

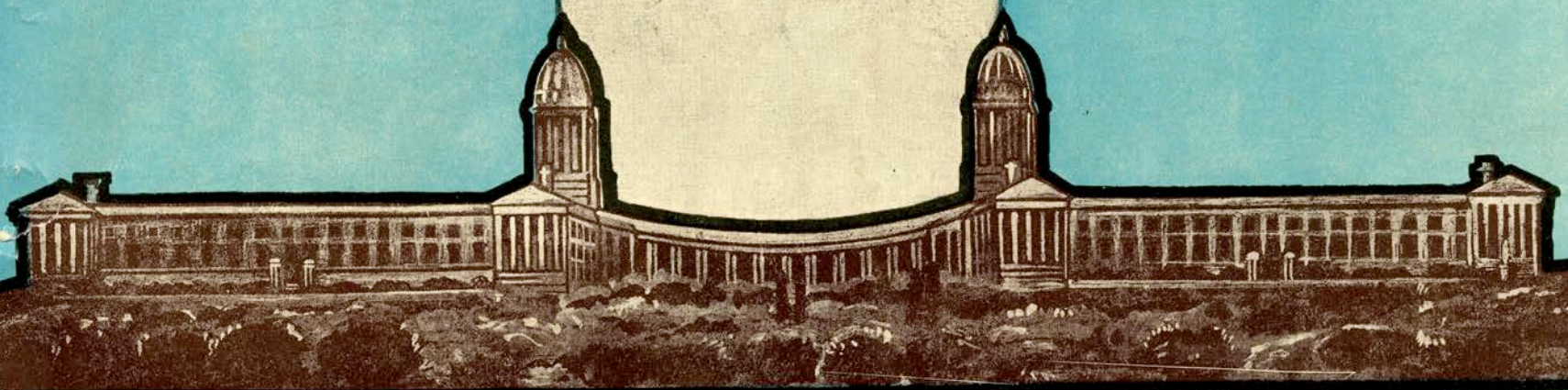
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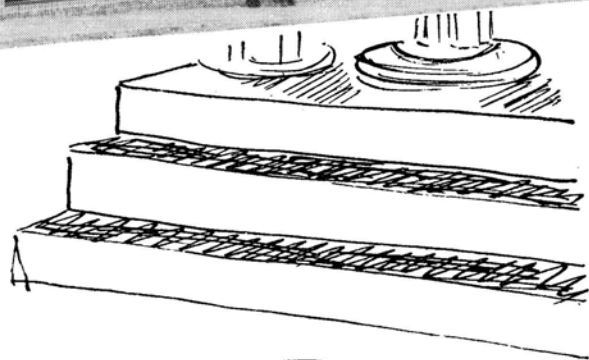
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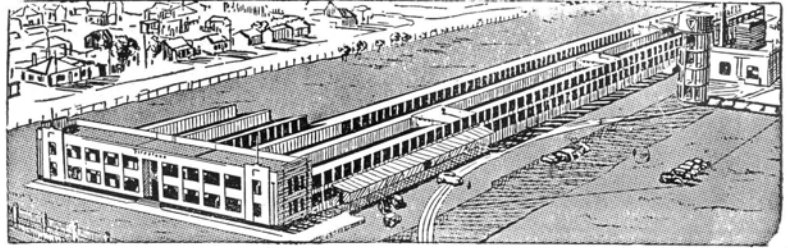
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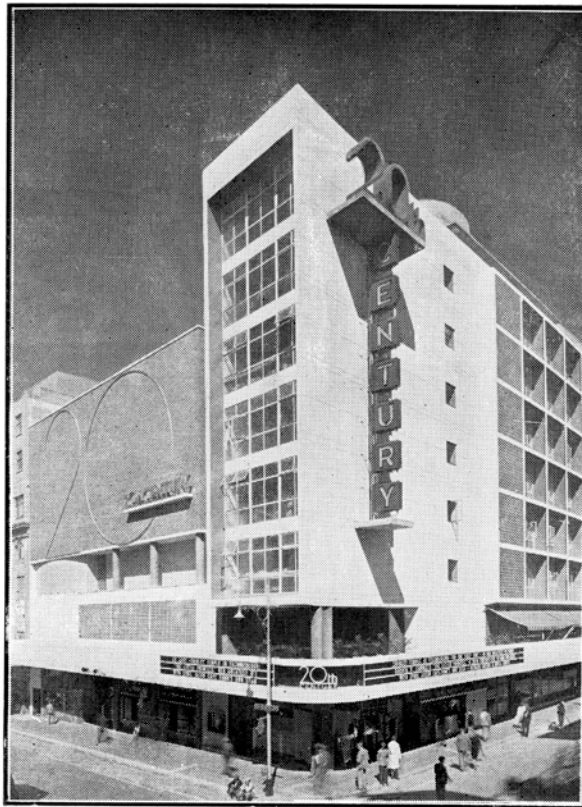


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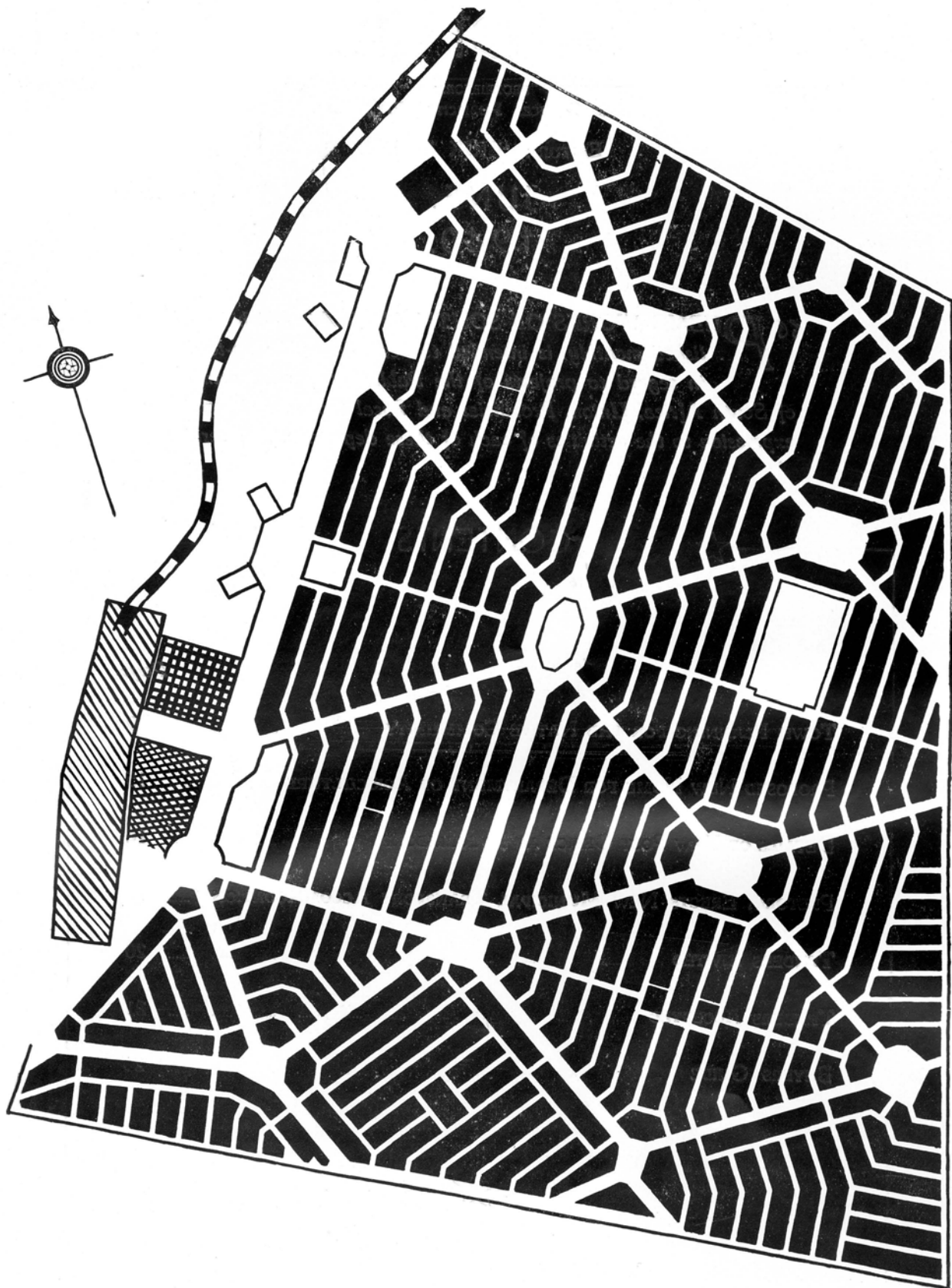
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Plan of Orlando Native Township.

TOWN PLANNING for the NATIVE COMMUNITY

By _____
JOSEPH HARDING

Considerations Suggested By
Orlando — Johannesburg's
Native Township of 40,000
People

THE Native township of Orlando, situated about ten miles to the south-west of Johannesburg, presents a somewhat unusual subject for PUBLIC WORKS OF SOUTH AFRICA. From our point of view its main interest is in the town-planning aspect, which, as the reader of this article will realise, contains many problems unorthodox to the subject of town-planning in general.

While town-planning in itself is an essentially elastic subject, its application to the Native community demands considerations which would appear to place it in an almost different compartment. The main problem is that the town planner is called upon to provide for a community which is ethnologically, socially and mentally far removed from his own. This at once suggests that a fair and satisfactory solution to the problem can be attained only after research into the sociological, psychological and economic aspects of the urban Native community.

No attempt is made here to treat the subject exhaustively, the object being to offer a description of Orlando as an example of the way in which the Johannesburg Municipality has set out to solve the problem of its urban Native population. The many aspects of this problem are outlined, and are illustrated by the description of Orlando, which, no matter how far it may fall short of idealism, remains a practical and realistic conception. By way of comment, this township may be regarded as a severe compromise between idealistic town-planning and Native needs and civic abilities.



(The author of this article is indebted to the Johannesburg Municipal Native Affairs Department for the information and kind assistance offered during its preparation.)

Orlando in Outline

THE Native township of Orlando, with a present-day population of 40,000, was established seven years ago by the Johannesburg Municipality. It is a realistic attempt to give effect to the Union's policy of segregation in such a way that the Natives benefit as well as the Europeans, from whose slum areas the Natives are being removed. At present the township comprises between 5,000 and 6,000 houses spread over an area of about 5,000 acres, which is only one-third of the total area available. When fully developed, the township will rank about the fourth or fifth largest in the Union, with a population of 80,000 to 100,000 people.

All buildings in the township are of red face-brick, and each house has a plot of ground 50 ft. wide by 70 ft. deep. All property is erected and owned by the Municipality and leased to the tenants at nominal rentals. The township is laid out to a modified plan, the original of which was the subject of an open competition won by Messrs. Kallenbach, Kennedy & Furner. Consequently there is an ample provision of lungs, public spaces and recreation grounds, including sanitary lanes between adjacent rows of houses. This much is evident from the plan of the township reproduced here.

The important distinction between Orlando and the other Native townships of Pimville, Western Area and Eastern Area is that the latter three are more correctly described as locations, whereas Orlando is a township in the truest sense of the word. No slum property is allowed, all buildings being erected by the Municipality to specifications which forbid anything but the use of burnt brick. Orlando may be described best as the show township of the Johannesburg Native community. Its purpose is to retrieve this community from the European slum areas, and, at the same time, offer them increasing opportunities for self-development in an environment of respectability.

It will be realised that, before any such scheme may be launched with initial success, the fullest consideration must be afforded to the sociological and economic problems of the urban Native community. In this regard the experience of the authorities at Orlando is of the greatest value. Some of these problems are set out below.

The Urban Native Problem : **I**T is perhaps incorrect to speak of "urbanised" Natives when referring to the Native communities of towns.

Such a characterisation would seem to imply complete adoption by the Natives of civic principles and manners, together with the achievement of a secure economic sub-entity within the framework of the European community.

While it is not the purpose here to argue on theories about Native economy, it is nevertheless clear that it is precisely because the Native has not achieved urbanisation in this sense that there exists an urban Native problem. Nor can the position of the Native be regarded with surprise. Under present conditions

urban Natives are for the most part a nebulous mass of people struggling to establish the foundations of their own social structure. The solution to their problem demands the creation of circumstances favourable to the development of this structure, which must inevitably follow the European model on broad lines. Its necessary corollary also must be a growing measure of economic self-efficiency in such matters as small trading, employment and even manufacturing for special Native needs. Such a Native economy would never be other than complementary to the European system. Its chief advantage would be its capability of supporting the more simple needs of Native life at proportionate cost, and it would tend, even in its initial stages, to remove the Native from unfair competition against European labour.

Whether he is conscious of it or not, the Native need for such a social structure is urgent, mainly for the purpose of providing a force to mould them into a communal whole capable of realising civic discipline within themselves. Psychologically the requirement would appear to be a structure reinforced with a respectability and discipline replacing that which exists naturally in traditional tribal life. Naturally, the individual Native is probably more concerned with the material possibilities of life. Such possibilities would not immediately occur from a separate Native economy, which would have to develop under the stimulus of their own social structure.

These are some of the implications of Native urbanisation in accordance with the Union Government's policy of segregation, the onus of which has been placed on the shoulders of local authorities. Orlando is a step in the direction of giving the Johannesburg Native his own urban environment and opportunity. At present it serves only a small portion of the community, but provision has been made in the matter of available land for considerable extension.

Practical Difficulties : **T**HERE are, however, many practical difficulties in the launching of a scheme such as Orlando to satisfy these needs of the Native. It is no exaggeration to say that from almost every point of view the problem is a strenuous one; and it assumes its true proportions only if the authorities accept their responsibility for the Native community under their control and set about its solution with a dual purpose, namely, to ameliorate the lot of the Native as well as to improve conditions in the towns. Indeed, both purposes are interdependent.

In the first instance, it is important to form a true conception of the quality of the urban Native element. This element has no counterpart in the lower levels of European society. These lower levels may be regarded as retrogressive for one reason or another, and apparently inevitable under present conditions.

With the Native it is entirely different. So far from being an integral part of the social structure, he has been transplanted quite recently from tribal life in the country into an urban environment for which his traditional mode of life is unsuited. It must be remem-

bered that the bulk of the Natives living in the country are not affected by urban conditions, and supply a steady stream of raw recruits to the towns, even though many of these recruits remain only for a short while.

It seems unfair, therefore, to describe the Natives' present demoralisation in the towns as a sign of retrogression. If it is retrogression it is not the fault of Native character, but rather the fault of the circumstances in which they live. The basic fact is that urban Native peoples are not a "lower fringe," but a community struggling in an unfamiliar environment in which they have little recognised standing or opportunity. It may be true that many urban Natives are complete strangers to tribal life and customs, but this does not alter the misfortune of the community as a whole. Such Natives, particularly educated Native leaders, will, by leadership and example, help their people many strides forward. But they have had neither time nor sufficiently generous encouragement on a large scale.

Orlando is designed to give this encouragement by offering the Natives decent homes, in addition to many other social facilities which they soon learn to appreciate. The encouragement of respectability among themselves is an important factor in bolstering up the work of educational and religious institutions. It is something which cannot be denied if the Native is to progress in the towns. Orlando offers proof that the Native is anxious and able to lead a dignified and progressive life. Here he finds it possible, because he is living in a regulated township composed of his own people, away from the slums of the European community.

An additional factor which complicates the urban Native problem, particularly on the Rand, is the impermanence of a large proportion of the population. While large numbers of Natives with their families are rooted to the towns, there is an equally large number of men who live in the towns temporarily for the purpose of earning additional money. No provision is made for this class of Native at Orlando, for one reason, among others, that residence there would entail expense sufficient to defeat the intentions of the Native. Such Natives find accommodation in special municipal hostels.

This fact, however, has repercussions both in town and country. It means that the majority of these Natives are separated from their families in the country. The result is the break-up of their homes, and, because of the temptations and exertions of urban life, an increasing lack of support for their women folk. The immediate consequence is that a large proportion of this male urban Native community lead restless, aimless lives, and cannot possibly fit in with the settled domestic life required in Orlando. Moreover, at the present time, when there is a shortage of houses, their inclusion would result in problems likely to imperil the success of the scheme. These circumstances appear to indicate that, to a large extent, our industrial efficiency is being achieved at the expense of the domestic stability of Native life.

With the ultimate development of Orlando, and the extension of the scheme, it should be possible to arrive at some practical co-ordination between Native urban and country life. At present this is undesirable at Orlando owing to the lack of housing for the reasonably permanent population. The Native is chiefly to blame, for his habit of hospitality is such that, no matter how urbanised he may be, his house, like his kraal, is open to all his relatives and friends from the country, regardless of their number. Overcrowding is always undesirable, and so Orlando is at present reserved for Native families domiciled in Johannesburg.

Social Services and Facilities : THE township is under the immediate control of the Native Affairs Department of the Johannesburg Municipality. Social facilities are the responsibility of the Research and Welfare Branch, which, in addition, publishes reports on local conditions from time to time, and acts as a clearing-house for information on urban conditions. The Branch also keeps files of statistical and other information. The work is organised by the Research and Welfare Officer, who is a woman. This officer is concerned with the underlying causes which lead to cases of distress among the Natives. She is assisted by a male officer who attends to the problems relating to men and boys. Other officials include a case worker, who is concerned *inter alia* with the individual domestic problems brought to her attention, and a housecraft demonstrator who advises the Native women on budgeting and the buying of foodstuffs and trains maids for domestic service. The township is supervised by a superintendent.

Native housekeepers are taught the best use of the materials at their disposal by "at home" days, to which the Native housewife concerned invites a small number of her friends and the demonstrator. Domestic clubs for women are held in the community halls where cookery, needlework and dressmaking are studied. It is interesting to record that, through its efforts, the Department has acquired the services of one male African officer to assist with the social services in the various townships. Although the item has had to be struck off this year's estimates, for financial reasons, the Department has recommended that four women African officers be employed, one for each of the townships, as it is the policy of the Department to train Africans to render social services to their own people.

An important feature of the work done at Orlando is the attention given to the youth of the township. There is, for instance, the Boys' Club, which is open to all the boys during the afternoons and evenings. With this unit a considerable amount of Pathfinding activity is conducted, and it is interesting to note that some of the Municipal Police boys are becoming excellent scoutmasters.

Earnest attention is paid to juvenile delinquency, which naturally forms one of the problems of the township. To take care of the more flagrant cases

there is a special home at Orlando for committed boys. This home, which is run by the Education Department, the building being provided by the Municipality, is under the care of an African house father and mother. As an outcome of the Juvenile Delinquency Conference convened by the Johannesburg Municipality in 1938, the possibilities of the proposed Bantu Board of Education, Social Welfare and Employment are being investigated. It is understood that recommendations are to be put up to the relevant Government quarters as a prelude to a much bigger scheme for coping with the children of the Native townships.

Among the difficulties facing the authorities is the employment of adolescent boys in the township. One of the methods adopted to mitigate this is the running of a labour unit on a Departmental farm adjoining the township. Here 24 boys recruited from the Boys' Unit are employed and taught as gardeners. They are paid on a daily basis and receive a free meal once a day and a free ration of vegetables once a week for their families. It is intended also to give them free uniforms. Besides forming a limited amount of employment and instruction, this scheme has suggested a very useful method, if extended, for overcoming the shortage of fresh vegetables in the township. It is worth while noting that, in spite of the number of Native general provision merchants trading in the township, their lack of training as traders and the difficulties of transport make the supply of fresh vegetables from the usual sources uncertain and limited. The scheme, it is understood, is to be extended. As a further measure of assistance, the parents of each boy employed on this farm are notified when pay day occurs.

Housing : **T**HE most striking feature of Orlando is the excellence of the houses. All are brick-built by the Municipality to standard designs comprising two-roomed and three-roomed detached and semi-detached units. Some of the semi-detached units are built with a communicating door so that they may be used as a single house for large families. It is proposed to have in future three-roomed and four-roomed houses for the larger families. All houses are of red facing-brick with pitched corrugated iron roofs. The floors have been left for the Natives to fill in, as floor smearing is one of the Native crafts which it is hoped to preserve. The Natives are very skilled also at their own granolithic work, and many houses are adorned with granolithic verandahs and garden paths.

Each house is on a stand 50 ft. wide by 70 ft. deep, surrounded by a wire fence. The back yard contains a brick convenience, and opens out on to a wide sanitary lane. Light and water have not yet been laid on to the houses, but taps have been provided on the pavements at intervals of every ten houses. There is adequate street lighting. It is the intention of the Municipality to lay on light and water to each house in due course. Water-borne sewerage will be a further improvement. The sewage lines are to be linked up with a new disposal plant to be erected shortly.

It is estimated that the capital cost of housing a family at Orlando is £200, as opposed to £60 per capita for accommodating Natives in a hostel. Until recently the following rents were charged:—

| | | | | |
|---------------------------|----|----|---|------------|
| For a 2-roomed house | £1 | 0 | 0 | per month. |
| .. 3-roomed house | £1 | 5 | 0 | |
| .. 4-roomed house | £2 | 0 | 0 | |
| .. 6-roomed house | £2 | 10 | 0 | |

As from July 1, this year, these rentals are to be reduced as follows:—

| | | |
|---------------------------|-----|-----------|
| For a 2-roomed house | 4s. | per week. |
| .. 3-roomed house | 5s. | |
| .. 4-roomed house | 6s. | |

These rentals may at first appear to be out of proportion to the average Native wage, which is between £4 10s. and £4 15s. a month. This may be so, but they compare very favourably with those demanded in slum areas of the City, where the Native has to pay as much as £2 a month for a single room in a corrugated iron or mud-brick shack. The rentals at Orlando, therefore, are less than one quarter of those usually charged in the City. Moreover, they include free medical services, free hospital attention, free clinical facilities and free water and sanitation.

Health : **T**HE Non-European and Native Affairs Department and the Public Health Department together provide the funds for health work in the Native townships. Extensive health services are available, including a small hospital with maternity section and a polyclinic for the treatment of tuberculosis, venereal diseases, ante-natal and post-natal cases, ordinary clinic cases and dentistry. The polyclinic is under the supervision of a European health visitor assisted by a staff of Native nurses and orderlies. Two doctors and two dentists are always in attendance. Proposals have been made for the erection of a Provincial hospital providing about 300 beds, to be extended to 1,000 beds in the future. This intention, however, has been postponed because of the war.

Education : **A**LL schools in Orlando are mission schools, with the exception of one Government secondary school. In addition to schools, there is a crèche run by the Children's Aid Society and subsidised by the Department. There is also a nursery school run by the Anglican Church for children between the ages of 2 and 6 years. This is also subsidised by the Department. These schools, in addition to being useful for the children, serve as training centres for African mistresses who will be needed when more nursery schools can be obtained.

It is of interest to mention that some difficulty attended the establishment of the first crèche and nursery school at the Western Area township owing to a mutual distrust between the tribes. For instance, if the mistress supervising the crèche or nursery school happened to be a Zulu, the women of the other tribes at first refused to take their children to these

institutions. The Natives, however, have been educated out of these fears, with the result that they now have a real consciousness of the value of these places. The daily charge made is 2d. for one child, 3d. for two children and 4d. for three. The children receive breakfast, lunch and afternoon tea.

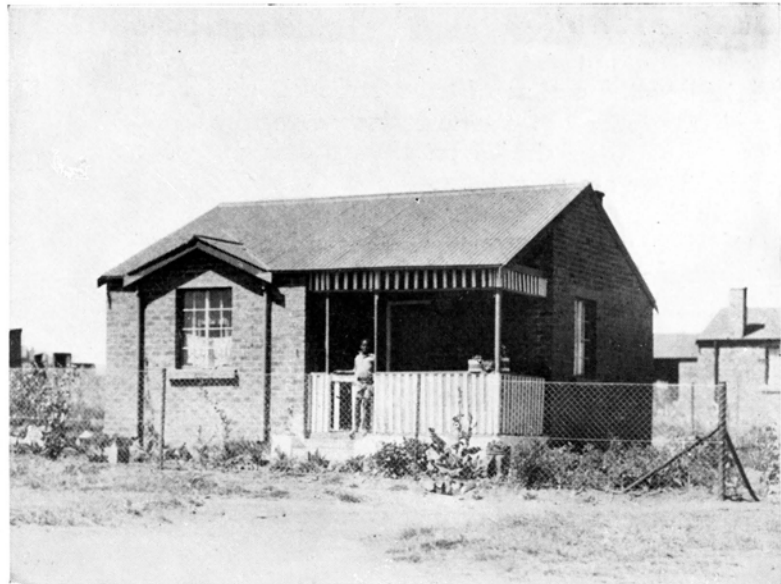
Music is also regarded as an important item in Native education, and is being aided by a series of lectures on singing and choral work by Professor C. A. O. Duggan, Professor of Applied Music at the Witwatersrand University. This training is related to African cultural life.

Economy: IN establishing Orlando, the Johannesburg Municipality has realised the economic possibilities of the scheme for the Natives. Native trade is encouraged by leasing to the Natives specially built shops for carrying on business as general provision merchants, greengrocers and butchers. There are 18 such shops in Orlando at the

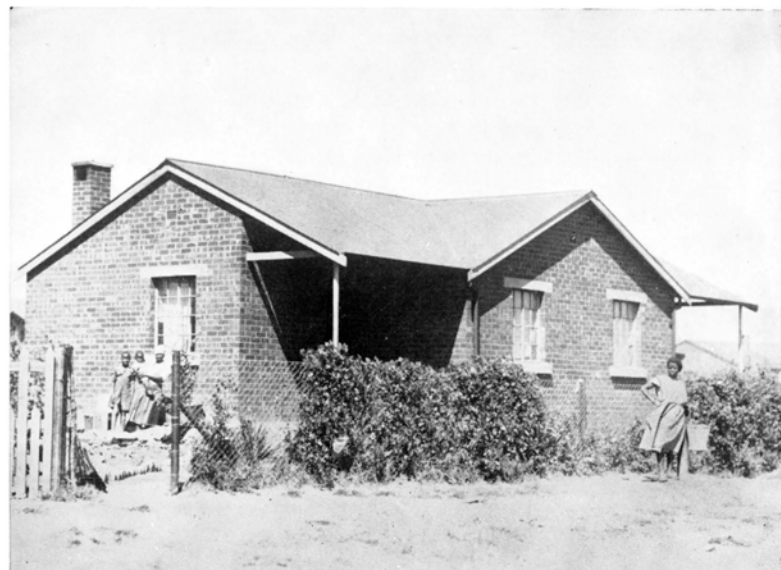
moment, the proportion being one to every 200 houses. These shops will be increased as required. They are dispersed conveniently over the township so as to serve defined areas. In addition, a market system has been adopted, whereby 24 stalls are available for hire at 6d. a day. These stalls are for the sale of fruit, vegetables, etc. If the system proves successful, further market stalls will be placed at the chief points in the township. It is recognised that, later on, other kinds of shops will have to come into existence, as well as small industrial centres in which the Natives could train their own craftsmen. This trend is already in evidence, as shown by the amount of odd-jobbing, shoe and other repair work carried on by individual Natives. Some Native women take in washing from their more fortunate neighbours for a consideration. The possibilities of Native trade among themselves may be realised by the simple fact that some of the provision shops have a monthly turn-over of between £700 and £1,200.

Two Types of Housing at Orlando

TWO-ROOM
HOUSE.



TWO-ROOM
SEMI-DETACHED
UNIT.



Some of the disadvantages of Native trading are worth noting. These are mostly the fault of the Native shopkeepers, who, besides a tendency to take things easy, show a lack of discernment in buying, and a few apparently have difficulty in distinguishing between profit and turn-over. The result is that they find themselves in financial difficulties.

Transport: **T**RANSPORT facilities are important to a Native township, because very few Natives own vehicles. Orlando is connected to Johannesburg by electric railway and macadamized road. Season tickets for the railway are available at 8s. 6d. a month or 2s. 6d. a week. There is also a bus service for internal transport in the township.

Sport: **S**PORT facilities are an important provision in any Native township, owing to the Native's characteristic preference for physical rather than æsthetic activities. At Orlando, football, net-ball and general athletics are sponsored by an athletics league under the control of the Department's African sports organiser. These activities are run on the same lines as European high school sports. Tennis is popular, but the single court at Orlando falls far short of requirements. It is intended to build further courts, but this may have to be postponed owing to the war. There are about 288 sports teams of different kinds in Orlando, which is a measure of the popularity of sport.

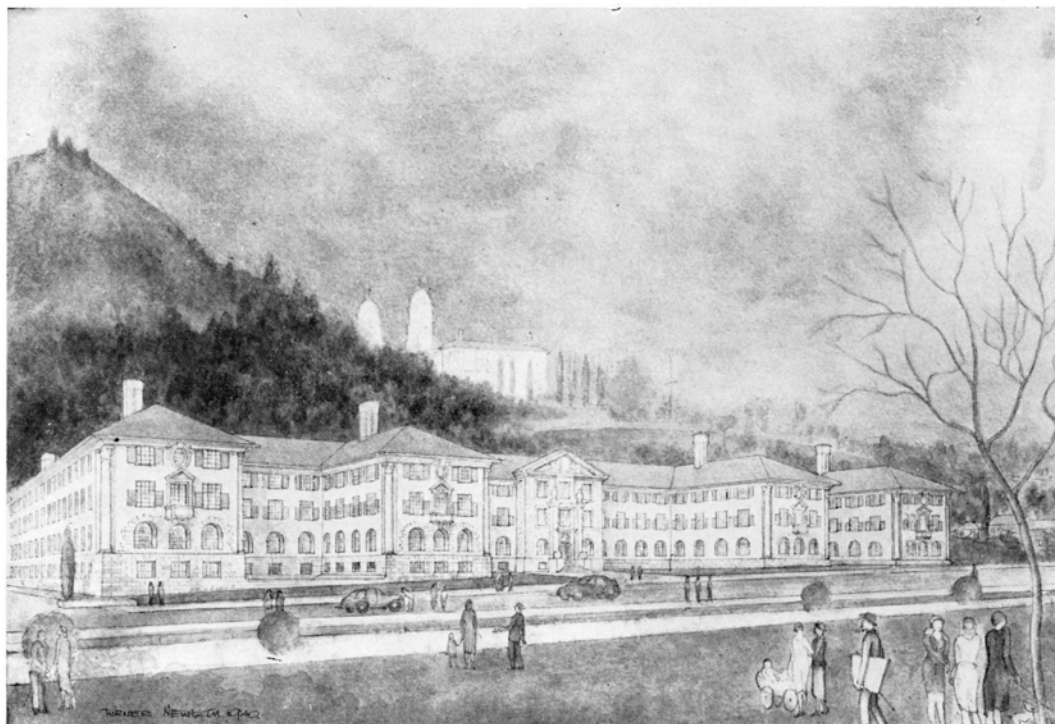
Town Planning :_____

THE foregoing outline of the urban Native problem and description of Orlando enable a few generalised conclusions to be drawn on town-planning for the Native. They are as follows:—

- (1) Particularly in its initial stages, a Native township should be planned on the lines of a sub-urban residential area.
- (2) Good main and subsidiary roads are important features, and the plan in general should take into account the contours of the site for drainage, as expensive drainage systems are not likely to be installed at first. Disregard of this will cause a great deal of damage and depreciation.
- (3) Sites for small shop groups must be provided evenly throughout the area. These sites should preferably front open spaces or lungs at road intersections. Usually only provision shops are required at first. Commercial areas as in European towns are not necessary, though the possibility of spontaneous commercial development through Native initiative should be considered.
- (4) There must be adequate and convenient provision for essential services such as hospitals, clinics, crèches, nursery schools, churches and assembly or community halls.

- (5) Native preference for physical rather than æsthetic exercises points to a high proportion of recreation grounds, open spaces and lungs.
- (6) Means for aiding adolescents in employment, such as agricultural farms and gardens, should be made a feature rather than an afterthought.
- (7) If the township is of considerable size, internal transport is essential. There should also be some variety in plan in order to avoid monotony. The "spider-web" lay-out of Orlando is intended to achieve this.
- (8) All house sites should be large enough to permit front and back gardens, as the Natives show a ready aptitude for horticulture.
- (9) Streets should be fairly wide and should have pavements. Street lighting is also desirable.
- (10) Sanitation is an absolute essential, so that lanes for refuse removal should be provided between adjacent rows of houses.
- (11) The question of tree-planting is an important one, for, though desirable, it has its difficulties. In Orlando, streets and open spaces have been planted with trees. It was found, however, that as soon as the trees close to houses attained a certain size they were surreptitiously destroyed. Inquiries revealed that, apart from the need for firewood and Native destructiveness, the cause of this action was Native superstition that at night spirits lodge in the trees.

— — — Proposed New Home for Union Department



of Agriculture



By

TURNER NEWHAM



THE proposed new office block at Pretoria for the headquarters of the Department of Agriculture of the Union Government is to be erected on a site adjoining the Union Building grounds on the west. It is bounded by Zoutpansberg Road on the north, Hamilton Road on the west and Belvedere Road on the south. Although primarily an office block, the building has been designed to harmonise with the Union Buildings as far as possible.

It is proposed to build, at a cost of £135,000, a first portion approximately one-fifth of the whole. This will comprise the central entrance section and two adjoining wings. The remainder of the building is to be completed in successive stages.

So far as is possible all the materials are to be of South African origin or manufacture. The lower ground floor is to be of red granite; and the ground, first and second floors are to be of coloured brick generally. Roof coverings will be of Etruscan-pattern tiles, and stonework to the central feature and pavilion ends of pink or red sandstone similar to that found at Waterpoort or Warmbaths. This has been selected primarily because of its durability and suitability for mouldings and carved work.

Internal Treatment :

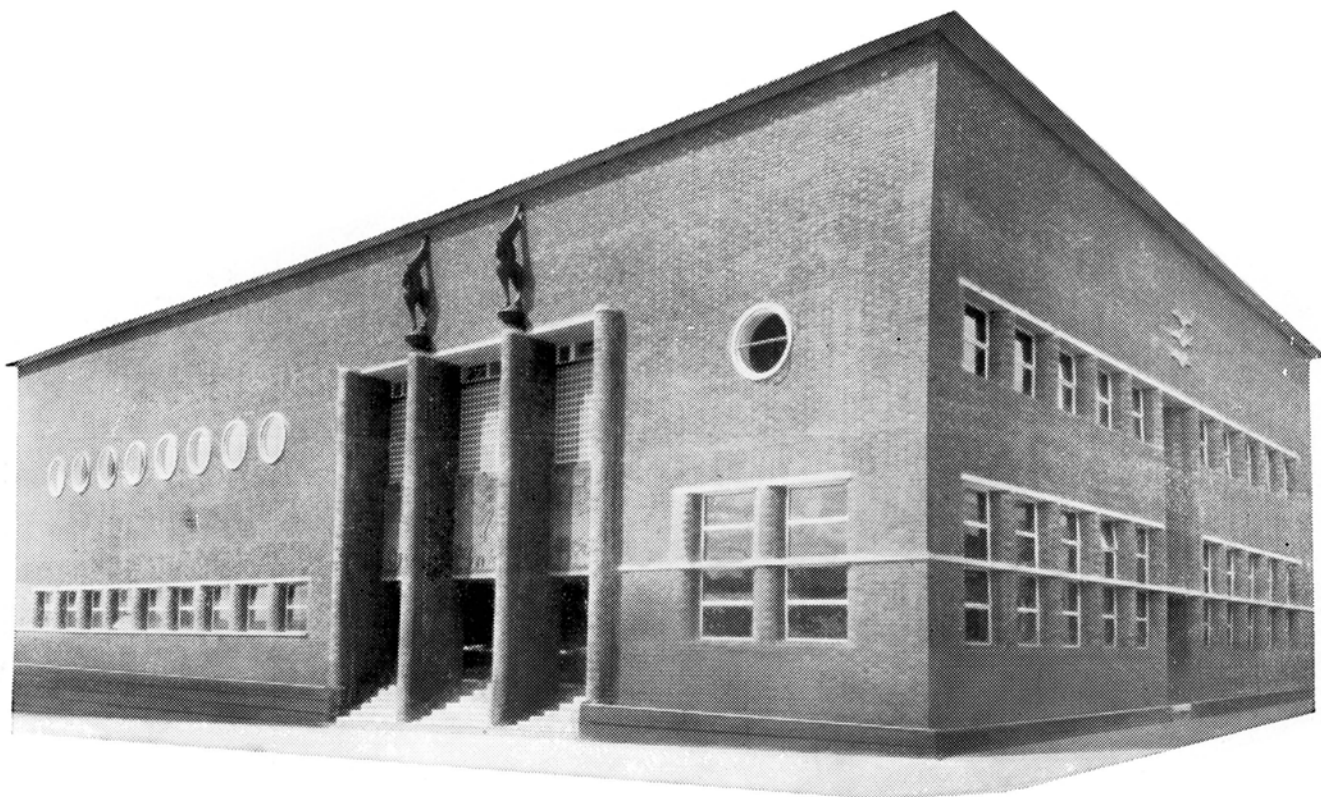
IN the stair and lift halls to each floor the columns, lift openings and fireplaces will be of different-coloured marbles and polished granites; and leading-off doors will have carved teak fanlights and shaped transoms.

A variety of locally grown woods, such as Karri Red gum and Pilularis, are to be used for flooring throughout; indigenous timbers used will include Kejaat, Red Currant, Wild Peach, Cape Ebony and a number of Transkei woods. A certain amount of Stinkwood will be used for panelling the Minister's and Committee rooms. Kejaat and Stinkwood will be used for furniture also, less important furnishings being in Saligna Gum.

Accommodation :

THE accommodation included in the first portion to be built comprises, on the ground floor, partly Field Husbandry and partly administration offices. Postal records are to be situated in the basement. On the first floor, part of the Marketing Council and Revenue Department will be situated to the left and right of the hall respectively. The second floor will accommodate part of the Economics and Markets Department and part of the Agricultural Education and Extension Department.

Unfortunately, it is not possible at present to offer the reader detail plans and description.



The elevations are of brick of selected colour built in Flemish bond, relieved with a plaster cornice, and fins used at window-heads. On the west elevation these fins appear at sill-level to square up the building on the steeply falling street. Brick soil-pockets on this elevation form a fore-standing podium and also set the building to the slope of the ground. On the upper floor the windows to the switch-room are circular, set in reinforced spun concrete pipes.

DETAILS OF NEW POST OFFICE at KRUGERSDORP

IN the December, 1938, issue of *Public Works of South Africa* we reviewed the design of the new Krugersdorp Post Office on which construction at that time had not begun. The building has now been completed, and has proved a most successful architectural conception, exemplifying the modern note manifest in the architecture of our public buildings to-day. We have pleasure, therefore, in presenting the following illustrations.

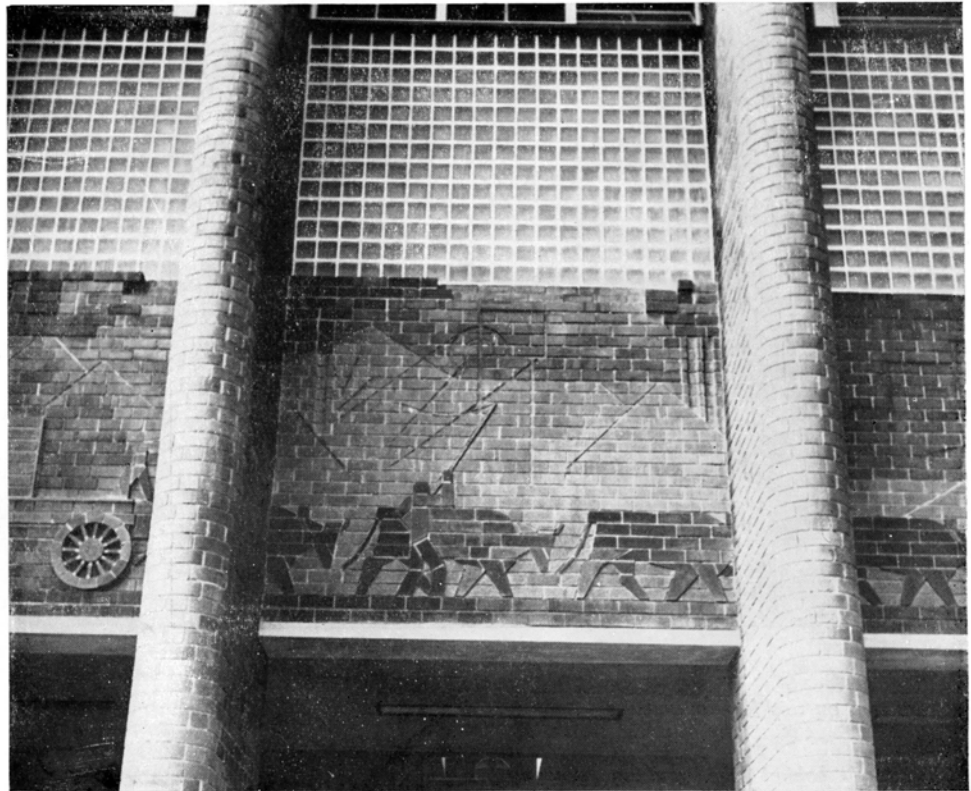
The new building contains a number of unusual details. Chief of these, perhaps, is the frieze adorning the main entrance in Kruger Street. This frieze has been very effectively carried out in brick-work, the design being of symbolic significance. Another interesting feature — it is really an innovation — is the counter design in the public concourse. This has a glass-louvre screen surmounted by a brick wall instead of the usual metal counter grille. It is worth noting in this regard that, whereas the custom in post office fittings is to have a high counter with a stout metal grille, the tendency in bank fittings is a counter of medium height but of considerable width. Both serve the same purpose, namely, protection.

The new Post Office is situated on the corner of Kruger Street and Ockerse Street, facing west and south respectively. The design was carried out by the Union Public Works Department.

Detail of Main Entrance

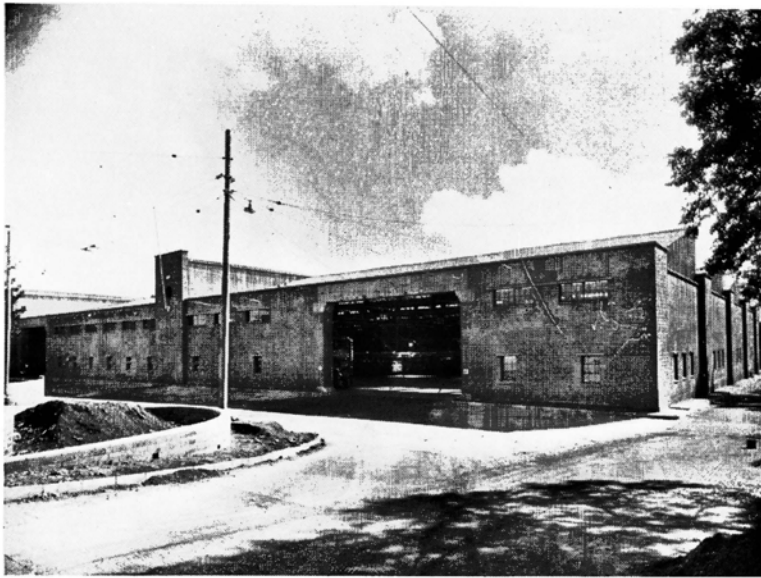
This unit is set back slightly from the main wall face, and is defined by four semi-circular brick pylons, the two centre ones of which are surmounted by effigies of the Winged Springbok, symbolical of the functions of the building. The unit is further defined by glass-brick panels at first-floor level above a running frieze.

This frieze is of particular interest, as it is executed in variegated brick, and depicts an ox-wagon symbolising the Great Trek and the discovery of the Reef, with mine dumps and buildings of Krugersdorp of the present and future in the background.



Public Concourse

This view of the European public concourse shows the interesting innovation of a glass-louvre screen to the counter instead of the usual metal grille. This system gives better visibility and supervision. The brick wall above the screen segregates the public from the voices and distractions of the staff space and the noise of the circulation and telegraph branches. The concourse is 66 ft. by 20 ft., it is treated acoustically, and has a wood-block floor.



GARAGE UNIT FACING BOOM STREET:
The pylon-like features, of which there are two on this façade, shield the trestle girders spanning the entire width of the garage. The workshop unit is situated behind the parking garage.



THE PARKING GARAGE: *Note the massive, brick-lined central pier supporting the trestle girders. The floor area is 300 ft. x 200 ft.*

Pretoria Erects New Municipal Transport Accommodation

£70,000 Garage and
Workshop Unit Carried
Out In Red Face - Brick



A CONSIDERABLE stride forward in public transport amenities has been made recently by the Pretoria Municipality. A short while ago the electric tramways of the Capital were discarded in favour of a fleet of about 80 electric trolley-buses and motor omnibuses. Since then, a further development has been achieved with the erection of a complete transport section, comprising a handsome double-storey administration office block and a large parking garage and workshop unit. The office block and transport sheds are on opposite sites in Boom Street, to the immediate west of the Pretoria Zoo.

Erected at a cost of about £70,000, the transport sheds have a certain amount of structural interest, chiefly on account of their size. In the case of the parking garage, the saw-tooth steel roof is probably among the largest single spans in the country. Roof construction for the whole unit cost £26,000.

ROOF CONSTRUCTION.

OF chief interest is the parking garage, which is 300 ft. long and 200 ft. wide. It is under a steel-construction saw-tooth roof of four longitudinal bays with only one intermediate support, in the form of a massive central pier of reinforced concrete lined with red face-brick. This pier carries two main trestle girders spanning the entire width of the garage. These girders support subsidiary girders of 200-ft. span carrying the roof-trusses direct. There is a 23-ft. clearance between the girders and the floor. Incorporated in this central pier is a staircase serving a system of overhead gangways, which make any point of the roof accessible for repair, painting or window cleaning.

The concrete floor is broken at the east end by a number of examination pits lined with white glazed tiles and fitted with built-in reflector lights.

Adjoining the parking garage is the workshop, 450 ft. long and 150 ft. wide, also under a steel-construction saw-tooth roof in three bays. Steel-frame partitions divide the shop into a number of bays for overhauls, body repairs, carpentry, fitting, blacksmith work, saddlery, etc. Each bay has its own entrance from a tar-macadamised yard. The entrances are each fitted with a steel sliding door, and rise almost to the height of the roof girders. The floor of the shop is concrete incorporated with steel-crete to ensure a durable and hard-wearing surface. There are the usual sluice and electric-cable ducts, also a number of examination and repair pits treated similarly to those in the parking garage.

Contained in the shops, on its north-east corner, is a double-storey office, store and change-room block containing drawing offices, store-rooms, armature-winding rooms, change-rooms, showers, etc. This block has steel-frame windows and glazed steel-frame doors.

Both parking garage and workshop are an integral structural unit carried out externally and internally in red facing-brick. There is ample provision for future extensions to the west, and for this reason these ends of the building have not been bricked in, but closed temporarily with corrugated iron sheeting.

The administration offices are contained in a substantial building of red facing-brick relieved by cream balconies to the first-floor wing gables. The plan is of a shallow U-shape, and the building is under a tiled roof.

Messrs. Grant & Son, Pretoria, were the contractors for the administration offices; and Messrs. W. Stretton & Co., Pretoria, erected the transport shed and workshop. Both buildings were designed departmentally.

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.

BUILDINGS AND ALTERATIONS, ETC.

Additions to Glenwood High School, Durban (P.W.D. tender 672): P.W.D., Pretoria (Room 531, 'phone 5477), and District Representative, P.W.D., Pietermaritzburg, and Inspector of Works, Durban. **3rd July.**

Alterations and additions and installation of water-borne drainage at Gaol, Head Warder's house, Clerk Warder's house and outbuildings, at Ermelo (P.W.D. tender 678): P.W.D., Pretoria (Room 531, 'phone 5477), and District Representative, P.W.D., Johannesburg. **11th July.**

Alterations and additions to Public Offices (Department of Justice), Germiston (P.W.D. tender 680): Particulars as above. **11th July.**

House for Agricultural Officer, Single Quarters, E.C. and Garages, for Native Affairs Department at Witziesshoek, O.F.S. (P.W.D. tender 681): P.W.D., Pretoria (Room 531, 'phone 5477), and District Representative, P.W.D., Bloemfontein. **11th July.**

Additions to Secondary School at Bethlehem, O.F.S. (P.W.D. tender 679): Particulars as above. **9th July.**

CENTRAL HEATING.

Low-pressure steam heating installation at G.P.O., Cape Town: supply, delivery and erection (P.W.D. tender 668): P.W.D., Pretoria (Room 531, 'phone 5477). **1st August.**

CHEMICALS, LABORATORY EQUIPMENT, ETC.

Chemicals and apparatus, supply of, to Division of Botany and Plant Pathology (tender S.O. 900): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **4th July.**

Apparatus and Chemicals, supply of, to Low Temperature Research Laboratory of Department of Agriculture and Forestry, Cape Town (tender S.O. 907): Particulars as above. **11th July.**

Chemicals and apparatus, supply of, to Stellenbosch-Elsenburg College of Agriculture, Stellenbosch (tender S.O. 953): Particulars as above. **1st August.**

Zinc chloride, supply of, to Forest Products Institute, Pretoria West (tender S.O. 980): Particulars as above. **8th August.**

Guaranteed analytical reagents, supply of, to Onderstepoort Laboratory (tender S.O. 976): Particulars as above. **8th August.**

Chemicals, supply of, to Onderstepoort Laboratory (tender S.O. 975): Particulars as above. **8th August.**

Chemicals and apparatus, supply of, to Stellenbosch-Elsenburg College of Agriculture, Stellenbosch (tender S.O. 957): Particulars as above. **8th August.**

Apparatus and chemicals, supply of, to Departments of Agricultural Chemistry and Agricultural Bio-Chemistry of the Agricultural Research Institute, University of Pretoria (tender S.O. 965): Particulars as above. **8th August.**

COOKING EQUIPMENT, ETC.

Heat-storage cooker for Nurses' Home, Mental Hospital, Bloemfontein: supply, delivery and installation (P.W.D. tender 648): P.W.D., Pretoria (Room 531, 'phone 5477). **18th July.**

Steam boilers and automatic stokers for Native Kitchen and Laundry Block, Krugersdorp Mental Hospital: supply, delivery and erection (P.W.D. tender 673): Particulars as above. **8th August.**

Kitchen range for Mental Hospital, Fort Beaufort (tender S.O. 970): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121), Pretoria. **4th July.**

ELECTRICAL EQUIPMENT.

Low-tension switchboard for Magistrates' Courts, Johannesburg: supply and delivery (P.W.D. tender 667): P.W.D., Pretoria (Room 531, 'phone 5477). **1st August.**

Low-tension switchgear for New G.P.O., Cape Town: supply and delivery (P.W.D. tender 674): Particulars as above. **8th August.**

Adaptors, electric bells, bell transformers, end boxes, etc., supply of, to P.W.D. Stores, various centres (P.W.D. tender S. 26): P.W.D., Pretoria (Room 513, 'phone 3547). **8th August.**

FURNITURE, FITTINGS, ETC.

Wooden or steel revolving arm-chairs, supply and delivery to P.W.D., Bloemfontein, Johannesburg and Pretoria (P.W.D. tender S. 25): P.W.D., Pretoria (Room 513, 'phone 3547). **4th July.**

HOSPITAL AND SURGICAL EQUIPMENT.

Surgical instruments for Onderstepoort Laboratory, supply of (tender S.O. 963): Union Tender and Supplies Board, 271 Visagie Street (P.O. Box 371, 'phone 3121). **1st August.**

Theatre equipment for Port Shepstone Hospital (Non-European Block): Provincial Accountant, P.O. Box 373, Pietermaritzburg. **21st August.**

Portable X-ray plant for Eshowe Hospital: Particulars as above. **14th August.**

LAUNDRY EQUIPMENT.

Steam boilers and automatic stokers for Native Kitchen and Laundry Block, Krugersdorp Mental Hospital: supply, delivery and erection (P.W.D. tender 673): P.W.D., Pretoria (Room 531, 'phone 5477). **8th August.**

REFRIGERATING PLANT.

Refrigerating plant for Pretoria Mental Hospital: supply, delivery and erection (P.W.D. tender 675): P.W.D., Pretoria (Room 531, 'phone 5477). **8th August.**

ROADS AND ROAD-MAKING EQUIPMENT.

Motor graders (heavy) for Transvaal Prov. Admin. (tender (65/1940): Controller of Stores, P.O. Box 857, Pretoria. **3rd July.**

Motor graders (medium) for Tvl. Prov. Admin. (tender 66/1940): Particulars as above. **3rd July.**

Motor delivery vans (tender 73/1940), **sedan delivery vans** (tender 74/1940), for Tvl. Prov. Admin.: Particulars as above. **17th July.**

Road rippers for Tvl. Prov. Admin. (tender 75/1940): Particulars as above. **17th July.**

Road scarifiers for Tvl. Prov. Admin. (tender 76/1940): Particulars as above. **17th July.**

Disc harrows for Tvl. Prov. Admin. (tender 77/1940): Particulars as above. **17th July.**

Tar or bitumen boilers for Tvl. Prov. Admin. (tender 78/1940): Particulars as above. **17th July.**

Concrete mixers for Tvl. Prov. Admin. (tenders 79/1940 and 80/1940): Particulars as above. **17th July.**

Road graders for Tvl. Prov. Admin. (tender 84/1940): Particulars as above. **24th July.**

Mobile crushing plants for Tvl. Prov. Admin. (tender 85/1940): Particulars as above. **24th July.**

Pumping plants for Tvl. Prov. Admin. (tender 86/1940): Particulars as above. **24th July.**

Portable granulating and screening plants for Tvl. Prov. Admin. (tender 87/1940): Particulars as above. **24th July.**

Drill-sharpening machines for Tvl. Prov. Admin. (tender 88/1940): Particulars as above. **24th July.**

Road rollers for Tvl. Prov. Admin. (tender 89/1940): Particulars as above. **24th July.**

Gangers' huts, Native huts and storage huts for Tvl. Prov. Admin. (tenders 93/1940, 94/1940 and 95/1940): Particulars as above. **3rd July.**

Jackhammers for Tvl. Prov. Admin. (tender 98/1940): Particulars as above. **24th July.**

Broom drags for Tvl. Prov. Admin. (tender 99/1940): Particulars as above. **3rd July.**

Water pressure tanks for Tvl. Prov. Admin. (tender 100/1940): Particulars as above. **3rd July.**

Scarifier teeth for Tvl. Prov. Admin. (tender 101/1940): Particulars as above. **3rd July.**

Ploughs for Tvl. Prov. Admin. (tender 102/1940): Particulars as above. **7th August.**

Rotary scrapers (Fresno) for Tvl. Prov. Admin. (tender 103/1940): Particulars as above. **7th August.**

Bituminous primer for O.F.S. Prov. Admin.: Provincial Roads Engineer, P.O. Box 517, Bloemfontein. **5th July.**

Major plant for National Roads in Cape Province (tender F. 51/1940): Full particulars in Cape Provincial Gazette of 17th May. **12th July.**

WATER SUPPLY AND IRRIGATION EQUIPMENT.

Concrete pipes (Irrigation tender 261): Controller of Stores, Irrigation Department (P.O. Box 277), 474 Carl Street, Pretoria. **4th July.**

MISCELLANEOUS.

Electric body lift for new Police Mortuary, Johannesburg: supply, delivery and erection (P.W.D. tender 633): P.W.D., Pretoria (Room 531, 'phone 5477). **11th July.**

Feed pumps for Pretoria Gaol: supply and delivery (P.W.D. tender 642): Particulars as above. **18th July.**

Electric passenger lift for G.P.O., Pretoria: supply, delivery and erection (P.W.D. tender 647): Particulars as above. **25th July.**

Gas retorts, supply and delivery to P.W.D. Stores, Pretoria (P.W.D. tender S. 22): P.W.D., Pretoria (Room 513, 'phone 3547). **11th July.**

Steel boiler plates for Railways Administration (tender 2750): Railway Stores at Salt River, Uitenhage, East London, Durban, Bloemfontein, Pretoria, and Chief Stores Superintendent, Park Chambers, Johannesburg. **19th August.**

Steel rivets for Railways Administration (tender 2727): Particulars as above. **29th July.**

Shovels, picks, ballast forks and handles for Railways Administration (tender 2766): Particulars as above. **2nd September.**

Garage machine tools, supply of (S.A.P. Indent 254): Quartermaster, South African Police (P.O. Box 449), 149 Koch Street, Pretoria. **4th July.**

Fans, kettles, radiators and urns, supply of, for various centres (P.W.D. tender S. 23): P.W.D., Pretoria (Room 513, 'phone 3547). **1st August.**

Vacuum cleaners and polishers, supply of (P.O. tender 870): District Stores Superintendents, Johannesburg, Cape Town, Port Elizabeth, East London, Durban, Bloemfontein; Divisional Controller, Post Office, Pietermaritzburg; Controller of P.O. Stores, Room 77, G.P.O. Annexe, Pretoria. **8th August.**

Lifts for New G.P.O., Cape Town: supply, delivery and erection (P.W.D. tender 682): P.W.D., Pretoria (Room 531, 'phone 5477). **8th August.**

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.

AGRICULTURAL IMPLEMENTS AND MACHINERY, ETC.

(1) **10 lawn mowers**, (2) **2 lawn mowers**, for Valkenberg Mental Hospital (tender S.O. 727): (1) G. North & Son, Parow, C.P.: £38 2s. 6d., f.o.r. Durban; (2) Ransomes (S.A.) (Pty.) Ltd., Cape Town: £59 10s., delivered.

AIR-CONDITIONING AND CENTRAL HEATING.

Slow-combustion stoves for P.W.D. Stores, Pretoria (tender S.O. 838): Durban Falkirk Iron Co., Ltd., Durban. £47 12s. 6d. each, f.o.r. Jacobs.

Central heating plant for Heidelberg Post Office, Automatic Exchange (P.W.D. tender 537): F. A. Sharman (Pty.) Ltd., Johannesburg. £765 10s.

Air-conditioning plant for Grootfontein College of Agriculture (P.W.D. tender 569): A. E. Barker, Johannesburg. £1,476.

Central heating installation for Pretoria Magistrates' Courts (P.W.D. tender 560): F. A. Sharman (Pty.) Ltd., Johannesburg. £3,104.

BUILDINGS AND ALTERATIONS, ETC.

Alterations and additions and installation of drainage to Public Offices and Post Office at Umtata (P.W.D. tender 591): Ivan Barax, Umtata. £2,500.

Blocks for European and Native Mental Patients at Leper Institution, Pretoria (P.W.D. tender 514): J. H. Botes, Parktown, Pretoria. £8,581.

Alterations, additions, etc., to Married Quarters, Public Offices, Post Office, etc., at Newcastle (P.W.D. tender 593): J. A. Scott, Umhlanga Beach, North Coast, Natal. £1,160.

Alterations and additions to Somtseu Road Police Post, Durban (P.W.D. tender 583): Patrick Florens, Durban. £1,374 12s.

Conversion of old Police Headquarters into Married Quarters at Vryburg (P.W.D. tender 610): Michael & Van Zyl, Kimberley. £1,050.

Public Offices and outbuildings for Post Office at Newcastle (P.W.D. tender 597): A. B. Cartwright, Durban. £18,530.

Outbuildings and waterborne drainage at Residency, Middelburg, Tvl. (P.W.D. tender 617): Dawson & Fraser, Pretoria. £417.

Additions, Babanango School, etc.: A. B. Cartwright, Durban. £2,988 11s.

Additions to Nurses' Home, Grey's Hospital, Pietermaritzburg: F. Brierley. £3,801 10s. 3d.

New Science Block, etc., Estcourt High School: A. B. Cartwright, Durban. £8,869 15s. 3d.

Alterations and additions and installation of waterborne drainage, Provincial Buildings, Newcastle: J. A. Scott, Umhlanga Beach, Natal. £2,110.

CHEMICALS, LABORATORY EQUIPMENT, ETC.

81,200 lb. tetrachlorethylene for Onderstepoort Laboratory (tender S.O. 776): S.A. Liquid Gas Co. (Pty.) Ltd., Cape Town. £1,510, f.a.s. New York.

Silicagraphite (75 tons) for Department of Agriculture (tender S.O. 869): Mazista Slate Quarries, Ltd., Johannesburg: £543 15s., f.o.r. Mazista.

COOKING EQUIPMENT, ETC.

(1) **Double oven range**, (2) **electric griller and toaster**, and **electric urn**, (3) **plate and food warmer**, and **dish-washing machine**, for Prime Minister's Residence, Pretoria (P.W.D. tender 574): (1) British General Electric Co., Ltd., Johannesburg; (2) Butterworth Productions (Pty.) Ltd., Durban; (3) S.A. General Electric Co., Ltd., Johannesburg.

ELECTRICAL EQUIPMENT.

- (1) **Circuit breaker, (2) transformer, (3) switch unit**, for Johannesburg New Police Mortuary (P.W.D. tender 518): (1) Johnson & Philips (S.A.) (Pty.) Ltd., Johannesburg: £24, delivered; (2) Rice & Diethelm, Ltd., Johannesburg: £98 15s., f.o.b. Liverpool; (3) Rice & Diethelm: £104, f.o.b. Liverpool.
- Wiring barrows (50)** for Department of Posts and Telegraphs (P.O. tender 681): Francis & Graham (Pty.) Ltd., Durban. £268 15s., f.o.r. Congella, Durban.
- Electric generator** for Department of Posts and Telegraphs (P.O. tender 862): Sturrock (S.A.) Ltd., Johannesburg. £142 10s., f.o.r., Johannesburg.
- (1) **Cape Town Central Carrier accumulator, (2) Walmer main battery accumulator** (P.O. tender 850): Stratford Engineering, Ltd., Johannesburg: (1) £99 5s., f.o.b., London; (2) £61 10s., f.o.b., London.
- 40,000 yds. wire F. 1533**, for Department of Posts and Telegraphs (tender A.L. 255): Associated Engineers Co., Ltd., Johannesburg. £335, f.o.b. London.
- Cable** for Department of Posts and Telegraphs (tender A.L. 258): (1) Standard Telephones & Cables, Ltd., Pretoria; (2) British Insulated Cables (S.A.) Ltd., Johannesburg.
- Insulators** for Department of Posts and Telegraphs (P.O. tender 259): (1) Reunert & Lenz, Ltd., Johannesburg; (2) British General Electric Co., Ltd., Johannesburg.

FURNITURE, FITTINGS, ETC.

- (1) **80 tubular steel chairs, (2) 8 + 8 tubular steel tables**, for new G.P.O., Johannesburg (P.W.D. tender 602): (1) Export Import Union (Pty.) Ltd., Johannesburg: £111, f.o.r. Johannesburg; (2) Chromewell Electro-Plating & Steel Furniture Factory, Johannesburg: £54 16s. and £40, f.o.r. Johannesburg.

REFRIGERATING PLANT.

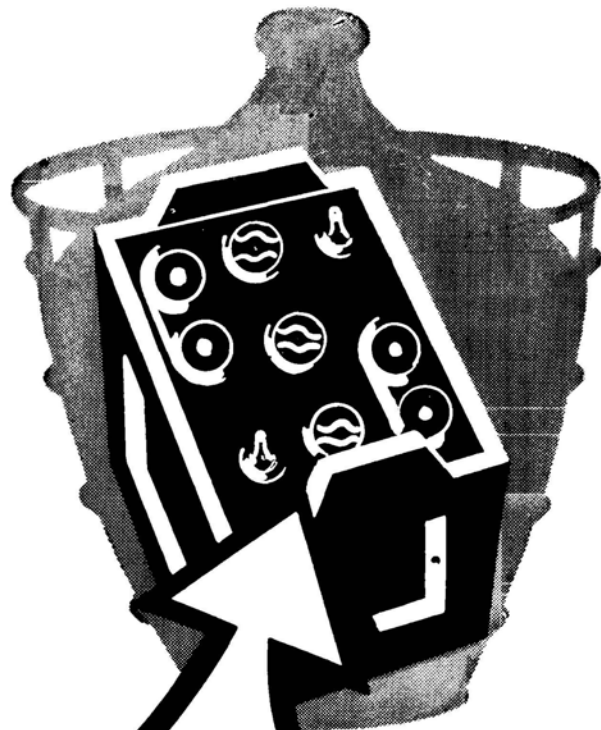
- Refrigerating plant** for Stellenbosch Western Fruit Research Station: supply, delivery and erection (P.W.D. tender 539): H. G. Skelton & Co., Cape Town. £1,592.

ROADS AND ROAD-MAKING EQUIPMENT.

- Various road-making equipment** (tender S.O. 789): Edgar Allen Co. (S.A.) Ltd., Johannesburg.
- Loading trailers (2)** (Tvl. Prov. Admin. tender 11/1940): Hubert Davies & Co., Ltd., Johannesburg. £465 each, in bond, f.o.r., Port Elizabeth.
- Mechanical excavators (4)** (Tvl. Prov. Admin. tender 11/1940): J. W. Kirkland & Son., Ltd., Johannesburg. £2,748 each, in bond, f.o.r., East London.
- Bitumen (64,000 gallons)** (Tvl. Prov. tender 42/1940): S.A. Torbanite Mining & Refining Co., Ltd., Johannesburg.

MISCELLANEOUS.

- Electric passenger lifts (3)**, supply, delivery and erection (P.W.D. tender 490): Waygood-Otis (S.A.) Ltd., Cape Town. £4,635 5s.
- (1) **Two-ton cable hoist, (2) 4-ton hydraulic lift** (S.A. Police Indent 244): (1) Globe Industrial Equipment Co., Johannesburg: £37 5s., f.o.b. New York; (2) D. H. Saker & Co., Johannesburg: £158 10s., f.o.r., Johannesburg.
- Residence elevator (electric)** for Prime Minister's new residence, Pretoria: supply, delivery and erection (P.W.D. tender 521): Waygood-Otis (S.A.) Ltd., Cape Town. £559.
- Wheel grader** for S.A. Police (Indent 249): W. S. Thomas & Co. (Pty.) Ltd. £192, f.o.r. East London.
- Fencing material** for Irrigation Department (Irrigation tender 15): (1) Mochal, Gevisser (Pty.) Ltd., Port Elizabeth; (2) Hunt, Leuchars & Hepburn, Ltd., Pretoria; (3) Otto Landsberg & Co., Cape Town.
- Barbed wire** for Department of Native Affairs (tender S.O. 910): Hunt, Leuchars & Hepburn, Ltd., Pretoria. £1 4s. 6d. per coil, f.o.r. Maydon Wharf.



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Stewarts & Lloyds of South Africa, Ltd.

AIR SURVEYS:

Aircraft Operating Company of Africa (Pty.), Limited, Johannesburg.

ART METAL:

Fredk. Sage & Co. (S.A.), Ltd., Johannesburg.

AUTO-TRUCKS:

Stewarts & Lloyds of South Africa, Ltd.

AUTOMATIC TELEPHONES:

Automatic Telephones (S.A.), Ltd., Johannesburg.

BOILER MOUNTINGS:

Stewarts & Lloyds of South Africa, Ltd.

BRICKS:

The Brick & Potteries Co., Ltd., Johannesburg.
John J. Kirkness, Pretoria.
Vereeniging Brick & Tile Co., Vereeniging.
Hume Pipe Co. (S.A.), Ltd., Cape Town.

BRICK-MAKING MACHINERY:

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Concrete Association of South Africa, Johannesburg.
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BUYERS' GUIDE

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Mazista Slate Quarries, Ltd., Johannesburg.
Rhodesian Timbers, Limited, Johannesburg.

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Hunt, Leuchars & Hepburn, Ltd., Johannesburg and Durban.

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Raymond Plywood (Pty.), Ltd., Johannesburg.
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Stewarts & Lloyds of South Africa, Ltd.

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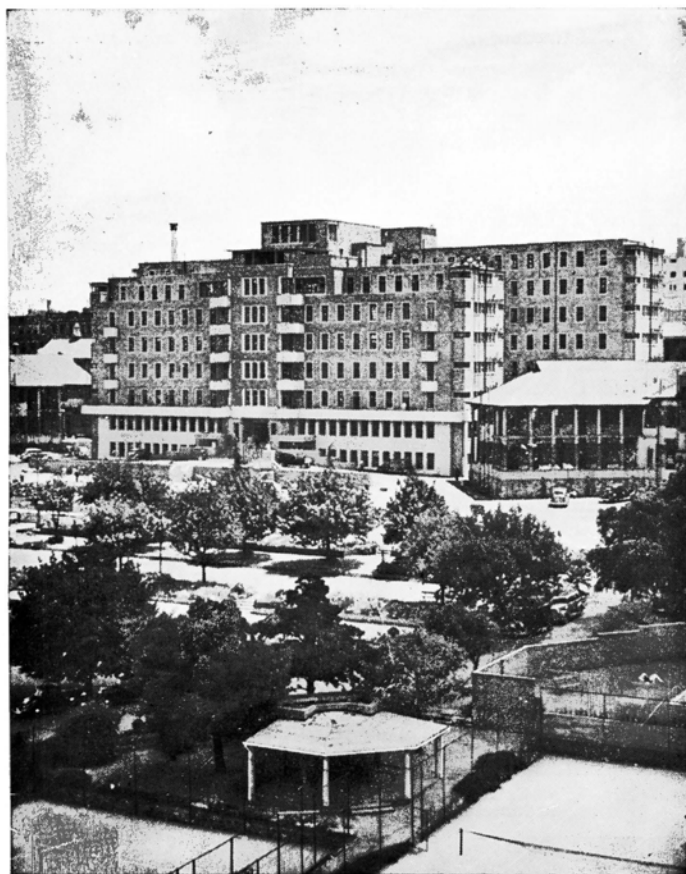
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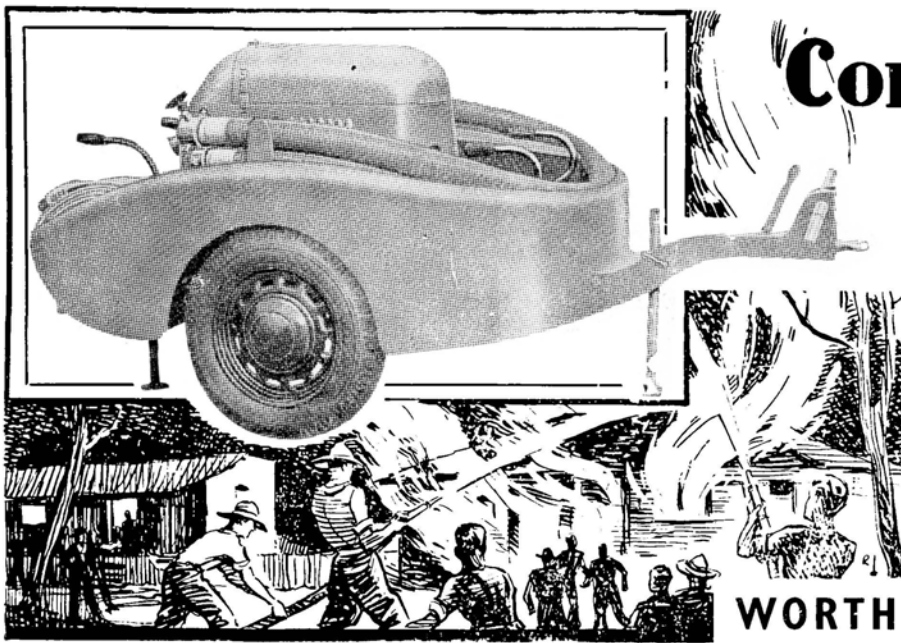
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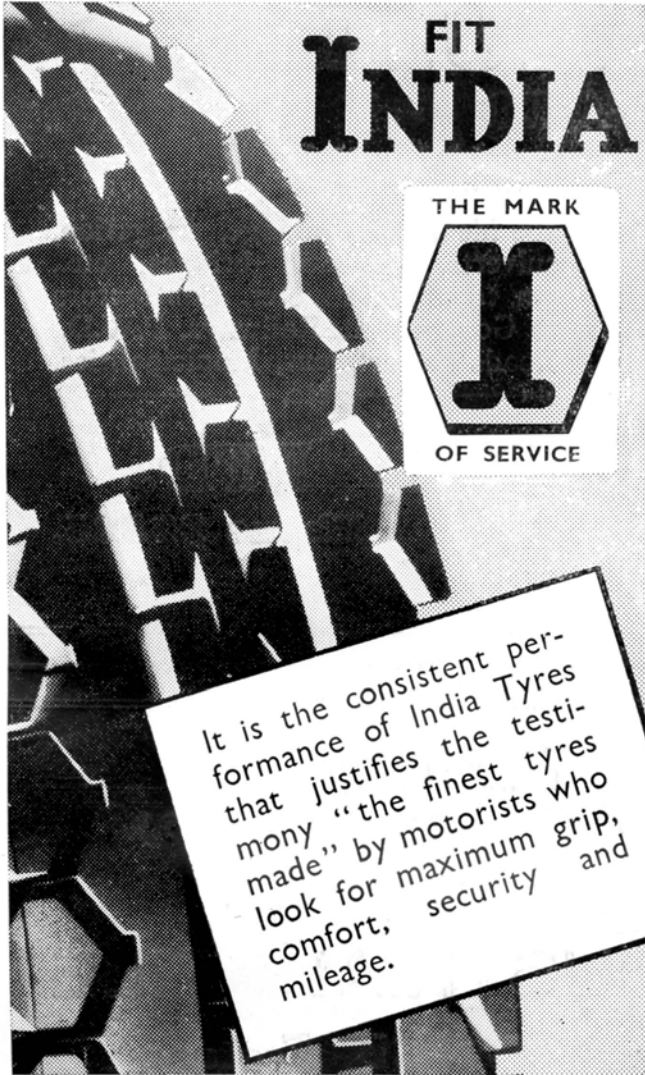
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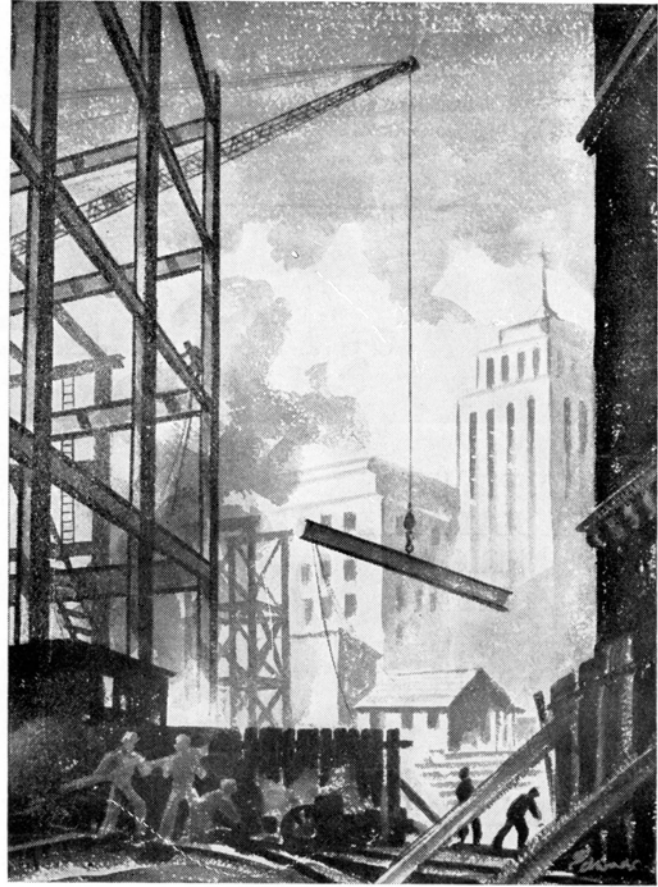
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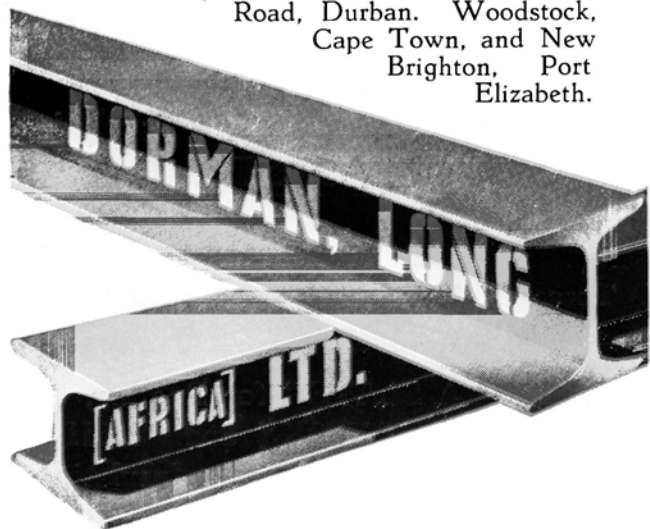
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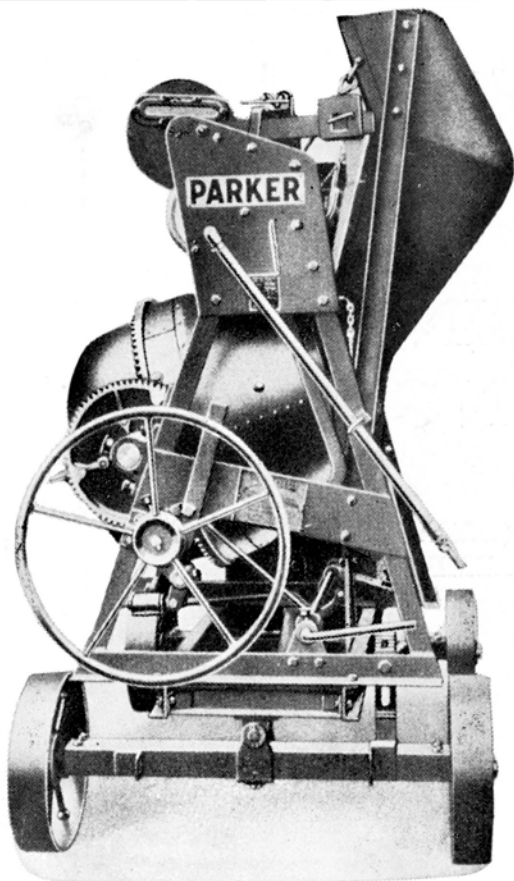
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