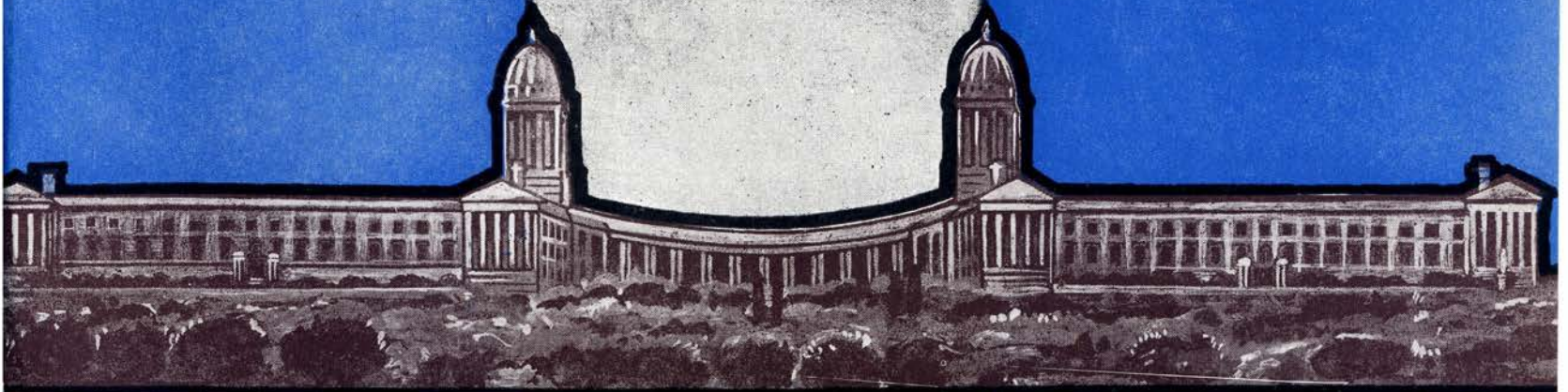


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No. 16.

FEBRUARY :: 1940.

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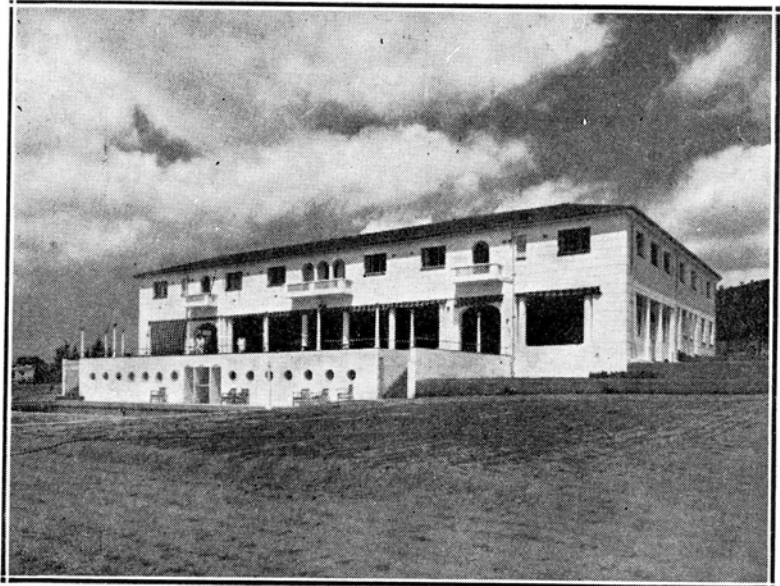
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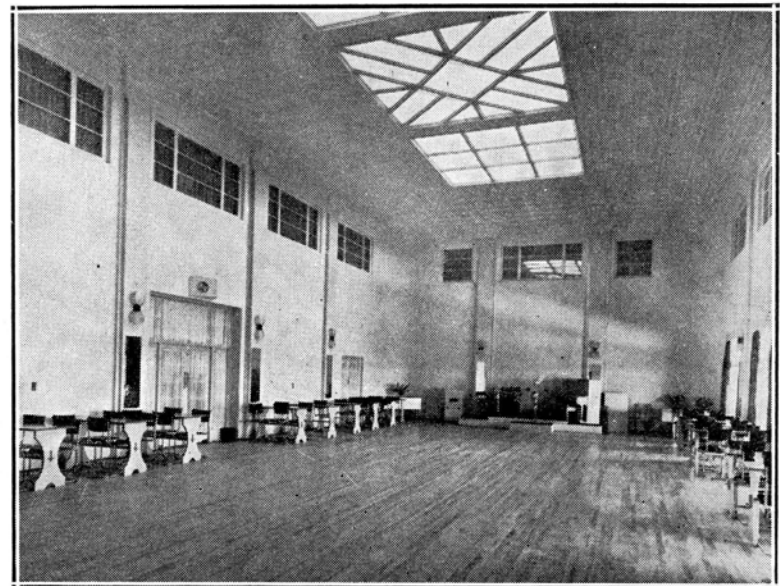
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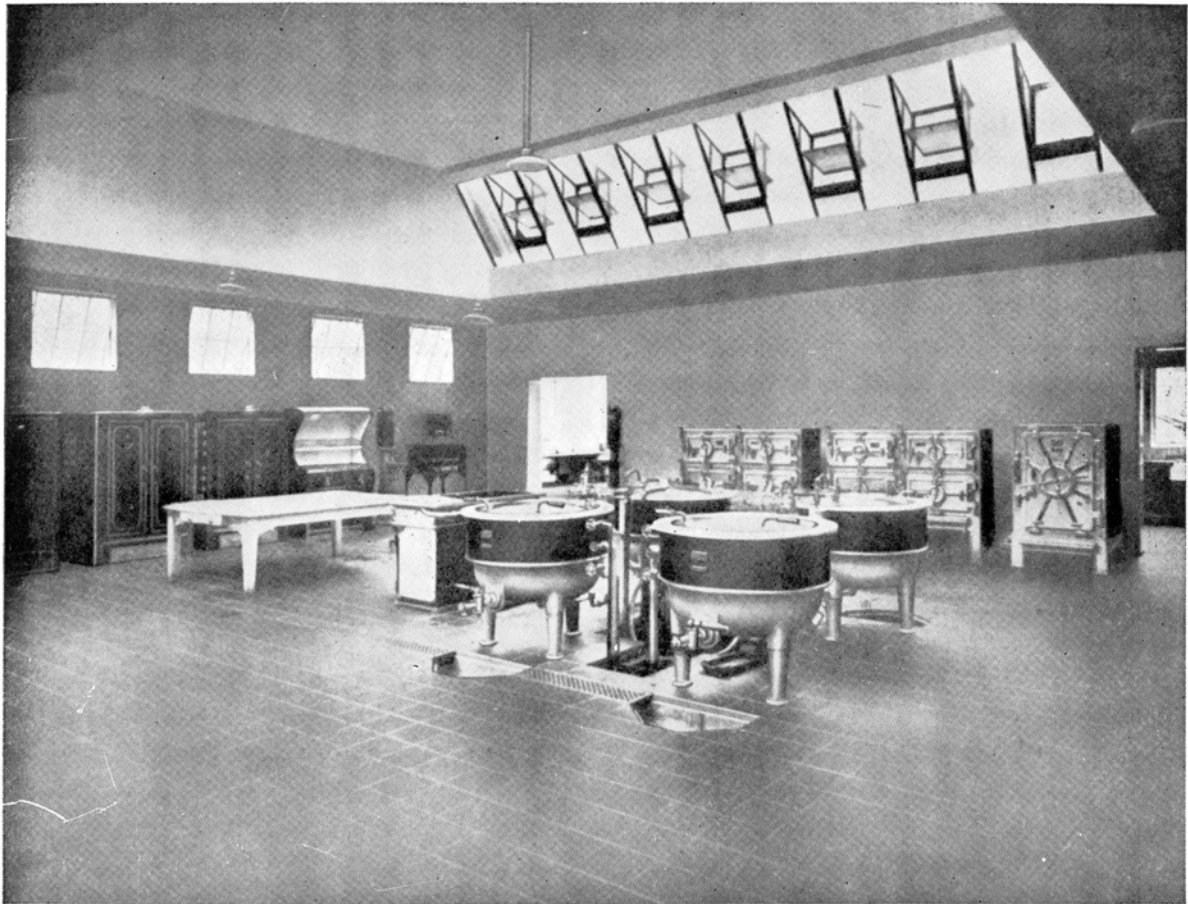
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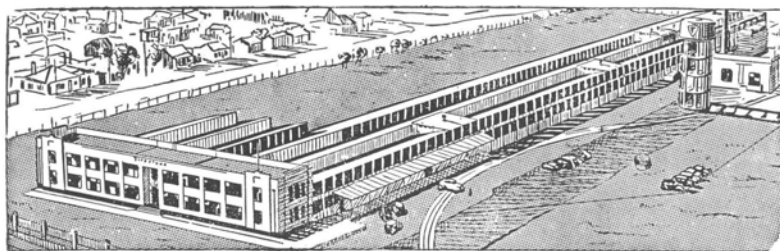
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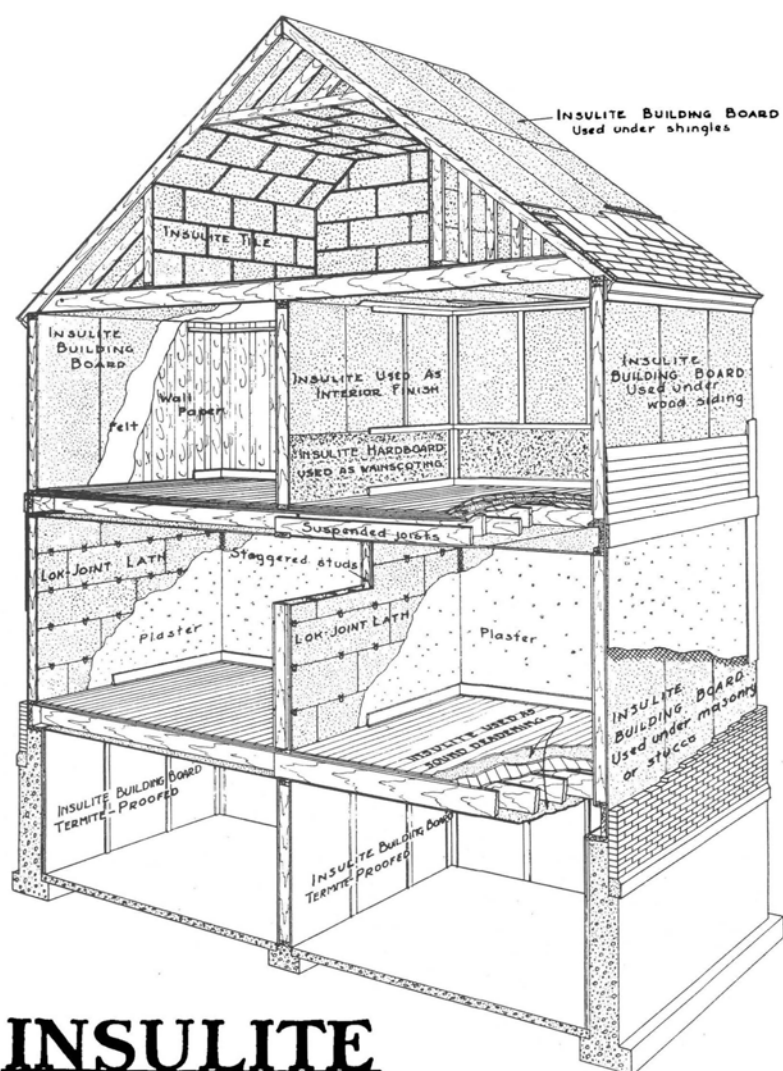
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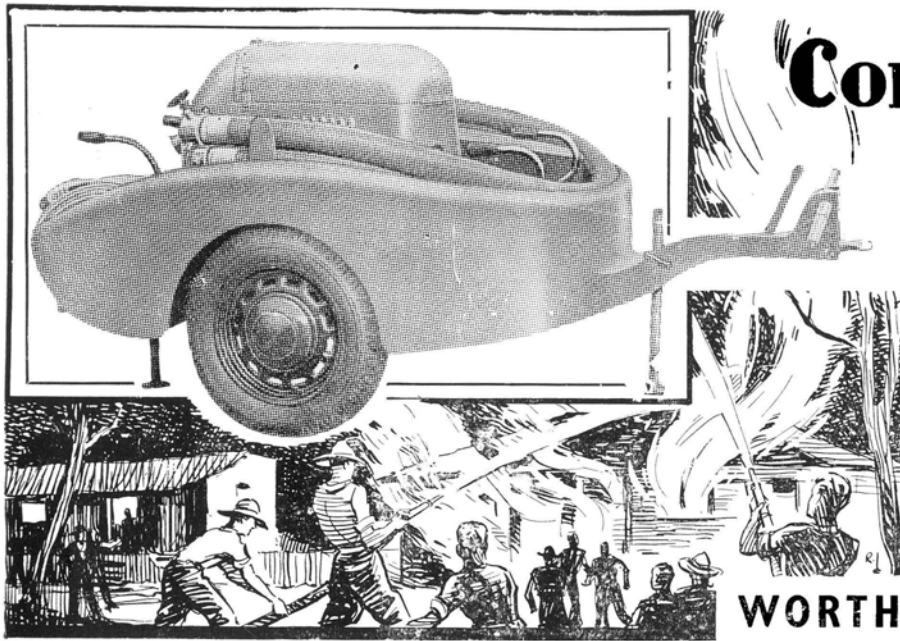
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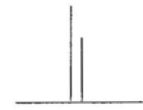
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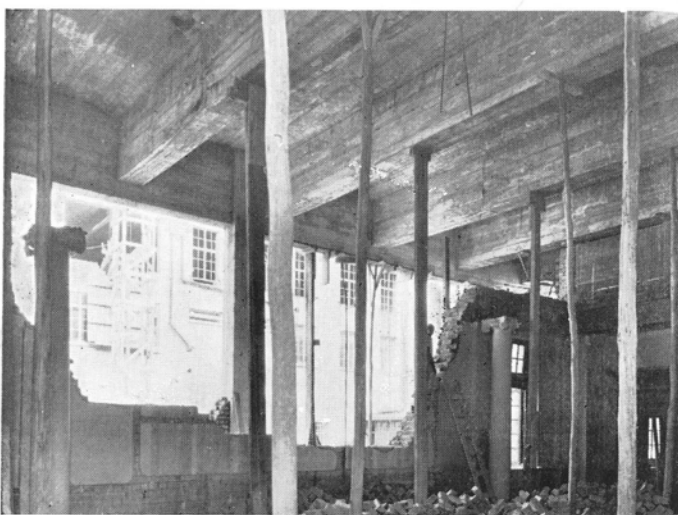




Ceiling Design



New Council
Chamber :
Johannesburg
City Hall



This view of the Council Chamber taken during the reconstruction period shows the heavy reinforced concrete beams put in to take the weight of the additions off the piers in the Rates Hall below.

THE design of this ceiling for the new City Council Chamber in the Johannesburg City Hall (architects, Messrs. Hawke, McKinlay and Sayce) was dictated by the fact that a span of 85 feet above the Chamber, itself 45 feet square, had to be bridged by reinforced concrete beams 4 feet 6 inches deep and 1 foot 8 inches wide. This beam span was essential owing to the fact that the inner or "partition" wall of the Chamber could not be used as a supporting member for the additions above without considerable strengthening of the supporting columns in the Rates Hall below, an operation which would have caused tremendous inconvenience to the public.

A PRACTICAL solution to the design of the ceiling was offered by the use of false beams, so forming a coffered ceiling. The centre of each coffer is occupied by an electric warming panel controlled by thermostats fixed in the wall. The treatment is plaster with a gold design on an ivory background.

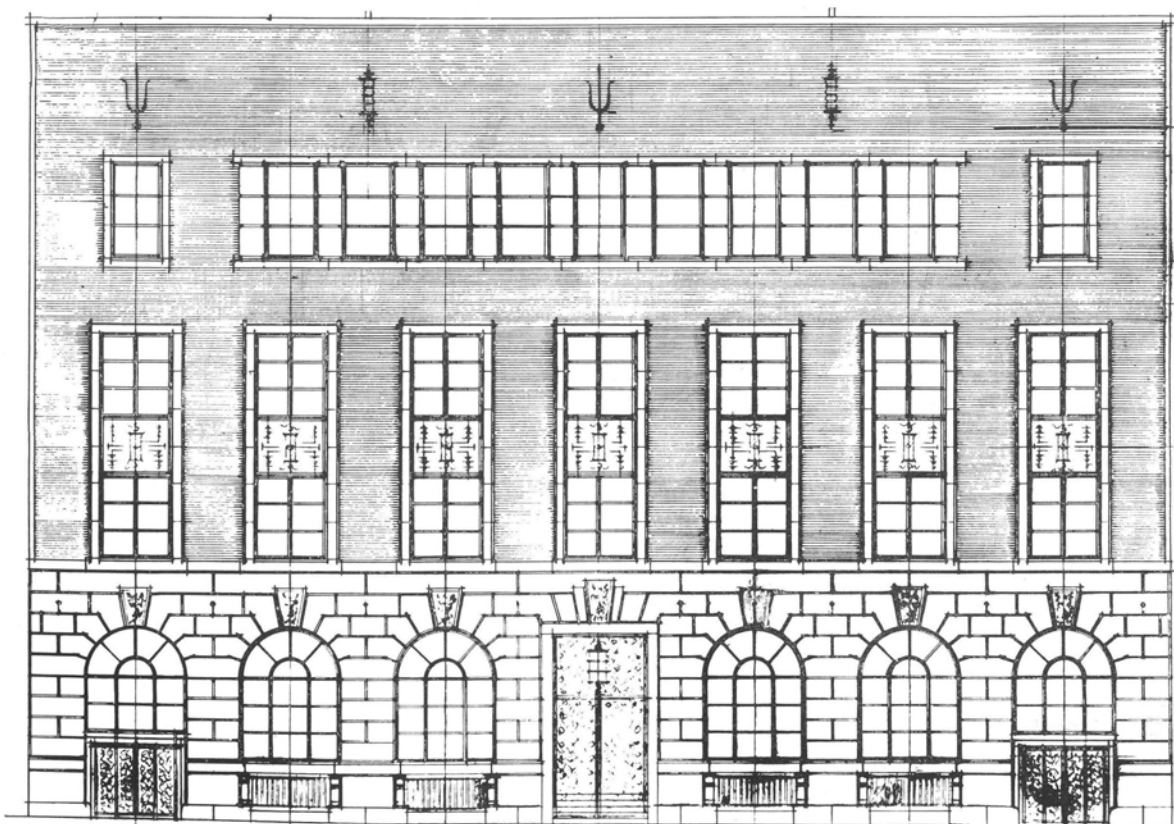
EVOLUTION OF A PLAN

... A Description of the Plan, Development and Final Design of the New Rand Water Board Offices to be erected in Johannesburg.

IN the near future construction is to begin in Johannesburg on a new office block for the Rand Water Board. The building will be erected at a cost of approximately £90,000, and will rank among the most imposing structures in Johannesburg. The architects were Messrs. Gordon Leith & Partners.

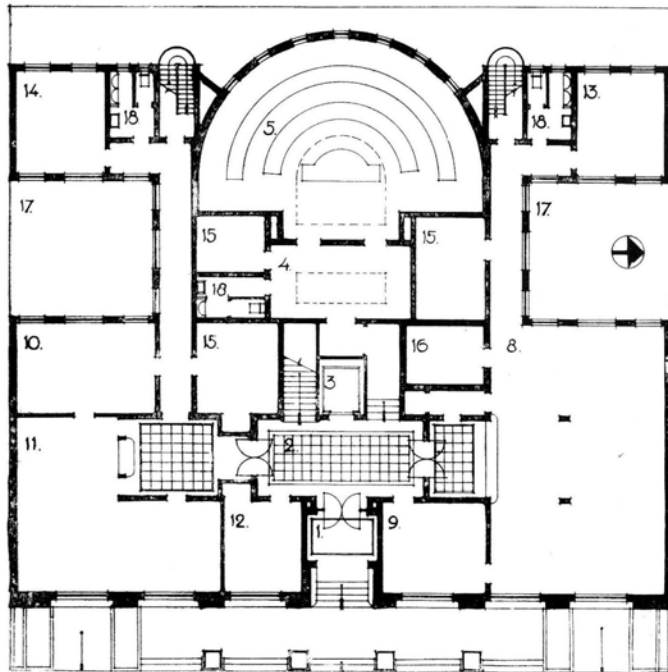
One of the most interesting aspects of the design of this building was the number of evolutionary stages through which the plan had to be passed before a final conception satisfactory to all was attained. Before offering a description of the new building a brief resumé of the development of the plan will be given because of its great interest to students of architecture and to lay readers not familiar with the problems that confront the architect.

The problem hinged mainly on the difficulty of arranging the desired accommodation on the site and achieving at the same time suitable lighting, ventilation and architectural distinction. Altogether more than 15 schemes were prepared before the final plan was adopted. Many of these schemes were naturally inter-related, and little advantage would be gained by describing each, so that only decisive stages in the evolution of the plan have been chosen. These are as follows:—



*Fraser Street
Elevation*

Fig. 1. *First Scheme*



First Scheme: THE plan depicted in figure 1 was the first scheme to be placed before the Rand Water Board authorities who, at the beginning, desired that their new building should be recessed back some distance from the street. The Board desired also that the basement should be available for use as a garage in addition to the usual function of providing record and strong rooms.

Accommodation desired on the ground floor was as follows:—

- (a) A large accounting department consisting of a general office, an accountants' office, a strong-room and a record room.
- (b) An expenditure department consisting of a large general office, with public spaces, a buyers' office and a record room.
- (c) A stationery store.
- (d) A room for auditors.
- (e) A Board Room with ante-room, and, if it could be provided, a Committee room, these to constitute a feature of the ground floor plan.

The disabilities of this first scheme were that the general office of the buyers' department (No. 11) took on an awkward shape, and the expenditure department was in a very awkward position from the point of view of public access. In addition to this, the entrance lobby was rather cramped, and the approach to the ante-room and Board Room was not imposing.

The greatest disability, however, was revealed when the upper floor plans were developed from this scheme. Under this scheme, the disposition of the Board Room was such as to preclude building over it, firstly because of the difficulty of spanning, and secondly because adjacent property made the windows in the Board

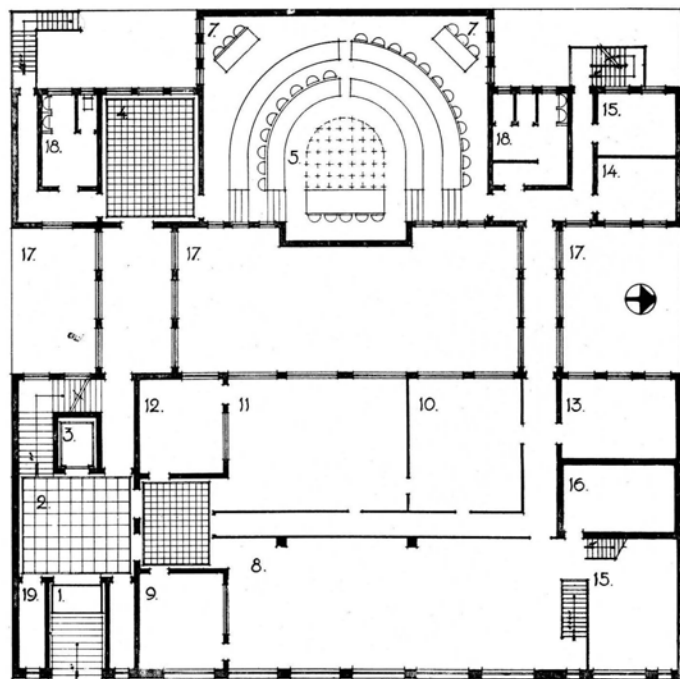
Room an insufficient source of illumination without the aid of top lights. As a result of this arrangement there was a considerable loss of valuable space on the first floor level, a disability which would have been repeated on all upper floors. After the development of this scheme it was discovered that the accommodation necessary required every inch of the site.

So far as the façades were concerned the problem of the approach to the basement intruded. The Board authorities were anxious to have a well-balanced elevation, and were satisfied to have one entrance to the basement balanced by one entrance to the building; or, alternatively, a central entrance to the building with an entrance and an exit to the basement symmetrically arranged.

* * *

Second Scheme: IN view of these disabilities a second scheme was drawn up. In this scheme consideration was given to the possibility of an asymmetric plan having the entrance to the offices on the south end of the elevation and a single entrance to the basement on the north end. This arrangement is shown in figure 2.

While this plan conformed to actual requirements in so far as the disposition of the various departments was concerned, it was obtained at the expense of architectural effect. The narrow passageways leading to the Board Room, and the unbalanced, connected passages, make this apparent. Under this scheme it was intended to dispense with the top lights in the Board Room, and utilise the space over it.



Second Scheme Fig. 2.

Third Scheme: THE plan in scheme two was unsatisfactory, and, after further alteration and revision, the third scheme was evolved.

The arrangement shown in figure 3 enabled the building to be carried round the four sides of the square formed by the Board Room. However, here again the rather cramped approach to the Board Room was considered unsatisfactory, as well as the method of lighting the rooms above the committee room by means of side windows into the area.

* * *

Final Scheme: UP to the present it will have been noticed that in all cases the lift was placed immediately opposite the main entrance, a very convenient arrangement and natural enough to be regarded as a matter of course. In the re-arrangement shown in figure 4, which is the plan to which the building will now be erected, the position of the lift was changed.

By placing the entrance lift at the side of the entrance lobby, a much more spacious and attractive entrance is provided, the improvement to the Board Room approach being particularly apparent. It will be readily seen that the accommodation provided is much more generous under this scheme, and all parts of the building are very well lit and ventilated. The Board Room is air-conditioned, and illuminated by a large top light, the space above forming a central courtyard round which the offices are grouped.

In evolving this plan it was agreed that the buying and expenditure departments should be accommodated in one large room. This enabled balance to be obtained between these departments and the account-

Third Scheme

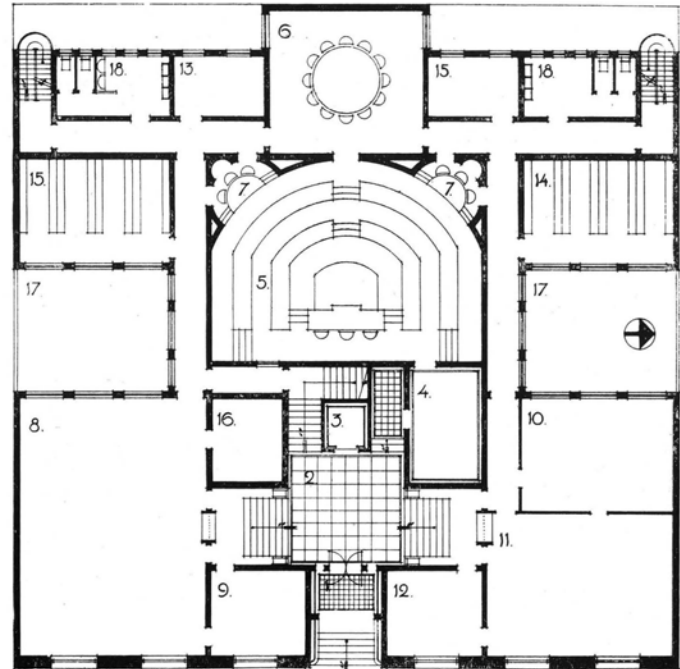


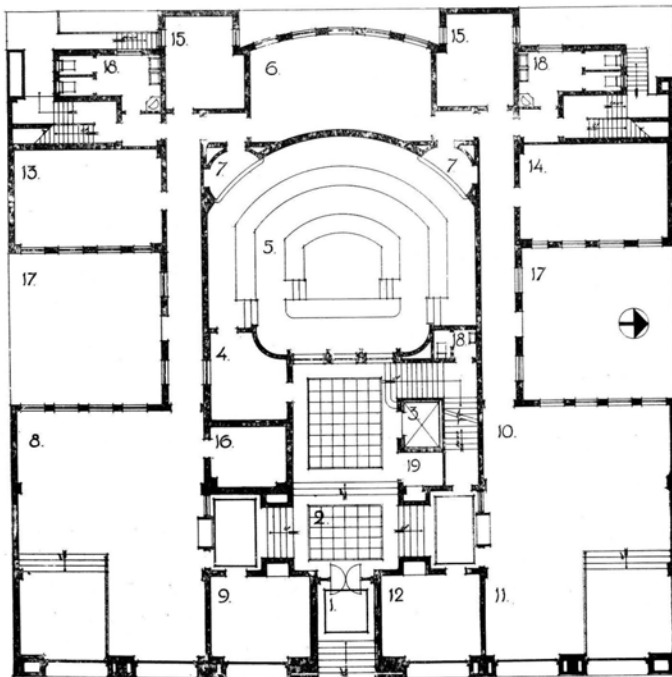
Fig. 3.

ants' department, and resulted in a convenient disposition of the strong room in relation to the latter. The platforms indicated in rooms numbered 8 and 10-11 result from the necessity for raising the floor at these points to allow sufficient head room for the entrance to the basement. They cannot be considered inconvenient as they will accommodate the chief clerk of each department, giving him a point of vantage in the control of his department.

Description of Building

THE building is to be situated in Fraser Street. The main elevation faces east, and is flanked by tall buildings on its north and south boundaries. The back of the building faces west, and communicates with a 6-ft. right of way giving access to President Street.

The style in which the building has been designed may be termed Neo-Classic, its effectiveness being dependant on good materials, proportion and great restraint. It is intended that only the most durable materials, and only the most attractive of their respective kinds, will be used in the construction as well as in the finishings of the building. In all cases



Final Scheme

Fig. 4.

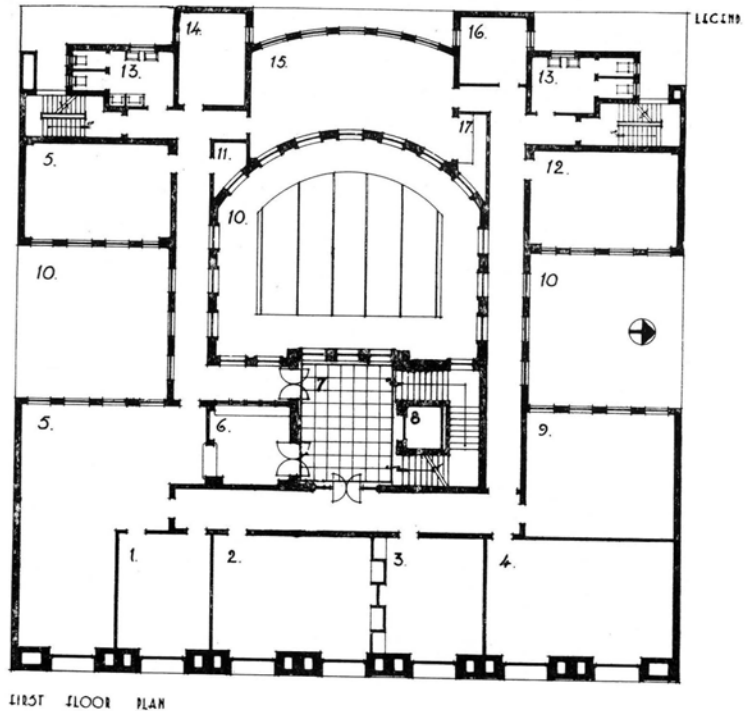
LEGEND: (1) Entrance Lobby, (2) Entrance Hall, (3) Lift, (4) Ante Room, (5) Board Room, (6) Committee Room, (7) Press, (8) Accounting Dept., (9) Accounting, (10) Expenditure Dept., (11) Buying Dept., (12) Buyer, (13) Auditors, (14) Stationery, (15) Records, (16) Strong Room, (17) Area, (18) Cloaks, (19) Attendant.

the application of the finishes will be carried out in the simplest and most economical way.

Externally, the walls from ground to first-floor level are to be faced in Brits granite. The walls above are to be faced with specially selected facing bricks, the surrounds to window openings, copings, etc., being executed in Brits granite as before. All windows will be of bronze, glazed with $\frac{3}{16}$ " glass. The grilles to the ground-floor windows, main entrance and garage are to be carried out in wrought iron to a gay design as a relief to the otherwise rather severe elevation.

On entering the building from Fraser Street, one will be confronted by a pair of hand-made wrought-iron grilles, which, with very little effort, can be made to slide into the granite-lined walls on either side of the vestibule; and in this position they will remain concealed during business hours. Beyond the grille, a flight of granite steps leads to a pair of bronze-lined swing doors, which give access to the main entrance hall of the building.

The floors and walls of this moderately spacious hall are to be lined with a selected variety of South African marble. Five marble steps lead off the hall to right and left, giving access to the lobbies communicating with the Accounts and Buyers' and



Final First Floor Plan

LEGEND: (1) Chief Clerk, (2) Secretary, (3) Assist. Secretary, (4) Chairman, (5) Records, (6) Waiting Room, (7) Lobby, (8) Lift, (9) Office, (10) Area, (11) Store, (12) Rest Room, (13) Cloaks, (14) Filing, (15) Typists, (16) Telephones, (17) Roneo.

Accommodation

First Floor: — Entrance lobbies on this, and all floors above, are very considerably reduced compared with those on the ground floor. The first floor accommodates the secretary and his staff, lavatory accommodation, etc., being provided.

Second Floor: — The second-floor accommodation is for the Chief Engineer and his staff. A generous-sized recreation room for the staff has been provided on this floor, together with lavatory accommodation, etc.

Third Floor: — This floor has been devoted to the drawing offices, survey offices, etc., and is also provided with lavatory accommodation.

Fourth Floor: — A flat for the caretaker has been provided and also accommodation for such Natives as will be obliged to remain on the building site. The floor will also contain the lift-room. All water tanks will be concealed from view.

Basement: — The lift and stairs serve the basement lobby, communicating with the garage on one hand, with a fire door and a suite of record rooms on the other. The garage will be lit by glass sets forming the floor of the north and south areas.

Expenditure offices respectively; these in turn communicate with their respective strong-rooms, record rooms, stationery stores, Auditor's rooms and lavatories. The west end of the entrance hall terminates with a large double-glazed window in variegated glass. This window, incidentally, also serves as a background to the Chairman's table in the Board Room. It is hoped that this window will form an attractive feature of the design by reason of the subdued light coming from the ceiling of the Board Room. On the right-hand side of the entrance hall are situated the entrance to the lift and the approach to the main staircase. On the left-hand side the entrance to the Board members' cloak-room communicates with the Board Room. Beyond the Board Room a Committee room capable of seating 12 to 15 persons has been provided. In addition, Board members are provided with a small private lavatory, which leads off the first landing of the main stair, and is thus carefully concealed while being easily accessible.

The Board Room occupies a position in the centre of the building, and will be entirely top-lit and air-conditioned. The shape and area of the Board Room afford a central courtyard above, lighting and ventilating the rooms surrounding it as well as forming a pleasant architectural feature of the design. Two further light areas are required to admit light and air to the interior of the building.

Materials to be Used in Construction:

THE following are the materials which it is intended to use in the construction and finish of the building:—

GRANITE FACINGS: Walls from ground level to first floor sill; courses are to be faced in Brits granite.

WALL SURFACES: Walls from first-floor sill cornice are to be faced with specially selected facing bricks; facings to window surrounds and copings are to be in Brits granite, fine-punched to sample.

WINDOWS: All windows except in lavatories and caretaker's quarters are to be in bronze to detail.

Grilles to main entrance, and openings below windows on ground floor, to be hand-made wrought iron to architect's design.

Windows throughout the building are to be glazed with $\frac{3}{16}$ " British plate glass.

VESTIBULE: Walls flanking entrance vestibule and ceiling to same to be lined with Brits granite, fine-axed or polished, as required.

Paving steps to swing door including landing to be in fine-punched granite.

The swing entrance doors are to be in bronze-covered teak to detail.

STAIRS: Stair treads and wall linings of main stair from ground to first floor only will be in white marble, with bronze handrail.

BOARD ROOM: The walls of the Board Room are to be panelled in selected, matched and figured sycamore, the furniture being of dark polished walnut. The ceiling is to be acoustically treated, and the floor covered with dark rust-coloured Wilton pile.

The outer skylight is to be glazed with $\frac{3}{4}$ " armoured glass, the laylight to be in actinic $\frac{1}{2}$ " plate.

FLOOR: General Construction.— All concrete floors are to be of trough or coffered beam construction.

WALLS: Plastering generally.— Internal walls and ceilings are generally to be plastered in cement and skimmed with "Hardwall" finish, and enamelled to approved tints. All external angles liable to damage are to be protected by metal arris.

LOBBY FINISHES: Walls of lobbies, corridors and main staircase above first-floor level are to be faced with Kirkness special 3" x 2 $\frac{1}{4}$ " x 9" blue bricks bedded in dark mortar to a height of 7 ft.

SKIRTINGS AND REVEALS: Skirtings, floor margins, and door reveals in corridors are to be

lined with $\frac{1}{4}$ " marble of a colour to harmonise with the brickwork. The floors of corridors are to be paved with $\frac{1}{2}$ " cork tiling, full width of corridors.

PANELLING: In addition to the Board Room, it is proposed to panel the walls of the Committee Room, the Chairman's room, the Chief Engineer's office and the Secretary's office.

CONCEALED LIGHTING: Concealed electric lighting will be provided in the Board Room entrance lobbies and Coommittee Room.

AIR-CONDITIONING: A small air-conditioning plant is to be provided for ventilating the Board Room and record rooms in the basement. All other parts of the building will be adequately ventilated by natural means.

MARBLE REVEALS: Doors and windows to ground, first, second and third floors throughout the building are to have 1 $\frac{1}{4}$ " polished marble reveals and sills.

LAVATORIES: All lavatories are to be served by Sloane or approved silent flush valve systems. The walls are to be tiled to a height of 7 ft. and the floors are to be in terrazzo.

CENTRAL COURT: The main segmental courtyard is to be faced with bricks similar to, but lighter than, those specified for external facings, and surrounds to windows are to be executed in Ficksburg stone.

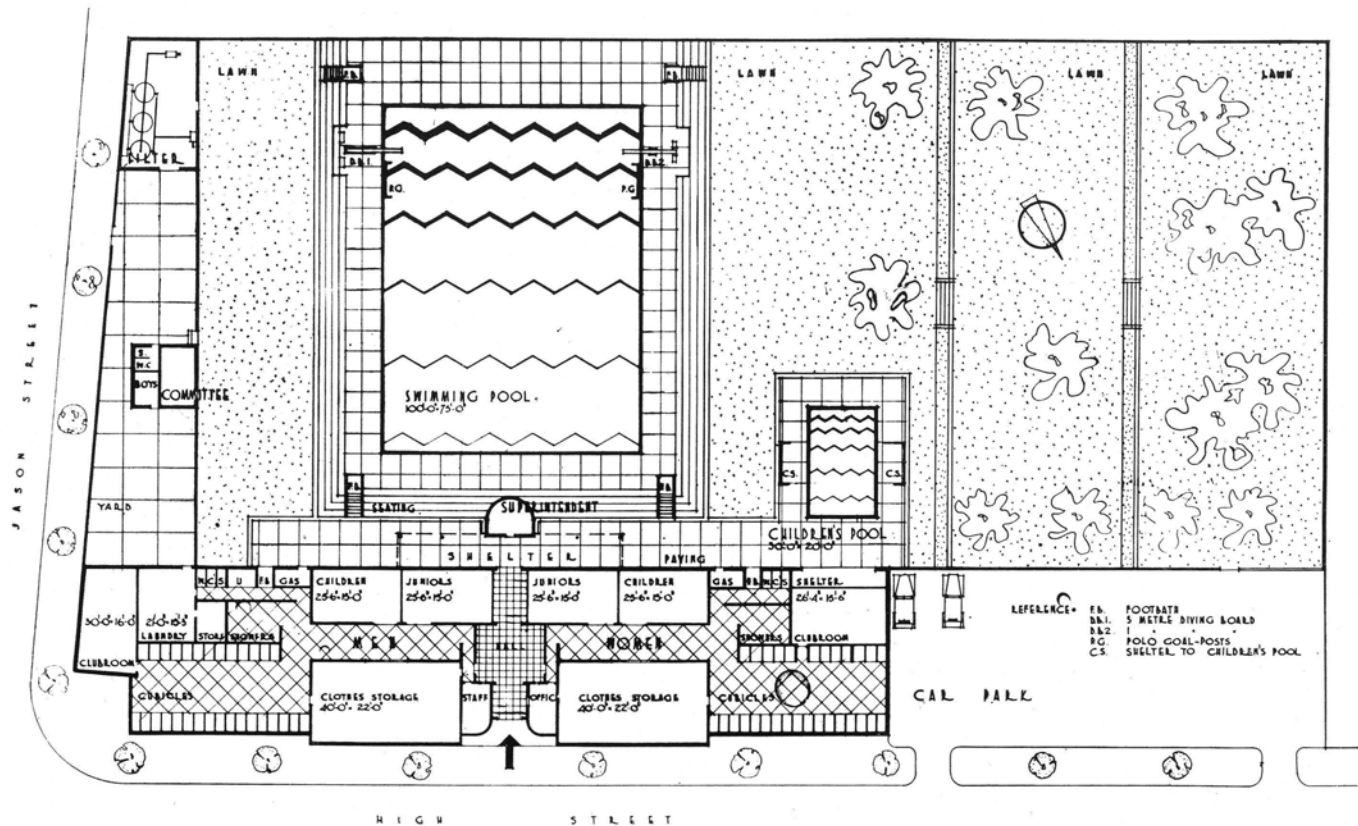
LIGHT AREAS: The light areas north and south of the Board Room are to be plastered in white cement, as also are the areas to the west of the building.

LIFT: The lift is to be automatic with self-operating sliding doors, cage and doors being finished in bronze.

ENTRANCE HALL: Entrance hall floor is to be in comblanchien unpolished or other approved white marble, with black sets and margins. The walls of the entrance hall are to be lined to ceiling height with soft-coloured marble such as "Kairo," "Heat Mist" or other marble, preferably South African.

VENETIAN SHUTTERS: As the morning sun will penetrate the east windows and the afternoon sun the west windows, it is proposed to provide removable and adjustable Venetian shutters to the east and west windows of all offices. It is intended that these shall be introduced as a permanent feature and combined with curtains, valences, etc., in order to prove an attractive feature of design rather than as an afterthought. Shutters having aluminium slats which exclude the minimum amount of reflected light when drawn will be recommended.

New Municipal Swimming Bath: Brixton, Johannesburg



CITY OF JOHANNESBURG
 CITY ENGINEER'S DEPARTMENT
BRIXTON SWIMMING BATH
 SCALE - 1" = 10'

Franklin
 CITY ENGINEER

SITUATED in the heart of a thickly populated area, the new swimming bath erected recently by the Johannesburg Municipality at Brixton offers an interesting example of modern swimming-bath design, being notable for the simple effectiveness of its conception, its finish and the incorporation of some of the latest ideas in this field of architecture. The total cost of the bath was approximately £23,500.

Though not in a wealthy area, the site of the bath is in many respects ideal as it is on the crest of a rise overlooking Newlands, Mayfair and much open country. It has a slight westward slope which enables a fair view to be obtained from the bath, at the same time allowing added interest to be given to the grounds by the provision of terraced lawns.

Planning Details :

A GLANCE at the plan of the Brixton swimming bath, reproduced here, will indicate at once that the main intention in the design and system of administration adopted was the accommodation of large numbers of people without discomfort or confusion. It will be noticed first of all that there is ample space provision in the bath grounds.

In swimming-bath design it is important that any estimation of free space required should be based on the assumption that the majority of bathers spend the greater part of their time, as much as 75 per cent., sun or air bathing, and not in the pool. In addition to this important fact, swimming baths are assuming an increasingly important rôle in community life, and are among the few places where people may obtain their daily recreation in considerable numbers. From a public health point of view, therefore, it is important that sufficient space be provided for the indulgence of certain forms of recreation besides swimming. To extend the recreational facilities of the Brixton baths, it is the intention of the authorities to institute various forms of ring games to be played on the lower lawn terrace.

It will be seen also that, to facilitate the accommodation of large numbers of people without inconvenience to patrons, the "clothes-storage" system has been adopted instead of the usual system of lock-up cubicles. The former system will probably be adopted in all Johannesburg municipal baths in future, on account of its many advantages. Its chief merit is that it allows the baths to be used by large numbers of people simultaneously without the necessity for providing a propor-

tionate number of cubicles, as would be the case in the lock-up system. At Brixton there are only 29 cubicles for women and 30 for men. The advantage of this is seen immediately when it is considered that no cubicle is occupied for longer than the time it takes one person to dress or undress. The system is a safeguard against the theft of patrons' clothes, and dispenses with the necessity for a lock-up attendant.

Under the clothes-storage system adults are given a special wire clothes receptacle comprising a bottom basket, a cross rail for trousers and shoulders for coats. Juniors are given a wire basket alone, and children receive a canvas bag. Each receptacle has a metal number tag, a corresponding tag being given to the bather who attaches it to his costume.

The lay-out of the cubicle enclosures forms another interesting departure in design. There is no narrow, sunless and draughty passage-way between the two rows of cubicles. The cubicles, storage rooms, showers, lavatories and clubroom in each enclosure are ranged around what might be called a miniature courtyard. Sunlight is therefore admitted at all times of the day, and the enclosures may be used for nude sun-bathing if desired.

A further point to note in the planning detail is that the superintendent's office is situated immediately adjacent to the shallow end of the pool so that he may obtain an uninterrupted view of the bath and the grounds. This is essential from the point of view of effective control. For this purpose also large windows have been built into the filter-plant room at the south-east corner of the grounds.



A general view of the Brixton Swimming Bath taken from the south-east corner. The children's pool can just be seen in the background.

Hygiene and Filtration :

HYGIENE.

BY designing a swimming bath to accommodate large numbers of people at a given time the problem of maintaining the highest possible state of hygiene is naturally accentuated. This can be achieved by tightening up discipline, which the architect can assist by certain elements in design.

At Brixton, for instance, the exit from each of the cubicle enclosures to the bath is occupied by a white glazed tile foot-bath, about 9 inches deep, filled with a disinfectant solution. Bathers, who are forced by regulation to use the shower before emerging from the cubicle enclosure, have no option but to traverse the foot-bath. As a further precaution against the contamination of the swimming pool, its immediate surround is isolated from the grounds by a low bar railing. By this means, the non-bathing public are prevented from access to the pool surround, which is thereby protected from dirt and contaminating matter carried on the shoes of the public. Provision is made for spectators by the tiered seating round the sunken quadrangle in which the pool is situated. Bathers wishing to enter the pool from the lawns have to traverse another foot-bath at each of the four entrance points.

FILTRATION.

THE usual system of filtration has been installed, and may be described best on broad lines by the following quotation from "Modern Public Baths," by Kenneth M. B. Cross, M.A., F.R.I.B.A.:—

"The waste outlet is planned at the deep end of the bath at the bottom of the diving well. The water passes through a strainer which is easily removable for cleansing purposes. It then enters the circulating pump, chemical reagents are added

mechanically to effect the coagulation of impurities, and the water enters the filter. The coagulated impurities and suspended matter are retained by the filter bed and the water collects at the base of the filter. The impurities in the filter bed are periodically removed by washing the bed by reversing the water flow after compressed air agitation. . . .

"After passing through the outlet pipe from the base of the filter, the water is aerated in order to impart to it an attractive and sparkling appearance after treatment. The next process, disinfection, is usually effected by means of chlorine gas, and this method is claimed to be the cleanest and most effective method of achieving the object in view. The chlorine gas is administered by means of a chlorinator, and the steel chlorine containers are conveniently placed in relation to the plant. . . . The water re-enters the pond by means of inlet gratings at the shallow end. This process continues during the whole period during which the bath is in use, a continuous circulation being maintained."

At Brixton, therefore, the water is filtered, aerated and sterilized by the high-pressure chlorine gas process as recommended by the British Ministry of Health. The chemical reagents added to effect coagulation are alum and caustic soda. The entire contents of the bath pass through the filtration plant every six hours. The bottom of the bath is cleaned periodically by means of an apparatus which may be described as an underwater vacuum cleaner. This apparatus is connected to the suction end of the circulating pump. A suction head is thereby created in the apparatus, and this, working through rubber squeegees, draws up all grit, sand and other dirt adhering to the bottom. A scum channel round the perimeter of the bath allows surface dirt to run off to waste.



Constructional Details and Treatment :

The Bath: THE main swimming pool is 75 feet wide and 100 feet long, with a depth ranging from 3 feet to 10 feet. The bath interior is finished with 6-inch square white glazed tiles with black tile lines along the length to guide swimmers. In addition, a few feet from the wall of the bath at the shallow and deep ends there is a transverse black tile line which serves to indicate to swimmers racing that they have reached the end of the bath.

Depth markings and starting blocks are indicated by lettering burnt into the white glazed tiles. The bath surround is of deep cream non-slip cement tiles.

The contour of the bath bottom is interesting. At the shallow end it is 3 feet deep, from which point it slopes down evenly to a depth of 6 feet over a distance of 60 feet. Here the slope is increased, the floor dropping from 6 to 9 feet over a distance of 14 feet. Over the next 10 feet it drops to a depth of 10 feet which is maintained for 6 feet. The floor then rises to a depth of 9 feet at the end of the bath.

This arrangement provides a deep diving well, the depth of 10 feet being in compliance with the regulations of the International Amateur Swimming Federation for baths provided with 3-metre spring diving boards. The Brixton bath has 1-metre and 3-metre spring diving boards, both fitted with adjustable fulcrums. It will be seen that an even slope over the length of the bath would not give the maximum depth where it is needed most, namely where the diving boards are placed. In addition, the gradient for a depth of 10 feet would be too steep to be comfortable for non-swimmers.

* * *

Method of Tiling: ONE of the difficulties encountered in swimming-bath construction is the fixing of the tiles in such a manner that they do not loosen or move by expansion or contraction. The method adopted at Brixton was as follows:—

The tiles were placed in a mould and cast solid to concrete slabs 18 inches square. These slabs, faced with the tiles, were then laid on to the bath floor. Across the width of the bath the floor has expansion joints at 3-foot intervals. There are three expansion joints over the length of the bath. To reduce movement in the surround the tiles are laid with $\frac{1}{8}$ -inch joints, bituminous expansion joints being inserted 12 feet apart. The specially grooved tiles forming the scum channel were fixed in the same manner as the tiles covering the bath sides and floor, *i.e.*, they were

cast solid to cement blocks, which were finally placed in position.

* * *

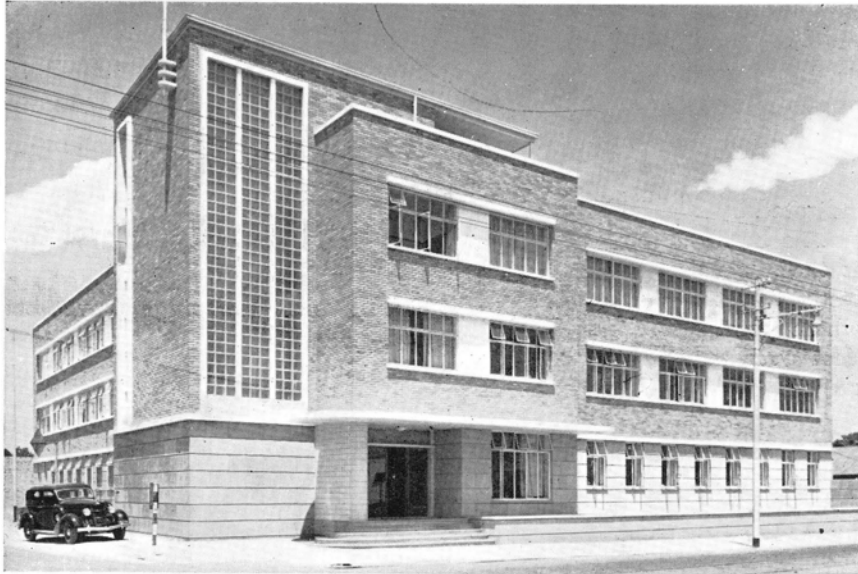
Children's Pool: THE children's pool is finished with white glazed tiles, and is 20 feet wide by 30 feet long, with a depth ranging from 6 inches to 1 foot 9 inches. In addition, it has a number of shelters for parents.

* * *

Bath Buildings: THE bath buildings have been given a high finish, all interior and exterior brickwork being carried out in golden-brown iron-spot facing bricks. Outside façades have a snowcrete finish above a brick plinth. The walls of the entrance hall have a dado of mottled cream glazed tiles with a mottled blue capping and skirting, the tiles being carried or repeated round the architraves of all the windows and doors. The flooring of the hall is carried out in rich cream encaustic non-slip tiles relieved by blue borders. The flooring in the cubicle enclosures is of red pressed cement.

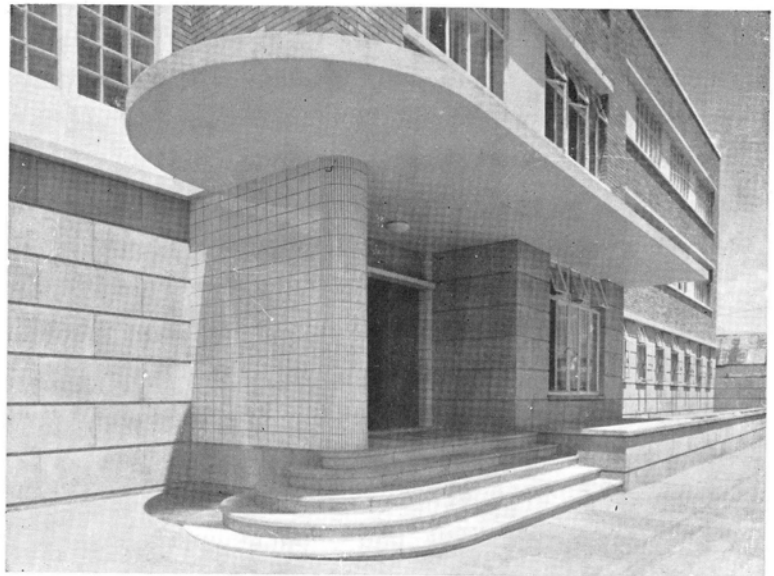
Provision made in the cubicle enclosures includes a club-room containing individual lockers, showers and lavatory accommodation and two large rooms, 15 feet wide by 25 feet 6 inches long, fitted with large iron grille sliding gates. These rooms are normally used for juniors and children, but may be reserved for a single class visiting the baths. This is an important provision, in that swimming has now been placed on the school curriculum. The arrangement saves the handling of clothing, thereby economising time for the scholars.

The shower enclosures are open to the sky, and are equipped with hurricane-type showers between frame partitions. In addition, there is a needle spray bath, and special foot showers. Hot water is available for the showers from gas-geysers of the non-storage type. Toilet soap containers are fitted beside every shower. The walls of the shower enclosures are finished with white glazed tiles from floor to top. In the womens' enclosure special attention has been given to the arrangement of mirrors and their illumination at night. Full first-aid equipment is available, including a special Inhalation Resuscitation Apparatus supplying a mixture of 93 per cent. oxygen and 7 per cent. carbon dioxide. Ceilings throughout are of cement plaster, distempered white, and all lighting fixtures are of the direct diffused type.



CHURCH STREET FAÇADE.

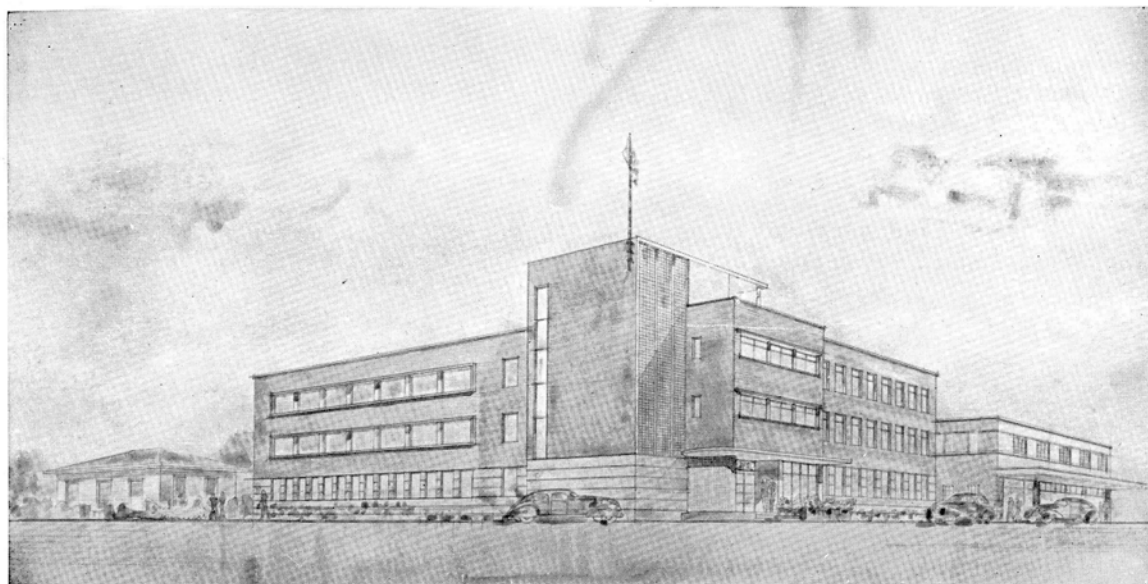
Photo : Alan Yates.



MAIN ENTRANCE.

Photo : Alan Yates.

New Offices at Pretoria for Wheat Industry Control Board



THE Wheat Industry Control Board, an organisation brought into being in 1930 for the purpose of fostering the production of wheat in South Africa, is now housed in an impressive new building recently completed in Pretoria.

The building, the contract cost of which is £28,746, is situated at the corner of Church and Edward Streets, in the central area. The building is three storeys high and of the concrete-frame construction. Provision has been made for a future addition of two more floors.

The main entrance is near the corner of Edward Street, and is strongly emphasised by the staircase and lift-tower, of which the wall facing Church Street is built completely of glass bricks, and forms a continuous glass panel 10 feet wide and 35 feet high.

The lower portion of the façade to the height of the top of the ground-floor windows is faced in buff-coloured reconstructed stone with rectangular-sunk channel joints.

Above this level the building is faced with yellow facing bricks, four courses to the foot, and with deep recessed joints.

The steel windows have been purpose-made and comprise 11-foot sections all vertically pivot-hung.

The main entrance doors are of purpose-made bronze. Above these doors, externally, is fixed a coloured ceramic panel 2 feet high and 10 feet long, illustrating in a conventionalised manner the Wheat Industry.

A coloured ceramic finish has been selected, and no direct shadow effects can be obtained as the panel faces on to the entrance porch.

LAYOUT.

The main entrance hall, on the ground floor, is 25 feet long by 12 feet 3 inches wide, and is panelled in a modern manner to door height.

The floor is of Rhodesian teak blocks, as are the floors of all the offices.

Indirect tubular lighting has been provided to the hall and is concealed in a continuous light-trough fixed below the ceiling. On the left of the entrance hall are the two lifts and staircases. One lift only is being provided at this stage, but on completion of the proposed future extensions the other lift will be installed.

Immediately opposite the main entrance doors is the Enquiry Office, with counter and brass grille.

Double glass-panelled swing doors lead into the corridors, which are 7 feet wide, running along the north and east wings.

Almost the whole of the east wing is occupied by an office 62 feet 3 inches long by 38 feet 6 inches wide, lighted by large windows on the east and west sides of the office. With the exception of two columns, the office is completely unobstructed. This office is repeated on each of the three floors and is occupied by men only. Each of these offices has its own independent common-room and lavatory accommodation, and is therefore a self-contained unit.

The north wing, facing Church Street, is divided into smaller units each 15 feet wide and lighted with similar large windows.

The usual women's rest rooms and men's and women's lavatories are provided.

The first floor follows a similar layout with a few minor differences, and the same applies to the top floor, with the exception, however, of a Board Room, facing north.

The Board Room is 39 feet 6 inches long by 28 feet 9 inches wide. The walls up to a height of 7 feet are panelled in kejaat, the north and south walls being taken up by large windows, each unit being 11 feet long.

A visitors' room and Board members' cloak-room have been placed adjacent to the Board Room, each with its own lavatory accommodation.

The basement is under the east wing of the building, and contains a records room 38 feet 6 inches wide by 63 feet long, strongroom 21 feet by 11 feet 6 inches, and a stationery store 14 feet 7 inches by 22 feet 9 inches.

All windows to the basement are burglar-proofed. Access to the basement is from the staircase, and in addition one lift has been designed to serve the basement.

The boiler room, coal bunker and stoker are all placed in the basement with separate staircase.

The municipal high-tension room is also placed in the basement facing on Church Street. A tunnel leads from the high-tension room under the pavement and connects to a manhole, the electrical gear being brought into the building by means of the manhole and tunnel. This method is an entirely new departure and was arrived at after consultation with the Municipal electrical engineers.

The roof of the building is of concrete and will be utilised by the staff as a roof garden, portion of the roof being covered for protection from the sun.

The interior finish has been designed along clean modern lines. All joinery is teak and the doors are of the flush-laminated type. The lift installation will comprise a high-speed Waygood-Otis lift with metal automatic-opening gates and a metal car with collective control.

Flushing valves have been installed to all W.C. fittings; and all lavatory blocks are tiled out with white glazed tiles to a height of 7 feet.

The usual fire, heating and electrical services have been provided.

Special arrangements have been made for telephone cable runs; and in addition inter-office Dictaphone communications will be installed.

In the back courtyard there is a garage block containing five lock-up garages with a possible future extension for a further 24 cars.

The Native quarters are adjacent to the garage block.

Above the garage is the laboratory for wheat-testing and sampling. The laboratory is 50 feet long by 19 feet 4½ inches wide, and is lighted by large windows facing east; it has its own cloak-room and lavatory accommodation, and staircase.

The architects were Messrs. Burg, Lodge & Burg, Messrs. Borckenhagen & Louw were the quantity surveyors, and the general contractors were Messrs. R. Leggat (Pty.), Ltd.

The following description of the Wheat Industry Control Scheme may be of interest.

THE WHEAT CONTROL SCHEME.

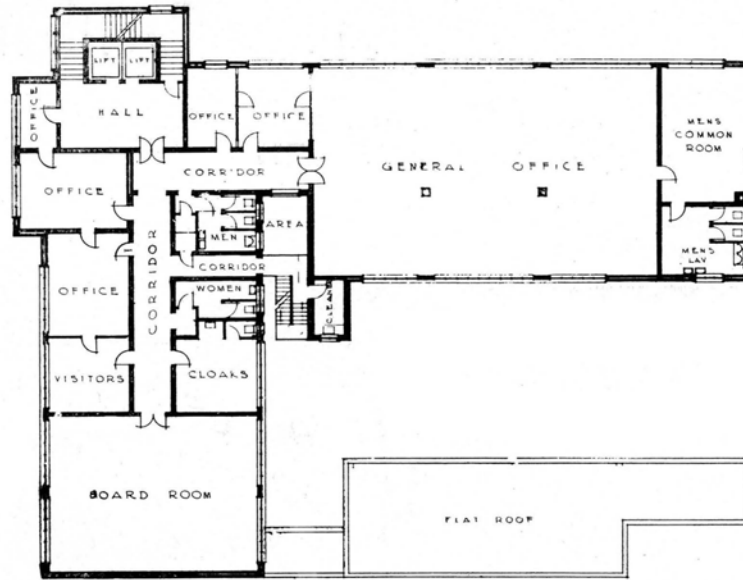
Since the end of the Great War, from time to time measures were taken to protect the wheat industry. In 1930 Parliament passed an Act which made it impossible to import wheat and flour into the country for less than 22/6 and 37/- per bag respectively. In 1931 Parliament passed an Act whereby wheat could be imported into the country only under permit. Owing to increased production and the fact that, whereas wheat is harvested and threshed over a period of a few months, it is milled throughout the year, these measures did not bring stability to the industry.

Parliament accordingly passed the Wheat Industry Control Act in 1935, whereby a Board was established. The main function of this Board was to encourage producers and their co-operative organizations to store wheat and thus regulate the marketing of wheat by the payment of compensation for losses due to storage. The Board's attempts met with considerable success, and it was able to stabilize wheat prices to a large extent, even in the face of the huge surplus of the 1935-36 wheat crop. It soon became apparent that the Board's powers were inadequate.

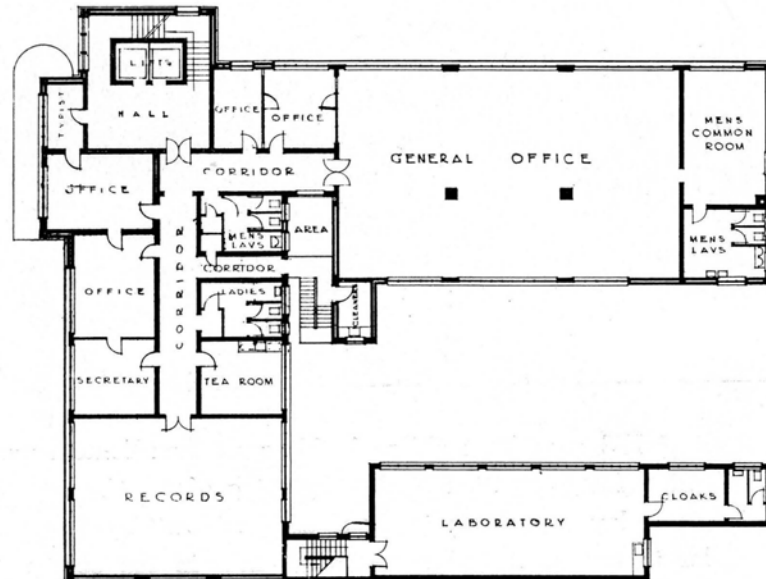
On the 5th October, 1938, the Wheat Control Scheme was gazetted. This scheme gave the reconstituted Wheat Industry Control Board very wide powers. Briefly the scheme may be described as what is popularly known as sale through one channel. It provided that the Board could prohibit a producer from selling his wheat to anybody but the Board. The Board was empowered to appoint agents to purchase wheat on its behalf at prices fixed by the Board. Such wheat would then be sold by the Board to millers and others. The Board was also empowered to fix the prices of the various wheaten products such as flour, meal, bran and bread.



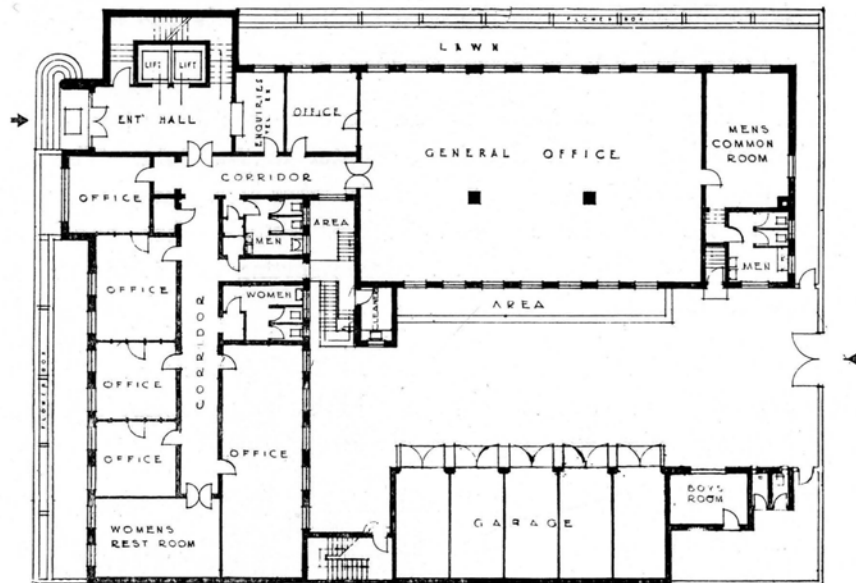
GROUND FLOOR.



FIRST FLOOR.



SECOND FLOOR.



New Post Office Building at Randfontein



THE new Post Office building at Randfontein was completed and handed over for occupation at the beginning of October of last year. It forms part of a layout scheme in front of the Town Hall; a complementary block, very similar in treatment and elevation, is now in the course of erection on the other side of the gardens. Designed by the Public Works Department, Pretoria, the building faces Stubbs Street on the west, whilst the side and back elevations are to Sutherland Avenue and Porges Street respectively.

From the central entrance, double glass doors lead off to the private boxes lobby on the left and the European counter to the right. The subsidiary right-hand side entrance is mainly to the Native and other Non-European sections, whilst that to the left is to the Telephone Accounts, Postmaster's office, and their dependent offices. At the rear of the building is the large sorting office 60' x 45', with retiring rooms, etc., at the back.

Designed for maintenance, and having modern simplicity, and ease of access everywhere, the style may be said to be somewhat Georgian, with the large overhanging eaves, and unbroken slate roof.

The cost was approximately £9,750, and the general contractor for the works was M. Klawansky, of Krugersdorp.

TURNER NEWHAM.

:: Tenders Invited and Accepted ::

TENDERS INVITED.

THE following are particulars of the more important tenders which have been invited, up to the time of going to press, by Government departments and Provincial Administrations. In each case the date by which tenders must be submitted, and the office to which application should be made, are given.

AGRICULTURAL IMPLEMENTS AND MACHINERY, ETC.

Agricultural implements for Vaal-Hartz Settlement: supply of (tender S.O. 719): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **28th March.**

Single-furrow reversible ploughs for Vaal-Hartz Settlement, near Warrenton (tender S.O. 735): Particulars as above. **7th March.**

Lawn mowers for Valkenberg Mental Hospital, C.P. (tender S.O. 727): Particulars as above. **28th March.**

AIR-CONDITIONING AND CENTRAL HEATING.

Ventilating plant for Law Courts, Cape Town: supply, delivery and erection (P.W.D. tender 487): P.W.D., Pretoria (Room 531, 'phone 5477). **14th March.**

Ventilating plant for Johannesburg Police Mortuary: supply, delivery and erection (P.W.D. tender 484): Particulars as above. **14th March.**

Central heating installation at Ladysmith Post Office, Natal: supply, delivery and erection (P.W.D. tender 493): Particulars as above. **21st March.**

Central heating installation for Police Mortuary, Johannesburg: supply, delivery and erection (P.W.D. tender 504): Particulars as above. **21st March.**

Central heating installation at Government Offices, Barrack Square, Cape Town (P.W.D. tender 505): Particulars as above. **21st March.**

Central heating installation for Z.A.S.M. House, Pretoria: supply, delivery and erection (P.W.D. tender 519): Particulars as above. **28th March.**

Central heating installation for Police Barracks at Springs: supply, delivery and erection (P.W.D. tender 520): Particulars as above. **28th March.**

Central heating installation at Post Office Automatic Telephone Exchange and Mining Commissioner's Office, Heidelberg: supply, delivery and erection (P.W.D. tender 537): Particulars as above. **4th April.**

BRIDGES AND MATERIALS.

Five bridges and seven culverts for Tvl. Prov. Administration, construction of (tenders 9 and 10/1940): Room 2, 2nd floor, de Villiers Buildings, Pretoria, and Provincial Secretary, P.O. Box 383, Pretoria. **6th March.**

BUILDINGS AND ALTERATIONS, ETC.

Officers' quarters at Garrison Hill, Voortrekkerhoogte, Pretoria (P.W.D. tender 533): P.W.D., Pretoria (Room 531, 'phone 5477). **7th March.**

House for caretaker at Vaccine Institute, Rosebank, C.P. (P.W.D. tender 535): P.W.D., Pretoria (Room 531, 'phone 5477), and District Representative, P.W.D., Cape Town. **2nd March.**

Fruit Research Station at Stellenbosch University (P.W.D. tender 541): Particulars as above. **7th March.**

Houses for railway staff, Sydenham: erection and completion: System Manager, Room 23, S.A.R. & H. Offices, Port Elizabeth. **4th March.**

School at De Brug, O.F.S. (P.W.D. tender 536): P.W.D., Pretoria (Room 531, 'phone 5477), and District Representative, P.W.D., Bloemfontein. **5th March.**

Additions to School and Kindergarten Block at Viljoenskroon, O.F.S. (P.W.D. tender 534): Particulars as above. **5th March.**

Additions to Boys' Primary School in George Division, C.P.: Messrs. Simpson & Bridgeman, Chartered Architects, Oudtshoorn, C.P. **12th March.**

Additions to Fort Beaufort Cottage Hospital Buildings: Messrs. Farrow & Stocks, Architects, East London. **12th March.**

CHEMICALS, LABORATORY EQUIPMENT, ETC.

Bluetongue vaccine bottles, supply of, to Onderstepoort Laboratory (tender S.O. 703): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **21st March.**

COOKING EQUIPMENT, ETC.

Steam boiling pans, steam calorifiers, cylinders, traps and reducing valves, vertical steam boilers and feed pumps, supply and delivery of, to Potchefstroom and Pietermaritzburg Military Camps (P.W.D. tender 488): P.W.D., Pretoria (Room 531, 'phone 5477). **7th March.**

Steaming ovens, supply and delivery of, to Fort Beaufort Mental Hospital (P.W.D. tender 483): Particulars as above. **14th March.**

ELECTRICAL EQUIPMENT.

Transformer and high and low-tension switchgear for New Police Mortuary, Johannesburg (P.W.D. tender 518): P.W.D., Pretoria (Room 531, 'phone 5477). **28th March.**

Magneto bells and switches, supply of (P.O. tender 845): District Stores Superintendents, Johannesburg, Cape Town, Port Elizabeth, East London, Durban, Bloemfontein; Divisional Controller, P.O. Pietermaritzburg; Controller of P.O. Stores (Room 77), G.P.O. Annexe, Pretoria. **11th April.**

FURNITURE, FITTINGS, ETC.

Steel wardrobe lockers (P.O. tender 839): District Stores Superintendents, Cape Town, Johannesburg, Port Elizabeth, East London, Durban, Bloemfontein; Divisional Controller, P.O. Pietermaritzburg; Controller of P.O. Stores, Room 83, G.P.O. Annexe, Pretoria. **4th April.**

Wooden furniture (P.O. tender 840): Particulars as above. **7th March.**

Iron instrument tables with wooden tops and steel fittings for Cape Town Post Office (P.O. tender 842): Particulars as above. **14th March.**

Twin garment press, supply and delivery of, to Mental Hospital, Bloemfontein (P.W.D. tender 532): P.W.D., Pretoria (Room 531, 'phone 5477). **28th March.**

HOSPITAL AND SURGICAL EQUIPMENT.

Hospital scales for Mental Hospital, Pretoria: supply of (tender S.O. 660): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **14th March.**

X-ray and photographic material for King George V Hospital for Tuberculosis, Durban (tender S.O. 737): Particulars as above. **7th March.**

LAUNDRY EQUIPMENT.

Vertical steam boiler for Fort Beaufort Mental Hospital Laundry (P.W.D. tender 489): P.W.D., Pretoria (Room 531, 'phone 5477). **14th March.**

Laundry machinery and electric motor, supply and delivery of, to Queenstown Mental Hospital (P.W.D. tender 516): Particulars as above. **28th March.**

REFRIGERATING PLANT.

Refrigerating plant, supply, delivery and erection of, at Police Mortuary, Johannesburg (P.W.D. tender 517): P.W.D., Pretoria (Room 531, 'phone 5477). **28th March.**

Refrigerating plant for Western Province Fruit Research Laboratory, Stellenbosch: supply, delivery and erection (P.W.D. tender 539): Particulars as above. **4th April.**

WATER SUPPLY AND IRRIGATION EQUIPMENT.

Pumping plant and engine for Government Buildings, Mahlabatani (P.W.D. tender 515): P.W.D., Pretoria (Room 531, 'phone 5477). **7th March.**

Deep-well power-pump heads, with engines, for use on National Roads, O.F.S. (tender 9 of 1939/40): Provincial Roads Engineer, P.O. Box 517, Bloemfontein. **29th March.**

MISCELLANEOUS.

Telephone coin-collecting boxes, supply of (P.O. tender 838): District Stores Superintendents, Johannesburg, Cape Town, Port Elizabeth, East London, Durban, Bloemfontein; Divisional Controller, P.O. Pietermaritzburg; Controller of P.O. Stores, Room 77, G.P.O. Annexe, Pretoria. **14th March.**

Woodworking machinery and spray-painting outfit, supply and delivery of, to Valkenberg Mental Hospital (P.W.D. tender 485): P.W.D., Pretoria (Room 531, 'phone 5477). **14th March.**

Electric passenger lifts (3), supply, delivery and erection of, at Government Buildings, Barrack Square, Cape Town. (P.W.D. tender 490): Particulars as above. **14th March.**

Electric passenger lift, supply, delivery and erection of, at Z.A.S.M. House, Pretoria (P.W.D. tender 501): Particulars as above. **21st March.**

Mail conveyors, chutes and hoists for New General Post Office, Cape Town: supply, delivery and erection (P.W.D. tender 506): Particulars as above. **21st March.**

Electric panel and tubular heaters and thermostats, supply and delivery of to Western Province Fruit Research Station, Stellenbosch University, Stellenbosch (P.W.D. tender 507): Particulars as above. **21st March.**

Electric passenger lifts (5) for New Magistrates' Courts, Johannesburg: supply, delivery and erection (P.W.D. tender 508): Particulars as above. **21st March.**

Tractors for Orange River Settlements, Upington: supply of (tender S.O. 702): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **21st March.**

Scales, weights and measures for Assize Division, Department of Commerce and Industries (tender S.O. 693): Particulars as above. **4th April.**

Blue-print machine (P.O. tender 837): District Stores Superintendents, Cape Town, Durban, Johannesburg, Bloemfontein, Port Elizabeth, East London; Divisional Controller, Pietermaritzburg; Controller of P.O. Stores, Room 83, G.P.O. Annexe, Pretoria. **4th April.**

Cattle dipping tank, building of, at Houtpoort Reformatory, Heidelberg (tender S.O. 723): Union Tender and Supplies Board 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **22nd March.**

Electric elevator for Prime Minister's Residence, Pretoria: supply, delivery and erection (P.W.D. tender 521): P.W.D., Pretoria (Room 531, 'phone 5477). **28th March.**

15-ton electrically driven crane for Railways & Harbours Administration (tender 2352): Railway Stores at Salt River, Uitenhage, East London, Durban, Bloemfontein, Pretoria, and Chief Stores Superintendent, S.A.R. & H. Headquarters Offices, Johannesburg. **22nd April.**

Low-level jetty and turning area for vehicular traffic at Hout Bay, C.P., construction of: Chief Civil Engineer, Room 1, Railway Headquarters, Johannesburg; and Harbour Engineer, New Works, Table Bay Harbour. **4th March.**

Wall clocks for Tvl. Prov. Administration (tender 16/1940): Superintendent of Provincial Stores, P.O. Box 857, Pretoria. **6th March.**

* * *

TENDERS ACCEPTED.

THE following are particulars of some of the contracts which have been awarded by Government departments and Provincial Administrations. The name of the successful tenderer is given in each case, and, wherever practicable, the contract price.

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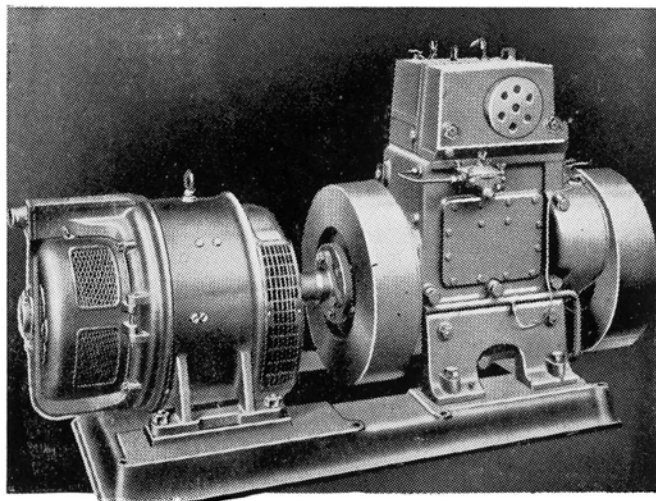
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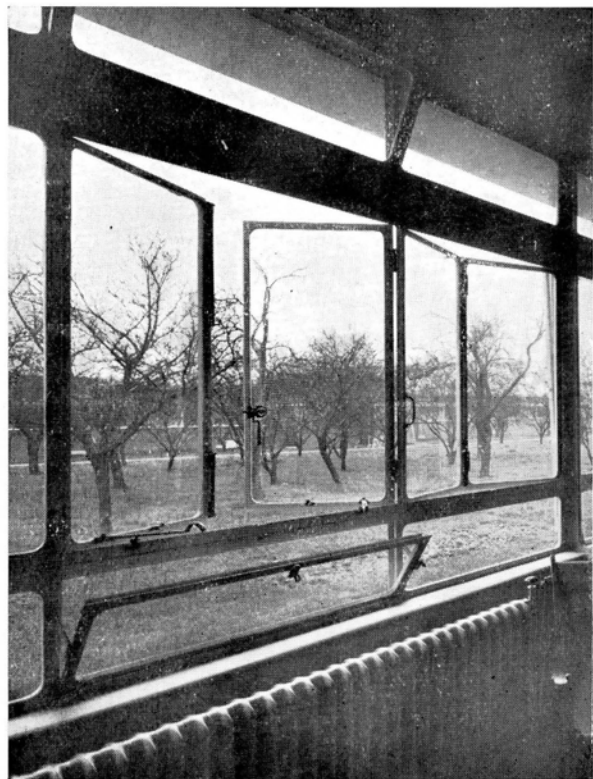
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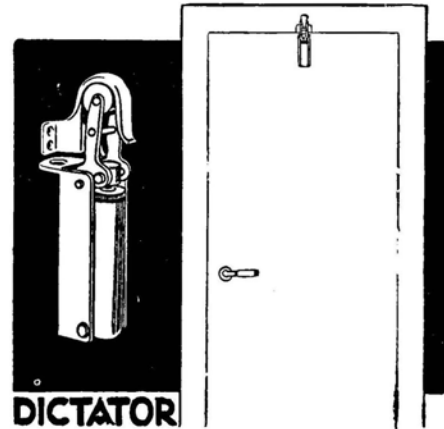
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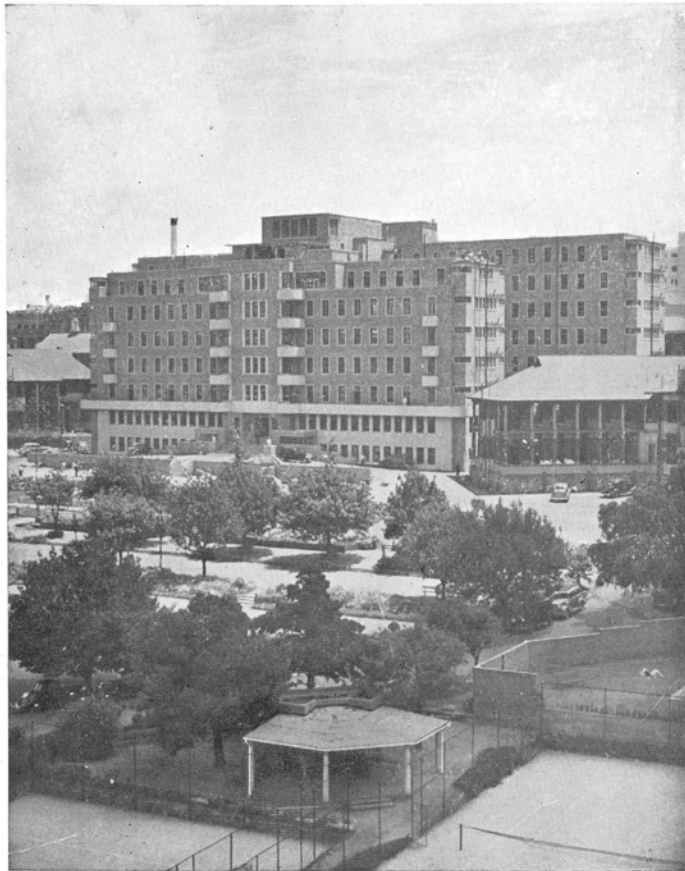
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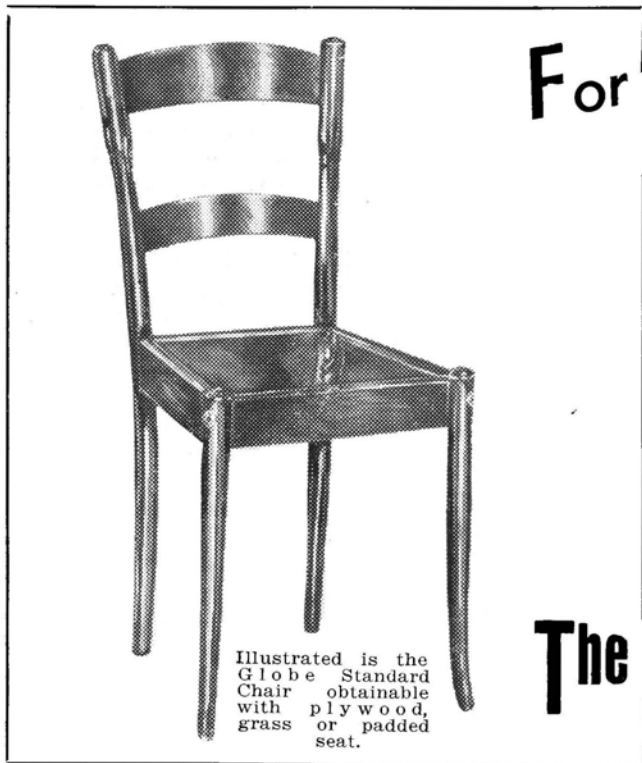
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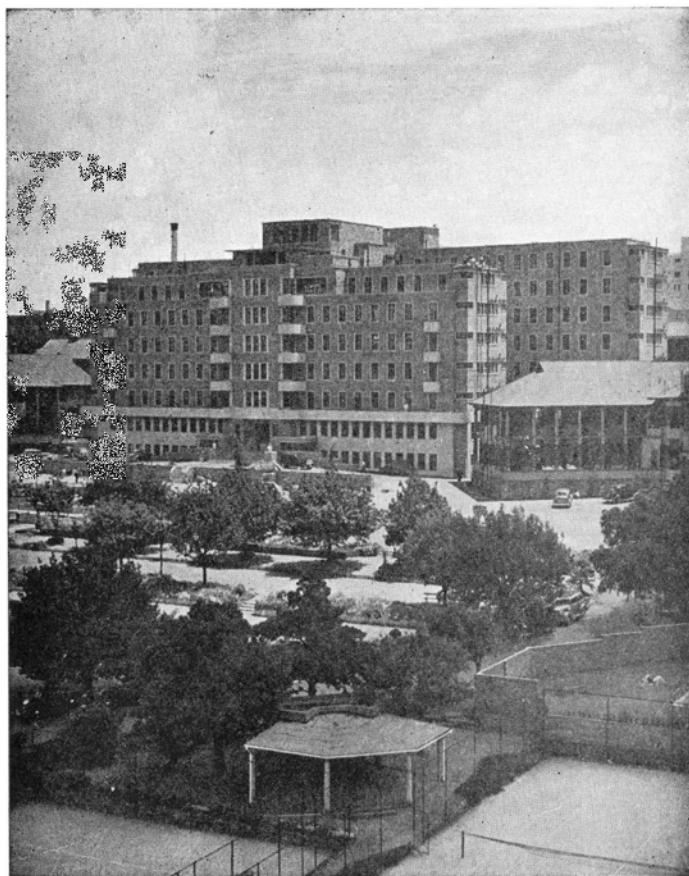
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