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A CONTEMPORARY CITY, JOHANNESBURG

Illustration from The "Art
of Architecture" Exhibition.
Photograph, Rand Daily Mail.

EDITORIAL

An advertisement appearing in a Johannesburg evening paper reads thus:

THE INSTITUTE OF SOUTH
AFRICAN ARCHITECTS. THE
TRANSCAAL PROVINCIAL INSTITUTE
OF ARCHITECTS AND THE
WITWATERSRAND UNIVERSITY
STUDENTS ARCHITECTURAL
SOCIETY

Present an

EXHIBITION THE ART OF ARCHITECTURE ESCOM HOUSE

HALL OF ACHIEVEMENT
OPEN DAILY 9 a.m. to 10 p.m.
MON., SEPT. 15—SAT., SEPT. 20

Not mentioned is the series of lectures to be held in conjunction with the exhibition—and as little more than the subjects are known at present, and as the matter in full will be reported in a subsequent issue, it will receive no further mention here. However the photographic material, which is the substance of the exhibition, can never be reproduced. It is to be hoped, therefore, that members will attend the exhibition. When quality has received its due, there remains the effect, the visual effect, of quantity—and this exhibition is profusely illustrated. There is textual matter in plenty too; the illustrations, as it happens, are adapted to the text. Architects being reputed individualists will have comments to make. Before this appears Johannesburg members will have already made theirs. Others will have to do a little more than wait their turn: for, if they are to have a turn at all, they will have to arrange for its showing at various centres.

If ease of handling is a criterion, it deserves to become an itinerant exhibition. Conforming to standard sheets it has been designed for easy hanging and packing. Its claim, however, to be shown in many places is based on more substantial grounds than convenience. It has been designed for public showing. The exhibition represents perhaps the Institute's biggest effort, so far, to popularize architecture. In this respect, if none other—and architecture on display

is always of interest—it merits not only the attention of the profession, but also the little effort that is needed to make so much labour—students' labour—have full value.

The value of the medium chosen for the presentation of architecture to the public, will, as has been hinted, be subject to the criticism of the profession. Criticism, if not always pertinent, is always possible. Let it be tempered in this case by an appreciation of the exhibition's purpose. If you do not find your favourite building, if you think that Salisbury Cathedral might have been illustrated rather than Canterbury and Le Corbusier and Jeannerot's "Maison de week-end" rather than Frank Lloyd Wright's "Falling Waters", or if you do not like Gothic and contemporary architecture anyhow, remember that the Italian Renaissance and the Elizabethan versions, if either is your preference, were not included primarily for your benefit. We are supposed to be aware of the heritage and meaning of architecture, the public generally is not.

To instill an awareness, a consciousness even, of architecture, of "well building" as distinct from mere building, in the layman is the central problem that confronts the architect today. All problems concerning the "function of the architect" would resolve themselves if only this was solved. Photographs and words, the medium of the current exhibition, are, it must be admitted, only illustrations and interpretations of the real thing, architecture. In a way they serve their purpose, though it would seem that a more immediate result might be achieved by using them to illustrate and interpret contemporary and accessible works of architecture. Although one difficulty would be the obtaining of space in the lay press, a bigger one is provided by the architectural profession itself. Music gets its space, and architecture might: though professional considerations would still remain. It is difficult to imagine reviews of buildings like those of symphony concerts. The comparison may seem strained, because the composer is usually dead and the architect very much alive. None the less the composer's work has usually obtained its seal of merit, and it is the conductor's interpretation and his orchestra's performance that is up for estimation. Good or bad reviews may make or mar a conductor's career. The architect's

standing is more firmly founded. Perhaps the reason is that building represents real estate, and nothing so ephemeral as a musical composition. As investment is involved, references to building in the press are usually limited to features of descriptive eulogy, the contractor and sub-contractors, more often than not, paying for the insertions. If, then, there is "The Art of Architecture" and architecture is an art, the architect who is the artist differs more than in kind from other artists. The position is reflected in the existence of critics of music, literature, the drama, and the fine arts, but not of architecture. A citation of the alleged abuses of criticism, of the fallibility of critics, and of any other qualifications and exceptions that affect the relative standing of architects and artists, does not alter the fact that the architect's livelihood is protected by a consideration of his client's, whereas the artist's is not. In principle an artist's work, unlike an architect's, is subject to public criticism.

Of course, there is public comment. However it is seldom printed, and, in any case, owing to the absence of standards of criticism is largely uninformed. The press and radio present the most obvious means for the dissemination of such standards. In either case architects' works would have to be put up for discussion. The bogey is uncovered, and very substantial it is too. A complexity of professional considerations make it so. Simply stated they are advertisement and derogation of status. If one architect's work is singled out for praise, he is *ipso facto* placed above his fellows; if another's is subjected to adverse criticism he loses the privileged status that distinguishes him from the artist. There would seem to be difficulties in the presentation of contemporary and accessible works of architecture to the public.

Education of "the public as a whole"—an expression seen at a pre-view of the exhibition—must be done, it seems, by recommending the profession as a whole. That, in fact, is as much as any professional body can be expected to do. The rest depends on the individual architect, in the traditional relationship of architect and client. Nevertheless, as the field of public relations has been entered, it is as well to give some thought to the present position of the profession. While the initiative that led to the sponsoring of an exhibition must be commended,

the realization that it was necessary to do so ought not to be overlooked. Encroachments on the architect's province have occurred in recent years. Education, the modern nostrum, is now being tried. Although progress will assuredly be slow, it may in time create a condition more nearly approaching those which have distinguished periods in which art and architecture were esteemed. That condition is the existence of a circle of informed and critical laymen. At present, to skim the top of society as it existed, it cannot be an eighteenth century coterie; but must comprise a far larger group of people sufficiently interested in artistic matters to set a standard.

Some may doubt whether architecture is really a matter of art. The tendency is to refer increasingly to the architect as a technician, a planner, a co-ordinator, a social reformer, and, indeed, to emphasize all his actual and assumed functions except the one that ultimately justifies his separate existence, which is as an artist. There is no shortage of technicians who put things up, lay things out, fit things together, and who are not averse to giving an opinion on things social; but there is only one man who has it in him to communicate an imaginative feeling to things, and that is the artist, who in building is the artist of building, the architect. The position warrants an occasional reference.

These reflections on "The Art of Architecture" refer, in the end, but lightly to the exhibition of that name. Perhaps it is as well. To the sedulously practical let it be said that the first word of the exhibition's introductory precept is "Utility," the second "Strength," and only the third "Beauty." If a paragraph or two have dealt with criticism, no attempt has been made to provide the unnecessary, which for a professional body would be a formal criticism of the exhibition. If one observation may be allowed, it is that the last cartoon — there are cartoons as well as photographs — reflects something of the conceit of the compendious planner. That is one note. There are many other notes, and together they should help materially in the education of the public. The profession, in a difficult position when it enters the field of public relations, might well be grateful to the Students' Architectural Society of the University of the Witwatersrand. Its work is available for use.

A. S.

Cowin & Ellis, Architects



HERMANNA COURT, JOHANNESBURG

This block of semi luxury flats is located in the vicinity of Clarendon Circle, Johannesburg, and was completed early in 1947. It comprises 49 two-roomed and 15 bachelor flats with parking accommodation for 40 cars in the basement and servants rooms on the topmost floor.

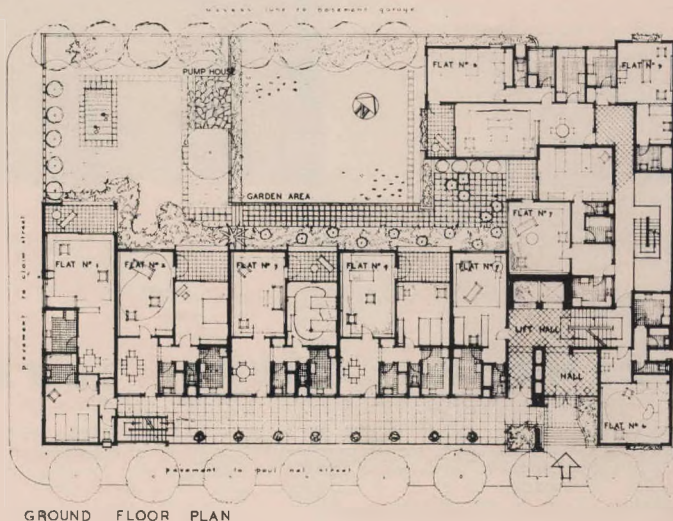
The site 100ft. x 150ft. has frontage to the South and West with an access lane on the North boundary. It was decided at an early stage that within practical and economical limits, as much of the site as possible would be kept open as a garden area.



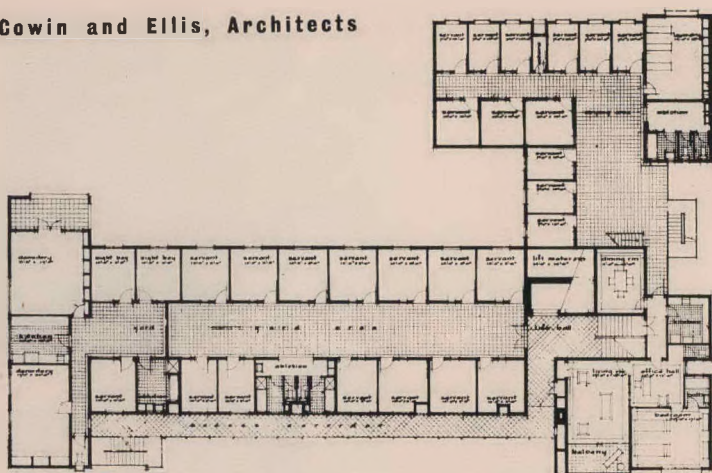
HERMANNA COURT

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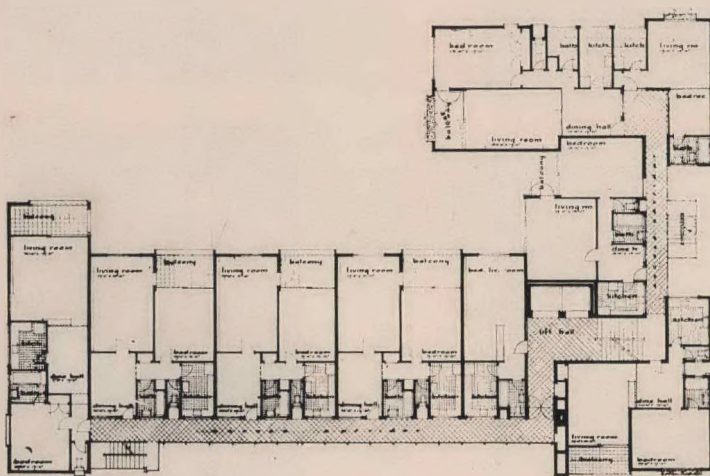
(1) The Main Entrance. Black polished slate treads and risers are used for the flight of steps to the entrance hall and blue-black facings for the plinth and two flower boxes, with a black polished slate capping. The projecting slab carrying the metal letters of the name of the building, lit from a light in the flower box, is painted white against the terra cotta of the supporting column. The white pergola is fixed to the wall and slab with pipe distance pieces. The balcony fronts are sea green with brown quarry tile capping and huckle green pipe handrail. The steel flower boxes beneath the windows act as a foil against the light iron-spot facebrickwork.



Cowin and Ellis, Architects



E I G H T H
F L O O R P L A N



T Y P I C A L
F L O O R P L A N

The block of flats is entered off the main thoroughfare, Paul Nel Street, on the South, from a broad flight of steps, to a centrally located entrance hall and lift hall. Because of a steep fall on the site from East to West and to avoid overlooking of flats No. 5 by flats No. 7, the block was planned with two wings on different levels, the East wing being 5 feet above the corresponding floor level of the West wing. Basement garages are entered off Claim Street on the West and the access lane on the North.

The flats follow a straightforward plan but an attempt has been made to introduce a feeling of spaciousness in the interior within the confines of the 1,000 square foot floor area allowed by Building Control restrictions.

The central fin of dark blue facebrick between the two wings on the South houses the boiler smoke flue, an electrical and telephone duct, the main hot and cold water supply, a rubbish chute connected to each floor and a ventilation shaft from the rubbish disposal room and boiler room. All rubbish is incinerated in the boilers. On all street frontages plumbing pipes have been concealed in ducts with crimped wire mesh covers painted the colour of the brick dados, to the access corridors.

Laundry facilities for the tenants have been planned on the roof to the East wing, with a large drying yard adjoining. Servants may be summoned to their respective flats by a bell system, connecting each flat with the servants quarters. A pump to a borehole in the gardens supplies the building with an adequate water supply.

Externally a 2 5/8 inch primrose facebrick in dark and light brown has been used as a facing to the underlying reinforced concrete frame. A special 3in. x 1 1/2 in. x 4 1/2 in. brick has been used at each floor level to tie the brick veneer to the concrete frame. The brickwork has been relieved with the white concrete surrounds to the balconies and the panels of venetian blinds. A 3 inch dark blue facebrick in straight joint has been used in the infilling panels between the expressed splay fronted concrete columns to the basement storey.

(2) View from North-West: 2 1/2" Ironspot bricks used as a facing, with plaster trim to the concrete surround of the west windows with spandrels painted in terra cotta Sanstonia finish. The panels between the balconies on the North are coloured a sea-green. The projecting raking roof slab to the Native quarters is white. The splayed columns to the basement storey are dove-grey with panels of blue-black brick between. A facing of 6" x 6" brown quarry tile has been applied to the garden seat and flower box. (3) The South-West Corner: Dark brown facebricks with close butted perpend and stressed horizontal joints with C.I.L.S.C.O. windows projecting beyond the face of the brickwork and painted white. The soffits of the access balconies and stair flights have been painted sea-green, with the front edge and stringers white and a 1 1/2" black grano trim as a capping. The column and cross beams supporting the fire escape and the vertical piping to the access corridors are coloured a dark terra cotta, the crimped wire mesh balustrades white and the handrail bottle green. (4) Night View from South-West showing South access balconies to flats, the ground floor promenade and West garage entrance. The change of floor levels between the two wings can be seen at the projecting brick fin next to the main entrance.

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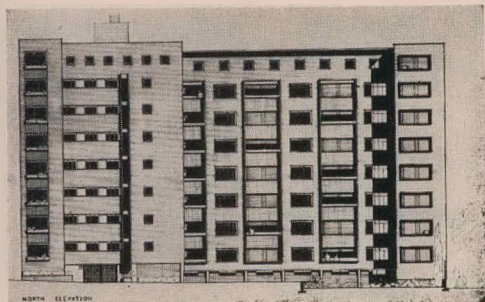


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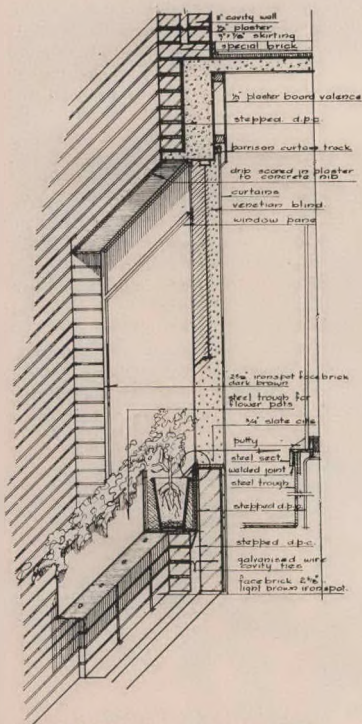
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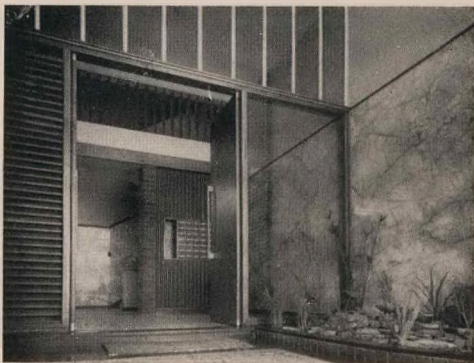
NORTH ELEVATION

(5) Main Entrance Hall and Lift Hall: The glazed screen in standard cottage section is fixed to the 6" x 3" knat frame housing a panel of clear plate glass, the 6" 0" x 8" 0" knat faced doors and lowered panel. Door furniture is in brushed chrome finish. The floor of the main hall and lift hall is laid in 12" x 12" Marvello grey marble tiles with diagonal joints. Light Tambourie marble cut cross grain has been used as a facing to the East wall and stair wall with a 1" capping and 3" recessed skirting in Belgium blue marble. A bronze faced letterbox has been set into a terra cotta corrugated asbestos panel, flanked by a pier in 3" dark blue facebrickwork. The stair soffits have been decorated a pale blue, with frieze and stair balustrading in a lemon yellow. The treads of the stair are in Marvello grey marble with Belgiani blue marble risers and balustrade capping. A chromium-plated pipe handrail is mounted above the marble capping. The lift doors are a dark powder blue and the gamboge screen to the double volume in the entrance hall has terra cotta edges with sea green returns. Fluorescent lighting has been used throughout the vertical circulation. (6) The Lower Terrace of the Garden: A random rubble retaining wall and flower box flanks the precast steps from the upper to the lower terrace. Precast steppingstones have been let into the lawned area and a surround to the pond and fountain. The pumphouse has been finished in a dark brown facebrick with a monopitch concrete roof covered with crazy paving "Slasla" fixed with green granolithic. A 11" diameter w.c. pipe railing painted white and mounted on a 9" dark blue dwarf wall defines the western boundary of the garden but retains an openness of space to the garden. Swaziland Eunis grass has been used on both terraces. Pin oaks, Lombardy poplars and a single Deltoides poplar have been planted in the garden against beds of flowering shrubs, plants and creepers.



FLOWER BOX TO NORTH WINDOWS

5



6



MUD AS A BUILDING MATERIAL

By Barrie Biermann B. Arch. IV. U.C.T.

A paper read to the O.F.S. Technical and Engineering Association by W. Rhodes Harrison, at Bloemfontein, August, 1945

The widespread use of reinforced concrete and steel frame in contemporary building has made these materials synonymous with modern construction, and the natural materials have become, by contrast, almost exotic. The lamentable tendency to disguise inefficient design behind a mask of cement rendering or parapet walls of facebrick, has in its turn contributed the "brick and plaster" idiom to modern design. Together, these trends have given to our hastily-erected and ill-considered cities an appearance which is at best mediocre, and a permanence, unfortunately, which even heavy bombers can only superficially affect. However, where a more human and less mercenary outlook prevails, in the Scandinavian countries and the smaller States of Central Europe, climate and geology play a larger part than industrial enterprise in dictating the material most suited to the region. The renaissance in timber work in those countries, for example, gives the impetus to startling developments in wood techniques; in Switzerland, reinforced concrete, with us still a symbol of clumsy strength, became the most lithe and subtle of structural materials. Scientific approach to current building problems, greater stress on quality than quantity of work, gave the world the fabulous new plywoods, the mushroom construction and the flexible concrete slab, some of the greatest technical advances of our time.

This paper is a plea for a re-evaluation of our building standards, and a scientific approach to a material which historically seems suited to our Free State region. "The sociological and aesthetic aspects will be stressed: but the plea is at base an economic one.

Mud is the most primitive of materials, the first in architectural history. In common with stone and timber, it is a universal material, and has directly or indirectly bequeathed to us the majority of structural forms in use today. Contemporary Science acknowledges the fact that

our material environment, which we accept as final and inevitable, is merely the result of accident or choice in the past; and insofar as mud was, literally, a moulding material at the very beginnings of architecture, the forms adopted by those ancient builders have come to be regarded as fundamental. For a re-evaluation of mud as a modern material, its historical forms need to be analysed and proven by scientific calculation, before we finally accept them. With the waning of superstition and a religious regard for Vitruvius, architects are abandoning the so-called "classical" forms. No form can be accepted as final until it has been ratified by calculation and experiments. And with the validation of historical forms we should try out new ones—with a universal material like mud. This presents purely an academic case for investigating mud as a building material—and in itself, sufficient justification for serious research. But the demands of our mercenary society would require a more lucrative and "practical" motive—which is also present. Economically, mud offers the only solution to our major building problem—housing the native. While snobbiishness amongst the more sophisticated Europeans would reject mud as a



Above, an early Egyptian house and, right, a house of 1800 B.C.

regional material for regional application, it is a material which has an historical, and with the passing of time, a sociological significance for the native. This latest trend in geopolitics should afford the strongest argument with our somewhat slow-minded authorities for a planned, Government-aided campaign for the full use and exploitation of mud as a building material.

The condition which makes a serious discussion on the uses of mud at all possible, is the climatic affinity between our Free State region and those regions in which mud has been developed in history as the major building material. With no other material is climate so important a zoning factor: it limits its use to a circumscribed area, and provides at the same time the *raison d'être* for its use.

Mesopotamia and Egypt are cited as the standard mud-building countries, but nearly the whole of the Mediterranean basin made use of mud in some form or other. In Egypt the preoccupation with the hereafter and the tomb-building industry (the most important in Egyptian economy, it seems) guided the researchers in building technique to achieve permanence and durability with the most erodable material in existence.

The domestic building of Egypt from primitive huts to well-organised country houses of the Ptolemaic dynasty, was carried out in mud, either as solid walling or pisé de terre on reed matting or wood framing. Here was a highly civilised race, responsible for the first great monumental architecture, living in a state of high sophistication in houses built of mud. That their culture was not impaired thereby (in fact the most likeable part of their civilisation, to Western minds, was the informality and gaiety of their domestic life) speaks volumes for a light and flexible structural system, as applied to the ever-changing needs of domesticity and unofficial society.

Indeed, an instructive parallel may be drawn between the heavy stone architecture which "froze" the official culture of Egypt for thirty centuries, and the lithe, flexible architecture which was the servant of a carefree and uninhibited populace.

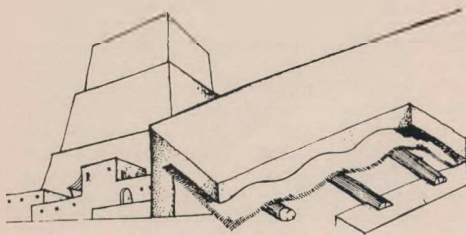


Plastic mud and mudbrick early on led to the discovery of the arch, though this form was not widely used in Egypt. But the buttress effect of the battered wall is already in evidence in the temporary domestic work; and in the growing industry of burying important people under eternal landmarks, this principle was exploited to the full. It may have been suggested to the builders by the sides of a sandheap over the early pitgraves, lying at an angle of repose: or the plastic nature of mudbrick, damp and under pressure, might have forced it on them. A section of an early mastaba shows a heap of sand- and brick-rubbish enclosed by coursed walls; these latter may have been built to conform to the angle of repose of the heap, or (early on) been too weak as retaining walls, and after a particularly heavy rain (which in Egypt is rarer now than it was formerly) they might have "flowed" under the pressure at the base of the heap. But it is important to grasp the principle: the Egyptians saw that the battered wall was a shape normal to mud, and developed it, applying it to stone architecture and thereby achieving greater permanence than any other builders.

The pyramid developed on this principle. Mastaba piled on mastaba (it being incumbent on the King to go one better than his nobles) gave the step-pyramid. Translated into stone, and finished to suit the mathematical tastes of a more highly developed culture, it emerged as the pyramid. It is instructive to ponder over this second parallel in Egyptian architecture: the most enduring structures erected by mankind originated in the shifting dunes around them, heaps of sand whose transitory nature is proverbial.

While the section of the wall conformed to the extrudable nature of the material, its surface was likewise affected. The smooth mud-plastered wall became traditional in Egypt and together with the power of conservatism, that of utility established it as the norm. For it was a convenient and durable surface on which to paint and write, and since the priestly hierarchy spent most of their time painting and writing and furthermore had all the say in official building the smooth wall became in time an aesthetic necessity. Consequently when the mud structures were replaced at a later date by stone, the tradition of the smooth wall was preserved, the joints of the stonework were ignored, and one more feature had been bequeathed to the Western architectural heritage.

In Mesopotamia the idea of the step-pyramid was developed in the Ziggurat, the Tower of Babel of which the Bible speaks. The unhappy Sumerians lived in a flat country and were obsessed with the idea of raising themselves above it: so they built massive towers of mudbrick, encased in glazed tiles, which they could ascend to worship or to make astronomical observations. While we can have little sympathy for people with such subjective love of staircases, we must recognise the soundness of their constructional principles. The walls of the Ziggurat were



Above, Babylonian Ziggurat and roof construction of pise de terre applied on reed matting and poles.

battered—in outline it formed a rough pyramid. Both in Mesopotamia and Egypt earthquakes had occurred at one time or another: but the Pyramids and Ziggurats have survived them. It is worth pondering over that no other structures of so erodable a material have preserved their form for so long: close on five thousand years.

Timber was scarce in the Mesopotamia basin, and the early plaindwellers had to improvise roofs of mud. Domed roofs of elliptical or semicircular section were contrived: presumably without shuttering, since course after course could be slightly corbelled inwards. Whether the Sumerians were unable to devise a keystone to finish the dome, or whether the opening was left at the top to serve as a ventilator, is not known; but a central opening was left, sometimes roofed over with a small vault. Here was a highly developed structural form used, and probably invented by, the primitive Sumerian peasants of six thousand years ago! The material used was mud.

The vault was also employed, especially in the construction of sewers. Some unknown compound must have been used to prevent erosion of the crude mudbrick—a stimulating fact for our industrial chemists to investigate. The Arch of Ctesiphon which has survived centuries of erosion, earthquake, and warfare, presents an even greater challenge to orthodox constructionists than Mailart's reinforced concrete arch at Zurich.

As trade developed and timber was imported from Lebanon, the technique of building flat roofs was either invented or adopted. Poles of short span were slung from wall to wall, reed matting was laid on top, and mud (pise de terre) applied. The analogy with reinforced concrete is obvious. In time the embedded matting would act as a weak reinforcement. Unlike our pretentious flat-roofed structures of today, erroneously regarded as symbols of modernism and progress, the flat roof of the crowded Babylonian cities had a functional basis. They were used as roofgardens, outdoor livingrooms and sleeping-porches in the hot summer nights. Like the Egyptians, the Babylonians were not enslaved by their building

materials: they moulded them to conform to a high domestic culture.

The role played by mud in Greek architecture has had to be deduced from scanty findings, mostly remains of foundations: for the climate of Greece is less favourable to mud-building than that of Egypt and Mesopotamia, so that all traces of the material itself have long since eroded away. But it left its unmistakable impress on the structures which have survived. It seems that the early huts, or cellas, were built of rubble, or timber framing with lath and plaster. The rubble walls were rendered more weatherproof by mud plaster. (It seems unlikely that the timber structures of another region were plastered, in view of the Minoan tradition of exposing the structure.) The mud plaster of the walls was easily eroded, and the roof was consequently extended to protect it; much as, it seems, in German South West Africa, the eaves extended as much as 4 ft. 6 in. beyond the walls to afford shade and insulation. The elongated eaves in the case of the Greek hut were supported on poles; and so was born the tradition of a cella surrounded by a colonnade, the peristyle: the whole framework on which was built the Orders, the grandeur of classical architecture, and the subsequent degradation into commercial classic, which is still rampant in our city streets. Side by side with these developed symbols of the protection of mud plaster, cement-rendered parapet walls rear up into the sky, sans coping, sans shelter; so far have architects lost touch with the fundamentals of their art.

The plastered walls inside the colonnade were smooth; and the tradition of the smooth wall was perpetuated in the developed marble temples, where stone was ground on stone to ensure a perfect fit, thereby eliminating the joint. Thus even in a country where it played a minor role, mud was destined to bequeath forms to architecture which were accepted as final for three thousand years.

Between the historical phases of mudbuilding and the growth of the tradition in the Eastern Free State, lies a period of several thousand years. During this time the material was relegated to a background of peasants and primitive peoples, and no advances in its technics were made. Stone, the imperial material of the ancients, ruled



the building world up to the industrial revolution; then a series of political and economic circumstances afforded cast iron, and then steel, pre-eminence. Unplanned and accidental researches, mostly by "cranks," and engineers ahead of their time, led to the discovery of concrete, reinforced concrete, and the new possibilities of wood.

Only in the field of roadbuilding was chemical research applied to soil: it is perhaps from this direction that we may expect new strengths and new properties from common mud. However, the historical survey has shown that what is known about the material at present should suffice for our needs. Circumstances other than an academic interest in a new material may one day force its use upon us.

In the absence of authentic written history of the tribes of the Eastern Free State, the Barolong especially, this survey cannot be considered accurate. The deductions are made from such evidence as is to hand.



Above, groups of Kaffir huts on Bonolo Tha Banchu, showing characteristic Basuto and Barolong groups, squatting stools, fire circles, link wall and mud plaster decoration. Left, a Greek prototype.

The most prevalent form in native building in the entire Free State Region is the round hut, domesticated as the "rondawel." It probably originated in the translation of the round, domed, grass-hut of the Amabantu into mud or stone. The thatched roof remained as a survival of the grassbuilding tradition, probably because it was the most convenient material for the purpose. Had grass not been available, the entire structure might have been raised in mud—a similar process to the literal translation of mud structures in Egypt into buildings of stone. We would have had mud domes in the Eastern Free State.

As it is, the "rondawel" form proved so useful even to the Europeans, that it became a standard and indispensable feature on the "werf." As a planning unit it has been in many cases (the Moroka Institute at Thaba N'ehu is an example) the forerunner of the Dynaxion House, a new trend in American prefabrication. It is still, in European homesteads and in groups of kaffir huts, an unsurpassed method of extension: the articulating element being a linkwall, which serves also as a windbreak.

In the course of time the rondawel was modified to resemble more closely the houses of the Europeans, and the thatched roof determined the simple rectangular shape at the outset. Those natives in whom the tribal custom was not strong, however, adopted corrugated iron eagerly: and as all the customs of the native are being steadily undermined, it is doubtful whether the younger generation will ever master the technique of thatch. In many ways the passing of the thatched roof will have a deleterious effect on kaffir huts: the material, besides affording good insulation, discouraged the making of fires in the hut, the cause of so many accidental deaths among the natives: and it demanded periodical renewal, which stimulated the plastering of the mud walls, and general good maintenance of the structure. Corrugated iron displaces all these advantages and brings new maladies in its wake. Grass playing no part in the building, the natives are less inclined to use it as a bonding material in the mud walls, and since the sheets of corrugated iron are impervious, a fall is considered unnecessary, so that the roof frequently sheds its water into the hut, onto the walls, or with a favourable wind, onto the ground outside.

The traditional, soundly built hut of the Eastern Free State requires for its site, construction and finish, a turfy bank near a reedgrown spruit.

Clods of turf, lifted with a spade or assegaai, about 12 in. x 9 in. x 9 in. high, are piled in single thickness on a row of flat stones which, laid on the surface of the ground, constitute the foundation. The floor is the usual compound of mud and cow-dung. Lintels to doors and windows are formed by thin slats of wood, which, on rotting away, leave the mud to span the opening on its own. The

thatched roof is skillfully applied to a nondescript collection of rafters, battens and hips, usually willow twigs. Though the roof of a structure of this kind is highly impervious, the walls, plastered as they are with mud, consolidate in time to form a hard, impervious mass, given a fibrous texture by the layers of turf. Where not ravaged by white ants, they will stand for decades without a roof, eroding slowly away, and not breaking up under stress of temperatures as exposed brickwork tends to do. Where maintained, they should outlast even reinforced concrete.

It is interesting to observe the many forms which the natives have developed in this material, to suit their casual way of life. Squatting stoeps on the front (east or north) wall, link walls which unite family groups of huts, pavements on which the huts are raised above the damp ground in rainy weather, and ornament on the mud plaster which seems to be acquiring some significance: broad semicircular sweeps, always on the gable walls, a square and diagonal pattern on the front wall.

Insofar as they mould the material to conform to their lives, the natives are well ahead of the Europeans. Conservation and snobbishness are the social counterparts of sham Tudor and Bloemfontein Bloomsbury: exclusive, admittedly, but rather silly when one considers that the natives lead free domestic lives while the Europeans have to live in straightjacketed, if respectable, discomfort.

The tribal custom of grouping is also a significant emergent. The Basuto seem to favour the Line, the Barolong a more informal and neighbourly disposition round a fire circle. The former presents the houses to the stranger for candid inspection, like soldiers on parade; the character of the owner is to be read in each façade.

Another fact of importance is the rapidity with which the conversion from grass to mud and the changes in form afterwards, were effected: for although the natives arrived in the Free State simultaneously with the Trekkers, so that no long-seated customs of building could be established before they were subjected to foreign influence, in a people so primitive and backward the rapid progression can only be ascribed to the plastic nature of the material used. It is as well to bear this in mind when considering possible developments in native housing in the future.

An assessment of the role played by mud in building since the advent of the Europeans, must necessarily be inaccurate, until a thorough regional survey has been undertaken. From casual observation, however, it appears that the Trekkers brought with them the simplified urban Cape-Dutch style; and its gracious façades, so strongly reminiscent of the Malay quarter in Cape

Town, may be seen in all the older towns, from Bloemfontein to Griquatown. Besides providing an object lesson in street architecture to our commercially-minded age, these unassuming buildings might hold the key to a regional architecture. The material to hand, when the Trekkers arrived, was mud—and once again it is difficult to assess whether its use was learnt from the natives or whether the prototypes of the Free State houses in Graaff-Reinet and the Eastern Province were also built of raw brick laid in dagga. The Cape tradition was carried on in the North and it is to be regretted that the Diamond Fields boom disrupted it, substituting corrugated iron and cast iron ornament as standard materials. This new spirit of shackbuilding infected the brick builders too, it seems, for the later examples of building in dagga mortar (as far as can be ascertained) are unplastered, and not so carefully finished as the earlier types. Between the Cape tradition and the modern burnt brick and cement render idiom, there seems to have been a break; and it is in this period that the raw brick and dagga buildings were subjected to direct weathering, from which interesting conclusions may be drawn.

A personal inspection of the older houses in St. George's Street would be worth more than the reading of pages of description or statistics. Badly maintained, these raw brick buildings rendered with lime plaster stand solidly, in defiance of the more sophisticated but not necessarily more rational burnt brick and cement render structures. The unprotected dagga walls, however, present an even greater challenge. For the most part, they are uncracked, and weathering has only rendered the badly burnt or raw brick homogeneous with the mortar, so that stresses are evenly distributed and no haircracks which allow the penetration of moisture occur. An old hall in Aliwal Street, well over forty years old, shows joints eroded by rain and wind, on the most exposed corners, up to half an inch in depth; while those which are more protected present their original faces, as struck. In Fountain Street a neglected building has stood for more than sixty years, facing the southern winds, protected only by a scanty coat of limewhite; and the Waaihoek stone employed as foundations and sills, seems to have fared worse than the raw brick and the dagga. Indeed, to judge from appearances, the stone edifice in St. Andrew's Street which was recently proclaimed fifty years old, is deteriorating more rapidly than the houses in St. George's Street, which are over seventy. The general conclusion which may be drawn is that materials which are not intrinsically durable, or recognised as durable, but which are inert as regards changes due to variations in temperature and humidity, seem to face up to our extreme climate better than those, stone or the cement products, which have a reputation for strength and durability *per se*, but which are not tolerant of severe

weathering on a building. The point is perhaps best illustrated by comparing the cornices of the Raadzaal (1893) which are shedding their mouldings, with the ruins of natives huts on the open veld, which, standing without roofs, have eroded less in the same time.

The case for mud would not be fully stated without reference to its strength in buildings. Since no official reports are available, the evidence here put forward is empirical and necessarily limited, but it will suffice to show the unexploited potentialities of the material. In the old Free State Board of Executors Building a double storeyed structure demolished in 1938, the walls were of raw brick in dagga, the external walls being faced with a $4\frac{1}{2}$ " skin of burnt brick. Although altered at various times, the original walls were sound up to the day they were demolished. The compressive stress at the point of heaviest loading was about $3\frac{1}{2}$ tons per square foot—twice as much as the local Building Regulations allow for slop bricks in dagga.

The fact that brick arches in dagga show no signs of cracking, speaks well for the elastic properties of the mortar, especially when used in conjunction with a brick of similar composition.

As has been stressed in the introduction to this paper, it is a plea for a re-evaluation of a common material—neither a condemnation of the accepted standard materials, nor a presumptuous claim for a panacea to all our building problems. The history of mudbuilding is of interest to scientific men because of the material's remarkable standards of performance; multiplicity of form, strength, and durability. To the economist it should present itself as a possible solution to the vast problem of rehabilitating the native, both because of its intrinsic cheapness and because, being easily workable, and having a strong tradition to support it, it allows every man to build his own house. To the cynics who do not appreciate its magnificent history, and who would contend that such a procedure would turn the country into a vast location, an excellent reply is to be found in a survey undertaken by a student of architecture at the Witwatersrand, Miss Betty Spence. In an admirable report on conditions in Transvaal locations, she stresses the fact that control exercised by superintendents alone tends to improve the standard of work: and if scientific research and architectural design concentrated on the problem, there can be no doubt that, four thousand years after Babylonia, we can produce something even better. It is not generally appreciated how much good design can achieve with the simplest materials: the mud-building in Mexico, now becoming synonymous with that country's modern architecture, has yet to be studied and made known in South Africa. In short, both as regards the ethics and aesthetics of mud-building, it presents a stronger case than prefabrication, as a solution to mass housing in our region.

Once again, it is the economics of mud-building, viewed against its good record in the Free State, which commends it to the attention of those who take a serious interest in housing the native.

Going further, however, and looking broadly at the developments in building during the past few decades, it seems that the simpler materials are coming into their own again. The new timber technique, for example, are farther divorced from the old carpentry days than high stress steels from the first cast iron bridges. One looks involuntarily to the other material, mud, to find a parallel improvement beyond recognition on the vaults in ancient Mesopotamia. But research has been lagging behind in this sphere, and a too ready acceptance of synthetic and imported materials has eclipsed the material which once was the dominant in our regional buildings. Who can predict what benefits might accrue from scientific research into the possibilities of mud?

Our industrial schools and agricultural colleges present themselves as possible centres of organised research. The British Building Research Station has produced excellent reports which have proved of great value to architects and builders. Significantly enough, its researches have temporarily discredited the cement products which were once accepted as the most weatherproof building materials. These latter have not always competed successfully with mud in our region. It is added inducement to investigate.

As the regional idea grows, so the necessity for a regional material will make itself felt. And the material which holds the greatest promise for the Free State, or Central South Africa region, from the evidence to hand, is mud.



Above, Basuto huts between Teyateyaneng and Leribe. The group shows a Basutoland round hut, a rectangular thatched hut and a rectangular hut roofed with corrugated iron. Below, an old building c. 1880 at 38, Fountain Street, Bloemfontein, with walls unplastered white-washed dagga.

THE STUDENTS' FORUM

THE OLD BANKS OF JOHANNESBURG

By Cyril A. Stoloff

The "Late Victorian" bank building is a good example of how certain styles in Neo-Classic and Neo-Gothic Architecture became associationally branded. For in the late 19th century, architects considered it advisable to design banks representative of the prosperity associated therewith, and thus we find great steel-framed structures that were reasonably functional in themselves, in the form of Italian Renaissance Palaces. Various period styles were adopted, and favourites changed with fashion. With the 19th century Greek Revival in civic architecture, Town Halls were virtually Greek Temples. In the construction of prisons, the battlemented castle persevered. More

often than not, the early banks of Johannesburg were massive, ostentatious Classic buildings — the clientele of these establishments were no doubt greatly consoled with merely one glance at so solid a structure!

The first bank established in the town appears to have been a primitive one-storeyed brick building in Commissioner Street, where the Standard Bank of South Africa established a Johannesburg branch. (The first financial institution to establish itself on the Witwatersrand gold-fields was this same bank, which had opened up in a tent in 1886, in "Ferreira's Camp.") The Standard Bank eventually purchased and transformed into banking

Three typical examples of the late Victorian Bank are seen in this photograph of Market Square. They are the National Bank, which adjoins the tall Corner House building, and is designed in the identical style, the Colonial Bank and the African City Property Trust Buildings. This later became the Volkskas Bank and was demolished in 1946.





Above, the Natal Bank 1904, the facade of which is shown in the drawing on the left. It is a typical "Classic Revival" design (the Gothic Revival was not popular in South Africa) with Ionic columns and the pilasters, swags and pediments typical of the French Renaissance. The illustration on the far left shows the entrance gates of the National Bank of South Africa.



Above, the Netherlands Bank, Fox Street: an exuberant facade in what might be termed the "Colonial Baroque" style. It is an early example of the use of projecting cantilevered bays, and is also the only example in Johannesburg of

"caryatids" supporting first floor window pediments. The wrought iron balustrading, although designed in accordance with elaborate Victorian principles, displays a high standard of craftsmanship. Right, the Transvaalse Bank.

offices the property in Commissioner Street formerly known as Holborn Restaurant. This building, erected in 1889, is still existing today, but has received subsequent additions. The prevailing style is contrary to the accepted Renaissance period adopted for banks, in that it is French Renaissance. In 1901, the bank acquired a site measuring 100 feet by 142 feet, with frontages to Fox, Commissioner and Harrison Streets. A six-storeyed building was erected thereon, the architects being Messrs. Stucke and Bannister, of Johannesburg. The building is what the public has come to regard as the only way a bank should appear, and it is in this vein that all subsequent banks have been constructed in Johannesburg, especially in the early years of the century. A building having an even more solid appearance is the Standard Bank branch, corner of Eloff and Market Streets, with its heavy rusticated masonry and Ionic columns.

The Bank of Africa, which boasted some 65 branches in South Africa alone, in 1905 established its Johannesburg premises in a large Italian Renaissance Palace at the corner of Commissioner and Harrison Streets. The building was constructed of great blocks of stone, and two massive Corinthian columns were the features of the Harrison Street facade. Windows were at a minimum, the ground floor openings being heavily screened with decorative iron grilles. The building was demolished about 1938, giving way to a new banking building.

The African Banking Corporation took over the business of the Cape of Good Hope Bank, who possessed a small building at the corner of Fox and Simmonds Streets. The African Banking Corporation demolished the old building, and erected a four-storeyed structure for the use of their



administrative offices and banking hall. This structure was not as elaborate as its contemporaries, and has a restrained Georgian appearance more than anything else. This bank was also demolished in 1938, giving way to yet another banking building.

The Netherlands Bank in Fox Street is still in existence today and possesses one of the most elaborate façades imaginable. The decoration appears to have defeated its own ends, and the entire building may be termed "Colonial Baroque." There is an abundance of Renaissance and Classic motifs, and features include the most exuberant wrought iron balustradings, which in themselves are indicative of fine craftsmanship, and also what is probably the only example in Johannesburg of the "caryatid." These figures are employed to support the first floor pediments.

The National Bank of South Africa purchased a site adjacent to the Corner House in Simmonds Street, and erected a building identical to the Corner House, and of the same height. This is one of the few examples in Johannesburg of an architect being "neighbour conscious" in the design of a new city building. Another accepted feature of early 20th century bank design was the glassed-in banking hall, with characteristic roof lights. This was a feature of the National Bank.

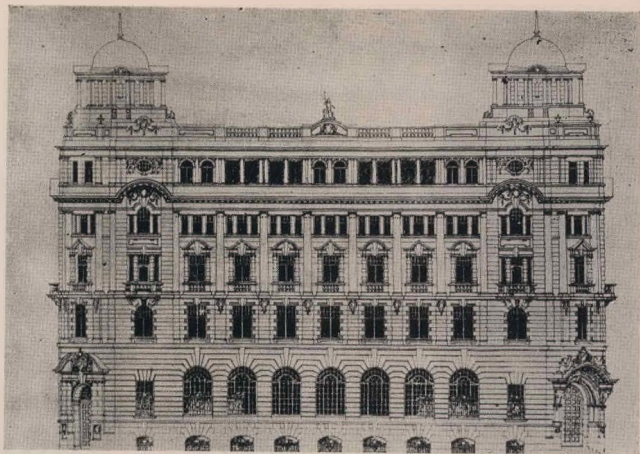
Other notable historic banking institutions in Johannesburg are the Natal Bank in Market Street, and the old Transvaalsche Bank in Sauer Street, both of which are still existing today.



Above, the Bank of Africa, corner Commissioner and Harrison Streets: an Italian Renaissance Palace for the financial transactions of a mining town. The design has its full compliment of Corinthian columns, rusticated masonry, arcading and colonnades. The style is a practically identical counterpart to late nineteenth century banks in Europe and America, although there the Gothic Revival was more in evidence. Left, the African Banking Corporation, corner Simmonds and Fox Streets. Less elaborate than most banks, it also shows a strong Renaissance influence.

Right, Standard Bank Buildings. 1906:
Fox, Harrison and Commissioner
Streets. Architects, Stucke and
Bannister: an original elevational
drawing.

Below, Standard Bank Buildings, 1889:
Commissioner Street, off Sauer Street.
It was the Mining Camp's first double-
storey bank and still exists today.
Portion of the building was originally
used as the famous "Holborn
Restaurant." (Photo: Davies Bros.).





Left, the first
Standard Bank.
Commissioner St.,
Johannesburg,
built in 1887.
Extreme left, the
present building.
Below, Standard
Bank, Eloff. St.



THE OLD BANKS OF JOHANNESBURG

CONTEMPORARY JOURNALS

COMMERCIAL

"Architectural Record," February, 1947, pp. 87-104.
Stores:

"Economics of Department Store Planning": This Study by N. A. Owings, of Skidmore, Owings and Merrill, Architects, is illustrated by photographs and plans of Goldwater's new fashion departmental store in Phoenix, Arizona.

"Intermediate Floors for Greater Efficiency in Storage and Service": Dr. Louis Parnes, A.I.A., details proposals in which he developed the intermediate stock-floor to give the following advantages:

- (1) Reserve stock situated immediately below or above the corresponding sales departments on each floor, with quick, easy and direct supply at any time.
- (2) Convenient "receiving stations."
- (3) Increased sales space.
- (4) Increased display space.
- (5) Reduction of service personnel and operating costs.
- (6) Elimination of emergency hand-truck delivery during selling hours, interfering with customer movement.

"California Department Store for Women": Artele illustrated with photographs. Gruen and Krummeck, Designers.

"New Arrangement for Bringing the Inside Outside": Illustrated article by J. A. Fernandez, Architect.

"Town and Country Boudoir Theme": Illustrated Article by L. Gluskin, Designer; J. Modin, Associated Architect.

"Open Front Photo Shop": Plan and Photographs of a shop in Berkeley, California. John Warnecke, Architect.

"Architectural Record," March, 1947, pp. 78-84.

Designs for Displaying Merchandise. A collection of display ideas from recent stores and showrooms covering Fabrics, Cosmetics, Perfume, Candy, Lamps, Carpets, Electrical Appliances and Yarns.

"Progressive Architecture," March, 1947, pp. 66-67.

Office Showrooms for Hansen Glove Corp., New York, designed by K. Hoffmann and S. Heidrich. Illustrated.

"Progressive Architecture," March, 1947, pp. 68-73.

Project 2-48 E. Market Street, Corning, N.Y. Sanders and Mabin, Architects, illustrate a design solution for the facades of undistinguished buildings along East Market Street between numbers 2 and 48, to effect a continuity of design and integrate a series of store fronts and to provide flexibility of design to meet the requirements of function, appearance and cost, and at the same time utilizing to the maximum the existing structural soundness of the individual store fronts.

"Architectural Record," April, 1947, pp. 88-93.

Bigelow-Sanford Showroom, Merchandise Mart, Chicago. Donald Daskov Associates, Designers. Plans and Photographs.

"Architectural Forum," April, 1947, pp. 76-78.

Shopping Centre, Bellevue, Washington. Moore and Massar, Architects. Plans and Photographs.

"Architectural Forum," April, 1947, pp. 88-91.

Furniture Store in Los Angeles designed by Gruen and Krummeck for Motorist Attention and Minimum Cost.

"Architectural Forum," April, 1947, pp. 94-101, 106-109, 124-125.
Office Buildings and Stores:

- (1) Offices on New York's Park Avenue, planned for large affluent, long-term tenancy. Kahn and Jacobs, Architects.
- (2) Office Building initiating Prefabricated Aluminium facing over reinforced concrete frame. Pietro Belluschi, Architect.

(3) Department Store, Garage and Warehouse, built as a unit, permit a mechanised system of stock handling. Houston, Texas. K. Franzheim, Architect.

(4) Clothing Store in Tulsa, Okla., employs the "Continuity Principle" to produce a structure of Exceptional Interest and Efficiency. Bonz, Parr and Aderhold, Associated Architects.

"Architectural Forum," February, 1947, pp. 79-87.

Proposed State Office Centre for Michigan. Designed by the Architects Smith, Hinchman and Grylls, the project includes two office buildings, Supreme Court buildings, Museum and Archives building, car parking arrangements and landscaping of the four blocks site.

"Progressive Architecture," April, 1947, pp. 51-53.

Office Building for the Rio Grande du Sul Railway, Porto Alegre, Reids and Machado, Architects. Plans and Photographs of building.

"Architectural Record," May, 1947, pp. 104-112.

The following are illustrated:

- (1) Wholesale Rug and Yarn Showrooms for James Lees & Sons, Co., Chicago. Raymond Lowey Associates, Van Der Laeken, L. Hyzen, Architects.
- (2) Ansonia Shoes in a Florida Setting. M. Lapidus, Architect.
- (3) Carpet Mart, Hamstead, N.Y. H. Siegel, Architect; E. Rapp, Designer.

"Progressive Architecture," May, 1947, pp. 53-83.

A Critical Study of a group of Retail Stores is presented in this issue and covers the following:

- (1) Rich's, Atlanta, Georgia. A large Departmental Store. Toombs & Creighton, Architects.
- (2) Valfrid's, Bogota, Columbia. Designed as a dual-use structure. Initially, the first floor, mezzanine and second floor are to be used for a high-class speciality store; the upper three floors, for rental office space. Eventually all floors will be used as store space. Associated Architects: H. Hudgins & Co. (Bogota) and Ketchum, Gina & Sharp.
- (3) Mangel's, Birmingham, Alabama. A Speciality Store. Ross Frankel, Inc., Designers.
- (4) Joseph Maguin, Sacramento, Calif. Designed by Gruen & Krummeck Associates.
- (5) Two-in-One, Salt Lake City, Utah. Two stores of widely different character within a single structure—a low-priced ready-to-wear store for women and a jewellery shop. Designers: Gruen & Krummeck Associates.
- (6) Guild House, Boston, Mass. Carson & Lundin and H. Davidson & Son, Architects.
- (7) Pava Palmouth, Mass. E. Peterson, Architect.
- (8) Jollett's, Lafayette, Calif. F. Confer, Architect; R. Willis, Associate.

"Architectural Forum," June, 1947, pp. 84-93.

Shopping Centre for Suburban Boston. This scheme uses location, unlimited parking, a pedestrian mall and modern design to safeguard a six million dollar investment. Ketchum, Gina & Sharp and Anderson & Beckwith, Associate Architects.

DOMESTIC

"Architectural Journal," February, 1947, pp. 167-169.

House at Luccombe, Isle of Wight, designed by F. R. S. Yorke, Rosenberg and Marshall. Plans and Progress Photographs.

"Progressive Architecture," February, 1947, pp. 50-66.

The Geller house, Lawrence, Long Island, designed by Marcel Breuer, Architect. Well illustrated with plans and photographs, this scheme illustrates integration of all elements: plan, structure, finished design, furnishings and landscaping.

"Architectural Forum,"—February, 1947, pp. 92-102.

- House in Seattle, Washington, designed by Philip Moore, Architect.
- Additions to a country cottage in Ipswich, G. Brewster, Architect.
- House in Highland Park designed by Morgan Yost, illustrating split-level planning.
- House in Winnetka. Designed by Morgan Yost, Architect.
- Hillside House near Los Angeles illustrating a dramatic complex of varied levels and roofs. Architect, H. M. Schindler.
- House in Los Angeles on a steeply sloping wooded site. Architect, R. M. Schindler.

"Architectural Forum,"—February, 1947, p. 105.

- House built on a narrow lot at Mar del Plata. Walter Loos, Architect.

"Architectural Review,"—March, 1947, pp. 97-100.

- House at Kandy, Ceylon, on a steep site. Andrew Boyd, Architect. Illustrated.

"Progressive Architecture,"—March, 1947, pp. 74-77.

- House in Southbridge, Massachusetts, designed by Hugh Stubbins, jun., Architect.

"Progressive Architecture,"—March, 1947, pp. 78-79.

- House for Arcadia, California, designed by W. T. Dreiss, Illustrated.

"Architectural Forum,"—March, 1947, pp. 78-79.

- House on a hilltop designed by Gardner Dailey, Architect.

"Architectural Forum,"—March, 1947, pp. 81-86.

- (1) House in Dover, Mass. E. Noyes, Architect.
- (2) House in Evanston, Ill., for a Professor, featuring separate access study for student interviews.

"Architectural Forum,"—March, 1947, pp. 84-96.

- Mill Guest House. Eaton Turrell and Associates, Architects.

"Architectural Forum,"—March, 1947, pp. 97-104.

- Houses, U.S.A. A Brief Review of the development of Domestic Architecture in America Part II, 1820-1946, the Revivals and Eclecticism.

"Architectural Record,"—April, 1947, pp. 82-87.

- Six Ranch Houses for modern living. Cliff May, Architect.

"Architectural Forum,"—April, 1947, pp. 79-81.

- Steel Frame House in Sausalito. Mario Corbett, Architect.

"Architectural Forum,"—April, 1947, pp. 92-93, 102-103, 112-113, 126-128.

- (1) Beach House at water's edge is open in all directions, relies on windbreaks and wide overhangs for protection. Ralph Twitchell, Architect. P. Rudolph, Associate.

- (2) Lake Shore House. G. and W. Keck, Architects.

- (3) Quonset House, built on a California Hillside. Architect, W. K. Wong.

- (4) Hillside House for rugged Central Valley, N.Y., designed by Jackson & Callender, Architects, on two-level system.

"Proaressive Architecture,"—April, 1947, pp. 62-71.

- The following houses are illustrated in this issue:

- (1) House, Santa Teresa, A. V. Brazil, Architect.

- (2) House, Lincoln, Mass. Carl Koch, Architect, planned the house on three levels.

- (3) House, Berkeley, California. Ostwald, Anshen & Allen, Architects.

"Architectural Record,"—May, 1947, pp. 124.

- The following projects are illustrated:

- (1) Houses for an Arizona community. William Wilde, Architect.

- (2) Houses for T. C. Renshaw in Milo Folley, Syracuse, N.Y. Sargent-Webster-Crenshaw & Folley, Architects.

- (3) House for W. Davey, Esq., California. Richard Neutra, Architect.

- (4) House for I. Cowan, Esq., Milwaukee, Wis. Keck & Keck, Architects.

- (5) House in Chattanooga, Tenn. Gill & Biancuelli, Architects.

"Progressive Architecture,"—June, 1947, pp. 53-57.

- Six projects are selected by "Progressive Architecture" as winners of the first Annual Awards for Works of Architecture, completed during the preceding year, that best exemplify sound progress in design. They are as follows:—

- (1) "California Cabins"—Truss Modular System. Kenneth Lind, Architect.

- (2) Own Home, Los Angeles. Gordon Drake, Designer.

- (3) House, Pasadena, Calif. Whitney Smith, Architect.

- (4) House, Tucson, Arizona. Arthur Brown, Architect.

- (5) House, Los Angeles, Calif. J. R. Davidson, Designer.

- (6) House, Lawrence, Long Island, N.Y. Marcel Breuer, Architect.

"Progressive Architecture,"—June, 1947, pp. 75-78.

- Cape Cod Cottage, West Dennis, Mass. David Fried, Architect.

"Architectural Forum,"—May, 1947, pp. 57-60.

- The following three schemes are presented:

- (1) Suburban house near Chicago by Schweikher & Elting, Architects.

- (2) Desert house in Palm Springs, Calif., by Raymond Loewy, Designer.

- (3) House in Sierra Madre, Calif., John Matthias, Designer.

"Architectural Forum,"—May, 1947, pp. 81-88.

- Houses, U.S.A. A Brief Review of the development of Domestic Architecture in America. Part III, 1880-1946, the Modern Approach.

"Architectural Forum,"—June, 1947, pp. 95-101.

- Three projects are presented:

- (1) Country house in Forestville, Va. Charles Goodman, Architect.

- (2) House in San Marino, California. W. Smith, Architect.

- (3) House in Slingerlands, N.Y. Henry Blatter, Architect.

"Architectural Review,"—June, 1947, pp. 199-204.

- House at Kevings. Sven Markelius' own house in Stockholm.

- House in the Nasby Palace Gardens. Sture Frolen, Architect.

- House at Lissna. Ralph Erskine, Architect.

HOUSING

"Progressive Architecture,"—February, 1947, pp. 42-49.

- Housing Study. A Thesis by Ise Messner demonstrating the value of Integrated Design. Illustrated with plans and photographs of models.

"Architectural Forum,"—February, 1947, p. 105.

- Row houses at San Isidro. A. Vilar, Architect.

"Architectural Forum,"—February, 1947, pp. 115-120.

- The Industrialized House. Illustrated Article showing the panel system developed by K. Wachsmann and Walter Gropius.

"Architectural Forum,"—March, 1947, pp. 105-113.

- The Industrialized House. Kaiser & Iurns prefabricated a Standard House Chassis turning out 20 houses a day with possibilities of doubling the output. Various projects are illustrated.

"The Journal of the Royal Institute of British Architects,"—March, 1947, pp. 247-255.

- Planning for Amenity. Paper read by Edward Armstrong. Illustrated.

"Progressive Architecture,"—April, 1947, pp. 47-49.

- Women's Residence Club. Rio de Janeiro. Marcello, Milton and Roberto, Architects. Plans and photographs of model.

LIBRARIES

"Journal of the Royal Architectural Institute of Canada,"—February, 1947, pp. 36-60.

- The February issue Vol. 24 No. 2 is a special issue on Libraries covering the following:

- (1) Some Principles of Library Design. Article by Hilton Smith.

- (2) The smaller Public Library Building. Article by A. H. Eadie.

- (3) The Building Programme of the Public Library in Relation to its Functions. Article by Anne Hume.

- (4) The Children's Library. Article by Lilian Smith.

- (5) Libraries for Today. Article by E. S. Robinson.

- Plans and perspectives of the following Libraries are illustrated:

- (a) Dunbar Public Library. Vancouver, B.C. McCarter and Nairne, Architects.

- (b) South Hill Branch Library. Vancouver, B.C. Sharp, Thompson, Berwick, Pratt, Architects.

- (c) Proposed Branch Library. Vancouver, B.C. Townley & Matheson, Architects.

- (d) Proposed Branch Library. Hamilton, Ontario. Husband, Robertson & Wallace, Architects.

- (e) Public Library, Leaside, Ontario. G. Adamson, Architect.

- (f) Public Library, Toronto, Ontario. Beck & Eadie, Architects.

- (g) Branch Library. Knoxville, Tennessee. M. Biancuelli, Architect.

NOTES AND NEWS

TRANSCAAL PROVINCIAL INSTITUTE

PARTNERSHIPS

Messrs. Fleming and Partners have changed the name of the firm to Fleming and Cooke, practising at the same address.

Mr. H. N. Joubert has joined the firm of Kennedy, Furner and Irvine-Smith, which is now practising as Kennedy, Furner, Irvine-Smith and Joubert, at the same address.

Messrs. E. V. Hulse and R. F. McGaw have entered into partnership, practising as Hulse and McGaw, Salisbury House, Central Street, Pretoria.

Messrs. I. Dorner and T. O. Muller have entered into partnership, practising as I. Dorner and T. O. Muller, 508 Alris Buildings, Rissik Street, Johannesburg.

Mr. J. P. Lowe, M.C.Q.S., has entered into partnership with H. H. le Roith, practising as Harold H. le Roith and Partners, at the same address.

Mr. B. Janks and Messrs. Kling and Trope have dissolved partnership. Mr. Janks is practising at 930, S.A. Mutual Buildings and Messrs. Kling and Trope at 912, S.A. Mutual Buildings, Johannesburg.

RETIRED MEMBERSHIP:

The following members have notified their retirement: Messrs. W. C. P. Bailey, J. F. McKenzie, R. W. Scott, W. Weightman, G. R. Whale and S. L. Williams.

CHAPTER OF S.A. QUANTITY SURVEYORS

G. Brian McIntosh and Ronald K. K. Bowie have entered into partnership under the style of McIntosh and Bowie, Quantity Surveyors, Lewis & Marks Building, 65, President Street, Johannesburg. Hochstetter House, Andries Street, Pretoria.

W. Selkirk and E. A. Gaisford have entered into partnership with effect from 1st July, 1947, and under the style of Selkirk and E. A. Gaisford, Quantity Surveyors, 76-77, Alliance Building, Rissik Street, Johannesburg.

A. R. Wilcox and H. C. Sheppard have entered into partnership with effect from 1st July, 1947, and under the style of Wilcox and Sheppard, 91, Alliance Buildings, Johannesburg.

D. M. Sinclair, jun., W. B. James, R. L. Baragwanath and R. H. Aitchinson have entered into partnership with

effect from 1st July, 1947, and under the style of Sinclair, James and Partners, 414, Commercial Union Buildings, St. George's Street, Cape Town.

I. Leeb and W. A. Ritchie-Fallon have entered into partnership under the style of Leeb and Ritchie-Fallon, Chartered Architects, 88, St. George's Street, Cape Town.

J. W. S. Castleton, G. R. Durrant, N. R. Law and W. I. Paul have been taken into partnership by Messrs. Farrow, Laing and McKechnie and the firm will carry on business under its former name.

D. C. Dove has been taken into partnership by Mr. A. J. Lane, and the firm will carry on business under its former name.

RESIGNED:

White, E. (Col.) and W. J. Munks (Miss).

ACKNOWLEDGEMENT:

The brief summary of the British Town and Country Planning Bill published under "Notes and News" in the April issue was reprinted from the "Municipal Review," January, 1947.

VISIT OF MR. A. W. DAVSON

Arising out of the visit of Mr. A. W. Davson, a member of the Council of the Royal Institution of Chartered Surveyors—it was reported that letters of appreciation and thanks for the courtesies extended to Mr. Davson during his visit had been received by the President and Mr. D. J. Laing from the Secretary of the Institution.

SOUTH AFRICAN ARCHITECTURAL RECORD

Blue-bound volumes of the South African Architectural Record (1942-'46) are available on application to the Secretary for £13 16s.

APPOINTMENTS SOUGHT AND OFFERED

TALENTED ARCHITECT, seven years' building experience, all kinds work, wishes position or partnership with firm already settled. Some capital can be brought into business. Scheming, supervision, calculation. Also interior decoration. New ideas. Preferably in larger town. Lt. Jan Wawelberg, Soughdri Aerodrom, Stafford, England.

ARCHITECTURAL ASSISTANT, finished contract in Rhodesia, September, wishes to find suitable position; 18 years' experience in Australia and Switzerland in Architectural design, also engineering plant design and erection supervision. Reply: S.K. P.O. Box 138 Salisbury.

ARCHITECT, age 29, arriving Cape Town from England on 15th October, seeks post in Cape Town, Durban or other coastal town. Passed R.I.B.A. final examination. Five years' office experience before the war; eighteen months since war as chief assistant in London office. A. G. Versino, c/o Barclays Bank (D.C. & O.), Adlerley Street, Cape Town.

FRENCH ARCHITECT, 37 years of age, 20 years' experience, including work on cinemas. "Normandy" schools, Paris Exhibition, 1937. Member of the Order of French Architects, former student of three major schools; very good general and practical knowledge; in private practice since 1936 and carried out private and Government work. Seeks employment as architect or assistant with firm in South Africa.—Further information on request from Yvon Le Corneé, Architecte, Lormes (Nievre).

PROVINCIAL WORK

The following is a list of accepted tenders for Provincial Work for the period 1st January, 1947, to 31st March, 1947, together with the names of members of the Transvaal Provincial Institute and Chapter concerned.

SERVICE	ARCHITECTS	QUANTITY SURVEYORS	CONTRACTORS	AMOUNT
Welgedacht School: P.P. Rust: Alterations and additions	Gilham & Neill	Austin Stewart & Ellis	J. R. Rumble	£22,440 0 0
Lindleyspoort School: Zwartuggens: Additions	Margo & Margo	R. W. Skudder	Van der Spek & Matthysen	5,589 0 0
Saamwerk School: Benoni: Additions	Schaefer & Schaefer	A. J. Lane	A. S. Bottom (Pty.), Ltd.	6,888 0 0
Delarey Township School: Erection of New Primary School	(1) P. Rogers Cooke; and (2) H. Porter	Quail & Quail	C. T. Oschger	28,777 7 0
Prinshof Junior High School: Erection of New Building	Green & Hermer	T. Moore	Engel & Ruyter (Pty.) Ltd.	58,113 0 0
Bethal High School: M.T. & D.Sc. Centre and Additions	(1) Reid & Martin; (2) Murray & Telford	R. L. LeFaux	L. Fokkens (Pty.) Ltd.	20,440 0 0
Vereeniging: High School: Erection of Girls' Hostel	(1) Burg, Lodge & Burg; (2) Bosman & Verhoef; (3) Gemert & Breedveld	D. Caplan and Partners	Botbyl & Schep (Pty.) Ltd.	48,800 0 0
Waarad: Rand East School: Alterations and Additions	M. L. Bryer and Partners	Sinclair & Bowyer and Close	A. S. Bottom (Pty.) Ltd.	8,140 10 0
Brits Agricultural Training School: Hostel Additions	D. E. Barry and G. E. Fitzgerald	R. F. Bell	Van Heerden & Johnson (Pty.) Ltd.	48,960 0 0
Sonop School: Erection of New Building	(1) Mann & Joubert; (2) C. H. Sayce	D. Caplan and Partners	De Kloe & Slingerland	28,890 0 0
Pretoria West Afr. Jnr. High School: Electrical Installation	J. B. Dey		Industrial Electrical Co. (Pty.) Ltd.	780 0 0
				£277,817 17 0
DEPARTMENTAL:				
Belfast High School: Erection of Domestic Staff Quarters	Departmental		De Kloe & Slingerland	£10,470 0 0
Wolmaransstad High School: Additions to Girls' Hostel	S. B. Cunningham		Departmental	70,126 0 0
				£80,596 0 0
MINOR WORKS:				
Geduld Afr. Med. School, Rand East: Additions to Latrines			Shorten & Cuthbert (Pty.) Ltd.	£909 0 0
Tygerpoort School: Additional Room to Teachers' Quarters			Graaf & De Waal	780 0 0
Old Bethal Primary School: Conversion of "Rooi Gebou" into Additional Accommodation for Euodia Hostel			J. P. Venter	1,497 16 6
Brits Primary School: Construction of Additional Room to Principal's Residence			B. Fresco	1,125 0 0
Rossmore Afr. Med. Jnr. High School: Altering Cycle Shed to Kitchen and Store. Additions and Alterations to Native Quarters. New Cycle Shed			M. Kelfkens	985 0 0
Witbank Eng. Med. School: Construction of Native Quarters and Storeroom			Duncan & Elliot & Co.	605 0 0
				£5,881 18 6

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