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THE SOUTH AFRICAN ARCHITECTURAL RECORD

THE JOURNAL OF THE TRANSVAAL, NATAL AND ORANGE FREE STATE PROVINCIAL INSTITUTES OF SOUTH AFRICAN ARCHITECTS AND THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS.

XIV

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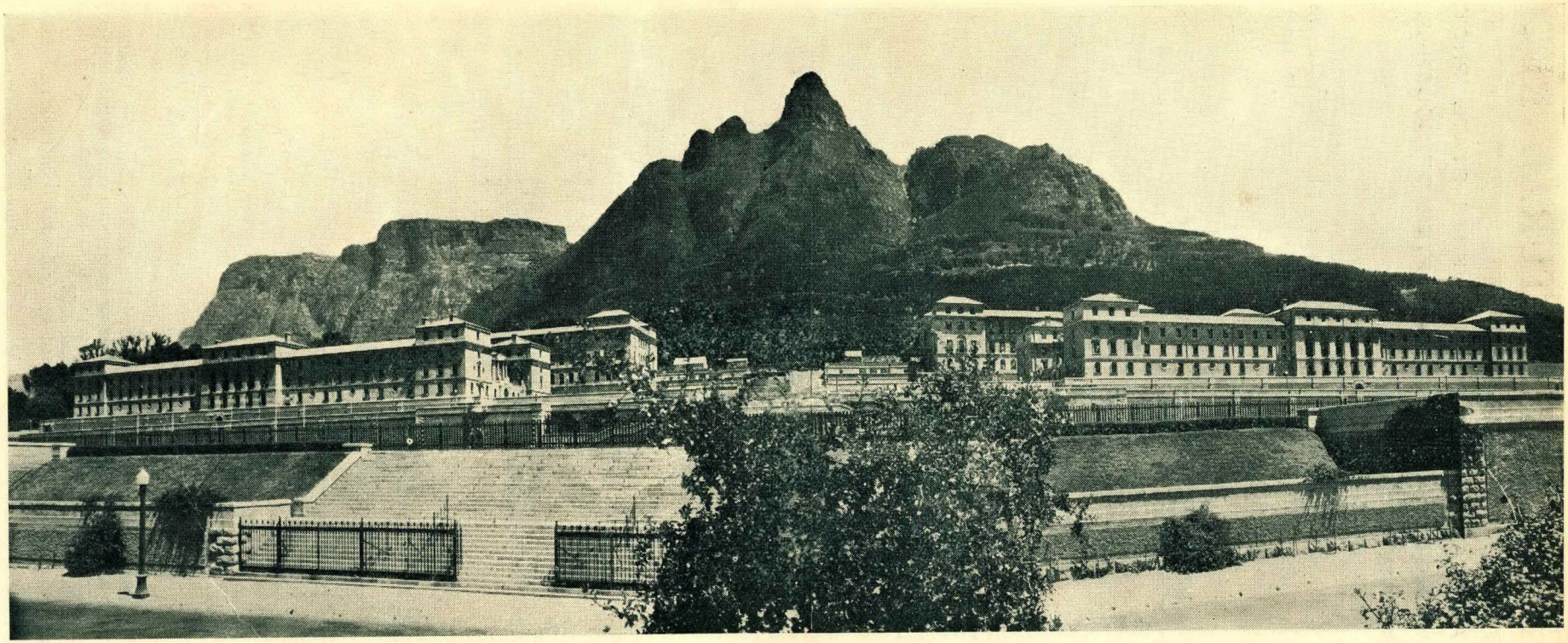


Photo : Publicity Dept. S.A.R.

The New University Buildings, Rondebosch, Capetown, where the first meetings of the British Association were held.

Originally designed by the late J. M. Solomon. The designs have been modified and are now being carried out by Messrs. C. P. Walgate and Hawke and McKinley, Architects.

THE SOUTH AFRICAN ARCHITECTURAL RECORD

XIV

Vol. XIII. No. 55. SEPTEMBER, 1929

ARCHITECTURE AND SCIENCE.

The recent visit of the British Association for the Advancement of Science has done a great deal in focussing the attention of the public on the various branches of experimental and applied science and incidentally on the developments which are or have been taking place in South Africa in recent years.

As a result of this visit one feels that much more might be done on the scientific side of Architecture and that we, as a profession, should realise that there is a great field of research open to us in this respect, and take every opportunity of fostering and developing it. Of recent years tremendous strides have been made in the manufacture of various local building materials, but we, as architects, have done little to encourage or foster their development or even to investigate their possibilities or uses in building.

Much of this work is left to others and we are inclined to accept their decisions as final. What is required is the appointment, at an early date, of an enthusiastic scientific committee which might do a great deal towards improving the quality of these materials for our use, by discussions based on experience, and conferences with the manufacturers and their technical experts.

Such questions as the acoustics of public buildings have rarely been considered by the practising architect with disastrous results. It is regrettable, therefore, that the opportunity of hearing so eminent an authority as Mr. Sutherland was missed.

Mr. Sutherland, who visited South Africa with the British Association is one of the recognised authorities on the subject in England, and has contributed several papers to the leading technical and scientific societies in that country. He advised Sir Herbert Baker on the acoustics of the new legislative buildings in Delhi, and it is satisfactory to know that our civic authorities in Johannesburg have commissioned him to investigate and report upon the acoustics of the City Hall, the Selborne Hall and the Council Chamber.

Another of our visiting scientists was Dr. Vaughan Cornish, who has travelled extensively and was particularly interested in the early Dutch architecture at the Cape and the beauty of the Cape Peninsula.

As an associate member of the Society for the preservation of rural England, he was naturally concerned in the preservation of our wonderful assets in this respect and, with his permission, we publish a paper which he read in Johannesburg before the Geographical section of the British Association.

A great deal of interest centred round the investigations carried out by Miss Caton Thompson, at Zimbabwe.

These, although of an archaeological nature, are particularly interesting to Architects, affecting as they do those mysterious ruins of some early and little known civilisation.

It is interesting to note that amongst those assisting Miss Thompson in her work was Miss Norie, who was a student at the London University School of Architecture.

By the courtesy of the *Star* we are able to publish a report of the lecture given by Miss Thompson on Zimbabwe.

The fine exhibition of bushman paintings and engravings held at the University during the Association's visit was exceptionally interesting and should, if possible, be retained in this country. They would always be of great artistic and historical value as representing the work of primitive artists equal, if not superior, to those of a similar nature found in Southern Europe and Northern Africa.

This collection represents the untiring efforts of Dr. Frobenius and his staff of able assistants, and has been collected from various parts of the Union and Rhodesia.

THE BEAUTY OF THE CAPE PENINSULA, AND ITS PRESERVATION. *

by VAUGHAN CORNISH, D.Sc.

ASSOCIATE MEMBER OF THE COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND

Sailing from Northern Europe and passing through the Tropic belt we arrived at Cape Town, on July 19th, and I felt at once that I had reached the Mediterranean climate in which our civilization was cradled. The garden of my temporary home resembled that of a villa at Mentone both in the appearance of the vegetation and in the atmospheric fragrance which is the best summing up that our senses provide of the character of the general plant association resulting from a climate. The mountain rampart which makes so fine a backing for the avenues and parks of the City is not unlike in form and magnitude the encirclement that screens Monte Carlo from the cold Alpine blasts which search the Riviera, but do not affect the Cape Peninsula adjacent to the mild Atlantic. The preference for mountainous or open landscape in the country is a matter of individual temperament, but there is no question that a city is most picturesque in a mountainous environment, for this alone permits the landscape to appear above the buildings.

Wending my way towards the town through an avenue of oaks whose tracery of bare boughs make the sunlight vibrant, I came to a building with the columnar and horizontal lines of Greek architecture, and this I found to be endowed with added beauty by the background of a tabular mountain, marked with lines of vertical and horizontal relief. The building had the repose and strength of the mountain in yet more emphatic form and when the mountain was etherialized by atmosphere so that there was no unequal competition of mere ponderous mass, the landscape presented a remarkable pictorial unity of natural and architectural features. Nowhere have I seen this desirable result better achieved than in Cape Town, and its vicinity. Photographs had failed to show me the full merit of the Rhodes Memorial at Rondebosch. The camera seldom succeeds in rendering the tones of distant landscape, and only when I stood upon the upper terrace looking down the lion-guarded descent, and, beyond the massed foliage of stone pines, saw the broad continental plain backed by distant mountains glowing in the evening light did I realise that architect and sculptor had done more than merely put a fine thing in a fine position, for the natural landscape gained in distance and in delicacy of tone when seen with a foreground, massive and stately, yet imbued with the quality of repose.

**Communicated to Section E (Geography) British Association Meeting 1929, at Johannesburg, August 2nd.*

In the businesss centre of Cape Town, I soon began to lose the exaltation brought by beauty of environment, for there is much bad building of the late Victorian age which was as poor in architecture as it was rich in other achievements. Looking more closely, however, I observed that the newest twentieth Century buildings of greater height were satisfactory adaptations of Mediterranean, particularly Italian, types of architecture and that most of the bad Victorian buildings were on a scale inadequate to the growth of business and therefore would presently have to be replaced by the style which is so well suited to the latitude and climate. Thus the problem of preserving beauty when reconstructing a business centre is easier in Cape Town than in England, where we are often confronted with the disagreeable alternative of destroying that which is venerable or continuing that which is inconvenient.

In the appointments of the seventeenth century Castle, as in the history and relics of old public gardens in Cape Town, we are reminded that the Dutch Settlement began at a time when European taste in both architecture and landscape gardening had reached a high level, and to this, no doubt, is partly due the charm of the Dutch style of farm house and country mansion of which I met numerous examples both old and new as soon as I started on the circuit of the Peninsula proceeding clockwise. These farm houses have white walls and the older have grey roofs and so far resemble the old farm houses of Devon, which harmonise so well in tone and colour with a verdant landscape. But the Dutch farm houses all the way to Constantia are of more ambitious form, displaying the rounded gable end. This I had hitherto seen chiefly in cities and never in the City had I so fully felt its charm. I suggest that the form is especially valuable amidst the rounded outlines and many branches of timbered landscape where all abruptly angular features of architecture are inharmonious. It seems strange as first that white walls should be well-suited to strong sunshine, but it is a white wall which best shows blue shadow, and blue shadow is never more delightful than when thrown by the limbs and boughs of adjacent trees.

From Rondebosch to Wynberg Hill the wealth of round topped stone pines exceeds all that I have seen in Italy, and they are suitable on the great rounded shoulders of grassy hillside, which form so fine a foreground for the beetling crags of Devil's Peak.



The Rhodes Memorial, Rondebosch, Capetown.

Photo: Publicity Dept. S.A.R.

Beyond the first road which leads to Constantia Nek the bold undulations in the direction of Tokai are laid out in well-kept vineyards where great stretches of red-brown earth are framed in encircling woods of pine and oak and silver tree. To the decorative beauty of form and colour in this view is added the charm of association, for the vineyards tell the tale of a fruitful world bringing forth its increase, and no human environment is complete or permanently satisfying if the Earth's fertility on which we depend is lacking from the scene.

From the main road through Diep River and Heathfield the mountains of the Peninsula which stand away to the right have a foreground of flat plain which is in its own way spectacular, for in the absence of any undulation the upstanding trees exercise to the full their role as "distancers," making the mountain wall seem far away and thus enhancing its apparent magnitude, while this in turn, suffused with atmospheric tone but not, as daylight sky, uncomfortably bright, shows the outline of the trees in perfect silhouette.

From the time when we reached Muizenberg we exchanged the continental outlook on the left for a marine view, having reached the promontory of the Peninsula. On this, the eastern side, I looked across the broad waters of False Bay to a mountainous coast with a serrated sky-line of remarkable boldness, and in tone and colour made delectable by distance, suffused in the softly-tinted rays of a sunshine that had something wondrous in its power of bestowing beauty. The sweeping concave curve and sandy beach at Muizenberg brought a new form into the landscape, and as I looked I saw a long line of translucent wave curl over in a scroll and, breaking form a frothy ridge which marched forward to the shore thinning as it went; and five others like thereto ran before it, the white ridges proceeding in procession towards the beach.

Muizenberg is an old-established bathing resort, the smaller resort of Fish Hoek, a little further on of quite recent fashion in this regard, and it is noteworthy that whereas the buildings which I saw at Muizenberg were below the average of the Peninsula architecture, Fish Hoek had excellent examples of the small marine villas with loggias and other Mediterranean characters in which the Cape Town architects excel.

The low sandy neck between Fish Hoek Bay and Chapman's Bay, sharply delimits the main northern peninsula from the dependent southern peninsula which, except for Simon's Town, is still the original wild South Africa. In Simon's Town itself we see again the inferiority of late nineteenth to early twentieth century building, but the neatness of the Naval Dock and the elegant perfection of the ships of the Royal Navy are pleasing here as everywhere throughout the Empire!

Beyond Simon's Town the road rises to between four and five-hundred feet as it runs along the bold coast-line of the Simonsberg, the sea beneath at noon-day of colour truly "ultra-marine." And then we reached the last lap of the outward run, the broad, wild, wind-swept moorland with low shrubs, which extends to the cluster of capes, Good Hope, Maclear, and Cape Point, where the light-house stands. Here I saw the double view, to the left across the broad bay to Continental mountains, to right over the waters of the open Atlantic, scarcely ruffled by the gentle breeze. Yet on Disa Rock, far out from time to time, at uncertain intervals, a great swell rose from out the sea and bursting flung the white foam high.

Turning reluctantly from the furthest goal I drove back across the wild moorland by another route. By this time I had begun to visualize the possibilities of afforestation, by which the decorative beauty of the district would be enhanced, as the northern parts of the peninsula have already been made more beautiful by tree planting than they could possibly have been before the arrival of the European. And yet I pause, for the Cape Peninsula is a world in itself with definite and strongly marked frontiers and as a world of its own should be an epitome of scenery. On reconsideration therefore I would sacrifice something of decorative effect and, as a counsel of perfection, preserve the southern part of the peninsula as moorland, sheer wild South Africa. And, on this point of completeness of scenic environment I will, though it be daring in a stranger, tell what I feel about the fitting destiny of this wonderful entity the Cape Peninsula. My ideal is the Cape Peninsula as a Capital. The word "Capital" be it remembered, does not in its derivation mean town, but head-quarters, and what we have to envisage is, at the very least, the political and social centre of the Cape Province, and the environs as well as the City itself are an essential factor in the life of such a community of residents and visitors with a considerable leisured class. Therefore, as far as is possible by forethought, contrivance and good will, and also by firmness in legislation, let the development and preservation of what nature has so lavishly provided be directed by the ideal not of Cape Town, but of the whole Cape Peninsula as a Capital. For the purpose of consistent planning there should be a Board of Scenery representing all the local authorities. Meanwhile it is much to be desired that the hands of the Township's Board should be strengthened by the support of an enlightened public opinion. Neither should timid counsel of economy prevail, for in a generation's time the money value of this metropolitan district will be such as would to-day seem fabulous, if the amenity and beauty of the inheritance be from now conserved.

Thoughts such as these so occupied my mind that I awakened as from a dream when the car, turning sharply to the left, entered the low neck connecting Fish Hoek Bay and Chapman's Bay, a valley with salt pans and marshes where the herons come, and stretches of pale grey sand drifted in wave-like ridges by the wind which blows along the gully. Looking



Muizenberg from Constantia Nek. *Photo: Publicity Dept. S.A.R.*



Hout Bay from Chapman's Peak. *Photo: Publicity Dept. S.A.R.*

down from where the road rises in order to round Chapman's Peak the perfect arc of Chapman's Bay presented the finest contrast of colour seen in the circuit of the Peninsula, the strong reflection of the pale-grey sand contrasting with a blue sea not of dark tint as in deep waters but of a pure brightness rejoicing the eye.

Beyond this I came to the Victoria Road, which follows the western shore, the magnificent cornice of a rock-bound coast where waves far below surge among rounded boulders of a cyclopean magnitude seldom seen, even on the ocean strand. There is little fear that this part of the Peninsula will be spoilt, for here nature in stern mood provides her own protection. We passed the Sentinel and other jutting crags of Hout Bay, and then turned inland to follow Hout Bay Road towards Constantia Nek, and stopping short of the summit viewed on the left the upper course of the streams which unite to form the Hout Bay River. They furrow a truly Alpine valley having steep and shadowed sides which leads up by a moderate gradient to the plateau summit of Table Mountain, of whose lofty outlook upon the panoroma of the Peninsula, two seas and the continent itself I must not presume to speak for, alas! I have not reached this crowning height.

Returning to the junction of the Hout Bay Road with the western coast road we followed the latter northwards, and after passing the conical peak of Little Lion's Head, entered the wonderful stretch of coast between the long line of the Apostle Peaks and the beating surf of the rock-strewn shore, and at length reached the detached suburbs of Cape Town, where little villas, many of them pleasing in appearance, stand open to the cool breeze of the wide Atlantic.

A few days devoted to the circuit of the Peninsula and the repetition of visits to particular points convinced me that Cape Town is pre-eminent among the capital cities of the world in the suitability of the environment for a metropolitan district. The Peninsula has an area of about one hundred and sixty-five square miles, if we take the railway to Muizenberg as boundary, which is adequate, but not unmanageably large; its frontiers are definite and bold, and the region beautiful both in its features and its outlook.

For the first five days of my visit the landscape of the Peninsula was viewed beneath a vault of pure blue sky, but on the morning of July 24th, a change came over the scene and I watched the white cloud wreathing the summits of Table Mountain and Devil's Peak, and then, descending, enfold the lesser eminence of Lion's Head. The power of a mountain as compeller of the clouds is not the least of its scenic qualities, and one of the attractions of Cape Town is the rapidity with which the lofty dome of blue is replaced by the spectacular cloud which broods among the crags. In the afternoon when I was at the new University the cloud lay thick against the cliffs of Devil's Peak and the pine woods were black beneath. Strong gusts blew and driving rain came down in banded streaks;

but as evening drew on, the sky brightened in the west, and a patch of blue appeared above Kloof Nek, the seven-hundred-foot saddle between Lion's Head and the great northern buttress of Table Mountain. I make all speed for the Nek, which reached, I saw the vapours whirling overhead among the upper crags of Table Mountain, which now appeared of an immensity far greater than when seen in fair weather, for a mountain side is dwarfed by the dome of blue sky above but magnified by a low pall of cloud, so that in mountain scenery the part is at one time greater than the whole under other conditions.

Crossing the Nek to the western slope I saw the evening light touch with dull crimson the mists which eddied round the Apostle Peaks, while away to the right in a glowing gap between dark clouds a fiery sun sank into the sea.

There yet remained one day before I must quit the Peninsula paradise where the week had passed as one long dream of delight, and this day I devoted to the continental view of the region, reflecting that the main approach to this capital is no longer from the sea but by land. The expedition was timed so that the return should be in the low light of late afternoon, and at this delicious hour I saw the whole mountainous outline of the Peninsula from Cape Point to Table Mountain as one tripartite range, deeply notched at Fish Hoek Bay and Constantia Nek. The beauty of the range was enhanced by the broad foreground of low, level plain covered with native shrub and tree among which the slanting rays of the descending sun made play of light and shadow.

I looked my last, and prayed that vision might be given to the people so that they should preserve and protect the treasure of this inheritance of scenery.

THE RHODESIAN RUINS INVESTIGATION.

From "THE STAR" AUGUST 2nd 1929.

Miss Caton Thompson, leader of the British Association's research party which was sent to Rhodesia, in advance, to study Great Zimbabwe and other ruins there, presented her report yesterday.

It shows that in the limited time at her disposal she and her assistants (both of whom are women) did a remarkably large amount of investigation. The results of these she set out in great detail, giving the depth and conditions in which each article mentioned was found, and explaining that trenches and pits giving critical evidence had been left exposed in order that the Association, when it visits Great Zimbabwe, may be able to check her statements.

Excavations were carried out in a number of places, to bed rock. No articles of any great antiquity were found, but native pottery and weapons, and mediaeval imported objects were found at the very lowest levels. The effect of these facts on the theory of an archaic race having dominated Rhodesia before the Bantu is stated in emphatic terms.

A PROBLEM IN ARCHAEOLOGY.

Introducing her subject, Miss Caton Thompson said: It is now twenty-four years since Dr. Randall MacIver investigated the problems of the origin and age of the Southern Rhodesian ruins. Since that date nothing of any scientific consequence has been added to the evidence on the purely archaeological side, with the exception of the so-called Western Temple of the Zimbabwe Acropolis, under direction of Mr. Douslin, then Minister of Public Works in Southern Rhodesia.

On the ethnological side some excellent work has been done, but in an archaeological problem such as ours, involving the age and source of culture of a past civilisation, ethnological research can be, I think, no more than a tributary stream controlled by, and absorbed into, the main flow of established archaeological fact.

In physical anthropology, we had, in 1924, Sir Arthur Keith's report on four ancient skeletons found in gold mines, and one from Zimbabwe itself. They were of Bantu type, but do they represent the original miners, and how old are they?

Miss Caton Thompson went on to a rapid examination of the situation as it was left by Dr. MacIver, who, she pointed out, was the only competent trained archaeologist who had contributed to the subject; but she made it clear that while she relied on his facts as accurate, she had at no time allowed his conclusions to influence her judgments on the evidence which he had produced.

DR. MACIVER'S WORK.

Dr. MacIver, she said, found both in Mashonaland and Matabeleland ruins, at levels considerably lower than the foundation courses of the containing walls, dateable Oriental and European imports of mediaeval age, consisting of Chinese porcelain, Persian faience, Indian and Venetian beads, Arab glass; these facts argued conclusively to his mind the general contemporaneity of the building with mediaeval times. With these dated imports was a quantity of native African pottery, metal work and other objects, differing little from those still made by local Bantu tribes to-day. No object dateable as earlier than early mediaeval was found by him, or had indeed ever been found by the too active amateurs who had preceded him, who had the pick of the untouched ground, but who clung without concrete evidence to the idea of a Phoenician or even older South Arabian origin.

Commenting on MacIver's finds, she pointed out that he had realised the importance of the floors of crushed granite found in some of the enclosures which, when intact, would absolutely prevent objects on the floor from sinking to a lower level. MacIver had put down seven test trenches through the floors to find

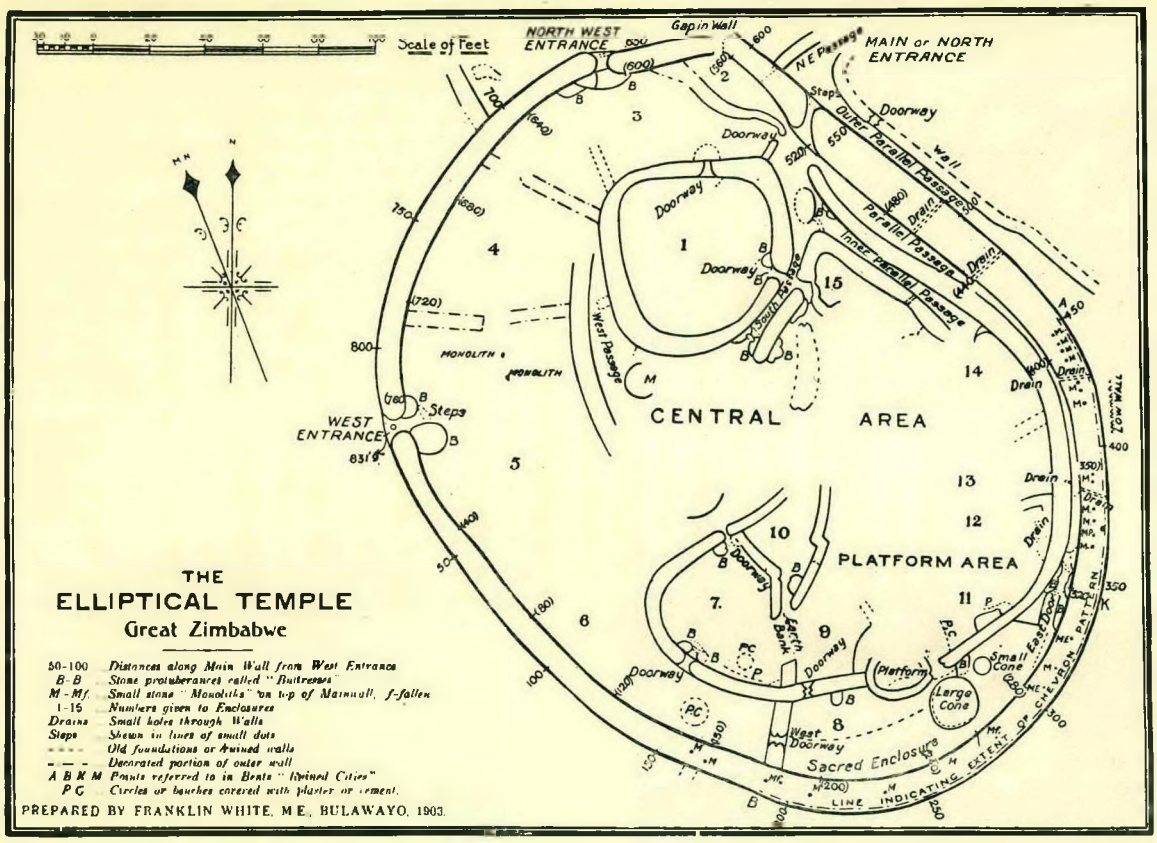


Photo: Publicity Dept. S.A.R.

what lay below, finding native objects identical with those found above the floor and imported articles which could be dated as mediaeval.

The seventh test, in enclosure fifteen has become historic. Mr. R. N. Hall had, in previous years, all but cleared out this enclosure, removing twelve vertical feet of deposits from above the original cement floor, at which level he stopped. His published section shows Nankin china, Arab glass and native pottery in what he calls his fifth stratum from the top—a stratum immediately overlying the original cement floor; from this fact he inferred its later date.

MR. HALL'S MISTAKE.

Accidentally or otherwise, Hall left a small section standing. This was found and critically examined by MacIver, who asserted that Hall's stratigraphy was mistaken, and that his fifth layer containing the mediaeval china and glass was, in reality, not a separate stratum, but an integral part of the cement foundations of a hut, forming a stratigraphical unit with the cement floor on which it rested. That being so the cement would be dated by the objects Hall found in it as mediaeval. MacIver carried on excavation at this spot through the cement floor down to bedrock five feet or so below. He got no dateable objects: but a definite stratum of ash and sand was encountered, its level being some feet below the level of the foundation courses of the temple walls; this lowest stratum contained coiled bronze wire bangles, native pottery and spindle whorls, similar to the same objects found associated with the mediaevally dated products at higher levels.

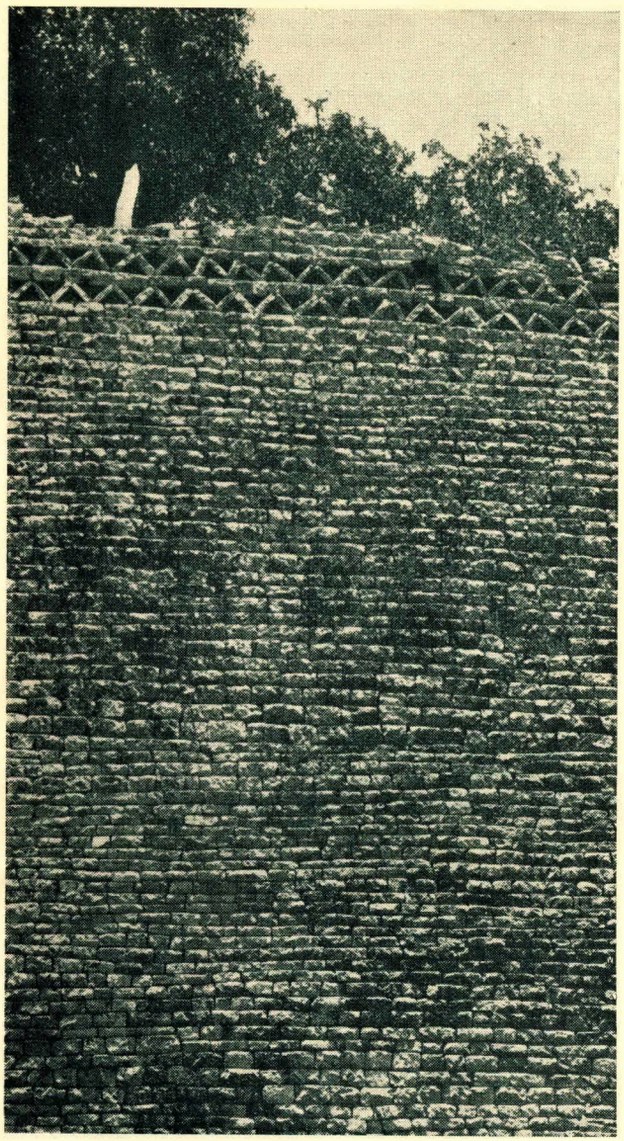
On inference, therefore, Miss Caton Thompson continued, and in conjunction with his positive evidence, MacIver urged the approximate synchronism of the two within a century or two. The evidence bound up in that earliest stratum is obviously extremely important to the whole dating question, and I have concentrated our researches upon it.

MAIN PURPOSE OF THE EXCAVATIONS.

After a reference to the similar results obtained at Dhlo-Dhlo in Matabeleland she said her chief object had been directed to check the exact relationship of the lowest occupation layers (beneath the original cement floors) to the main walls of the Elliptical Temple.

"My main endeavour, therefore, has been directed to elucidate this point, and test first the stratification over a wide continuous area, not only down to bottom, but to test it with particular reference to its behaviour in relation to main walls; in short, to see if evidence could be collected proving the walls contemporary with a pre-mediaeval level; secondly to check the results by means of excavations in the deepest undisturbed sections available in other areas, as well as by excavations vertically beneath some structure of unquestionable antiquity."

The report continued: Now that programme may seem a very modest one, in view of the numerous lines of investigation which the problem invites, some of which Dr. Frobenius has followed with such remarkable results. But I believe it to be a radical one, controlling, in a way nothing else is likely to equal,



Detail of walling, Zimbabwe. *Photo: Publicity Dept. S.A.R.*

the dating evidence; and in pursuing it I have willingly sacrificed more spectacular work in favour of limited and methodical excavations, tying us for weeks on end to one small area. The work has been mainly a study in stratigraphy.

To fulfil the first part of this programme a site had to be found providing two essentials not easy to come by:—

(1) A site unquestionably as old as Zimbabwe's Elliptical Temple.

(2) A site showing an intact cement floor, and yet a site of sufficiently minor importance to warrant the inevitable destruction of that floor.

Dhlo-Dhlo, which I visited and tested on arrival in Rhodesia, failed under the first heading; the Zimbabwe Temple and Acropolis failed under the second.

THE MAUND RUINS.

UNDISTURBED GROUND CHOSEN.

In early March, in a week of pitiless rain in a wilderness of long, wet grass, I found the spot which seemed likely to meet the case—the Maund ruins, in the Valley of Ruins, Zimbabwe. The walls are ruinous but show all the features characteristic of the Temple—the rounded, bastioned entrances, the grooved doorways, the peculiar swing out of the bottom courses to form stepped approaches. Even R. N. Hall, who believed in several different periods of building, was satisfied that these ruins belonged to the oldest group. As to previous disturbance, I was guided largely by the vegetation, which grows with peculiar luxuriance on disturbed soil; here it was comparatively modest. I was not disappointed. An absolutely intact granite cement floor was found over practically the whole area.

After a very detailed description of the conditions of these ruins, which lie in the little valley between the Temple and the "Acropolis," and of the excavations, which started with a trench driven across from wall to wall to test the stratification ("Substantial sections have, of course, been left for you to examine"), Miss Caton Thompson said:—

THE FINDS.

What we found was this: Beneath a thin skin of humus came ten inches to one foot of a hard, yellow, artificial cement, formed of pulverised granite; this had been laid as a floor over practically the whole area and it covered the bottom three or four courses of the wall. This cement, in turn, overlay two feet six inches to three feet of a brown-red soil of natural origin—hill wash—but containing charcoal, shreds, iron slag and other things. Upon this the walls were actually built and we found this to be the case, with only one exception, in every one of the twenty-nine segments of walls contained in the Maund ruins. Now an occupation layer, resting on virgin soil and forming the very foundation upon which the builders based their walls was one of the things I most wished to study in great detail and though it involved stripping the walls bare and clearing the ground down two or three feet lower than their bottom courses, I did not hesitate to do so. They remain exposed until the British Association has visited Zimbabwe, then they must be suitably covered in again.

The lecturer also mentioned a fourth stratum, of considerable, though intermittent extent—a red dagga find in great mounds with the timber of huts in it in excellent preservation. The dagga structures seemed to have been made by later occupants, but there seemed little difference in time between them on the one hand and the older stone walls and cement floors on the other, nor could she detect much difference in the objects collected from them. The deposits, starting at the bottom, ran as follows:—

(1) Virgin soil of quaternary yellow granite sand. This passes imperceptibly into

(2) Red hill wash, two feet six inches to three feet six inches thick, which underlies the walls. In this are tangible signs of man's occupation.

Dealing with the lowest stratum (No. 2), she said :—

The objects from it are much *in situ* as any ever will be this side of heaven. One could not reasonably expect to find very much in such a position, but there was sufficient for our purpose. The pot sherds number four hundred and forty-eight and are in small fragments. Of these about forty are rims. Four hundred and eighteen of these are in coarse red-brown ware, gritty with quartz particles. Dr. MacIver figures what appears to be similar ware from the Niekerk ruins near Umtali. It is of interest to remember that he judges the Umtali-Niekerk, Inyanga, group of ruins to be rather older than Zimbabwe. With this class of rough pottery was a small quantity of plain black, polished ware indistinguishable from that found all through the higher levels.

This gritty surface is quite certainly not that of the original pot, but the dampness of the Maund deposits has removed every particle of stip or other finish which the ware may originally have had. A disc-shaped spindle whorl in the same rough pottery was also found.

IRON, BRONZE AND BEADS.

A certain amount of iron came also from this stratum. Lumps of iron slag were distributed throughout, though we found no smelting furnace ; some came from directly beneath the cement floor, some from the very bottom, resting on virgin soil. There was also a small number of iron weapons, and an axe-head from this earliest pre-wall stratum. A few fragments of bangles of flat bronze wire coiled over grass fibre were also found—eleven fragments, to be exact. They are of the type familiar to everyone who has dug in the Rhodesian ruins and are found at all levels. You will observe there is here, no more than there was there, any object which can be dated. Are the objects older than the walls, even if we cannot say how much, or are they contemporary, in spite of being at a lower level and in a deposit upon which the walls rest ?

EXPLANATION OF A MYSTERIOUS PAVEMENT.

At this point, where it might seem we had reached an archaeological impasse, the Maund ruins provided material in this same stratum for another line of reasoning.

Not long after our work had exposed down to bottom a part of the area lying between walls one and twenty-nine, we encountered a line of thin granite slabs about four inches thick, forming a narrow pavement about two feet wide. It was laid on the virgin yellow sand of Stratum one and was therefore completely buried by the full depth of Stratum two, at least two feet six inches. Some of the pottery and iron slag found in this pre-wall stratum lay vertically over the pavement, and in some cases in actual contact with it. Eastwards it ended abruptly without apparent reason. But we followed it heading southwest for a distance of fifty-six feet. It then vanished under one of the sections I had meant to leave standing, and farther on appeared to be heading direct for the entrance. The path kept its own level, plunged under the foundations (the rounded entrance is built in true Zimbabwe fashion, the bottom two or three courses connecting the walls on two sides of it), and emerges on the far side, and continued on its way some little distance farther.

This, the report said, was very puzzling, but as clearance proceeded they came to a neat little walled enclosure, under the granite cement floor of which they found hugging one wall a similar flagged path, in this case resting upon Stratum two, not beneath it. When followed it was found to descend in a series of rough steps and meet the other paved path. Later other similar lines of pavement were unearthed beneath cement floors, and the investigators came to the conclusion that these pavements were laid for the temporary convenience of the workmen erecting the walls, in what was a very muddy locality—the cement flooring itself is an expedient to keep dry in a land where as much as nine inches of rain can fall in one night. This interpretation was confirmed by the native commissioner's native police sergeant when asked to explain the flagged paths, and Miss Caton Thompson was told that similar devices are even now adopted by certain native tribes preparatory to building. She had to give unqualified acceptance to this interpretation, but it destroyed her earlier idea of an occupation before the walls were built.

NO PRE-BUILDING OCCUPATION.

The evidence from the Maund ruins was explained as follows :—

(1) No case can be established for an occupation earlier than the building period.

(2) The objects of this period excavated from a sealed deposit include iron weapons, spearheads, arrowheads and an axe, also bronze wire bangles, typically Bantu in character.

(3) Prior to the construction of the walls, building pavements were laid down which can be, I believe, paralleled to the present day.

(4) No article was found at any level which was not of native manufacture. We found no imported articles to give a dating clue. These came from our work in other parts of Zimbabwe and from three distant sites in the Sabi Reserve.



Doorway, Zimbabwe. *Photo : Publicity Dept. S.A.R.*

"THE TEMPLES."

WORK ON ACROPOLIS AND BELOW THE TOWER.

Referring to the buildings on the hill, the report said no one had hitherto attempted to lay bare the middens of the original inhabitants of the Acropolis, and she was anxious to know at what depth they lay and to help out the dating problem more positively than the earliest stratum in the Maund had enabled her to do. In one case after good iron implements and two fragments of a soapstone bowl in the top five feet, this clay passed down irregularly at about twelve feet six inches into black midden, with quantities of split animal bones, chiefly ox, of no very ancient aspect, and sherds ; between thirteen feet six inches and fifteen feet came two pots of undecorated native ware, six pottery phalli and fragments of bronze wire bangles. At eighteen feet on rock bottom were two more pots which to her resembled ordinary Bantu pots ; they could be paralleled from any of the Rhodesian ruins.

Another test shaft, sunk alongside the second terrace wall from the top, was even more interesting. Under a terrace filling of red dagga clay and rough granite blocks, at eight feet beneath the surface a curious stone structure was encountered, completely buried in the terrace levelling process and therefore earlier.

A CURIOUS STRUCTURE.

It measured ten feet long by four feet wide and six feet high and was solid except for a narrow five inch vertical vent. Its purpose remains a mystery. The deposit round it was burnt in places, but no trace of fire could be detected upon the stones, and its solidity precludes its use as kiln or furnace.

"What concerns us stratigraphically is the fact that it rested on a foundation of roughly laid stones, and that round it a paving of thin granite slabs lying at from fifteen feet to seventeen feet beneath the surface, as in the Maund ruins and the sacred enclosure of the conical tower, served it on the three sides we could clear. The objects found in the underlying stratum are therefore as much from a sealed deposit as in the Maund, but at nearly five times greater a depth. It yielded three fragments of iron tools, iron slag, a white porcelain bead threaded on thin copper wire, and eighty other beads in coloured opaque glass—blue, green, yellow, red, black—of types found in many of the Rhodesian ruins.

"That they represent the earliest period of Acropolis debris," Miss Caton Thompson said, "I have no doubt at all. They lie in a stratum on rock bottom, under twenty-four feet of superposed debris. The depth means little in itself ; but these beads and other objects were already there when people using the same building pavements that we found in the Maund ruins—and which, incidentally, may also be seen by the side of the Conical Tower—built a stone structure upon the midden deposit which contained them. This structure in turn must antedate the stone and dagga filling which buried it to a depth of eight feet. Finally that stone and dagga filling is synchronous with the formation of a terrace with a solid retaining wall. This evidence is in harmony with that obtained in 1915, inside the main wall of the Acropolis, when a section of the infilling, about seventeen feet thick, was cleared and Bantu pottery and iron implements were discovered down to bottom. I refer you to Mr. Douslin's paper in the Proceedings of the Rhodesia Scientific Association, June, 1921-22."

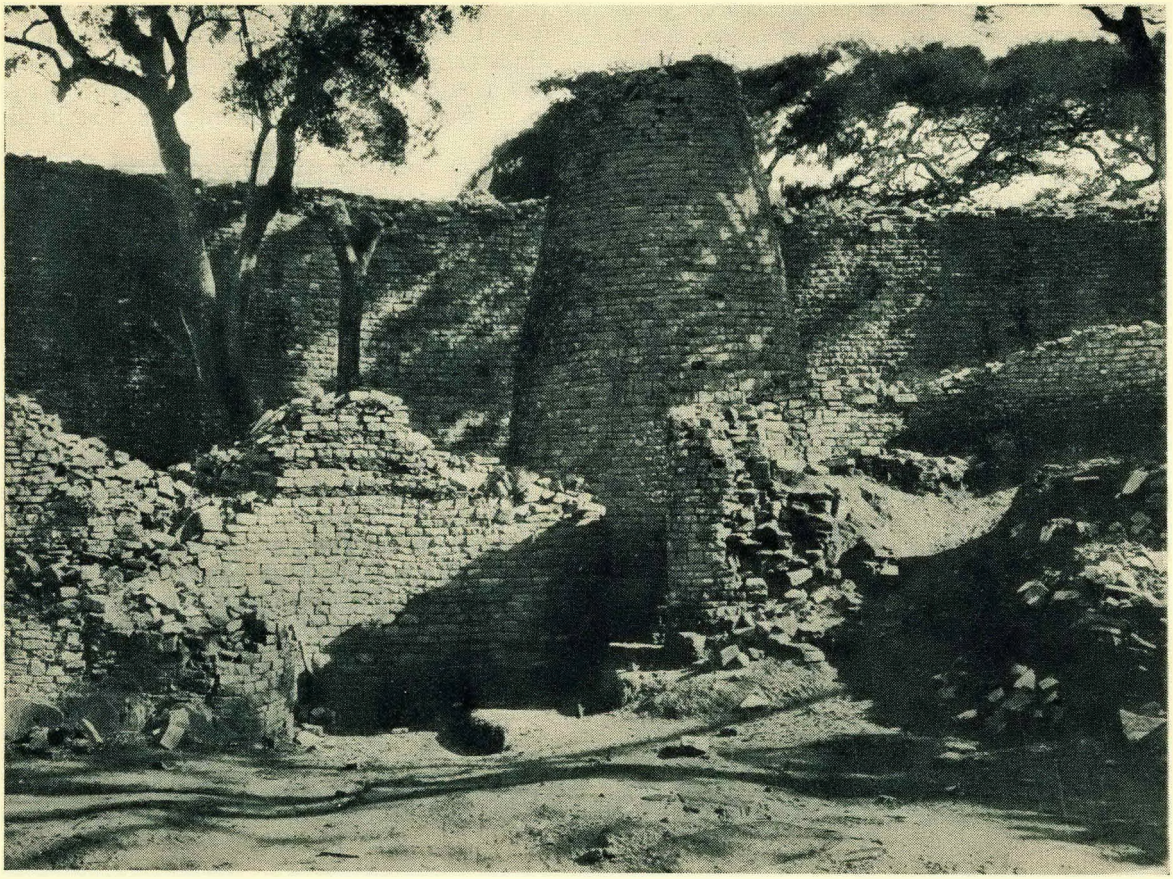
The paper now went on to describe other test work done in the vicinity of the Elliptical Temple, which from the figures given must have been extensive. The result was the same ; coiled wire bangles, one in gold, spindle whorls in pottery and soapstone, imported beads, etc.

TUNNELLING UNDER THE TOWER.

"I have given you the evidence of three sealed deposits—the Maund, the Acropolis A3 pit, and now the Mauch ruins," the lecturer said. "From none of these came objects indicative of any considerable antiquity. In the good old days before geology and evolution upset everything it was, I believe, stoutly maintained that fossils, when found in deposits suggestive of an age greater than B.C. 4004—had been placed there by the devil to deceive mankind. Possibly he also placed those glass beads in the most ancient deposits at Zimbabwe ; no one else could have done so except the original inhabitants. However, one last endeavour has been made to clinch the matter finally and incontrovertibly. It is obvious that any object of racial or temporal stamp found *in situ* in undisturbed deposits vertically beneath an original wall would settle the matter, even to the average layman unfamiliar with the intricacies of archaeological evidence.

"Around the Conical Tower at Zimbabwe have rallied all the theories of Semitic origin ; it was fitting, therefore, that this famous structure should submit to a practical test which has never been before attempted. With the consent of the Rhodesian Government, a tunnel has been driven right through from side to side beneath it, exposing, on a width of three feet to four feet, the underlying deposits down to bed rock. My idea that the Tower might be the superstructure of a grave is disposed of. It rests, without any prepared foundation whatsoever, on six feet odd of natural sandy deposit consolidated by pressure overlying the granite. The bottom five feet six inches or so of this is sandy yellow granite sub-soil similar to that we found underlying the Maund ruins.

"The first thing found was a beautiful early stone age implement (a *coup-de-poing*). I present it to those who believe in Zimbabwe's great antiquity. Another crude implement showed that the soil had been undisturbed since the early stone age. Above this undisturbed soil was a thin layer of reddish hillwash, and on this the Tower rested. Every inch of this reddish soil was washed and sieved, but all that was recovered was a small iron band, a minute gold bead, traces of wire bangle and a small sherd of the usual black polished pottery. The purpose of the Tower remains as obscure as ever. Viewed from below its workmanship is as haphazard as most of the buildings. With level granite rock only six feet below, the builders laid their foundations on sand. They did not level them, and on a diameter of eighteen feet four inches there is a fall of 1.19 feet. That this is not due to later subsidence is shown by the fact that thicker courses, to correct the error in the ground



Conical Tower and Platform, Zimbabwe.

Photo: Publicity Dept. S.A.R.

courses, have been introduced higher up the Tower. This is hardly the work of high civilisation, and confirms Mr. J. F. Schofield's architectural estimate."

The expedition examined the Matindere Ruins and also Chiwona, a fortified terraced kopje only reported last November, and only seen previously by four white people, and another terraced kopje, finding the same things in these as in the other ruins.

QUESTION OF DATE.

SEMITIC ORIGIN THEORY CONDEMNED.

The report went on to deal with the question of dates of the building. Contrary to the experience of Dr. MacIver, only two fragments of Celadon glaze were found, but these were older than those found previously. They are said by the British Museum to be Sung period (10th-13th century A.D.), but the fragments might have reached the interior of Rhodesia in barter a century or more after their manufacture. A larger number of beads were obtained than ever before, probably owing to the use of fine sieving. The full report on them has not been received, but Mr. Horace Beck, to whom they were submitted said they included types from Southern India definitely considered to be not later than 900 A.D. Other beads are similar to some found in the remains of villages in Malaya and Borneo, and according to Dr. Beck seem to belong either to a period 600 to 1100 A.D. or 1660 to 1850 A.D.

ONE DEFINITE STATEMENT.

Miss Caton Thompson proceeded:

"We have, therefore, imports the extreme dating limits of which seem to lie between 600 A.D. and 1300 A.D. And we also have, on Dr. MacIver's clear showing, other imports not found by us at Zimbabwe—namely, Arab glass, eleventh century; Persian faience, fourteenth to sixteenth centuries; Chinese porcelain of the Ming period, sixteenth century; and Nankin china, sixteenth century. My trial pit at Dhlo-Dhlo yielded such things, but they were not on rock bottom.

I think the evidence collected by Dr. MacIver and ourselves is complementary the one to the other. Owing to the immense advantage I possessed in being after him, I have been able to concentrate my attention on the earliest strata. He had, in a short time, to disentangle things from top to bottom, and I should like to pay in public my great respect for his achievement.

I have, from this paper tried to eliminate all theory and vague generalisations incapable of proof. But I will allow myself one subjective observation. It is this:—

It is inconceivable to me, now that I have studied the ruins, how a theory of Semitic or civilised origin could ever have been foisted on an uncritical world. Every detail in the haphazard building, every detail in the plan, every detail in the contents, apart from imports,

appears to me to be typically African Bantu. It is also inconceivable to me how a theory of antiquity in the sense of Oriental archaeology could ever have been formulated by observant people. The structure of the buildings is such that not one stone would be standing on another in a period reckoned in millennia and not centuries.

Ladies and gentlemen, I cannot furnish now more evidence and the mass of detail on which that evidence rests must be postponed; I have only touched on it in crude outline. But I affirm, both in my own work and on that of my predecessors—Bent, Hall, MacIver, Douslin—that we have no evidence whatsoever for a date of great antiquity. Had Dr. Randall MacIver never set foot in Rhodesia, had a mediaeval date never before been hinted at, my own excavations, concentrated as they have been on this question of the earliest date for the earliest intact deposits, would have led me to within a few centuries of the same conclusion.

My respect for an interest in the Rhodesian ruins is enormously strengthened thereby. Instead of a degenerate offshoot of a higher Oriental civilisation, best studied in its homeland, you have, I believe, a vigorous native civilisation, unsuspected by all but a few students, showing national organisation of a high kind, originality and amazing industry. It is a subject worthy of all the research South Africa can give to it; South African students must be bred to pursue it.

THE AIR SURVEY.

It may appear ungrateful to refer only at the close to the most generous assistance given by the Union Air Force. The results have come in too late for me to make use of them in this report, but a study of the admirable series of vertical and oblique photographs cannot fail to be of very great assistance and interest to both archaeologists and geographers. Most especially was I desirous of getting an aerial survey of the M'telekwe Valley, covering the first stages of what I do not doubt to be the trade route to the coast.

As leader of the British Association's expedition in Rhodesia, I wish most sincerely to thank the Union Government for the excellence of their assistance. To the Southern Rhodesian Government, in particular to the Colonial Secretary, we are also most deeply indebted for the support, both material and moral, which has been given us."

PROFESSIONAL NOTES AND NEWS.

THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS.

Minutes of the First Board Meeting, 1929 Session, held at the Office of the Central Council, Johannesburg, on the 13th April, 1929.

Present:—Messrs. H. Rowe Rowe (President), in the Chair, W. E. Puntis, Senior Vice-President, E. B. Farrow, T. Moore, R. Howden, H. G. Labdon, S. Waters, F. D. Hickman, D. J. Laing and The Secretary.

Apologies for Absence.—Apologies for absence were received from Mr. W. G. Thompson, Mr. W. A. Ritchie Fallon and Mr. A. W. Springthorpe.

Minutes.—Minutes of the following Meetings, having been circulated prior to the Meeting, were taken as read and confirmed.

Third Board Meeting 1928 (Second Session) held on the 14th January, 1929.

General Purposes Committee held on the 25th February, 1929.

It was resolved that the Minutes of the Second Annual General Meeting held at Pretoria on the 15th March, 1929, be amended, as altered in the Minute Book, at the next Annual General Meeting.

Election of President.—Mr. Rowe Rowe proposed Lieut.-Col. W. E. Puntis. Lieut.-Col. Puntis informed the Meeting that he greatly appreciated the honour of the nomination but regretted that, on account of great pressure of work, it was quite impossible for him to accept.

In proposing Mr. T. Moore he drew attention to the enormous amount of work that Mr. Moore had undertaken on the Central Council on behalf of the Chapter, and thought that it would be an act of great courtesy to appoint Mr Moore.

Mr. Waters said it gave him great pleasure to second the nomination. He had very little to add to what Col. Puntis had said about the amount of good work that Mr. Moore had done for the Chapter, and the Board greatly appreciated it.

There being no further nominations, Mr. T. Moore was declared elected and took the Chair. He returned thanks, stating that he would continue to advance the interests of the profession to his utmost ability.

Votes of Sympathy.—The President called upon the meeting to pass a vote of sympathy and condolence with the relatives of the late C. S. Hill, a member of the Chapter and partner in the firm of Messrs. Sheppard and Hill, of Port Elizabeth.

The President stated that he had just heard of the death of the wife of Mr. W. Knuckey, of the firm of Messrs. Reid and Knuckey, and a vote of sympathy and condolence was also passed with the relatives.

Election of Vice-Presidents: Senior Vice-President.—Mr. D. J. Laing proposed Mr. H. G. Labdon, who regretfully declined as he thought that the Senior

Vice-President should be a Member of the same province as the President and could therefore assist him in his work. He would find it extremely difficult, as a Coast Member, to attend all the necessary meetings.

He proposed Lieut.-Col. W. E. Puntis, and Mr. Rowe Rowe seconded the proposition.

There being no further nominations, Lieut.-Col. W. E. Puntis was declared elected.

Junior Vice-President.—Mr. E. B. Farrow proposed Mr. H. G. Labdon, and Mr. D. J. Laing seconded the proposition. There being no further nomination, Mr. H. G. Labdon was declared elected.

Appointment of Committees.—It was unanimously agreed to appoint the following Committees :

1. *General Purposes.*—T. Moore, F.S.I. (Chairman and Convenor), E. B. Farrow, F.S.I., R. Howden, F.R.I.B.A, A.R.V.I.A., M.I.A., F. D. Hickman, P.A.S.I., D. J. Laing, W. E. Puntis, O.B.E., V.D., F.S.I., M.I.A., H. Rowe Rowe, M.I.A.
2. *Finance Committee.*—D. J. Laing (Chairman and Convenor), E. B. Farrow, F.S.I., A. Stratton, M.C., The President (ex officio).
3. *Practice Committee.*—Lt.,-Col. Puntis, O.B.E., V.D., F.S.I., M.I.A. (Chairman and Convenor), A. W. Springthorpe, S. Waters, L.R.I.B.A., M.I.A., The President (ex officio).
4. *Chapter's Representatives on Architectural and Quantity Surveying Education Council*—W. E. Puntis, O.B.E., V.D., F.S.I., M.I.A. (Chairman and Conveyor), H. Bell-John, M.C., F.S.I., L.R.I.B.A., M.I.A., A. T. Babbs, F.S.I., T. Moore, F.S.I.
5. *Chapter's Representatives on Central Council.*—T. Moore, F.S.I., Pretoria, Delegate (W. G. Thompson, F.S.I., Durban, Alternate).
   H. G. Labdon, F.S.I., Capetown, resigned in favour of F. D. Hickman, P.A.S.I., who was appointed Delegate and H. G. Labdon, Alternate.

Arrear Subscriptions.—The Report of the Finance Committee was handed to the President, to deal with the matters raised therein.

Loans.—It was resolved: "The Secretary be instructed to repay balance of Loans to Members forthwith."

Educational Matters.—Col. Puntis reported that satisfactory arrangements had been made for this year's Examinations of the Surveyor's Institution, Great Britain, and that the Preliminary Examination was held on the 9th and 10th January, and the Intermediate and the Final from the 18th to 22nd March, 1929. The Transvaal University College, Pretoria, as usual, kindly arranged accommodation and invigilation, and Mr. H. Bell-John, Chief Engineer, P.W.D., undertook, with the approval of the Institution, the examination of the Candidates in Land Surveying and Levelling. All papers have been duly despatched to London for marking.

In regard to the lack of satisfactory educational facilities in Pretoria, where a number of Architectural and Quantity Surveying Students are employed in the P.W.D. and by private practitioners, Col. Puntis stated that arising out of the present position of the professions under the Architects' and Quantity Surveyors' (Private) Act No. 18 of 1927, and the desirability of placing educational facilities in Pretoria on a sound basis, a meeting of all interested was convened by Mr. J. Lockwood Hall, F.R.I.B.A., and Mr. T. Moore, F.S.I., to discuss the question and, if possible, arrive at some satisfactory decision. The meeting was held at the Transvaal University College, Extra-mural Buildings, Pretoria, on the 15th February, and pupils and others interested were invited to attend.

Professor Pearse of the University of the Witwatersrand was also invited to attend the meeting, and he explained the conditions on which that University would be prepared to open a branch of its activities in Pretoria assisted by and with the goodwill of the Transvaal University College.

Dr. du Toit, Rector of the Transvaal University College, wholeheartedly agreed to co-operate.

The advantages of a University course for professional men, rather than a course conducted by Technical Institutes, were obvious. The Diploma of the Rand University could only be conferred on registered students of the University and as the Transvaal University College had no Faculty of Architecture or Quantity Surveying, Pretoria students were therefore under great disabilities.

Following on the meeting, at which a resolution was unanimously passed requesting the Central Council and the Board of the Chapter to immediately institute classes for both professions, a request was submitted to the Rector of the Transvaal University College in terms thereof, with the suggestion that the courses should be under the control of a professional director and the name of Mr. H. Bell-John was submitted. Preliminary negotiations with the Witwatersrand University and the Department of Education have been undertaken by the Transvaal University College, with the satisfactory result that classes leading to the diploma of the University of the Witwatersrand in Architecture and Quantity Surveying, have been commenced at the Transvaal University College, Pretoria.

The Lecturers appointed are gentlemen of the highest professional qualifications, the Department is under the control of Mr. H. Bell-John, who was largely responsible for the founding of the Transvaal Society of Quantity Surveyors and at one time Chief Quantity Surveyor of the P.W.D., and at present its Chief Engineer, from which post Mr. Bell-John is retiring to devote his professional knowledge and energies to the new department at the Transvaal University College.

Col. Puntis referred in eulogistic terms to the co-operation and assistance of and the great work done by Mr. J. S. Cleland, Chief Architect, P.W.D., Mr. Bell-John, Chief Engineer, P.W.D., Mr. T. Moore and others whose active efforts were largely responsible for the success that has been attained in establishing, in Pretoria, courses of tuition in Architecture and Quantity Surveying on a sound University basis.

The President thanked Col. Puntis for his report and at the same time pointed out that the work done in Pretoria was not in conflict with anything likely to be done by the Education Council on Architecture and Quantity Surveying. He further pointed out that the University would deal sympathetically with non-matriculated students, who applied for exemption, provided they could prove they were educationally fitted to take part in and understand the courses.

DIPLOMA IN QUANTITY SURVEYING.

1. The course for the Diploma shall extend over not less than three years, during the whole of which period candidates may attend as full-time or part time students of the University.

2. Every candidate for the Diploma must produce evidence that :—

(a) He is eligible for registration as a matriculated student.

(b) He holds an approved Secondary School Leaving Certificate or a Certificate approved by the Senate for this purpose ; or

(c) He holds a Certificate of Exemption granted by the Central Council of the Institute of South African Architects with the approval of the Senate.

3. Every candidate for the Diploma shall attend the courses specified below and complete these courses by passing the prescribed examinations.

4. The following courses shall be included in the first year of study :

Building Construction,
Graphics and Mensuration,
Architectural Drawing,
Elementary Quantities.

Every candidate shall also attend satisfactorily a course in the *History of Architecture.*

5. No candidate shall obtain credit in respect of any one of the courses referred to in paragraph four unless he has completed two such courses in one and the same academic year ; and no candidate shall be admitted to the work of the second year unless he has completed all such courses.

6. The following courses shall be included in the *second* year of study :

Building Construction (two courses),
Nature and Properties of Building Materials,
Sanitation and Hygiene,
Quantities.

7. No candidate shall obtain credit in respect of any one of the courses referred to in paragraph six unless he has completed three such courses in one and the same academic year ; and no candidate shall be admitted to the work of the third year unless he has completed at least four such courses.

8. The following courses shall be included in the third year of study :

Building Construction (working drawings).
Surveying,
Specifications,
Quantities,
Professional Practice in Quantity Surveying.

9. Every candidate shall be required to complete at least three of the qualifying courses referred to in paragraph eight before being credited with having completed any qualifying course in the third year of study.

10. A candidate in any year who has failed in any course or courses, but who has obtained credit in the minimum number of qualifying courses in that year, shall be permitted to take a supplementary Examination at the end of the succeeding long vacation, in the course or courses in which he has failed.

DIPLOMA IN ARCHITECTURE.

1. The course for the diploma shall extend over not less than five years, during the whole or any portion of which candidates may attend as part-time students of the University.

2. Every candidate for the diploma must produce evidence that :

(a) He is eligible for registration as a matriculated student, or

(b) He holds a certificate of exemption granted by the Federal Council on Architectural Education with the approval of the Senate of the University.

3. Every candidate for the diploma shall attend the courses specified below and complete these courses by passing the prescribed examinations.

4. The following courses shall be included in the first year of study :

Geometrical Drawing.
History of Architecture,
Architectural Design.

Every candidate shall also attend satisfactorily, courses in Elementary Building Construction and Freehand Drawing.

5. No candidate shall obtain credit in respect of any of the courses referred to in paragraph four unless he has completed two such courses in one and the same academic year ; and no candidate shall be admitted to the work of the second year unless he has completed all such courses.

6. The following courses shall be included in the second year of study :

Theory of Structures,
History of Architecture,
Building Construction,
Architectural Design.
Freehand Drawing or Modelling.

7. No candidate shall obtain credit in respect of any one of the courses referred to in paragraph six, unless he has completed three such courses in one and the same academic year ; and no such candidate shall be admitted to the work of the third year unless he has completed at least four such courses.

8. The following courses shall be included in the third year of study :

Sanitation and Hygiene,
History of Architecture,
Architectural Design,
Building Construction.

Every candidate shall also attend satisfactorily a course in Theory of Structures.

9. No candidate shall obtain credit in respect of any one of the courses referred to in paragraph eight unless he has completed two such courses in one and the same academic year; and no candidate shall be admitted to the work of the fourth year unless he has completed all the courses referred to in paragraph six and has also completed at least three of the courses referred to in paragraph eight.

10. The following courses shall be included in the fourth year of study:

Theory of Structures,
Specifications, Estimates and Quantities,
Nature and Properties of Building Materials,
Architectural Design and Construction (two courses).

11. No candidate shall obtain credit in respect of any one of the courses referred to in paragraph ten unless he has completed at least three such courses in one and the same academic year; and no candidate shall be admitted to the work of the fifth year unless he has completed all the courses referred to in paragraph eight and has also completed at least four of the courses referred to in paragraph ten.

12. The following courses shall be included in the fifth year of study:

Architectural Design and Construction (two courses),
Structural Design,
Professional Practice,
Town Planning and Landscape Design.

13. Every candidate shall be required to complete at least three of the qualifying courses referred to in paragraph twelve, before being credited with having completed any qualifying course in the fifth year of study.

14. A candidate in any year who has failed in any course or courses but who has obtained credit in the minimum number of qualifying courses in that year, shall be permitted to take a supplementary examination at the end of the succeeding long vacation, in the course or courses in which he has failed.

Pretoria, 26/3/29.

Classes leading to the diploma of the University of the Witwatersrand in Quantity Surveying and Architecture will in future be given by the Transvaal University College.

The lectures, which will commence on Monday, the 8th April, will be given at the main building near Rissik, and intending students should enroll as soon as possible The head of the department will meet the class at 5 p.m. on the 8th April, Intermediate Hall, Arts Block.

The fees for the course are £21 per annum inclusive *plus* a registration fee of £1 payable to the University of the Witwatersrand by students taking the examination of that institution for the current year.

In view of the late start of the classes, the fees for 1929 will be £17 10s. plus £1 Witwatersrand University registration, £6 10s. being payable for the first semester and £11 for the second. £2 must be paid upon enrolment. Fees are normally payable half-yearly in advance, but the question of further payments by instalments will be discussed after the opening of term.

A. A. ROBERTS,
Registrar.

Surveyors' Institution of Great Britain Examinations.—A report was received from Mr. H. Bell-John stating he had carried out the Examinations in Levelling, Chaining and Angle-taking, and had sent all the papers and results direct to the Secretary of the Institute.

The Board passed a vote of thanks to Mr. Bell-John for the time and attention he had devoted to the examinations.

A letter was received from the Registrar, Transvaal University College, stating particulars of fees and expenses incurred in connection with the Preliminary, Intermediate and Final Examinations. The Secretary was instructed to forward a cheque to the Registrar forthwith.

The Board instructed the Secretary, when acknowledging the Registrar's letter, to express its thanks and appreciation to the Transvaal University College for conducting the examinations.

Letters from Mr. H. Morse, Salisbury, were received asking for particulars of the Preliminary Examination and as to exemption from the matriculation. The Secretary was instructed to furnish all particulars.

Copies of Correspondence re Affiliation of the CHAPTER OF S.A. QUANTITY SURVEYORS with The SURVEYORS' INSTITUTION, GREAT BRITAIN.

The Central Council,
Institute of S.A. Architects,
Johannesburg,
21st January, 1929.

The Secretary,
Chapter of Quantity Surveyors,
Johannesburg.

Dear Sir,

re Affiliation of the Chapter of S.A. Quantity Surveyors.

For the information of your Board, I attach copy of a letter to-day written to the Secretary of the Surveyors' Institution, London, in re the above.

On receipt of his reply, I will advise you further.

Yours faithfully,

J. S. LEWIS,
Registrar.

21st January, 1929.

The Secretary,
The Surveyors' Institution,
12, Great George Street,
Westminster.

Dear Sir,

re Affiliation of the Chapter of S.A. Quantity Surveyors.

I am directed by the Central Council of the Institute of South African Architects (within which Institute is included the Chapter) to make application, on behalf of its Chapter of South African Quantity Surveyors, for affiliation with the Surveyors' Institution.

As I think you know, the Chapter of South African Quantity Surveyors has, since the passing of the Architects' and Quantity Surveyors' (Private) Act of 1927, absorbed the former South African Institute of Quantity Surveyors, which latter body was affiliated to your Institution.

The present application is for a transference of that affiliation to the Chapter above-mentioned.

Yours faithfully,
J. S. LEWIS,
Registrar.

The Central Council,
Institute of S.A. Architects,
Johannesburg,
5th April, 1929,

The Secretary,
Chapter of Quantity Surveyors,
Johannesburg.

Dear Sir,

re Affiliation of the Chapter with the Surveyors' Institution.

I have pleasure in enclosing copy of a letter dated 5th March, 1929, received from the Surveyors' Institution, London, cordially approving the proposal that the Chapter be affiliated with it.

Yours faithfully,
J. S. LEWIS,
Registrar.

The Surveyors' Institution,
(Incorporated by Royal Charter),
12, Great George Street,
Westminster, S.W.I.,
5th March, 1929.

Dear Sir,

At yesterday's meeting of the Council your letter of the 21st January, on the subject of the affiliation of the Chapter of South African Quantity Surveyors was laid before the Council.

I was directed to congratulate your members on the statutory recognition which had resulted in the South African Institution of Quantity Surveyors being absorbed into the Chapter, and I was directed to express a hope that the newly constituted society would have many years of useful work before it.

The Council cordially approve the proposal that the connection between the Institution and the South African Quantity Surveyors should be continued, and that the Chapter should be affiliated to the Institution on the same conditions as those which applied to the Institute.

Yours faithfully,
A. GODDARD, H.G.L.,
Secretary.

J. S. Lewis, Esq.

Mr. H. G. Labdon's Appreciation.—Mr. Labdon (Capetown) expressed his appreciation of the work done by the Board and its various Committees, and his regret at not being able to attend more meetings during the past session. He stated that the work of the Committees was often discussed by Members of the Chapter in Capetown, and was equally appreciated by all.

Standard System of Measuring.—It was resolved that the matter of bringing up to date and issuing a further edition be left to the General Purposes Committee, and when drafted to be submitted to the Board.

President-in-Chief.—The President asked the members of the Board to pass a vote of thanks to the President-in-Chief of the Institute of S.A. Architects for the services he had rendered as President-in-Chief, not only to Architecture but also to Quantity Surveying. It was only those who had worked with him on the Union Registration Executive Committee, the Inaugural Board, the Nominated Council and the first Elected Council, who could appreciate the enormous amount of work done, and the time sacrificed for the benefit of others, by the President-in-Chief.

Col. Puntis endorsed everything said by the President, and their remarks were appreciated by the other Members of the Board.

Mr. Howden thanked the Members of the Board and considered that it was the one pleasure of his professional life to see the Act and Regulations having such a good effect for the Members of the two Professions.

Education Council on Architecture and Quantity Surveying.—It was unanimously resolved:—

"That in the opinion of the Board a small Council composed of Architects and Quantity Surveyors, with equal representation from both professions, should be established in lieu of the Education Council as now constituted."

Copies of Minutes.—It was resolved that:—

"As several Members of the Chapter had expressed a wish to have copies of the Minutes, the Secretary be instructed to enclose a stamped addressed post card to every Member of the Chapter, with the request that they fill in and return the post card if they wish to be furnished with copies of the Minutes of the Board."

Past President.—Col. Puntis, in proposing a vote of thanks to the Past President, expressed deep appreciation of his services and the thanks of the Board and Members of the Chapter for all the work done on their behalf.

This was unanimously agreed to.

The Past President, in reply, said it had been a very great pleasure to work in conjunction with the other Members, and he hoped the new President would receive the same support during his term of office.

* * *

Mr. T. Moore, F.S.I., of Pretoria, has taken into partnership Mr. Dudley, S. Mann, F.S.I., and the business will be carried on under the title of "T. Moore and Mann, Quantity Surveyors, 31-36, Connaught Buildings, St. Andries Street, Pretoria, Transvaal."

* * *

The Chapter of Quantity Surveyors received a communication from the Master Builders and Allied Trades Association of the Witwatersrand, pointing out that the Johannesburg Municipality will not give a fixed price for carrying out the work in connection with making Municipal connections for Sewerage, Water and Fire Services, etc., but will only give an

approximate estimate. The Master Builders asked that in future P.C. amounts should be allowed for these items. The Board of the Chapter, whilst sympathising with the request, had to point out that these were matters under the control of the Architect, and that the Quantity Surveyor could only deal with the items mentioned in the specification. The Board recommend the members of the Chapter to comply with the request of the Master Builders in so far as it lies in their power.

The Master Builders also brought to the notice of the Chapter the preponderence of P.C. Items in contracts for measurable work, and requested the Chapter to recommend its members to measure these items. The Board replied in similar terms to the above.

The Master Builders are quite justified in asking that work for which they cannot obtain a definite price should go into the contract as a P.C. and are equally justified in asking that all measurable work be included in the contract as measured items in order that they can estimate for same if desirable.

THE TRANSVAAL PROVINCIAL INSTITUTE OF ARCHITECTS.

INSTITUTE QUESTION NIGHT.

A special General Meeting of members of the Transvaal Provincial Institute of Architects was held in the board room of the Chamber of Commerce, Market Street, Johannesburg, on Thursday evening, August the 29th. Some thirty-five members signed the attendance book.

Mr. S. C. Dowsett, Vice-President, occupied the chair in the unavoidable absence of the President, Mr. Harold Porter.

After expressing his extreme gratification at the splendid attendance of Members at the first of these trial special General Meetings, he said that he hoped that it would be followed by many more, and that the attendance would grow so that in time it would become necessary to engage the Selborne Hall, and eventually the City Hall (when the acoustics had been improved) for these Meetings.

He regretted the absence of several of the Members, especially one or two of the Committee Members, namely, Mr. Williamson and Mr. Donaldson, and had received apologies from these and several others, who had found it impossible to attend.

Continuing, Mr. Dowsett said that he wanted Members to understand that the object of the Meeting was to bring them together to discuss questions of interest to the profession and he felt that the object of the meeting would not be completely achieved unless every Member made a speech. He also mentioned that the Council had arranged for refreshments, later in the evening.

The Chairman stated that before starting on the questions, which had been submitted by Members for discussion, he would like to mention a matter which was at present exercising the minds of the Provincial Committee and that was the issue of licences to unregistered persons.

He asked Members to notify the Institute if they heard of any case where a licence had been issued by the Revenue Office to an unregistered Architect.

He then called upon Mr. Cowin to reply to the first item for discussion, which was the suggestion that a Museum or Central Bureau should be established for the storing of samples of building materials, pamphlets and catalogues and where Architects could obtain any information they might require in that connection.

Mr. Cowin said that he was sure that every Member found that in course of time his office became so littered with samples and catalogues that he had not enough room to do his work, and that Members would be glad to have some place where they could send a great deal of this material, which they did not care to destroy and which could be filed for convenient reference at any time for the whole profession. He suggested that the best place for these things would be in the Secretary's Office, where the various catalogues, pamphlets, samples, etc., could be systematically indexed and arranged.

He remarked that there was a very good Museum at the University of the Witwatersrand, but this was out of the way and few Architects had the time or inclination to go so far to obtain the information required. "What the Architects want," he said, "is a place where they can obtain information at a moments notice." Mr. Cowin thought that the initial cost would be small, perhaps £5, and if it was found that the storing of these catalogues and materials hampered the Secretary, a small adjoining office might be taken, and he suggested that the scheme go forward to the Committee for consideration.

The Chairman said that he would like to hear some other opinions on the subject.

Mr. Wild moved that this suggestion he referred to the Committee.

Mr. McCubbin asked where was it proposed to establish this Bureau. The Chairman replied "At the Office of the Institute."

Mr. Allen Wilson said that he liked the idea, but he did not think it could be done in the Secretary's Office. He thought that if Members were constantly calling, it might interfere with the secretarial work. If the Secretary, however, could inaugurate such a Bureau without much expense, it would be of undoubted benefit to the profession and he would give his support to the proposal.

Mr. Furner asked where the funds would come from. Would the Institute have to pay ?

Mr. Spicer thought the whole thing a very excellent idea, and did not think that the expenditure would be very great and the additional work would only be the keeping in order of the catalogues and samples.

He thought it would be very helpful to all the Architects to be able to keep up to date with the new materials which were continually being placed on the market.

Mr. Sinclair remarked that at one time, there was quite a large collection of samples in the Office, but as soon as the different firms got to know of it, their goods came pouring in and became so numerous that it had to be stopped. He said that as Chairman of Finance, he had to inform Members that the Institute could not afford to spend money on the scheme, because for two or three years, it had been running at a loss. He thought the filing of catalogues would not cause much difficulty, but the collection of samples would.

Mr. Deuchar said that Mr. Cowin's proposals received his full support, and he thought it was the duty of the Committee to go further with these suggestions as well as placing a comprehensive library at the disposal of the Members.

Mr. Howden said the proposal seemed to be generally accepted though the difficulty was financial and he suggested appealing to the Chamber of Commerce to finance the scheme, as most of the agents and merchants who represented these goods were members of the Chamber of Commerce and though the goods were displayed in a room adjoining the Secretary's Office, he saw no reason why the Chamber of Commerce should not finance the scheme. He thanked Mr. Cowin for his excellent suggestions, and submitted that it might be a solution to the problem of agents worrying Architects at their offices during business hours.

Mr. Lansley thought that the scheme should be financed by the various building material agents, for they are the people who gain.

Mr. McCubbin said that unless the system were properly carried out, it would be useless, and he feared that done properly, it would cost a great deal.

Mr. Cowin, in replying to the discussion, said that he was very glad this suggestion had been so thoroughly discussed and he hoped the matter would not be allowed to drop, but he did not think the Chamber of Commerce ought to be approached on the subject.

In conclusion he said that he was sure the Architects would benefit greatly by such a scheme, and find that they had considerably more room in their offices for work, and he hoped the suggestion would be acted upon by the Council.

Mr. Furner asked if he might speak again. He said that such a scheme would be the best possible form of advertisement for suppliers of building material, and he proposed that there should be a small charge made to the agents for the displaying of their products in the Office.

The Chairman said that it was apparent this subject had greatly interested all Members present and if this had been the only discussion of the evening, he felt that it justified the holding of the meeting.

The Chairman then read the first question on the paper, which had been circulated to Members a few days previously, as follows:—

"Will the Institute arrange to have Meetings when all Members can attend, get to know one another and develop the spirit of service and *esprit de corps?*"

He said that the splendid attendance at this first Trial Meeting in itself answered that question.

Mr. H. A. Collins, who had submitted the question congratulated the Committee on the success of the Meeting, which was shown by the attendance thereat.

The Chairman then read the second question:

"Has the question of Collective Professional Publicity or Co-operative or mass advertising been considered by the Committee, and if not, should it not be considered?

"In America it consists of a displayed advertisement in a daily paper about once a week, with the object of showing their fellow citizens the folly of trying to secure good Architecture without an Architect, or in other words, an endeavour to induce the public to abandon bad building in favour of good Architecture, and to convince them that the service of an Architect is their best investment."

Mr. Howden said he thought the writer was really asking Members for an opinion. He said that this question of Collective Professional Publicity had also been brought up at the R.I.B.A. Meetings but had not been so well favoured by them as in America.

He wanted to emphasize that the object was not to advertise any individual Architect, but the Profession in general and it would do good rather than harm to bring to the notice of the public the advantage of employing Architects, for he said that Architecture did not seem to be very well known to the public in general. He asked for an expression of opinion from Members present.

Mr. Cowin thought this was a matter to be dealt with by the Central Council. He said it was an excellent proposal though he did not agree with one suggestion in the question, viz.: "Do not attempt to beat your Architect down in his fees. You cannot demand full services unless you fully pay for them." He said that if an Architect cared to do work for less than the full fee, it was his duty to give full services, for it was his own fault for accepting a low fee.

Mr. McCubbin did not agree with advertising at all. He preferred the profession to remain as it is, rather than ask the public to patronise it.

Mr. Lansley said that Architects had to fight their own battles, and advertise the status of Architecture, with a view to protecting the public.

Mr. Furner thought that a certain amount of advertising would be a good thing, but that it would have to be very carefully done. He felt that an Architect's best advertisement is in the work he produces. In his opinion some of the suggestions regarding advertising were far too blatant.

Mr. Wild could see no objection to such advertising schemes. He thought the public ought to be informed how to get the best results when about to build.

Mr. Allen Wilson was of the opinion that periodically, articles on Architecture might appear in the press, and he suggested that this matter might be sent forward to the Committee for consideration.

Mr. Spicer thought advertising was rather indelicate and that much more good could be done by a series of public lectures, illustrated by lantern slides, showing how the work of the Architect is carried out

—the supervision of the actual building; the different stages of the process of converting drawings into concrete buildings. He admitted that the carrying out of his suggestion might be somewhat expensive.

Mr. Lansley suggested that a scheme might be carried out in conjunction with the Master Builders' Association, illustrating some of the buildings that are at present in course of construction.

Mr. Allen Wilson said that the Institute had not the funds to do this.

Mr. Lockwood Hall suggested approaching the African Theatres Trust.

Mr. Nurcombe said that it is only the client of moderate means, who is of very little account, who is in ignorance of the procedure of the Architect's office. He suggested that a paragraph might appear in the press to the effect that anyone desiring information on Architecture could apply to the Institute's Office.

Mr. Howden said he was extremely gratified at the discussions which had taken place, which showed that this was certainly a debatable question, and he thought the matter ought to be sent forward to the Committee for consideration.

Mr. Rowe Rowe remarked that no reference had been made to Quantity Surveyors.

The Chairman said that Quantity Surveyors were naturally included.

The third question: "Is there not some confusion in the Building By-Laws regarding the definition of Domestic Building, Dwelling and Tenement or Apartment House."

In A. XXVI—it states the term "Dwelling" shall include "Tenement" or "Apartment House," yet in 99b a dwelling requires that not more than sixty per cent. and forty per cent. of the site shall be built upon, and in 99c a tenement or apartment house requires not more than eighty per cent. and twenty per cent.

In A. XIV—it states "Domestic Building" shall mean "Out offices of dwellings, etc." Does not "Domestic include a "Dwelling?"

In 44—Thickness of walls of the Domestic class: Does not Domestic class include Dwellings and Tenements or Apartment House?

If the following are considered conjointly, they do not seem to agree with each other.

A. XIV; A. XXVI—44, 98, 99b, 99c."

This was answered by Mr. Dowsett, who said he did not think there was really any confusion in these By-Laws and proceeded to explain that under the Johannesburg Municipal By-Laws tenement houses are of the dwelling house class but the By-Laws do not consider a dwelling house, *per se,* as an apartment or tenement building. Practically the only difference between the "Domestic class" and the "Tenement or Apartment house class" in the By-Laws is in respect of open spaces. He said that when a person buys a stand in a strictly "Dwelling House" locality, he expects to have at all times the amenities usually associated with a dwelling house—garden space and no undue crowding, etc., etc. Tenement and Apartment Houses, he said, are associated with areas at or near the centre of large cities, where the land is more valuable and hence the open space required under the By-Laws is less.

With reference to the second part of the question, Mr. Dowsett pointed out that whilst it is true that a dwelling is a "Domestic Building" it does not follow that a Domestic building is a dwelling. For instance, a coal shed or a detached wash house are domestic buildings although not dwellings.

Regarding the next paragraph—thickness of walls—Tenement or Apartment Houses are considered as Domestic class for this purpose.

In the last part of the question, he thought there was nothing incongruous in Definitions XXVI and XIV, neither, in his opinion, was there anything wrong with By-Law 44, which refers to walls of the Domestic class (including buildings for human residence and domestic use) out offices of dwellings, etc., nor in By-Laws 98, 99b and 99c if read in the light of the above explanations.

The Chairman said that unfortunately, Mr. Williamson, who was to answer the next question was absent, so he asked for views from those present. The question was:—

"Is it the responsibility of the Architect to know or to find out the building restrictions of every township?

Such restrictions are contained in the Owner's Title Deeds, and if the owner does not disclose to the Architect the building restrictions contained in the Title Deeds, is the Architect responsible?"

Mr. Lockwood Hall said that it was not the responsibility of the Architect to find out the restrictions contained in the Title Deeds, but he considered that it is advisable for the Architect to make enquiries if there are any restrictions and he thought the Builder should do likewise.

Mr. Lansley contended that the Architect is responsible.

Mr. McCubbin said the Architect should protect his client by finding out these restrictions.

Mr. Sinclair stated that it was impossible to hold the Architect responsible—it was the duty of the owner to inform and instruct his Architect of all restrictions, as mentioned and agreed upon, in Title Deeds.

Mr. Lansley said again most emphatically that it *is* the responsibility of the Architect, though it is certainly up to the Owner to help.

Mr. Sinclair in answer to Mr. Lansley, referred to a Building case lately heard in the Supreme Court, regarding the definition in Title Deeds for the erection of Flats in Parktown: Justice Tindall giving judgment in favour of the erection of flats. This was upset on appeal at Bloemfontein. Surely where Judges and K.C.'s differ, an Architect would not be held responsible, as in the majority of these cases it comes down to a legal point.

Mr. Sinclair also referred to a building that was erected over thirty years ago by a firm he was then working for. Plans or a Certificate were now being asked for, as it was contended the Building was not in full accordance with the Township restrictions. "Surely," he said, "one cannot hold the Architect responsible in such cases."

Mr. Raine said he thought this question was a legal one.

Mr. Kennedy was of the opinion that the whole question depended upon circumstances.

Mr. Harrison thought that the first and second part of the question was rather confused. Agreed.

Mr. Allen Wilson could not see how the Architect could get into serious trouble.

Mr. Dowsett agreed with Mr. Raine that this is undoubtedly a legal question. It would be considered by the Committee.

Mr. Lewis, Registrar of the Central Council, asked what guidance Architectural Students had in such matters.

Mr. Furner replied that he thought that they were included in the course of Professional practice. He said it was unfortunate that Professor Pearse was absent, as he could have given a definite answer to this question.

The next question, No. 5, which reads as follows, was answered by Mr. Cowin:

"If I owned a vacant lot one hundred feet by fifty feet, not a corner and the lots on either side and at the back have buildings with basements, how am I to erect a building without a basement on my lot, and have I any redress against my neighbours for depriving me of being able to erect a building without a basement."

Mr. Cowin said that he thought the grievance of the owner of the said lot was more imaginary than real. His opinion was that the owner was not compelled to take his walls down to the foundation of the adjoining buildings, in spite of the two buildings at each side and the building at the back having basements. He must not cause any damage to the adjoining buildings by his operations.

Mr. Howden said he did not think the point raised in the question had been seen.

He felt that the three original building owners were only responsible for the position when they built.

Mr. Waugh said it was a question of the right of support. If any adjoining builder impaired the natural support it was his duty to restore it to the natural state.

On the suggestion of obtaining lateral support from the foundations of the existing buildings, Mr. Howden submitted that the central man had no right to the support of adjoining buildings or foundations.

That is, if a building exists on the site they must shore up and underpin, but if nothing but earth exists, they are responsible only for supporting that earth.

In answering question 6—"A building owner has a residential property at a higher level than his neighbour, who is back to back. The only way his surface water can escape is through the adjoining owner's property. What rights have each of them got regarding same? Must the adjoining owner let the water through? And if so, under what conditions?" Mr. Allen Wilson gave an illustration on the black board of how a building owner, who had a residential property at a higher level than his neighbour's, was forced by the Municipality to prevent his surface water from flowing over his neighbour's property, and laid a pipe which delivered all his surface water into the main road.

He quoted another case, below street level, where the owner obtained a perpetual servitude for a pipe through an adjoining property.

Mr. Harrison asked what would happen if the other man refused to have a pipe laid through his property. He expressed the opinion that it ought to be the duty of the Township owner to see to the correct delivery of surface water.

Mr. Crothall read a legal opinion that the owner of a lower stand has to allow the water from the upper stand to pass through his property, but he thought it was really a matter for private arrangement between the parties. He thought that if the question of health were involved, the M.O.H. would have the right to force building owners to drain off their surface water properly.

Mr. Dowsett read the following extract from the "Sunday Times," of January the 16th, 1920:—

"Troyeville—Your neighbours are not entitled to discharge their storm water on to your ground if they have disturbed the surface soil of their property, and they are certainly not entitled to discharge the rain from the roof of their houses on to your ground. You are entitled to apply to court for interdict restraining them from doing so. On the other hand you are not entitled to ask the Municipality to act on your behalf to restrain your neighbours from doing a wrong. The attitude adopted by the Town Clerk is quite correct. You must assert your own rights against your neighbours, and do not ask the Municipality to do so."

He said that he read this really to emphasise the latter part of the extract, viz.: that the Council cannot interfere in these matters but that they must be settled between the parties concerned.

The general opinion seemed to be that the owner of the lower stand must allow the water from the upper stand through his property, and if the upper stand were undisturbed, then the owner of the lower stand must bear any expense incurred in letting the water through his lower stand. But if the upper stand be disturbed by buildings, etc., and so concentrating the water, then the owner of the upper stand must bear the expense of piping, channelling, etc., through the lower stand.

The Meeting then adjourned for tea and it was decided, on account of the lateness of the hour, that the remainder of the questions submitted be discussed at the next meeting, which it is hoped will take place in the near future.

Mr. Dowsett again thanked Members for their attendance and declared the Meeting adjourned.

It has been decided to hold the adjourned meeting on Thursday, 10th October, from eight to ten p.m. when the following questions will be discussed:

An intending building owner casually meets an Architect and asks what are the charges for plans, etc., including supervision. Architect X replies that the Institute charges are six per cent. The enquirer Y laconically remarks "Too much," and passes on. In course of time Architect Z is seen supervising a building for Y for which he has prepared plans and specifications. What is the most charitable assumption which can be put on the action of Architect Z?

Surveyors invariably prepare their plans of Townships, Estates, etc., with the North point pointing directly towards the top of the plan. It is argued that Architects who use a portion of these plans in the shape of Block plans also place the block so that the North point points towards the top of the plan. If there be a right and a wrong way to do it, let us adopt the right way, which is apparently the one adopted by the Surveyors.

I am erecting a building with basement adjoining a building without a basement. I must shore up and underpin the adjoining building. The owner of the adjoining building refuses and will not give me permission to underpin his building. What am I to do?

A building owner instructs an Architect to erect a building on a certain lot. Is it the Architect's duty to ascertain if the lot is free from servitudes, etc., etc., or is it the builder's duty before commencing work to ascertain that everything is in order? In the event, for instance, of the building owner turning out not to be the owner, can the builder, who has already proceeded with the work, have any claim on the Architect?

A building owner intimates to an Architect that he wants to build a house. Plans and specifications are prepared but the relationship between the two has become impossible, and the Architect refuses to have anything further to do with his client and demands payment of 3 per cent. for partial services of plans and specifications and refuses to carry on any further. The building owner says "No," the Architect must see him through (the plans and specifications being satisfactory). Must the building owner pay, or is he entitled to demand full services or nothing?

When a new tall building is erected next to a low building, the latter having several smoke flues just above its roof, whose duty is it to carry those flues up to the height of the new building to obtain the necessary draught?

In the S.A. Architectural Record of September, 1925, a ruling was given, presumably by the Building Surveyor, that a corner stand and a stand adjoining should be regarded as one site. Is this consistent with the clause that Reduction of open spaces shall only apply to that portion of a building actually upon the corner stands?

Is there such a thing as Architectural Copyright, and has an Architect any redress when he finds his designs being reproduced without his consent?

In building a new tall building against another low building, what is the legal position regarding water finding its way down between the two buildings?

Is it the duty of the owner of the new tall building to flash over the parapet wall of the low building and so prevent the rain beating against the tall building finding its way down the cavity? If so, can he do so without the permission of the owner of the low building, and what happens if the owner of the low building refuses and says why should he take off the water from the new tall building? Or is it the duty of the owner of the low building to flash across to the new tall building?

What is the position of Members of the Royal Institute, and particularly Institute Students, under the Act?

Builders contend that in a percentage contract there should be no retention period as in a lump sum or quantity contract and that they should be paid in full on completion of the work. Is there any justification in this contention?

IN THE COURTS.

There is a great fund of humour and human interest in the Johannesburg Civil Courts.

The other day a case was being heard in which building interests were concerned. When the Magistrate remarked that the expert evidence of an architect would have been useful, the solicitor for one of the parties assured the Court that he had been unable to get an architect to attend, and he had not had an opportunity of subpoeanaing one.

"In another similar case some time ago," he said, "I asked an architect to give evidence, and he told me he would rather go to hell than come to Court."

"Dear, dear," said the Magistrate, with mock gravity, "isn't that contempt of Court?"

"Doubtless," replied the solicitor, "but he evidently considers that hell and the Court are synonymous terms. *(From the Rand Daily Mail.)*

THE HERBERT BAKER SCHOLARSHIP.

We are glad to announce that after a long lapse of years and through various vicissitudes a preliminary competition for this Scholarship has at last taken place.

It is some seventeen or eighteen years since the first competition was held, the winner being Mr. Gordon Leith, M.C., A.R.I.B.A. The Great War intervened and through various circumstances the capital sum diminished. The trustees, however, awarded grants at different times to Messrs. Hoogterp and L. McConnel to enable them to proceed to Rome for the purpose of study. In 1921 a competition was held, but the Trustees withheld the award pending the completion of a course of training in South Africa by the competitor placed first by the assessors. In the preliminary competition which was held last month, and for which there were twelve entrants, four were selected to enter for the final competition.

The successful competitors are Messrs. R. A. Bruce, N. M. Eaton, L. R. F. Bustin and J. P. Nelson The first three have successfully completed the diploma course in Architecture at the University of the Witwatersrand and were about to take the final examination qualifying for the Associateship of the R.I.B.A. It is interesting to note that all four com-

petitors have been assistants in Mr. Gordon Leith's office. Mr. Nelson who was educated at Haileybury College, England, obtained a commission in the 5th Middlesex Regiment shortly before the Armistice. He was also a student at the Witwatersrand University, qualifying for registration as an Architect under the Transvaal Act.

The time allowed for the final competition is three months, hence the final award should be made at the end of the year.

R.I.B.A.

The Board of Architectural Education, R.I.B.A., wish to call attention to the Isometric Drawing of St. Paul's Cathedral, which has been prepared by Mr. R. B. Brook-Greaves. The drawing is a remarkable one and of great educative value.

Reproductions of the drawing have been made and copies may be obtained on application to the Secretary, R.I.B.A., price £1 10s. 6d., each inclusive of postage.

The Secretary of the Royal Institute of British Architects advises that the Exhibition of International Commercial Architecture created a considerable amount of interest and received very favourable notices in the press who had not overlooked the work from the Dominions.

PROFESSIONAL EDUCATION IN PRETORIA.

One of the most important departments at the Transvaal University College is that devoted to the training of young people in architecture and quantity surveying. The rapid development of the country is creating wide scope for those thoroughly trained in these professions. There has been a remarkable increase in building construction in South Africa during the last four years. Statistics show that whereas in 1924 the total value in the nine largest urban areas was just over £7,000,000, this had risen in 1928 to over £10,250,000.

It is unfortunate that a great deal of the work of both professions is at present carried out by unqualified men, and this is due not only to the ignorance of the general public as to the benefit of employing an architect and a quantity surveyor (this ignorance being especially profound with regard to the Quantity Surveyor), but to the shortage of qualified men, resort having to be made at times to importation from overseas.

It is notoriously difficult for parents (and young men and women) to decide what professions offer a reasonable hope of a successful and financially satisfactory career, but they would do well to investigate the present facilities for training in these two professions.

The Department of Architecture and Quantity Surveying at the T.U.C. was recently established and prepares students for a diploma in either subject.

The courses are so arranged that students engaged in Architects' and Quantity Surveyors' offices are able to take a full course and obtain either diploma.

The course for architects requires five years' and that for quantity surveyors three years' study, the first year's course being very similar for both diplomas.

The diplomas are accepted as the examination qualification for registration under the Architects' and Quantity Surveyors' Act, 1927. The educational standard required for admission to the courses is the matriculation examination or its equivalent, but in exceptional cases non-matriculated students may be admitted, each case being considered on its own merits.

There are at present twenty-five students in Architecture and thirteen in Quantity Surveying and as part study and attendance at other classes have, in the case of students already in either profession, been taken into account, these thirty-eight students are divided into four groups in Architecture and three in Quantity Surveying.

Adequate University training is obtainable at Capetown, Johannesburg and Pretoria only. It is in many cases possible for students to arrange to live in Pretoria when circumstances prevent their going to either of the other towns. The courses are open to both men and women. The home of the Department of Architecture and Quantity Surveying is at present in the "Agricultural Block," near Rissk Station, and adequate lecture room accommodation is available.

The Head of the Department is Mr. H. Bell-John, M.C., F.S.I., L.R.I.B.A., late of the Union Public Works Department, and he is assisted by several specialist part-time lecturers of experience.

Many building material industries flourish in or near Pretoria, some of the most important being the Pretoria Cement Works, Kirkness' Brickworks (where there are over 500 employees), the S.A.R. and H. and Forestry Department timber drying kilns and experiment station, various stone and slate quarries, lime works, etc.

Students will have opportunities of inspecting these works under proper guidance.

RECENT BOOKS.

Early Church Art in Northern Europe by Josef Strzygowski, B. T. Batsford, London, 21s.

It is some four or five years since Professor Strzygowski delivered the series of lectures at University College, London, on the early Church Art in Northern Europe, which opened up a new field for study and research in the origins and development of mediaeval architecture in Western Europe. The long promised publication of these lectures has now been fulfilled and we have before us a new theory of the origin of Gothic building development by one of the most distinguished archaeologists in Europe.

While the development of mediaeval architecture from Roman and Romanesque sources has always appeared

as a logical thesis, many of us have felt that there were ideals and ideas both in design and decorative treatment in the later work which could not be entirely reconciled with the art of the civilizations round the shores of the Mediterranean. It is this missing link in the chain of archaeological research that Prof. Strzygowski fills in his new book. In his introduction the Professor states his theory, "The history of mediaeval art rests on an unsound foundation if it looks for its origins only to Greek and Roman, early Christian and Italian Art. There existed a North European art about which we are ignorant, since the monuments were chiefly of wood and have consequently not survived. There are, however, traces of these which may serve as a starting point for our studies."

He describes certain buildings in Croatia, where stone and vaulting were used, not in the manner of Rome, but in another tradition born in the North. He tells us of that amazing wooden architecture of Eastern Europe, not the half timber of the west, but the heavy solid construction of horizontal logs found in the Ukraine, Galicia and Finland, of the half timber churches and vertical log work of the west and of the "mast churches," of Norway. He traces the intricate ornament of this Northern culture as found in the Churches and the rozel tombs in Norway, and in the old Viking Ships. "Thus," he says, "the history of art assumes a new and wider horizon, one which might perhaps be adopted with benefit in the study of many other branches of human activity . . . Thus we shall avoid the blind alley into which we are led in the present state of education and research."

The book is a typical Batsford publication well printed, well arranged and fully illustrated and one deserving the closest study by all interested in the historic development of building in Europe.

A.S.F.

The New Interior Decoration by Dorothy Todd and Raymond Mortimer. Batsford 21s.

A great deal of interest centres round the latest development in Architecture and Interior Decoration, in Europe.

This new movement cannot be ignored and although much of it may appear at first sight somewhat bizarre to the mind accustomed to tradition nevertheless underlying it all is a sound substratum of commonsense and a desire to produce something more in harmony with our modern hygienic and scientific age.

In this volume, another excellent Batsford publication an attempt has been made by the authors to illustrate the latest development in interior decoration, furniture and textile design. For this purpose some two hundred illustrations are given representative of work carried out chiefly in France, Germany, Holland, England and America. Chapters are written on The Influence of Painting and Architecture and on Practical Methods and Features.

The work has much to commend it, more especially as it is "the first attempt in English to illustrate this style and to show its relation to the lives we lead."

Old Cottages and Farmhouses of Norfolk by C. W. Messent, A.R.I.B.A. W. W. Hunt, 14 Oxford Hill, Norwich. 10s.

In this book Mr. Messent has endeavoured to place on record the many different types of building scattered throughout Norfolk, some of which, as he says, "are fast falling into decay and are being replaced by modern and often less picturesque buildings."

The work is very fully illustrated with pen and ink sketches by the author, who has evidently devoted many years to his subject. A brief description is given of the various building materials in use, bricks, flintwork, clay lump, carstone, half timber work and weather boarding, after which a chapter is separately devoted to examples in each of these materials with many illustrations to indicate their use in building and their influence on design. A chapter devoted to dovecotes is particularly interesting as illustrating a type of building fast disappearing and as an instance of the importance attached to these buildings in the past.

Several interesting examples of dovecotes and pigeon houses occur in connection with the early homesteads at the Cape.

Old Village shops are dealt with in the final chapter of the book.

Modern Dutch Architecture by Professor J. G. Wattjes. J. Tiranti, London.

This work represents a second volume or series dealing with this subject and is very fully illustrated. The majority of buildings are of brick and show the great possibilities achieved in this material, more especially in the hands of Dutch architects who have a great tradition behind them in this respect and appreciate the value of mass, colour and texture.

Many of the buildings illustrated show the influence of the modern movement in Northern Europe and the handling of the brickwork in some of the larger buildings, more particularly in commercial and church towers deserves careful study.

Letarouilly: Edifices de Rome Moderne. J. Tiranti, London. 6 Volumes 7/6 per Volume.

The reprint in a cheap edition of this colossal work is a great boon to the practising architect. The original work is too well known to give more than a passing reference to it and the reproduction of Letarouilly's drawings on a smaller scale in this reprint have not in any way detracted from them. It is a standard work which shoud be on the bookshelves of every practising architect.

The Public Health and Housing Acts of the Union of South Africa by Manfred Nathan and Sir E. N. Thornton. Central News Agency, Johannesburg.

This publication deals with two most important Acts affecting the question of Public Health and Housing in the Union. Many sections are of particular interest to Architects and Town Planners more especially Chapter VIII of the Public Health Act which deals with Sanitation and Housing. Clause 132 of this Chapter empowers the Minister to make regulations or to confer powers on local authorities and others in respect of the sub division and general layout of land intended to be used as building sites, etc. Many efforts have been made by those interested in Town planning to draw up such regulations and have them put into force without delay in order to prevent the ghastly blunders of the past.

The authors of this work are to be congratulated on the manner in which it has been compiled and for the synopsis of these Acts which is given in their introductory chapter.

UNCONTROLLED DEVELOPMENT OF THE CITIES AND LARGER TOWNS OF THE UNION OF SOUTH AFRICA.

J. S. CLELAND, F.R.I.B.A.

The uncontrolled and more or less haphazard development of the cities and larger towns of the Union of South Africa is a matter of very grave concern, particularly for the future. With the rapid growth of the large centres, it becomes more and more imperative that the problem should be dealt with as soon as possible.

As an Architect, dealing with large projects and constantly visiting the different centres of the Union, I have been particularly interested in the growth of towns, and very distressed to see the various authorities' deplorable lack of vision in dealing with their development schemes, the carrying out of which, in many instances has been entrusted to those with but little knowledge of the subject.

Much attention is being given to this important matter of controlling the development of cities in Europe, America and other countries of the world, and very interesting articles on the development of Washington and New York, U.S.A., were given in *The American Architect,* of 20th May, 1929, and the *R.I.B.A. Journal,* of 10th August, 1929.

As Washington was, when the first development scheme was planned, to some extent in the same position as that in which the capitals of the Union are to-day, I have thought it wise to repeat portions of these articles. I suggest that Municipal authorities obtain copies of these publications which include useful plans and photographs and which indicate what is being done in other parts of the world by men of vision who have control.

The first plan of Washington was made in 1791, by P. C. L'Enfant, who had been commissioned to prepare plans for the "Federal City," by President Washington.

Notwithstanding this, for a period of a hundred years, Washington developed more or less haphazardly, there being no one authority responsible for the planning and zoning of districts and control of building design and location. The first step in correcting this was the appointment of the McMillan Commission of 1901.

The McMillan Commission consisted of four leading Architects drawn from various parts of the U.S.A., who worked for more than a year upon a report they submitted without compensation for their services.

It is interesting to note that the scheme prepared in 1791 was planned on such splendid lines that it is still suitable to meet the requirements of to-day.

In an address on the development of Washington, Mr. Milton B. Medary, F.A.I.A., stated :—

" The physical plan of a city should bear the same relation to the development of its separate elements that a constitution or character bears to the development of the social and political life of its people.

"Washington and his advisers recognised this fact and gave us a physical plan with our Constitution. Had they anticipated the *chaos and anarchy* associated with the physical development of many American cities during the period which followed the early Republic, I am inclined to think they would have provided a Government agency as guardian of the physical plan of Washington in much the same manner as the Supreme Court is called upon to measure the development of social and political institutions in terms of the Constitution.

"Such a plan must necessarily be basic and flexible enough to permit the freest development in accordance with the varying conditions of a constantly changing social order, insisting only that all individual elements of a city's growth shall be in harmony with each other and with the whole.

"The value of large and farseeing planning is by no means confined to the *aesthetic.* In considering each project in the development of a city as a part of a grand purpose, great economies result from the avoidance of overlapping interests and the consequent destruction of previous development by the encroachment of newer work, and through the conveniences of use resulting from orderly arrangement of related interests. Each step in such a program gradually but consistently leads in the direction of that true simplicity in the arrangement of the city as a whole, which can result only from a singleness of purpose behind all of its physical works.

" Without such purpose, *physical chaos* will eventually deprive a city of much of its *usefulness* as well as its *dignity.* The period of artistic illiteracy which governed the development of Washington during the period between the influence of the L'Enfant Plan and the plan of 1901, well illustrates this point, a notable example being the introduction of railroad tracks and stations in the great park designed by L'Enfant and known as the Mall. The cost and manner of correcting this mistake illustrate both the lack of economy resulting from *unguided development* and the value to a city of the orderly disposition of its utilities in their true relation to a great basic plan. The great industries of the country never hesitate to scrap entire plants, if badly planned, not for aesthetic reasons, but as a necessary measure of economy of production and maintenance, and our Universities, Hospitals and other large institutions are frequently under the same necessity.

"Huge as our country has become and accustomed as we are to large figures, we are often staggered by large plans because of the ultimate cost of their realization. The size and cost of the ultimate realization of the City of Washington as planned by L'Enfant did not seem extravagant to Washington and the group of his advisers, who dictated that plan. The infant

Republic was in no position to think of its immediate realization, but nevertheless, it was planned to be the capital of what Washington believed would be a great nation and in discussing such details of the plan as the size of the White House he stated that the plans were being made for a far distant future.

"The McMillan plan, made in 1900, is, after nearly thirty years, only partly realized. It would seem reasonable, therefore, to anticipate a period of twenty-five to fifty years in any comprehensive plans for the future and in doing so they should represent the normal annual development multiplied by twenty-five or so without implying any increase in normal average expenditure.

"This much foresight at least would be required to insure against the destruction in one decade of what had been built in an earlier one, while at the same time paving the way to ultimate results not possible in individual projects."

Taking the large centres of the Union—Cape Town, the Mother City—no co-ordinated scheme for the development of this city has been considered. The city authorities, through the City Engineer, have done a good deal of useful work in street widening to meet the increasing traffic demands.

The convenient and beautiful de Waal Drive has been made to link up with Rhodes Drive, which leads through the magnificent Groote Schuur Estate, a wonderful heritage left to the nation by that far seeing man Rhodes.

This scheme was carried out by the Provincial Government. As against this, however, the splendid mountain side is rapidly being covered with townships and houses of the speculative type and the trees are gradually disappearing. The city itself is becoming congested through the want of main trunk traffic ways; and large and lofty buildings, each with no relation to the other, are being erected everywhere, and so gradually the usefulness, dignity and beauty of Cape Town is disappearing.

Muizenberg is a very sad example of lack of co-ordination.

Some scheme of co-operation as between the Government, the Railway and the city authorities, whose interests are so interwoven, and some form of legislation for control is urgently necessary.

Johannesburg is in even worse case. There are practically no open squares and the congestion is becoming more and more serious with seemingly no great interest being taken in the matter, although I understand the City Authorities have been investigating the possibilities of trunk traffic ways.

Starting as a mining town some forty-six years back, and with very rapid development, it was perhaps understandable in the earlier years, but a great deal might have been done in the City itself had the matter been taken in hand some twenty years ago. The suburbs are on fairly sound lines.

Pretoria is smaller but is rapidly going the way of its larger neighbour.

The recent controversy over the site for the New Town Hall indicates the urgent need for a survey and a scheme, and as a citizen of Pretoria and an Architect, I am inclined to agree that the site chosen is not the most suitable, and I certainly do not consider it large enough for the important building proposed to be erected thereon, as it is essential that a fine layout should be provided for, so that the whole is worthy of the Administrative Capital of the Union.

Congestion in the centre of the Town is becoming more and more acute and the need for diagonal roads serving the different sections of the Town is very necessary.

Government and Railway interests loom very largely here as in Cape Town. The Town Clerk here is alive to the need for something being done to remedy the present evil and a small unofficial body has recently been formed consisting of the Town Clerk, Town Engineer, four Architects of the Town and myself. With no authority, however, I am afraid nothing much can be done.

Durban, has, in many ways, been very progressive but the need is here too for a comprehensive scheme with the best brains behind it.

The centre of the Town and the Beach are becoming very congested and the recent additional memorial on the Town Square seems to completely block it up.

The Railway Authorities must erect a new station here shortly and this should be an opportunity with joint effort to open up the Town at this point.

Bloemfontein, Kimberley, East London and Port Elizabeth are on fairly progressive lines but the same necessity for proper development on co-ordinated lines is required.

East London has one of the finest beach fronts in the Union, but they have not made the best of it.

In a lesser degree there is need for much more care in the development of the smaller towns.

The above brief details of the position clearly show the need of a broader outlook on the part of the thinking people of the Union. It is urged that business and the making of money are not the only claims we have on our time and energy, but that a very grave responsibility lies with the people of this magnificent country in their neglect to advance and beautify the towns they live in. The position in regard to convenience and transport facilities is becoming more difficult and it is inevitable that the longer the question of proper development is delayed, the heavier the cost involved will be to the authorities concerned.

It is not suggested that immediate realization is required and that the present generation should bear the whole cost, but we have a duty to the future generation not to leave the responsibility of the whole burden to them.

Many proposals have been put forward to deal with the position and it is certain that some power of control would be required so that some legislation would be necessary. The appointment of a Commission has been suggested to go into the whole question but the members of such a Commission would have to be very carefully chosen.

A suggested procedure which has possibilities would be the appointment by the four large Towns of the Union of a City or Town Architect with ability of a high order.

It would be an essential that these Architects be experienced in Town development, planning and design, and it is considered it would be possible to get suitable men in Europe or America.

These Architects, whilst under the control of the City or Town Authorities would form the Architectural side of any Board or Commission arranged for.

The duty of each Architect would be primarily to his own City or Town Authority, but with important schemes of development he would have the benefit for consultation with the Architects of the other Town Authorities, as well as, of course, the Town Engineer of his own Town and also with any competent local Architects, interested and willing to help. (At Washington experienced Architects from Chicago and other places gave their services without fee.)

It would have to be very definitely laid down that there should be consultation between the four City or Town Architects with all schemes.

Apart from this inter Town discussion, they would meet say, every three months (or as decided) at one of the centres, also to be decided, in the form of a Board or Commission and this would consist of the Mayor of the centre concerned, or his representative, chosen for his interest, broad outlook and business capacity, as Chairman: the Town Clerk, the Town Engineer, the Town Architect and the Architects of the other centres. Schemes for the particular centre in which the Board or Commission is sitting, would be discussed and settled for presentation to the Authorities of that centre.

The Government has big interests in many of the Towns of the Union and it is thought that it should have representation at these meetings.

The Secretary for Public Works is keenly interested in this question and could render invaluable aid.

In the first instance it is suggested that a meeting of representatives of the four centres concerned (Cape Town, Johannesburg, Durban and Pretoria), be called to discuss and settle the general procedure, powers of control, legislation, etc.

The question of the smaller towns is also important, but it is thought that if the scheme for the larger centres could be brought into being, the Board or Commission would be able to evolve some scheme for the smaller centres.

I cannot too strongly again emphasize how important the matter is and how essential it is that there should be no further delay in tackling the problem.

CLAY PRODUCTS IN SOUTH AFRICA.

With the object of fostering interest in the production and manufacture of building materials in South Africa it is intended to publish a series of articles on the subject commencing with Clay Products of South Africa.

The development of the brick making industry in South Africa has been extremely rapid especially during the past twenty-five years, and the manufacture of tiles is comparatively recent. Drain pipes of the finest quality are now being produced and it is gratifying to see that steady development and progress are being made in the manufacture of pottery, glazed ware and decorated faience work.

South Africa possesses some excellent clays which might well be more fully investigated and tested.

It is perhaps unfortunate that in the size of bricks being manufactured the makers have not followed the standard sizes laid down and being used in England to-day, or even better the smaller sizes commonly used in Holland. This is a matter that might well be taken up by the Architectural profession as a whole, as by co-operative action much might be achieved.

The question of colour, texture and quality generally of bricks as required by Architects in their work might be more fully investigated as at present it is very difficult to obtain exactly what one requires when designing a building, and the brickmakers themselves do not appear to have fully investigated this question as far as Architects are concerned.

We publish an address recently given by Mr. Guy Dawber, P.P.R.I.B.A., to the Brickmakers Federation in England, which is of particular interest on this subject.

It is intended to publish as fully as possible details of the various clay products of this country with photographs of the works and, if possible, the processes of manufacture, together with any analyses and tests that may be available.

This series will be followed by one on the Building Stones of South Africa.

ADDRESS BY Mr. GUY DAWBER, A.R.A. F.R.I.B.A., F.S.A.

At the Luncheon following the annual meeting, of the Brickmakers Federation, Mr. H. J. Lawrence (President) occupied the chair.

After the toast of "The King" had been honoured, the Chairman said, having held their Annual Meeting that day, and enjoyed a very pleasant luncheon, they had the pleasure and honour of having with them a distinguished guest in the person of Mr. Guy Dawber, from whom those present hoped to hear something of the views of the other side, that of the Architect. To his mind there was no material so suitable for building as bricks, and he hoped in the future as in the past that they might continue to see good old English brick buildings erected in the good old English style. Without any further remarks, he would call upon Mr. Dawber to address them.

Mr. Guy Dawber, A.R.A., F.R.I.B.A, F.S.A., in response said when they did him the honour of asking him to this luncheon or rather when Mr. Montgomery did, he was under the impression that it was going to be a small luncheon with a small number of brickmakers, but instead of this he was terrified to find that he had to face the fire of the members of a whole Federation. He had been asked to talk about the relations between the architect and the brickmaker. He thought that could be answered simply in a few words. To his knowledge the relations between the two had been of the most friendly character, and he hoped it would always continue to exist. As far as he was personally concerned, he did not often come into close contact with the manufacturer. So long as the bricks supplied were satisfactory, he and his fellow architects did not take much interest in the brickmaker.

THE CHARM OF BRICKWORK.

He thought they would all agree that there was a most peculiar charm about brickwork. Personally, he liked building in bricks before anything—one could secure more satisfactory results in a very fine piece of brickwork than in any other material. He was in Norfolk recently, and went to see some of those fine old brick buildings for which the county was famous. What struck him most in looking at them was that those old bricks were as hard and sound as any that were turned out at the present time. Why could they not get that sort of brick to-day? His own experience had been that when special bricks were wanted, he had to go to a great deal of trouble to get them. In East Anglia and some other clay districts, all the bricks seemed to be made from one bed. If they had to pull down any of those buildings to which he had referred, they would find exactly the same kind of brick used for facings as for the backings. He had often wondered why the same procedure in building was not carried out to-day. The present practice seemed to be to get one special brick for the exterior, and an inferior or common one for the backing.

HAS THE QUALITY OF BRICKS DETERIORATED?

He was going to ask them to answer the following question. Old seventeenth and eighteenth Century buildings with nine inch brick walls had stood the strain and wear and tear for 200 years without letting wet through, and why was it that to-day no one would think of building a nine inch wall? He had been told that one reason was that in the olden days bricks were burnt by means of wood. As a boy he used to watch bricks being made in the neighbourhood of his home. They used to get the clay in the summer time, let it lie throughout the winter, and in spring churn it up in a mill worked by a horse. The bricks were then made in a mould by hand, and when burnt were perfectly sound.

TRIBUTE TO MIDLAND BRICKS.

Talking of the present-day product, there was a wonderful brick to be found throughout the Midland Counties; they were thinnish bricks, brindle coloured, and as hard as iron. That type of brick could be found in extensive use in such towns as Liverpool, Manchester, Oldham; in fact, in all the northern towns. The bricks were of delightful texture and extremely hard. On the Continent, from right up in the north in the Hanseatic League towns and Stockholm, they saw bricks of much greater thickness than the English brick. In the Midlands and in Italy they found a much thinner brick, almost a tile, yet as hard as iron. Those questions always seemed difficult for him to understand. Why was it that the bricks in use abroad and in the North of England were so much harder than the bricks one seemed to get to-day? The charm of a good brick wall lay in the lovely play of light and shade on it, which it was impossible to get if the surface and texture of the brick was even. He thought the disrepute that brick had sometimes fallen into was due to its machine-like regularity. He always felt it was a great mistake that such common bricks should be used at the present time all over England for building small houses.

BAD COMMON BRICKS.

He had no hesitation in saying that, in his opinion, the common bricks which were being used to-day had done more to spoil the beauty and charm of the countryside than anything else. Why was it that brickmakers with all the knowledge at their command could not turn out a common brick of decent quality of rough texture and uneven shape? He suggested that they should make an earnest endeavour to manufacture that sort of brick instead of the dreadful type so extensively used to-day. Continuing, Mr. Dawber said he recently had occasion to visit a little village in which there were some fine eighteenth Century cottages with nine inch walls. Those cottages had been built of local bricks because there were no means of obtaining others. The bricks were all of a beautiful colour and texture. Side by side with those beautiful old cottages he discovered two of those horrible abortions to which he had made reference, the brickwork of which was a perfect disgrace. He felt that if brickmakers were to get together they might by some means or other produce a better brick for average use in the suburbs of London and elsewhere than was provided at present. If they could do this, their contribution to the Preservation of Rural England, would be of real value.

LONDON REVERTING TO BRICK.

He was glad to see that throughout London they were gradually getting back to the use of brick instead of stone. There were parts of London, in the squares and public places, where the use of brickwork was most valuable, and was the most suitable material. Good London bricks did not take the dirt or discoloration or show the marks of time nearly as much as did stonework. Portland stone after a period of about one hundred years was a most delightful material—but Portland stone for the first thirty years of its life was an exceedingly ugly material when seen in the streets of London. The same remarks did not apply to brick. If they were to examine the old brickwork, they would find it still retained its delightful freshness of colour.

Reverting back to the present, he was of the opinion that if it was essential that the backing brick and the facing brick should be of different material, they should put bricks on the market that would go one with the other in thickness. He would like them, if they could, to take up the question of the common brick, and really press the matter forward. He thought all brickmakers throughout the country should

give the matter their very serious consideration, and endeavour to make a better brick for the cheaper buildings as their contribution to the Preservation of the Countryside. In conclusion, he thanked them for doing him the honour of inviting him to be present at their most enjoyable luncheon.

DISCUSSION.

The Chairman said he felt they ought to pass a very hearty vote of thanks to Mr. Dawber for the very pleasing and illuminating address he had given them. There were one or two points Mr. Dawber had raised which he desired to reply to. One point in particular was that Mr. Dawber thought the good old fashioned bricks were made by being burnt with wood. In answer to that he would inform their guest that at one of his firm's works they were tenants of H.M. Commissioners of Woods and Forests, and part of their agreement was they were permitted to make use of the tops of firwood for the purpose of brick-making. They had used these for a number of years, but the result was that some bricks were burnt all right, but some were not, the latter being unfit to put on the market. With regard to the depressions that were sometimes to be found in brickwork, this was largely the result of age. As to the sandfaced bricks in use at the present time, they were looked upon as things of beauty. They did not shrink and, moreover, they were perfectly dry. The reason why brickmakers did not send out bricks which had boils or blisters on them was that, as a rule, they would be turned down as bad bricks. His firm made them and would be pleased to dispose of them at a reduced price! They did try and did make the finest sand-faced brick that it was possible to procure. He believed that if Mr. Dawber could by any fortunate circumstance return to this sphere one hundred or two hundred years hence he would find that the present-day brick could be found to stand better than those made in the olden days. He thought that the brick of to-day was more solid and would have a greater life than bricks made, say, one hundred and fifty to two hundred years ago. With regard to the hard bricks of the North, in the North they could not make a sand-faced brick, apparently they had not the right sort of clay available.

Mr. W. H. Collier remarked that he was particularly interested in Mr. Dawber's remarks about the special sized brick Mr. Dawber had stated there was difficulty in getting the old rough work. His own experience had been on many good jobs that when hand-made bricks were sent out the Clerk of the Works or the Contractor who was not educated up to the point of the architect, finding rough bricks had been received, would send the whole of the bricks back. He could show at the present moment work that had been executed where rough bricks known as "cripples" were used. If such as these were sent on to a job they would be promptly returned. They could, and did, produce bricks near to, and if anything, better than the old-world bricks, but they were forbidden to send them out.

Mr. Horace Boot said, as one of the brickmakers who was responsible for making almost every kind of brick in the country, he was only too pleased to hear Mr. Guy Dawber's remarks. No brickmaker made common bricks because he desired to do so, and if they could only be assured that Mr. Dawber would be the architect for all the buildings put up in this country, they would immediately reconstruct their works in an endeavour to produce the desired type of brick. As they were all aware, a very large part of London had been built in stock bricks, and perhaps there was no other brick in existence which had the same wearing quality. Personally, he was not particularly fond of this brick from an artistic point of view, but he thought the stock brick was worthy of the attention of the architect. If Mr. Guy Dawber and the Institute which he so ably represented as its President two years ago could impress on the Government in their housing schemes the necessity of using decent bricks rather than the foreign ones so largely specified by public authorities, they would think he had done a great work in beautifying the countryside. They as brickmakers had done all they could to try and prevent the enormous influx of those bricks into this country.

Mr. D. H. Whitehouse remarked that he did not agree with Mr. Boot about the stock brick, because the stock brick was a beautiful brick. When he meant a stock brick he meant a Sussex stock brick. The Sussex stock brick could be obtained in almost every variety and texture. At the present moment he was making a million two inch bricks for a big contract in London.

Mr. Sydney A. Wright said he was a very small brickmaker, but he would like to tell them his experience with a housing scheme close to Reading. For its housing scheme he received an order for a quarter of a million bricks, but after the first few loads had been sent in, to his surprise he received a claim. In consequence of this he said he went over to Reading to see the builder, and whilst there took an opportunity of going on to the job to see some of the brickwork. Admittedly they were not the best bricks as far as the average was concerned, because the best colours, as they knew, were made in rather less than nine inch and rather less than four and a half inch. When he went over with the contractor and pointed out to him that some of the best facing bricks were put on the inside walls, he asked the reason why? The reply he had received was to the effect that the architect would not allow them to be put on the outside because he wanted uniformity of colour on the face of the building. Mr. Wright said as a result he lost an order of from 150,000 to 200,000 bricks.

The Chairman remarked that some time ago he had an enquiry from America for 200,000 bricks. As a result he endeavoured to find out the type of brick that was required. This American was intending to build a large store in New York. He was informed that the type of brick required was the beautiful black brick that was to be found in London buildings. They turned out to be stock bricks which had become entirely black.

MR. DAWBER'S RESPONSE.

Mr. Dawber, in responding, thanked the company for the very kind things they had said about bricks, and took the opportunity of thanking Mr. Montgomery for so kindly inviting him to their luncheon. He also desired to compliment him on the Brick Builder, which he and many other architects thought was a most valuable contribution to the literature of building.

THE CORONATION BRICK AND TILE CO., LTD., DURBAN.

The plant of The Coronation Brick and Tile Co., Ltd., consists of two factories, No. 1 Works being situated at Umgeni and No. 2 Works at Red Hill, five and seven miles respectively from Durban.

At No. 2 Works the product is bricks—common building, special moulded (bullnose, splayed, etc.), and plain and chequered pavers.

At No. 1 Works are made common building bricks, a high class facing brick, Klompje bricks for building fireplaces, etc., and roofing tiles in six varieties, viz., Marseilles, Coronations, Cordova, Italian, Broseley and Pantile, together with Ridging of various types and paving Quarries. There are also a number of hand-moulded goods made at No. 1 Works, such as Junctions for ridging, Kerbing for Klompje fireplaces, Chimney Pots, etc., etc.

The material from which all the different articles are made is a shale, varying in colour from brown to black, and considerable judgment is required in grading and mixing the different kinds of shale, as this has a very marked effect on the firing of the goods. It is very easy to ruin a kiln of bricks if an excess of say hard black shale is present.

In making bricks the shale is first crushed, then ground into a powder in revolving pan mills and screened, the fine material being fed to the brick-making machine. The type of machine used here for making bricks is what is known as the stiff plastic process. The ground material in a dry state is fed into a mixer where the necessary small quantity of water is added, from the mixer it passes into a pug mill where it gets a pretty thorough kneading, and is pressed into moulds on a revolving table. When the table comes to a certain position the bricks are lifted out and passed under a press, where they are subjected to a very heavy pressure.

If the bricks are to be used as commons, they are put directly from the machine into kilns of the continuous or Hoffmann type, where they are burned.

To produce a first-class facing brick a different treatment is required after leaving the machines, and with this object in view a dryer and special type of kiln have been designed which have been in operation now for some time and have given excellent results.

The dryer is of the humidity type, consisting of tunnels 107 feet long. There are fifteen tunnels in the brick dryer, which can comfortably dry 60,000 bricks per day.

Two sources of heat are used to operate the dryer, the first being from the gases of combustion from the kilns when they are under fire, these hot gases are taken through flues under each tunnel, where they give up a large proportion of their heat by radiation into the tunnel; the flue gases do not, of course, come into contact with the bricks to be dried, this would be fatal, and result in badly scummed goods. As heat by itself will not evaporate and carry off the moisture it is necessary to have an air supply, hot air being preferable. This is obtained by drawing air through a kiln after the firing is finished, but which has a very large amount of available heat in the mass of red hot bricks which it contains, the air is pre-heated in passing through the kiln, and passed through the drying tunnels amongst the bricks, thereby carrying off the moisture with it; as this heated air is pure and contains no objectionable gases, it is impossible for it to scum or discolour the bricks in any way.

The temperature of the air is maintained at 250°F. at the hot end of the tunnels, at the other end of the tunnel it is reduced to atmospheric temperature and is thoroughly saturated. This gives a highly humidified condition of the tunnel at the charging end where the bricks are put in.

The fan operating this hot air system can deliver 38,000 cubic feet of air per minute.

The bricks come from the machines packed on special dryer cars each holding about 500, and as stated above enter the drying tunnels at the cool end, and gradually pass through into a dryer and warmer atmosphere, eventually coming out at the other end hot and dry.

The time taken for a truck to pass from one end to the other is from thirty to thirty-six hours.

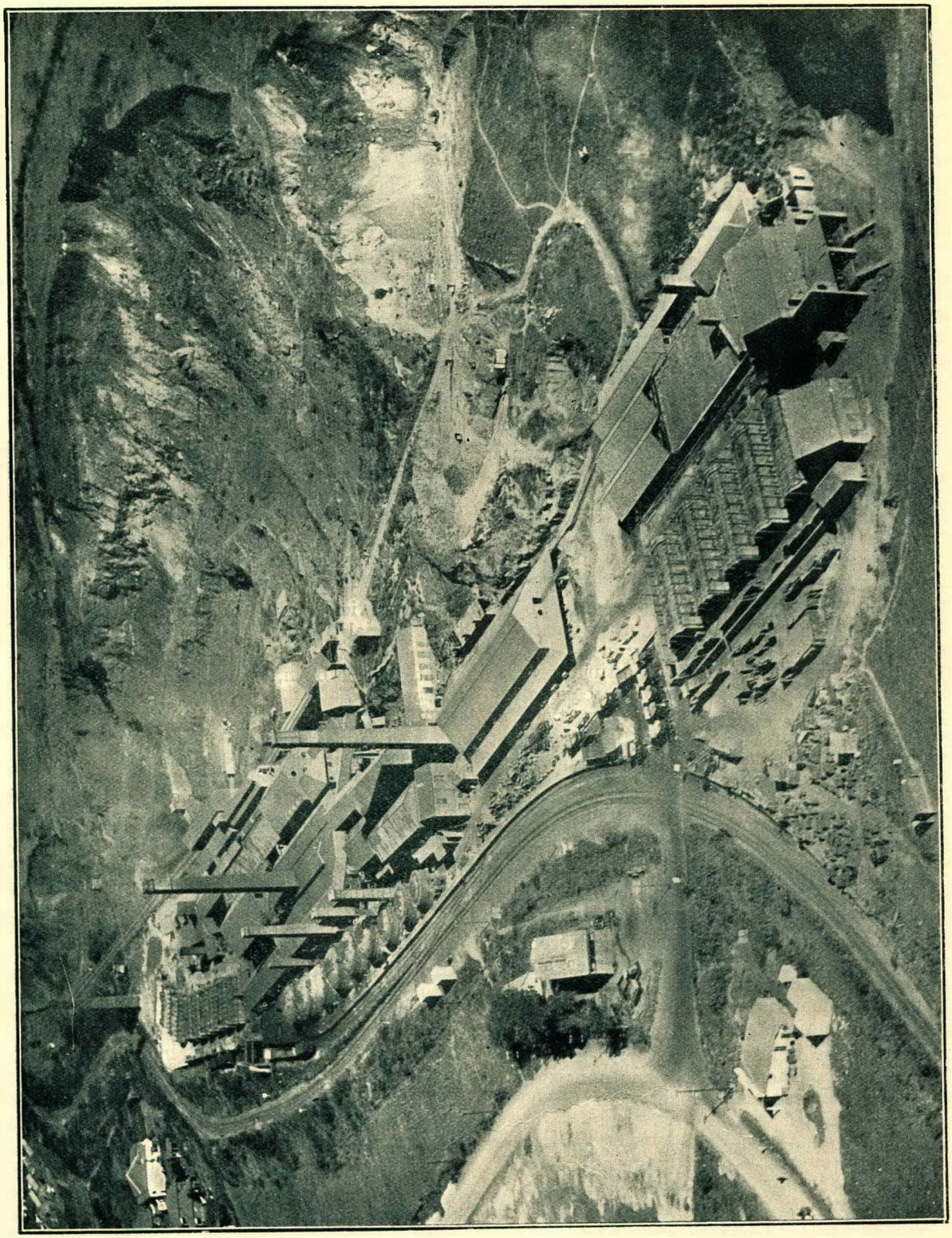
The dried bricks are now taken on the dryer cars to a special type of kiln in which they are packed; each kiln holds 70,000 bricks and takes from six to eight days to burn, depending on the class of shale in the brick.

The kilns are known as Rectangular Down-draught, which are quite a usual type, but those which have been designed and built here have a special system of flues, which enable the fire to be brought to any part as occasion demands, for instance the kiln when under fire might shew up to be too hot in the centre, with ends requiring more heat, this can quite easily be done by the adjustment of certain dampers controlling the draught, and diverting the heat where required. Draught gauges reading to 1/100th part of an inch are fitted to each kiln and the temperatures are controlled and recorded by platinum electric pyrometers; the finishing temperature of the kiln is 1,900° Fahrenheit.

Bricks dried and burned in this manner are very hard and sound, as the temperature to which they are taken will indicate; they are also perfectly free from scumming of any kind, and have a delightfully clean, crisp and rich red colour, being ideal for facework.

There are nine brick machines at No. 1 Works and seven at No. 2 Works capable of a combined output of 200,000 bricks per day of nine hours.

The making of roofing tiles is quite a different process to that employed in making bricks, shale is again the raw material, but it has to be much more carefully graded. It is first crushed and ground in four nine-foot revolving pan mills, but has to be ground very much finer, and passes through a screen having one hundred and forty-four holes to the square inch.



Umgeni.

Coronation Brick and Tile Co., Works.

To ensure a uniform mixture, all the screens are arranged over one conveyor belt which picks up the finely ground shale and deposits it at the bottom of an elevator, this in turn delivers it into a long worm conveyor, where it gets a further thorough mixing, and is eventually deposited on to a storage floor.

This is the end of the first stage, the material being in the form of a fine dry powder.

It has now to be made into a thoroughly plastic state; in other words it has to be made into what is usually understood as clay.

To accomplish this, a quantity of the dry powdered shale is fed into a wet grinding pan, where the correct quantity of water is added, and ground into the shale dust, thus giving it its first stage of plasticity.

These machines are very much like the dry grinding pans only smaller, the dry pans being nine feet in diameter, the wet pans six feet diameter. The pans revolve on a vertical shaft, and the two grinding rollers revolve inside the pan on a horizontal shaft, which thus has not only a grinding but a rubbing action on the material.

At present six of these wet pans are installed.

The clay is taken from the pans and put through a pair of tempering rollers, and is deposited on to a conveyor belt which takes it to another double set of tempering rollers.

Each pair of these rollers runs at a slightly different speed; this has the effect of rubbing the clay together as well as squeezing it together. The clay issues from them in the form of a sheet twenty-four inches wide by about quarter inch thick, and is dropped into a double shafted knife mixer. This is a trough seven feet long with two horizontal shafts running side by side, each shaft is fitted with knives throughout their total length. The clay in passing through this receives a very effective mixing and kneading.

It now enters an augur pugmill where it is compressed into a solid mass, and is ejected through a mouth-piece in a continuous column. For making Marseilles or Coronation tiles the mouth-piece measures ten inches by five inches and has four wires stretched across it which divides the clay column in five layers measuring ten inches by one inch, the continuous column now passes through a revolving cutting machine which cuts it into suitable lengths, forming groups of five tile bats or slabs. These are carried on a conveyor to a storage floor where they are stacked and allowed to stand for four days to mature, after which they can be pressed into the various types of roofing tiles on friction driven screw presses. Each tile is taken from the press on a wooden pallet, trimmed, and placed on racks on a dryer car, which when loaded up is taken to the dryer.

The dryer and kilns used for tiles, klompjes, paving quarries and ridging, are worked on exactly the same principle as described for facing bricks. The dryer in this case has twelve tunnels and is worked at a lower temperature, the hot air supply being maintained at 110° F.

The kiln temperatures for tiles are very carefully watched, each kiln having four electrical pyrometers installed, two on the top and two on the bottom.

The time for burning a kiln of tiles is from four to five days.

The whole of the two plants are driven by electric power supplied by the Durban Corporation at six thousand six hundred volts, which is transformed down to a working pressure of five hundred volts.

Practically every machine has its own individual motor, of which there are about one hundred and ninety in use, aggregating a total horsepower of three thousand one hundred.

A description of these Works would be incomplete without some reference being made to the various workshops which are maintained to keep this large plant going.

It will be readily understood that in an industry of this nature, using an abrasive raw material, and with an output of about twenty thousand tons per month, the amount of maintenance required is very considerable, and requires the services of quite a large staff of skilled artisans in the various trades, such as bricklayers, carpenters, patternmakers, blacksmiths, fitters and turners, and the workshops for the different trades are all equipped with up-to-date machine tools; in the mechanical engineering shop are to be seen some of the most modern machine tools procurable.

All the various parts required for the upkeep of the plant are made on the spot, and quite a number of complete machines have been made throughout.

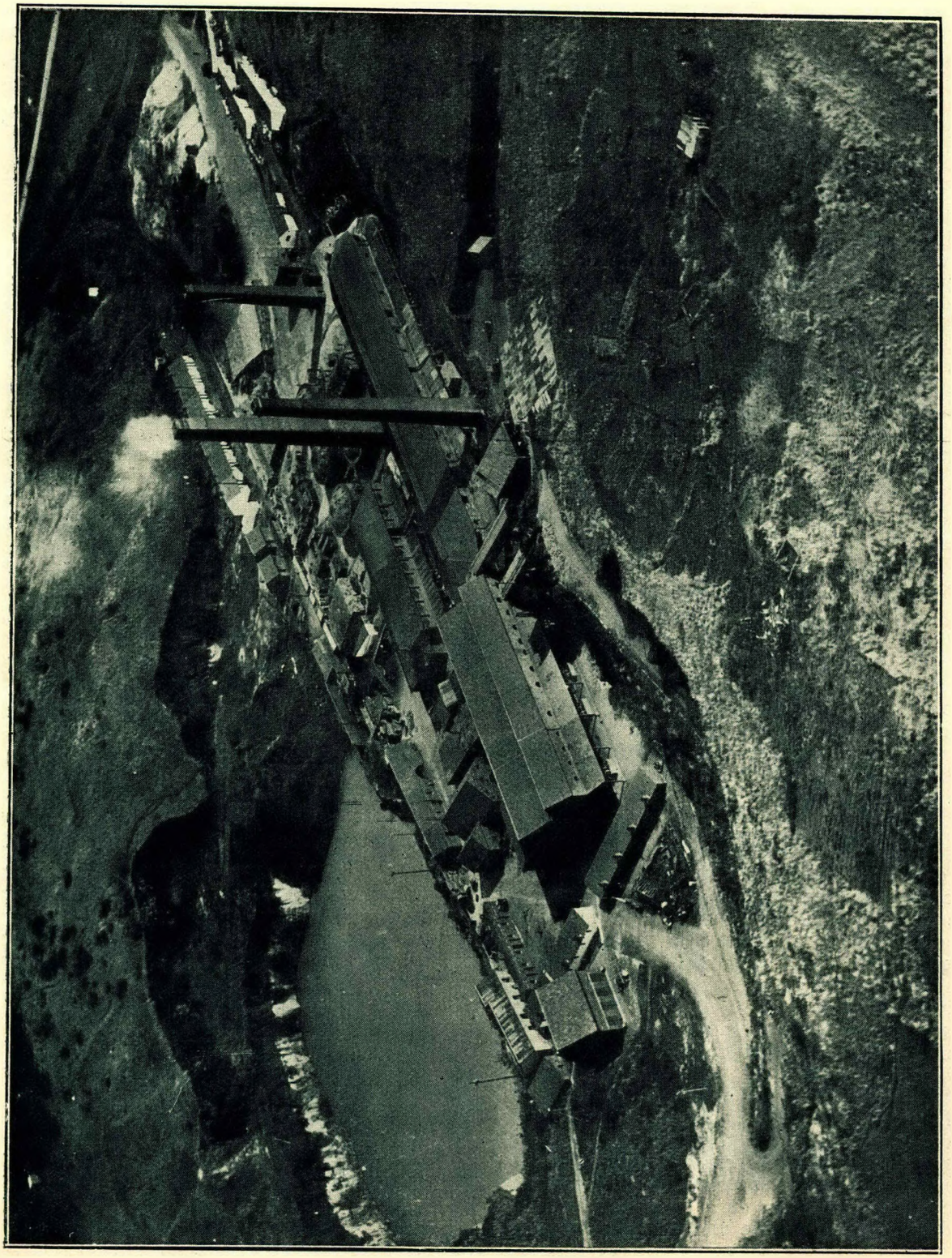
CHEMICAL ANALYSIS.

No. 1.

	Before burning.	After burning.
Insoluble Silica	33.96	37.26
Soluble Silica	27.33	29.81
Alumina	23.12	25.29
Peroxide of Iron	5.32	5.83
Lime	0.29	0.32
Magnesia	0.60	0.65
Alkalies	0.77	0.84
Sulphuric Oxide	traces	traces
Loss on ignition	8.61	—
	100.00	100.00

No. 2.

	Before burning.	After burning.
Insoluble Silica	31.49	34.59
Soluble Silica	24.33	26.73
Alumina	20.58	22.60
Peroxide of Iron	12.95	14.22
Lime	0.33	0.36
Magnesia	0.07	0.08
Alkalies	1.03	1.13
Sulphuric Oxide	0.27	0.29
Loss on ignition	8.95	—
	100.00	100.00



Redhill.

Coronation Brick and Tile Co., Works.

	No. 3. Before burning.	After burning.
Insoluble Silica	39.45	45.96
Soluble Silica	20.57	23.79
Alumina	17.40	20.13
Peroxide of Iron	6.45	7.46
Lime	0.70	0.83
Magnesia	0.46	0.53
Alkalies	1.17	1.37
Sulphuric Oxide	0.26	0.33
Loss on ignition	13.54	—
	100.00	100.00

	No. 4. Before burning.	After burning.
Insoluble Silica	40.46	41.93
Soluble Silica	21.94	22.74
Alumina	18.20	18.86
Peroxide of Iron	8.92	9.24
Lime	0.35	0.36
Magnesia	1.06	1.09
Alkalies	2.45	2.54
Sulphuric Oxide	3.10	3.24
Loss on ignition	3.52	—
	100.00	100.00

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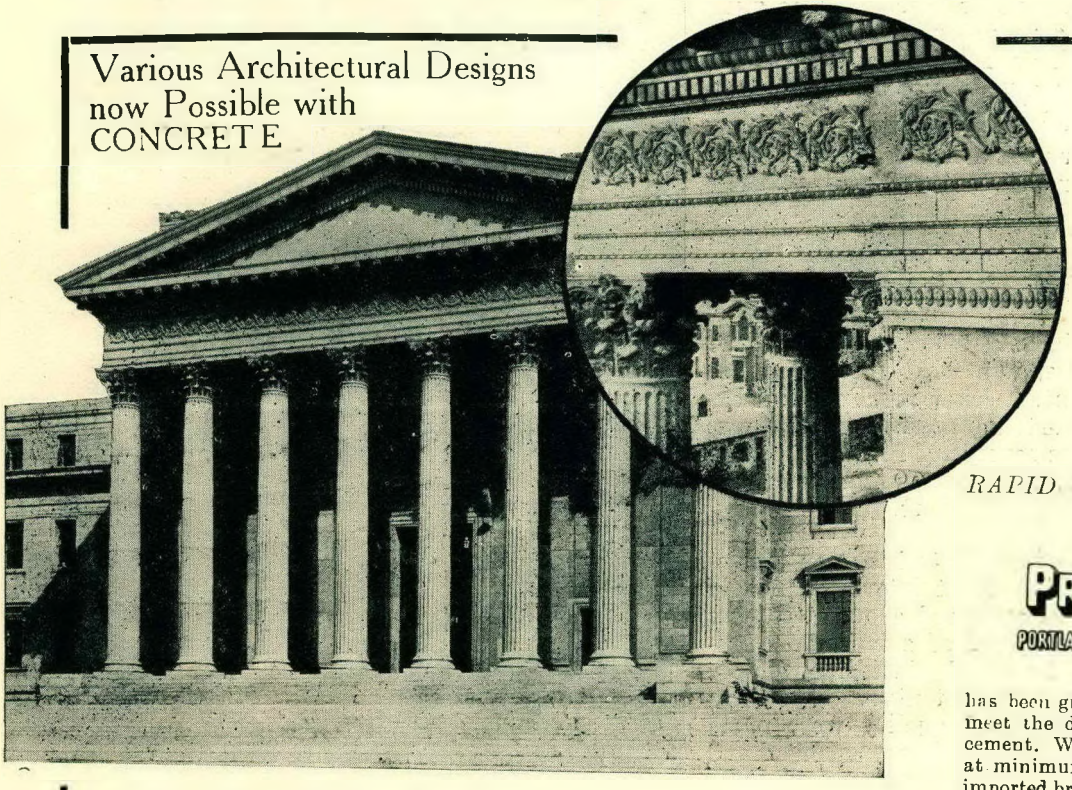

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WALL TEXTURES.

The Jazz School, the Old World Charm School, the Modern School, these are the three groups into which styles in textured wall finishes may be roughly divided. These groups are related to corresponding changes in interior decoration fashions, and constitute distinct phases in the artistic development of plastic paints.

Plastic paint in the first place was the outcome of the desire to produce an individual type of wall finish which could not be standardized, or turned out by a machine, but which when applied would result in a surface of craftsmanlike feeling and originality, something in other words that would be different.

Of course for many years, painters of what we call the old school had been using compositions like Swedish putty and English compo to produce textured wall finishes but only on occasional jobs. The stuff was hard to work and spread, and the result was seldom uniform. It took an exceptionally persevering craftsman to decorate a wall successfully enough to warrant all the struggle involved.

We can even go as far back as the dawn of history, and find that the cavemen had textured walls of their huts with mud and clay and as Mr. Vanderwalker points out in his book " Interior Wall Decoration," we find on the walls of the tomb of King Tut and others, plastic colour coats which have endured for centuries.

The idea which lay back of all these efforts, the texturing of wall surfaces, was what interested the originators of plastic paint. After much careful experimentation on their part, a texture material was finally produced which was capable of furnishing satisfactory decorative results with the minimum expenditure of time, labour cost, and effort.

Plastic paint made an immediate hit upon its entrance into the paint field. What interested people most about it when it first appeared about 1911, was the fact that when applied, a raised surface was produced. Its projections, its third dimension, simply fascinated them. Therefore the textures that most expressed this third dimensional quality were much in vogue at that time. They were heavy sponged and swirled textures. Every square inch was as busy with ridges and hummocks as it could possibly be. Everyone has textures of this type as they are in great demand; in other words the Jazz School is still going strong.

The next phase of fashion in decoration that had a marked effect upon the style of plastic paint finishes and what was partly accountable for the phenomenal growth in its use was the dramatic interpretation of the Spanish type interior in America, or what building magazines call "Old World Charm." Coral Gables and the building boom in Florida, increased the vogue for everything Spanish.



It was soon discovered that the old-time plaster wall, was too dead in surface, too neutral in colour to give the right atmosphere to such exotic exteriors. The crisp, picturesque textures procurable with plastic paints, the extreme ease with which it could be coloured or glazed in a never ending variety of effects, made it a godsend to the ambitious painter or decorator.

In spite of being rather overdue on the whole, the adoption of the free rendering of the Spanish style in America, has been the means of adding a much needed variety to wall surfaces, as well as to building materials in general. We find plastic paint applied less often in the mechanical swirl effect and more in picturesque imitation of the roughly hand-trowelled walls of the past. Such walls form irresistibly rich backgrounds for the carved work, wrought iron, and heavy tapestry, as seen particularly in old Dutch houses. It should be mentioned in passing, that in the zeal to get an old world charm into plastic wall surfaces, injustice was often done to the masons of ancient times. They did not do their jobs nearly as badly as we like to think they did. It is rather disappointing to see how smoothly most of the old plaster walls are finished off in Italy. Surfaces of these walls in general approximate the waterfloat finish, rather than the exaggeratedly smeared and trowelled effects so often seen in modern "antique" walls in America and England. Variations in old plaster walls are often brought in by mottled discoloration resulting from the dirt and water stains of ages, often very lovely in effect. Such colouring is easily procurable by tinting the glaze especially prepared for plastic paints, several different shades, spotting it on the wall, then blending the different colours together by wiping. However, the important point as we said before, is to get the right Mediterranean atmosphere; and plastic paint rough or smooth, was the important ingredient in getting this atmosphere.

Now, to-day, we find a modern school of plastic paint in process of evolution. In spite of the fact that the roughly swirled texture has gone out, and the Spanish craze has reached its apex in America, we find with the moderns that the plastic paint is more popular than ever. The list of distinguished architects and well known painters and decorators who have been won over to the cause of plastic paint, is growing every day. The textured wall surface fills a need, and it has made an enviable place for itself in the field of interior decoration.

In American large cities, in the most sophisticated of the exhibitions of modern rooms, plastic paint is selected to set the style and quality in wall treatments. For instance, P. T. Frankl, of New York, a style leader in modern decoration, and the designer of the skyscraper bookcase, used plastic paint in his galleries as backgrounds for his furniture. Texture has come to stay; people have found that it has that indescribable "It" which adds charm to any background.

Now, what is the viewpoint of the decorator of the modern school in applying plastic paint as compared with the decorator of the jazz school who endeavoured to elaborate the surface to the nth degree,

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or that of the decorator of the old world charm school who tried to reproduce period effects ?

The decorator of the modern school is interested primarily in making a happy ensemble of the walls, floor, ceiling, trim, furniture, hangings and decorations of the interior in question.

He has found that the treatment of the walls is a matter of first importance in bringing all these different elements together. Is the room a large one with simple rather heavy furniture of oiled natural wood and are the draperies in this room a heavy striped linen in warm rich colours ? Then the wall surface can be swept in flattened planes with a large trowel or triangle and glazed to harmonize with the furniture.

Is the room a small one with delicate furniture lacquered in green and silver with hangings of the sheerest voile in shades of apricot and green ? Then the wall can be textured lighty with the brush or floated smooth and glazed pale apricot. No matter what the style of the interior, a special texture, especially coloured can be found to suit it.

The truly modern painter or decorator has become texture conscious as he has become colour conscious. Therefore he finds in the freedom which plastic paints give him to adapt to wall surface both in texture and colour to a definite decorative scheme an indispensable ally in working out arrangements that are distinctive.

VACUUM TANKS AND SEWERAGE.

13/9/29.

The Works Committee of the City Council has decided that the installation of vacuum tanks be not agreed to in sewerable areas unless the owner of the property signs an undertaking that he understands it is the intention of the Council to instal sewerage in the district, and that when this is done he will be called upon to discontinue the use of the vacuum tank and connect the premises to the sewer.

It is the intention of the City Engineer's Department, in future, to notify the owners, installing vacuum tank systems on their property, in terms of the above.

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