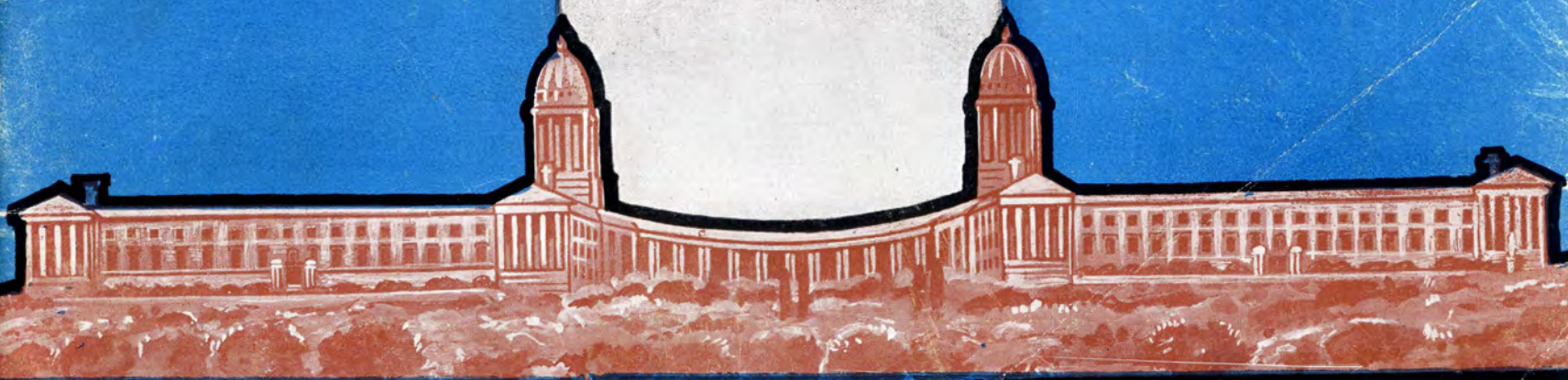
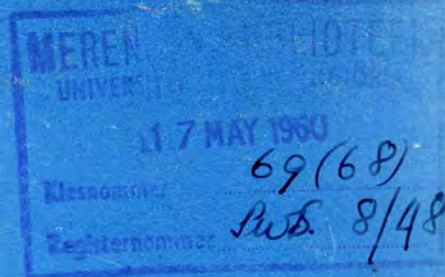


Vol. VIII.

No. 48.

NOVEMBER : 1947.

# PUBLIC WORKS OF SOUTH AFRICA



Registered at the General Post  
Office as a Newspaper.

Price per Copy : 1/6

Subscription : 15/- per annum.

# HOW TO MAKE YOUR TRAIN TRIP A

## *Highlight of your Holiday*



**BOOK EARLY.** Use the Railway Tourist Bureau. They know your needs and issue all tickets — travel, meals, bedding — in a compact book. Saves carrying extra money.



**BE EARLY AT THE STATION.** Avoids last-minute rush. Allows time to check your name on the passenger list, buy your magazines and say your farewells.



**YOUR COMPARTMENT** is your private room for the trip. Keep it clear of parcels and baggage. Leaves you room to relax and make yourself "at home."



**BULKY LUGGAGE** is best sent to the luggage van. Remember to remove old labels and to address everything clearly. Saves confusion and delay.



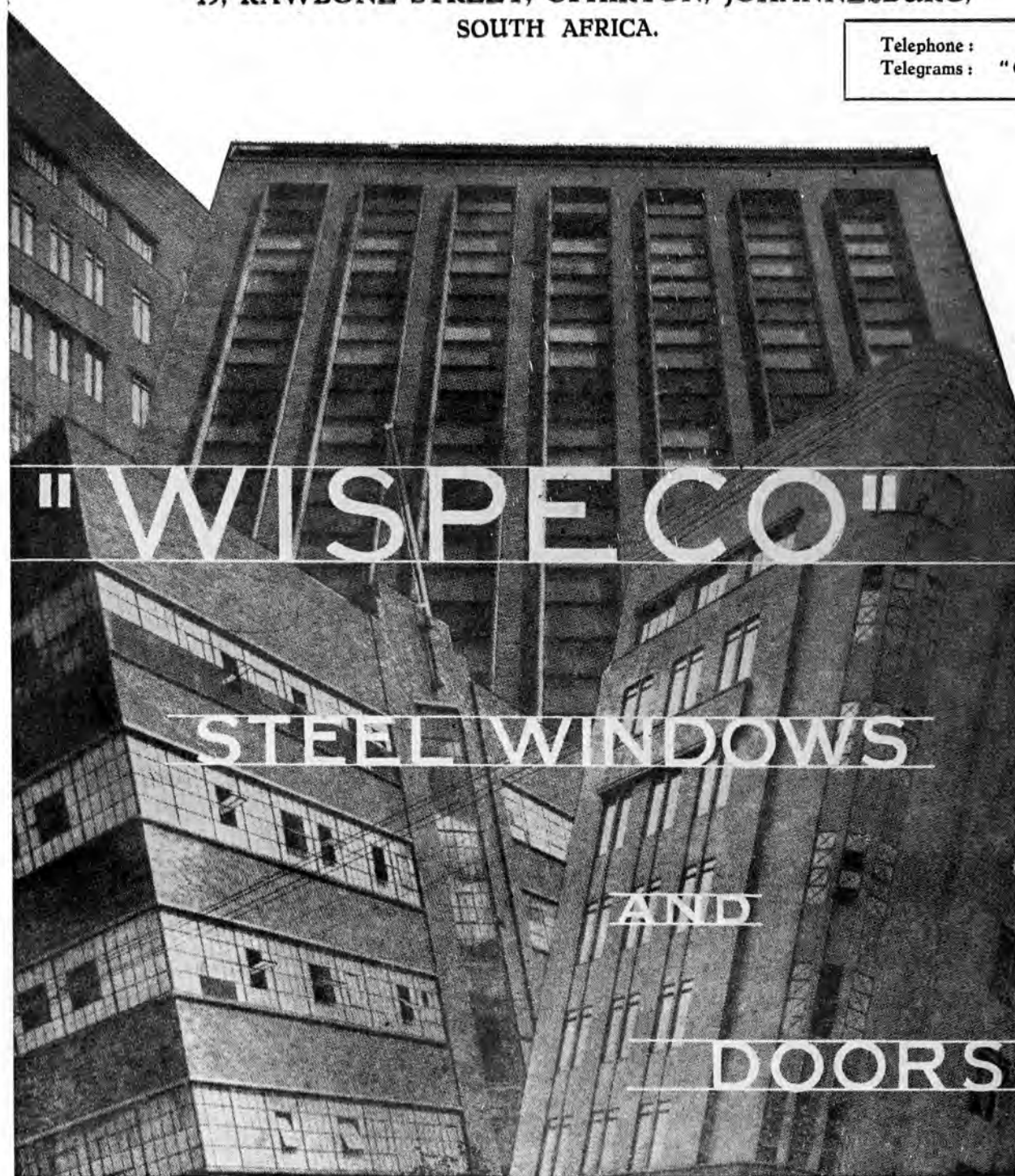
**BE ON TIME FOR MEALS.** The Dining Car staff can then give prompt, personal service. If you wish, meals and teas will be served in your compartment.

LEARN THE ART OF *Travel by Train* WITH THE  
**SOUTH AFRICAN RAILWAYS**

# WIRE INDUSTRIES STEEL PRODUCTS AND ENGINEERING CO., LTD.

49, RAWBONE STREET, OPHIRTON, JOHANNESBURG,  
SOUTH AFRICA.

Telephone : 33-9534  
Telegrams : "Castings."



Manufacturers of :

STEEL WINDOWS, DOORS AND FLYSCREENS,  
PRESSED STEEL DOOR FRAMES AND WINDOW  
SURROUNDS, GATES AND FENCING, SCREENING,  
WHEELBARROWS, ETC.

Also  
at :

CAPE TOWN  
DURBAN  
PORT ELIZABETH  
EAST LONDON

REINFORCING AND STRUCTURAL  
ENGINEERS



## PRIMROSE RUSTIC BRICKS

AN IDEAL FACING FOR A RESIDENTIAL BUILDING HAVING THAT MELLOW  
APPEARANCE OF OLD-WORLD BRICKWORK

# PRIMROSE BRICK WORKS (1936) LIMITED

TELEPHONE 58-1311/2/3

TEL. ADD.: "PRIMBRICKS"

P.O. BOX 49  
GERMISTON





# WHITE LIMBA

*(Terminalia Superba)*

A BELGIAN CONGO HARDWOOD THAT MACHINES BETTER  
THAN A SOFT PINE



CREAMY-YELLOW COLOUR, IDEAL FOR DISTINCTIVE SCHEMES FOR BANKS,  
SHOPS, PANELLING AND CUSTOM-BUILT FURNITURE AND JOINERY  
YET WILL TAKE A FINISH TO ANY TINT

“STAYS PUT” WHEN PROPERLY KILNED

## SAFE AS TEAK

When Kilned to Moisture Content for Area of use  
And given a simple and inexpensive preservative treatment

AFTER MACHINING

— and —

BEFORE ASSEMBLY

Specify **“AGRIFOR”** *Protected Limba*



Ste **“AGRIFOR,”** **Lemba-Boma, Belgian Congo**

REPRESENTED BY:

**TIMBER & ALLIED AGENCIES (PTY.), LTD.**

87, COMMISSIONER STREET,  
JOHANNESBURG.

52, ST. GEORGE'S STREET,  
CAPE TOWN.

Cables: Brettimber.

# PIONEERS IN LOCKS

STILL THE LEADERS

---

Rebated Locks  
2 and 3 Lever  
Mortice Locks  
Rim Locks

---




---

Cupboard Locks  
6 and 8 Lever  
Safe Locks  
Door Furniture

---

MANUFACTURERS:—

## E. SCHULTZ & Co. (Pty.) Ltd.

P.O. Box 3901  
Phone 22-6270

34, Salisbury Street,  
JOHANNESBURG

Sole Distributors: HUMPHREY PATTERSON.



Illustration of plant supplied to 71 Air Training School, Milner Park, Johannesburg.

### TARRY'S "PUROB"

Pat. No. 253.

#### FILTRATION PLANTS

For swimming pool purification. Sizes available from 12,000 to 250,000 gall. capacity. Engine or electrically operated sets.

#### SERVICE:

We are equipped with a special filter service department for rendering service and maintenance to all our installations as and when required.

Also repairs and overhauls carried out on existing installations.

When designing a swimming pool please communicate with us re filter installation.

## E. W. TARRY & CO., LTD.

(INC. IN ENGLAND.)

IRRIGATION, WATER PURIFICATION, MECHANICAL AND ELECTRICAL ENGINEERS.

Head Office: Simmonds St. Branches: Port Elizabeth, Kimberley, Benoni, Bulawayo, Salisbury, Lusaka.  
ADDRESS: Cor. END and ALBERT STREETS, JOHANNESBURG. TEL. 22-9791.

NEWEST DEVELOPMENT OF THE "WONDER WOOD"-*Plywood*

# BEAUTIFUL FLOORS

*Create Beautiful Homes*

HUSKY



FLOORING

**EMPIRE PRODUCTS (PTY) LTD**

14 HEIGHT STREET

DOORNFONTEIN

JOHANNESBURG

PHONE 44-6905

Public Buildings  
throughout South Africa  
bear evidence of the  
Expert Craftmanship  
in  
Architectural Metalwork  
and  
High Class Joinery  
carried out  
by

**FREDERICK SAGE & CO. (S.A.) LTD.**

10, HEIDELBERG ROAD, VILLAGE MAIN,

PHONE 22-7555.

JOHANNESBURG.

BOX 777.

# 6 good reasons for using **IVORY** Gypsum HARDWALL PLASTER

- 1 It has uniform quality, and the set is controlled.
- 2 It is easy to mix, and requires no special knowledge to apply.
- 3 There is a slight expansion in setting, which eliminates shrinkage and crazing.
- 4 "Ivory" Plaster has relatively high tensile and compression strength. It ensures long life and freedom from cracks.

- 5 "Ivory" Plaster can be trowelled to a smooth, hard finish which will not harbour vermin or germs.
- 6 The most delicate decorations can be applied without injury.

"IVORY" Plaster absorbs nearly half the quantity of mixing water into its molecular structure, facilitating quick drying. Walls can be painted within a week of being set and a considerable saving of working time results.

Entirely satisfactory results have been obtained by leaving "IVORY" Plaster ceilings unpainted. The natural ivory colour of the finish gives a pleasing effect. The possibilities of texture finishes are limited only by the ingenuity of the operative.



Managing and Selling Agents:

**J. H. VIVIAN & CO. LTD.**

Union Corporation Building,  
Marshall Street.  
P.O. Box 301. Phone 33-9981.  
JOHANNESBURG.  
3 Queen Street, P.O. Box 1115, Phone 2-8171,  
DURBAN.



GYPSUM INDUSTRIES LIMITED  
Germiston and Durban.

**KEEPING  
PACE...**

WITH THE



**INDUSTRIAL EXPANSION OF SOUTH AFRICA**

— Loads From 6 To 60 Tons —

**ROSS TRANSPORT CO. LTD.**

152, PRESIDENT ST.,  
GERMISTON.

Phones: 51-4402  
51-1179

# ASEA

## ELECTRIC

SOUTH AFRICA (PTY.), LTD.  
PRETORIA

ASEA, the Swedish General Electric Company, are specialists in metal rectifiers. These rectifiers are of the Selenium type and are now being assembled from imported components by ASEA Electric South Africa (Pty.), Ltd., at their factory in Pretoria.

These rectifiers can be supplied for a variety of duties such as the charging of batteries; for direct connection to consuming apparatus such as brake magnets, operating coils, etc., for stand-by lighting sets; electro-plating applications and for use in telephone networks.

Sole Selling Agents for ASEA Electric S.A. (Pty.), Ltd.



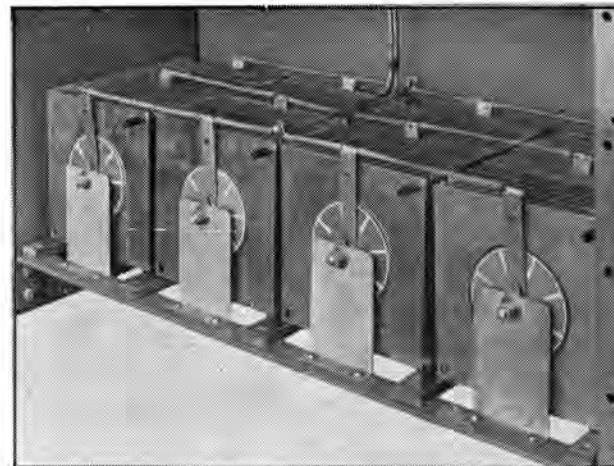
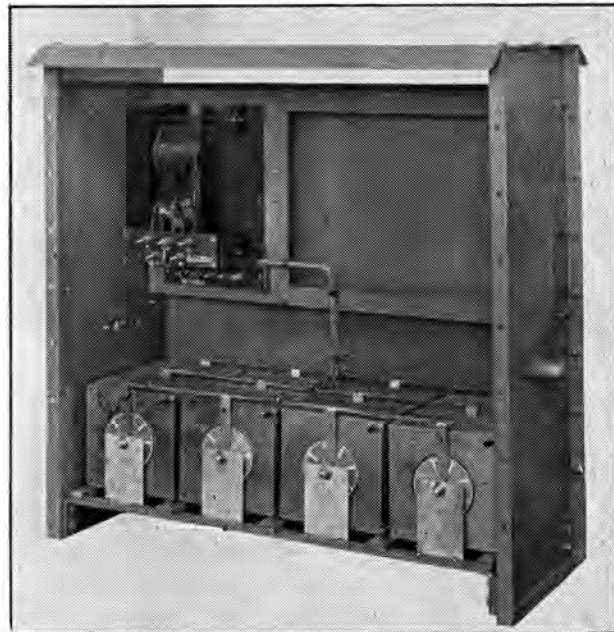
Also at: Bulawayo, Cape Town, Durban, East London, Port Elizabeth, Pretoria, Que Que, and Vereeniging.

# REUNERT & LENZ LTD.

*Beresford House, Johannesburg.*

PHONE 33-5201. P.O. BOX 92. TELEGRAMS: "ROCKDRILL"

The illustrations below show details of Selenium Rectifier unit assembled in South Africa. This unit was supplied for operation with a magnetic machine tool table, rated 10 amps at 200 volts.



# JOHN LAING & SON (S.A.) (PTY.) LTD.

BUILDING AND ENGINEERING CONTRACTORS

JOHANNESBURG

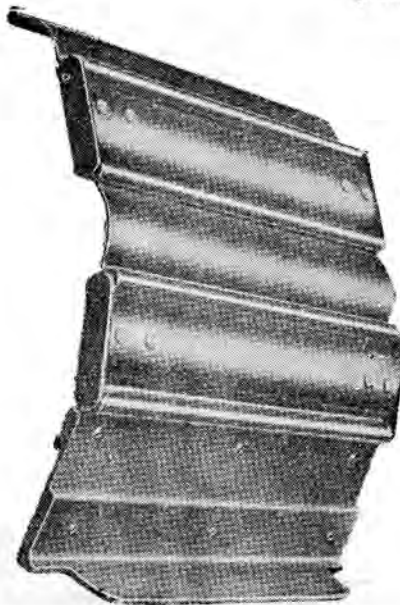
## ROLLING SHUTTERS

*for all purposes*

Deliveries from the factory in England are prompt.



DENNISON-KETT ROLLING SHUTTERS — ONE WITH "AUTOWICKET" DOOR



The "Dennison-Kett" Rolling Shutters have been supplied for many public and private buildings throughout the Union.

There are "Dennison-Kett" Rolling Shutters for every purpose from a small domestic servery to the largest aeroplane hangar.

There are in all 18 types of Rolling Shutters. Depicted here is Type No. 11 for Garages.

Banks, Photographers' Studios, Stores, Warehouses, Factories, Laundries, Works, Offices, Docks, Mills, Railway Bridges, Tramway and Omnibus Sheds, Barracks, Breweries, Shop Fronts, Jewellers, Exhibition Buildings, Ships, Laboratories, and elsewhere where maximum strength is required for the protection of valuable property.



Let us quote you!

**CHUBB & MAXWELL (PTY.), LTD.,**

MARSHDALE BUILDING, COR. MARSHALL & LOVEDAY STREETS, JOHANNESBURG.

P.O. BOX 5038

TEL. 33-5040.



## **Proved in War — Perfect in Peace**



From the fuselage of a fighter plane to panelling on a wall, South African plywood has proved itself equal to the finest in the world. At our seventeen-acre factory in Cape Town we are producing beautiful veneers, technical plywoods and Laminated Board of amazing strength, durability and resistance to moisture. We will gladly advise on the use of plywood as a lightweight constructional material.

# **PLYWOODS** *Limited*

Head Office and Works: PAROW, CAPE TOWN. JOHANNESBURG OFFICE: 810 Union House, Main and Simmonds Streets, P.O. Box 8476, Telephone 33-6566.

Agencies at Port Elizabeth, East London, Durban and Bloemfontein.

# PUBLIC WORKS OF SOUTH AFRICA

PROPRIETORS: PUBLIC SERVICES PUBLICITY (PROPRIETARY) LIMITED  
EDITORIAL OFFICES: 45, PRUDENTIAL HOUSE, PRETORIUS STREET, PRETORIA  
PUBLICITY DEPARTMENT: FIRST FLOOR, 92, MAIN STREET, JOHANNESBURG  
LONDON ADDRESS: RYTON PUBLICITY SERVICES, 92, FLEET STREET, LONDON E.C.4.

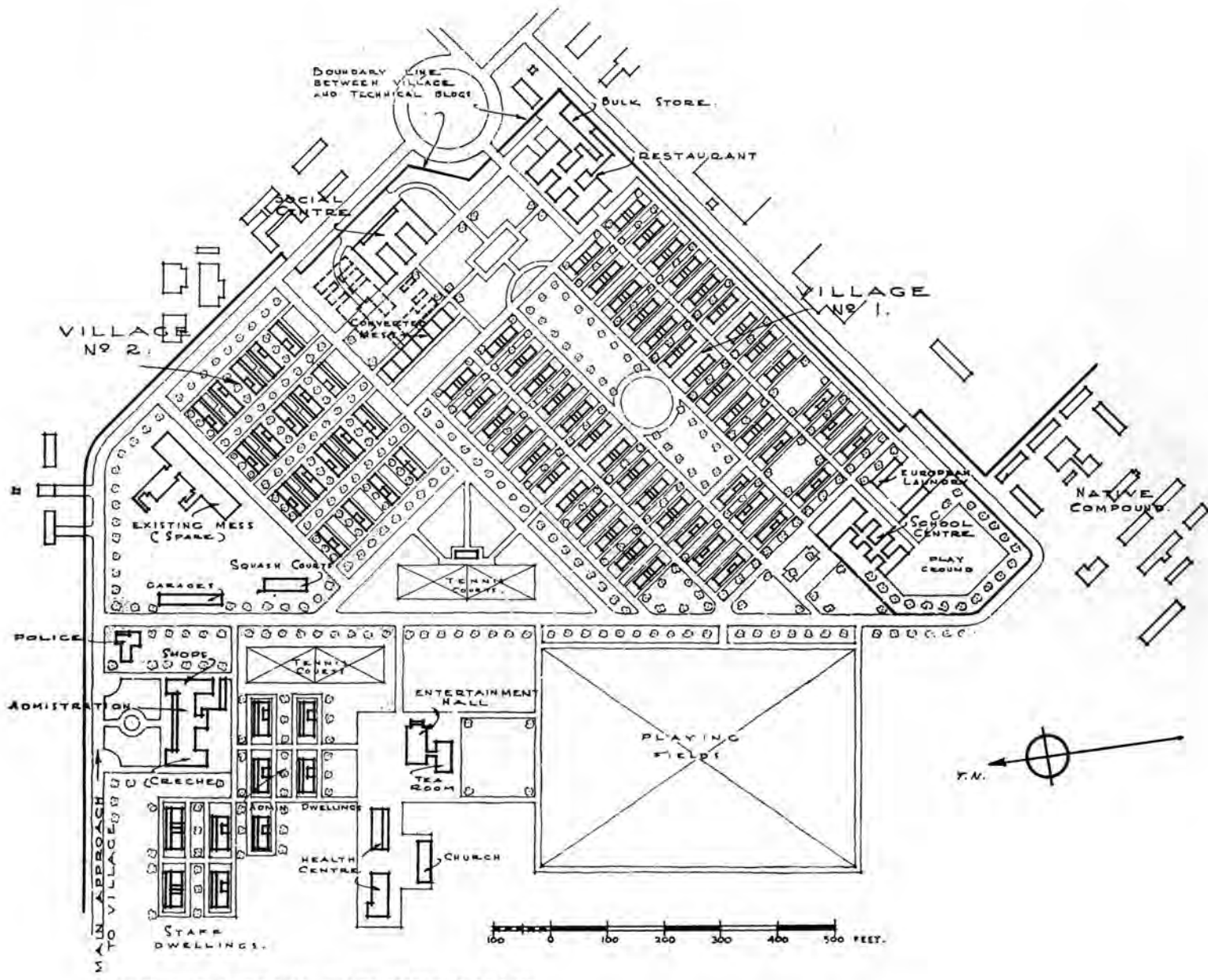
E D I T O R  
E R I K T O D D

PUBLIC WORKS OF SOUTH AFRICA, which is published monthly, is intended to keep the public up-to-date in regard to the engineering and building projects of the Central Government and the Provincial and Municipal Governments of South Africa

VOLUME VIII • NUMBER FORTY-EIGHT • NOVEMBER 1947

## CONTENTS

GOVERNMENT VILLAGES  
WELDED RAILS ON THE S.A.R.  
S.A. BUREAU OF STANDARDS SPECIFICATIONS  
PARKS IN PRETORIA  
RADAR BEACONS ON SPRINGBOK ROUTE  
ANNOUNCEMENT  
ZONING OF PUBLIC BUILDINGS IN THE CAPITAL  
TENDERS INVITED



LAYOUT OF A TYPICAL GOVERNMENT VILLAGE.

# GOVERNMENT VILLAGES

## SERVICE CAMPS CONVERTED TO TEMPORARY DWELLINGS FOR EX-SERVICEMEN

THE idea of converting vacated military camps into temporary Government villages for ex-volunteers was conceived towards the end of the war by the Rt. Hon. The Prime Minister, Gen. J. C. Smuts with his usual foresight.

A Committee of Departmental heads to be known as the "Ad Hoc Housing Committee" was formed, their terms of reference being in the words of the Prime Minister himself, "to go into the question whether camps near big cities could be used (with slight conversions if necessary) for housing returned soldiers and their families, if any, during the period of housing scarcity after demobilisation."

The Committee commenced their duties on January 11th, 1944, and was comprised of the following members :—

Chairman — Maj. Gen. Mitchell Baker, at that time Quartermaster General.

Deputy Chairman — Albert Kuit, Esq., Chairman of the Civil Re-employment Board.

T. A. F. Rhodes, Esq., and later A. A. Eales, Esq. Secretaries for the Public Works Department.

Dr Peter Allen and later Dr. G. W. Gale, Secretaries for Health.

G. A. C. Kuschke, Secretary for Social Welfare.

The Committee was advised by the Chief Architect and Quantity Surveyor and also various Technical Officers of the Department of Public Works, which Department was responsible for the preparation of the schemes, placing of contracts, supervision and in numerous cases the actual conversions, the work being undertaken departmentally.

Several typical camps were inspected, and following discussions at which all the various aspects and probable difficulties were considered, it became apparent that the planning and construction of every camp would require individual consideration owing to the variety of conditions and construction appertaining in each, but that throughout certain basic principles would apply, namely :—

1. The scheme being more or less a stop-gap, speed in construction was essential.

2. In order to assist in attaining this end, the least alteration to the existing buildings should be done.

3. As the Scheme was essentially a temporary expedient,

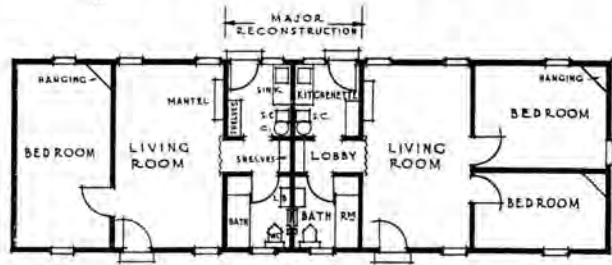
the least expenditure consistent with the provision of comfortable living conditions was of the greatest importance. It was thought that the life of a village would vary from a minimum of three to a maximum of ten years.

4. The predominant motif throughout should be communal, this point having been stressed by the Prime Minister, who had during a recent visit to Britain inspected various centres at which the Communal Restaurant system was operating extremely well.

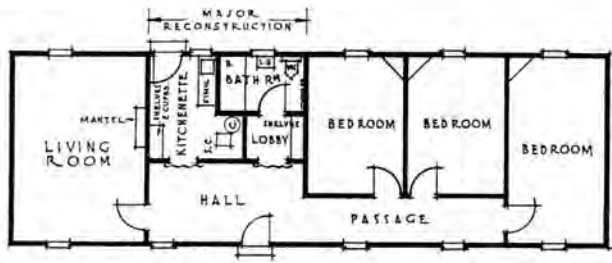
5. Each village should be planned to incorporate the following facilities wherever possible :—

- (a) Flats of three different sizes having one Living Room, Bathroom, Kitchenette and one, two or three Bedrooms each. The flats of each type to be as similar as possible on account of the rent problem. As communal feeding was to be encouraged, only very limited cooking facilities were to be provided, these comprising two electric plugs and a slow combustion stove which while allowing of very light meals to be prepared, would at the same time supply all necessary hot water.
- (b) A Restaurant.
- (c) A Social Centre.
- (d) A Recreation Hall.
- (e) Administrative Centre and Stores.
- (f) A School for young children.
- (g) A Creche.
- (h) A Laundry.
- (i) A General Store and Baker.
- (j) A Health Centre.
- (k) Blocks of Garages.
- (l) Accommodation for Native Servants.
- (m) Tennis courts, playing fields, swimming baths (only where there already exists) and childrens' playground.
- (n) A very simple garden layout which would be mainly decided by roads and paths.

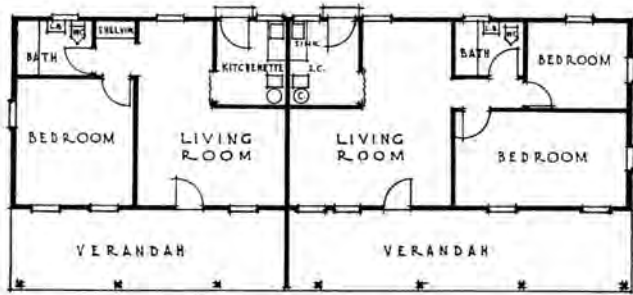
The reason for the provision of certain features such as shops, etc., was that in the great majority of cases the camps had to be sited a good distance out of towns and as consequence it was obviously necessary to provide these facilities.



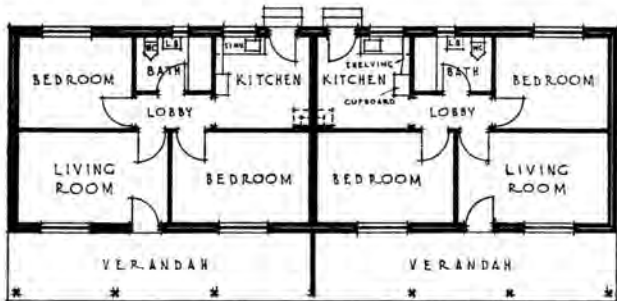
Bungalow converted to provide one 2-roomed Flat and one 3-roomed Flat. Note the concentration of reconstruction in the centre.



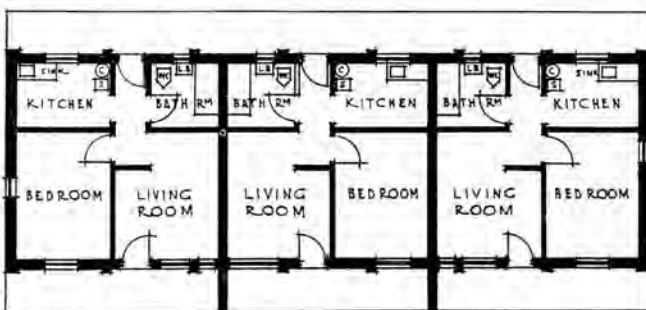
Bungalow converted to provide one 4-roomed dwelling.



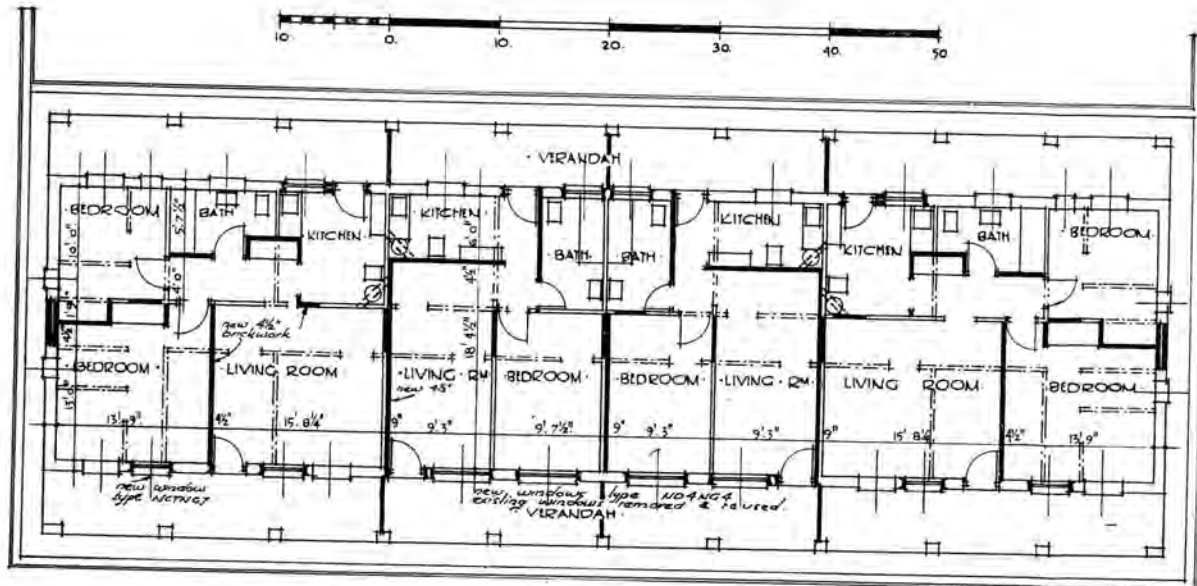
Bungalow converted to provide one 2-roomed and one 3-roomed Flat. Note the shape of living-room which provides dinette.



Bungalow converted to provide two 3-roomed Flat units.



Bungalow converted to provide three 2-roomed Flat units.



SHOWING THE EXTENT OF RECONSTRUCTION.

Certain huts were converted into type dwellings and were inspected by the Prime Minister who had already been informed of the findings of the Committee. He expressed his satisfaction and instructed the Committee to "go ahead."

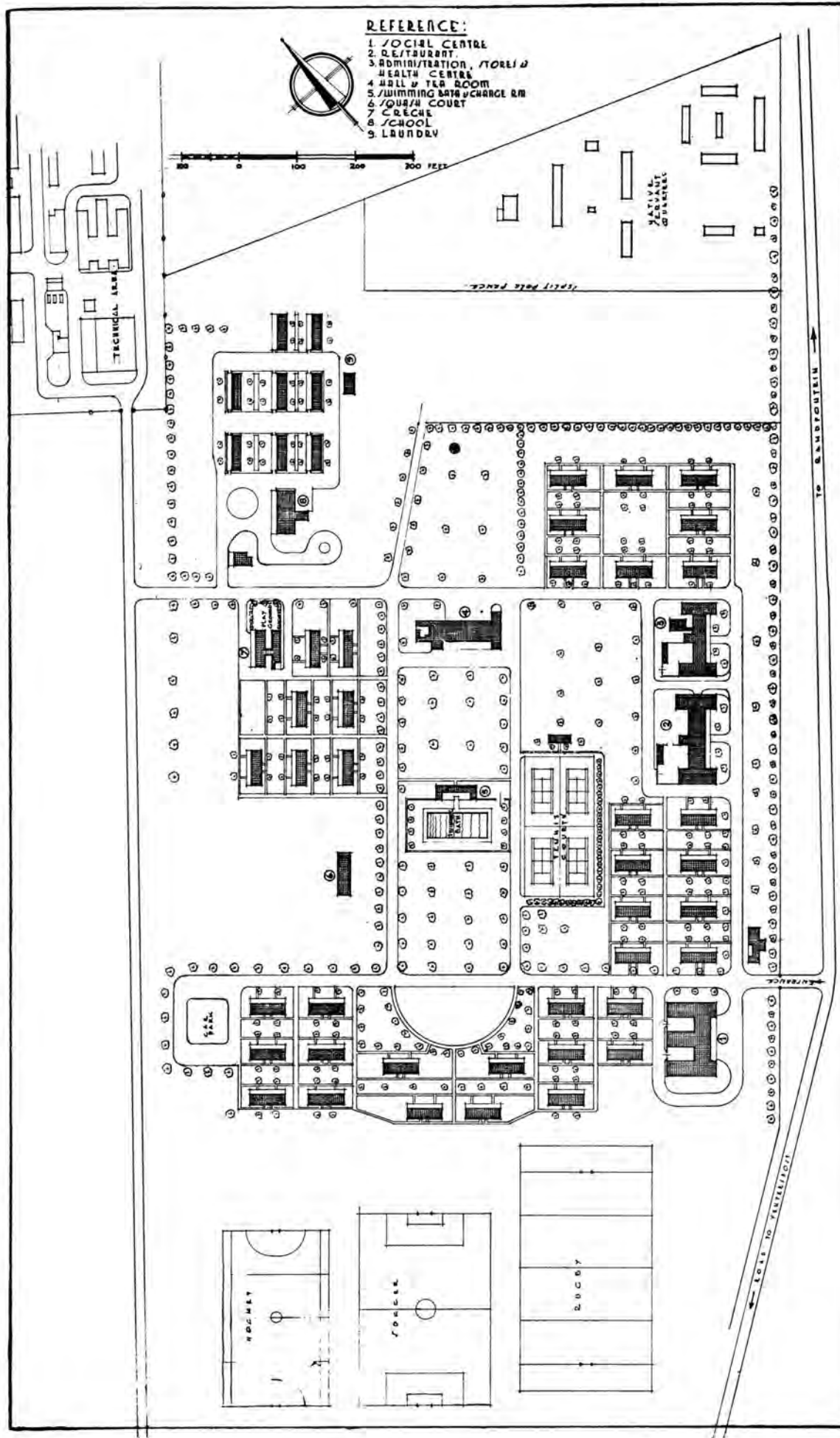
At this stage however, it was still not possible to obtain vacated camps or even a single camp, and it was only gradually that camps could be released by the Department of Defence. In most cases provision for the remaining troops in occupation still restricted development. This state of affairs continued throughout the whole period of conversion. In the meantime a tour was made of all the camps which were thought might be suitable for conversion, and from this, various unexpected difficulties began to appear.

Camps used for infantry were extremely uniform and regimented and to obtain any departure from the monotonous lines, it would be necessary to demolish and re-erect huts, while Air Force camps, although being more attractive, were very much more scattered, thus introducing the distance complication. In one instance a field hospital was converted into over 100 dwellings. Owing to the speed and methods which have been used in the construction of these camps, accurate drawings and information of the various types of buildings and services provided were not complete, which meant that a check and in many cases an appropriation would be necessary. This was started at once and further difficulties immediately became apparent. Whereas it had been hoped that drawings might be made

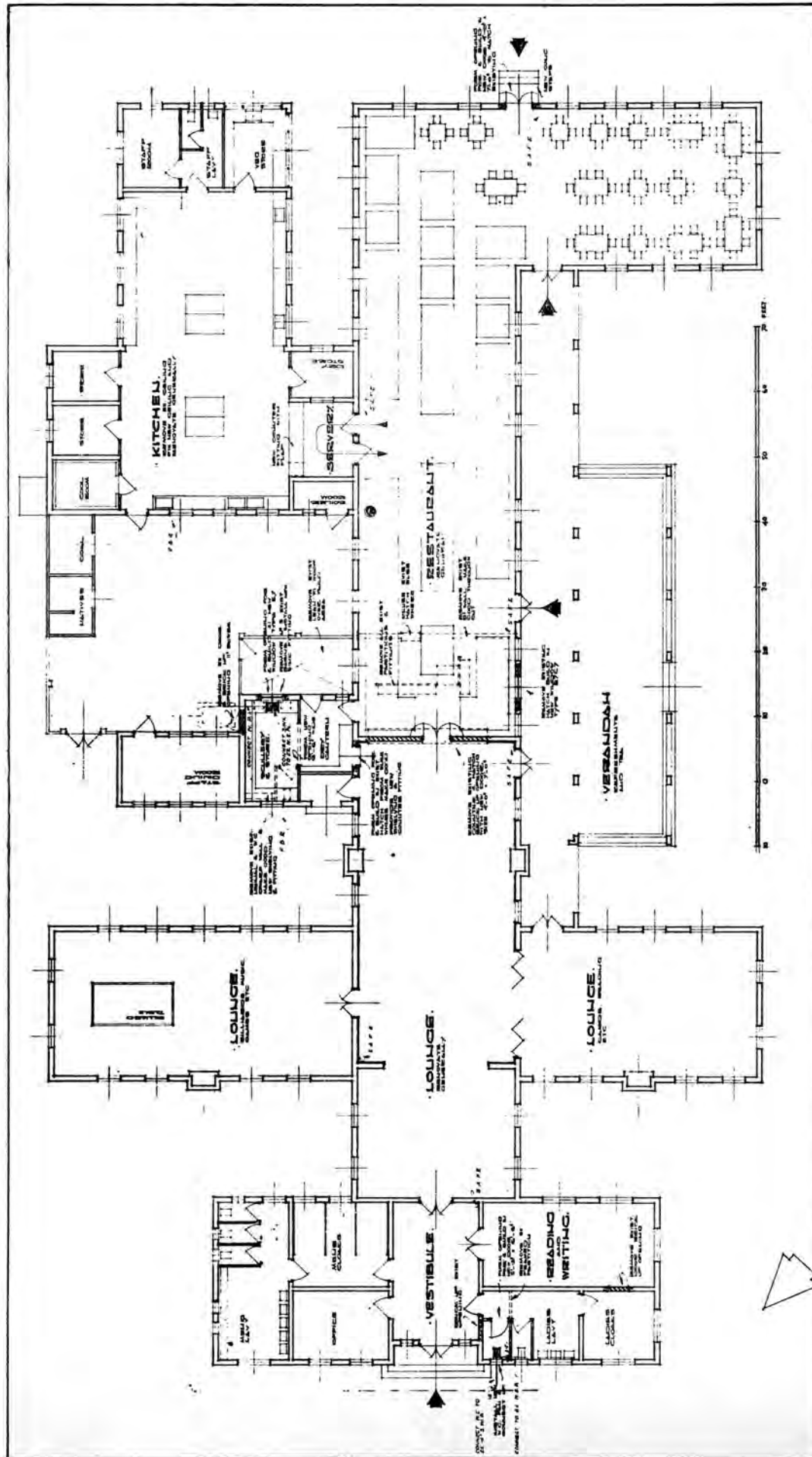
more or less uniform for every camp it was now obvious that this happy position would be the exception. Camps were constructed of Wood and Iron, Weatherboard framing, Brick, Breeze Blocks and types of inter-locking concrete panels, having wooden floors, concrete floors, various types of windows, doors, lining material and most serious of all varying in sizes heights and designs. Looking back now it can be emphatically stated that every camp was designed and complete drawings prepared for each village, making a colossal task for a very small, hardpressed and depleted staff.

Eventually the first camp became available which happened to be an Infantry Brigade lines constructed of wood and iron, most of the buildings having wooden floors. The only economical method of tackling the dwellings was to plan the Kitchenettes, Bathrooms, etc., in the centre of the hut, thus cutting out a centre portion of the wooden floor which became solid, limiting the drainage and waer supply and leaving the remainder of the floor untouched. The dwellings were then divided by a party wall carried up to the rake of the iron and the whole central portion built in brick with solid floors. The remaining partitions were built of sound-proof framing superimposed on the existing wooden floors. Where converting buildings with suspended wooden floors. When converting buildings with fere with existing walls and this further complicated design.

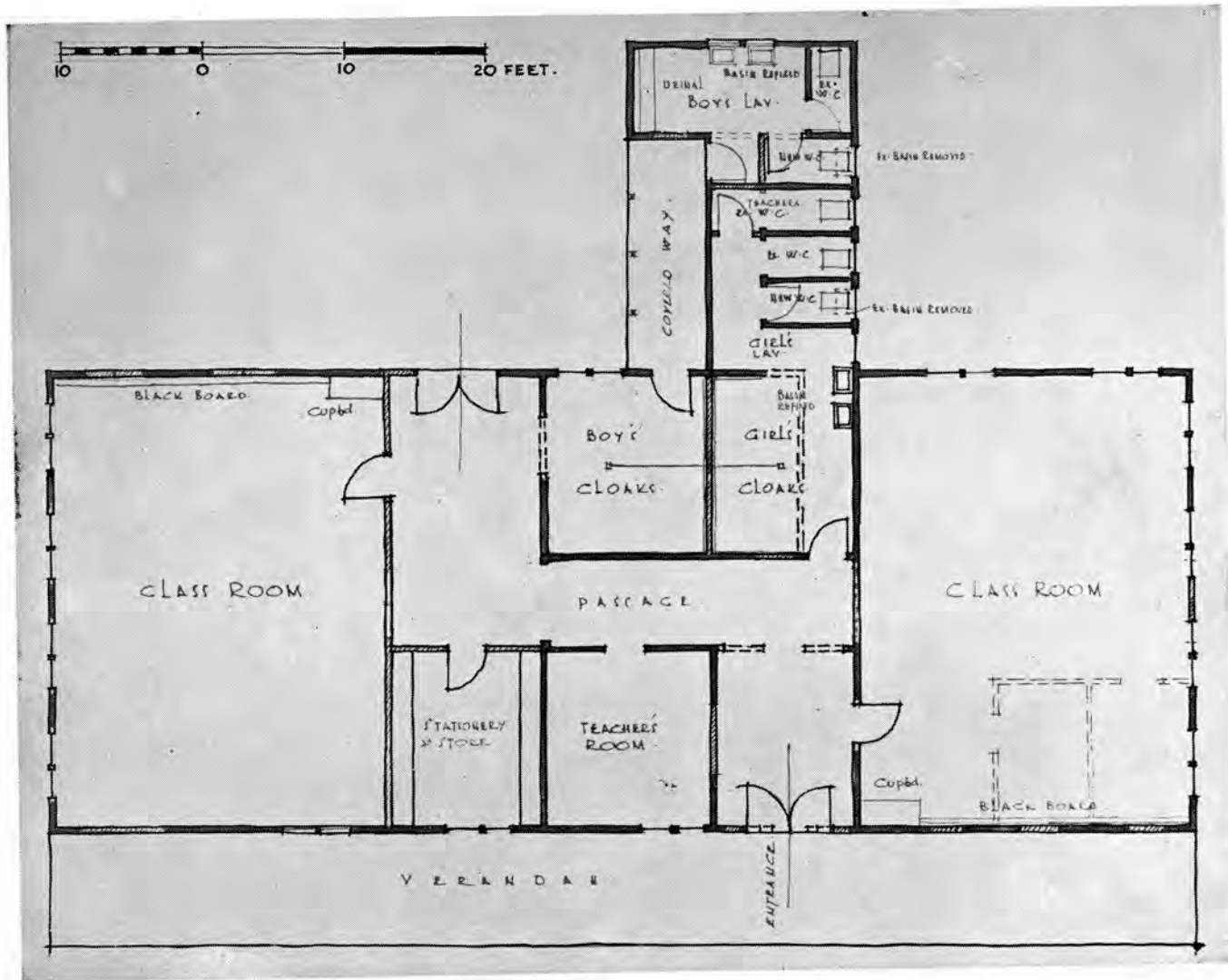
Ablution blocks were removed and material wherever possible stacked for re-use.



A  
S  
M  
A  
L  
L  
E  
R  
  
V  
I  
L  
L  
A  
G  
E  
  
L  
A  
Y  
O  
U  
T



A SOCIAL CENTRE AND COMMUNAL RESTAURANT.



A VILLAGE SCHOOL.

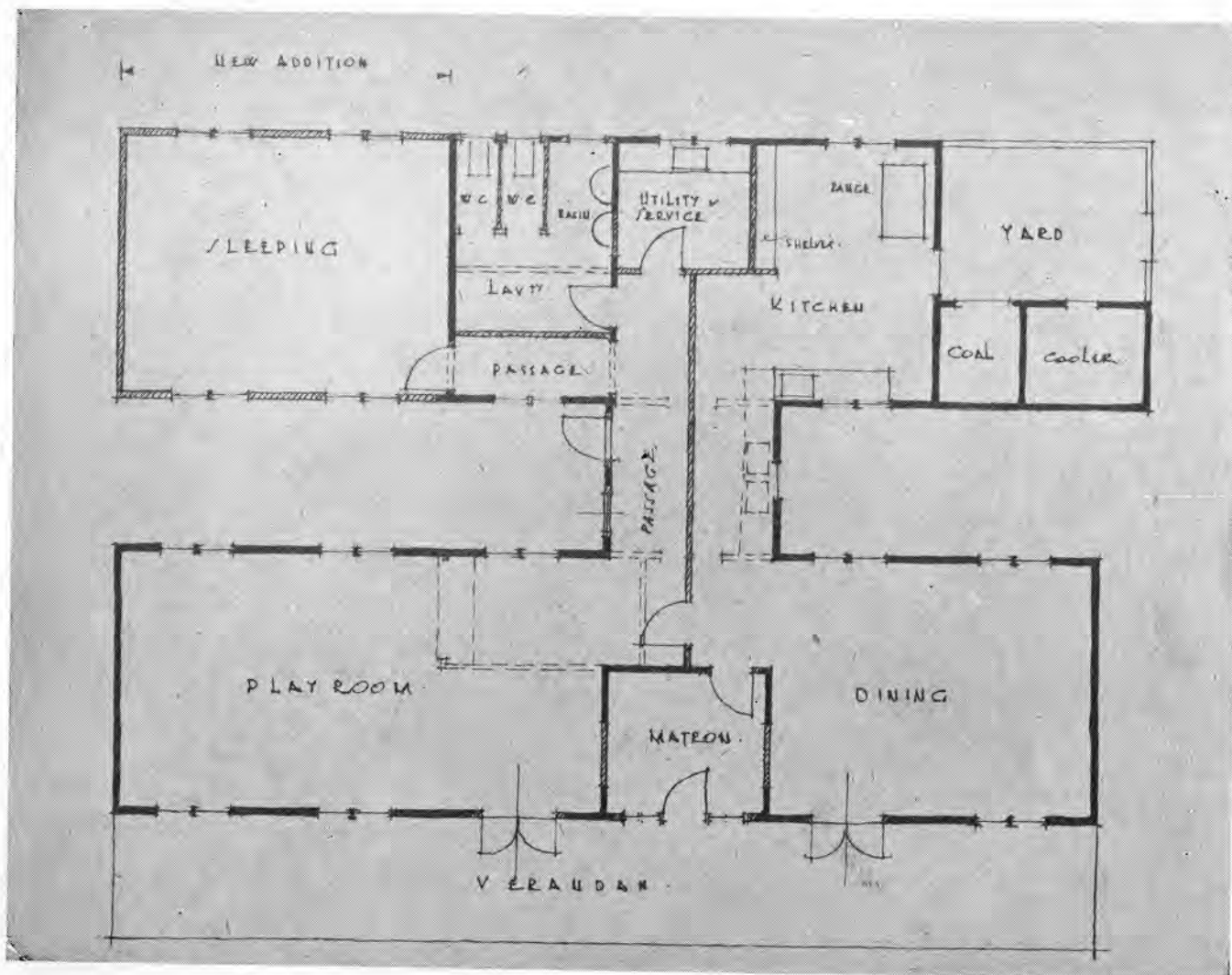
In the case of huts being demolished and re-erected and converted it was soon apparent that it was better to demolish the complete number, sort the material for re-use and then proceed to build new dwellings with say a liberal addition of new material. When the provision of new floors and foundations, electric supply, drainage, etc., is taken into consideration, there is not nearly the economy in this form of building that at first seems possible.

Now that the work was actually about to commence, the difficulties in the material and labour seemed insuperable. Both material and labour were in short supply and substitutes for the former and the simplification of design to save the latter were the continual aim.

Cast iron porcelain baths were unobtainable and so Terrazzo was used as a make-shift for both baths and drainer tops. Sanitary fittings were salvaged from every possible source.

Cooking stoves of any description were just unobtainable and so even though communal restaurants were decided upon, we would have been forced to install S.C. stoves in any case and one might go as far as to say that but for these much despised (by most of the residents) units the Government village scheme might never have reached the stage it has.

Materials such as timber, steel, cement, paint, linings and ceilings, glass, floor coverings, galvanised iron piping, electrical material and numerous others not mentioned were at times almost unobtainable, but still the scheme battled on. At one time brooms were used for certain painting work. Tradesmen of course were extremely scarce as demobilisation had not then got into its full swing and the progress of work at times could be determined by the plumbers and plumbing material available.



A CRÉCHE.

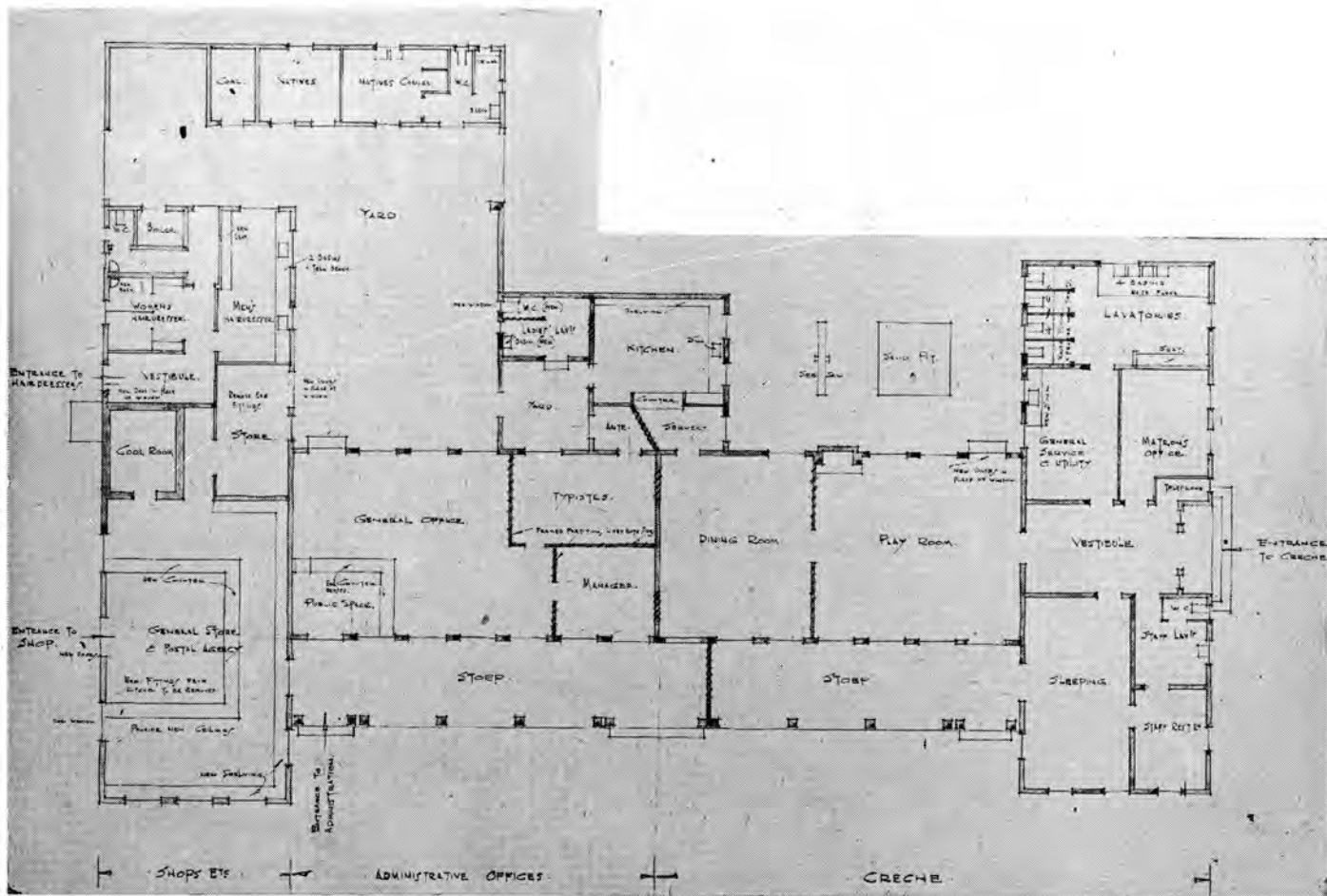
There were only two forms of contract possible for this type of work, the much debated form of cost-plus and the work carried out Departmentally. Prevailing conditions and the labour position at the various centres determined which of these forms should be used.

As villages became available for occupation it was not long before they were filled and waiting lists became the rule. Further efforts were then made to provide additional accommodation and buildings, which had not primarily been considered fit for conversion into dwellings, were again reviewed and in most cases very comfortable flats were provided, calling upon perhaps a little more initiative and improvisation in design and construction.

The complete scheme now accommodates approximately 1,850 families distributed among the main towns of the Union as for example Germiston, Pretoria, Witbank, Randfontein, Vereeniging, Bloemfontein, Durban, East London,

Port Elizabeth and Cape Town. There were naturally of course other centres which wished to be considered but these were unfortunate in so far as either the existing camps were unsuitable or it was felt that the expansion of the particular town did not warrant a village being formed. In the running of these villages on communal lines it was not considered to be a payable proposition under say 80 dwellings.

Of the 1,850 dwellings approximately 1,050 were constructed Departmentally and 800 by contract. The scheme was completed in approximately 2 years in spite of the difficulties to be contended with and in this connection it must be said that this was only possible on account of the Committee who from the inception of the scheme never wavered in spite of considerable criticism, but continued steadily with their basic plan and were never at any stage undecided. If at any stage an uncertain spirit had



crept in, the scheme would never have reached finality and without a doubt would have become a miserable failure.

In view of the acute housing shortage which confronted the Union immediately following the war, the provision of 1850 dwellings by the conversion of camps in a matter of approximately two years, is an effort which should not be readily dismissed. The National Housing Scheme was still in the process of formation, or to say the least, only at the commencement of its gigantic task.

It is understood that certain camps may be taken over by various municipalities for sub-economic requirements,

when they have served their purpose, but so far as the remainder go it might not be inappropriate at this stage to suggest that with very slight modifications and renovations they would make excellent centres for the aged, a very important and much overlooked provision in this country.

The initial idea of conversion has now been further developed and the Departments of Defence, Health, Education and many other concerns are busy converting camps more or less on the same lines, and it looks as if rather than suffering from an excess of derelict camps there are now not going to be nearly sufficient of these to serve all the requirements.

# WELDED RAILS ON THE S.A.R.

(RAILWAY BULLETIN)

**M**ORE than 1,600 miles of track on the South African Railways have now been laid with 120-ft. rails, made up of three 40-ft. rails welded into one continuous length, and further sections are being re-raild almost daily. Since longer rails provide smoother running and more silent travel for passengers, besides materially reducing maintenance costs, all main lines are eventually to be laid with these 120-ft. rails.

For many years the standard rail in use was limited to 40 feet although, in 1934, as a result of certain experiments, a rail 72 feet long, made up of three 24-ft. lengths was tried. These rails, which were welded into one piece by the arc-welding process, stood up for a limited period under comparatively light traffic and axle loads, but thereafter the failure of many of the joints resulted in this method of welding being discontinued.

Endeavours to discover a thoroughly satisfactory method of welding rails were, however, persisted in, and, as a result of further experiments, it was found that joints welded by the flash-butt process proved reliable and generally suitable for main lines.

Once it was established that the flash-butt process of building up rails in South Africa measured up to all requirements, consideration was given to the maximum length that could be adopted as the standard for main lines, and the 120-ft. standard was adopted, since this was the longest rail that could be transported round curves of 300-ft. radius on 3-ft. 6 inch gauge track.

As the rails do not bend while negotiating curves, they are transported on two 60-ft. trucks, coupled together. A type of bolster is pivoted on two points on the trucks and this allows the rail to move transversely when the trucks pass round curves. The rails are loaded on to these bolsters and this permits of each pair of trucks carrying their maximum capacity, amounting normally to 100 tons of rails. This is an important consideration when rails have to frequently be transported as far as a thousand miles from depots.

Under normal conditions, the 120-ft. rail is obtained by welding together three 40-ft. rails, and in the 1,600 miles of main line track already laid with the longer rail approximately 700,000 joints have had to be welded. Some of these rails have been in service for more than ten years and up to date only 64 joints have failed.

While 40-ft. lengths are principally used in the building up of the long rails, approximately 30 per cent. of the flash-butt welded joints have been made on second-hand rails, some of these being nearly 70 years old. During the war period, these second-hand rails, which would normally have been scrapped, constituted the main source of supply, and in some cases lengths as short as 5 feet were welded into serviceable 120-ft. rails.

Rails have also been welded by the thermit welding process, in accordance with the procedure developed in Germany, but these joints have not been found entirely satisfactory, owing to the difficulty experienced in ensuring fusion on the rail crown, and the process is not being continued at the present time.

## LONG RAILS

Prior to the discontinuance of the thermit process, it was

used to weld 120-ft. rails into 240- and 480-ft. lengths, and these are still being kept under observation to establish their reaction to South African conditions. These rails are, however, far from being the longest in the Union.

On the Natal mainline, two miles south of Ladysmith there is an unbroken stretch of continuous track a full mile in length. In this instance, 40-ft rails were welded at the depots by the flash-butt process into 120-ft. lengths, and these were in turn, welded by the thermit process into the total length of a mile. This section was opened to traffic in 1941, but was uplifted in 1946 owing to the welds spreading throughout the full length of the rail.

Continuous rails have proved extremely successful in tunnels, where the elimination of rail-joint maintenance is a decided advantage. The comparatively small temperature variation in the tunnels reduces contraction and expansion and so reduces the variation in spaces between the rails. Up to the present, only three flash-butt joints have failed in the tunnels.

## DEPOTS AT DANSKRAAL AND ELANDSFONTEIN

There are two flash-butt welding depots in the Union — one at Danskraal in Natal and the other at Elandsfontein in the Transvaal. The total number of staff at these two depots is approximately 300 Europeans and 800 non-Europeans, and the average output of each flash-butt machine at the depots is from 16 to 17 joints an hour.

Elandsfontein, which is the larger of the two depots, does not confine its activities to the welding of rail joints, but is also engaged on the production of all types of structural steel for the Railways. The steel girders for the new bridge over the line at Claim Street in Johannesburg were manufactured there, as are many thousands of window frames for native houses, and all the trolleys used on stations. The depot is now busy on the manufacture of the umbrella roofing for the new platforms at Germiston station. Some 3,000 tons of structural steel, tools and other general products are turned out at Elandsfontein annually.

## S.A. BUREAU OF STANDARDS SPECIFICATIONS

**T**HE South African Bureau of Standards announces the issue of a specification for asbestos cement sheets and a code of nomenclature for South African home grown timber. The specification "Flat and Corrugated Asbestos Cement Sheets (including Ridging, Barge Boards, and Flashings)" is published on behalf of the South African Standards Institution and covers the composition, appearance, dimensions and tolerances, strength, water absorption, sampling and testing, test methods, and recommendations for laying and fixing.

The code 'Nomenclature for South African Home Grown Timber' contains a list of standard names for 165 varieties of South African grown indigenous and exotic timbers, together with a list of other names by which a wood locally or otherwise familiar to interested parties under a particular name may be identified with its standard name. The corresponding botanical species, natural habitat, and average weight per cubic foot are also given.

Copies, 5/- post free, are obtainable from the South African Bureau of Standards, Private Bag 191, Pretoria.



*Photograph: Martin Grous.*

IN THE EASTERN SPORTS GROUND, PRETORIA.

# PARKS IN PRETORIA

BY THE PUBLIC RELATIONS OFFICER,  
CITY COUNCIL OF PRETORIA

ONE of the facts most frequently commented upon by visitors to Pretoria, and more particularly by tourists from overseas, is the comparatively high number of open spaces, whether they be beautiful parks, well-kept sports grounds, modern swimming baths with their safe children's paddling pools, or nature reserves, to be found in the immediate vicinity of the city. And Pretorians are justifiably proud of these amenities provided by City Councils on a scale that is about three times as high as that laid down for the most modern town-planning schemes in Europe and which compares well with the provisions made by any other cities in South Africa.

According to the principles on which modern town-planning schemes in Europe are prepared, "open spaces" must be provided on the basis of about ten acres per 1,000 of population. Applied to Pretoria this means that the capital's open spaces should cover an area of about 1,000 acres. In actual fact the total area covered by these open spaces amounts to about 3,000 acres — approximately three times the area one would find in a European city of the size of Pretoria.

Some of these "open spaces" are nature reserves, such as the well-known Fountains Valley. Though not actually in the city area, it is easily accessible and has been developed by the Municipality into one of the most beautiful and best known civic amenities in the capital. The fact that most civic luncheons are held at the Fountains Kiosk, and that guests at these luncheons come not only from all parts of Southern Africa but also from other countries, has made it a well-known and much admired beauty spot.

It may be of interest to mention in passing that the first Voortrekkers who came to the area now known as Pretoria just over a century ago, approached through this valley and were immediately struck by its beauty and the abundant water supply provided by the springs which to-day still yield a considerable percentage of Pretoria's water. Among the first houses built by Europeans in the Pretoria area were those built in the Fountains Valley. It was preserved for posterity by a proclamation issued by the Republican Government in 1895 when it was proclaimed a nature reserve and later it became part of the townlands. Successive City Councils have jealously guarded this reserve.

It is the same underlying principle that is guiding present City Councils to enforce townplanning schemes which lay down that in all new townships and suburbs a specified percentage of the total area of such a township

shall be reserved for open spaces. The actual percentage of the area so reserved depends on the size of the building plots and varies accordingly.

The enforcement of this policy will mean that for all time the City of Pretoria will have sufficient ground available for laying out new parks, children's playgrounds, sports fields and other amenities as and when required. There is no fear of Pretoria losing the lead it has established in this sphere.

A considerable amount of money has been spent on creating and maintaining these facilities. The extent of this expenditure is perhaps best shown by the fact that out of each £1 paid by the ratepayer to the Municipality, ten pence (10d.) is spent exclusively on parks, recreational grounds, swimming baths, and paddling pools. And this is expenditure from revenue, in other words, expenditure that has to be incurred year after year.

The estimates for the current financial year show what this means in hard cash. Provision is made for the expenditure from revenue during this year of £22,460 on swimming baths and paddling pools, and of £110,500 on parks, sports grounds and children's playgrounds, a total of nearly £135,000. This is only part of the annual expenditure incurred by the Parks Department, as the care of plantations, the planting of street trees, the construction and care of traffic islands, the upkeep of the cemeteries, and the continuous and never-ending work in the municipal nurseries are all undertaken by this department. The City Council's three nature reserves, comprising nearly 6,000 morgen are also cared for by the Parks Department.

The city has invested capital of over £250,000 in its various parks and recreation grounds, nearly £93,000 of which was spent on swimming baths and children's paddling pools, and about £161,000 on parks and recreation grounds (including sports fields).

This total does not reflect the full extent to which Pretoria tries to provide these amenities for its ratepayers, as the figures quoted earlier show that many thousands of pounds are spent annually from revenue on these services, many of which are really in the nature of capital improvements, such as the planning, laying out and construction of parks and other amenities. The total capital amount is, therefore, considerably in excess of a quarter million pounds.

The following example illustrates how the ratepayer in Pretoria contributes a substantial share towards providing the city's sporting facilities. One hundred and three tennis courts are maintained (apart from construction costs) at an



FORMAL GARDENS IN FRONT OF CITY HALL.

*Photograph : Martin Gibbs.*



STREET ISLANDS.

*Photograph : Martin Gibbs.*



*Photograph : Martin Gibbs.*

THE LOFTUS VERSFELD RUGBY GROUNDS.



*Photograph : Martin Gibbs.*

FOUNTAINS VALLEY, SHOWING KIOSK.



*Photograph : Martin Gibbs.*

THE SOUTH AFRICAN PARK, GROSVENOR SQUARE.



*Photograph : Martin Gibbs.*

THE LILY POND, BURGERS PARK.

estimated expenditure for 1947-1948 of £10,229, and the estimated revenue from the annual charges paid by the clubs to the Municipality is only £2,700. The loss amounts to £7,529 per year, equivalent to an annual loss of £73 per tennis court. Assuming that there is an average of 40 members per club, it means that the City Council, and this in turn means the general ratepayer, subsidises each player to the extent of over £1-10-0 per year, or 2/6 per month.

Here are other examples : Four swimming baths and one bathing pool are maintained at an annual cost of £21,000 with an estimated revenue of £10,000, leaving a net loss of £11,000 per year ; thirty-two parks, squares and public gardens are beautified at an annual cost of £23,000 (there is no revenue from this source); catering for the players who make use of 12 bowling greens involves the Council in an annual loss of about £2,200; the annual loss on three hockey fields is £250. Eight athletic tracks, five baseball pitches, five cricket pitches, 17 football grounds, and 15 rugby grounds are maintained at an annual loss of between £6,000 and £7,000. The loss on 153 jukskei pitches amounts to about £1,500, on five croquet lawns to £150, and on 34 children's playgrounds to nearly £4,000.

The Parks Department's total vote for the current year amounts to about £149,000, and its revenue is estimated at £44,500, leaving a loss of £104,500.

The Parks Department which is in charge of all this work was for many years a section of the City Engineer's Department. But in 1942, when the late Mr. J. H. Venning, who, in addition to being in charge of this work, held several other posts, retired on pension, the Parks Department was created and Mr. H. Bruins-Lich, well-known for outstanding work in this sphere, was appointed Director of Parks, a position he still holds to-day. This system of having an independent department in charge of this work works well.

The oldest park in Pretoria is Burgers Park, the known history of which dates back to 1875 — 20 years after the establishment Pretoria — when it was known as the 'Botaniese Tuin.' It was later renamed Burgers Park in honour of President Burgers.

Of course, the park has been redesigned and its layout changed since those days. It is of interest that the first two public tennis courts in Pretoria were built in this park, and some of the standards can still be seen to-day. Until fairly recently it was the venue for official garden parties. There are several historic trees in the garden, planted to commemorate important events.

Another well-known park established many years ago is Princes Park in Pretoria West, named after Prince Christian who planted an oak tree which is still there to-day and which stands at the Schoeman Street entrance. The Western area, now portion of the park and bowling greens, was formerly a vlei, well-known for its bird life, and a spot where many old Pretorians recall having caught birds.

Pretoria was in those days known as the "City of Roses" — it was before the mass advent of the jacaranda — and it was customary for rose enthusiasts living in the Eastern suburbs to drive down in their buggies to the vlei and collect the clay soil in which the roses thrived.

Simultaneously with the establishment of this park, a municipal nursery was laid out and another one was estab-

lished at Burgers Park. These nurseries have grown and later a much bigger one was established in the Fountains Valley, with others following elsewhere in the city. To-day the municipal nurseries are among the biggest in the Union.

With the establishment of these nurseries it became possible for the municipality to grow its own trees. Up to then all these trees had to be bought. It is, however, still difficult to grow young jacarandas for the streets as the nurseries are situated in the colder parts of Pretoria. For this reason the Director of Parks is anxious to establish a municipal nursery north of the Magaliesberg, which would enable him to grow as many jacaranda trees as he required.

The jacaranda tree, with which the majority of Pretoria's streets are lined, has made Pretoria famous, and the Annual Jacaranda Festival, which is held in October, is becoming an attraction to tourists from many other places. This year an overseas film company came to Pretoria specially to make a film of this function. The jacaranda tree was introduced to the Capital by the late Mr. J. D. Celliers in the year 1888, when he planted two trees imported from Brazil in his garden in Sunnyside, which now forms part of the Sunnyside School playgrounds. These two parent trees are still standing, and the City Council has erected commemorative plaques on them. Mr. Walton Jameson, "Jacaranda Jim," Town Engineer, was taken with the beauty of the trees and commenced using them for street planting, and his example has been followed by successive engineers. To-day if all the street jacarandas in Pretoria were placed in a line they would cover a distance of approximately 275 miles.

Many other varieties of trees are used for street planting, and much experimental work has been done in this connection — there is probably no other city in the Union which has experimented more in this regard. Street trees are planted at the rate of between 7,000 and 8,000 a year, and since 1942 well over 40,000 trees of all types have been planted.

Incidentally, the policy of beautifying the city in this way has also been extended to the locations, and in a few years Atteridgeville will boast as beautiful tree-lined streets as any other suburb.

Grosvenor Square, which for many years was an open space, has recently been laid out as a miniature "Kirstenbosch." Every plant, shrub and tree is indigenous. Rockeries, lily ponds and a running stream with rustic bridges add to the charm of this truly South African Park. The thorn trees in this park date from the early day, but the wit stinkhout trees were planted about 17 years ago.

Nearly all Pretoria's sports grounds are parklike in appearance, with their trees, lawns and flowerbeds.

One of the best known of these grounds is the Eastern Sports Ground, with its tennis courts, where all the big matches are played, and its croquet lawns and bowling greens. Adjoining it are the Loftus Versfeld Rugby Grounds where many a hectic inter-provincial match has been played. These two grounds are about 16 morgen in extent.

Other popular parks, all of which are worth a visit, are the Venning Park (formerly the Eastwood Park), the George Brink Park (in Sunnyside), the Belgrave Square Park (with its sports grounds), the Riviera Park and Meintjies Square in Park Street.

# RADAR BEACONS ON SPRINGBOK ROUTE

A CHAIN of radar beacons is being installed along the Springbok route between the Union and the United Kingdom, with the object of improving navigational conditions along the route.

Inability to obtain the necessary equipment held up the work for some time, but the material is now available and every opportunity is being taken to have the beacons installed.

They are already operating at Almaza (Cairo), Juba, Wadi Halfa, Khartoum, Kisumu, Malakal and Nairobi. Additional beacons are being supplied to the Civil Air Council, South Africa, for installation on the section of the route under their jurisdiction. These are to be erected at Mbeya, Mpika, Tabora, Kasama, Ndola, Lusaka, Livingstone, Salisbury, Bulawayo and Pietersburg.

The new beacons, which are designated "Eureka Radar Responder Beacons," operate over a range of 60 miles, dependent upon local conditions. They enable the navigator of the aircraft to obtain so accurate a plot of his bearing and distance from the beacon, that, on his passing the information to the pilot, the latter can, if necessary, break cloud over a predetermined point or home on to the aerodrome.

America is also adopting the British system, which was developed during the war, and is establishing a chain of responder beacons across the southern part of the United States from the Atlantic to the Pacific on the United States Navy Transcontinental ferry route.

## NEW BLIND-APPROACH BEACON SYSTEM

As a result of an agreement between the British Ministry of Civil Aviation, the South African Civil Air Council and British Overseas Airways Corporation, it has been decided to install BABS Mark II blind-approach landing equipment at Cairo, Khartoum, Nairobi, Kisumu, Salisbury and Palmietfontein.

This system enables the navigator to obtain accurate and continuous readings of his distance and heading from the aerodrome and thus keep the pilot advised of his actual position throughout a blind landing, as opposed to the present system under which the pilot is only able to plot his actual position at intervals.

## IMPROVED INSTRUMENTS ON AIRCRAFT

In addition to a "Rebecca" receiver, which is the complementary airborne equipment for the new radar beacon system, the new aircraft operated by South African Airways are to be equipped with other up-to-date aids to navigation.

The three new Skymasters, recently acquired, are the first South African Airways' aircraft to be fitted with radio altimeters, an instrument well known to many of the aircrews who served with bomber squadrons during the latter years of the war. The model chosen gives an absolute

terrain clearance up to 4,000 feet, with two scales, one from zero to 400 feet and the other from zero to 4,000 feet. This instrument, which is also to be fitted to all Vikings, will prove extremely valuable on flights to England or in the Cape area, during the winter months.

Another new instrument not previously fitted to South African Airways' aircraft is the Sperry Gyrosyn Compass, which is a part of the equipment on the Dove aircraft and is also being used on the Vikings. It is hoped at some future date to standardize this equipment throughout both the Viking and Skymaster fleets.

The Gyrosyn Compass combines the functions of both a directional gyro and a magnetic compass and gives an accurate indication of magnetic heading under all conditions.

(RAILWAY BULLETIN.)

# ANNOUNCEMENT

## REPORT OF THE CAPE PROVINCIAL HOSPITAL COMMISSION

THE Hospitals Ordinance (No. 18) of 1946 was passed by the Provincial Council of the Province of the Cape of Good Hope at the June Session, 1946. The Hospital Ordinance brings the control of hospitals more directly under the Administration and provides for free hospital services.

The Executive Committee in February, 1946, decided to send a Commission overseas to study modern hospital design and administration. The Commission consisted of Mr. G. M. H. Barrell, M.E.C. as leader, Dr. D. A. van Binnedyk, Director of Hospital Services, and Mr. S. H. Todd, Provincial Architect. The Commission departed from Cape Town on the 11th July, 1946, and visited England, Holland, Denmark, Finland, Sweden, Switzerland, France, Canada, the United States of America and Mexico.

This Commission has now presented its Report to the Honourable J. G. Carinus, Administrator of the Province of the Cape of Good Hope.

This very comprehensive and well presented report is of such interest and importance that it should prove useful to designers and administrators of hospitals throughout the country. "Public Works of South Africa" has therefore decided to publish it, together with certain illustrations that we have managed to secure, commencing in the December issue.

Editor.

## ZONING OF PUBLIC BUILDINGS IN THE CAPITAL

**I**N future all Government, Provincial and municipal buildings may be concentrated in certain defined areas of the capital if schemes now being considered by a technical sub-committee are agreed upon.

At present Government and Provincial offices and, to a lesser extent, municipal offices are scattered throughout the city, and sites for these offices have never been chosen according to plan.

The idea was then suggested that a technical sub-committee should be appointed to evolve a plan for the siting and development of one or more centres in which all Government, Provincial and municipal activities could be concentrated.

As Pretoria is already completely built up it would naturally not be possible to find as many unoccupied adjoining building blocks as would be required for the creation of Pretoria's "Whitehall." But if decisions to ensure this were taken, embodied in the townplanning scheme and supported by all three authorities, it would be possible over a number of years to create a "second Union Buildings" in Pretoria, which might comprise an area of several blocks where the construction of only "official" buildings would be allowed.

The technical sub-committee consists of four members representing the Government, the Provincial Administration, the City Council and the Pretoria Architectural Society. The City Council's representative is Mr. N. T. Cooper, town planner in the City Engineer's Department.

(Public Relations Officer, City Council of Pretoria).

## TENDERS INVITED

**T**HE following are particulars of the more important tenders which have been invited, up to the time of going to press, for Public Works by Government Departments, Provincial Administrations and Municipalities. In each case the date by which the tender must be submitted is given. While every endeavour will be made to maintain accuracy in these columns it is pointed out that readers using this information do so entirely at their own risk.

**Note:** S.A.R. & H. Tender Board address is: 715, P.F.A.C. Building, 15, de Villiers Street, Johannesburg.

### BUILDINGS:

**Department of Public Works, Pretoria:** Emyanyana Leper Institution — four staff houses, three semi-detached cottages for non-European staff, sewerage and water scheme including house for electrician. P.W.D. No. 950. Due 4/12/47.

**Department of Public Works, Pretoria:** Additional garage, tar-macadamised roads, Zwartkop Air Station. P.W.D. No. 953. Due 4/12/47.

**Department of Public Works, Pretoria:** Type post office, Park Rynie, N.P. P.W.D. No. 954. Due 4/12/47.

**Department of Public Works, Pretoria:** Reinforced concrete standards, New Gaol and quarters, Port Elizabeth. P.W.D.-S. 132. Due 18/12/47.

### DRAINAGE, ETC.

**S.A.R. & H., Tender Board:** Certain drainage works including the excavation of concrete culverts on the site of the Jan Smuts Airfield, Kempton Park. (Deposit £5-5-0). No. CTO(R)94. Due 4/12/47.

### ELECTRICAL EQUIPMENT, ETC.

**S.A.R. & H. Tender Board:** Lamp holders and switches. No. 7515. Due 11/12/47.

**S.A.R. & H. Tender Board:** Transmission line equipment. No. 7344. Due, 11/12/47.

**S.A.R. & H. Tender Board:** Switch boards and transformers. No. 7228. Due 11/12/47.

**S.A.R. & H. Tender Board:** Marine radio equipment. No. 7312. Due, 11/12/47.

**S.A.R. & H. Tender Board:** Electrical testing instruments. No. 7311. Due, 8/1/48.

**Department of Public Works, Pretoria:** Supply, delivery and erection of one electric passenger-goods lift, New Automatic Telephone Exchange, Port Elizabeth. P.W.D. 916. Due, 18/12/47.

**Department of Public Works, Pretoria:** Four Diesel Alternator Sets, Leper Institution, Amatikulu, Natal. P.W.D. 940. 15/1/48.

7,000 feet of 11,500-volt cable, various institutions fed from Main Ring, Pretoria. P.W.D. 941. Due 15/1/48. Two 25 k.v.a. transformers, Amatikulu Leper Institution, Natal. P.W.D. 930. Due, 1/1/48.

Eleven transformers, Ring Main, City Hall to Power Station, various institutions, Pretoria. P.W.D. 931. Due, 1/1/48.

**Irrigation Department, (Controller of Stores), P.O. Box 277, Pretoria:** Transformers. Irr. No. 174. Due 11/12/47.

**Irrigation Department, P.O. Box 277, Pretoria:** Thirty-two 10-25 k.v.a. Diesel electric generating plants. Irr. No. 131. Extended to 1/1/48.

**Department of Posts and Telegraphs, Pretoria:** Tinned copper wire, coil made-off wire, copper, enamelled copper wire and enamelled Eureka wire. P.O. No. 877. Due, 11/12/47.

**Transvaal Provincial Tender Board, P.O. Box 1040, Pretoria:** Controller of Provincial Stores, P.O. Box 857, Pretoria. Six, approximately, refrigerators of 20 feet capacity or nearest 220/240 volts, 50 cycles, A.C. No. 202/47. Due 3/12/47.

**Natal Provincial Tender Board, P.O. Box 358, Pietermaritzburg:** Provincial Works Office, Pietermaritzburg and Durban. Addington Hospital — alterations and additions to lift. Due 7/1/48.

**Natal Provincial Tender Board, P.O. Box 358, Pietermaritzburg:** Provincial Works Office, Pietermaritzburg and Durban. Electro-medical equipment for Addington Hospital, Durban. Due, 17/12/47.

**Natal Provincial Tender Board, P.O. Box 358, Pietermaritzburg:** Provincial Works Office, Pietermaritzburg.

burg and Durban. Alterations and additions to lifts at King Edward VIII. Hospital. Due, 7/1/48.

**Electricity Department, Durban :** Oil filter plant. E. 2139. Due, 5/12/47.

**Electricity Department, Durban :** Metering equipment. E. 2138. Due 5/12/47.

**Electricity Department, Durban :** Workshop machines: Lathes and arc welding set. E. 2140. Due, 19/12/47.

**Electricity Department, Durban :** Transformers. E. 2142. Due, 9/1/48.

**Electricity Department, Durban :** Electrical material. E. 2148. Due, 30/1/48.

**Electricity Department, Durban :** Electricity meters. E. 2147. Due 16/1/48.

Watchmaker's lathe and potential transformers. E. 2146. Due, 23/1/48.

**Telephone Manager, Durban :** Sundry telephone material. P.291. Due, 24/12/47.

**Johannesburg Municipality :** Electricity Department, Johannesburg. 6.6 k.v. 250 m.v.a. switch gear. Contract D.6/47. Deposit of £3-3-0 — additional copies of documents at £1-1-0 each. Due, 7/1/48.

**Johannesburg Municipality :** Electricity Department, Johannesburg : 20,000 volt, 0.25 square inch, 3-core screened cable, pilot cable and accessories. Contract D.8/47. Deposit £3-3-0 — extra copies of documents at £1-1-0 each. Due 7/1/48.

**Johannesburg Municipality :** Stores Department, Johannesburg. Gas meters. Contract 285. Due, 22/12/47.

Copper conductor. Contract 286. Due, 22/12/47.

Insulating sheets for switch-board panels. Contract 287. Due 22/12/47.

Electric cable. Contract 292. Due 22/12/47.

**Bloemfontein Municipality :** City Electrical Engineer, Bloemfontein. Repairs to power station steam pipe work. Enquiry 33/1947. Extended to 5/2/48.

**Bloemfontein Municipality :** City Electrical Engineer, Bloemfontein. Circuit breakers and switch fuses. Enquiry 32/1947. Due, 5/1/48.

**Bloemfontein Municipality :** City Electrical Engineer, Bloemfontein. Sub-station switch-board equipment. Enquiry 31/1947. Due, 2/1/48.

**Kimberley Municipality :** City Electrical Engineer. Kimberley. Electrical material: E.H.T. and L.T. underground cable, L.T. pin and shackle insulators, Kilowatt hour meters, E.H.T. and L.T. cable joint boxes, L.T. overground disconnecting boxes, Distribution poles and cross arms. Due 4/12/47.

**Port Elizabeth Municipality :** City Electrical Engineer, Port Elizabeth. 22,000 and 6,600 volt switch gear and neutral earthing resistance, Specification 310 ; 5,000 and 1,000 k.v.a. transformers, Specification 311; Super tension E.H.T. and L.T. cable joint boxes, etc., Specification 312. One copy of contract documents free of charge, extra copies at 10/6 each. Due, 8/1/48.

**Boksburg Municipality :** Electrical Engineer, Boksburg. 3-phase E.H.T. switch-boards. Contract E.7/47. Due, 11/12/47.

**Boksburg Municipality :** Town Clerk, Boksburg. 50,000 feet 2-core P.I.L.C.S.T.A. .0225 square inch 660 volt grade to B.S.S. 480/1942. E. 8/47. Due, 11/12/47.

**Mafeking Municipality :** Electricity distribution extension :—

Section 1. 3.3 k.v. cable, cable boxes, including laying and jointing.

Section 2. L.T. cable and boxes including laying and jointing.

Section 3. H.T. and L.T. switch gear, earthing compensator, resistance and sundries, including erection.

Section 4. Supply only of transformers.

Specification M.3/1947. Consulting Engineer : J. S. Clinton, P.O. Box 4648, Johannesburg. Deposit of £3-3-0 — extra copies of documents at £1-1-0. per copy. Due, 19/1/48.

**Vereeniging Municipality :** Electrical distribution extensions : Section 1, H.T. and L.T. cable and boxes; Section 2, H.T. and L.T. switch gear ; Section 3, Transformers ; Section 4, Earthing compensator and resistance ; Section 5, Steel poles, copper and sundries. Deposit of £3-3-0 — extra copies of documents at £1-1-0 each. Specification V. 2/47. Consulting Engineer : J. S. Clinton, P.O. Box 4648, Johannesburg. Due 5/12/47.

**Graaff-Reinet Municipality :** Supply, delivery and erection where specified of the power plant and distribution material covered by the following :

10,000 lb. per hour boiler, feed pump, steam, feed and drain piping. Specification G.R. 2/1947.

625 k.w. turbo-alternator and evaporator plant. G.R. 3/1947.

H.T. and L.T. switch gear, P.S. Auxiliary transformer, G.R. 4/1947.

Circulating water pump, motor, spray gear and pipe work. G.R. 5/1947.

Switch gear, H.T. cable, cable boxes, L.T. cable, cable boxes, switch gear, transformers and sundries. G.R. 6/1947.

(One copy of the documents for any one of the above contracts on deposit of £3-3-0 — additional copies at £1 each). Consulting Engineer : J. S. Clinton, P.O. Box 4648, Johannesburg. Due, 20/12/47.

**Bulawayo Municipality :** First extension, 13th Avenue Power Station : Supply, delivery and erection of steam boilers, turbo-alternator, switch gear, feed pumps, steam and water piping, tanks, transformers, reactors, and certain other auxiliary equipment. (Three copies of contract documents on deposit of £5-5-0 — extra copies at £2-2-0 each). Contract E. 26/47. Town Clerk, Bulawayo. Due 19/1/48.

**Ndola (N. Rhodesia) Municipality :** Electricity undertaking :—

Section 1. Boiler.

Section 2. Boiler feed pump.

Section 3. Boiler, steam, feed and drain piping, condensate piping and sundries.

Section 4. Power Station main switch gear and I.T. auxiliary board.

Specification N.2/1947. Consulting Engineer : J. S. Clinton, Preston House, Simmonds street, Johannesburg. One copy of documents for each contract on deposit of £3-3-0 — extra copies at £1-1-0 each. Due 10/1/48.

**Southern Rhodesia Government Tender Board, Salisbury :** Chief Engineer, P.O. Box 1280, Salisbury.

20 petrol electric alternators, 2 Duplex facsimile units, Magnetic type combined recorders and reproducers. No. 1563. Due, 1/12/47.

#### FIRE CONTROL EQUIPMENT :

**Durban Municipality :** Electricity Department, Durban. Fire control installation. No. E. 2149. Due, 6/2/48.

**Bulawayo Municipality :** City Engineer, Bulawayo. One motor fire engine, One motor 100-ft. all-steel turntable escape, One motor ambulance, Auxiliary fire brigade equipment. Contract 19/1947. Due, 12/12/47.

#### TRACTORS AND ROAD MAKING PLANT, ETC :

**S.A.R. & H. Tender Board :** Industrial tractors. No. 7150. Due, 18/12/47.

**S.A.R. & H. Tender Board :** Caravan trailers. No. 7153. Due, 11/12/47.

**S.A.R. & H. Tender Board :** Graders. No. 7397. Due, 4/12/47.

**S.A.R. & H. Tender Board :** Road Rollers. No. 7405. Due, 29/1/48.

**Irrigation Department, P.O. Box 277, Pretoria :** Drag line excavators. Irr. No. 132. Due, 11/12/47.

**Cape Provincial Tender Board, Cape Town :** Major plant for the construction of national roads in the Cape Province :—

Item 1. One only standard gauge crawler type tractor over 90 h.p. (drawbar) with Diesel engine including 10/12 ton hydraulic jack.

Item 2. Up to 28 standard gauge crawler type tractors 70/90 h.p. (drawbar) with Diesel engine, including 8/10 ton hydraulic jack.

Item 3. Up to 34 standard gauge crawler type tractors 50/70 h.p. (drawbar) with Diesel engine, including 8/10 ton hydraulic jack.

Item 4. Up to 6 double drum winches suitable for use with tractors as under Item 1. Makes and models of tractors for which winches are suitable to be clearly indicated.

Item 5. Up to 30 double drum winches suitable for use with tractors as under Item 2. Makes and models of tractors for which winches are suitable to be clearly indicated.

Item 6. Up to 9 double drum winches suitable for use with tractors as under Item 3. Makes and models of tractors for which winches are suitable to be clearly indicated.

Item 7. Up to 6 trail-builders, cable-controlled, to be suitable for and complete with all equipment necessary for use with tractors of over 90 h.p. as under Item 1. Makes and models of tractors for which trail-builders are suitable to be clearly indicated. Five to be suitable for Allis Chalmers model, 14 standard gauge tractors. Quote as alternative for hydraulic-controlled type.

Item 8. Up to 30 trail-builders, cable-controlled and suitable for and complete with all equipment necessary for use with tractors of 70/90 h.p. as under Item 2. Makes and models of tractors for which trail-builders are suitable to be clearly indicated. Quote as

Alternative for hydraulic-controlled type.

Item 9. Up to 9 trail-builders, cable-controlled and suitable for and complete with all equipment necessary for use with tractors of 50/70 h.p. as under Item 3. Makes and models of tractors for which trail-builders are suitable to be clearly indicated. Quote as alternative for hydraulic-controlled type.

Provincial Roads Engineer, 506, Provincial Building, Cape Town. No. F. 72/47. Due, 12/12/47.

**Cape Provincial Tender Board, Cape Town :** Major plant — national roads :—

Item 1. Up to 17 motor graders — full Diesel engine with oil bath air cleaner, 12-ft. blade, V. scarifier attachment. Weight without attachment at least 20,000 lbs. Mechanical or hydraulic control. Single tandem drive with low pressure tyres. Canopy top with curtains. Odometer. Full set of operator's tools. 10/12 ton hydraulic jack in lock-up tool box, mechanical air pump. Machines fitted with 7.50 x 24 front tyres will NOT be considered.

Item 2. Up to 12 power excavators of  $\frac{3}{4}$ -yard capacity with the following essential specifications :—

The whole outfit mounted on crawler type tracks, to be self-propelled, both forward and reverse. The unit should be easily manoeuvrable and all operations controlled from the operator's seat ; substantial and well-constructed operator's cab should give full protection to operator and machinery, yet allow full view for operator. The lay-out and general construction of the Swinger clutches should be clearly shown. The excavator should be equipped with either Diesel or petrol engine although a Diesel unit is preferred. Engine unit to be provided with oil bath air cleaner of ample size. The unit should not exceed 11 ft. in overall height. Complete set of operator's tools to be provided in a steel lock-up box on the machine.

Item 3. Up to 12 power excavators of  $\frac{1}{2}$ -yard capacity. Specifications as under Item 2.

Item 4. One only  $\frac{1}{2}$ -cubic yard Mobile loader, self contained or mounted on a wheel or crawler tractor equipped with a Diesel engine of at least 45 h.p. Machines with a swinging bucket will receive preference, and all controls to be operated from the driver's seat. A suitable cab must be fitted if possible. Bucket mechanism is to be controlled either by mechanical or hydraulic means. Dumping height to be at least 8 ft. 6 ins. Machine should be easily manoeuvrable and capable of a reasonable fast travelling speed. Engine to be fitted with a heavy duty oil bath air cleaner, etc. **Quote as an Alternative** for a machine of  $\frac{3}{4}$ -yard capacity to the same general specifications.

Item 5. Up to 3 trailer type cranes of 10-ton capacity, mounted on pneumatic wheels, primarily suitable for use with crawler tractors of above 70 h.p. Clear lift of at least 20 feet. Full details and specifications of crane are essential, and these should include lifting height, weight and radii. It is preferable that these units should be operated from standard double drum power control units by cable. Where special power control units are required, this must be specially stated and a separate quotation submitted.

Tenders are subject to the tender conditions, P.A.N.

*Henwoods*

SUPPLIERS OF THE BEST BUILDERS' HARDWARE SINCE 1856

*Items carried by*

**DURBAN BRANCH ONLY . . .**

**'JAMES GIBBONS'**

Architectural fittings that grace many of the finest buildings in the world — Established in Wolverhampton in 1670.

**CAST-IRON MAN-HOLE COVERS.**

**CAST-IRON EARTHENWARE AND GALVANISED PIPES AND FITTINGS.**

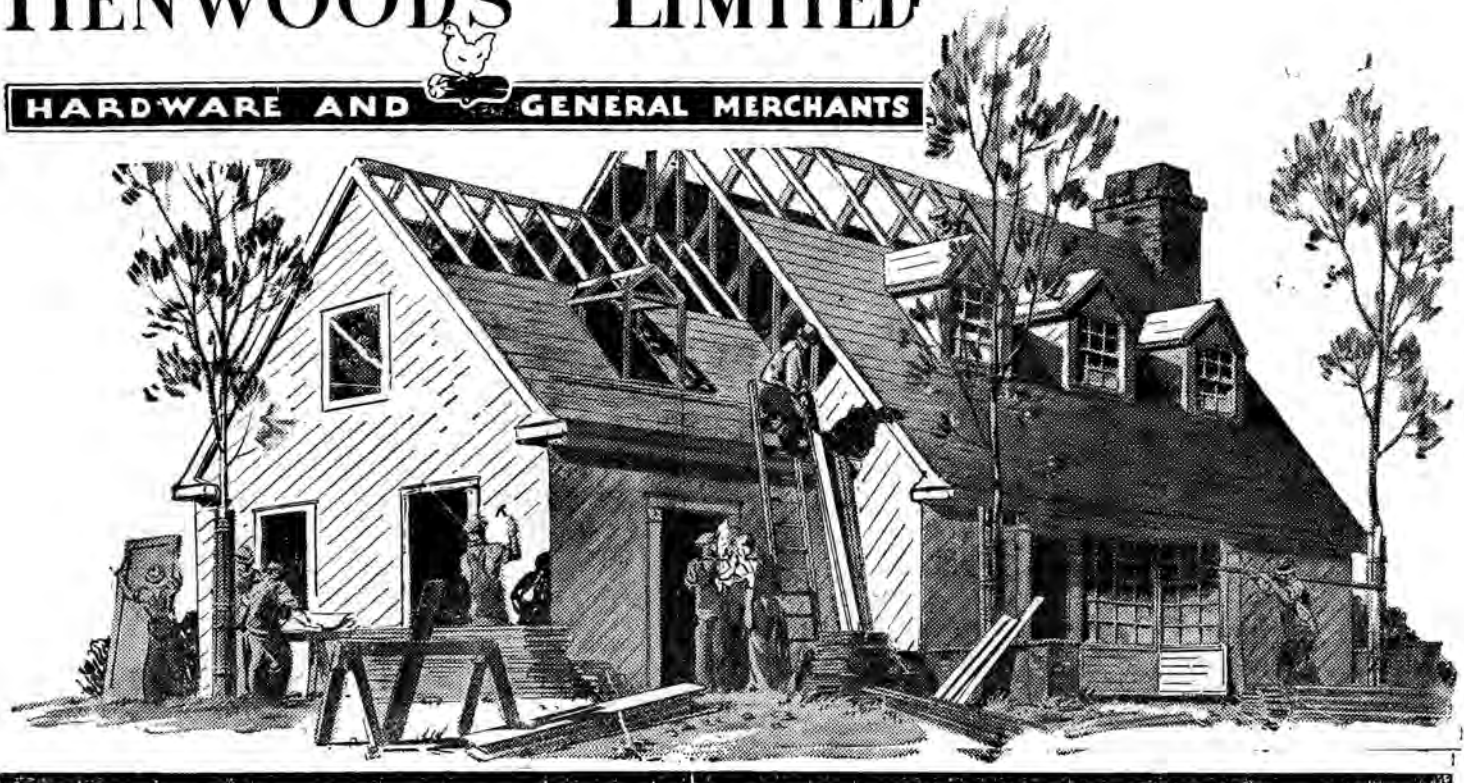
**COMPLETE SEPTIC SEWERAGE INSTALLATIONS WITH ACCURATE PLAN AND INSTRUCTIONS.**

- **'COBURN' BALL BEARING SLIDING DOOR GEAR**  
For Garages, Warehouses, Etc.
- **'BONDEX' WATERPROOF CEMENT PAINT**  
Known as 'The Paint Eternal' because of its incredible durability under the most adverse climatic conditions — adds years of life as well as beauty to any masonry surface.
- **'SHERWIN-WILLIAMS' PAINTS AND VARNISHES**  
There is a quality 'S.W.P.' Product for every purpose.
- **P.W.D. BUILDERS' HARDWARE**  
All the above items appear on the P.W.D. approved list.
- **SANITARYWARE OF EVERY DESCRIPTION**  
From the world's foremost manufacturers
- **KIRSCH 'SUN-AIRE' VENETIAN BLINDS**
- **'MODERNFOLD' FLEXIBLE DOORS**

- P.O. BOX 3. PHONE 2-1516. WEST STREET DURBAN.
- P.O. BOX 74. PHONE 33-5432. PRITCHARD STREET, JOHANNESBURG.

# HENWOODS LIMITED

**HARDWARE AND GENERAL MERCHANTS**



514/1947 published in the "Provincial Gazette" on the 25th September, 1947.

Provincial Roads Engineer's Department 506, Provincial building, Cape Town. No. F.76/1947. Due, 9/1/48.

**Cape Provincial Tender Board, Provincial Building, Cape Town.** Provincial Roads Engineer's Department, 506, Provincial Building, Cape Town. Major plant — national roads. No. F77/47. Due 16/1/48.

**Cape Provincial Tender Board, Provincial Building, Cape Town.** Provincial Roads Engineer's Department, 506, Provincial Building, Cape Town. Provincial roads — equipment. No. F.78/47. Due 16/1/48.

**Cape Provincial Tender Board, Provincial Building, Cape Town.** Provincial Roads Engineer's Department, 506, Provincial Building, Cape Town. National roads — major plant: Various petrol-driven motor truck chassis, motor trucks, truck-mounted distributors for bituminous materials, panel vans, light pick-up vans, welding generators. No. F.79/1947. Due 23/1/48.

**Transvaal Provincial Tender Board, P.O. Box 1040, Pretoria :**

Five  $\frac{3}{4}$ -yard truck mounted mechanical shovels. No. 217/1947. Due, 10/12/47.

Ten  $\frac{1}{2}$ -yard truck mounted mechanical shovels. No. 218/1947. Due, 10/12/47.

Twelve extra heavy motor graders. No. 219/1947. Due 10/12/47.

Six light motor graders. No. 220/1947. Due 10/12/47.

Forty-three mechanical shovels,  $\frac{3}{4}$ -yard crawler mounted. No. 221/1947. Due, 10/12/47.

Thirty heavy motor graders. No. 222/1947. Due 10/12/47.

Twenty-three mechanical shovels,  $\frac{1}{2}$ -cubic yard, crawler mounted. No. 223/1947. Due 10/12/1947.

One hundred and ninety heavy truck chassis. No. 224/1947. Due, 10/12/1947.

(Further particulars from Controller of Provincial Stores, P.O. Box 857, Pretoria).

**Southern Rhodesia Government Tender Board, P.O. Box 383, Salisbury :** Road-making machinery :—

(a) Motor-drawn tar or bitumen sprayer.

(b) Portable crusher and granulator unit.

(c) Hoisting winches.

(d) Air-driven grinders for rock drills.

No. 1560. Due 1/12/47.

#### VEHICLES, ETC :

**S.A.R. & H. Tender Board :** Electric motor coaches. No. 6116. Due, 25/3/48.

Separate price required for electrical equipment and mechanical portion.

**S.A.R. & H. Tender Board :** Single deck suburban bus bodies. No. 7426. Due, 8/1/48.

**S.A.R. & H. Tender Board :** Inter-urban coaches to be manufactured in South Africa. No. 7471. Due, 22/1/48.

**S.A.R. & H. Tender Board :** Dump Trucks. No. 7519. Due, 18/12/47.

**S.A.R. & H. Tender Board :** Suburban bus bodies. No. 7493. Due, 8/1/48.

**Municipality of Benoni :** 6 C.I. engined motor buses. Contract No. 309. Town Engineer, Benoni. Due, 1/12/47.

**Municipality of Johannesburg :** Ford V.8 petrol engines. Contract 294. Stores Dept. Due, 23/12/47.

#### MISCELLANEOUS :

**Acetone or substitute :** S.A.R. & H. Tender Board. No. 7455. Due, 4/12/47.

**Air compressors :** S.A.R. & H. Tender Board. No. 7496. Due, 15/1/48.

**Air compressors :** S.A.R. & H. Tender Board. No. 7105. Due, 11/12/47.

**Aluminium paint :** Stores Dept., Johannesburg Municipality. Contract 281. Due, 22/12/47.

**Air-conditioning plant :** Stores, Department, Johannesburg Municipality. Contract 288. Due, 15/12/47.

**Brass and Copper Sheet :** S.A.R. & H. Tender Board. No. 7208. Due, 18/12/47.

**Boring and turning mill :** S.A.R. & H. Tender Board. No. 7451. Due, 22/1/48.

**Cast iron sluices for Mockesdam :** Town Clerk, Bloemfontein Municipality. Contract No. 26/1947. Deposit of £2-2-0. Due 15/1/48.

**Carbon Paper :** S.A.R. & H. Tender Board. No. 7536. Due 11/12/47.

**Cotton wool to director of Veterinary Services :** Union Tender and Supplies Board. P.O. Box 371, Pretoria. S.O. 2069. Due 18/12/47.

**Copper plates for locomotive boilers :** S.A.R. & H. Tender Board. No. 7299. Due, 11/12/47.

**Coir rope :** S.A.R. & H. Tender Board. No. 7339. Due 18/12/47.

**Cable-laying gloves :** Department of Posts and Telegraphs. P.O. No. 875. Due 11/12/47.

**Canvas fire hose :** S.A.R. & H. Tender Board. No. 7549. Due 22/1/48.

**Documents copying camera :** To Division of Film Services. Union Tender and Supply Board, P.O. Box 371, Pretoria. No. S.O.2077. Due, 18/12/47.

**Deep sea bouys :** S.A.R. & H. Tender Board. No. 7360. Due, 1/1/48.

**Drilling machines :** S.A.R. & H. Tender Board. No. 7118. Due, 18/12/47.

**Drugs and surgical sundries :** Natal Provincial Tender Board, P.O. Box 358, Pietermaritzburg. Due, 28/1/48.

**De-greasing machine to Dept. of Transport.** Union Tender and Supplies Board, P.O. Box 371, Pretoria. No. S.O. 2008. Due, 4/12/47.

**Ferro manganese :** S.A.R. & H. Tender Board. No. 7556. Due, 22/1/48.

**Flush coupled and flush jointed casing for diamond core drilling machines :** Dept. of Irrigation, P.O. Box 277, Pretoria. Irr. No. 168. Due, 4/12/47.

**Grinding wheels :** S.A.R. & H. Tender Board. No. 7287. Due, 18/12/47.

**Guage and lubricator glasses :** S.A.R. & H. Tender Board. No. 7502. Due, 8/1/48.

**Grinding machine :** S.A.R. & H. Tender Board. No. 7324. Due, 15/1/48.

**Grinding machine :** S.A.R. & H. Tender Board. No. 7314. Due 15/1/48.

- Generators for motor vehicles :** S.A.R. & H. Tender Board. No. 7414. Due, 8/1/48.
- Gas works instruments :** Stores Dept., Johannesburg Municipality. Contract 303. Due 22/12/47.
- Guillotine machine :** Stores Dept., Johannesburg Municipality. Contract No. 299. Due, 23/12/47.
- Galvanised hooks for drop wire clamps :** Dept. of Posts and Telegraphs. P.O. 880, Due, 11/12/47.
- Hydraulic leather :** S.A.R. & H. Tender Board. No. 7382. Due, 18/12/47.
- Hydraulic accumulator :** S.A.R. & H. Tender Board. No. 7256. Due, 4/12/47.
- Hose pipes :** S.A.R. & H. Tender Board. No. 7286. Due 11/12/47.
- Hydraulic press — 400-ton :** S.A.R. & H. Tender Board. No. 7485. Due, 22/1/48.
- Lathe :** S.A.R. & H. Tender Board. No. 7328. Due 11/12/47.
- Lathes :** S.A.R. & H. Tender Board. No. 7439. Due, 8/1/48.
- Lathe :** S.A.R. & H. Tender Board. No. 7348. Due, 18/12/47.
- Lathes :** S.A.R. & H. Tender Board. No. 7349. Due, 18/12/47.
- Lathes :** S.A.R. & H. Tender Board. No. 7370. Due, 18/12/47.
- Lathes :** S.A.R. & H. Tender Board. No. 7383. Due, 11/12/47.
- Lathes :** S.A.R. & H. Tender Board. No. 7116. Due, 18/12/47.
- Lathe.. :** S.A.R. & H. Tender Board. No. 7350. Due, 22/1/48.
- Lap Cement :** S.A.R. & H. Tender Board. No. 7533. Due, 12/2/48.
- Locomotive connecting rods :** S.A.R. & H. Tender Board. No. 7320. Due 4/12/47.
- Laboratory apparatus to Deputy Chief Health Officer at Durban :** Union Tender and Supplies Board, P.O. Box 371, Pretoria. No. S.O. 1993. Due, 4/12/47.
- M.D. double stone floor grinders :** S.A.R. & H. Tender Board. No. 7261. Due, 4/12/47.
- M.D. Crank pin quartering machine :** S.A.R. & H. Tender Board. No. 7186. Due, 4/12/47.
- Milling machine :** S.A.R. & H. Tender Board. No. 7322. Due, 15/1/48.
- Mercerised cotton (green) and carpet thread (white linen).** Dept. of Posts and Telegraphs, Pretoria. P.O. No. 872. Due, 4/12/47.
- Mercury arc rectifier :** Public Works Department, Pretoria. P.W.D. No. 937. Due, 18/1/48.
- Mechanically set diamond drilling bits for diamond core drilling machine :** Dept. of Irrigation, P.O. Box 277, Pretoria. Irr. No. 192. Due, 4/12/47.
- Medicinal ampoules :** Southern Rhodesia Government Tender Board, Salisbury. No. 1586. Due, 5/12/47.
- Milling machine :** S.A.R. & H. Tender Board. No. 7325. Due, 22/1/48.
- Motor car electric service hoist to Department of Transport, Pretoria :** Union Tender and Supplies Board, P.O. Box 371. No. S.O. 2001. Due, 4/12/47.
- Portable air compressors :** Dept. of Irrigation, P.O. Box 277, Pretoria. Irr. No. 173. Due, 18/12/47.
- Portable Diesel engines :** Dept. of Irrigation, P.O. Box 277, Pretoria. Irr. No. 175. Due, 11/12/47.
- Portable and stationary tilting-drum concrete mixers :** Dept. of Irrigation, P.O. Box 277, Pretoria. Irr. No. 162. Due, 4/12/47.
- Pneumatic table equipment :** Dept. of Posts and Telegraphs, Pretoria. P.O. 879. Due, 29/1/48.
- Planer and thicknesser :** S.A.R. & H. Tender Board. No. 7420. Due, 22/1/48.
- Phosphor-bronze and bronze bar :** S.A.R. & H. Tender Board. No. 7282. Due, 8/1/48.
- “Permatox” or similar preparation to Department of Forestry :** Union Tender and Supplies Board, P.O. Box 371, Pretoria. No. S.O. 2009. Due, 4/12/47.
- Radial drilling machine :** S.A.R. & H. Tender Board. No. 7258. Due, 18/12/47.
- Radial drilling machine :** S.A.R. & H. Tender Board. No. 7168. Due, 4/12/47.
- Radial drilling machine :** S.A.R. & H. Tender Board. No. 7255. Due 4/12/47.
- Surface grinder :** S.A.R. & H. Tender Board. No. 7487. Due 22/1/48.
- South African manufactured 96 lb. and 81 lb. points and crossing :** S.A.R. & H. Tender Board. No. 7380. Due, 4/12/47.
- Shaping machines :** S.A.R. & H. Tender Board. No. 7257. Due, 4/12/47.
- Strip tin :** Stores Department, Johannesburg Municipality. Contract 291. Due, 22/12/47.
- Spring Steel :** S.A.R. & H. Tender Board. No. 7279. Due, 8/1/48.
- Shaping machine :** S.A.R. & H. Tender Board. No. 7390. Due, 15/1/48.
- Shaping machine :** S.A.R. & H. Tender Board. No. 7321. Due, 15/1/48.
- Steel plates for loco boilers :** S.A.R. & H. Tender Board. No. 7298. Due, 22/1/48.
- Surgical scissors and hypodermic syringes to Central Medical and Veterinary Stores :** Union Tender and Supplies Board, P.O. Box 371, Pretoria. S.O. No. 2042. Due, 18/12/47.
- Surgical dressings :** Southern Rhodesia Government, Tender Board, Salisbury. No. 1585. Due, 19/12/47.
- Street name plates :** Complete with clamps, nuts and bolts. Town Engineer, Springs Municipality. Contract 43. Due, 1/12/47.
- Solder :** Durban Municipality Telephone Manager. No. P.292. Due, 24/12/47.
- Spring steel :** S.A.R. & H. Tender Board. No. 7388. Due, 8/1/48.
- Theatre trolleys, H.P. sterilizing apparatus, invalid chairs, soiled linen receptacles, rubber mattresses, aseptic tables, for Greys Hospital, Pietermaritzburg.** Natal Provincial Tender Board, P.O. Box 358, Pietermaritzburg. Due, 7/1/48.
- Tramcar gear wheels and pinions :** Stores Dept., Johannesburg Municipality. Contract 297. Due, 23/12/47.
- Vices :** Department of Posts and Telegraphs, Pretoria. P.O. 881. Due, 15/1/48.
- Woodworking machinery,** Technical School, Bulawayo. Southern Rhodesia Government Tender Board, Salisbury. No. 1583. Due, 29/12/47.



# COMPRESSORS AND PNEUMATIC TOOLS



- ★ HIGH ECONOMY that insures from 15% to 35% more air per gallon of fuel consumed.
- ★ GRADUAL SPEED REGULATOR that varies the speed — not by steps but GRADUALLY — up and down exactly as the air demand varies.
- ★ GREATER PORTABILITY due to lighter, more compact construction.
- ★ LOWER MAINTENANCE COSTS because of Gradual Speed Regulation, increased valve and port areas and many other refinements born of experience with earlier models.

THERE IS A CP PNEUMATIC TOOL FOR PRACTICALLY EVERY PURPOSE.... A SIZE FOR EVERY NEED. BECAUSE OF THEIR MODERN DESIGN, STURDY CONSTRUCTION, EASE OF CONTROL, OUTSTANDING OPERATING EFFICIENCY AND ECONOMY, THEY ARE THE CHOICE OF THRIFTY CONTRACTORS EVERYWHERE. LET US KNOW YOUR NEEDS AND COMPLETE INFORMATION WILL BE SENT TO YOU IMMEDIATELY.

P.O. Box 4921.  
Phone 22-6641/2/3

**CONSOLIDATED PNEUMATIC**  
TOOL CO. S.A.  (PROP.) LIMITED

190 MAIN ST.,  
JOHANNESBURG

#### AGENTS:

R. L. Weir & Co. (P.E.), (Pty.), Ltd., P.O. Box 148,  
Port Elizabeth.  
Rogers-Jenkins & Co. (Pty.), Ltd., P.O. Box 1425,  
Cape Town.  
Engineering Supply Co., 10-12 Oxford St., East London.

J. Clack & Co., Ltd., P.O. Box 638, Bulawayo.  
J. Clack & Co., Ltd., P.O. Box 409, Salisbury.  
J. Clack & Co., Ltd., P.O. Box 25, Ndola.  
Adriana Maia (Suc. & Ca. Lda., P.O. Box 354, Lourenco  
Marques.



- Concrete Batching Plants
- Central Concrete Mixing Plants
- Earth Moving Equipment
- Road Making Machinery
- Patent Steel Shuttering
- Concrete Mixers



SUPPLIES IN STOCK:  
PROMPT & EFFICIENT  
SERVICE

## NATIONAL ENGINEERING (PTY.) LTD.

5th FLOOR, PERMANENT BUILDINGS, C/O COMMISSIONER AND SIMMONDS STREETS,  
P.O. Box 2762. JOHANNESBURG. Tel. 33-0066 (10 lines).  
SOLE SOUTH AFRICAN AGENT. SUB-AGENTS IN MOST PRINCIPAL TOWNS.

P.O. Box 3653

Phone 22-1518/9



### *Stockists*

SANITARY EARTHENWARE, BATHS,  
BASINS, SLOW COMBUSTION STOVES,  
BUILDERS' HARDWARE, BRASS, COP-  
PER & ZINC SHEETS, & OTHER  
ITEMS OF INTEREST TO BUILDERS  
& PLUMBERS TOO NUMEROUS  
TO MENTION.



**BEAGLE & LIPPERT**



104, PRITCHARD STREET,  
JOHANNESBURG.

# BOWRANITE

Genuine Anti-Corrosive



Unaffected by salt water, spray, sea air, chemically charged atmosphere, frost or sun's heat. Has great covering and enduring capacity. Easily applied by brush or spray.

In all parts of the world "Bowranite" has been found to be impervious to the most exacting climatic conditions. Its success has been specially striking in hot climates, where a number of great industrial undertakings are already using this special anti-corrosive paint to protect their iron and steel work. Extensive experiment has produced "Bowranite," a protective coating which is completely unaffected by heat, frost, humidity, alkali, acid and all other corrosive action — even years after application. "Bowranite" maintains iron and steel in a clean, sound and safe condition and has become accepted as standard treatment.

*Available in 9 serviceable and attractive colours*

- STANDARD RED
- STANDARD GREY
- STANDARD GREEN
- STANDARD BLACK
- CHOCOLATE
- FRENCH GREY
- LIGHT GREEN
- SUPER BLACK
- ALUMINIUM

**ROBERT BOWRAN  
& CO LTD  
PELAW  
GATESHEAD 10**

REPRESENTED IN  
SOUTHERN AFRICA BY

**BARTLES**

190/196 MARSHALL STREET, JOHANNESBURG  
P.O. Box 2466 Tel. 22-8985

Also at  
DURBAN CAPE TOWN PORT ELIZABETH

# The Brick and Potteries Company, Limited

Manufacturers of the following :

- " HERONMERE " BRICKS
- DOWN DRAUGHT KILN FACING BRICKS
- GOLDEN BROWN FACING BRICKS
- HOFFMAN KILN BRICKS
- SPECIALS

*Prices will be furnished on application to:*  
THE SALES MANAGER. 'Phone 33-4158/9.

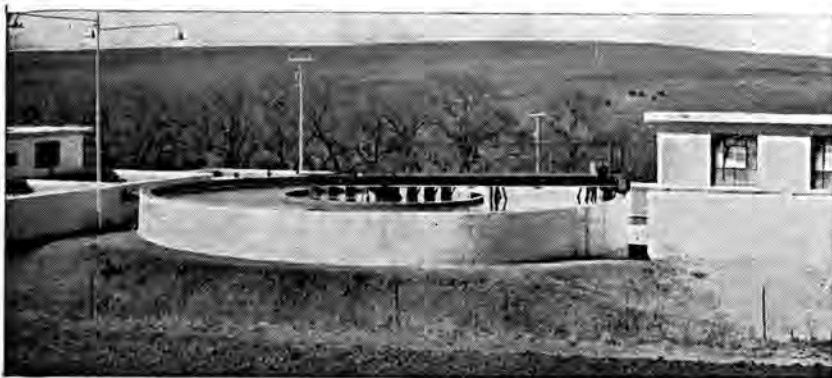
Head Office :  
TRUST BUILDINGS,  
Cor. Fox and Loveday Streets,  
JOHANNESBURG.  
'Phone 33 - 3414.

Works :  
P.O. Box 155.

STEVENS ROAD,  
Off Eloff Street Extension, Booyens,  
JOHANNESBURG.  
'Phones 33 - 4158/9.

## DORR EQUIPMENT

### *for Water Purification*



DORR EQUIPMENT is directly applicable to the treatment of both municipal water supplies and industrial water for power generation and general process work. The type of treatment may range from simple turbidity removal to water softening; coagulation for the removal of other impurities; and the Dorco D-1 System for the partial or complete removal of mineral salts in solution.

# *Edw. L.* **BATEMAN** *Proprietor*

7th FLOOR, PRUDENTIAL ASSURANCE BUILDING, 90, FOX STREET.  
BOX 1671. JOHANNESBURG. PHONE 33-7091.



**. . . the QUALITY  
name in pressed  
steel and aluminium  
ware**

You can see the T.S.P. Mark on many things — buckets, milk cans, refuse bins, aluminium basins, bowls and plates — indeed on countless everyday articles which the giant T.S.P. presses make in thousands. You can depend on T.S.P. goods. Each is of the highest quality and modern production keeps the price down to a level you'll appreciate.

**Transvaal Steel Pressing  
Syndicate, Ltd.**

JOHANNESBURG, CAPE TOWN,  
DURBAN.

**.. BEROLD  
& BUSANSKY**

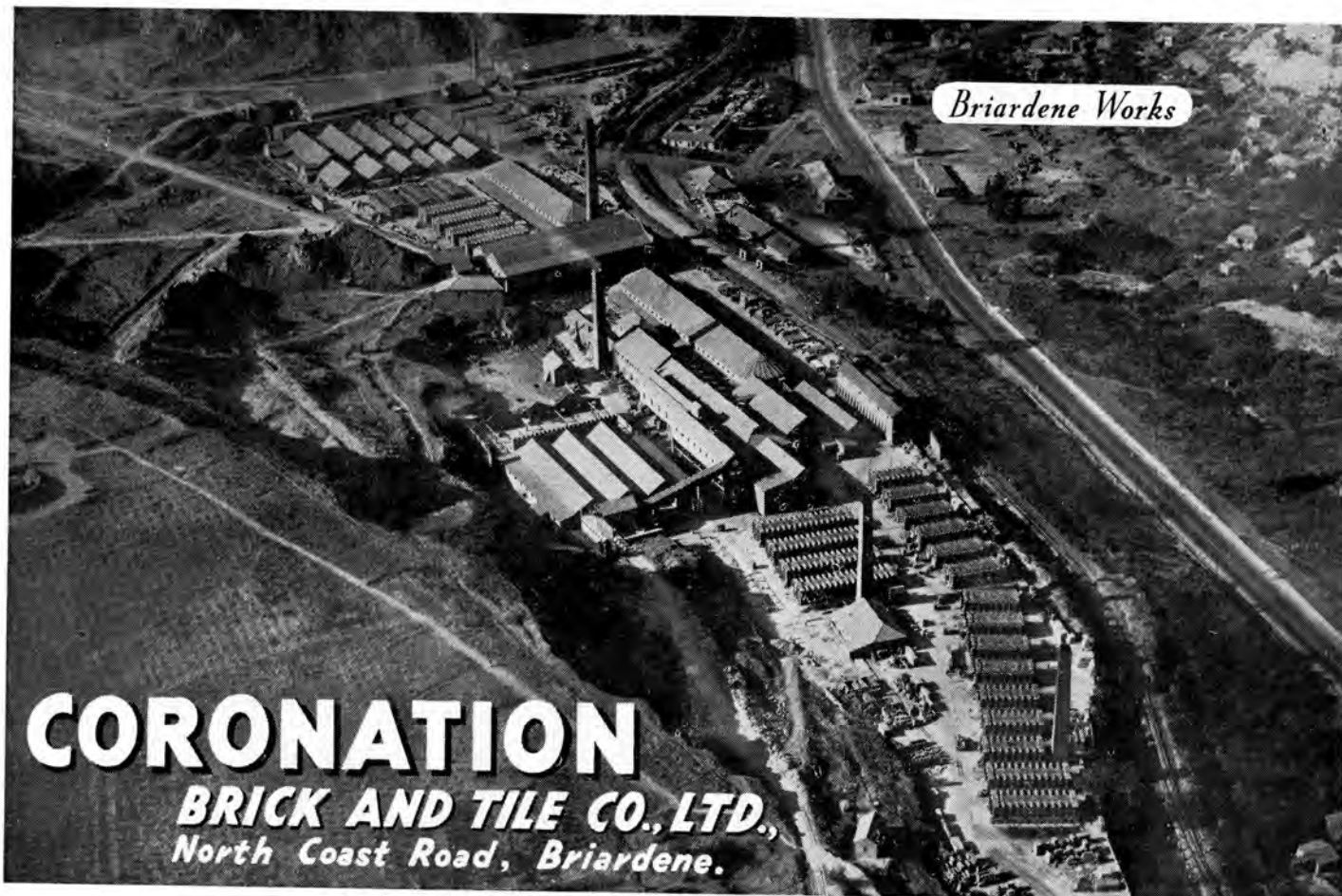
At the moment it is difficult to supply all the demands upon our limited stocks. Rest assured, however, that as soon as we can we will again occupy our place as Johannesburg's leading house for :

GLASS, PLYWOOD, LAMINATED BOARDS,  
"RHINO" PLASTER BOARDS, SANITARY-  
WARE, BUIDLERS' HARDWARE, PAINTS  
"CANEC" INSULATION AND HARDBOARDS.

184 MAIN STREET  
JOHANNESBURG  
P.O. Box 5070  
Phones 22-6658/9  
Tel. Add.: "Glassply"







# **ASBESTOS PRODUCTS LIMITED**

21, PIM STREET,

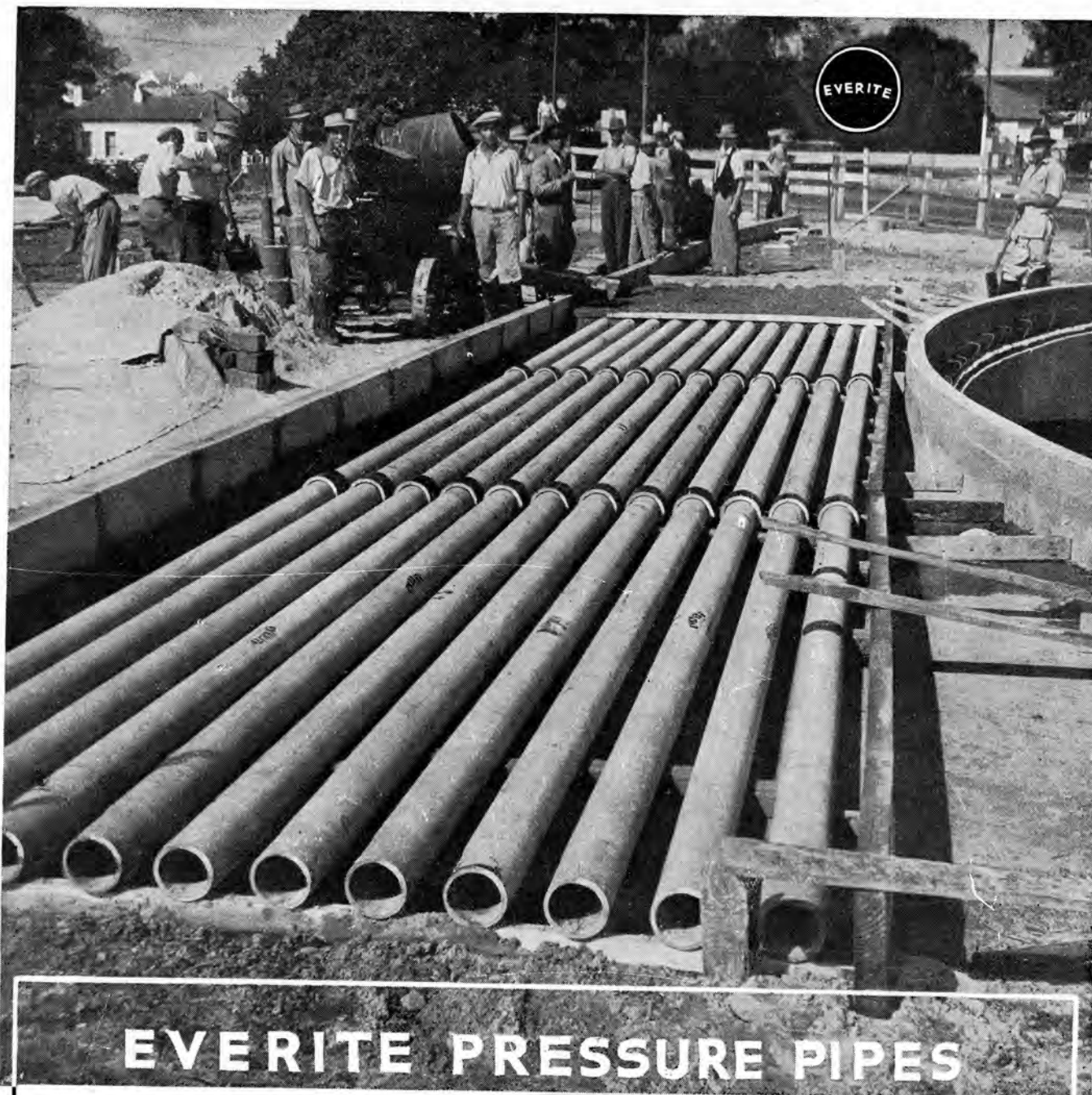
JOHANNESBURG.

*Manufacturers of:*

Asbestos Cement Roofing  
Asbestos Cement Ceilings  
Asbestos Cement Partitions  
Asbestos Insulation Slabs  
Asbestos Insulation Fibre  
Asbestos Insulation Sectional Pipe Covers  
Asbestos Cement Gutters, Down Pipes, etc.

---

CATALOGUE SENT POST FREE ON APPLICATION.



## EVERITE PRESSURE PIPES

CLASSES "A" TO "D" FOR WORKING PRESSURES  
FROM 100 TO 400 FEET HEAD OF WATER  
AND CLASS "J" FOR LOW PRESSURES

•  
NON CORRODING, NON INCRUSTATING, NON CONDUCTIVE  
DURABLE, STRONG, LIGHT IN WEIGHT, ECONOMICAL

•  
USED BY GOVERNMENT, MUNICIPALITIES, INDUSTRY  
AND AGRICULTURE FOR FRESH AND SALT WATER  
GAS AND SEWAGE MAINS, IRRIGATION AND CABLE DUCTS.

# PITTSBURGH PAINTS

WALLHIDE FLAT WALL PAINT  
 WATERSPAR ENAMELS  
 SUN-PROOF EXTERIOR GLOSS PAINT  
 LAVAX SYNTHETIC ENAMELS  
 IRONHIDE ANTI-CORROSIVES



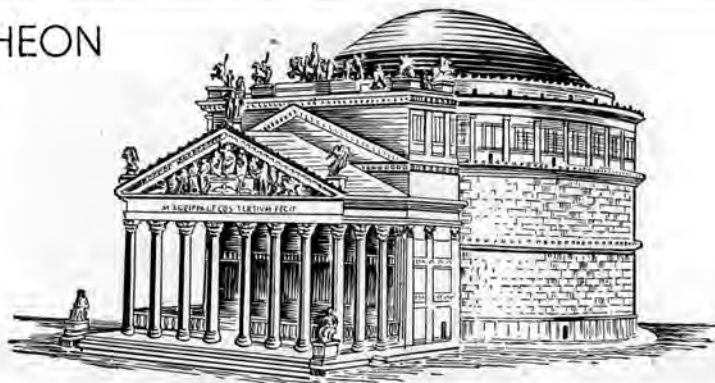
## REID BROS. (SOUTH AFRICA) LIMITED

175 COMMISSIONER STREET, JOHANNESBURG

Telephone: 22-3722.

P.O. Box 802.

THE PANTHEON  
ROME



*This magnificent piece of Architecture is still standing to-day — a testimony to the strength of the materials used in the construction. Cement was used even in those early days. The Old Roman cements were made of a mixture of slaked lime and volcanic dust. Even this crude combination produced an artificial stone, which has stood the test of time.*

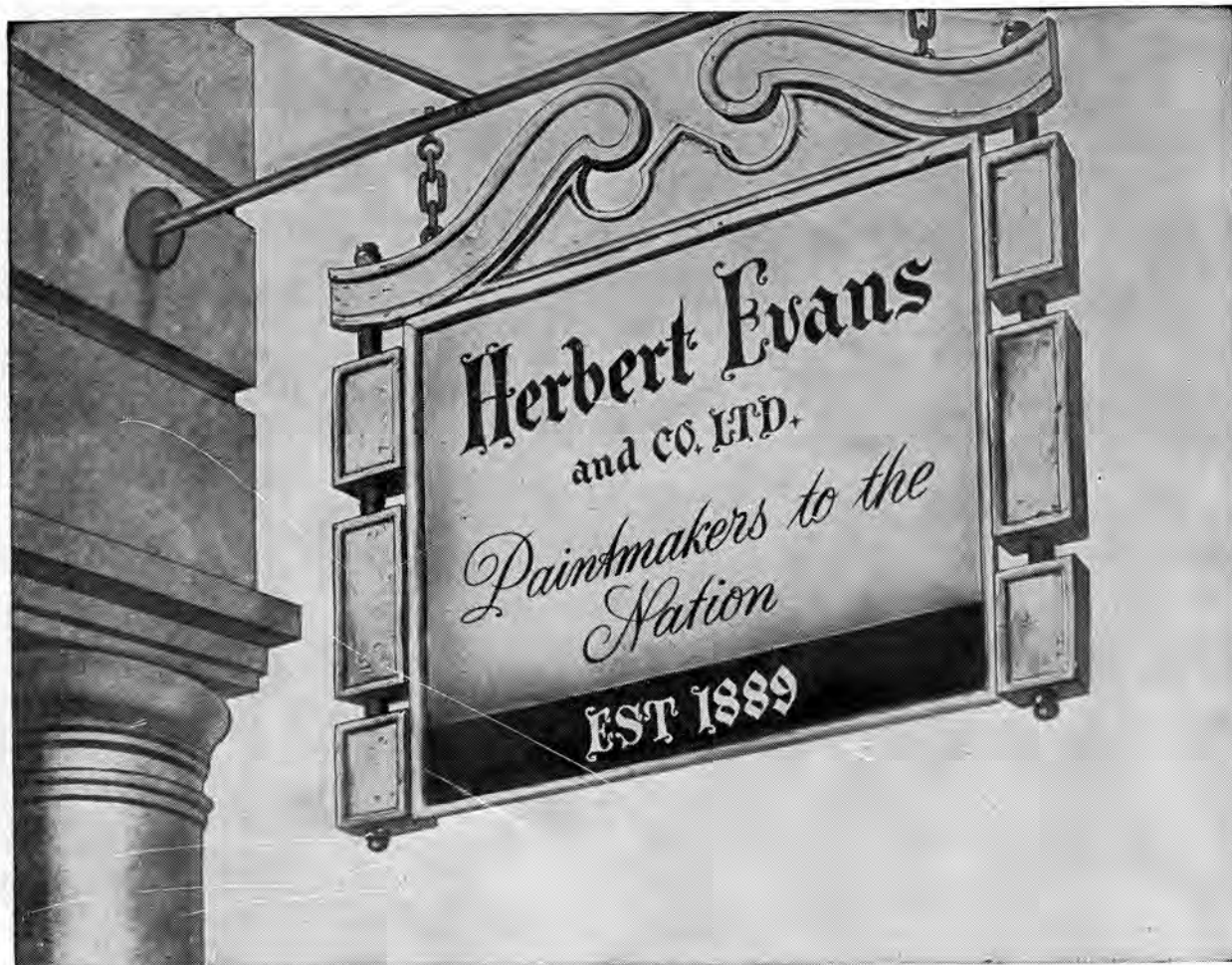
MODERN CEMENT has many advantages over the Old Roman product. The materials are scientifically tested during all the stages of manufacture, from the original analysis of the raw materials, including the spot-testing throughout the process of the final test of the finished cement.

Anglo Alpha Cement conforms to the British Standard Specifications and is noted for strength and durability.

## ANGLO-ALPHA CEMENT

ANGLO-ALPHA CEMENT LIMITED

Head Office: Anglovaal House, Fox Street, Johannesburg.



Built on the solid foundation of quality materials and excellence of workmanship—backed by ceaseless research work in laboratory and testing shop—Parthenon Products are accepted by the people of South Africa as the finest manufactured.

**PARTHENON**  
*By Test*  *the Best*

A COMPLETE RANGE OF PAINTS, VARNISHES, ENAMELS, STAINS, DISTEMPERS, AND POLISHES

MANUFACTURED BY **HERBERT EVANS & CO., LTD.**

Head Office : JOHANNESBURG. Branch : PRETORIA. Factories : DURBAN & JOHANNESBURG  
 Depots : JOHANNESBURG, PRETORIA, DURBAN, CAPE TOWN, PORT ELIZABETH, BLOEMFONTEIN AND SALISBURY

AGENTS THROUGHOUT SOUTHERN AFRICA

PUBLIC WORKS OF SOUTH AFRICA.

NOVEMBER, 1947.



Printed by Caxton Limited, 265, Pretorius Street, Pretoria, for the proprietors and publishers, Public Services Publicity (Pty.), Limited,

Norwich Union Buildings, Main Street, Johannesburg.

Digitised by the Open Scholarship & Digitisation Programme, University of Pretoria, 2016