THE ARCHITECTURE OF THE CAPE COLONY

FROM 1795 TO 1837

VOLUME IV

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VOLUME IV

THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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Ronald Bentley Lewcock.

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THE GEORGIAN EPILOGUE.

1. Moreland Terrace, Cape Town.

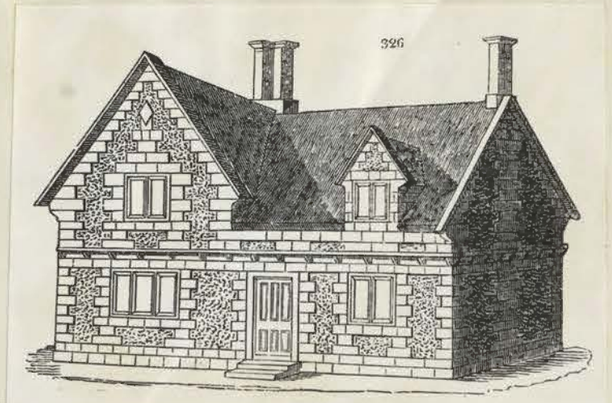
CHAPTER FIFTEEN

THE GEORGIAN EPILOGUE.

Between the Cape of the thirties and that of the forties lies a gulf as wide in the economic sphere as it was in the political; a gulf symbolically marked, in 1837, by the accession of a young queen to the British throne. The Georgian era, with all its redolences of the eighteenth century, came to an end and a new age, the Victorian, was born.

In South Africa the transition is marked by a lull in commercial activity following the brief prosperity brought about by the Sixth Kaffir War of 1835. A government saddled with enormous colonial debts was in no position to undertake public works, while altered trade preferences caused a serious depression in the export wine trade, on which the Cape depended for the bulk of her foreign income.[1] Only the growing sheep industry offered relief, and by the mid-forties this had brought a reversal of fortune, taking first place in the list of exports, and 'saving the country from general bankruptcy' (Theal,

1. Theal 'History of South Africa. 1834 - 54' (London, 1893), 185.



2. Column design for the D.R. Church at Riversdale,1844. (Cape Archives).
3. Ornate house from Loudon's 'Encyclopaedia', 2nd Ed., 1836.
4. Cast iron fireplace in the Uitenhage Drostdy.

'History of S.A. 1834 - 54', 185).

During 1835 - 7 a valuable proportion of the experienced farmers, some of them belonging to the oldest Cape Families, left the Colony to trek north in search of financial and political independence of British authority. They settled across the Orange River, in Natal (with their capital at Pietermaritzburg) and in territory beyond the Vaal River. The establishment of the Boer Republics opened a new chapter in the political development of South Africa.

The unsettled atmosphere of the times is reflected in architecture. Socially and culturally the mid-nineteenth century was a period of disintegration. That the Age of Reason and the Age of Elegance persisted as long as they did is due to the efforts of the late-Georgian 'Man of Taste'. But popular opinion increasingly appealed to the changeable moods of fashion for its criterion of what was good and bad. Architecture became a matter of superficial style at the expense of essentials. The public's eye was gradually beguiled away from the standards endemic to good building - stablity, function, repose, grace and refinement - by the lure of tinsel and gaiety, encrustations of ornament and continuous variety. The late Georgian arbiter of taste struggled gamely to stem the rising flood of middle-class display. His 'sensibility' was directed to subtly blending together a multitude of diverse architectural features from all parts of the world, and for a time, during the Regency, he succeeded remarkably well when all the odds seemed against him. That the qualities he fought for persisted at all into the best work of the succeeding age is surprising, that they persisted as much as they did is the highest tribute to virility of Georgian architecture.

Opposite:

5. Doorway in Port Elizabeth, near Main Street.
6. House in Loop Street, Cape Town.
7. House in the Heerengracht, Cape Town. (Elliott).
8. House in Colesberg.
9. House in Beaufort West.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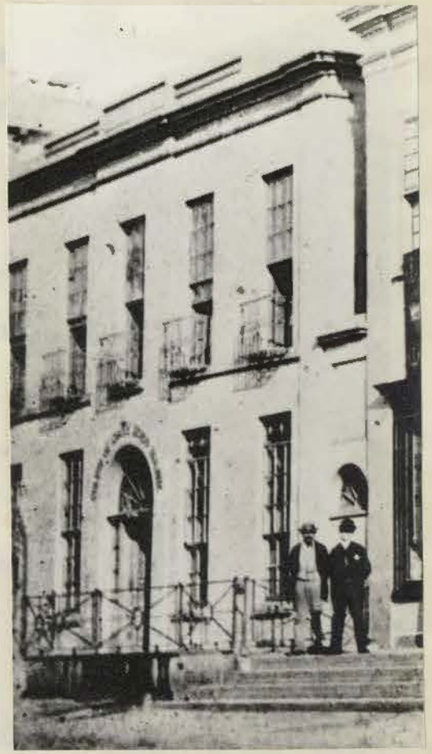


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10. House believed to have been a shooting box for Col. Henry Somerset, Henry Street, Grahamstown.

11. Mid-Victorian house on the corner of Market and Bathurst Streets, Grahamstown.

12. House in Montague, Cape.

A stroll through one of the new villa suburbs of Cape Town, Grahamstown or Port Elizabeth in 1837 would like as not reveal an amazing diversity of style, from cultures centuries apart and regions at the far ends of the earth, modified by 'original' embellishments.

This haphazard architecture, especially when transferred to the narrower sites in the towns, was steadily destroying the sense of unity which was implicit in the eighteenth-century town.

The self-assertive villa, the product of the 'Picturesque' movement, produced near-chaos in the street scene.

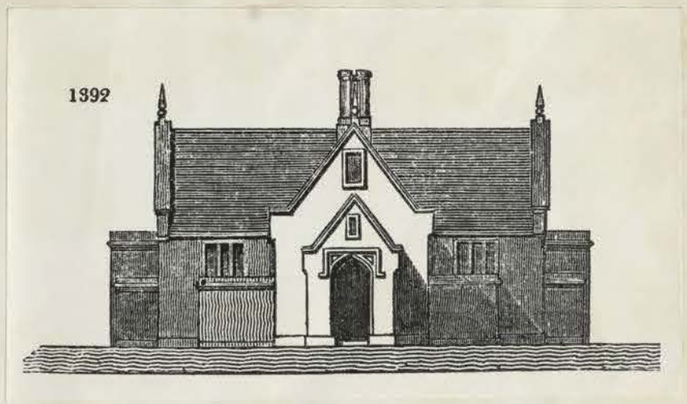
The reasons for its growth, and it was to increase in popularity until the end of the century, were diverse but interdependent. Briefly, one might say that they were social and industrial.

Society had long lost any sense of unified purpose, in thought or aspirations. Its forms were unconvincing because its values were changeable. In their uncertainty men of the age turned from qualitative to quantitative assessments, and architecture was judged on originality, size, expense and richness. A long-term effect of the Greek Revival was to place emphasis on the monumental, even in small houses, and this resulted in an undue stress on individuality and independence.

In the search for originality more and more styles were turned up, and foreign travel began to play a large role in providing inspiration. Archeology blossomed under the impetus of architectural patronage; romanticism produced an interest in cultures other than our own, but the result when crystallized in architecture was disastrous.

This trend was accompanied by a flood of mass-produced architectural decora-

1. Payne Knight 'Analytical Enquiry ... etc.' London, 1808.

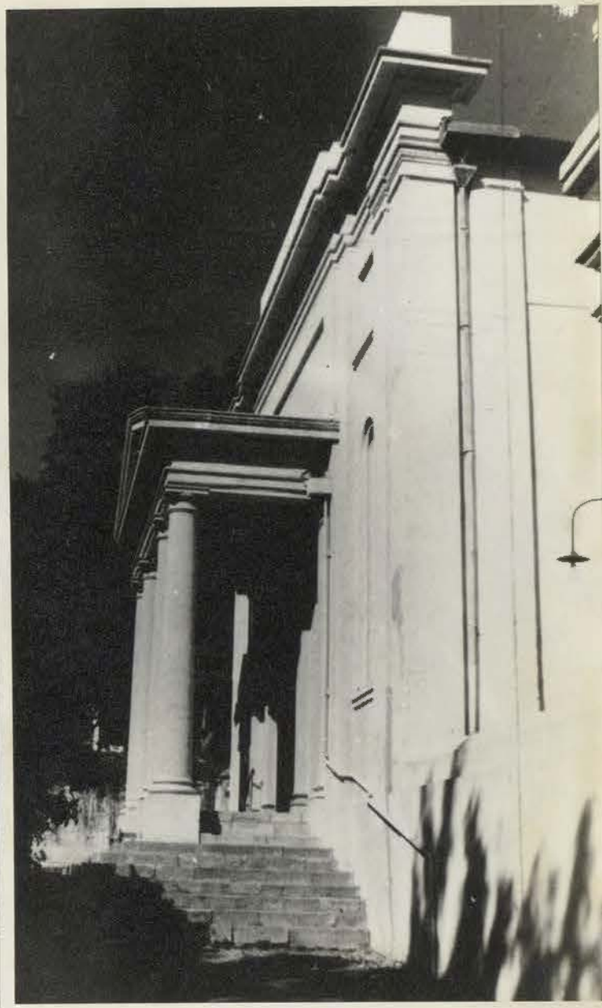


13. Another illustration from Loudon's 'Encyclopaedia', 2nd edition, 1836, showing a building in the Gothic style.

14. The first Church of England Grammar School in Grahamstown (Huntly Street), 1848.

tions which became a new article of international trade and hastened the decay of local standards. 'Suitability' and 'applicability' ceased to be pertinent terms of criticism, and 'diverting' and 'pretty' took their place. Local crafts quickly died, while mass production brought a hard mechanical quality into details and materials which was quickly transferred to the architectural character as a whole. It was the era of industrial roofing slate and of the metal plaster float, producing knife-edge mouldings, and precise, unsympathetic rustication.

Opinions on style differed considerably. Payne Knight, of the 'Society of Dilettanti' in London had written as early as 1808[1] 'The best style of architecture for irregular and Picturesque houses, which can now be adopted, is that mixed style... taken from models which were built piece-meal, during many successive ages, and by several different nations; it is distinguished by no particular manner of execution, or class of ornaments, but admits of all promiscuously, from a plain wall or buttress, of the roughest masonry to the most highly wrought Corinthian capital: and in a style professedly miscellaneous, such contrasts may be employed to heighten the relish of beauty, without disturbing the enjoyment of it by any appearance of deceit or imposture.' Such licentiousness was not to everybody's taste, but there was certainly an enthusiasm for eclecticism: town halls, official buildings, gaols and banks generally being in the classical style, and churches, parsonages and schools in the Gothic. But even here there was evident room for dispute, and considerable licence in interpreting a particular style '...the business of an Architect of reason and taste is not to produce fac-similes, or repetitions of objects, but imitations of their style and manner.' (Loudon 'Encyclopaedia...' London. 1833, 277).



Trinity Presbyterian Church, Hill Street, Grahamstown, 1842.

15. Hall.

16,17. Church.

1. cf. N.Pevsner and S.Lang 'The Egyptian Revival'. Article in 'The Architectural Review' May, 1956, 243-54.

18. Early Victorian buildings at the Cape:

A. South African Mutual Life Assurance Company Building, Heerengracht, Cape Town. (According to Morrison built in 1845, though this date seems rather early. Morrison Collection).

B. Building in Church Square, Grahamstown. c.1845-60.

C. Public Assembly Rooms, Cape Town. A submission in a competition held, according to Elliott, in 1844. (Elliott Collection).

An off-shoot of the interest in archeology is the occasional appearance of 'Egyptian Revival' at the Cape as a late legacy of Regency 'Picturesque'. First introduced into France in the wake of Napoleon's Egyptian campaign, the style never gained much ground in England, except in furniture and interior decoration.[1] Nevertheless, two fine Egyptian buildings survive in South Africa, the South African College, Cape Town (Plates 19 and 20), and the Paarl Gymnasium (Plate 21).

The S.A. College, the earlier of the two, was based on an original design of July 1839 by Professor Adamson (Professor of Mathematics) which was considerably modified and enlarged by Col.G.G.Lewis of the Royal Engineers. Erection was begun in Sept. 1839 and completed at the end of 1840.

At about the same time another revival, the 'Italian', made its appearance in Cape Town. Palladianism had at last worn thin, and such young architects as Charles Barry in England had been executing designs (e.g. the Travellers' Club, London, 1829-32), based on Renaissance Classicist palaces in Rome, Venice and Florence. During the forties two fine buildings in the 'Italian' style were put up in St.George's Street (Plate 36 on page 426) very much in the Barry manner, and in 1844 a Cape Town Assembly Room was projected (but never executed) in a thoroughly Romanized style (Plate 18C).

The Italian Classicist Revival had peculiar ramifications. Not only did arched windows rapidly come into favour (Plate 18B) but architects of the period show a fondness for arched shapes in the lattice work of verandas which consequently tend to look like arcades from a distance (e.g. 'Westbrooke', Rondebosch, and Dr.G.Atherstone's house at Grahamstown - Plate 25).

Gothic continued in popularity, the Roman Catholic Church of St. Patrick

19,20. The South African College, the Gardens, Cape Town.
21. (Left). Paarl Gymnasium, 1858.

21.A. Lighthouse at Cape Agulhas,1847.
(Cape Archives).

Opposite:

22. Roman Catholic Cathedral,Grahamstown.

23. Settler Memorial Church, Grahamstown.

24. 'Sea Point House', Cape Town.

1. Drawings by Mr. Teeling, Clerk of the R.Engineer's Dept. For further details v. 'Souvenir of the Centenary of the Roman Catholic Church, Grahamstown'. Grahamstown, 1944.

2. Payne Knight's 'Analytical Enquiry'.

in Grahamstown being erected in coarse-stoned Tudor between 1839 and 1844 (Plate 22)[1] and the Methodist Settler Church after 1845 (Plate 23). A fine Gothic school was also begun in Grahamstown in 1844, (Plate 14). In the sphere of domestic architecture, in spite of Payne Knight's claim, early in the century, that a house 'could be adorned with towers and battlements and...still maintain the characters of a house of the age and country in which it is erected; and not pretend to be a fortress or monastery of a remote period or distant country',[2] the efforts made at the Cape usually proved him wrong, and it is difficult to think of a more horrifying final destiny for the old Society House of the Company's days than that which befell it in 1841 as the redecorated 'Seapoint House' in the garb of a Gothic fort. (Plate 24).

Many of the old Cape houses were at this time altered, usually for the worse, though their owners doubtless took great pride in the new verandas, balconies and fretwork. In some cases advantage was taken of the availability of the new slate to cover in the leaking plaster flats of the eighteenth century with pitched roofs, thus completely transforming the buildings, especially where the facades had originally been carefully proportioned for parapets (Plate 32). But the resulting awkwardnesses were soon accepted - popular taste was beginning to lose its ability to distinguish between good proportioning and bad.

In the country districts the decay of taste is frequently reflected in the design of the farm buildings. This is nowhere more true than in the older communities, in which Rococo fashions had never entirely died, and were given a new lease of life by the ornate decorations imported from Cape Town. At the

OPPOSITE:

25. House of William Guybon Atherstown, Grahamstown, c.1840-5 (?). (Albany Museum).
26. 'Clarensville', Cape Town.
27. Terrace of houses facing the Donkin Reserve, Port Elizabeth.
28. Terrace of houses in Cobem Street, Cape Town.
29. Veranda in Paulet Street, Somerset East.
30. Veranda in Bathurst Street, Grahamstown.

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31. 'Vredenburg' Stellenbosch. c.1840-50.

32. Houses in Wellington; they appear to have been originally flat roofed. c.1835-40.

33. 'Bellevue' Upper Kloof Street, Cape Town. 1848.

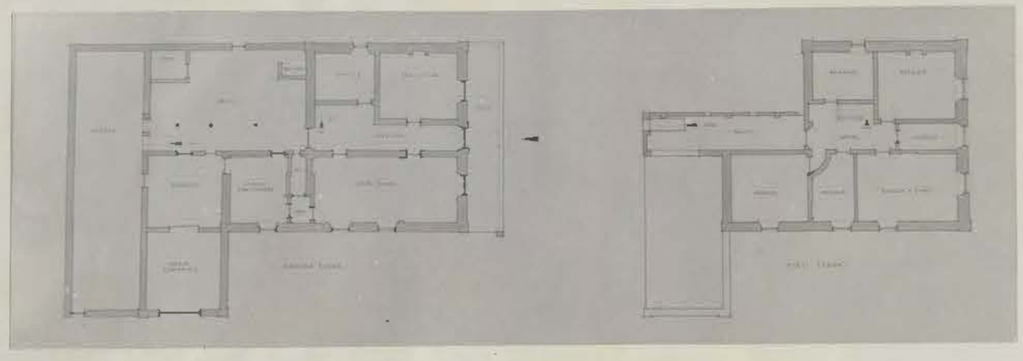
same time there was a serious falling off in decisiveness in handling forms and profiles. The gable is often debased to a narrow mannered projection over the door; rules of proportion are ignored; awkward shapes abound; and decoration loses its former logic and becomes an empty caricature, devoid of charm or value (Plate 33).

It is not surprising, therefore, that almost simultaneously with this riot of style and ornament, and the resulting collapse in standards of design, a reaction should set in. At the Cape it was probably triggered off by the new academically-trained architects who migrated from England attracted by the prosperity of the forties. But the influence of the best of the earlier work remained, and brought a reactionary preference among the wealthier Cape families for the restraint and dignity of Classicism. Thus the Georgian style acquired conservative associations, and in the best of the new work, although it sometimes betrays the frigid correctness of old age, the high principles of the 'Age of Elegance' are maintained.

The houses of this Georgian 'swan-song' are usually double-storeyed, of ashlar stone work, or rusticated plaster. The windows have large panes, usually only six to a sash, with deep knife-edges sash-bars to strengthen the large sheets of glass.[1] The door mouldings are coarser and more obvious at a distance than in earlier work.

Not only were such houses built in considerable numbers in the larger cities, (Plates 42-6) but they also made their appearance in small country towns, such as Heidelberg (Plates 38-9 - 1861) and Graaff Reinet (Plate 12 on page 479). Most surprising of all, they began to be built on farms in the Western part of the colony instead of farmhouses in the old Cape tradition (Plate 31).

1. Plate glass was coming into use in England at the time of the Accession of Queen Victoria. But it does not appear to have been much used at the Cape until c.1845-50 (R.Dutton: 'The Victoria Home', London, 1954, 20). It then became a popular fashion to replace the 'bird-cage' or 'prison' windows of early times with unbroken sheets of glass; whatever the effect from within, the Georgian facades punctuated with dark cavernous windows were seriously damaged. In new work, however, the effect of large sheets of glass was calculated, with more felicitous results.



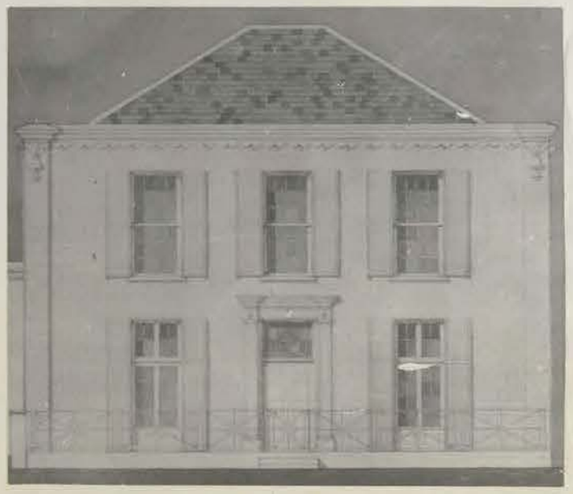
'Zeederburg House', Paarl. c.1840-50.

34. Front Entrance.

35. Plans.

36,37.A. Side View.

37. Front Elevation, Measured drawing (U.C.T.).



1. 'Encyclopaedia...' London, 1833, 318.

2. The fringed gas mantle completed the picture. The corner-stone of the Cape Town Gas-works was laid in October, 1845. The better houses were lit by gas-light before the end of the decade. (cf. Laidler 'Growth and Government of Cape Town', Cape Town, 1939, 292.)

38,39. House in Heidelberg, 1861.
40. House in Swellendam.
41. House in Worcester Street, Grahamstown, 1851.

There is a directness and honesty about these houses which is appealing, in spite of their frequently mechanical design. Their lack of subtlety is shared by the cheap buildings erected to English industrial housing standards, of the Moreland Terrace type. (Plates 1, 27 and 28).

It is interesting to note the persistence of the Greek Revival in town buildings. The Greek style followed set rules of design which were reassuring at a time when eclecticism was destroying so many of the established standards which architects had previously relied upon. But even here mouldings and proportions were sometimes distorted in work designed by unskilled contractors.

Internally the debasement of architectural symbols continued in the frequently clumsy profiles of skirting and cornice, door and fireplace surrounds; while rooms were beginning to be filled with over-sized furniture and decorated with over-rich wall-paper. Imitation wainscotting was frequently employed, and cheap woods or plaster were painted to simulate oak and mahogany. Loudon[1] even recommends painting cast-iron work to look like oak! From the full horrors of Victorian interior decoration, however, the decade of the forties was spared, and for a time light colours and muslin and silk draperies continued in use. But by the fifties the debacle had begun, with heavy carpets and curtains, enormous pictures, ottomans, upholstered chairs, what-nots, vases, knick-knacks, shells, papier-mache boxes, tassels, velvet doilies, alabaster time-pieces, wax-flowers, dried flowers - every square inch crammed with decoration and largely useless trappings.[2] 'Plain' and 'bare' were terms of reproach in Victorian architecture!

Just as in the exteriors popular taste was increasingly demanding the new, the original and the exotic, so interiors were judged on their richness and diversity. And where eighteenth century furniture was often built-in (the

Opposite:

42. House in Somerset Street, Grahamstown.
43. House in Main Road, Mowbray, Cape Town.
44. 'Rusdon', Rondebosch, Cape Town.
45. House in Worcester Street, Grahamstown,1851.
46. House in Queen Victoria Street, Cape Town.

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47. 'Hughendon', Rondebosch, showing a Victorian garden; the house has Georgian and Regency characteristics, but probably dates from c.1860.

'muur-kassie') or at least kept small and neat (the Georgian book-case) the new furniture was heavy and dominant. In rooms packed with lumpy paraphernalia and voluminous thick draperies there was little room left for architectonics, for an appreciation of form and space. Thus the great heritage of the eighteenth century (in Europe and the Cape alike), the internal organisation of space as a visual experience, was well-nigh smothered. And the decoration which replaced it was so profuse that it was ultimately self-destroying. Ornament became devalued to such an extent that it ceased to have any meaning.

Outside the house, in the garden, the same pattern was repeated. The small formal beds in the villa landscape garden had grown into elaborate parterres of trimmed hedges, shells, rocks, stone foundations, sundials and birdbaths. Anything and everything rather than the 'nature unadorned' of the eighteenth century ideal. The plants were exotics, hidden in the artificial pattern of hedges, and the trees tall cypress, devoid of shade (Plate 47).

Almost the only feature of the house which retained any architectural quality was the veranda. So essentially simple in itself that it could stand a considerable amount of embellishment without loss of character, the veranda assumed an added significance in the latter half of the century. At first, under the impact of the observation of its similarity to the prototypes of the Grecian orders, it often remained relatively simple and austere. But fretwork eventually engulfed it, first in bargeboards and then in columns and balusters.

The stoep-kamers were swallowed up under the veranda roof, the stoep was recessed, the veranda extended around the house; whatever the pattern the farmhouse and the villa gradually evolved a new form, dependent on a large enveloping umbrella roof, generally with its own dominating symmetrical form (Plates 54 and 55). The roofing was executed at first in thatch, a material in

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48. Veranda of c.1840 in Rondebosch; basically Gothic in character.

50. Neo-Classical veranda in Hill Street, Grahamstown.

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49. Lattice-work veranda in Somerset Street, Grahamstown.

51. Fretwork veranda in Colesberg.

52. Wrought iron veranda in Barrack Street, Grahamstown.

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53. Cast iron veranda to 'Woodville', Grahamstown, 1860-61.

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Opposite: Veranda houses in Natal.

54. Pietermaritzburg. c.1840.

55. Malvern, Durban. c.1870 (with walls of corrugated iron, as was then very popular).

1. Loudon, 'Encyclopaedia', First Edition 1833, 206-7.

2. Probably James Walker, an eminent London engineer of the period. cf. Samuel Smiles: 'Lives of the Engineers'. London, 1879.

3. cf. Shorter Oxford Dictionary (London. 1960).

4. Advertisements in the 'Adelaide Advertiser' 1850.

5. Laidler 'Growth & Government of Cape Town', Cape Town, 1939, 310 - 311.

6. An 'iron house', and 'iron hotel' with circular roof of 58' span shipped complete from England, and a sugar store which was a portion of the Crystal Palace Building of 1851 are mentioned in Durban. (Hattersley, 'British Settlers in Natal', 203-5).

7. The first railway station was almost entirely built of it, both walls and roof. (The first train ran on 13th Feb. 1862). For the next decade houses were frequently erected with walls of corrugated iron. Many survive in small towns such as Port Alfred.

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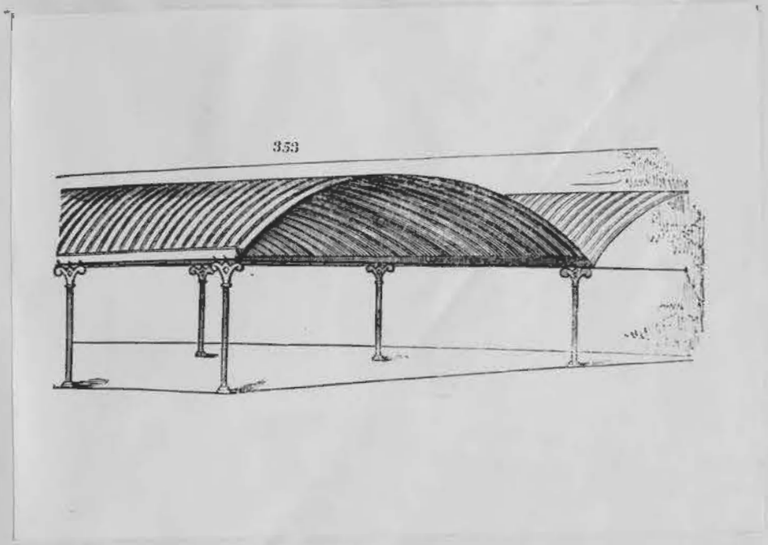
which continuity and simplicity of roof form is essential. But villa and farm-house alike were eventually re-roofed in corrugated galvanised iron, so that today we mistakenly tend to associate them exclusively with that material.

Corrugated cast iron was, according to Loudon,[1] invented by the engineer Walker[2] in the late eighteen twenties: '... no material hitherto brought into notice approaches this in its capacities for forming light and economical roofs of the greatest extent of span, and with the least loss of interior room .... As the invention has only been known four or five years, much has not hitherto been done with it; but there are several roofs of corrugated iron in the London docks, and Fig.353 Plate 56 represents a portion of one of them.' In 1836 the roofing of the London Gas-Works at Vauxhall was executed in the new material: 'The professional gentlemen who have examined this beautiful application of cast iron have admitted it to be the most durable and most economical roof that can be constructed, and I think that it may be justly considered as one of the principle improvements of the day in the science of building: and no small degree of credit is due to the enterprising engineer, (Mr. Hutchinson) who first introduced it'. ('M.D.' in 'The Architectural Magazine and Journal'. London, 1838, V, 66-written Oct. 1837). The process of galvanising first became common in England in 1839.[3]

Corrugated galvanised iron was already being exported to Australia in 1850[4] and this date seems to coincide approximately with its first appearance in this country. An 'iron-built' store was let in Cape Town in 1847,[5] and several 'iron' buildings were reported in Durban in 1850.[6] But the hey-day of corrugated cast iron is considerably later, in the eighteen-sixties and early seventies.[7]

Cast-iron posts and railings and brackets for verandas were also increas-



56. Cast iron roof in London docks, from Loudon's 'Encyclopaedia', London, 2nd Ed., 1836.

ingly imported. By the forties entire pre-fabricated verandas several stories high were being brought in from Britain. (e.g. Plates 74-5 on page 498).

Always eminently sensible, the architectural traditions of the late Georgian age were notable for the near approach they made to the evolution of a functional style of architecture. Especially in the adaptation of housing to a hot climate was this contribution memorable. By forgoing his ideals of architectonic symmetry and formality for the exigencies of site and landscape, the Regency architect made possible that 'congruity' of house and garden which in England was an aesthetic victory, in the Cape a functional triumph. Verandas made possible the use of unguarded French windows and living spaces flowing unbrokenly from interior to exterior, and in turn encouraged the development of a new kind of planning based on criteria of comfort and freedom, instead of formality and compartmentation. Modern materials, like iron and glass, were constantly turned to effective use to further these aims, methods of construction were simplified and perfected ..... There is a great deal on the credit side; and, in spite of all that happened in between, a considerable amount of it survived the Victorian Age to emerge triumphant but yet unrecognised as the essential groundwork of contemporary architecture.

PART B.

SIXTEEN :

THE ARCHITECTS AND THEIR WORK.

CHAPTER SIXTEEN

THE ARCHITECTS AND THEIR WORK.

In eighteenth century Europe, the standards of artistic taste touched exceptionally high levels, not limited merely to the narrow circles of the elite but shared - though admittedly at second hand - by most of the general public as well.

In the transference of European architectural traditions to the colonies it was inevitable that there should be a certain falling off in excellence. But at the Cape (due to its unique situation) this was less apparent then elsewhere. A port of major significance in world trade, Cape Town was visited more often then most colonial towns by governors and commissioners, members of the European aristocracy and upper mercantile classes, and by the professional architects, surveyors, engineers and artists who accompanied them to and from their posts in the Far East. However transitory these visits may have been, they helped to maintain a yard-stick of architectural criticism and performance in the colony, and created conditions in which high standards could disseminate to the mass of the people as they had done in Europe.

Who the professional architects were, and to what extent they personally contributed to Cape architecture, are lost with the inadequate records of Company days. But many an architect made his reputation in the East, and

doubtless was consulted on current work as he passed through Cape Town.

A second medium for the dissemination of European architectural standards was the Military Engineer. '...British public buildings in the tropics were invariably built by military engineers...' (T.H.H.Hancock, 'Coleman of Singapore' in 'Architectural Review' March 1954, 169). The distinction between architect and engineer was a slight one, and the officers in the Engineer Battalions had frequently had architectural experience and sometimes even an academic training. Under the rule of the Company such men were often put in charge of all official buildings in a colony. The arrival of military forces in considerable numbers at the Cape after 1781 brought a high concentration of talent, valuable both for the critical faculties and range of culture it offered, and for the work, public and private, which was executed under its auspices.

In 1785 a governor was appointed who was himself a high-ranking military engineer. Lieutenant-Colonel Cornelis Jacob van der Graaff had been Controller-General of Fortifications in Holland.[1] Under his lavish and informed patronage a group of enthusiastic designers and craftsmen was quickly formed at the Cape.

The personal influence of van der Graaff was perhaps the main reason (fortunately coincident with temporary economic prosperity) for the stepping-up of cultural standards at the Cape in the decade which followed his appointment.[2] And apart from the sophisticated buildings executed for the government and townsfolk the high ideals of their superiors were translated by the district surveyors to the country areas, not to replace but to embolden and refine the existing colonial tradition.

1. Theal 'History of South Africa 1652-1795', II, 192.
2. c.f. E.A. Walker 'The Cambridge History of the British Empire', Cambridge, 1936, III; 159.

A second lease of life, following the same pattern, was brought to this movement by the first British occupation. Though in the beginning Somerville was an unfortunate choice at the head of Government Works, Van der Graaff's protege Thibault assumed command after 1799.[1] Meanwhile local prosperity brought a revival and expansion of private architecture, most of it based on the indigenous style but with growing British influence.

The aesthetic weight of imported ideas from England must not be underestimated. As British fashions and furniture were accepted in a Cape Town in which more than half of the white population was British (if we include the permanent garrisons), a new visual horizon was opened for all but the more sophisticated of the local architects and designers.[2] In the desire to educate themselves in the new fashion (for they could not afford to be behind the times in matters of taste), the contractors and artisans resorted to the architectural pattern books which were being turned out in prolific quantities in England.

Pattern books had recently taken a new form. Once largely technical and seldom emphasizing the importance of style (if we exclude the original Palladian manifestos) they were increasingly devoted to the stylistic education of the craftsman and the layman. In Britain an early effect of the Industrial expansion was to produce a new middle-class patronage which was so unsure of itself as it emerged into the higher realms of aristocratic 'good taste' that whole volumes had to be written interpreting it for them, giving them models to copy and exact definitions to follow. In addition, there was still the gospel of the Adam revolution to be preached to provincial craftsmen. It is doubtful if even today we have exceeded the bulk of architectural criticism which was pouring out of the English printing presses at the end of

1. Somerville retained titular command, but as he was absent in Graaff-Reinet for much of this time it seems evident that Thibault was once more Government Architect in all but name.

2. We have the evidence of 'Papenboom' that Thibault, at least, (like many French architects of his time), had been earlier influenced by the English Palladian revival. And it is quite likely that English pattern books had spread to the Cape before the first occupation. But all the circumstantial evidence points to the first impact of the Adam style dating from after 1795, not before.

1. L.M. Thibault, a portrait by Lady Anne Barnard.

2. Trade card of a Lechdale (England) builder; issued about 1830.

the eighteenth and the beginning of the nineteenth centuries.

Naturally, the pattern books greatly affected the facility with which late Georgian ideas could be absorbed at the Cape. And the importation of 'Taste' in the British sense soon became a mark of cultural distinction. The influence of clothing fashions 'a la grecque' brought an emphasis on Classicism, which popularised the adoption of the Adam style, though the latter was hardly more Greek than the French classicism of Thibault and his genre - which, incidentally, was given a new lease of life by the same movement.

At this time there were few 'architects' who went by that name at the Cape, and fewer still who had had any academic training. Thibault's complaint that 'the Burgher gentry employ labourers, instead of architects - whence constructions at once vicious, grotesquely ugly and doubly costly...' (9th June, 1812. C.O. 43), may have had a certain amount of truth in it, but we must remember that at this time the French Academy (from which Thibault came) was one of the very few institutions in the world training architects, and that there were no professional bodies anywhere.

Since the early eighteenth century the term 'architect' had been a vague one, and any tradesman might aspire to address himself as such on the strength of the bare design of a few erected buildings. Architecture was open to all. Fortunately there were, besides the military engineers, other qualified men of status, the surveyors, whose professional attainments were understood to include not only the surveying of land, but the supervision, measuring and pricing of building work as well. In the absence of professional qualifications in architecture, many aspiring architects became licensed surveyors

1. Charles Bell
   ? Crous
   John Hope
   William Hopley
   William Jones
   ? Koentz
   J. Knobel
   T.L. Leeb
   T. Mahoney
   John Melvill
   Lt. Col. Charles Mitchell
   A.E. Petersen
   Herman Schutte Snr.
   Rob. Swann
   M. Theunnissen
   L.M. Thibault
   Johann H. Voorman
   ? Warwick

2. John Chisolm
   Col. Cockburn
   Lt-Col D. Cunyngham
   Major W.C. Holloway
   Col. Lewis
   Capt. T.C. Lucmore
   Henry W. Reveley
   Lt. James H. Rutherford
   Col. H.M. Scott
   Major Selwyn

3. John Brislin
   W. von Buchenroder
   George Gilbert
   ? Marnik
   Col. F. Pohl
   Pieter Retief
   H. Schroeder
   William Shepstone
   John Skirrow.

4. Hon. Lt. Col. John Bell
   Capt. G. Bridges
   T. Jackson
   C.R. Teeling
   P. Toussain
   H.C. Voget

5. C.O. 2576/George 1.

simply to establish their social position. (Most of the provincial buildings in the British Isles were built by men who styled themselves 'surveyors' in their correspondence. Even Thibault found it desirable - and lucrative - to take the oath as Sworn Surveyor at the age of fifty-seven).

The surveyors were, as we would say, 'white-collar workers'. One, at least, was attached to each Drostdy and was responsible for all surveying and town planning in the district - and, when called upon, was expected to furnish architectural designs for public buildings. Doubtless these men were also consulted on private architectural work, and several of the churches were privately commissioned from them by the church councils.

Of the forty-four men who are known to have designed public buildings at the Cape between 1795 and 1835, no less than eighteen were Sworn Surveyors.[1] (Two of them, Thibault - architect and military engineer - and H. Schutte Snr. - building contractor - became surveyors only late in life). Of the remainder of the forty-four, ten were primarily engineers[2], nine building contractors[3], one - Anreith - was a sculptor, and only six were primarily architects - and some of those dilettantes.[4]

In Drostdy areas, while there was temporarily no District Surveyor, there was also no architect, though a local contractor might do instead. The shortage of architects over the whole period may be gauged by comparing a letter of the landdrost of George in 1811 ('...I was not able to meet with any person in this District who was Architect enough to estimate the expense that would attend the erecting of the Buildings....')[5] with one of the Civil Commissioner of Colesberg written as late as 1841 ('...I regret that I am

1. Ibid.

2. C.A.Churches./24th Dec. 1841.

unable from the circumstance of their being no one here acquainted with Architectural designing to accompany the plan with a Front Elevation...').[1] To this was undoubtedly due the low standard of much of the public architecture, especially in some of the country districts. When the Colesberg Civil Commissioner says of a new church that a front facade 'is absolutely necessary to a Building of this nature and which will be perfectly plain and unornamented and will eventually stand in rear of other Buildings...'[2] he is obviously expecting the worst!

To this may be ascribed the decision of the authorities in various periods to have most of the country work designed by the Inspector of Buildings in Cape Town. Such was more often than not the case in Company days, and the practice continued during the administration of the Batavian Republic (public buildings at Tulbagh, Graaff-Reinet and Uitenhage), and Lord Charles Somerset's regime (public buildings at Worcester and Grahamstown).

Under other governments everything was left to the discretion of the local administrator - which often led to regrettable architecture. The best work of the District Surveyors from the early part of the period was probably the Neo-Classical designs of Johann Heinrich Voorman for buildings at Swellendam and Caledon. J. Knobel's architectural work (Uitenhage church) is wholly inferior to his town planning (Grahamstown and Bathurst). The work of Wernick is known only through the Malmesbury town plan, which does not suggest great ability. In later years John Hope, Surveyor of Albany District, designed the pleasant but unambitious Custom's buildings at Port Francis.

One must sympathise with Thibault, who wrote (in 1814) that it was a

pity more attention was not paid to architecture: 'The arts are of the greatest necessity in this Colony, and by art I mean the art of building and its allied craft... But surveying is all the rage at the Cape. Everyone wants to practise it. There'll soon be dozens of budding surveyors here, who will end by meeting one fine day in the wide open spaces and laying one another out flat, with blows from their surveying stakes... a spectacle of the very greatest interest.'[1]

The later military engineers, frequently well-travelled and highly trained, contributed a good deal more to South African architecture. Besides Thibault himself, Francis Hope and Charles Mitchell arrived as officers in the Engineers and were both, under various titles, transferred to the civil post of Government Architect. Mitchell was one of the best architects ever to work at the Cape. Among his known designs the Bathurst Church and St. Paul's, Rondebosch, were outstanding at the time they were built.

Those engineer officers who remained in military service executed (besides fortifications) a considerable quantity of architectural work which was of consistently high standard. Colonel H.M. Scott designed Scott's Barracks,and the first scheme for St. George's, Grahamstown. Lieutenant James H. Rutherford designed Fort England Barracks. Major Selwyn was responsible for the Commissary Buildings in many parts of the Eastern Cape, the refurbishing of the Grahamstown Library, possibly the Gothic Roman Catholic Church, Grahamstown, as well as his own house, 'Selwyn Castle'. Lieut.-Col. D. Cunynghame erected the Rondebosch Gaol. In Cape Town Col. Lewis designed

1. Education Fund File of Lodge de Goede Hoop, translated from the French by C. de Bosdari.

the long Georgian range of the Military Hospital, and the Egyptian-style South African College.

The distinction between engineering and architecture hardly existed during the Regency period - as the frequent use of the term 'architect-engineer' suggests. Neither profession had any recognised training programme, nor did the engineers yet regard themselves as belonging to a special category. Indeed the greatest of the early iron engineers, Telford, was actually an architect by profession, a protégé of Robert Adam. The increasing use of structural cast iron in building demanded that all architects take a serious interest in it, and its technique was still in such an infant stage as to make this possible. Iron had an important role to play in determining the character of Regency architecture, as we have seen, and it was only in the thirties that the two professions began to drift apart, the split accelerated by the growing academicism of the architects.

Even John Chisolm, the Engineer of Waterworks from Londonderry, brought out to Cape Town to install the first cast-iron water supply, considered himself an architect, and executed the first designs for the Commercial Exchange, (1819) now in the British Museum (Plate 51 on page 142).

Among the other architect-engineers was Henry Willey Reveley, whose abilities and experience probably made considerably more impression on the South African architectural scene than his known executed work (the Neo-Grecian St. Andrew's Church, Cape Town) would suggest.

It is interesting to note that Thomas Mahoney, the head of a party of '1820 Settlers', who got into such difficulties as contractor on the Bathurst Drostdy, gave his English occupation as 'Architect and Engineer and Surveyor' (He was murdered in the 1834-5 Kaffir War.) T. Willson, head of another party, had been a London architect, but he remained in South Africa only two years.

Only an architect of recognised artistic ability was considered to be capable of raising buildings to the standards of the 'Men of Taste'. But the builder, who may have had little architectural knowledge, gradually assumed a familiarity with, and feeling for, essentials, which the architects, in their pursuance of the chimera of fashion, sometimes tended to overlook. Today we can admire the straightforward planning and sure instinct for proportion which frequently characterized the builders' work.

The tradition of plain 'draughts' of small buildings being made by the craftsmen in the building trade goes back at least to the early years of the eighteenth century in Europe, and indeed was probably mediaeval practice. If the craftsman was in a position to design a building he was probably a 'master builder', a carpenter, bricklayer or stonemason who had accumulated a little capital and felt emboldened to build entire houses and even speculate on his own account.

The craftsman's desire to improve his position by self-education was one of the reasons for the great influence of pattern-books. Unfortunately the great spate of books being turned out towards the end of the Regency period inevitably meant that some of them were of poor quality, and the few really

pertinent authorities tended to be overlooked in the bulk of inferior and even vulgar publications. Inevitably there was a gradual falling-off in the level of the work of the builder-architects. But natural conservatism and common sense still came to their assistance, and the high standards of the old taste and craftsmanship persisted in modified form for many years.

The contractors were not men who aspired to greatness. Rarely are their names preserved in association with the buildings they designed. For instance we know that William Shepstone (the Albany Settler) 'commenced business as architect and builder in Bathurst and Grahamstown',[1] but we cannot identify any houses which are his, although we do know of his later work on the first Wesleyan church at Grahamstown and Theopolis. The same is true of Pieter Retief, who is said to have erected many houses in Grahamstown - but which they are remains a subject for dispute. In Cape Town Schutte must, with his high reputation, have designed a number of houses, but not one of them (except his own) is definitely identifiable as his. John Skirrow and Edward Durham were also highly respected contractors little of whose private work is known.

It is important to note the significant part played by the tradesmen in the preservation of tried and proven Cape skills of building after the British Occupation. And when the British Settlers arrived in 1820 it was primarily through the tradesmen that the merging of the two building traditions took place. Tradesmen thus made an essential contribution to the linking of two architectural heritages. Local tradesmen-architects took the Cape Dutch gable and the characteristic Cape townhouse into the Anglicised Eastern Province (Somerset East Church, 1825, etc.), to Natal, and to the Northern Republics. And British builders, both Moodie immigrants and those of 1820, brought English ideas into the farming districts of the Western Cape.

1. W. Shaw: 'The Story of My Mission': London, 1860, 339.

It is natural that the designs of the builder-architects, all men of one trade or another, should reflect their particular skills. It was this that was largely responsible for the varieties of architectural treatment of the early houses, in which face-brick vies with plaster, stone with half-timbering and tile-roofing with stone-slates. Walking through the old towns it was sometimes even possible to tell the trade of the master-mason from the buildings he produced. A proud brick-layer would naturally favour facebrick, a skilled plasterer decorated stucco, a glazier large areas of windows and elaborate fanlights, and a carpenter extensive veranda-ing and large bracketted eaves.

One of the most significant things about Cape architecture in the early nineteenth century was that it generally suffered from a dearth of architects of real vision and talent. There was no one of quite the calibre of Jefferson and Latrobe in America or Francis Greenway in Australia.

Indeed there was a continual shortage of experienced architects of any calibre. In spite of the co-operation of the Military Engineers, and the presence of Thibault as Government Architect, Sir George Yonge had to write to England in 1800 ' for a person to be sent out to build more barracks and other edifices...'.[1] Similarly, Harrington's house in Simonstown (c. 1815) was designed by 'an English architect'[2].

At this time Thibault offered his services as Director of Arts and Crafts in a Technical Institute which was being founded by the Lodge de Goede Hoop. 'Arts at the Cape must be arts of first necessity, most of which require knowledge of drawing'.[3] Apparently as a result of his insistence on the need for

1. Lady Anne Barnard, quoted in 'Africana Notes and News', I, 11.
2. Journal of Sarah Norman Eaton, MSS. S.A.P.L.
3. Letter of Thibault. Education Fund File of Lodge de Goede Hoop.

sound designers, architecture was placed on the curriculum, with the German sculptor Anton Anreith as full-time Instructor. 'Beginners in architecture must study mathematics and the drawing of ornamentation...'[1] the latter observed. There were also courses in carpentry and 'house painting' (mural decoration).[2]

Unfortunately, Thibault died in 1815 and Anreith in 1822. Of the men they taught, W.F. Hertzog later became Assistant Surveyor-General; Abraham Auret (of whom Anreith said that 'in freehand drawing he could exhibit in Rome or Paris'[3]) became an architectural draughtsman in the Surveyor-General's office; and H. Teubes, another architectural student whom Anreith praised in the same terms, became a Cape Town architect in private practice; of Charles Fisher, who had 'drawn the five orders of architecture very nicely', nothing further is known. De Smidt was taken on as a draughtsman of plans and maps in the Chief Secretary's office; and Herman and Jan Schutte, the sons of Herman Schutte, old pupils of Anreith and Thibault, became qualified surveyors.[4]

At the end of the eighteenth century the trend of art was collective rather than individual. The geometric regularity of the street scene, the restraint of community life which found expression in the harmony of aesthetic neighbourliness, these gave expression to it, and were understood, valued and freely interpreted by architects, contractors and craftsmen alike.

The decay of taste, increasing eclectism and false monumentality of the later Cape architecture, which we can already see appearing in the last works of Thibault,

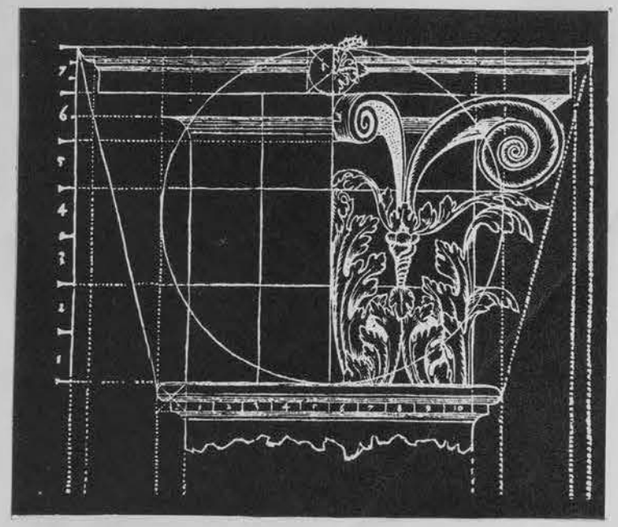
1. Letter of Anreith, Ibid.
2. de Bosdari, 'Anton Anreith', Cape Town, 1954, 56.
3. For this, and the succeeding information in this paragraph, v. de Bosdari, 56-58.
4. It is worth noting, though not in connection with the Institute, that William Jones also trained his son as an architectural draughtsman, and that he stayed on in the office of the Inspector of Buildings for some years after Jones' death.

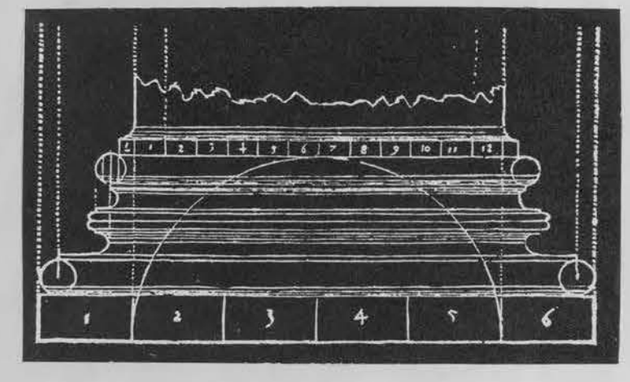
was relieved for a time by the purge of Georgian influence. But eventually this failed as well, under the stress of Regency 'Picturesque'. To be successful the 'Picturesque' clearly needed the guiding hand of the architect. Professional training became an essential of the new fashion, and the architect emerged as a romantic specialist, used to expressing an individualism in style which none but the initiated could dispute.

Fortunately the Colonial architects were usually practical men. Though they enjoyed indulging in the fashionable Romantic styles, they seldom lost their sense of proportion; principles of sound planning and common sense prevailed. The good points in their work were learned through hard necessity and resulted in an architectural style which, in spite of imported gloss, was basically moulded by local conditions to be functional, vigorous and apt.

SEVENTEEN :

THE CONTEMPORARY THEORIES OF DESIGN.





1. Vignola's proportioning of the Corinthian Order; from 'Regola delle Cinque Ordini d'Architettura'.

1. First published in Italian in Venice 1570; translated by Isaac Ware. London, 1738.

CHAPTER SEVENTEEN

THE CONTEMPORARY THEORIES OF DESIGN.

'... beauty does not consist in the elements but in the harmonious proportion of the parts ... as is written in the canon of Polyclitus.'
(Galen: 'Placita Hippocratis et Platonis'.A.D.150-99.V,3).

'Beauty will result from the form and correspondence of the whole with respect to the several parts, of the parts with regard to each other, and of these again to the whole; that the structure may appear an entire and compleat body, wherein each member agrees with the other...'
(Palladio. 'The Four Books of Architecture', 1570.I,i,1)
1

It is not easy today to appreciate the late eighteenth and early nineteenth century attitude to architectural design. While in science and engineering the progress of human thought had been more or less continuous, the development of architectural theory since 1830 has been only intermittent, and in some respects almost retrogressive.

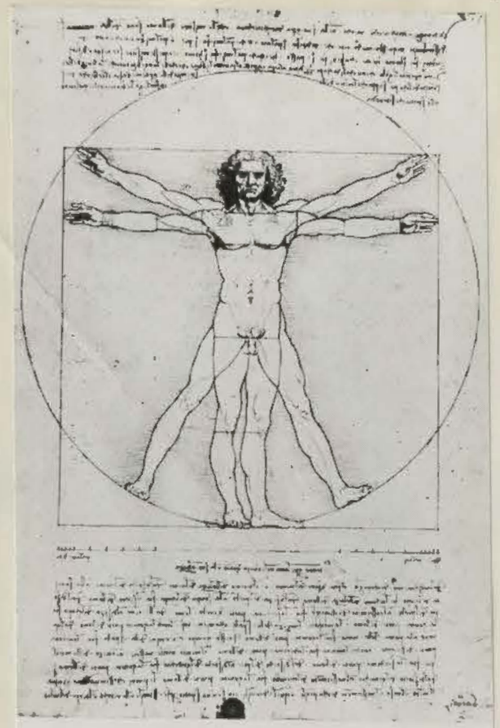
Much that was ingrained in the architects of one hundred and fifty years

2. Proportioning in Byzantine art; from Panovsky 'Die Entwicklung der Proportionslehre als Abbild der Stilentwicklung', 1921.

ago by a long tradition of aesthetic experimentation and reasoning dating back to the early Renaissance has been lost. Theories of design were then so integral with their craft that they were accepted almost without comment - by the practitioners and their clients as well. When the inroads made by the Industrial Revolution and the Romantic Movement gradually brought the collapse of the old order, traditional theories of architecture were cynically dismissed, and the architects and builders were left to attempt to cope with the enormous building programme of the 19th and 20th centuries with only the most meagre aesthetic theories.

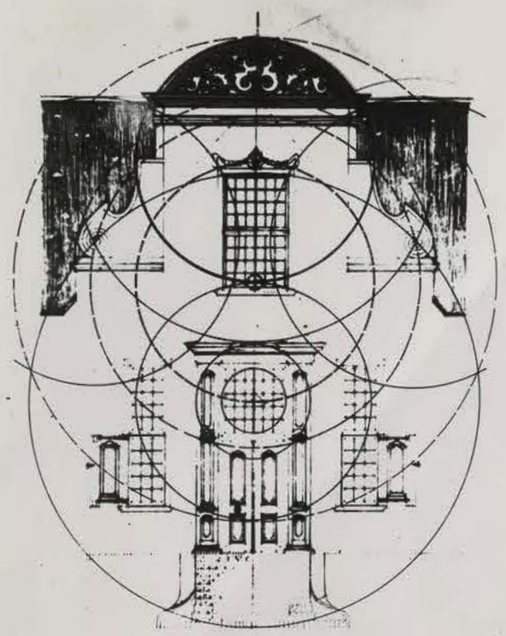
It is for this reason that historical studies of architectural creeds, and, in particular, of the theories of proportioning which formed a major part of many of them arouse so little interest today, and are even greeted with scepticism. In the modern subjective view, art is essentially irrational. The contemporary observer is unconvinced, if not actively antagonistic, when the historian tells him that a rational method of design - even a systemmatic proportioning scheme - underlies an aesthetic experience, instead of an arbitrary creative act.

Yet the value of research into the history of theories of design must not be underestimated. Not only is it of interest to know that particular architects or periods of architecture did work to some rational system, achieving harmony by geometrical or arithmetical organisation and following certain preconceived aesthetic laws, but also the exact type of theory each evolved has great significance in an understanding of 'style'. For it would be a mistake to assume that the theories of design all belong to the same genus.



—Leonardo da Vinci, Vitruvian Figure
rawing. Accademia, Venice

3. Leonardo da Vinci: diagram to illustrate Vitruvius' theory that the geometrical perfection in the proportions of the human body reveals the secret of beauty.
(Accademia, Venice).

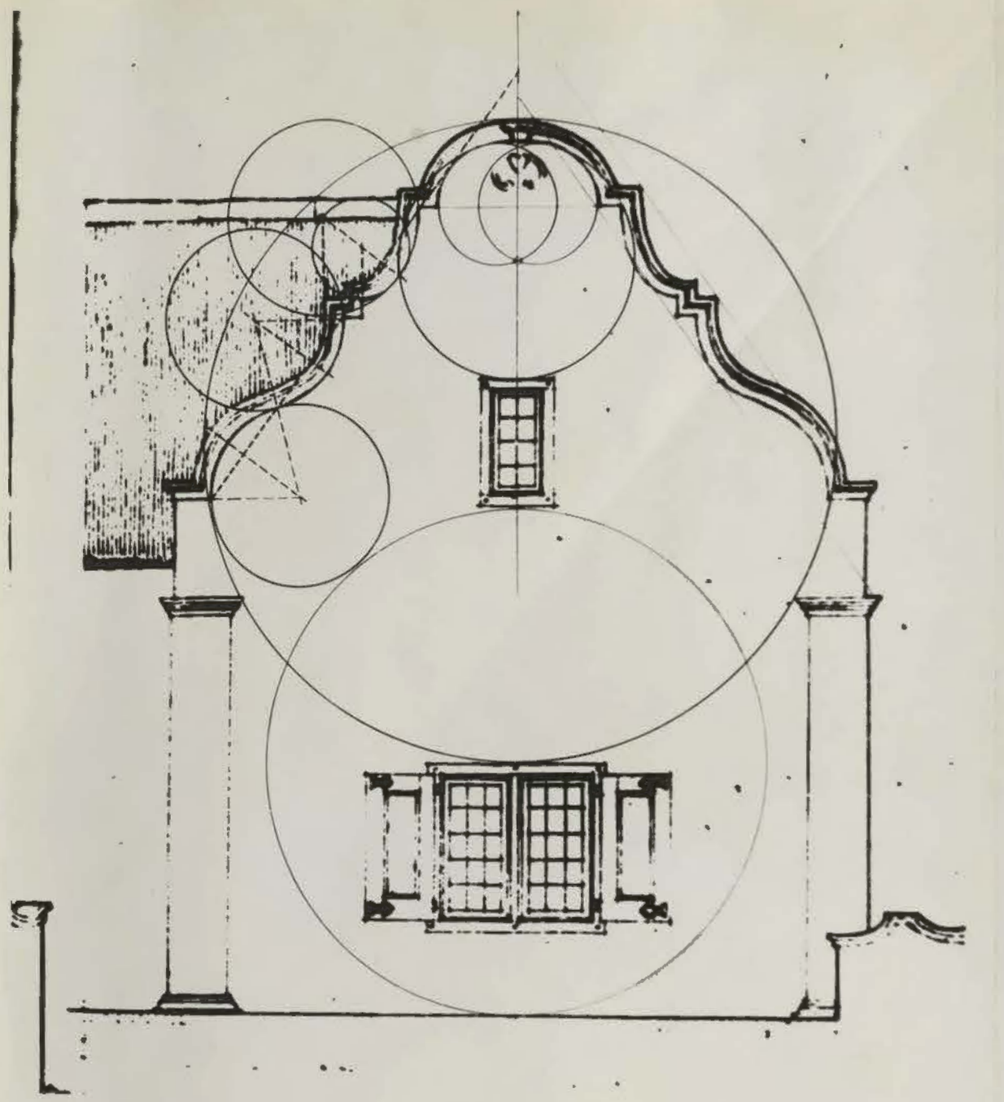


4. 'Stellenberg', Claremont. The two side focii of the centres of the volutes, the vase focus above the upper windows and the square fanlight all appear to take part in the tight integration of the design.

There is a fundamental difference between the design approach of the Palladians and the Greek Revivalists, just as there was between the systems which I will endeavour to show in the following pages to have been current at the Cape at the end of the eighteenth century, and those of the Georgian domestic architects. So basic are the theories of design that they might be said to lie at the very root of the character of each style.

Research into the processes of thinking and working of other times must inevitably depend mainly on documentary evidence. But such material applying specifically to the Cape is scanty. It was not until a later period that controversy over style brought architects to their writing desks to commit their architectural theories - or what was left of them - to paper. Fortunately we know something of contemporary theories overseas and, of course, the majority of the early architects and engineers were trained in Europe under established systems of design. In addition, even in the absence of direct evidence, there may be sufficient clues in the buildingsthemselves to suggest the type of approach that was in use. While drawing deductions on this kind of evidence is clearly a risky process ('reading out of the objects just what the searcher has put into them' as Panofsky calls it[1]) it is one to which we have to resort if we are to get very far with this problem in South Africa. Fortunately, sufficient examples from all periods survive to enable us to speak with some assurance of correspondences between buildings of similar style and date. One building reaffirms another, as it were, and it is not difficult to discover whether deductions apply in general or only in particular cases.

1. Panofsky 'Meaning in the Visual Arts'. New York. 1955, 55.



5. 'Nederburg', Side gable. The inner (shadow) side of the gable moulding seems normally to have been used to fix the profile and not the silhouette; evidence for this may be seen in this example in the way in which the 'cyma reversa' curve is determined at the lower extremities of the gable - the horizontal breaks lie on lines passing through construction centres, giving perfect 'normal' junctions, which the outer moulding cannot achieve. The upper elliptical profiles may have been here set out using a common device, a tangential junction of two arcs, one half the radius of the other. (Practical limitations on the accuracy of measurement of the gable profiles must be kept in mind).

Common to all theories of architecture in the Renaissance (right up until the beginning of the nineteenth century), was the use of some kind of rational design system which would facilitate the organisation of all the parts of a building together to ensure unity and harmony. In the Age of Enlightenment this type of approach was taken as evidence of man's pursuit of reason and order in all his works. Generally known as 'systems of proportioning' these processes included geometrical methods of design as well as 'analytical' or 'mathematical' proportioning schemes.

I. GEOMETRICAL SYSTEMS.

Naturally, design by geometry is considerably less intellectual than design using numerical ratios and mean proportionals. It is also taken to be considerably more difficult to carry out without compromise. But geometrical designing has always had tremendous appeal to the practical architect who may, using it, work empirically with familiar T-square, set-square and compass, instead of involving his design processes in the realm of mathematical abstractions. From the early Renaissance to the early nineteenth century a hard core of opinion favoured the use of simple geometrical figures, the square, the double-square and the circle, as the unifying elements in a design.

The earliest designing systems traceable at the Cape seem to be of this type. This is hardly surprising since Baroque and Rococo gables and parapets were almost entirely based on geometrical constructions using segments of circles (Plates 4 and 5). It was a method of working so firmly entrenched at the Cape that even Thibault seems to have been affected by it.

1. The study of the development of the Cape Dutch gable design is a subject on which a vast amount of research remains to be done. For the present purpose I have been able to examine only a limited number of examples, but enough, I trust, to warrant the deduction of the above general observation.

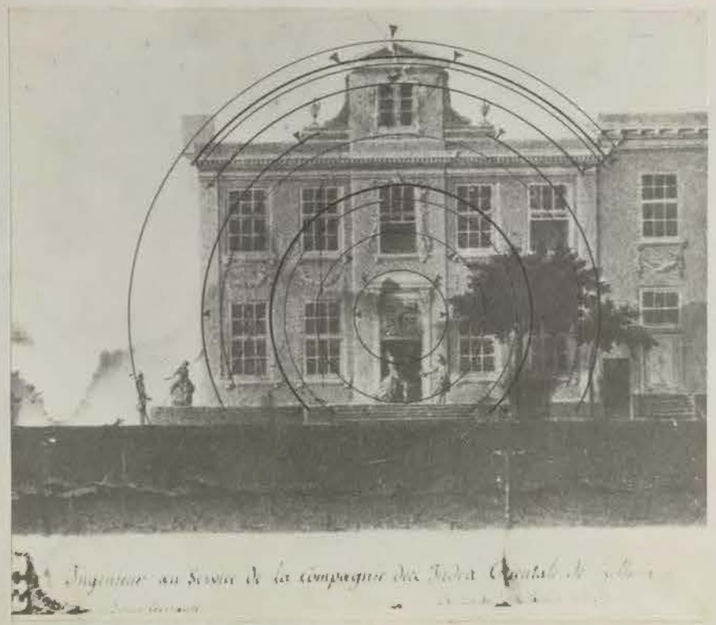
2. M.Borissavlievitch. 'Les Theories de l'architecture' Paris, 1926, 85 - 89. Although French theories after Percault (c.1680) had for some time tended to be sceptical of the value of the rational approach, by the mid-eighteenth century a reaction had set in in favour of Vitruvius and Palladio. v. also Scholfield; 'Theory of proportioning in Architecture'. Cambridge, 1958, 68, 70.

3. Briseux. 'Traite fe beau'. Paris, 1752; he undertook to demonstrate 'physically and by experience' that architectural beauty depended on proportioning.

4. Langier. 'Essai sur l'architecture'. Paris, 1754.

5. Vitruvius. 'De Architectura'. 1st century A.D. cf. Borissavlievitch, 89-91.

6. They are, of course, much more interesting as subjects for analysis than the finished buildings, in which even the small changes in dimensioning which have crept in in the course of erection or maintenance may be seriously misleading, and make it more difficult to work back to the original proportioning system.



6. Thibault's design for house on the Heerengracht, 1791. (Vol.I : Plate 20 on page 27). The fanlight appears to serve as the radial focus.

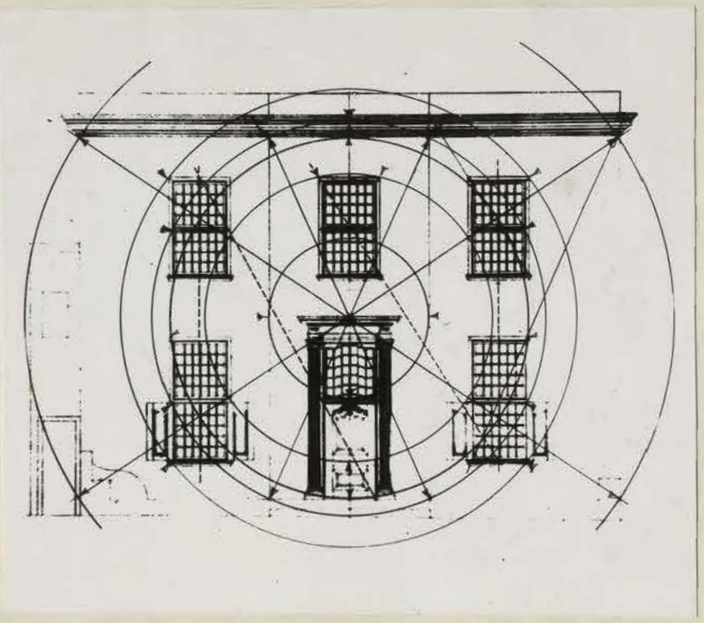
We have already observed that eighteenth century architecture at the Cape concerned itself more with modelling and breaking up of surface than with the relationship between solid and void. Windows were simply additional surface elements and took their place alongside frames, scrolls and stucco ornaments as incidents in the passage of the eye over the plane surface of the building. The climax came in the silhouette of both functional and contrived forms against the sky, which dominated the whole facade. No wonder the designers lavished all their geometrical skill on the proportioning of the gable and the parapet - with perhaps a rather more cursory treatment of the rest of the building.[1]

The revival of Classicism with the advent of French designers at the Cape brought a renewal, if any were needed, of the influence of academic theories of architecture. At the time when men such as Thibault were impressionable students in France, theorists were combining Palladian ideas from England with Neo-Classical Vitruvian concepts.[2] Besides harmonic and commensurable systems of proportioning it is evident that Briseux[3] and Langier[4] were intrigued by the 'geometricism' implicit in Vitruvius.[5]

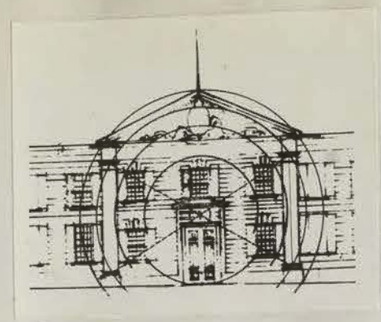
An analysis of the most complete series of Cape architect's designs which have come down to us from this period - those of Thibault[6] - yields intriguing results. Even allowing for the pitfalls of inductive reasoning there seem to emerge from the drawings certain common design principles.

A. THE USE OF CONCENTRIC CIRCLES.

Each facade has a central point, the focus, generally near the centre of gravity of the whole surface (Plates 6-9, 11, 15). From this focus the position of elements and limiting mouldings in all directions is fixed equidistant-



10. 14 Keerom Street, Cape Town. A simple house design which was clearly deliberately proportioned.



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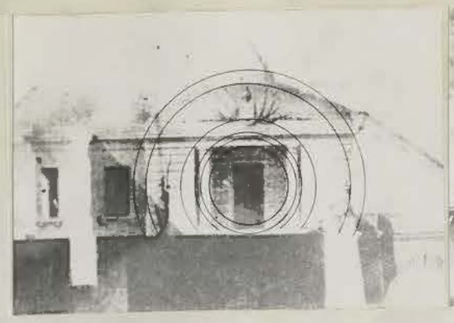

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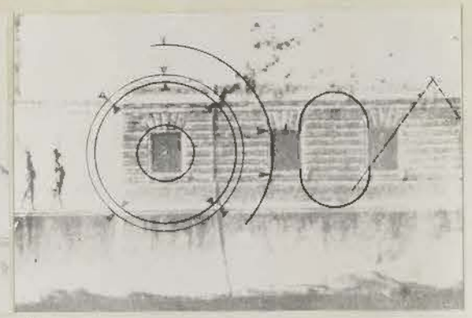

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11

The Architecture of Louis Michel Thibault, Cape Town:

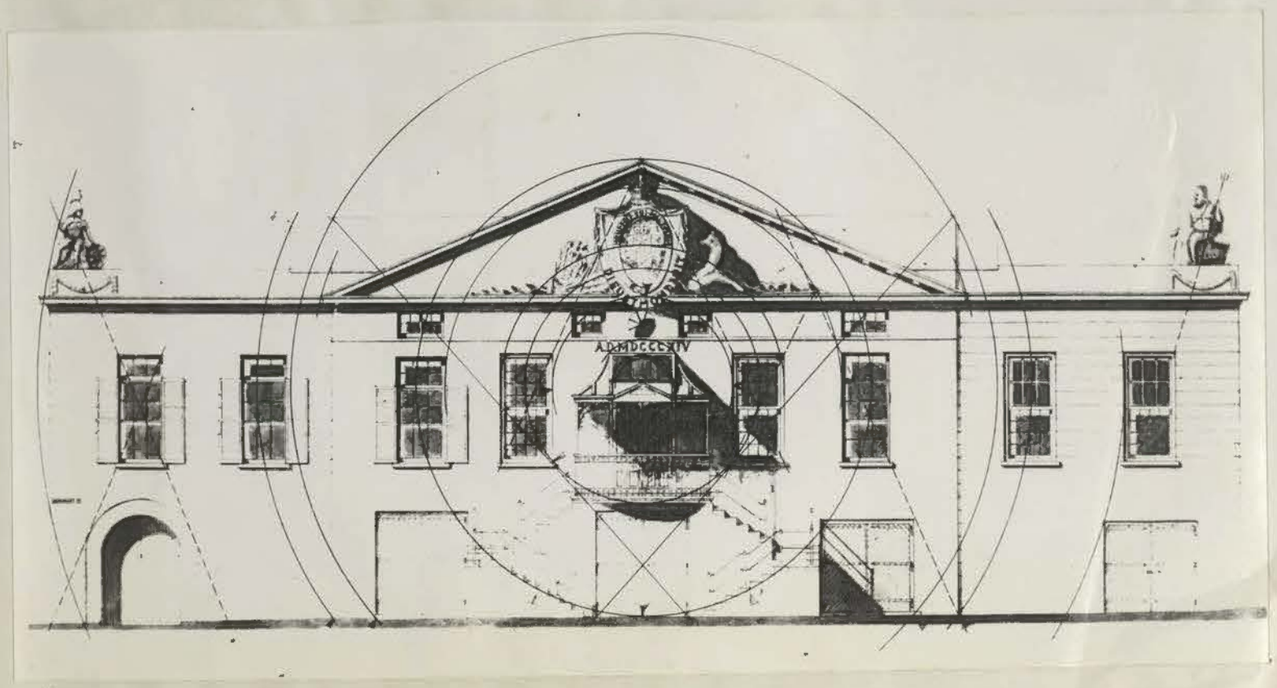
7. The Supreme Court building, c.1809 Graaff(Parliament) Street facade. The elaborate ornament above the door serves as a focus.

8,9. The Avenue Guardhouse, 1791. (Vol.I, Plate 20 on page 27).

11. The Goede Hoop Lodge, 1801.

12. The Customs House. c.1809-1814. The radial point for the semicircular fanlight serves as a focus; (attributed work).

13. Koopmans de Wet house, Strand Street. The centre of the elaborate frieze of circles and triglyphs above the door is the focus; (attributed work).



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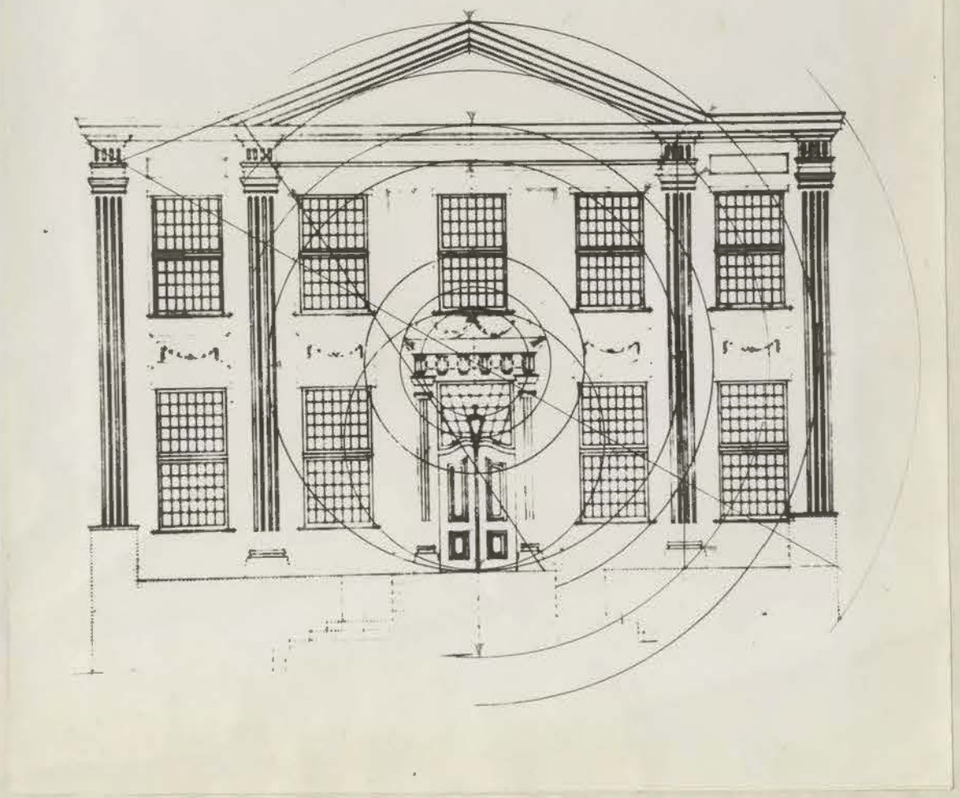


13

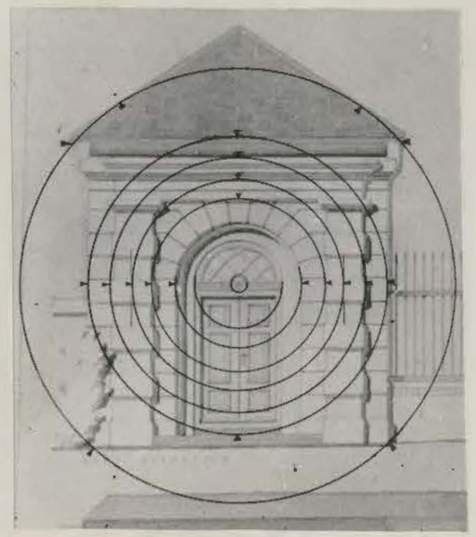
1. At the same time it is interesting to observe its apparent relationship to the indigenous system. Did the pre-occupation which Thibault was forced into with Baroque (cf. Chapter 2 page 31) eventually contribute to the evolution of this method of design?

2. Plate 7 shows the other elevation of the Supreme Court Building; the original drawings do not survive.

3. cf. Pearse 'Eighteenth Century Architecture in South Africa', London, 1933, 31, and de Bosdari, 'Cape Dutch Houses and Farms', Cape Town, 1953, 16 etc.

4. Though slightly asymmetrical, the right hand dimensions conform accurately to those of the centre bay, the left hand ones are a little larger.

14.A. Fanlight of the Great Hospital.c.1790 (Original drawing).



14. Guardhouse at Rustenburg (probably by Thibault).

ly by a series of circumscribing circles. The whereabouts of the focus in the facade is invariably emphasised in the surviving drawings by a strong shape, a square, a rectangle, a circle or a segment of a circle, which leads the eye inwards to the point from which generate the radiating concentric guide lines of the design.

Nothing could be simpler than this, and it is a system likely to appeal equally to the Romantic and the practical in Thibault - easy in execution, relatively flexible and yet conforming to the best classical precepts in its rational use of the perfect form, the circle.[1]

Assuming the possibility of this system actually having been identical with, or closely akin to, that used by Thibault, it is interesting to make a similar analysis of those buildings which he is thought to have wholly or partially designed.[2]

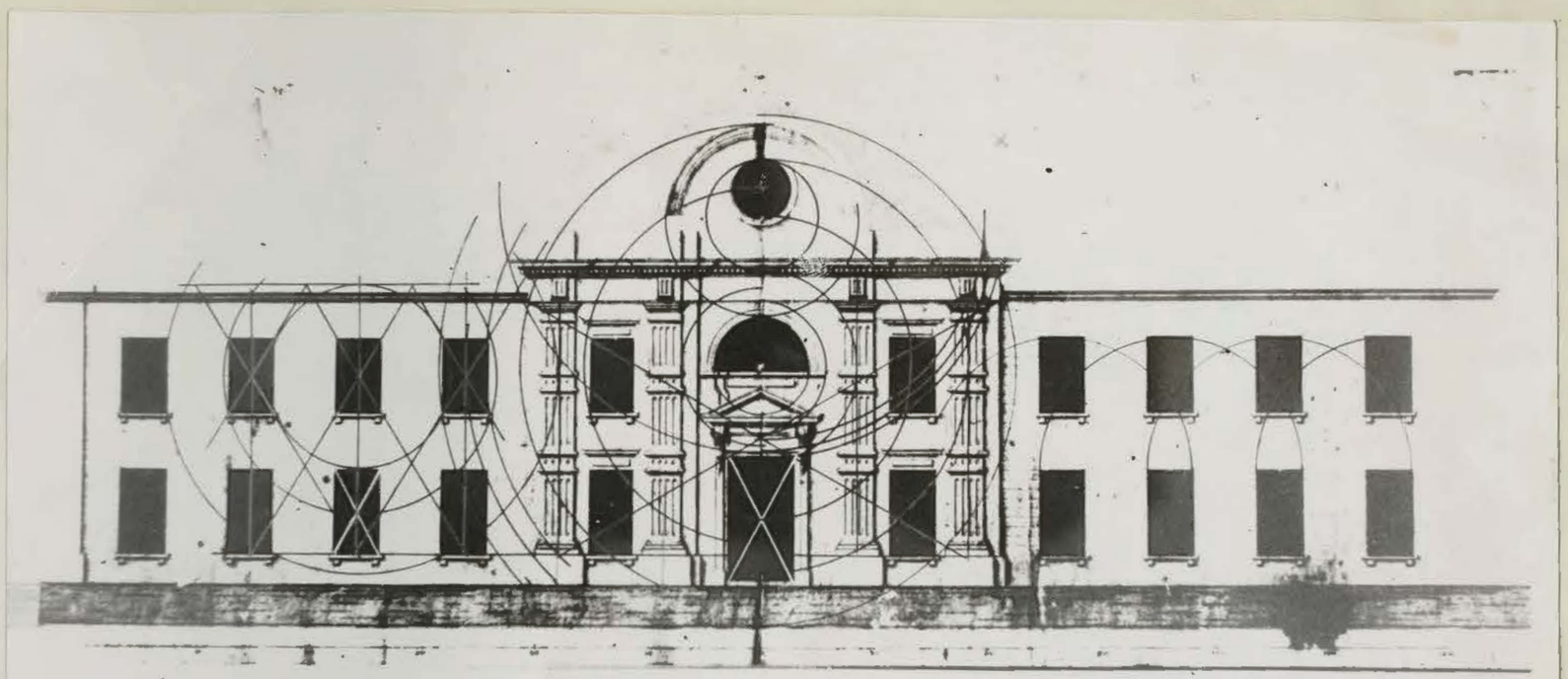
Of them, the Customs House of 1814 (Plate 12) is likely to have been his work, and seems to follow a similar pattern of design, especially in the centre bay. (It has, of course, been extensively altered on several occasions). On stylistic grounds the frequent attribution of the Koopman's de Wet house in Strand Street to Thibault may well have some foundation in truth.[3] Analysis shows that it too conforms to the concentric system (Plate 13).[4]

The Guard House at 'Rustenburg' (Plate 14) is strongly reminiscent of Thibault's designs for the lion gateway in the Avenue, and is almost certainly his work.

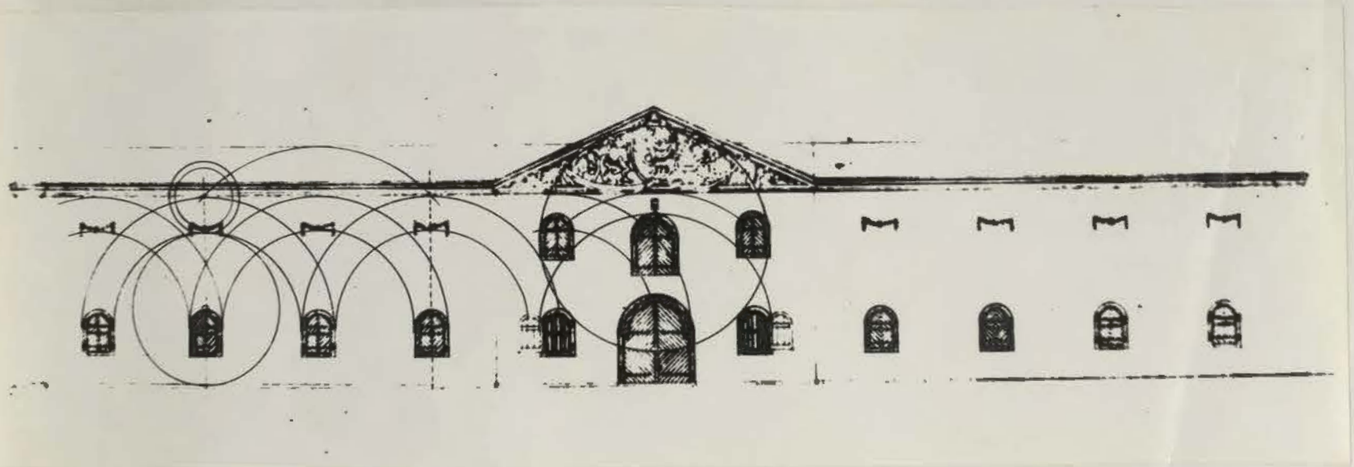
Two other buildings often claimed as Thibault's, the Wine Cellar at 'Groot Constantia' and the house 'Uitkyk', have some affinities with his work, especially with the design of the Graaff Reinet Drostdy. In all three of these cases

15.A. Geometrically designed fanlight based on intersecting arcs; from George.

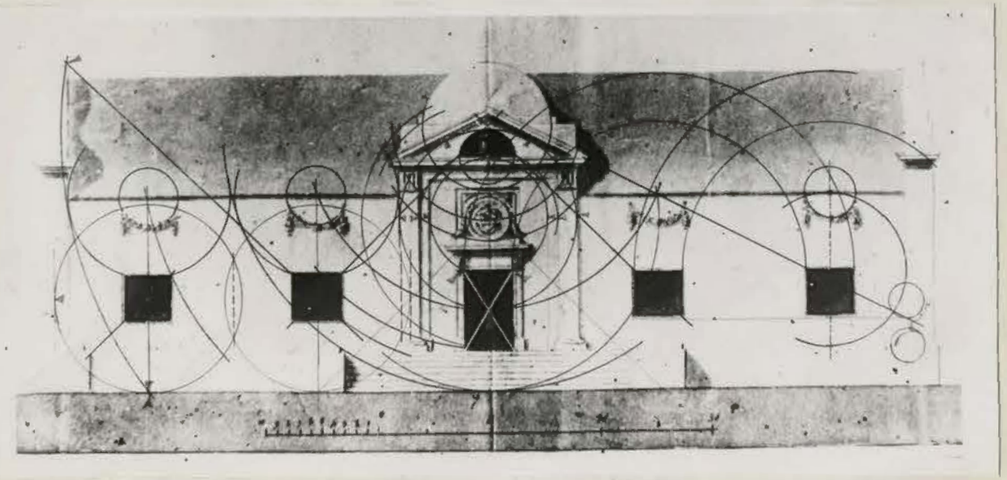
The Architecture of Louis Michel Thibault:



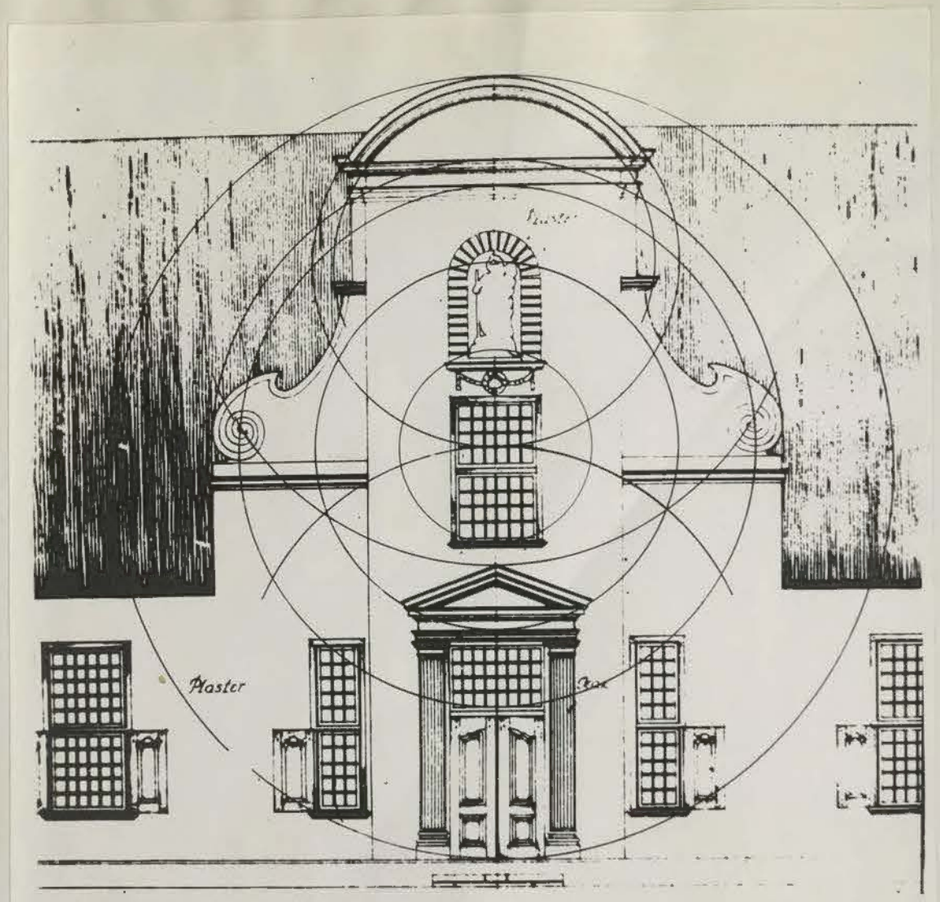
15. Heerengracht facade of the Supreme Court building, c.1809-14. (Architect's drawing - cf. Vol. I, Plate 5 on page 117 and Plate 7 on page 118). The perfection of the system of interpenetrating series of concentric circles is clearly revealed.



16. Winecellar at 'Groot Constantia' (attributed work). The height of the cornice and festoons are geometrically fixed in terms of the spacing between the window (cf. the right hand side of Plate 15).



17. Graaff Reinet Drostdy (Architect's drawing - cf. Vol. I. Plate 8 on page 107), c.1804. Shares many of the characteristics of the Supreme Court facade, the focus in this case being a circular medallion above the door, serving the same purpose as the Supreme Court fanlight.



18. 'Groot Constantia' - main gable (attributed to L.M. Thibault) cf. Plate 4; although the position of the focus point at first seems completely arbitrary, it will be noticed that it is exactly halfway up the height of the building, and also that it lies on the circumference of the circle of which the pediment is an arc.

there is the same 'raised brow' appearance and a peculiar stunted row of windows (in the two houses they are actually square in proportion). This seems to suggest that the three designs share a common design trait, one which may involve not merely the festooning of the upper wall surface but the use of some odd system of proportioning such as that suggested (Plates 16 and 17). It appears possible that in these buildings Thibault was interesting himself with window openings as strong positive elements in the wall surface - a notable departure for the Cape - and that his method of design was adapted to bringing out this quality.

A remaining attribution to Thibault are the gables of 'Groot Constantia' (Plate 18). But this type of gable is not unknown on other houses, the finest example probably being 'Stellenberg' (Plate 4).[1] There is strong evidence that they too were designed on some system of concentric or interrelated circles, and this immediately raises the question as to how far the use of such a system was limited to Thibault himself.

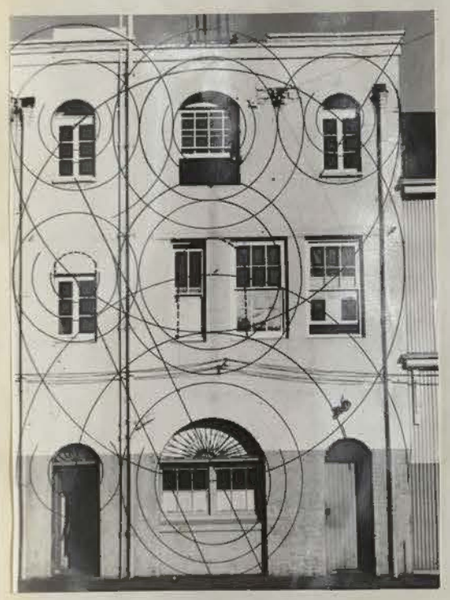
The answer seems to be that it was not. Apart from the traditional use of compasses in designing gables and parapets at the Cape, Thibault must have exhibited a considerable personal influence on his contemporaries. During most of his lifetime he appears to have held the unchallenged respect of all the craftsmen and contractors, as well as the majority of the citizens, and some reflection of the way he worked might be expected to turn up not only in the designs of the pupils he taught but also in the routine buildings of the Cape Town contractors. This may explain the surprising ease with which the early brick warehouses submit themselves to concentric analysis (Plates 19-22),[2] and the number of houses of this period, i.e. the turn of the nineteenth century, which appear to have some affinities with this same system (e.g. Plate 10).

1. Actually owned in 1808 by Thibault's brother-in-law Evert van Schoor (C.O.13, Sept.9th, 1808). But contemporary opinion today tends to ascribe the design to a period before Thibault's arrival - on little direct evidence, it may be noted. In 1787 de Grandpre observed that most of the town and country houses 'were the work of the master mason of the district', but as this was not, of course, a Government post, it is yet impossible to determine who this gentleman was in each district. (De Grandpre 'Voyage a la Cote occidentale d'Afrique' etc. 2 vols. Paris. 1807).

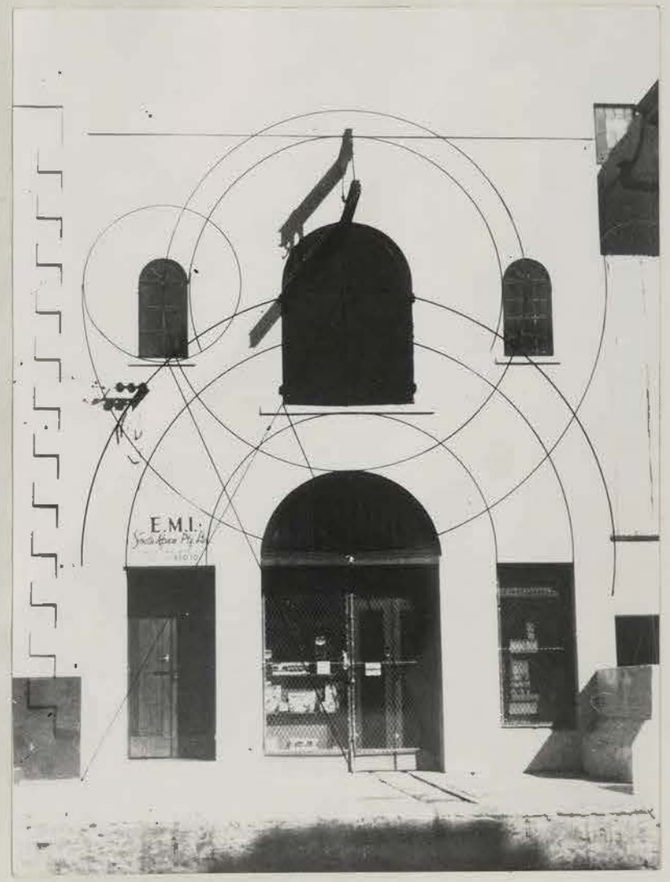
2. A system eminently suitable in buildings in which every window head is arched or segmented.

Brick warehouses in Cape Town:

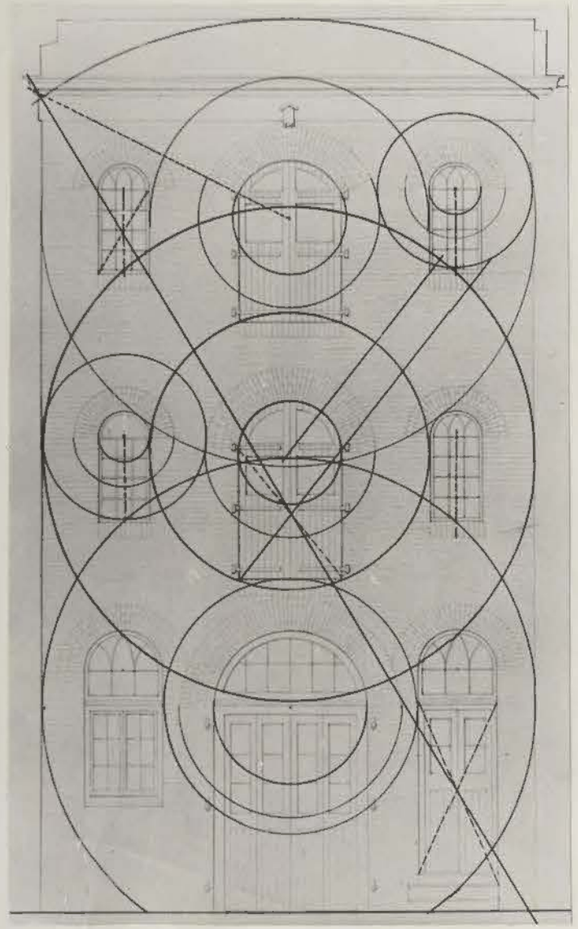
All have in common the method of fixing the position of the centre of the first-storey door head in terms of the width of the facade; 2 and 3 have the same device for fixing the cill of the first-storey doors; note especially the positioning of the upper windows and the cornices.



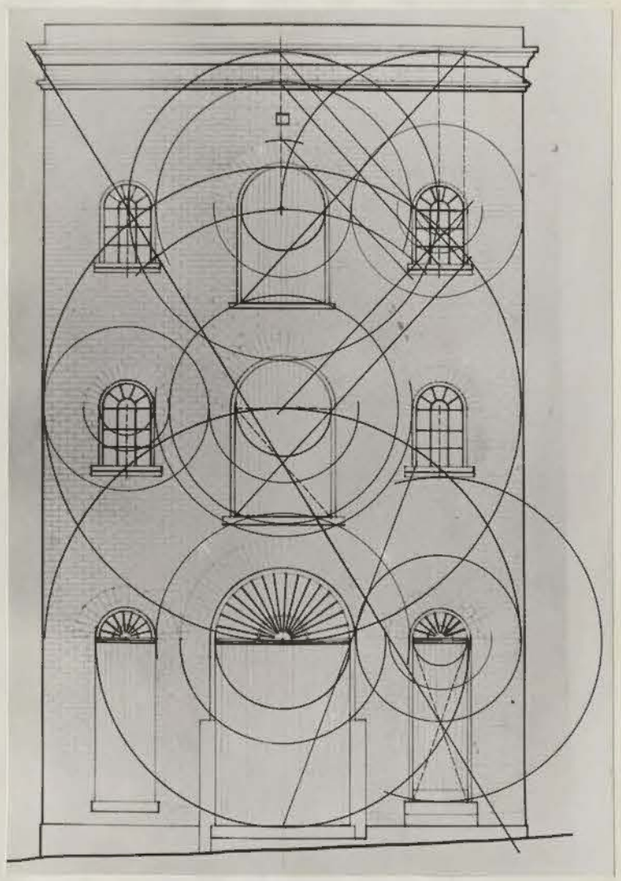
19. Strand Street, Cape Town.



20. Loop Street, Cape Town.



21. Riebeeck Square, Cape Town.



22. Wale Street, Cape Town.

1. At the same time it does not appear possible to make any other method of design - such as those discussed later in the Chapter, all of which were in use in Europe - fit either wholly or partially the buildings conforming to the concentric system.

23. Doorway in Swellendam. (Elliott).

The significance of these observations will be more fully understood when it is realised that, contrary perhaps to appearances, the discovery of facades suitable for the application of a concentric system of circles is not easy. Among all the post-1815 buildings available for analysis, only two, both probably dating from the next decade, one in Swellendam (Plate 23 - it may well be typical of others in the same area) and one in Cape Town, lend themselves to concentric analysis. Thereafter there seem to have been no facades which will accommodate the system with quite the logic of these early buildings.[1]

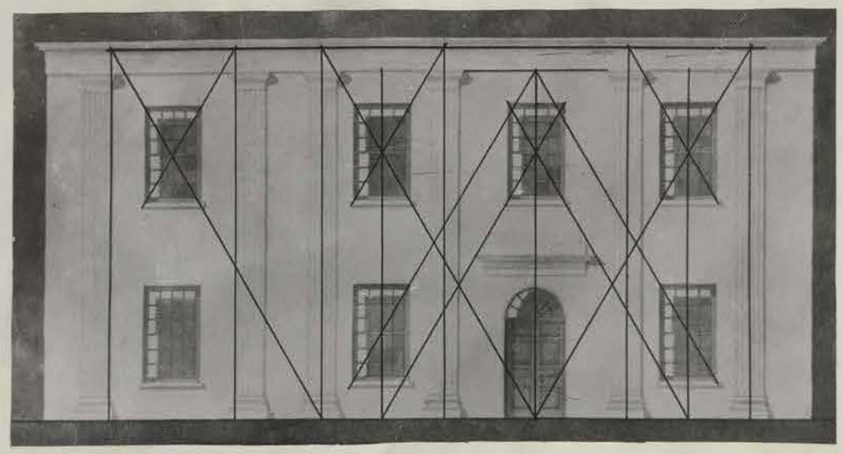
It thus seems logical to deduce, therefore, that, whether or not this is exactly the system on which they were organised, these early facades shared some method of design in common, and that, with the British Occupations it gradually died out, to be replaced by other more academic theories of proportioning, with which this one had few affinities.

B. THE USE OF GENERATING GUIDE LINES.

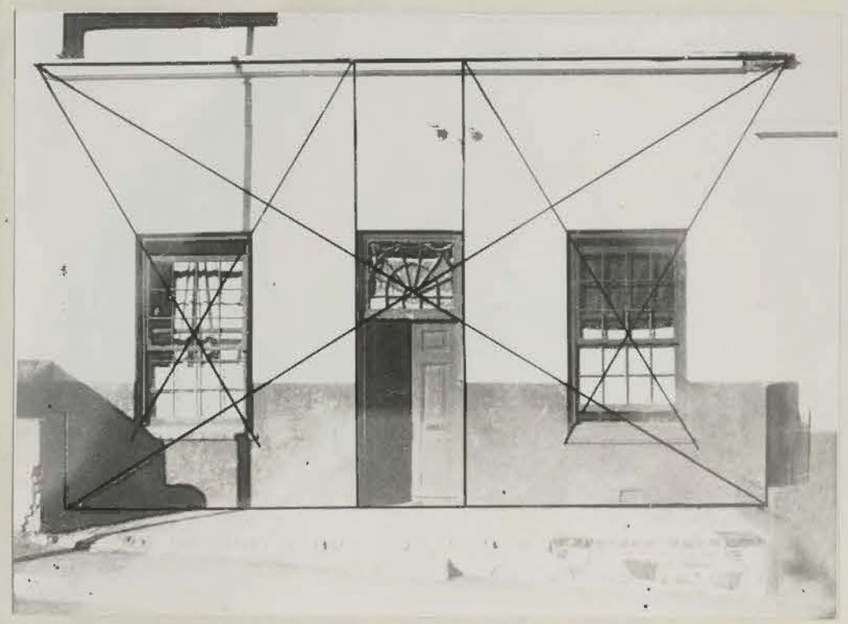
Early Renaissance writers sometimes based their theories of architecture on the principle that every form has its own natural geometrical co-ordinates. These include the natural axes and the major diagonals. According to this approach, the design of a building, or of parts thereof, should begin by a consideration of the overall form, the details contained within it being fixed according to its axes and diagonals. (Plate 28).

The use of this simple theory was complicated in the eighteenth century England by the stress placed on the shape and proportion of the windows. Eventually a compromise seems to have been reached in which the diagonal lines of the windows themselves were used to aid in fixing their positions in the wall

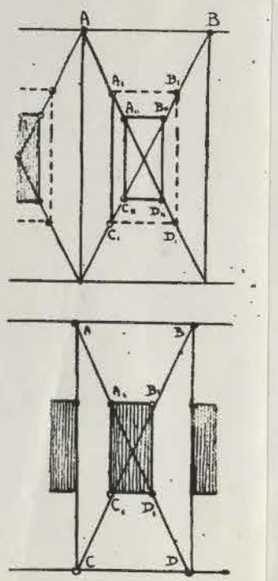
The use of window diagonals to fix the positions of windows and other surface features (the centre-lines of pilasters and the shadow-casting, edges of cornices and entablatures).



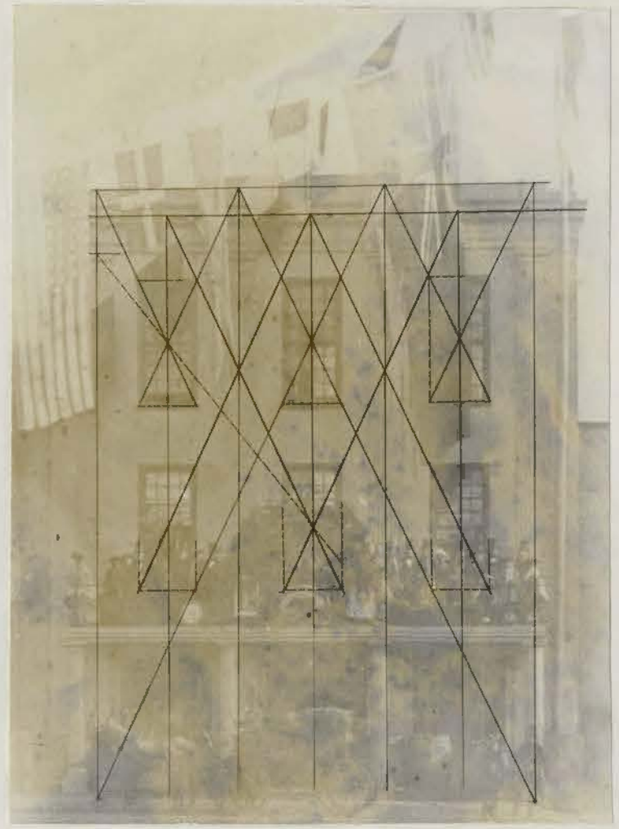
24. 144 Hatfield Street, Cape Town. (cf. Vol. I. Plate 19 on page 153).



26. House in Waterkant Street, Cape Town. c.1810-20; the use of the sides of the door to limit the window bay is a common procedure (cf. Plates 39 and 40).



27. Diagonal window-wall relationships; diagram from Thiersch 'Die Proportionen in der Architektur'. Hand. der Arch. IV.



25. 3 storey building on the Heerengracht, Cape Town; before 1815. (cf. Vol. I. Plate 36 on page 60).

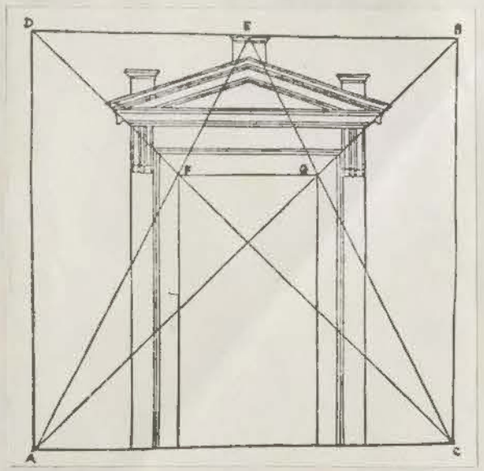
29. 90 Bree Street, Cape Town.

If we are to endeavour to imagine the steps by which this facade might have been designed, we must begin with the assumption that the architect had roughed out the width of the building, the height of the cornice (it was usual at this time to fix it in some visible relationship to the salient lines of neighbouring buildings), and the approximate size, number and position of the windows he intended to use. What now confronted him was the problem of drawing all the elements of the facade together in such an organised way that their arrangement would seem effortless yet inevitable.

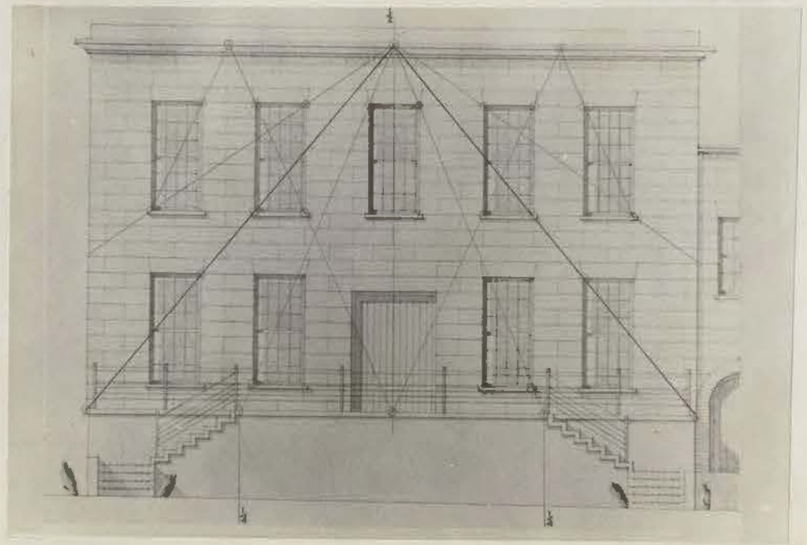
He would probably begin with the vertical centre-line, or axis, of the facade - since it was to be perfectly symmetrical this was obviously a basic guide line. From the point at which this intersected the top of the cornice (the most forward-projecting part of the facade) two diagonal lines would be drawn down to the bottom corners of the elevation. These were also important determining lines. Deciding that the basic proportion of his windows was to be 4:9 (Plate) he would draw two lines from the bottom end of the centre line, and on either side of it, at such an angle that any vertical rectangles drawn with them as the diagonals, would have the proportion 4:9. Once this had been done it was a comparatively simple matter to position the second window from the corner on each side. Its approximate size was known, one corner was made to lie on the major diagonal line and the diagonal of the window on the 4:9 line. From the point at which the 4:9 line crossed the cornice another 4:9 line would be drawn downwards again to fix the position of the top corner window.

The vertical and horizontal lines for the whole of the window subdivisions of the facade would now be fixed, remembering that the bottom outside window must have its top corner on the major diagonal, and must fall in line with the window above.

1. '... the windows are indicated only as voids in the solid masses. ... details were learned by heart ... and ... then placed on lines across the bare surfacesof the front, just as children write letters on the blank pages of their copy-books ... No books were written on it as 'real' architecture. But it is nevertheless very much alive. The whole form of the houses is an adequate expression of the taste of the period ... their aesthetic appearance was specially considered ... '. Rasmussen. 'London - The Unique City.' Copenhagen, 1934. London, 1937. (Reprinted 1960), 180. 179, 188.

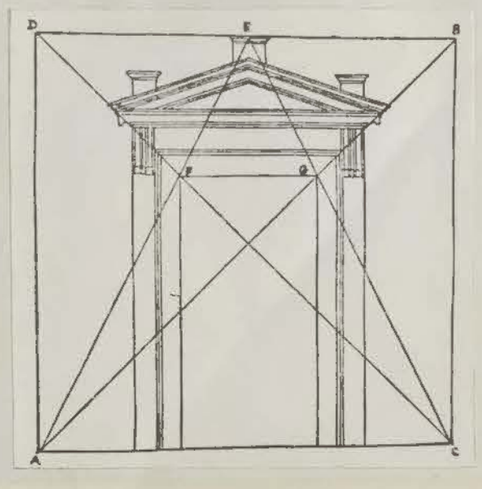


28. Diagram of proportioning by diagonals; from Serlio's 'I cinque libri d'Architettura', sixteenth century.

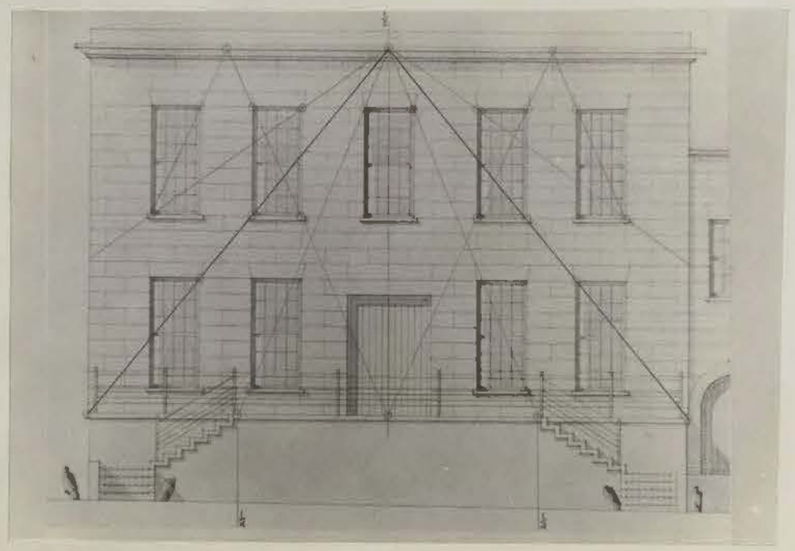


29. 90 Bree Street, Cape Town (cf. Vol. I, Plate 53 on page 172). The steps which might have been followed in its design are discussed opposite.

1. '... the windows are indicated only as voids in the solid masses. ... details were learned by heart ... and ... then placed on lines across the bare surfaces of the front, just as children write letters on the blank pages of their copy-books ... No books were written on it as 'real' architecture. But it is nevertheless very much alive. The whole form of the houses is an adequate expression of the taste of the period ... their aesthetic appearance was specially considered ... '. Rasmussen. 'London - The Unique City.' Copenhagen, 1934. London, 1937. (Reprinted 1960), 180. 179, 188.



28. Diagram of proportioning by diagonals; from Serlio's 'I cinque libri d'Architettura', sixteenth century.



29. 90 Bree Street, Cape Town (cf. Vol. I, Plate 53 on page 172). The steps which might have been followed in its design are discussed opposite.

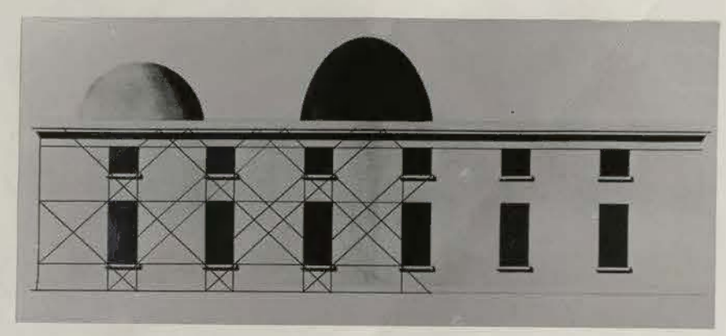
surface.[1]

This reasonable compromise theory seems to have been employed in a number of cases at the Cape (Plate 26 etc).

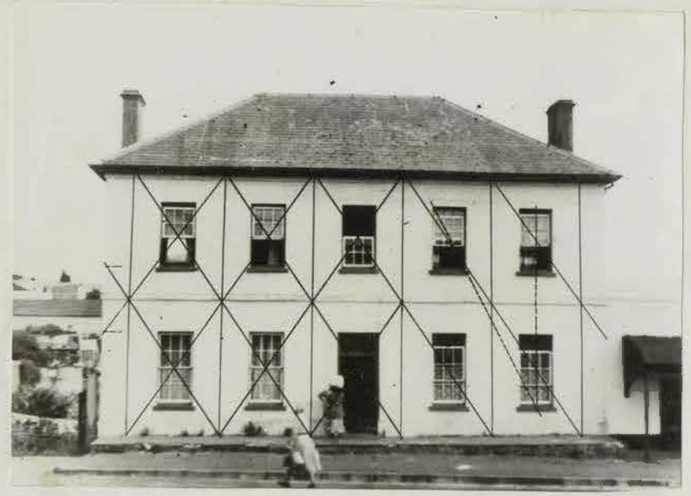
It is notable that the diagonals of the facade - or the diagonals of half the facade - frequently determine the position of the heads, cills, centres and corners of window and door openings: and that the diagonals of window and door openings, produced, often meet the boundary lines of the form, or of the plinths and cornices which seem to define it at the corners or on the central axis. In addition, windows may be interdependent, the position of the outer windows in Plate 29 being fixed in relation to the inner ones, so that their diagonals produced meet on the salient moulding of the cornice. In early designs of the Classic Revival period pilasters take an equal place with windows in the composition and the disposition of both is determined mutually (Plate 25). Plate 24 is a particularly interesting example of a clever use of this system to introduce harmony into a facade which is neither symmetrical nor has its pilasters or windows rhythmically spaced.

The Greek Revival of the eighteen twenties and thirties seems to have been characterised by a return to simple and direct methods of design. Not only can a fondness for proportioning with pure squares be discovered (as will be discussed later) but the spacing of the columns of the porticoes seems to have been determined on occasion by the use of a simple series of diagonal generating lines. (Plates 34 and 35).

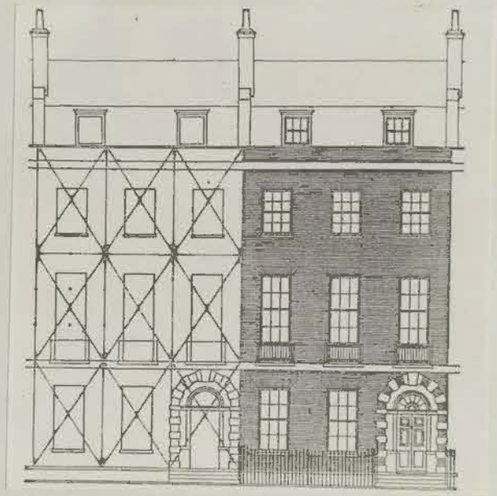
And in the side elevation of the Royal Observatory (Plate 30) the position and size of all the openings is fixed in relation to the base and cornice by an intricate system of intersecting diagonals.



30. Side elevation of the Royal Observatory, Cape Town. (Architect's drawing, 1821. cf. Vol. III, Plate 8 on page 411).



31. Bay designing in a house in Beaufort Street on the Market Square, Grahamstown.

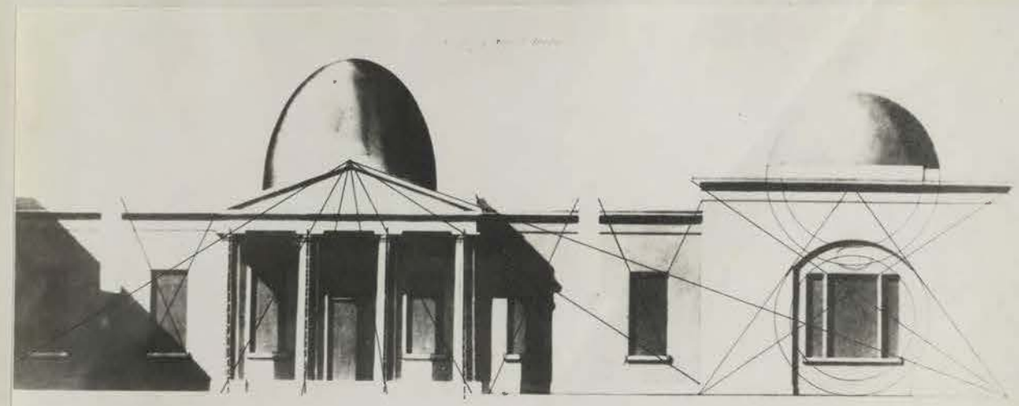


32. Bay designing in Bedford Square, London (from Rasmussen's 'London - The Unique City').

33. Bay designing in Bathurst Street, Grahamstown.

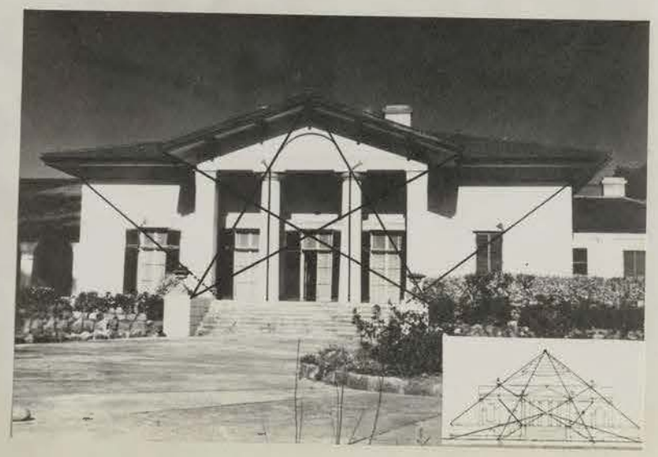
1. This system may well have constituted a surviving link with the mediaeval method of designing in a series of bays, which evolved because of the structural methods of that time.

2. Sir John Soane 'Lectures on Architecture' given at the Royal Academy c.1800 - 1814, published for the first time in London in 1929, 113-4.



34. Royal Observatory, Cape Town. (Architect's drawing, 1821).

35. 'Belmont', Rondebosch, compared with an interpretation of Palladio's Villa Rotonda. (The distortions in the photograph have been compensated for).



C. THE BAY SYSTEM OF DESIGN.

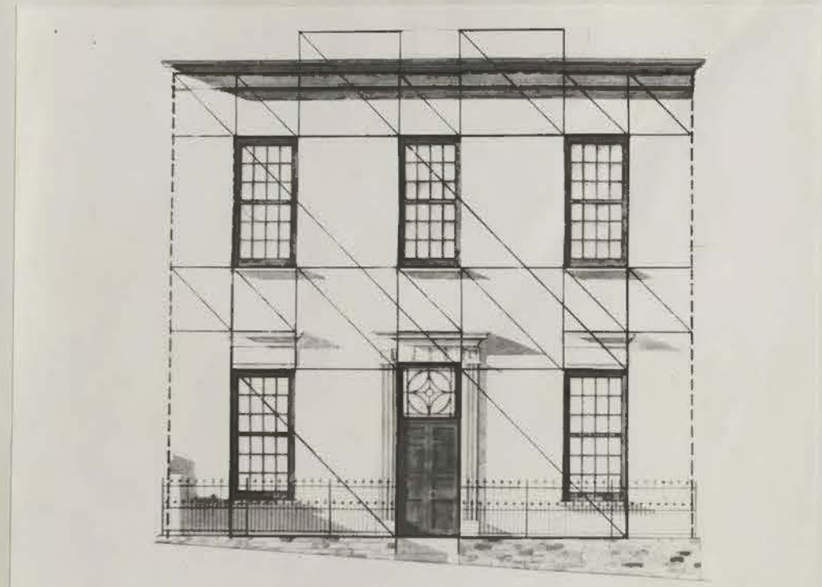
Given that a series of windows was going to be arranged in a regular rhythm, the diagonal approach was adapted to allow the division of the facade into a series of rectangles each with a window opening in its exact centre of gravity (Plates 31 and 33). This enabled the designer to fix, very simply, the most visually pleasing position of the plinth, cornice and intermediate string mouldings. (It is interesting to notice that the mouldings always seem to be designed so that the strongest shadow will lie on the line determined in this way, i.e.the position of the bottom of the string course is fixed, and not the top.[1])

D. THE USE OF THE SQUARE.

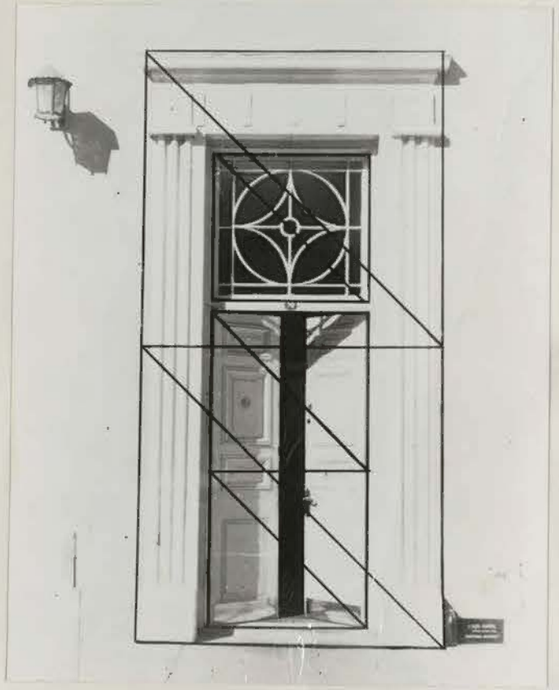
In the words of Sir John Soane 'Intrinsic beauty determines certain forms and proportions to be beautiful, such as the circle, the polygon, the square, the parallelogram, the cube, the double cube and others ....'[2]

Though Soane himself may not have been an exponent of the idea, methods of proportioning using pure forms to give buildings some attributes of this intrinsic beauty had been in sporadic use since the Renaissance (Plate 42), and appear to have been revived with new enthusiasm by the followers of the Greek Revival.

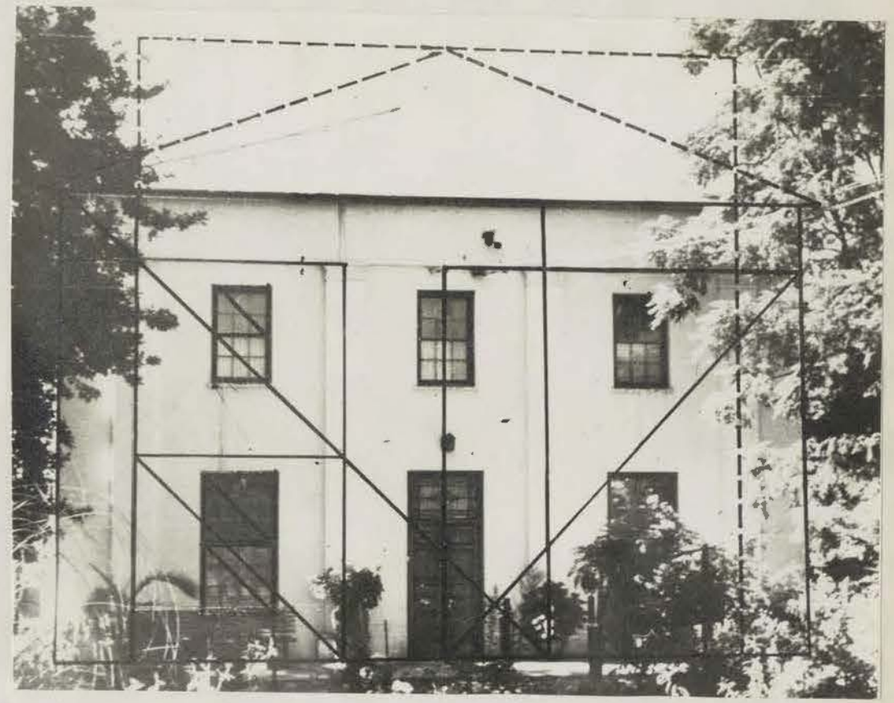
At the Cape several early houses, notably the Van Niekerken residence (Plates 36-7), were proportioned on the basis of a series of squares and double squares. Not only was the overall proportion a square, but the disposition of



36, 37. Van Niekerken house, Wale Street, Cape Town.



Proportioning by means of squares and double-squares:

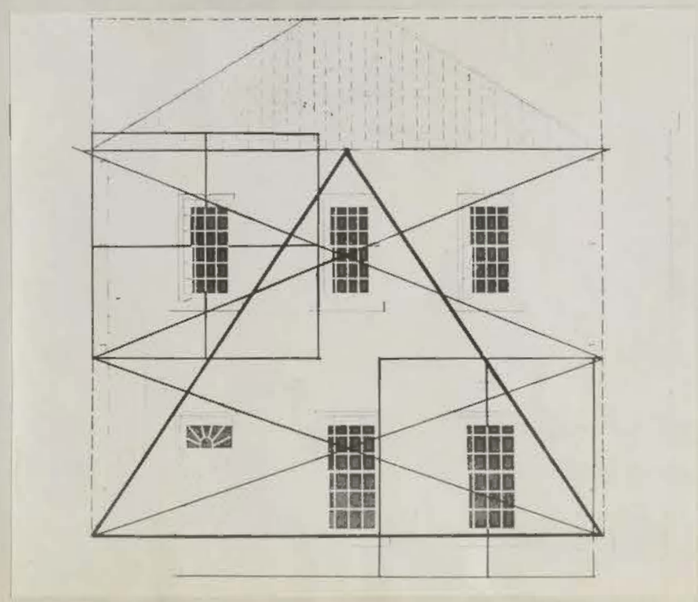


38. House in Wellington, 1839.

Proportioning by means of squares:

39. House in Somerset Street, Grahamstown. (v. Plate 42 on page 544).

40. 192 Longmarket Street, Grahamstown. (v. Vol. I, Plate 54 on page 173.



the windows is arranged on a series of lines formed on squares of different sizes. The focus to the facade is a square fanlight, while the doorway and windows are themselves double squares.

An interesting variation on this sytem is to be seen in the houses shown in Plates 39 and 40. These examples share in common the treatment of the outer windows as elements lying centrally in square bays. The windows are double squares, and in the former case the whole facade is also a double square, while the latter is, with the roof included, a single square. Note that in both houses the cill line of the lower windows is taken as an important base line in the proportioning.

A slightly later house, complicated by pilasters, but another perfect representative of the method of design based on a series of superimposed and interlocking squares, is shown in Plate 38.

To judge from the original drawing, St. George's Cathedral, Cape Town, was a splendid example of the efficacy of this system of design (Plates 41-4). The whole facade is two squares high, the columns of the portico together form a double square, and all the salient features of the tower are based on a diminishing series of squares and double squares.

The Drostdy at Worcester (Plate 46) also appears to have followed this Neo-Classicist approach.

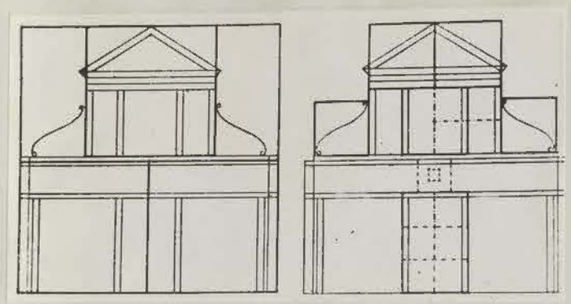
E. USE OF A REGULAR GRID.

Only one building of this period at the Cape has been found which may have been designed on the system of a square grid of guide lines advocated by, among

Opposite:

42. Alberti's proportioning of the facade of S. Maria Novella, Florence.

41,43,44. St. George's Church, Cape Town: proportioned on several series of squares of different sizes.



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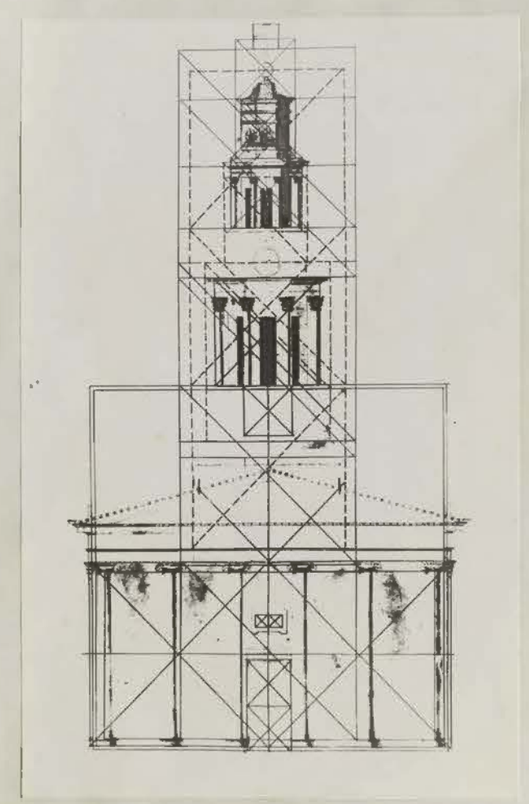

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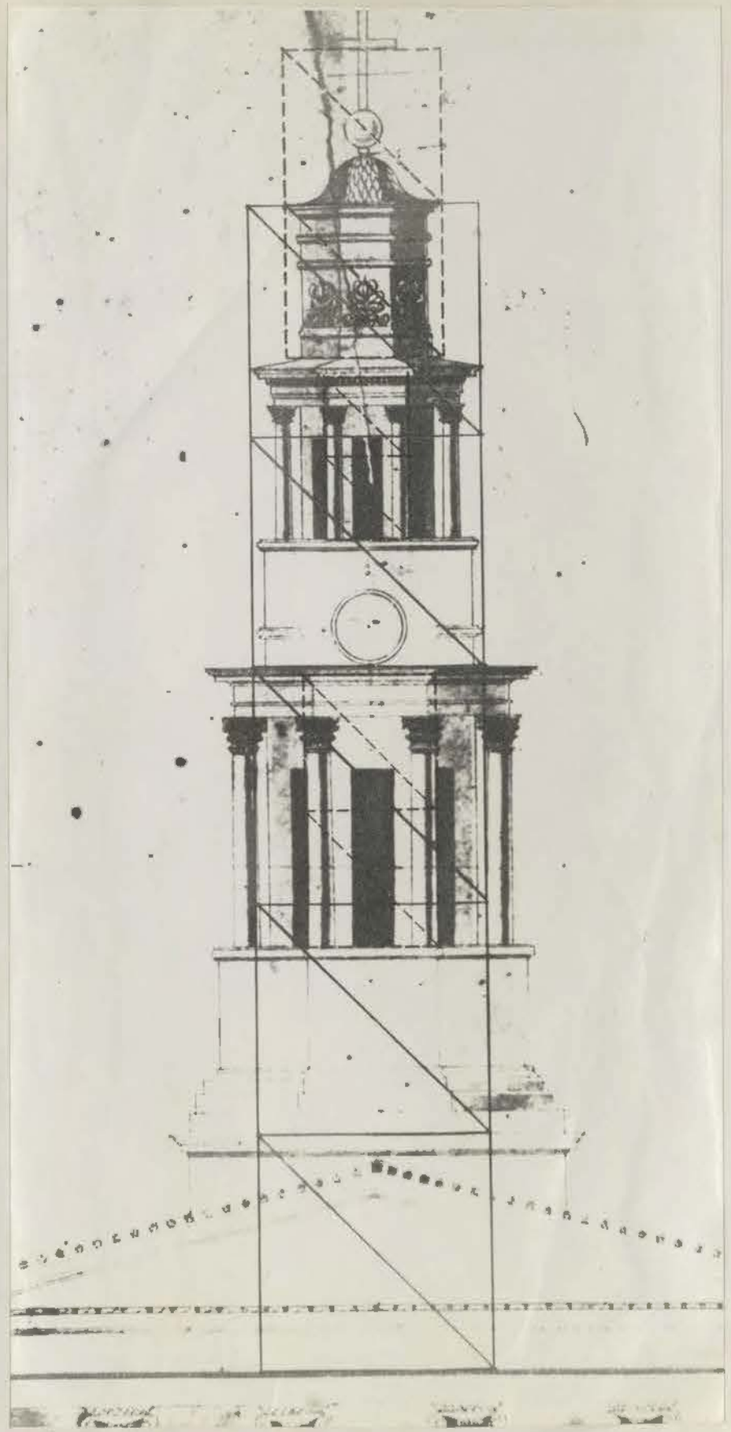

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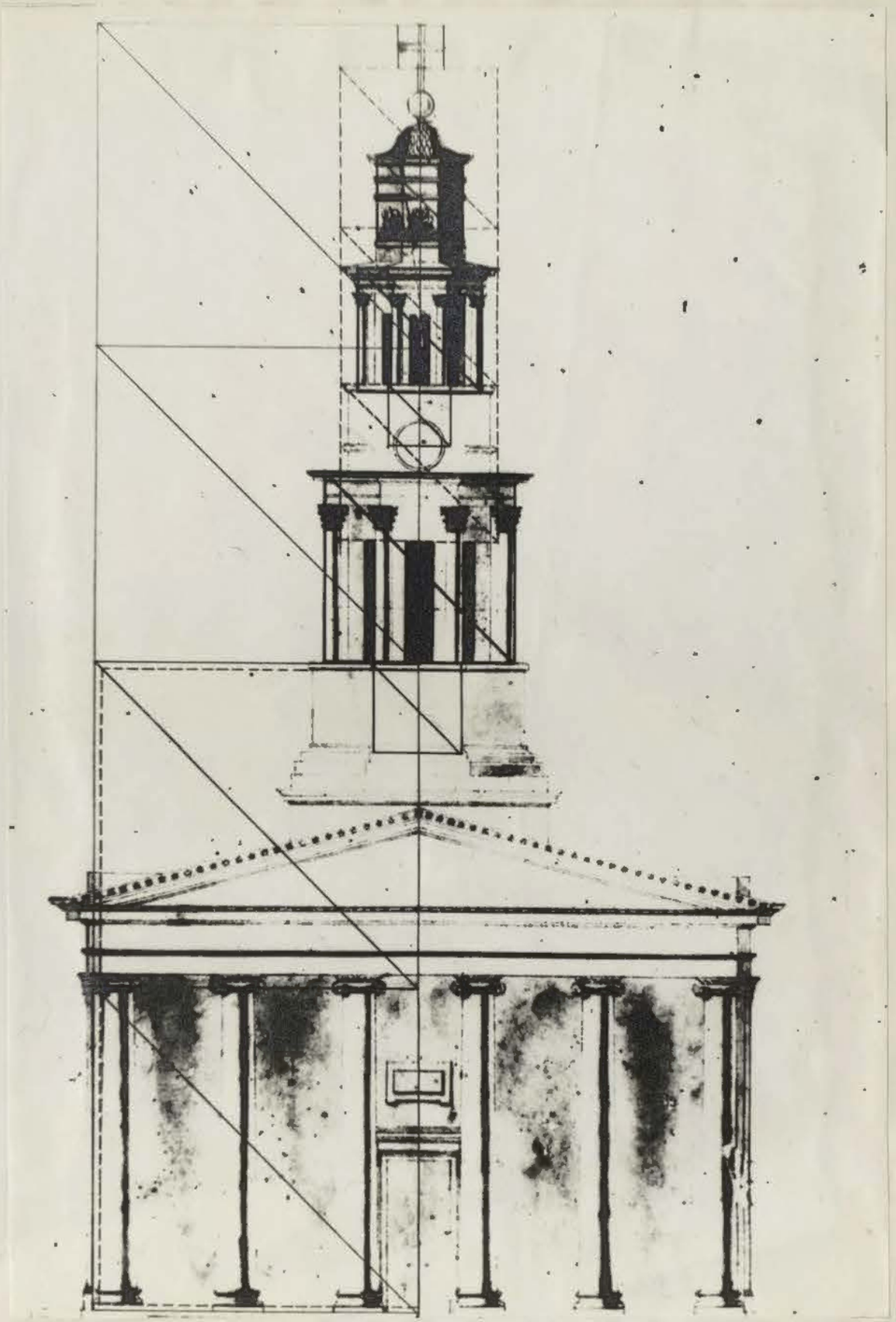
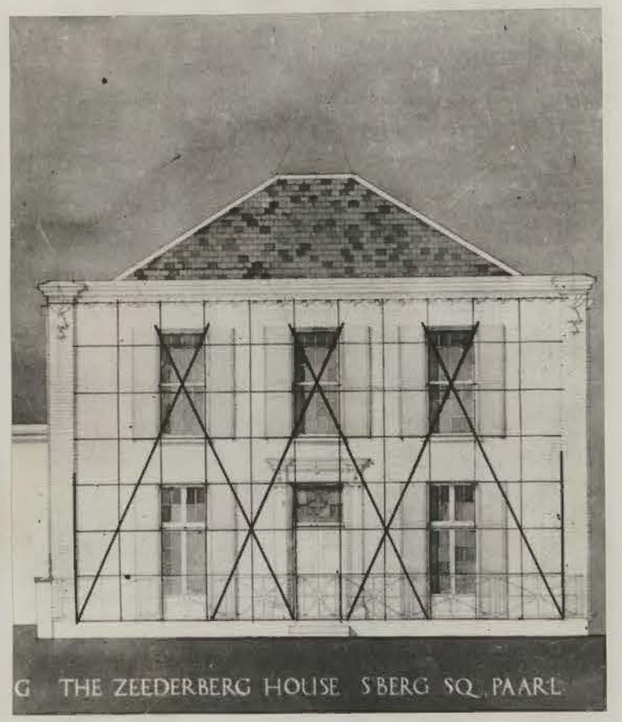
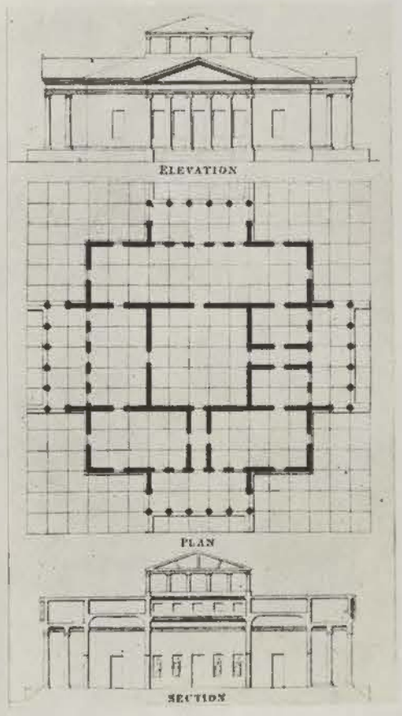


44

1. I. Gwilt: 'Rudiments of Architecture' London, 1826. (v.Plate 46).

2. cf. Plato's 'Timaeus'. The whole subject is discussed in detail by Professor R. Wittkower in 'Architectural Principles in the Age of Humanism.' London, 1949, 2nd edition, 90 ff.





Grid Proportioning:

45. 'Zeederberg House', Paarl. (cf. Plates 34-7, on page 542).

46. Plate from Gwilt's 'Rudiments of Architecture', London, 1826, 1835, 1839.

others, Gwilt.[1] It is a late house in Paarl (Plate 45) and reveals, by the very way it occasionally breaks away from this restrictive system, that design was still less academic and stilted at the Cape than it was at the same date in Europe.

II. ANALYTICAL SYSTEMS.

'Proportioning' has generally been understood as a means of establishing the mathematical relationships between the various parts of an object. These may be expressed as sub-divisions of the whole or as multiples of a unit - the 'module' - usually one of the smallest parts.

It is important to realise that until the twentieth century the mathematical relationships expressed as a series of ratios were seldom regarded as aesthetic ends in themselves, but merely as an analytical way of ensuring harmony between the parts of a design.

By an odd misunderstanding of passages in Vitruvius, many Renaissance theorists came to the conclusion that ancient Greek proportioning had been based on an analogy with musical harmony.[2]

On this assumption, the architects of the Renaissance evolved a theory that the key to the secret of cosmic order was contained in the simple numerical relationships of musical consonance. The Greeks had discovered that groups of notes in music which please the ear are produced by strings whose lengths are multiples (1:2 octaves) or simple ratios (the fifth, 2:3, the fourth, 3:4, and the major third, 4:5; the minor third, 5:6; the second, 8:9 etc.) The musical analogy supposed that ratios which please the ear must also please the eye, in the words of Sir Henry Wotton ('Elements of Architecture', London, 1624: 42-43)

1. 'The two principle consonances that most ravish the ear are by the consent of all nature the fifth and the octave. Whereof the first rises radically from the proportion between two and three; the other from the double interval between one and two, or between two and four. Now, if we shall transport these proportions from audible to visible objects, and apply them as they fall fittest (the nature of the place considered)... there will indubitably result from either a graceful and harmonious contentment to the eye.' Wotton, op. cit.

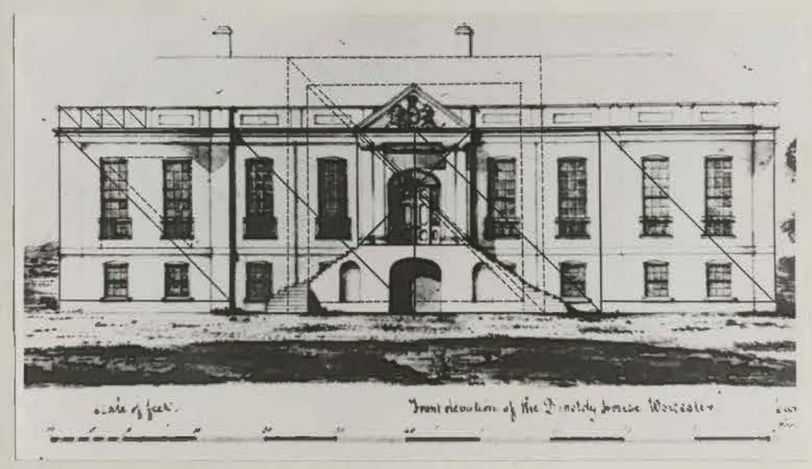
2. R.Morris, 'Lectures on Architecture'. London, 1734 - 6. (See Appendix, ix).

3. O.B.Scamozzi 'Le fabriche e i disegni di Andrea Palladio'. 4 vols. Vicenza. 1796.

4. The musical analogy reappears continually in English theories of architecture 'without requiring a revival' until the late eighteenth century. cf. Scholfield, 70.

5. These were made by Rex Martienssen, Norman Hanson and Gordon McIntosh before the demolition of the building in 1932, and most graciously furnished me by Professor G.E.Pearse. Dimensions are recorded to the nearest 1/8".

6. In musical terms, 2:5 is found in the chord of an octave and a third, i.e. 2:4 and 4:5.



47. Worcester Drostdy. Proportioned on squares.

'reducing symmetry to symphony, and the harmony of sound to a kind of harmony in sight....'[1] This theory was recommended to the architects of the Georgian Age indirectly, by the fact that it had been used by Palladio himself, and directly through the writings of such men as Robert Morris[2] and Scamozzi, who rediscovered its applicability to Palladio's work.[3] Although by the end of the eighteenth century English architects in general seem to have been disillusioned with analytical proportioning, so that it was no longer typical of the period, its revival in France and Italy at this time was doubtless felt in Britain among the more conservative of late Georgian architects.[4]

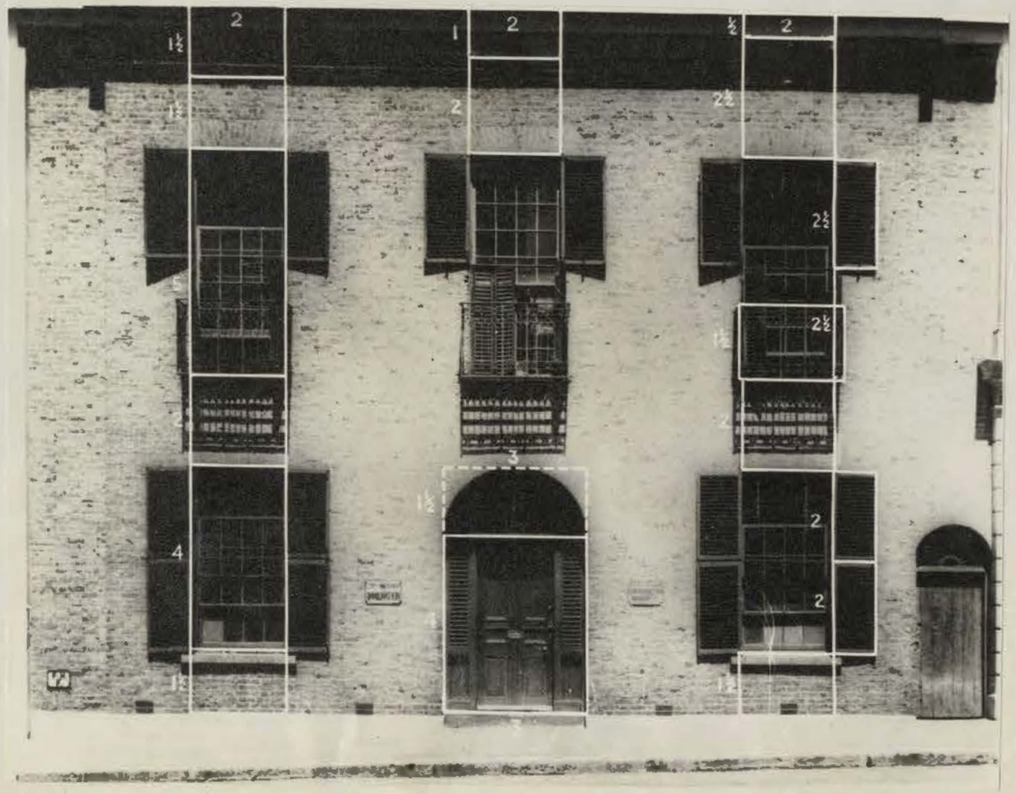
The musical analogy may since early times have lain behind the choice of the number of proportion of panes in the Georgian windows. In Chapter Seven (Plate 24 on page 158) some indication is given of the possible ramifications of the numerical relationships conjured up by variations in window design. These same variations are observable in the windows of Inigo Jones and his followers.

The possible interpretation of a facade at the Cape on harmonic lines is shown on Plate 48. This beautifully proportioned building (which used to stand in Parliament Street), did not conform to any of the geometrical systems outlined above, and the possibility of a harmonic theory having been used is the only one left open to us, if we are to accept that its appeal is due to design and not to accident.

Fortunately, this is a building of which reliable measurements are available,[5] and using these it is possible to surmise that the following logic underlay its method of design:

The key to the facade is the proportioning of the upper windows, 5:2,[6] which is repeated in three implied bays the full height of the building, giving

48. A, B, and C. House in Graaff (Parliament) Street, Cape Town. (cf. Vol. I, Plates 42-4 on page 166).



1. Musically, the minor third chord.

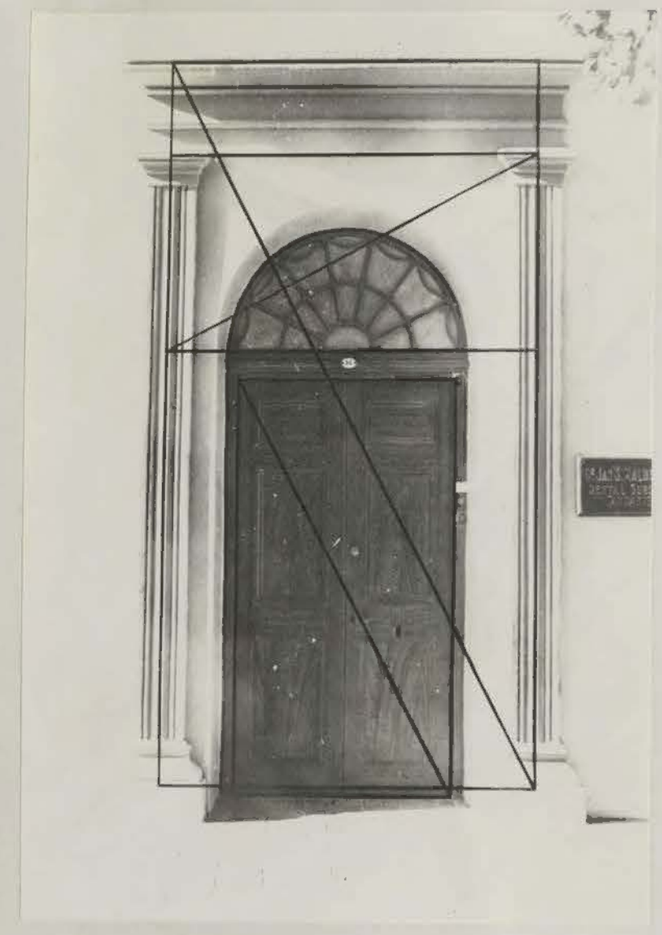
2. P.84. cf. William Wilkins 'The Civil Architecture of Vitruvius' London, 1812.

49. House in Bree Street, proportioned throughout on 2:5 rectangles.

a projecting central facade proportioned 5:6.[1] (This is also the proportioning of the projecting central block to the full width of the facade.) The spacing of the window to the wall between is 4:2 horizontally, which is the same as the proportioning of the lower windows and the door. Notice also the careful proportioning of the cornice, the lowest course of which is spaced equidistant between the window-head and the top of the parapet. Above the lowest course are three brickwork 'steps' before the material changes to stone, at a point which is as far above the window as the window is wide. (2:2). The parapet then equals in height the block of stone which forms the cornice, which is in turn equal to the height of the three brick steps. The keenly-felt harmonic geometry of this design, with its sensitive handling of planes, volumes and the surface textures, made it, in the opinion of many, worthy to be ranked alongside the best works of architecture ever seen in South Africa.

In the early nineteenth century, according to Scholfield, 'the Renaissance theory of proportion ... degenerated into a narrow and inflexible theory based on arithmetic and the use of simply commensurable ratios.[2] In spite of the decline, Vitruvius' belief that proportion was the source of beauty, which was thus determined by reason and rule rather than by intuition, still commanded some respect.

The use of commensurable ratios was based on the assumption that a building could be unified by the frequent repetition of one dominant shape throughout the design. The more the shape could be repeated the more likelihood there was of the eye recognising the qualities of order and harmony thus introduced. But to be commensurable a ratio had to be one which was capable of being extended indefinitely by some kind of mathematical progression. An example expressed in a series of whole numbers, is the near-geometric progression, the Fibonacci



50. Doorway in Dorp Street, Stellenbosch.

Series .... 3, 5, 8, 13, 21, etc., in which the ratio between any two adjacent numbers equals (to all intents and purposes) the ratio between any other pair of adjacent numbers.

Naturally, the use of a fully commensurable system was not common except among theorists. But the essential idea, that of the repetition of one dominant shape throughout a design, was in fairly common use in the early nineteenth century, as we have already seen in the cases of the circle and the square. Other examples, one using the Adam proportion 2:5, are shown in Plates 49 and 50.

Recourse to drawing instruments will readily convince sceptics that it is easy and satisfying to evolve a facade design on such a graphical system.

In an age when design allowed little room for individual expression except proportioning, it is not surprising that we find architects taking it so seriously.

Even among those unpretentious houses at the Cape which were not designed on the drawing board at all, some characteristics of what the Georgian architects delighted to call 'elegance and refinement'[1] rubbed off on the buildings. The local builders and tradesmen were bound to be visually educated by their perusal of designs in pattern books, most of which were sensitively proportioned, and in some cases proportioned details were incorporated in their entirety in new work. At this time 'proportioning' was still a quality looked for in all buildings, however small. It was only at the beginning of the Victorian era that 'what remained of the Renaissance theory of proportion shared in the collapse of the theory of architecture as a whole.'[2]

1. CA.Busby, 'Designs for Villas and Country Houses'. London, 1808, etc.

2. Scholfield, 33.

EIGHTEEN :

THE HAZARDS OF BUILDING.

CHAPTER EIGHTEEN

THE HAZARDS OF BUILDING.

To undertake the erection of a building in any part of the Colony meant a gamble, and the odds were considerable. The owner often had to cope with incompetent, or even dishonest contractors and sub-contractors, an extremely unreliable system of estimating, an antiquated legal system (which might involve a suit lasting twenty years to resolve a dispute), and a persistent shortage of materials and of skilled and dependable workmen. The contractor had to deal with the same problems, with the addition that he might have to cope as well with a ruthless and unreasonable client who would stop at nothing to have his pound of flesh.

There were two ways in which a prospective owner could approach the construction of a building. He could either arrange for a master-builder to carry out all the work for a lump sum, or he could undertake the co-ordination

of the job himself, and agree to separate contract sums with individual tradesmen - bricklayer, stonemason, carpenter, glazier, plumber, etc. Both methods were employed, the first most commonly for Government works and public buildings, such as churches; the second on occasion for private dwellings. The disadvantage of the lump-sum contract was that the building industry was not then organised as we now know it, with comprehensive and integrated teams of skilled craftsmen in all the trades. The contractor, the 'master-builder', was generally a craftsman himself, a little more affluent or bolder than the others, but dependent on them - through cursory sub-contracts - for a large part of the building work. This system naturally led to abuse, the 'master-builder' usually being technically unable to supervise a sub-contractor's work and ensure that price and workmanship were right, while both were determined to make profits at the other's expense. The completed building inevitably suffered.

True, there were master-builders who gradually acquired good reputations. Such a one was Herman Schutte, originally supposed to have been a dresser of stone, of whom Louis Thibault said that the Government could 'safely entrust' their work to him.[1] But on the whole contractors were, as Thibault put it, 'Bourgeois of Jerusalem': 'small wonder that they ask enormous prices for the smallest job'.[2]

The system of 'competitive tendering', so common today, was just coming into use during the First Occupation, and was perhaps introduced by the British. Thibault certainly resisted it, and objected in forceful terms to any suggestion that an unreliable contractor should be awarded work simply because his estimate was the lowest. He said of one tender: 'too good to be true: there's not a contractor in the world who'd slit his own throat as easily as that.' (C.O.13, April 17th 1808), and of another: 'Charged as I am with the

1. C.O.19 Feb.7th, 1809. But even Schutte erected bad buildings. The Parsonage at Simonstown was a distinct failure, the plaster cracking off the outside walls within three years, due to the lack of projecting cills, the flat roof leaking so badly that five years after it was put on it was completely replaced by one of shingles, and the internal plastering causing considerable trouble until it was eventually stripped off and re-executed.
(C.O.97/20, 21st. Nov. 1818; C.O. 113/24, 25th Nov. 1819).

2. C.O. 43, Jan.20th 1812.

interests of Government, I am under a duty to demonstrate the bad faith of contractors - and the Badness of Mons. Dekinah's is manifest.' (C.O.19, May 20th 1809). When favouring Schutte over lower tenderers, Thibault was not unaware of the ill-feeling he stirred up: 'There will be contractors to execrate me for this proposal: but habituated as I am to the anathemas of the evil-intentioned, I pay not the least heed.' (B.R.5/606).

Estimating was based on the most equivocal premises. It was done by the contractor - often a mere tradesman - usually on a rule of thumb method employing 'squares'. In this system the plan area of the building to be erected was divided into 100 sq. ft. 'squares', the number of which gave an idea of the probable cost, the price per square varying with the type of building and the average height of the structure. With such a system only the most experienced contractor was likely to be right, and, as might be expected, professional architects such as Thibault were often one jump ahead of them. 'My calculation is correct;' he wrote of a contract in 1808, 'and if Mocke has taken the work for less than it is worth, it is a great advantage for Government to come across contractors so simple at arithmetic.' (C.O.13, Feb.11th 1808).

After the demise of Thibault the government ceased, on the whole, to be so attentive to quality, and the competitive tender system became fully entrenched.[1] When the price for work was not low enough to suit the official budget the problem was solved by searching far and wide for possible contractors, until one was found foolish or corrupt enough to put forward a very low tender. (For example, St. George's Church at Grahamstown seems to have been put out to tender locally, then, when these prices were too high, Herman Schutte was asked for his tender, but eventually the contract was given to another Cape Town builder, George Gilbert - who fortunately proved a reliable

1. Advertising publicly for tenders was in use at least as early as the second decade of the nineteenth century. (v.C.O.2586/4, 5th Jan. 1813, and early copies of the 'Cape Town Gazette'.)

man, but seems to have suffered financial loss). It is presumably this system which led even Herman Schutte himself to occasionally submit tenders which were too low; it is recorded that he suffered a loss of £630 on the contract for building the Customs House at the Kowie, and of £2,520 on the contract for St. George's Church, Cape Town.[1] No wonder that less honest men so often attempted to recoup their possible losses in advance at the expense of the quality of construction of the buildings they had contracted for!

The contract document took the form of a general specification, usually stipulating the architect or supervisor to whose satisfaction the work had to be done. It was frequently vague in the extreme, which did not ease matters in the litigation which sometimes followed.

The effect of the arrival of new immigrants, or of large military occupation forces entailing a demand for private homes for the wives and children they had brought with them, was to create a marked shortage of houses. For the building industry was geared to a steady annual rate of production, and was quite unable to adjust itself to a level of output which would substantially ease the housing shortage within a short time. Building booms in the early nineteenth century therefore continued long after each new wave of immigration.

Throughout this period there was an increasing tendency for the master-builder to acquire the attitude of the business man rather than the craftsman. Fine execution and good finish became secondary to speed and profit. The major building crafts, carpentry, stonemasonry and bricklaying became commercial enterprises in their own right, and the old hand-crafts - joinery, carving, ornamental plaster work, even architectural sculpture - were eventually subservient to them.

1. Sale Catalogue of S.O.H. Schutte's estate. Item 102.

Outside of Cape Town it was extremely difficult to obtain craftsmen of any kind, at least until the arrival of the 1820 settlers. During the First British Occupation building reached such a pitch that even at the 'Vineyard' the Barnards suffered from protracted delays, apparently due to a shortage of workmen '... We have a couple of drunken invalids on their way home, who are some use when sober ...'[1] In the east of the Colony matters were much worse. Though the Uitenhage Drostdy was begun during the Batavian Republican rule, probably in 1804, the difficulty of obtaining building tradesmen, and even ordinary labourers, was such that by the end of 1805 the walls were only about 3 feet high. When Colonel Cuyler continued to build in 1806 he found the same obstacles. (Eventually he managed to attract Hottentots from the near-by mission station of Bethelsdorp.) This explains his insistence, when the erection of the Grahamstown Drostdy was first proposed, that the building 'be advertised for at the Cape to be contracted for by some builders there, from the scarcity of artificers in this quarter of the Colony and their being no Carpenter, and, I believe, but one indifferent Mason among the Military, I fear that without some person at Cape Town undertaking the building no contractor can be found here - or otherwise to suggest that 4 or 5 carpenters and as many masons be selected from the 60 Reg^{t}. and sent for the purpose with tools, when Capt. Fraser might himself oversee the work as I had to do at the building of this Drostdy House...'[2] In 1811 the Landdrost of George wrote to the Colonial Secretary saying that the contractor for the Drostdy House there would only undertake the work on condition that 'some masons and carpenters were sent from Cape Town'.[3]

The shortage of craftsmen soon became serious throughout the Colony. Following a suggestion of John Barrow's[4] the Government pursued the idea of signing up building tradesmen in China:

1. Lady Anne Barnard to the Earl of Macartney, 4th April 1799. (Fairbridge 'Lady Anne Barnard at the Cape' Oxford, 1924: 104-5).
   The letter includes an anecdote about the two men: 'One of them is very conceited: he was here first and despised the new-comer for being an inferior workman to himself - "You a Carpenter? You are a man of no signification compared to I." "And pray of what signification are you?" said the other. "I? I be's as pretty a workman as ever used a tool. I pleased my Lady Salisbury in the great staircase at Hatfield!" "My Lady Salisbury" cried the other with great disdain... "I pleased the Empress of Russia at her Willa near Petersburg". He who had pleased my Lady Salisbury, knocked down by a crowned head, scratching his own instantly sneaked off...'
2. C.O.2586/4, 5th Jan.1813.
3. C.O.2576/1.
4. J.Barrow 'Travels...'London, 1804. II:150.

'H.C.S. "SCALEBY CASTLE",
Canton River.
April 9th 1815.

'We, the undersigned artificiers, agree to serve his Majesty's Government at the Cape of Good Hope for Three Years in our several capacities....'

(Signatures in Chinese characters) 1 Foreman Mason
12 Masons
1 Foreman Carpenter
9 Carpenters
1 Carpenter and Painter.

Signed. John Corbell. Purser'[1]

Four of these Chinese craftsmen were sent, soon after landing, to work on the George Drostdy:

'Barrack Office. 6th December 1815

Dear Sir,

I beg to inform you that the Four Chinese sent to George's Drostdy, are returned, much dissatisfied with the treatment they met with. From what I can learn they have left their employers without leave. You will oblige me therefore by letting me know what I can do with them, they tell me, they have received no money since they left this and are in want of something to subsist themselves.

If they are to be placed on the strength of the Barracks Department another order will be necessary to enable me to draw their rations from the Com.Genl.

Henry Hanson, Adj.B.Mr. to Major Rogers, Military Secretary.'[2]

In 1817, and for six years thereafter, the Ledger of George Rex of Knysna includes accounts for wages to John Wing, a 'Chinese carpenter'. The government had apparently decided to make the Chinese available to private citizens. It is evident from the reaction of those sent to George that they did not much relish the working conditions at the Cape, where they were so likely to be confused with Malays and Coloured slaves. In spite of this, a number outstayed their original three-year contract, and ten were still in the Colony 'in fixed employments' in 1822.[3]

The experiment with Chinese craftsmen not being an unmitigated success, workmen were next (1817) brought from England. The Military quarters at

1. C.O.68/451.
2. C.O.68/553.
3. C.O.166/18,30th March, 1822.

1. C.O.81/127, Oct. 1st 1817.

2. The following trades were employed on the Bathurst Drostdy in 1821:-

Lime burners
Brick Maker
Sawyer (for felling timber)
Lath Render
Bricklayers
Carpenters
Slate Quarry Workers
Slater
Turner
Blacksmith
Glazier
Plumber

(C.O. 2637/113, October 29th 1821)

3. (G.H.26/12 Enclosure to Dispatches, 27th Nov. 1824).

Simonstown, built by the Naval Department, had a 'Foreman of the Works... sent from England for the express purpose of erecting the Buildings of the Naval Yard ...'[1], and the resulting workmanship, being rather strange at the Cape, caused adverse comment. (v.Chapter 6 Page 129).

It might be expected that the arrival of the 1820 settlers solved the problems of the building industry. Unfortunately, this was not the case, for the new immigrants brought their own demand for building labourers. (In any event the settlers were meant to engage in agriculture, and some of the immigrant craftsmen appear to have continued their attempts to farm until a relatively late period.) 'The great demand for labour, and the high wages given by the Government contractors and others attracted thither [to Grahamstown] great numbers of this class...' (Thompson, 'Travels.'London, 1827.II:170)[2] The position became so aggravated that when the reconstruction of Fort England Barracks was contemplated (1824) Lord Charles Somerset wrote to England requesting that 'Military Artificers' be sent out 'owing to the scarcity and exorbitant price of Workmen on the frontier...'.[3]

The difficulty of obtaining trained craftsmen throughout the whole of the period 1795-1826 accentuated the decline in building standards. Of course there were exceptions, but on the whole building construction was at a low ebb, until the economic changes of the late twenties eased the labour position and brought competition and renewed insistence upon quality in workmanship.

A brief summary of some instances of bad building will suffice to illustrate this point. The Caledon Drostdy, built c.1814, was in a ruinous state by 1822, apparently due to deliberate deception on the part of the Contractor: 'the walls are too weak to support a new Roof, more so as on examination these walls appear to be built only four inches on each side with Bricks, whilst the intermediate space is filled with Clay, being altogether only eigh-

teen inches thick... it appearing thus a matter of necessity to take the said Drostdy House down....'[1]

Referring to the Commercial Exchange in Cape Town (begun 1819), W.O.Jones and H.Schutte, called in to inspect the completed work, noted: 'In the foundation Walls we find an additional thickness of six inches from the particular... In the height of the Basement we find a deduction of 6 inches all around... the back linings of the windows we find plastered instead of wood as described ... the Cape Materials used in the construction appears of an inferior quality for such a Structure....'[2]

The arrival of the Albany settlers introduced another factor - speculative building. S.E.Hudson, in his account of Port Elizabeth in 1822, commented: 'Building mania pervades all classes, some for comfort, some for necessity, but more for speculation.' A new type of building contractor arose, one who knew little or nothing about building himself, but had the acumen to rent or buy land on which to erect houses, shops or public buildings in the quickest possible time for the maximum possible profit. Such a speculative builder would obviously have to sub-contract all the building work to someone who knew more about it than he did - so that one sometimes finds the anomalous position of a qualified general contractor acting under the orders of an ignorant speculative one.

Pieter Retief was in a sense a speculative contractor of this kind. A farmer by training and a merchant by trade, he knew how to build in the tradional manner, but it is doubtful whether he had ever erected anything on the scale of, or with the degree of finish required by, the Scott's Barracks, when he was awarded the contract. He was entirely dependant for all the carpentry and finishes on immigrant sub-contractors, and was clearly swindled by them, thus involving himself in a protracted lawsuit and heavy losses.

1. C.O. 2640/48.
2. C.O.145/66.

To cap it all the building fell in before settlement was reached in the law courts.

So bad was building in Grahamstown that Col.Scott, writing of the new church in Grahamstown in May 1823 discounted the possibility of a tower on the grounds of, amongst other things, 'the bad workmanship'.[1]

In fact, the first Freemasonry Temple did actually collapse, and had to be abandoned.[2]

Herman Schutte, who visited the town in December, wrote to Cape Town that 'a much readier method was to be adapted in accomplishing Business and therefore requests that permission should he be so fortunate that would Enable him to convince the Builders of Grahamstown what could be done...'[3]

In Cape Town the history of 'Newlands' is a sad tale of unwise counsel and incomplete workmanship. But since some part of it was doubtless due to the impetuosity and authoritarianism of Lord Charles Somerset himself, it is unfair to lay all the blame on the builders. It is sufficient to note in passing that the colonnade had to be completely rebuilt after two years, and that one of the bow wings collapsed five years later, when it was deemed advisable to dismantle the parapet and both bow fronts of the house.

Similarly, the Bathurst Drostdy (1821) had construction which was 'originally defective, the stone foundation not having been carried high enough to preserve the bricks from coming in contact with the earth, and the bricks being of the worst description, the whole house and especially the wing most exposed to the weather is [1833] in a very insecure state.'[4]

The work done for Lord Charles Somerset at Government House (1825) was later likewise judged to be defective: 'the circular gable' and 'bow projec-

1. (C.O. 186/68, May 20th, 1823.)
2. T.Sheffield. 'The Story of the Settlement', Grahamstown. 2nd Edition. 1884.226.
3. (C.O. 199/31, Dec.24th, 1823.) It does not appear that Schutte was ever granted this permission.
4. (C.O. 2742/47, 12th July, 1833.)

tion' has been in danger of falling down owing to improper foundations...' (1842).[1]

On the credit side there were occasional words of praise, but they were rare indeed. Francis Hope judged the contractor Pohl's work on the Drostdy in Grahamstown in 1825 'very workmanlike... in a style much superior to any I have seen before in the Colony...very Masterly...would be highly creditable to any Contractor'.[2] And Maclear praised Skirrow's execution of the Royal Observatory (1825-7) as 'excellent' and 'unequalled'.[3]

But to appreciate to the full the hazardous state of building at the Cape in the Georgian age one must pursue with the participants the course of some building operation in all its detail.

In conclusion let us examine the history of the erection of the Dutch Reformed Church building for George Town, which, situated midway between the West and East parts of the Colony, and spanning almost the whole period, is as representative an example as could be found.

The first church building in George was converted from the old post house in the town, and was consecrated in October 1813.[4] At the same time, plans for a proper church were obtained locally by the Landdrost. After consideration by the church council it was decided that this church, to be 60' by 24', and to cost Rds.27,000, was in reality too small for the congregation, and a new plan, 72' by 42' to cost Rds.32,000 was prepared, possibly by the master-builder Marnik. This building ,'the Cradock Church',was then begun on the site intended for it in the original plan of the town. But before it had progressed very far Marnik was dismissed by the Landdrost on the grounds of general incompet-

1. (Surveyor-General Charles Mitchell. 30th Nov. 1842.
2. (C.O.2671/29. Feb. 24th 1825.)
3. (8th Jan. 1834. Africana Notes & News X,I:5)
4. For this and subsequent information v. D.M.de Jager, 'Gedenkboek van die Honderdjarige Herdenking van die Kerk in wyding, 1842 - 1942.', George, 1942.

ence and lack of a proper knowledge of contruction. Exactly what precipitated this step is not known, but judging by later developments it is obvious that it was entirely justified, for the foundations were hopelessly inadequate.

In Marnik's place the contractor for the Drostdy, Trench (or Trenk) was employed. He was soon discovered to be also an unhappy choice, for the work progressed at a snail's pace. By the due date for completion the church was still far from finished, and only a series of reiterated threats produced results. Eventually, in March 1817, the contractor announced that the building, though incomplete, was ready for use.

Immediately, during the winter storms which followed, this building began to disintegrate. '...it was soon after apprehended, that the building would fall down, and that in consequence the authorities at George invited publicly that Tenders should be given in, to erect supports for the outside walls of that Building to prevent its falling into ruins...'[1] The successful tenderer was Carl Frederick Pohl, but although his buttresses slowed down the decay they could not altogether prevent it. By January 1820 the 'dominee' was complaining that his congregation had 'sadly fallen off'. The building had such a reputation for being ruinous and dangerous that people were frightened to go to church.

As a result the Church Council asked the government for a new loan, of which part was granted. In the meantime it was found that the new buttresses were cracking and the foundations settling. The latter were then repaired, and much of the stone they contained replaced and supplemented, at considerable cost. But the east wall continued to fall, and soon became so dangerous that eventually it had to be taken down altogether. The front gable then began to develop an obvious cant outwards, and the church council was soon

1. (C.O. 235/86. Letter of C.F.Pohl, 13th June 1825.)

forced to order its demolition also.

In the circumstances it is not surprising that a move to spend a large sum on the repair of the 'Cradock church', on lines submitted by C.F.Pohl, met with violent opposition from many members of the church council in July 1820.

Instead, it was decided to approach the government for financial support for the erection of an entirely new church building. As it was anticipated that this might involve some delay, a resolution was taken for the immediate construction of a long barn-like building behind the parsonage which could serve as a temporary church. (The parsonage needed stables and servants' quarters in any case, and it was expected that within a short time the new building would be free to serve these purposes. It was accordingly designed more with a view to its temporal function than its spiritual one, being 80 feet long and only 16 feet wide. In fact it remained the only usable D.R.Church in George for 22 years!)

This barn-like building, the third Dutch Reformed Church to serve this congregation in less than ten years, was erected by C.F.Pohl. And again the contractor's work was unsatisfactory. The building progressed so slowly that by the due completion date it was far from finished. The church council decided to grant Pohl six weeks' extension on the contract time, but warned him that if the church were not complete by then they would do the work themselves at his expense. Happily, on 5th March 1821 they were able to minute that the building had been finished according to contract and that it even included a number of improvements. But the roof was still judged insecurely anchored, and was thatched with reeds which were too short. The council insisted that Pohl bind himself in writing to rectify the faults and to maintain the church for a further 3 years beyond the three years stipulated in the original contract.

1. The 'long building', George. Temporarily the Dutch Reformed Church from 1821 until 1842.

Meanwhile, plans for the erection of the new church building (the fourth) continued to be considered. In July 1820 Pohl had submitted the first scheme, one for a building to cost Rds.25,000, but this was judged unsatisfactory. In October 1821 the landdrost proposed the adoption of a design by M.Theunissen, but this could not be proceeded with owing to lack of adequate funds, the 'long building' having just been completed. Various subsequent attempts to begin the erection of the new building were made, and meanwhile the old 'Cradock Church' was being progressively demolished, and in 1828 was finally razed.[1]

In the same year enthusiasm was once more aroused for the erection of a new church. In August requests for the necessary funds were submitted to the government, and a month later approved. A dispute then arose as to whether the building should be erected on the original site in the upper town, or a new site in the lower town which had been donated by a local resident. Mr. Jackson submitted a design on behalf of the residents in the lower town and feelings for a few months ran high between the adherents of the two groups. Eventually a secret ballot of church council members produced a unanimous decision in favour of the old site, and work could at last begin.

In the meantime, a plan had been obtained from 'Mr. Schutte' - almost certainly Herman Schutte, Senior, of Cape Town, as his son, the surveyor, H.F.Schutte, had left the Swellendam district in 1825.[2] Schutte's design for the church was generally preferred to that of Jackson, and appears to have been the one on which the specification was based, and in fact substantially that which was afterwards built.[3]

The specification called for a cruciform church large enough to hold between 500 and 600 people. The length of the arms was to be 114 feet, the diagonal under the crossing 100 ft., and the width 32 feet (outside dimensions).

1. Scattered remains were sold by public auction in 1831.

2. E.H.Burrows, 'Overberg Outspan', 64.

3. D.M.de Jager formed the impression that the present church was based on that of Swellendam, which was specially measured for the purpose by Surveyor Hopley. But although it may have been the intention of the authorities to follow this precedent, it seems much more likely, on visual evidence, that it was Schutte's design which was used in the end.

2. The completed Dutch Reformed Church, consecrated 1842 (from an old photograph).

It was specifically mentioned that the corners of the crossing should not be sharp, but rounded (as they are in the surviving building). On the front of the church there was to be a tower, and at the back a baptistry.

The foundations were set out by the contractor Jan Anderson in 1830. They were made of closely packed large round river stones, and were 6 feet deep and 5 feet wide - no chances were being taken here! The foundation stone was, however, not laid until April 1832. A master-builder, C.F.Visser, was then brought from Cape Town, together with 3 hired slave masons, who executed the stone walls (3 feet thick) with hard flat stones laid in bond. These appear to have taken years to build. By December 1838, when the church council found itself unable to continue with the work for lack of funds, although the main thatched roof was finished, that of the baptistry was incomplete and no internal finishing had been done.[1]

Visser offered great resistance to the attempts of the church council to suspend the work and terminate his contract, and the matter was not settled until it had been taken to court.

In August 1839 the authorities again endeavoured to have the church completed, this time by calling for separate tenders for different parts of the work.

In spite of this a further three years elapsed before the building was fit for consecration (December 1842) by which date it still had no floor (other than the bare earth) and an incomplete ceiling. Several years were yet to pass before the Dutch Reformed community in George were able to worship in an adequate church!

It is common practice to talk with awe of the high standards of con-

1. The roof was thatched with 'dune reed' obtained in the Albertinia and Riversdale districts.

struction in the old architecture of the Cape Colony. In fact, quality in the character of early buildings was often achieved in spite of, not because of, the methods of construction. And if building techniques were primitive and working poor, the irascibility of the early nineteenth century gentleman is formidably reflected in the interminable lawsuits which seem to have been the outcome of every major contract. Embarking on building in South Africa in late Georgian times was not a step to be undertaken lightly!

NINETEEN :

MATERIALS AND METHODS OF CONSTRUCTION.

CHAPTER NINETEEN

MATERIALS AND METHODS OF CONSTRUCTION

Materials and methods of construction have often been discussed as an integral part of the theme of the earlier chapters. In this section I propose only to draw general conclusions and supplement them by the consideration of details which could not be conveniently included elsewhere.

WALLING:

The indigenous structural technique produced massive buildings due to the bulky wall construction in layered clay or clay bricks, which were an inheritance from the Portuguese and Spanish colonies. (B.E. Bierman 'A contribution to the study of the origins of Colonial Architecture at the Cape' Ph.D. Thesis U.C.T. 1952). It was commonly known as 'Spanish walling' in the British colonies of the Caribbean. Thick white-washed walls made for coolness in summer and warmth in winter. The tradition was so firmly rooted, functional and sensible, that it is hardly surprising that it proved resistant to outside influences for many years. Only in the towns, where two or three storey buildings demanded stronger walls, and space was at a premium, did stronger, thinner forms of construction readily come into use.

The first serious impact on Cape Dutch constructional methods was made as

a result of the Georgian fashion for polished wooden floors instead of earth, Batavian tiles or brick. Wood was peculiarly susceptible to damp, and the need for adequate damp-proofing raised functional structural problems.

In the eighteenth century foundations generally consisted of a layer of rubble and rock laid directly on the top-soil (or at most excavated six inches into it). There are even indications that some were built with no attempt at a waterproof foundation. John Melville, reporting on the collapse of 'Newlands' in 1819, observed that 'the walls are built with bricks from the foundation, many of which are unburnt, decayed and crushed...'.[1] Later the stonework was taken to a height of two or three feet above ground level.[2]

With the arrival of British fashions, however, the sub-structure became more elaborate: 'the foundations to be such a depth as shall be satisfactory to the Government and 3 ft. 6" wide.' (C.O. 113/20: enclosure. Contract for "Newlands", 30th Sept. 1819). 'In the original plan...the foundation was stated at 4½ feet, but I have been obliged on account of the sandy ground at Port Francis, not only to sink it considerably deeper, in some places eleven feet, but also to lay a foundation of hard timber below the stone one...' (C.O. 235/48; 28th April, 1825. Report of Herman Schutte on Port Francis Customs House).

Damp proofing posed serious problems. For many years it was disputed whether lime mortar or 'dagga' (clay mortar)[3] was the most resistant to moisture. ' Clay will be found preferable, as lime is more subject to damping' wrote von Buchenroder in 1814 (C.O. 2592/34; 12th March, 1814); but he was

1. C.O. 113/12; 17th August 1819.

2. Observation of surviving buildings and many Archive documents, e.g. C.O. 113/20, 30th Sept. 1819: 'the walls to be built with stones 3 ft. from the floor.'

3. Merrifield ('S. African Architectural Review', March 1928) suggests that the word is probably derived from the Xosa 'daka' meaning dirt or mud.

presumably referring to 'common' lime, that is, lime made from burnt limestone, as shell lime, made by burning sea-shells, was everywhere used for waterproofing flat roofs. (e.g. 2614/George; 27th Feb. 1818. C.O. 2645/97; 8th July, 1822. Grahamstown etc.). 'Common' or 'mason' lime was notoriously permeable.

Shell lime was extremely difficult to procure on the frontier as late as 1820, (5th Feb. 1820. G.H./Enclosure to Dispatches. Scott's Barrack's, Grahamstown.) and, of course, even scarcer in the interior. The result was that two different building techniques seem to have survived side by side in different parts of the colony for many years. Where shell lime could be readily procured it was used in mortar for all types of wall construction,[1] and was invariably the damp-proofing medium in rubble foundations. (C.O. 2575.Uit/18; 15th Feb. 1811, C.O. 285/6; 30th Jan. 1826 etc. C.O. 2713/146; 10th July, 1829 etc. The mix in the latter case was 1 lime : 3 sand, but elsewhere it is given as 1:2 or even 1:1.) In all other circumstances clay mortar was used in walling and foundations, though an attempt was usually made to plaster and finish with some kind of external painting, either whitewash (made from shell lime)[2] or a composition of dung and glutinous fat.[3]

Shell lime plastering is a product of the seaside town, an environment in which strong salt winds cause rapid corrosion of bricks and mortar. It survived the brief fashion for building in imported English brick and took on a new lease of life in the Neo-Classical stucco age which followed; plaster had the advantage that it could be used to imitate stonework, lines of rustication producing an effect of richness which made face brickwork seem plebian. Cement - the basis of true stucco - was already being imported in 1816, and in 1820 even such a distant military outpost as Grahamstown was considering its use instead of the local material: 'plastered with lime mortar or pointed with

1. Although, due to the imperfect assimilation of building knowledge, there are exceptions to this rule, an example being 'Newlands' of which an inspection revealed that the brick walls built seven years before had for mortar 'nothing but clay.' C.O. 275/157; 14th Aug. 1826).

2. 'In consequence of the great expense of lime the walls will be only built of mud mortar, but they will be plastered with lime mortar...' 5th Feb. 1820. G.H./Enclosure to Dispatches. Scott's Barrack's, Grahamstown).

3. C.O. 164/10; 25th Feb. 1822 (Port Elizabeth Dwelling and Store).

Cement from the Ordnance Establishment at Harwich, which last method is recommended strongly on account of its durability and Economy'. (5th Feb. 1826. G.H./Enclosure to Dispatched (Scott's Barracks, Grahamstown.) Portland cement was introduced in England in 1824. ('Mechanics Magazine', New York, August, 1835).

Rough cast plaster was in use in the frontier districts from early times. (C.O. 2586/228; April 1813. C.O. 2741/46; 30th April 1833. G.H. 8/9. No. 28 16th Oct. 1837).

Cape bricks were of two kinds; the unburnt or 'raw' variety, which was usually made by the contractor on the building site (C.O. 68; 13th May, 1815. Simonstown. C.O. 2629/8; 28th Aug. 1820. Bathurst); and hard-burnt bricks, which could be bought from one of the several brick kilns in the vicinity of Cape Town and Stellenbosch (and later Port Elizabeth, Uitenhage, Salem, Grahamstown, etc.).

Cape bricks were always regarded as inferior to those of Europe.[1] In the days of the Company small hard yellow bricks, 'geele Klinkers' - locally called 'klompjes' - were imported from Holland in large guantities and used for all exposed work, and for reinforcing arches over openings. There was still a market for them at the Cape as late as 1829, and they were even proposed for the steeple of St. George's Church as an alternative to English bricks. (C.O. 370/78; 28th April, 1829).

It is not known that klompjies were ever used to face an entire building

1. At any rate until 1839, when 'hard English bricks' were still being used in the 'greater part of buildings now constructing in Cape Town'. (G.H. 28/15, 28th Sept. 1839).

at the Cape (as they were in Holland). On the other hand the first British Occupation saw the importation of English bricks for this purpose. But English face brickwork always remained a luxurious material, not merely because of shipping costs, but also because it was heavily taxed before it left England. (D. Pilcher 'The Regency Style'. London, 1947, 51). In 1815, English 'Blue' stock bricks cost £6.15.0 per thousand, as against £5.15.0 for 'Geele Klinkers' and only £1.4.6. for Cape hard-burnt bricks. In spite of this English bricks were used without hesitation where strength was needed, as in columns, (those of the Commercial Hall), (C.O. 145/66; 1st Nov. 1821) or pillars. (C.O. 156/457. Nov. 1821).

Raw bricks were commonly used for single storey buildings in country districts, a custom which persisted until the end of the nineteenth century, and was taken by the Voortrekkers to the northern republics. (Hattersley 'Pietermaritzburg Panorama'. Pietermaritzburg, 1938.). As bricks were difficult to make in the rainy winter months, at least in the coastal region, and the mortar would not set quickly, 'Building was always attended with considerably more expense in the Winter Season than in the Summer'. (C.O. 133/15; 9th March, 1820. Letter of Lady Anne Barnard, 13th Aug. 1798: Fairbridge 'South Africa a Century Ago', 70). Such raw brick walls were naturally very thick (two feet is a dimension often mentioned[1]) and were plastered externally with lime plaster.[2]

More frequently locally burnt brick was used in outside walling and the raw brick was kept for interior partitions. (C.O. 2586/22; 8th April, 1813. C.O. 2613/84; 27th Nov. 1818. C.O. 2672/17; 27th May, 1825. C.O. 2727/106; 8th Dec. 1831 etc.) In spite of being locally made, burnt brick was both

1. C.O. 2650/28; 12th Feb. 'walls of good raw Brick seven feet high and two feet thick'. 1823.
2. Or dung plaster, where lime was unobtainable.

1. External walling: Uitenhage Magistrate's Courts and Church, 2 feet thick. (C.O. 2586/22, 8th April, 1813 and C.O. 2592/34, 12th March 1814) 'Newlands' 2 ft. thick (C.O. 113/20, 30th Sept. 1819).

2. Dec. 1768. Criminals were obliged to labour 'chiefly in hewing and transporting of limestone, which is afterwards carried by small vessels to the Cape, and is used in the construction of houses, and other works..' (Stavorinus, 'Voyages...' London 1798. I, 536).

3. Laidler 'Growth and Government of Cape Town', Cape Town 1939, 154.

inferior to, and considerably more expensive than, stone, in the Albany district in the early 1820's. (C.O. 165/102; 4th Nov. 1822. 'stone is probably not one fourth the expense'.) All critics were agreed on the poor quality of the bricks produced with the local clays (that is, until Wynberg brick was manufactured in the late 1820's). (C.O. 145/66; 1st Nov. 1821. C.O. 2742/47; 12th July, 1833. Bathurst. C.O. 321/101; 1st Aug. 1827. Report on 'Newlands' 'the bricks - made 8 years before - were never properly burnt and are rotten..' C.O. 275/157; 14th Aug. 1826 'absorb water like so much sponge'.) For this reason the use of burnt brick usually did not lead to any reduction in the wall thickness. Two feet thickness for outer walls (two and a half bricks) was the standard dimension[1], with the upper storey of two-storey buildings having walls one half-brick (4½ inches) thinner. (C.O. 158/101; 9th June 1821). By the middle twenties the standards of local brick had slightly increased, and the thickness of brick walls was henceforth generally 18". (C.O. 2672/79; 26th Dec. 1825. Somerset East, Secretary's House, and C.O. 2727/106 8th Dec. 1831 Uitenhage, School House etc. 18" was still the dimension in 1842. G.H. 8/10; 18th Jan. 1842).

STONE WALLING was a common form of construction throughout the eighteenth and nineteenth centuries.

None of the stone found near Cape Town was very suitable for dressed stone-work, the Table Mountain (Signal Hill) granite of the Castle being too hard for more than the crudest finishing; Robben Island shale too fractious, and the limestone of Robben Island[2] and Mowbray[3] too vulnerable to erosion;

'surrounded by mountains full of Rocks' wrote Thibault with disgust (1809) 'none can be cut, nor polished, nor dressed, without Enormous expense, none have depth between cleavage planes; one can only employ them for commonest works; one is absolutely forced to coat with lime this thankless material...' (C.O. 19; 3rd Jan. 1809. Translated by C. de Bosdari.)

The houses of Cape Town were often built of roughly-faced limestone or reddish Table Mountain granite. (Percival, 'Cape of Good Hope'. London. 1804, 115). It is probably this granite which is meant whenever 'quarry stone' or 'ironstone' are referred to in old documents. (e.g. C.O. 104/33; 21st April, 1819). Round boulders or river stones were generally preferred for foundations, (C.O. 156/13; 2nd Nov. 1821), the rest of the stonework being coursed. Robben Island 'slate', also called 'bluestone' (C.O. 247/37; 24th May 1825) was used for paving slabs, steps, kerbings, hearthstones and, under Somerset, for fireplace surrounds. (C.O. 175, 1822).

The entrance gateway to the Castle was built of imported stone. (Pearse. 'Eighteenth Century Architecture in South Africa'. London, 1933, 21). During the British occupations Portland Stone began to be imported for cornices and similar dressings in brick buildings. (v. Import Lists 1816). By the 1830's new quarries had been opened up with more workable stone, and buildings in dressed ashlar began to appear in the streets of Cape Town.

In the country districts, farm and Drostdy buildings were built of plastered stone wherever suitable materials were available. (C.O. 66. Somerset East. 1st Jan, 1817. C.O. 2614/George 9; 27th Feb. 1818 etc.), the foundations being still of round river boulders. (George, D.R.C. Nov. 1828). Occasional good quarries were found, one of which led, in the case of Uitenhage, to red granite becoming a favourite flooring. (S.E. Hudson's Journal. Acc.602; 8).

The more aristocratic of the Albany Settlers delighted to place their dwellings on high ground where they might command the 'prospect', and in these exposed situations the qualities of materials were severely put to test. The preference for stone is thus explained. There is a complete absence of face brickwork from even the most Georgian of the houses (brickwork, seldom used, was invariably plastered). Here sandstone and limestone are commonly found in walling, and occasionally rough 'blue stone'. Dry stone walling was common in outbuildings; it was also used in Simonstown for the same purpose. (C.O. 391/137. 9th Sept. 1831), but stonework of dwellings was usually pointed with shell-lime (e.g. C.O. 2713/146. 10th July 1829) or cement mortar (e.g. 5th Feb. 1820. GH/Enclosures to Dispatches) whitewashed, (e.g. C.O. 2672/17. 17th May, 1825 : Somerset Church. C.O. 2671/172. 24th Oct. 1825) or - more rarely - plastered.

Stone walls varied from twenty-one to thirty inches in thickness, getting gradually thinner as mortars improved in the late twenties.[1] A detailed specification of 1842, though late, is interesting as it sets out the standards expected of the mason: 'Rubble Masonry in lime mortar, done in courses not exceeding 14 inches in height and each course to have a thorough bond stone at every 6 feet...' (G.H. 8/10, 18th Jan. 1842).

CORNICES were executed in stone or roughly built out in brickwork and then plastered. Naturally in the latter case the core, being cantilevered, needed to be highly burnt, and some concern was expressed when Cape brick was used for 'the projecting cornice all round' the Cape Town Commercial Exchange Building. (Report of W.O. Jones & H. Schutte C.O. 145/66; 1st Nov. 1821).

1. Simonstown, Church, 27" (C.O. 53, 17th Aug. 1813).
   Port Elizabeth, Dwelling, 30" (C.O. 164/10, 25th Feb. 1822).
   Grahamstown, St. George's, 30" (Measurements. Built in 1823).
   Cradock School, 21" (C.O. 2713/146, 10th July 1829).
   Grahamstown Commercial Hall, 24" (G.H. 18, Jan. 1842).

Horizontal string courses to separate the windows of double-storey buildings were introduced with Georgian fashions. They served to emphasise scale by roughly indicating the floor level, and also to enable a plinth, sometimes rusticated, to be made of the lower storey. (Worcester Drostdy, 1824, Plate 13 on page 414; Woodstock Military Hospital, Plate 77 on page 446; and many Albany buildings of the twenties and thirties, such as 'Hilton', Plate 165 on page 313, and the houses on the Market Square, Grahamstown, Plate 78 on page 346).

Similarly, PILASTERS were trowelled on a brickwork core in plaster. Sometimes 'English brick' was also used as the structural element in free-standing columns, such as those of the Commercial Exchange, (Report of W.O. Jones & H. Schutte, C.O. 145/66. 1st Nov. 1821) and St. George's Church, Cape Town. But if they were small enough it was much easier to turn wooden columns on a lathe. This was done in the case of the columns of 'Newlands' and the Bathurst and Grahamstown Drostdies. (C.O. 2645/97; 8th July, 1822 and C.O. 2682/124; 27th Aug. 1826) - and of course the beautiful earlier examples of the Kat balcony at the Cape Town Castle and the house 'Rust en Vreugd'.)

OPENINGS in external walls were usually strengthened by building hard-burnt brick arches above them, (C.O. 113/20; 30th Sept. 1819. 'Arches to be turned over the Windows and Doors with Brick and Mortar.') and sometimes with teak lintels as well (sneeze-wood on the frontier). (G.H. 8/10. 18th Jan. 1842)

In stonework, stone arches were sometimes specified (C.O. 2713/146, 10th July 1829, Cradock School.). In late examples 'bond timbers' were run right

through the external walling above and below the windows to strengthen the openings (G.H. 8/10. 18th Jan. 1842). On occasion the reveals of openings were also reinforced with specially hard bricks (Ibid).

EXTERNAL WOODWORK: Windows and outside doors were of teak in the best work; a wood imported from Burma and India via Mauritius. But in the hinterland and frontier districts the heavy teak was seldom available, and even in Cape Town stinkwood or imported Baltic fir ('deal') was often used instead.[1] Imported fir or 'deal' was already in frequent use at the Cape in Adriaan Van der Stel's time. A requisition of his asks for 'three hundred more deals for the Burghers,..' and another for 'more Norse deals and spar ribs for the citizens whose houses are rapidly increasing'. (Merrifield 'South African Architectural Record', March 1928). Fir was the most common building timber - for both structural work and joinery - throughout Europe and the British Isles in the eighteenth century (cf. J. Summerson 'Georgian London', 64). But at the Cape it was inclined to warp in the heat of the sun (Hudson's Journal; Acc. 602 No. 9). After the failure of Van der Stel's experiment of planting oak to provide the Cape with its own timber supply (the trees grew too quickly to produce a serviceable wood), Stone Pines were planted on the slopes of Table Mountain and some of this local 'fir' was available for building wood.[2]

Stinkwood was generally preferred to fir for external woodwork[3] (but in Cape Town itself and in the Eastern frontier districts it was always in short supply) with sneezewood being highly regarded for lintels, door posts and

1. In 1823 'deal' was slightly cheaper than teak (C.O. 187/22, 26th March, 1823). It was used in the Wynberg camp's doors and windows (C.O. 5, 23rd Nov. 1807) 'Newlands' - for windows and shutters (C.O. 113/20, 30th Sept. 1819); The Worcester Drostdy (C.O. 2669/89, 14th June 1825); Government House (C.O. 221/63, 6th Dec. 1824) etc. Contemporary specifications often treated 'teak' and 'fir' as alternatives for external woodwork (e.g. H. Schutte's Estimate for the Sea Point Lighthouse. C.O. 143/38, 12th Sept. 1821).

2. There is a tradition that the pine in the Koopman's de Wet house was Cape grown (Dr. Mary Cook). The joists of the Cape Town school building were specified to be 'Cape Fir' or 'old Oak' in 1824 (C.O. 221/71, 9th Nov. 1824). In July 1826 the Government advertised for 'Cape Fir' as well as 'European fir' for its stores (C.O. 275/89).

3. Hudson says that it was even preferred to teak (c. 1807). Acc. 602. No. 9.

cills - an almost imperishable but extremely unworkable material.[1] Stinkwood seemed to possess satisfactory weathering properties (C.O. 2645/97; 8th July, 1822. Grahamstown Drostdy), but yellow wood did not, and was inclined to rot very quickly unless thoroughly protected and maintained. As a result, yellow-wood was only used for doors and windows as a last resort.[2] But the great shortage of timber of any kind, especially during the building boom on the frontier after 1820, led to yellow wood being frequently employed in exposed woodwork,[3] with the subsequent deterioration and replacement of much of the joinery.

Sometimes external doors and windows were made with frames of stinkwood and casements of yellow-wood (C.O. 2586/22. 8th April, 1813). Uitenhage Magistrate's Courts, Secretary's and Messenger's Houses).

Other Cape timbers occasionally used included Cape Ash ('Essenhout' - Ekebergia capensis) which was used for the outside doors and windows of the Somerset East church (C.O. 2672/17, 27th May, 1825) and in the Worcester Drostdy (where it is called 'white ash'. C.O. 2669/89, 14th June 1825); and 'Rood Elsewood' (Red Alder, 'Rooiels' - Cunonia capensis) a furniture wood. This latter was specified for the exterior woodwork of Uitenhage Church in 1814.[4] Assegai wood (Curtisia faginea) was used for rafters and flooring during the first British occupation (Percival 'Cape of Good Hope'. London, 1804) but being very tough was doubtless also used for exterior work on occasion. 'Ironwood' (Olea laurifolia) is also specified for the Worcester Drostdy. The frontier farmers (Burchell 'Travels'. London, 1822, I, 169-70), and Albany Settlers, used Willow (Salix capensis) (Pringle 'Narrative...', London, 1824, 40-43) and Wild Olive 'Olea Africana) (Ibid).

1. Surviving in many Eastern Cape buildings. Specified in later work (e.g. G.H. 8/10, 18th Jan. 1842).

2. '...if any of the Windows should be approved to be of yellow-wood they must be well seasoned and to have three coats of oil paint...' Grahamstown Drostdy (C.O. 2671/172, 24th Oct. 1825).

3. Barrow 'Travels' London, 1806, and Hudson's 'Journal' (c. 1807) 'at times there are vessels from America with lumber which comes to a very good market..' (Acc. 602 No. 9).

4. Pringle, 'Narrative of a Residence inSouth Africa', London, 1824, 40-43.

The military cut and used Silver Tree poles on several occasions in erecting the camp buildings at Wynberg (B.O. 8/215, 18th Aug. 1797 and C.O. 5/180, 23rd Nov. 1807); and William Duckitt recorded that he also saw a grove of young Oaks which had been felled ostensibly for the same purpose (William Duckitt's Journal, Mss. S.A.P.L.). Poplar poles are mentioned among the materials for the Worcester Drostdy, presumably for use as roofing members. (C.O. 2669/89, 14th June 1825).

Besides teak and Baltic fir, many other woods were imported in smaller quantities. For instance the American ships, which traded liberally at the Cape,[1] brought Pitch Pine, White Pine, and Red Cedar. (Import Lists, 1808 - 1816). The Pines approximate closely to Baltic Fir for external and internal use. Cedar is quite exceptionally durable in exposed conditions, and for this reason was quickly adopted for shingles, weatherboarding, fascias, guttering, etc. (C.O. 2645/97, 8th July, 1822. Grahamstown Drostdy. C.O. 275/89, 12th July, 1826. etc.) Strangely enough, it is also a fine furniture wood and became popular at the Cape for interior joinery, even replacing stinkwood in such work as the pulpit for the Wynberg church. (C.O. 370/174, 21st Sept. 1829).

From Britain came English Oak, used in surprising amounts for beams and planks in floors and roofing. (Import Lists 1808-1816, C.O. 53, 17th Aug, 1813; Simonstown Church. C.O. 164/10, 25th Feb. 1822; Port Elizabeth House and Stores. C.O. 434/69, 24th June 1834; Robben Island works etc.). Oak and teak were used in combination in the front door of 'Elsenberg' (Pearse 'Eighteenth Century Architecture in South Africa, 26). It is not known whether the oak was locally grown or imported.

1. Barrow, 'Travels', London, 1806, and Hudson's 'Journal' (c. 1807) 'at times there are vessels from America with lumber which comes to a very good market.' (Acc. 602 No. 9).

A trade is also supposed to have existed in Brazilian woods. (Laidler, 'Growth and Government of Cape Town', 187). From the Caribbean came Honduras mahogany, used mainly for fine interior joinery and furniture (Import Lists, 1808 - 1816; C.O. 113/20, 30th Sept. 1819,; folding doors at 'Newlands'; C.O. 145/66, 1st Nov. 1821, staircase of Cape Town Commercial Exchange).

External woodwork was almost invariably painted. Water colour sketches of the late thirties show door and window frames or shutters brown - which may suggest oiled teak - but, as has already been mentioned, not a single earlier reference to the practice can be discovered in the Government records, and it seems likely that oiling external woodwork is a late innovation, possibly dating from the neo-Greek fashion for natural materials. One can imagine how repugnant the practice would have been to eighteenth century taste.[1]

WINDOWS of four kinds were in common use throughout the early part of the nineteenth century: traditional double-sash windows of Cape eighteenth century type, with the upper sash fixed; double sliding sash windows of English origin; small casement windows; and French casements.

The small casement, a mediaeval feature, was probably the most common type in the early Cape houses.[2] It was still occasionally specified on work by Thibault and later architects (C.O. 275/10, 3rd Feb. 1826. C.O. 374/65, 2nd April, 1830), and was used in combination with sash windows on the Worcester Drostdy, (Plate 12 on page 414).

. French casements became common in association with balconies and verandas in the eighteen twenties. One of the earliest examples known at the Cape seems to have had a decorated upper frame (Plate 20 on page 327), of a

1. By a curious coincidence, amateur connoisseurs in England and America imagine that interior Georgian woodwork should be stripped bare and waxed, which would, as Sir John Summerson comments, 'have been disgusting to a Georgian eye; Georgian woodwork... should always be painted.' (J. Summerson 'Georgian London'. London, 1945, 64).

2. Early drawings sometimes show these e.g. E.E. Vidal, Africana Museum No. 1036. House in Paarl, 1802, and Daniell's engraving of 'Farmers returning from Hunting' c. 1800.

type which became really fashionable fifteen years later.

An occasional economy in early nineteenth century construction was the elimination of projecting cills. But the resulting weather stains below the window usually led to cills being eventually added. Even so, a number of the bare type remain.[1]

Projecting cills were generally of plaster on a brick core, but under British influence timber was also used - sneezewood or teak. Georgian reveal linings of thin boarding - projecting to the outer face of the wall - sometimes formed a frame inside the window opening in work done before 1820.[2] The Greek Revival introduced a fashion for architrave mouldings in plaster on the face of the wall around each window.[3]

The solid and panelled shutters of eighteenth century Cape houses survived, with so much of the vernacular architecture, to make occasional appearances in the country districts until the middle of the nineteenth century. But the practice of putting shutters only on the lower half of the windows gradually disappeared, and the old type of window was either given a single shutter over its full height, or separate shutters on both bottom and top sashes. Even with the old windows 'Venetian' (louvred) shutters quickly replaced the solid in popularity.[4] On windows of the English type louvred shutters were generally made in one piece, running from cill to head, though they were occasionally split to cover the top and bottom sashes,independently. (Commercial Exchange, Cape Town. Plate 53 on page 143).

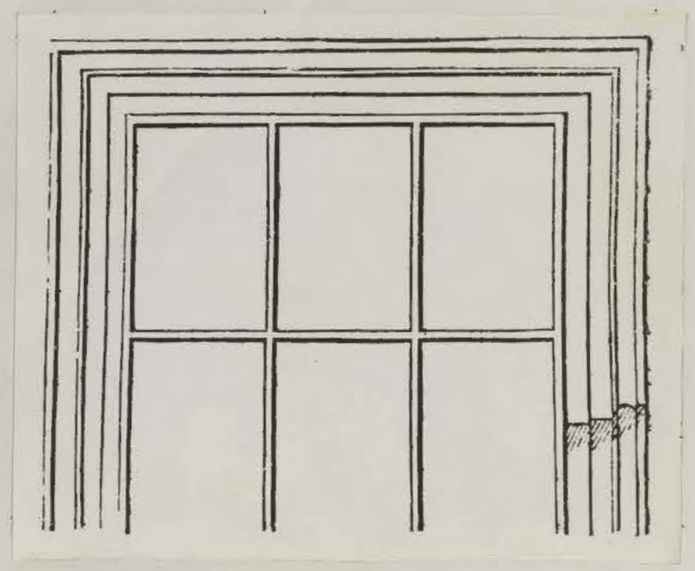
Window and door hardware was extremely diversified. Made in wrought

1. 'the want of projecting Window Sills...allowed the water to penetrate between the Wall and the Plastering'. C.O. 97/20, 21st Nov. 1818 (Simonstown Parsonage, designed four years before by Thibault and built by H. Schutte.

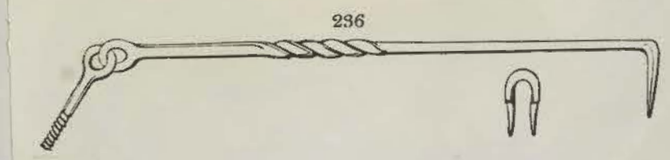
2. Examples survive in Dorp Street, Stellenbosch (Plate 22 on page 154) and Strand Street, Cape Town.

3. Commercial Exchange drawings, 1819. Worcester Parsonage 1824 (Plate 25 on page 419).

4. Supreme Court Building (Plate 6 on page 118), Houses in Church Square (Plate 57 on page 231) and Greenmarket Square ("J.W." water-colour. Plate 40 on page 63). Louvred shutters were early used on the Marine Villa, Camps Bay, 1823 (Plate 43 on page 223) and Cape Town, Govt. House (C.O. 221/51, 22nd Oct.1824).



1. Design for a plaster moulding around a window; from Loudon's 'Encyclopaedia', London,1833.



2. Wrought iron 'stay arm' and hook for bracing window casements; from Loudon's 'Encyclopaedia', London, 1833.

iron, cast iron or brass, some of it was manufactured at the Cape - though there was an increasing tendency for it to be imported. (Import Lists, 1808-1816, and surviving work). Hinges were of six types: butt, dovetail, parliament, cross garnet, H and HL (the latter two for shutters). (C.O. 275/86, 24th June, 1826 and C.O. 425/13, 18th Jan. 1834). Special wrought iron hooks and eyes were made for shutters, (Plate 2) and there were also 'back flaps' for keeping them open.

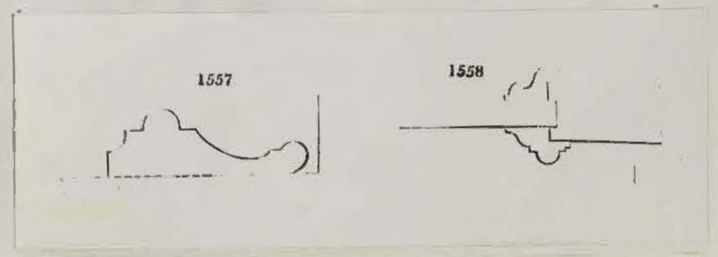
Canopies of wood over windows, called 'sunshades', were sometimes added in the late twenties (C.O. 370/194, 31st October 1829. C.O. 391/86, 11th June, 1831). Canvas awnings were also in use. (C.O. 344/17, 23rd Feb. 1828).

WINDOW GLASS was entirely imported until quite late in the nineteenth century. At the end of the eighteenth century it became, for the first time, cheap and plentiful, and assumed tremendous importance in the eyes of the architects. 'By means of glass we repell the inclemency of the elements... and can enjoy the distant prospect from our firesides. By the aid of mirror we multiply the costly embellishments that surround us, extend the apparent dimensions of our rooms, and create the most magical effects...' (John Britten, 'The Unity of Architecture, Painting and Sculpture, etc.' London. c.1800).

'Castle Crown Glass' from Britain was commonly specified, first mentioned by its trade name in the Import Lists of 1812,[1] and put into 'Newlands' (1819) and many other buildings. (C.O. 113/20. 30th Sept. 1819). It was still in use in 1842 (G.H. 8/10, 18th Jan, 1842). The panes rapidly increased in

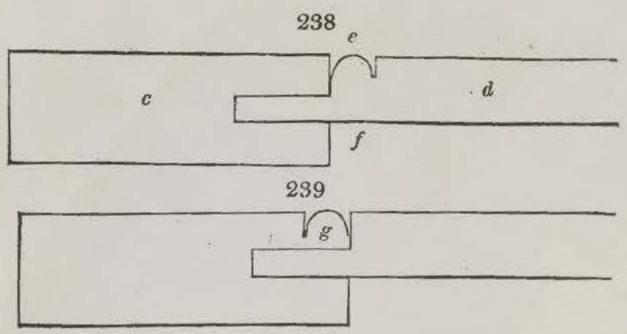
1. Though the Import Lists for the preceding years contain numerous entries for glass and mirrors, the type is not indicated.

1. Merrifield, 'Old Domestic Architecture of Cape Town' - South African Architectural Record, March 1928. He observes that the glass arrived from Holland in sheets 14" x 12" and was cut down to the required size at the Cape.



4. Fig.1557. An architrave moulding. Fig.1558. Bolection moulding for doors.

All from Loudon's 'Encyclopaedia', London, 1833.



3. Fig. 238. Section through a 'Bead, butt, and square back door'.

Fig. 239. Section through a 'Bead flush door, in which the bead, g, is struck on the styles, and returned on the rails, so as to surround the panel'.

size from 8" x 6" and 9" x 7" at the time of the first British occupation[1] to 16" x 12" in 1809 (C.O. 19/6th May, 1809), 20" x 11" in the Bathurst Drostdy of 1820 (C.O. 2742/47, 12th July 1833), and 22" x 16" in the tenders for the Government Stores in 1826 (C.O. 275/74, 27th May, 1826).

EXTERNAL DOORS were panelled in the best work, the number of panels having generally increased at the end of the eighteenth century until it reached a maximum of eight during the first British occupation. Panelling was a mark of splendour and strength. In Thibault's French Neo-Classical designs, some of the panels were shaped into flattened pyramidal forms, but in most of the late eighteenth and nineteenth century doors at the Cape the panels were raised and fielded. Bolection mouldings were in use during Baroque and Rococo periods, went out of fashion under Georgian and Regency influence, and came gradually back into use later in the nineteenth century. English practice favoured very restrained mouldings, with the lowest panels, and sometimes all of them, flush with the styles and separated from them by a simple shadow line of grooved-out beading (Plate 3 and Plate 11 on page 88). In the most elegant Adam work a fine single or double raised beading decorated the panel in its centre, or at the edge of the fielding. (Plate 47 on page 68).

Naturally, doors with many panels were more expensive than those with few, so that the most elaborate doors were kept for the front of the house, and it is extremely uncommon to find more than one eight-panelled door, or pair of doors, in one building.

For outbuildings external doors were ledged and battened, sometimes in diagonal patterns, but generally vertically.

Door frames were beaded on the projecting edges and usually rather heavy, ex. 6" x 5" being a common dimension. (C.O. 2713/146, 10th July, 1829 - Somerset East Secretary's House: 7" x 5", C.O. 2672/79, 26th Dec. 1825 - Uitenhage School: 6" x 4", C.O. 2734/5, 7th Jan, 1832).

Exterior painting was generally whitewash or coloured distemper on the plasterwork (C.O. 133/21, 1st May, 1820. 'yellow washing' the Cape Town Customs House) and oil paint on all woodwork. Oil painting always involved 3 to 6 coats on new work. (C.O. 145/66, 1st Nov. 1821 - 5 or 6 coats on the Commercial Exchange. C.O. 164/10, 25th Feb. 1822 - 3 coats on Port Elizabeth store. C.O. 247/37, 24th May, 1825 - 4 coats on Government House). In the 1820's oil paint began to be put on plaster, a Regency innovation in England, and 'sanded paint' was used to imitate stone on the Royal Observatory, (1827) and was later recommended for Government House. (G.H. 28/15, 28th Sept. 1839 'two coats of sanding are necessary to make good work.')

ROOFING: Roof construction was probably as conservative as any aspect of the rapidly changing architecture of the early nineteenth century could be. In most country areas and in many towns, the roofing timbers were simply roughly-trimmed poles, grooved into each other and sometimes tongued and morticed. Wooden pegs and hand wrought nails were used for fixing. Only in the largest roofs were proper trusses attempted, and these were king-post (C.O. 275/10, 3rd Feb. 1826 - C.O. 158/101, 9th June 1821 etc.) and queen-post (C.O. 2712/118 12th June, 1829) trusses with heavy sections.

The technique of laying a 'brandsolder' of clay over the ceiling to act as a fire-proofing seal between the roof construction and the rooms below survived sporadically for many years, and was even adopted with thatch and shingles by some of the immigrant architects. (C.O. 374/65, 2nd April, 1830- G.H. 8/9, No. 28. 8th July, 1840 - G.H. 28/17. P 1244. 1st Dec. 1841). But British methods of construction gradually led to a falling-off in its popularity, which was probably hastened by the discovery that the fire insurance companies did not set great store by its effectiveness.

Where brandsolders were used the ceiling beams were sometimes as big as 10" x 8" and 8" x 6" over quite average spans (C.O. 164/10. 25th Feb. 1822 and C.O. 2650/28; 12th Feb. 1823. etc. C.O. 155/2 had yellow-wood beams of 12" x 6" for a flat roof. But 5" x 4" is also mentioned, presumably on a very narrow span. C.O. 285/32, 3rd July, 1826).[1] One reason for the extraordinary massiveness of the beams is that in Dutch construction the weight above was carried on thick ceiling or floor boards with beams at relatively wide spacing. In the early nineteenth century the British method of ceiling construction began to appear, with thin boards carried on closely spaced small ceiling joists, which in turn were supported by main girder beams at right-angles. The ceiling or upper floor joists were placed 18" - 20" apart (C.O. 2672/79, 26th Dec. 1825, etc.) and beaded on the lower corners. They generally range in size from 5" x 2½" to 4" x 2". Main beams were usually of the order of 7" x 5".

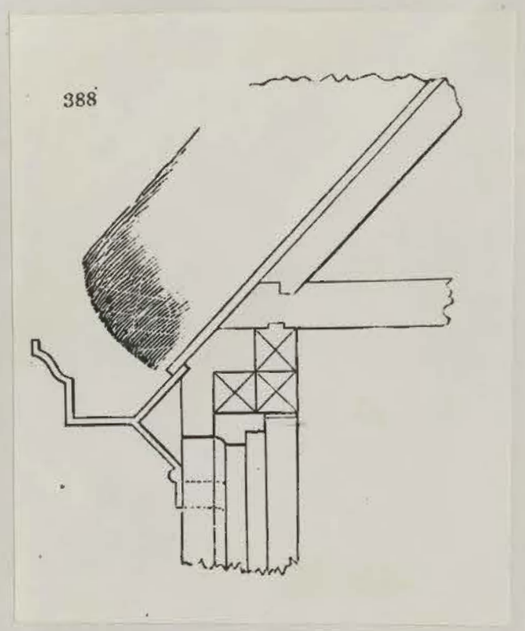
Ceiling boarding was commonly of yellow wood, 1" or 1½" thick, and 12" or 9" in width. (C.O. 4/31st May, 1806). Yellow-wood was regarded as by far the most durable local wood for interior carpentry and joinery.[2]

1. C.O. 2672/79; 26th Dec. 1825 & G.H. 8/10 18th Jan. 1842. Dutch and British practices seem also to have been combined, with extraordinary results. Examples exist of 10" x 4" at Cradock, spaced at 3' centres. Merrifield cites sizes of floor beams in double storeyed buildings in Cape Town: teak 11" x 4" and 10" x 8"; yellow-wood 9" x 6"; Spacing 2'6".

2. George Gilbert, commenting on the bad construction of the Bathurst Drostdy only a few years after it was built, noted that where yellow-wood had not been used 'the worm or maggot has attacked the members. Those sawn from yellowwood are in a good state of preservation.' (C.O. 2682/124, 27th Aug. 1826).

1. Menzel 'Description...' Glogau, 1785, I, 134. The reed referred to is 'Spanish reed' - 'matjesgoed'.

2. Barrow, 'Travels', I, 16. Dune thatch (Chapter 9, page 271) and 'Tambookie grass' were also used occasionally, but as they never became popular they must have proved very inferior. The thatch which George Gilbert referred to as only lasting 10 years at Grahamstown may have been one of these substitute grasses. (C.O. 2682/62. 5th April, 1826).



5. Cast iron gutter added to a thatch roof, from Loudon's 'Encyclopaedia', London, 1833.

Roofing rafters were seldom less than 4" x 4" or 5"x 3" (C.O. 2712/118; 12th June, 1829. C.O. 2650/28; 12th Feb. 1823. C.O. 2682/62; 5th April, 1826 etc.), and great care was taken in tying down the roof against the strong Cape winds. 'Strong iron Anchors to be at the end of every second Beam, and at the Angles, and the Gables end.' (Herman Schutte, specification of buildings in Port Elizabeth, C.O. 164/10, 25th Feb. 1822. Also specified in C.O. 2705/199, 29th Aug. 1828).

Roofing materials were a constant source of experiment and improvement until the advent of corrugated cast iron in the 1850's.

Reed thatch generally lasted about 50 to 60 years[1] and in exceptional cases as much as 80 years (Dr. Mary Cook). Rye-straw thatch would be good for only 20 to 30 years.[2] The thatch was usually about 9" thick and projected about 9" from the walls. (Cf. C.O. 2713/146; 10th July 1829; 'not less than 9" thick. C.O. 2682/62; 5th April, 1826). Guttering on thatched roofs was uncommon until the British Occupations, but was increasingly added in later years. The thatch was tied with leather thongs, tarred hemp or wired to laths 2" x 1" roughed out of yellow-wood or fir. It was capped by a ridge made of 'burnt brick chipped and plastered with lime (C.O. 2672/79, 26th Dec. 1825 etc.) or simply of a plaster mixture of 'lime and sand'. (C.O. 285/6, 30th Jan. 1826 etc.). It was the cost of repairing these ridges, which continually chipped away, which made thatch expensive to maintain. George Gilbert, a shrewd contractor, estimated (1826) that ridge repairs on thatch roofing over 50 years was equivalent to completely oil painting the same area of shingle roofing twelve times (with two or three coats of paints). (C.O. 2682/62, 5th April, 1826). As soon as other materials became available the

ridge was changed, tiles being commonly used wherever they were made (v. old photographs of Port Elizabeth and Uitenhage). In addition they were sometimes carried considerable distances specially for that purpose. (C.O. 2749/4, 10th Jan. 1834). Lead, zinc and copper were also, though more rarely, used for ridges on thatched roofs (C.O. 2749/4, 10th Jan. 1834 etc.).

Gables 'are no advantage to a building' observed Charles Mitchell in 1836[1] and there is some evidence that this was also Thibault's view. (C.O. 19/12th July, 1809. Mitchell preferred hipped roofs, and so, under some circumstances did George Gilbert. (C.O. 2705/199. 29th Aug. 1828). After the second British Occupation more and more hipped roofs begin to make their appearance, and while it may not have been entirely a British innovation there is no doubt that the imported preferences of fashionable Georgian taste contributed to the spread of the hipped roof. (C.O. 2705/199, 29th Aug. 1828. C.O. 2713/223, 14th Nov. 1829. C.O. 2748/91, 5th July, 1834. etc.)

The Kaffir War of 1835 with its tremendous devastations by fire, had a noticeable effect on the choice of roofing materials. (Chapter 9 page 292), and accelerated the rate at which thatch went out of fashion on the frontier,[2] a curious coincidence with the contemporary movement in the Western Cape brought about by the pressure of Insurance charges.

Plaster flat roofs were built up over 1" to 1½" yellowwood or deal boarding on heavy beams (12" x 6" at 2'0" centres is mentioned at Simonstown, C.O. 155/2, 22nd Jan. 1821). A crushed brick aggregate was next laid, and finished

1. C.O. 445/169, 17th Oct. 1836.

2. C.O. 2855/80, 20th June, 1835. Replacing roof of Port Elizabeth Public Offices and Prison with tiles. Already in 1834 the roof of the Uitenhage Public Offices had been replaced in the same way 'for security's sake' (C.O. 2748/91, 1st July, 1834).

with three coats of shell lime and sea shells. (Burchell, 'Travels' Entry of Jan. 1811, I, 53-4. C.O. 155/7, 5th Feb. 1821). This is not the method suggested in the Council of Policy's recommendations (1717) but was that everywhere followed at the time of the first British occupation. When these roofs leaked they were repaired with tar or paint. (C.O. 422/64, 12th July, 1833). If it was intended that the flat roof should be used as a promenade it was floored with red 'Italian' tiles [1] or slate slabs from Robben Island.

But roofs of this kind began to lose favour after the second British occupation. S.E. Hudson noted in 1822 that thatched roofs 'are cooler in Summer and warmer in winter than Flat plaster roofs upon which the sun has a most powerful effect however lofty they may be built...', [2] and George Gilbert commented (1826) that 'flat paving on Yellowwood Beams and boards might if well done...last a few more years than [thatch] but then the utmost diligence must be used to prevent any rain penetrating through...'. (C.O. 2682/62, 5th April, 1826). [5] Melvill in 1819 gave it as his opinion that 'the bad effects of the rain penetrating... [are] almost unavoidable in a flat Roof. (C.O. 113/24, 25th Nov. 1819).

In an endeavour to solve the waterproofing problems of flat or very low-pitched roofs two early expedients were canvas on flush boarding [3] and feather-edged weather-boarding [4], both either oil-painted or tarred. The paint or tar was sometimes sanded to increase its durability. (C.O. 374/91, 1st June, 1830). Not only were these roofing materials more waterproof and easier in maintenance, but, being lighter, they were considerably cheaper in first cost. (C.O. 413/32, 27th Feb. 1833: Canvas roofing 2/3 that of Brick and Plaster).

1. Spaarman 'A Voyage to the Cape of Good Hope', London, 1782. I,10-11. S.E. Hudson says that they were Batavian tiles in his time (1807). (Acc. 602. No. 9).

2. Accession 602. Document 8, Mrs. Eaton complained in 1818 of Cape Town houses that 'the upper rooms are hot in summer in consequence of the flat roofs.'

3. C.O. 97/8, 27th Feb. 1818 - C.O. 285/32, 3rd July, 1826: 'wood flats...to be covered with a strip of canvas newly tarred on both sides of 3" broad, and over which the whole to be covered with old tarred or painted canvas which is to be fastened with a batten the whole length of each seam 2" broad, the whole to be painted over. C.O. 374/124, 30th July, 1830 - C.O. 445/188, 21st Nov. 1836 - C.O. 28/20 634-9, 30th Nov. 1842.

4. 'the Roof of the Veranda to be either Weatheredged boards or sail canvas well painted.' C.O. 2671/172, 24th Oct. 1825 - C.O. 370/233, Feb. 1829.

5. Teak boarding was generally regarded as more satisfactory. (C.O.97/8; 27th Feb. 1818).

Towards the end of the Georgian period architects at the Cape began to advise against the use of flat or very low pitched roofs over any part of a building except verandas. It was found that the slightest penetration of water rotted the yellowwood or deal boarding and beams, and unless teak or some more durable wood was available these roofs were always likely to become a problem. The landdrost of Albany in 1825 wrote of his 'conviction of the insufficiency of flat Roofs constructed with the wood found in this part of the country' (C.O. 2671/105, 28th June, 1825), and Skirrow also commented (1836) that 'a trussed roof...would be cheapest in the end...' (C.O. 445/206, 23rd Nov. 1836).

Flat roofs were also at various times constructed of lead, zinc, roofing paper and asphalt felt.[1] Lead was used on the flat roof of the colonnade at 'Newlands' (1819) where it proved a failure ('the great Heat which it holds warps the boarding which again bends the Lead and by the changes of climate it breaks, perishes and requires perpetual repair.' C.O. 187/13, 27th Feb. 1823). But in this case the lead was too light, and a lead flat roof was subsequently used with great success on the Royal Observatory (1826). But it was always a most expensive construction, as the lead had to be specially imported from England. (C.O. 2467/8, 9th Aug. 1826).

Zinc was put on the flat roofs of the Grahamstown St. George's (C.O. 235/33, 29th March, 1825 and C.O. 2682/29, 14th Feb. 1826), over the Government House Ballroom (1826: C.O. 374/44, 5th March 1830), the Colonial Office c. 1826 (C.O. 374/106, 29th June, 1830), and new Wharf Offices (C.O. 403/56, 30th Apr. 1832), and continued to be used in good work throughout the century.

1. Asphalt felt roofing was being advertised c. 1856. (Laidler. 'Growth and Government of Cape Town, 310-1).

Tarred sheathing paper first appears in the available records as the covering of part of a house on Robben Island in 1826 (C.O. 275/119, 9th Oct. 1826), and in 1827 'Repairs to Sheathing' were mentioned for outbuildings to Government House. The paper came, not in rolls, but in quires and reams, and was 'coated twice with pitch and tar' after laying. (C.O. 321/37, 21st April, 1827). It is occasionally referred to thereafter, (C.O. 2749/4, 10th Jan. 1834, etc.) and was the material recommended by George Gilbert in this letter to the Governor as suitable for fireproof construction in fortified farmhouses. (Plate 97 on page 292).

Shingle roofs date from the period 1806 - 1820 (v. Chapter 7 page 173). By 1820 they were being employed in Government work, the Inspector of Buildings reporting that he had 'very little doubt... of their superiority and advantages to flat roofs.' (C.O. 133/14, 29th Feb. 1820). Besides being used for the roof of the Lutheran Church in Cape Town (c. 1818, these were made from teak) shingles were also used on the Grahamstown St. George's, (1825, redwood - C.O. 235/33, 29th March, 1825), and proposed for the Bathurst church, 1829. (C.O. 370/166, 28th Aug. 1829). In 1835 shingles, of kaffirboom, were recommended by Alexander as a suitable fireproof roofing for fortified farmhouses. (Plate 96 on page 292). (It is not known whether kaffirboom shingles were in common use.) But at this time imported zinc and slates were becoming readily available in the Colony. Under pressure from the Insurance companies, most of whom rated shingles as inflammable as thatch, ('Cape of Good

Hope Almanac', 1834 & 1835), the shingle roofs began to be replaced by these materials, a process which must have been almost complete by the 1860's. At the time they came into use, American redwood shingles were the most durable, and fairly easily obtainable (C.O. 2682/62, 5th April, 1826). Experiments made with teak, oak and Cape fir seem to have been only partially successful. (C.O. 133/14, 29th Feb. 1820 - C.O. 156/21, 27th Dec. 1821 - C.O. 199/15, 17th June, 1823 - Mitchell uswisely suggested yellowwood shingles for the Bathurst Church but the mistake was fortunately pointed out in time. C.O. 370/166, 28th Aug. 1829). Shingles were fixed by nailing into battens at close centres and flashed on the ridges and valleys with lead, zinc, or tinned copper sheeting. (On the ridges the metal was shaped over wooden ridge rolls. C.O. 113/20, 30th Sept. 1819 - C.O. 221/71, 9th Nov. 1824 - C.O. 175/22, 7th June, 1822 - C.O. 156/1, 17th Jan. 1821.).

Mentzel tells us that an early attempt to use pantiles in Cape Town ended in failure, since they were blown off by the wind. (Menzel 'Description of the Cape'. Glogau, 1785. I, 108). But Hudson'sremarks cast doubt on this for he pointed out that in his time (c. 1807) 'English tiles have been put upon some of the Government places without inconvenience or danger'.[1] Tiles appear to have been early amnufactured in the eastern part of the Colony by the Albany settlers (Chapter 10, Page 368), and continued to be made throughout the 19th century. They were common in early Port Elizabeth (where a special type was designed by the Commandant) and Uitenhage, and they were recommended by Alexander as a fireproof roofing material for fortifiedfarmhouses in 1835. (Plate 96 on page 292).

1. Acc. 609 No. 9. Hudson's Journal 'Buildings'.

The tiles, of the 'pantile' type, were not always of very good quality. To be really suitable for the manufacture of tiles the clay had to be considerably finer than the clays normally used for bricks, and such a clay does not seem to have been found at first. (Nor was the machinery available to grind the clay to a finer consistency. It was probably trodden before being used.). The result was that the tiles were not wholly impervious to water, and had to be painted with oil paint, in at least one case - that of the Uitenhage Drostdy. (C.O. 2711/110, 15th May, 1829). In addition, the early tile roofs always seem to have been masoned in with hair mortar (made with shell lime, sand and horsehair) and pointed after they were laid. (C.O. 2711/110, 15th May, 1829 - C.O. 284/35, 16th May, 1826 - C.O. 2748/91, 5th July, 1834 - and C.O.2741/46, 30th April, 1833).

The pantiles overlapped one another by 2½" to 3" and were wired to wooden laths of about 2" x 1¼". Specially shaped tiles were made for ridges and for the hips of hipped roofs (C.O. 2711/110, 15th May, 1829).

With the expanding industrial production of Europe new markets had to be found for many materials in the colonies, and tiles were among them. In the 1850s tiles (including Broseley) were imported in considerable quantities from England and put onto many South African houses. ('The Findlay Letters', and Hattersley, 'British Settlers in Natal', 215-6).

Zinc pitched roofing was another material recommended by Anderson for farmhouses on the frontier (1835): 'a roof covered with plates of this metal

is not expensive; in a town it is even less so than thatch, and cannot be set on fire. The difference of insurance is also to be noted; for zinc roofs 2s 6d per cent is charged, for thatch 15s.' It was the roof eventually put on the Bathurst English church, and seems to have continued in popularity until the arrival of the cheaper corrugated iron in the fifties.

Slate pitched roofing was first introduced by the British when they attempted to use stone slates on the Bathurst Drostdy and other early Government buildings (and possibly on some of the Albany settlers houses as well[1]). This was followed at the end of the decade by experiments with Robben Island slate for pitched roofing[2]. But these early attempts to use local slate only served to create a demand for the superior imported material, which, happening to coincide with the need for British manufacturers to find overseas markets, resulted in the exportation of considerable quantities of Welsh slate to the Cape after 1835. Mechanically trimmed, dressed and holed slate rapidly replaced in popularity all other materials except zinc and tiles, and in certain areas, thatch, until the advent of corrugated iron.

Guttering in the traditional Cape construction - where it was included at all - was boxed out of wood (C.O. 13, 2nd April, 1808 - C.O. 2711/110, 15th May, 1829), or 'cut out of beams' (C.O. 2614/George 9, 27th Feb. 1818), and pitched and tarred inside to make it waterproof (C.O. 247/39, 28th May, 1825). As it required continual maintenance and was a perpetual fire hazard,[3] the wooden gutter was lined with lead or zinc, after the British occupation,[4] or entirely replaced by a gutter formed of tinned copper.[5]

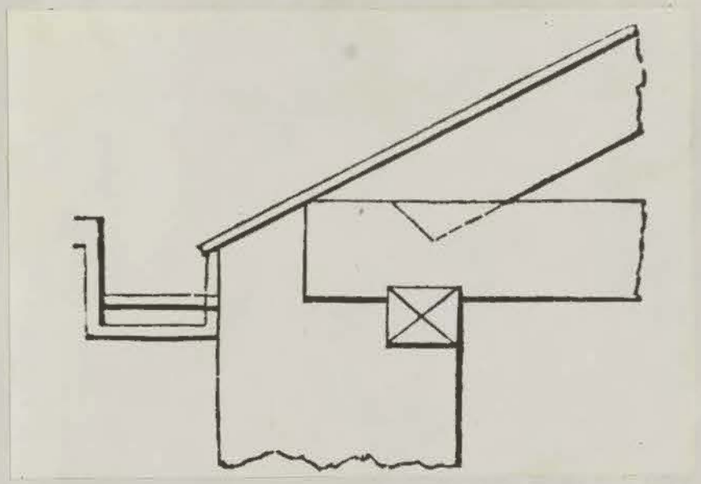
1. v. pages 273 & 386.
It is important to note that slate was the most fashionable roofing material in late Georgian England. (Summerson, 'Georgian London', London, 1945, 65).

2. v. pages 506-7.

3. Wooden gutters and waterspouts were instrumental in spreading the fire in the Dragoon Stables in 1798 (Andrew Barnard to Earl Macartney. Fairbridge. 'Lady Anne Barnard at the Cape', Oxford, 1924, 70-71).

4. C.O. 2749/6, 10th Jan. 1834 & C.O. 403/43, 14th April, 1832. The earliest mention of new lead-lined gutters were those eventually put on 'Newlands'. C.O. 156/17th Jan. 1821. Zinc gutters were specified for the Somerset East church C.O. 2672/17, 27th May, 1825.

5. C.O. 391/73, 30th May 1831. Tin copper gutters were proposed for 'Newlands' C.O. 113/20, 30th Sept. 1819, and were put on many new buildings after 1828. C.O. 344/73, 17th July, 1828 etc.



6. Flush guttering to a slate roof; from Loudon's 'Encyclopaedia', London, 1833.

In late Georgian design gutters were generally fixed directly to the wall (Plates 5 & 6). In double-storey buildings there was usually a moderate eaves overhang to act as a cornice to the facade, in which case the soffit of the eaves was either moulded in plaster, brick or stone to something approaching the profile of a classical cornice (Plate 56 on page 174) or boxed in simply with painted flush boarding behind the gutter. (Plate 19 on page 481).

INTERIOR WORK:

The commonest internal wall finish was, of course, plaster. In traditional Cape construction this was generally a clay plaster, made of a special white clay found in parts of the Western Province. (C.O. 53, 17th Aug. 1813 and C.O. 113/24, 25th Nov. 1819). In constructions with inadequate damp-proofing, clay was 'found preferable, as lime is more subject to damping' (1814). (C.O. 2592/34, 12th March, 1814). Sometimes dung was added to the mixture to increase its resistance to cracking and crazing. (C.O. 2672/79, 26th Dec. 1825).

The plaster was usually whitwashed or painted in pale 'size-colouring' - 'water-paint'. (C.O. 2586/22, 8th April, 1813 & C.O. 321/37, 21st April, 1827). For ornamental plasterwork, cornices and ceilings a special plaster made of 'well-burnt chalk lime' - that is, 'mason's lime' was used. (C.O. 370, 28th Jan. 1829).

In the 1820s the use of clay plaster fell into disrepute in official work,

1. Fir staircases: C.O. 374/189. 25th Nov. 1830.
Stinkwood doors: C.O. 2592/34, 12th March 1814.
C.O. 2672/17, 27th May 1825.
Stinkwood staircases: 97/2, 17th Dec. 1818. C.O. 2645/97, 8th July 1822.
Mahogany Doors: C.O. 113/20, 30th Sept. 1819.

2. French polished Mahogany doors were an Adam innovation, used at 'Newlands'.

3. C.O. 156/1, 17th Jan. 1821. & C.O. 210/128, 30th March, 1824. They were frequently put into a building at the same time as external shutters (e.g. C.O. 221/51, 22nd Oct. 1824).

because of its soft crumbling finish, and - with improved foundations and damp proofing - lime plaster came to be used inside as well as outside (C.O. 113/24, 25th Nov. 1819 & C.O. 2727/106, 8th Dec. 1831). In a few cases it was further oil-painted 'to resist the damp'. (C.O. 221/20, 27th March 1824).

Internal walls sometimes took the form of simple partitions, made of '2 inch ploughed and Tongued Board' on uprights, (C.O. 97/7, 19th Feb. 1818) or even such materials as canvas or 'Green Baize'. (C.O. 321/39, 26th April, 1827). Plaster on a wattled lattice was a common construction for partitions in the Albany Settlers' houses.

Joinery inside the building was generally of fir or yellowwood, with stinkwood or mahogany for the finest doors, staircases and internal window-shutters.[1] The two latter woods were generally left unpainted, the stinkwood 'provided with a coat of linseed oil' (C.O. 2592/34, 12th March, 1814) and the mahogany French polished.[2] At this time yellowwood was not regarded as a fine wood and it was invariably painted over with several coats of oil paint. Inside shutters were framed and panelled, (C.O. 2671/172, 17th June, 1824), folding so as to fit neatly into the window reveals when not in use, fitted with polished brass knobs, hinges and catches, (C.O. 2645/97, 8th July, 1822), and sometimes cut into two heights to give independent control of lighting from the top or bottom.[3]

From the eighteenth century floors of red 'Batavian' tiles and Robben Island stone, the fashion passed rapidly to suspended boarded floors in the

early years of the nineteenth century (C.O. 27/9th April, 1810 & C.O. 2586/22, 8th April, 1813).

The floors were again generally Baltic fir or yellowwood[1], with stinkwood in the best work (C.O. 221/46, 7th Oct. 1824); for, apart from its beauty, it was found to be considerably more durable than the other two (and for the latter reason was even used for flooring the Cape Town Prison as late as 1833.' - C.O. 403/130, 21st Sept. 1833). 'Newlands', 1821, had floors of Baltic fir (C.O. 156/1, 17th Jan. 1821), but for the 'Marine Villa', 1824, stinkwood was used. (C.O. 221/46, 7th Oct. 1824).

Floor boards were either dowelled together or 'ploughed and tongued'.[2] The boarding was always kept clear of the ground, a one foot ventilation space being the minimum. (C.O. 2713/146, 10th July 1829). The joists were seldom less than 4" x 3".[3]

In corridors, kitchens and outbuildings, floors continued to be laid tiles and slate.[4] English bricks were also a popular flooring material in the same situations. (C.O. 97/20, 21st Nov. 1818 , - C.O. 2645/97, 8th July 1822, & C.O. 2682/124, 27th Aug. 1826). On farms, a composition flooring of clay, fat and cowdung was still in use in the eighteen-forties.[5]

Plaster ceilings were introduced by the British (c.f. Burchell's 'Travels' I, 53-54). Before that, ceilings in thatched dwellings were either (a) non-existent, (b) made by lining the inside of the thatch with reed-matting, or (c) by covering-in the space above the beams with split canes, 'Spanish reeding'

1. Baltic fir: C.O. 156/1, 17th Jan. 1821 & C.O. 221/26, 16th May 1824. Yellowwood: C.O. 164/10, 25th Feb 1822. C.O. 221/71, 9th Nov. 1824 & C.O. 2711/122, 27th June, 1829. Burchell (1811) also mentions teak flooring in Cape Town houses ('Travels', London, 1822-4, 53-4.).

2. Dowelling: C.O. 156/1, 17th Jan. 1821 & C.O. 145/66, 1st Nov. 1822. Ploughed and tongued: C.O. 2711/122, 27th June, 1829.

3. C.O. 221/71, 9th Nov. 1824, etc. But many were considerably bigger, e.g. 6" x 4". C.O. 145/66, 1st Nov. 1821, C.O. 164/10, 25th Feb. 1822.

4. Tiles: C.O. 2682/124, 27th Aug. 1826. A whole house in early Port Elizabeth was tiled on the ground floor. C.O. 245/94, 28th June 1825. Slate: C.O. 2645/97, 8th July, 1822 and C.O. 285/6, 30th Jan. 1826.

5. v. Chapter 9 Page 281. As late as 1813 <u>all</u> the floors of the new Magistrate's Courts building at Uitenhage were specified to be of clay.

or wide boards as a foundation for the 'brandsolder'. Both the last two methods survived well into the nineteenth century.[1] Where boarding was used it was generally yellowwood, though oak, teak and fir were all employed for the purpose in or near Cape Town.[2]

In double-storeyed eighteenth century dwellings there had been no ceilings other than the exposed beams and boarding of the floor above. (cf. Burchell's 'Travels', I, 53-54). As the fashion for English interior decoration spread in Cape Town plaster ceilings were created by the simple expedient of lathing across the soffit of the beams with deal battens or split canes.[3] The ceilings were 'plastered with lime and hair and finished with neat Moulded...Cornice',[4] central chandelier rose (Plates 115-20 Page) and in elaborate work a ceiling pattern in low relief. (C.O. 145/66, 1st Nov. 1821). Workmanship was often poor, the lathes being placed too close together in some cases, and few of these ceilings have survived to the present day. Plaster ceilings were also frequently used under verandas and porticos. (e.g. C.O. 247/37, 24th May, 1825).

In the poorer dwellings of the frontier, ceilings of matting, calico or canvas were sometimes employed.[5] In such cases the ceiling height was often very low.[6] But generally the rooms were lofty, the average height of the traditional construction being about 14 ft (C.O. 2586/22, 8th April, 1813) going up to 18 ft. in all the living rooms at 'Newlands' and 22'6" in the Government House Ballroom (C.O. 113/20, 30th Sept. 1819 & C.O. 403/35, 27th March 1832). By the 1820s the average ceiling height in houses had come down to about 10 ft. (e.g. Huntley House, Grahamstown, 10'0", c. 1819. Port

1. 'Lining the inside of the roof with mats': C.O. 245/94, 28th June, 1825 and C.O. 2720/35, 6th March, 1830. It is interesting to note a similar practice at Jamestown, Virginia in 1609: Waterman 'The Dwellings of Colonial America', New York, 1950, 12.

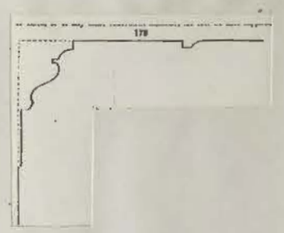
2. Oak: C.O. 53, 17th Aug. 1813
Teak: Burchell's 'Travels' I, 53-54.
Fir: C.O. 53, 17th Aug. 1813.
Yellowwood: C.O. 2586/22, 8th April, 1813 & C.O. 155/2, 22nd Jan. 1821.

3. Merrifield 'The Old Domestic Architecture of Cape Town'. S.A. Architectural Record, March 1928. There is some evidence (C.O. 370/233, Feb. 1829) that ceilings were also created by stretching canvas across the beams.

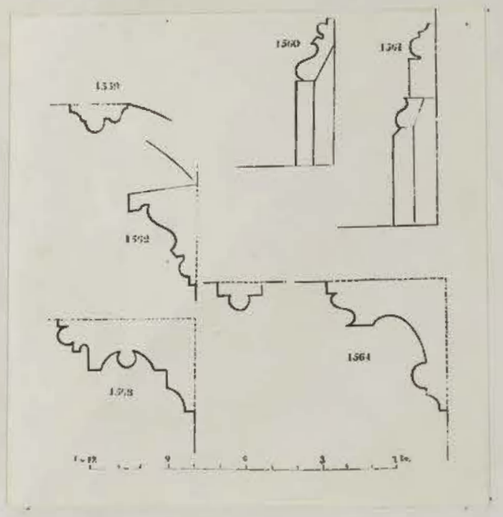
4. Specification of the ceiling of the Grahamstown Church (C.O. 221/8, 16th Dec. 1823.) - typical of the construction.

5. 'Centenary Souvenir of Roman Catholic Church, Grahamstown, 1844 - 1944, Grahamstown 1944 and Chapter 10 Page 332.

6. e.g. 7'0", Boatman's House in Port Elizabeth. C.O. 2650/28, 12th Feb. 1823. The ceiling heights of the officers' houses at Wynberg averaged between 6'0" and 8'0". C.O. 33"31. 17th Oct. 1811.



8. Two cornices, the second simpler than the first, recommended for a small cottage 'in the Halian manner' by Loudon.



9. Skirtings and cornices for a middle-class home (1559 and 1562 are part of the same cornice); from Loudon's Encyclopaedia', London, 1833.

Francis Harbourmaster's House, 9'0". C.O. 285/6, 30th Jan. 1826).

Interior mouldings consisted generally of a cornice of wood or moulded plaster around the edge of the ceiling (sometimes a combination of both), and a wooden skirting around the walls. ('Newlands' Report, C.O. 156/1, 17th Jan, 1821. Grahamstown Drostdy, C.O. 2645/97, 8th July, 1822). In elaborate work a moulded chair rail - 'surbase' - at a height of about 3'0" might be included (Plate 21 on page 327) (C.O. 187/13, 27th Feb. 1823). In the absence of a chair-rail, a plinth or thin line was sometimes painted around the walls to represent it. (C.O. 321/37, 21st April, 1827. Lines were also painted around the windows to represent architraves.) Picture rails were unknown.

Other mouldings were the architraves of doors and windows (C.O. 2671/172 Oct. 24th, 1825) which sometimes took the form of fluted classical pilasters extending right down to the ground (Plates 164 on page 312).[1] Fireplace surrounds also come into this category since they were usually made to match in pattern the door and window architraves and possibly skirtings.[2]

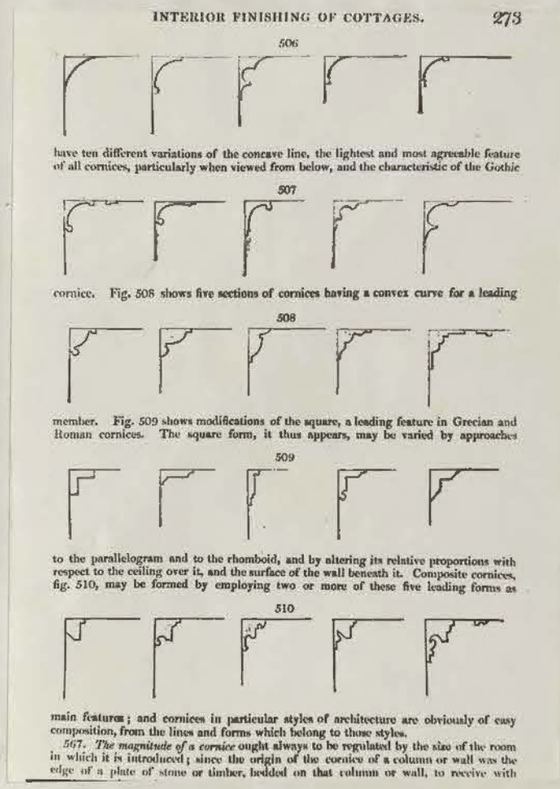
The choice and design of mouldings was a highly skilled business. To emphasise a corner a 'flush bead' was generally used - that is, a recessed semi-circular moulding (Plate 7, left). For a projecting edge the flush bead was sometimes taken to 3/4 of a circle. If the bead was projecting it was generally called an 'astragal'. The type of moulding was usually described by its basic shape - 'half-round', 'quadrant', 'ogee' ('cyma recta')[3] or 'ovolo' (paraboloid) - with additional ornament indicated by an adjective.

1. 'A modern pilaster would look much better in these Rooms than ... the Architraves...' 'Newlands', C.O. 156/1.
2. 'Skirting boards with mouldings to correspond to the other parts of the Rooms'. (Grahamstown Drostdy. C.O. 2671/172, 24th Oct. 1825).
3. Ogee. C.O. 186/23, 5th Feb. 1823.

1. 'The Shutters and Doors are only intended to be moulded with a reeded Astragal on the Panels' ('Newlands'. C.O. 156/1 17th Jan. 1821).

2. C.O. 166/93, 18th Nov. 1822. '...the Rooms are all ceiled and the two principal ones cornished...'

3. C.O. 156/1, 17th Jan. 1821. C.O. 187/13, 27th Feb. 1823 '...when the present plan was decided upon his lordship said he should not require any cornice, skirting, surbase mouldings or anything which could be dispensed with...'



INTERIOR FINISHING OF COTTAGES. 273

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have ten different variations of the concave line, the lightest and most agreeable feature of all cornices, particularly when viewed from below, and the characteristic of the Gothic

507

cornice. Fig. 508 shows five sections of cornices having a convex curve for a leading

508

member. Fig. 509 shows modifications of the square, a leading feature in Grecian and Roman cornices. The square form, it thus appears, may be varied by approaches

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to the parallelogram and to the rhomboid, and by altering its relative proportions with respect to the ceiling over it, and the surface of the wall beneath it. Composite cornices, fig. 510, may be formed by employing two or more of these five leading forms as

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main features; and cornices in particular styles of architecture are obviously of easy composition, from the lines and forms which belong to those styles.

567. *The magnitude of a cornice* ought always to be regulated by the size of the room in which it is introduced; since the origin of the cornice of a column or wall was the edge of a plate of stone or timber, bedded on that column or wall, to receive with

10. Page of cornices from Loudon's 'Encyclopaedia', London, 1833.

For example, one favourite moulding was a 'reeded astragal' (Plate 7)[1] and another the 'quirk ogee' (that is an ogee shape with a sharply incised groove on one side. Plate 10, Fig. 508 - C.O. 321/37, 21st April, 1827 & C.O. 275/98, 8th Aug. 1826). A 'staff bead' (Plate 7) was a corner moulding with a convex-concave curve. (C.O. 245/94, 28th June, 1825).

As all this ornament had to be hand-done, it is understandable that it could constitute a large part of the expense of a gentleman's residence. In many buildings only the principal rooms were corniced and finished with other mouldings.[2] In an endeavour to economise on cost Somerset instructed that mouldings should be entirely omitted from 'Newlands' in 1819.[3] And this in spite of the current dictum that 'ornament enhances comfort and tends to refine the mind'. (Loudon, 'Encyclopaedia', London, 1833, 94).

While the early mouldings were extremely fine and elegant, later mouldings - especially those of the 1830's - were becoming heavy and overbold, a tendency which was encouraged by the increasing use of mechanical aids in woodworking. Instead of being scaled down so as to appear restrained and in balance with the size of the room, architraves and cornices were soon large and over-elaborate, a significant indication of the impact of the European Industrial Revolution at the Cape.

During the period of the forty-two years under review, construction moved from a limited and highly conservative craft to a multifarious, mutable industry. To understand how this happened one has only to remember the

11. View of the mouldings on the doors of the Judge's Chambers in the old Supreme Court building, Cape Town.

continual shortage of skilled labour. The hand-crafts, which dominated building, were fostered in the eighteenth century under the stable agrarian economy of the Company's regime. They blossomed briefly under the impact of the prosperity brought by the French, and then by the British troops, but quickly faded as their best exponents turned contractors and speculators.

Standards of workmanship were bound to suffer. The old materials and building methods were inevitably replaced by new ones involving less skill, labour and creative ability.

In the country districts the traditional construction survived for many years, but was gradually dissociated from skilled craftsmanship and put in the hands of slave labour or hired coloured journeymen.

The whole tenor of the architecture of the latter part of the period, however, is characterised by the change-over from hand-crafts to factory production. Rapid commercial expansion boosted trade with Europe and widened enormously the range of building materials which could be bought in the Colony.[1] Architects brought up in the eighteenth century were confronted with a choice which had never had to be made before, involving not only a readjustment of techniques but an entirely new aesthetic: the soft warmth of hand work replaced by the mechanical coldness of mass production. No wonder that the architects sometimes foundered.

But the effects of the industrial fabrication of building components was not wholly to be deplored. While the eventual outcome was a disastrous decline in taste and refinement in Victorian times, the late Georgian architect was usually too disciplined to be so easily beguiled. Under his aegis

1. English materials were already being imported in impressive quantities in 1814, when Harrington brought all the materials for his buildings with him (Chapter 7 Page 167) and in 1819-20.
C.O. 166/93, 18th Nov. 1822.

the stamp of the machine produced handsome Regency balcony railings, fireplaces and plaster, lead and zinc ceiling roses and cornices.

Machine made ornament was regarded as a wonderful vehicle for satisfying the canons of Georgian good taste in even the humblest buildings: it was 'ready for immediate application at a defined and economical cost, which the tedious process of designing and modelling prevents...'. (Catalogue 'Jackson's Papier Mache Ornaments'. Date and publishing house unknown. Copy in R.I.B.A. Library).

One can imagine the enthusiasm with which such advice was adopted in a country in which skilled labour in many trades was well-nigh unobtainable.

At the same time there were the practical constructional advantages. Iron was producing structures of great utility and strength in Europe, and it is unlikely that, after Waterloo, architects at the Cape did not appreciate its superior qualities as a permanent and fire-resisting material for columns and lintels. Its early appearance (1818)[1] in churches and large halls has already been discussed. As a common structural support for verandas, its lightness helped to preserve the airy tent-like quality so enamoured of Regency taste.

1. Lutheran church, Strand Street, Cape Town, Chapter 6 Page 141.

The evident advantages of iron in trussed bridge construction soon led to its employment in the trusses of large buildings. In 1825 W.O. Jones advocated its use for St. George's - iron was clearly the most desirable

material for achieving the thin ethereal character of Gothic. Mediaeval window tracery, with its slender elongated members and intricate forms also lent itself to cast iron, and was mass-produced after 1815 - and also recommended for St. George's. (Chapter 13 Page 458).

The new materials, in their use, appearance and weathering qualities, fascinated the late Georgian architects. They experimented with the architectural character they produced against the background of local climatic conditions - the intense sun and the dusty environment - and gradually built up a local vocabulary which strongly coloured the later development of South African architecture.

TWENTY :

THE CHARACTER OF THE EARLY NINETEENTH CENTURY TOWN.

1. Portion of a plan of Cape Town at the time of the first British occupation, showing the Dutch East India Company's garden and the private farms of Table Valley above it.

CHAPTER TWENTY

THE CHARACTER OF THE EARLY NINETEENTH CENTURY TOWN.

Cape Town was founded as a market garden for provisioning the months-long trade route to the East. The garden became, and has remained, the focus of the town. When the Cape Town garden proved inadquate another was opened at Rondebosch, the first inland settlement. Thereafter, for more than two hundred years, the new South African towns owed their birth to agriculture. Whether evolving slowly in proximity to government lands or established as exchange and administrative centres for large districts, they were always the fountain-heads of regional community life; religion, trade, justice and defence were sought there by farmers who sometimes lived beyond the known limits of the land. It is this which gave their peculiar multifarious character to South African towns, and often enshrined in them that strong redolence of the African earth which is their most congeneric quality.

Stellenbosch was the first village at the Cape to be laid out as a centre of the latter kind, and for sixty-five years - after 1679 - administered all the settled hinterland beyond the Peninsula. In the mood of the times, Commander Simon van der Stel named it after himself, and planned it on a Baroque authoritarian grid pattern. The channelled course of a stream was made one boundary (which, probably later, became a street - Pine Street) and the wagon road to Cape Town (Dorp Street), the other. (Plate 3). Forming a shallow cross in the centre of this space were two main streets of the village, each terminated at the ends by major buildings serving as foci: landdrost's house, government offices, church and watermill.[1] But van der Stel did more than this. In the Baroque tradition of controlled vistas he planted oak trees at carefully spaced intervals down both sides of the streets, so that the whole became a formal unity on the grand scale irrespective of irregularities or gaps in the buildings.[2] Wherever the eye wandered it was eventually channelled down an axis to one of the symmetrical facades framed by the perspective of the trees.[3] Rippling water in the shadow of the oaks relieved the straight line of the furrows which ran the length of the streets - serving to lead water to the houses, and creating nostalgic reminiscences of the canals in the towns of the Low Countries.[4]

No other town established under the Company's regime at the Cape achieved such an integrated character as this, and none appears to have been so carefully designed. Paarl and Rondebosch were examples of ribbon development; the houses with gardens stretching up a hillside on one side and down to a stream on the other, were ranged at whim by the owners along a main thoroughfare which passed between them on its way to some other centre. Only the measured rows of oaks flanking the road redeemed the situation. By enclosing the roadway the trees created a formal unity which tied the scattered buildings together. But as soon as the development grew too extensive and the avenues excessively long

1. According to legend, the 'brak', at first an open space at the bottom of the town, was used for the celebration of van der Stel's birthday, and was only gradually incorporated into the town plan as it became surrounded by houses. In Adam Tas's time it was 'out of the way' but 'within sight of the village.' (cf. de Bosdari, 'Cape Dutch Houses & Farms'. Cape Town, 1953, 61)

2. The Dutch were regarded as the first serious town-planners in other colonies as well, (cf. 'M.Burrows: 'The Conquest of Ceylon' in 'Cambridge History of British Empire' Vol.IV, Cambridge, 1929, 402). Christopher Sweitzer ('Account of Ceylon', 1676) noted that 'Within the Castle of Colombo there are many pretty walks of nut-trees set in an uniform order: the streets are pleasant walks themselves, having trees on both sides and before the houses.'

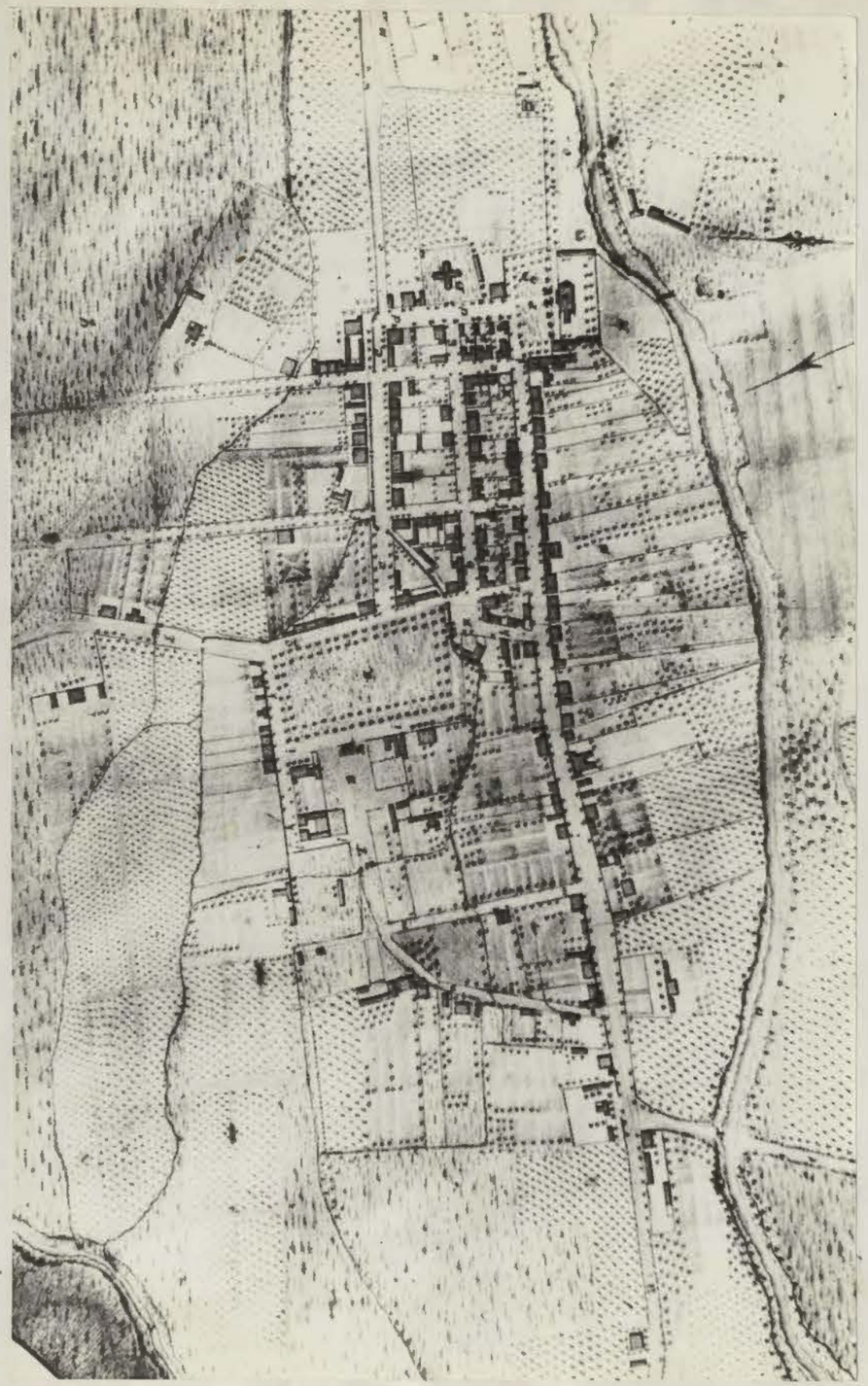
3. Lady Anne Barnard (1797) was so captivated by the town that she spent some time 'taking a plan of the village'. 'It is a beautiful one', she wrote 'regularly built, with one broad street, flagged over, and terminated by the church, three streets going off at each side from the main street. These large streets are the garden grounds of the houses that compose them, and are planted with rows of large oaks; the houses, being whitened every year, give the whole the appearance of being conjured up instantly by the wand of some magician, and the spreading branches of the trees meeting at top form a green canopy over the seven alleys, which are thus always cool and rendered impervious to the rays of the sun.' (Fairbridge 'Lady Anne Barnard at the Cape, 1797-1802' Oxford, 1924)

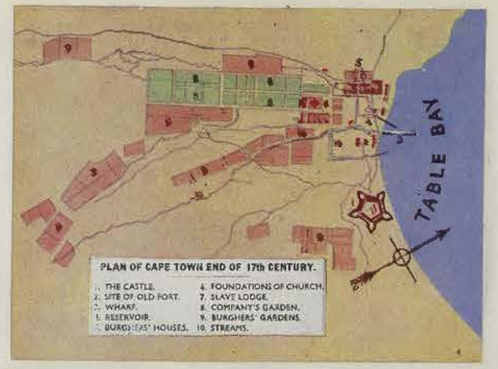
   Lichtenstein (c.1803) commented that 'Each street resembles an avenue...' ('Travels in Southern Africa', London, 1812).

4. Stellenbosch was devastated by the fire of 1803, which must have sadly affected the original beauty of the town, so often praised by travellers. The mill, parsonage, twenty-four private dwelling houses and fourteen warehouses and stores were totally destroyed. (Theal, 'History of South Africa 1795-1834'. London, 1891, 100).

1.A. Stellenbosch. c.1750.

2. View of Stellenbosch c.1720-50. (Elliott).
3. Plan of Stellenbosch in 1817. (Elliott).



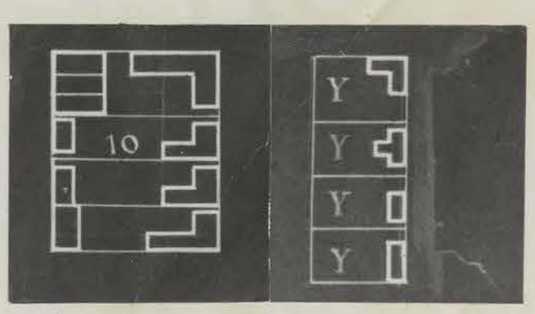


3.A. Diagrammatic Plan of Cape Town at the end of the seventeenth century.

4. Plans of early Cape Town lots. (Dr.B.E.Bierman).

A. Burgher houses in the Heerengracht (?).

B. Burgher houses in Church Square (?).



1. Roggeveen 'Tweejarige Reyze'. Amsterdam, 1774.
2. Stavorinus 'Voyages to the East Indies'. London, 1798, I, 552.

the sense of unity was lost once more.

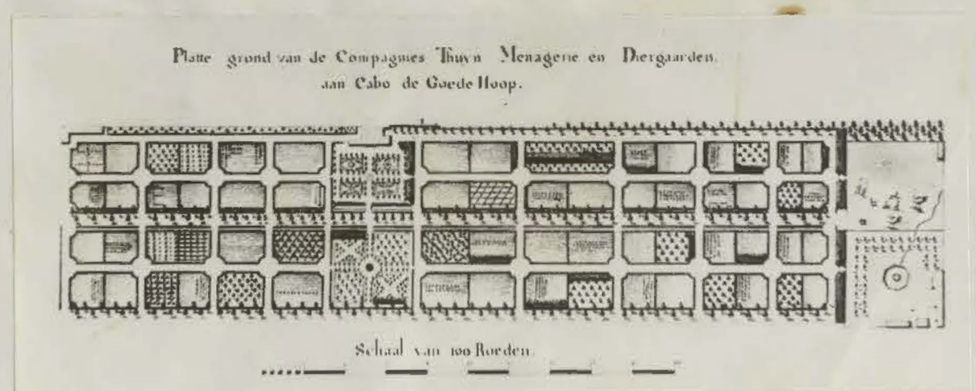
In Cape Town itself the natural ramparts of the setting compensated for the shortcomings of the town. The streets ran parallel to each other from the Garden down to the Bay, many lined by dense oaks shading canals as in Stellenbosch, but without the advantages of dominant foci. At right angles, narrower streets formed a mechanical grid (Plate 1). By 1755, when the Burgher Watch House was built, Greenmarket Square had been created by truncating two of the erven. Such a central open space was a Mediaeval concept, derived in turn from the Roman forum. It served as market place, open-air auditorium and setting for major public buildings. But this, together with the formation of Church Square, and later, Hottentot (Van Riebeeck) Squares were the only serious attempts to produce civic character in Cape Town. For many years public buildings were haphazardly placed across the pattern of the town wherever sites were available, with little to distinguish them by position or prominence from the houses flanking them on either side. Though the tower of the Groote Kerk dominated the town,[1] even this early building was enclosed by its neighbours, while the hospital opposite was so low, so crowded in by other buildings, that its size and importance could never be appreciated.[2]

The houses were at first single-storeyed, with their long sides on the street, as they remain to this day in the smaller country towns such as Paarl, with gardens spread out to the rear of them (Plates 4 and 5). The buildings were by regulation separated from each other by three feet alley-ways to provide quick access in the event of fire, and to lessen the danger of conflagration spreading from one thatched roof to another. (Such regulations survived into much later times, and were repeated in other towns, long after new materials had reduced the fire hazard to a dim memory.)

1. Stavorinus. 'Voyages to the East Indies'. London, 1798, I,552.

5. Cape Town from the south-east in the second half of the eighteenth century; engraving by Schneider. (Elliott).

6. Plan of the Company's garden c.1791, drawn by Josephus Jones. (Delft Topographical Service).



The chief ornament of Cape Town in the late 18th C. was the Company's Garden, and we may form an accurate idea of the impression it made by consulting Stavorinus, who wrote in December, 1768: 'Lengthwise the garden has five walks, which lead in straight lines upwards. The middle one is the broadest, and is planted with oak-trees, which, though they are not very large, afford a very agreeable shade by their thick foliage, uniting overhead. The other walks are equally planted with oak-trees, but they are cut like hedges. These are intersected by eleven cross walks, which are planted with bay (Laurus nobilis) and myrtle trees.

'By this means the garden is divided into fourty-four squares, in which many sorts of fruit-trees, and all kinds of vegetables, are grown: serving chiefly to afford refreshments to the crews of the ships, that touch here.' [1]

A true Baroque landscape this, and in it we observe a pattern which might have been that of the town, reduced in scale (Plate 6).

The Garden was later enclosed with a high wall by Sir George Yonge, and the public walk bordered 'on each side by a hedge of cut myrtles'. (Barrow, 'Travels' London, 1804, II, 28). It was subsequently reopened to the public by Governor Janssens, who caused the central part to be relaid as an elaborate parterre garden by Thibault 'a Frenchman and civil engineer (a gentleman of excellent taste) who made the plan and laid it out: a small serpentine stream, with fancy bridges, ran through the grounds, to which was added a labyrinth of small oak trees.' (B.Borcherds 'Auto-Biographical Memoir'. V.A.N. & N. IV,103). At the same time Thibault executed the flanking walls to the top of the avenue, a main gateway at that end, and the two lion gateways in the avenue (which still survive.)

On the other side of the town the castle was for many years separated from

7. Cape Town from the north-west in the second half of the eighteenth century; engraving by Schneider.
(Dr. K. Campbell).

the Heerengracht by a large empty piece of broken and uneven ground, unrelieved by planting and crossed by treacherous ditches. In the middle of the eighteenth century an attempt was made to relate this space to the town by levelling a section of it, and setting up four fountains (Menzel, 'Description of the Cape' Glogau 1785, 118)[1] 'which play constantly, though they may be stopped by large brass cocks: the inhabitants, and the ships, are supplied with water from them.' (Stavorinus, I, 549-50).

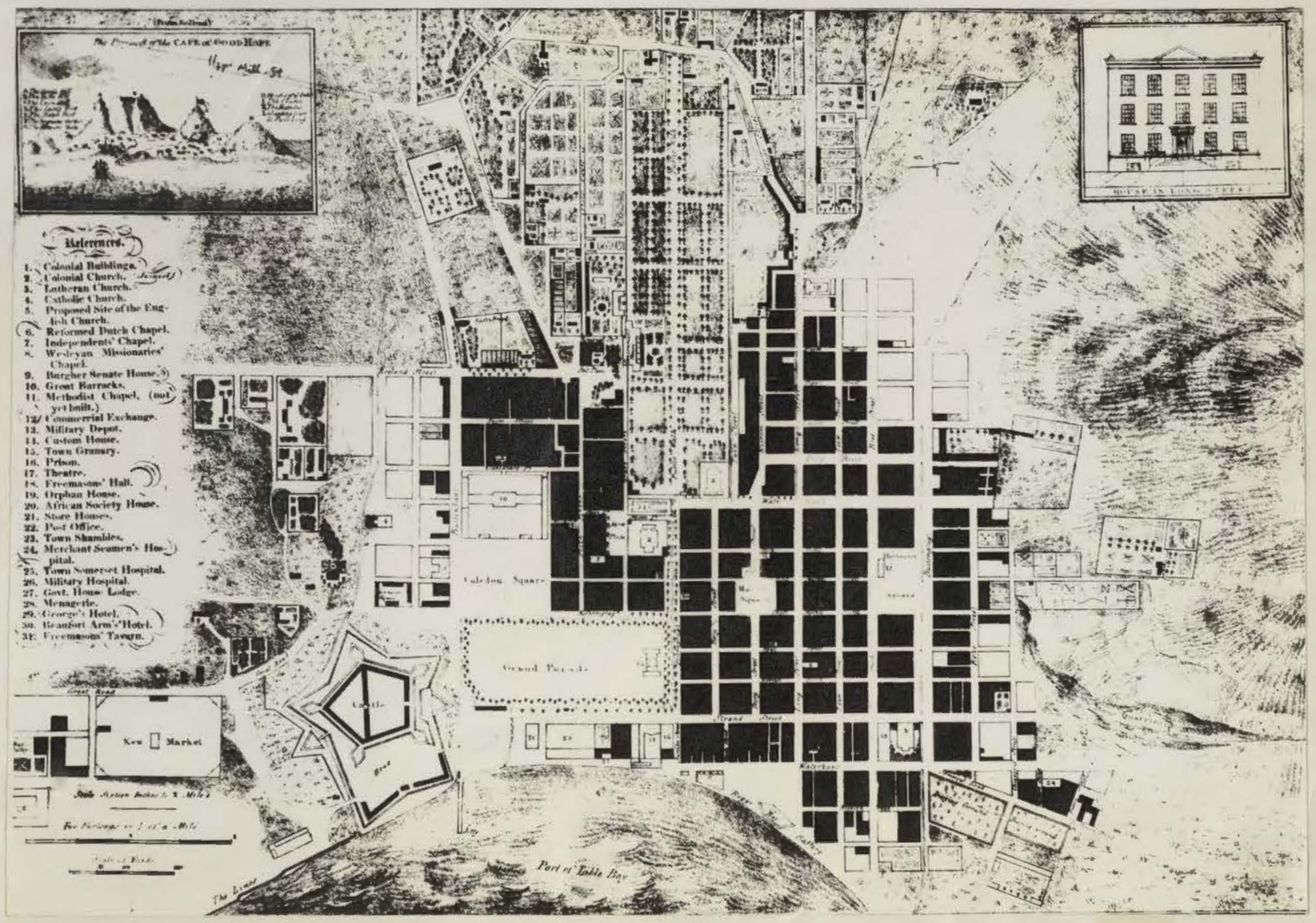
The erection of the new Company's hospital, which, begun in 1772 (rendered necessary by increasing trade to the East), transformed the Parade by providing it with an architectural backdrop. Especially after 1785 (when Thibault's revised facades began to be constructed), the vast open space was dominated by a symmetrical building on the scale and with the character of a palace, which formalised all the ground in front of it (Plate 8).[2] In 1799 a public fountain was set up before the hospital (now in use as a barracks). Related to this Thibault intended that there should be planting, for the contrast of greenery with architecture was one of the aesthetic delights of the late eighteenth century.[3] Under the rule of the Batavian Republic he found his opportunity, and a triple row of Pine trees was planted all round the Parade, lifting it immediately to the status of the main public square in Cape Town, on a scale comparable to that of the Place de la Concorde in Paris; and, like the latter, it became a fashionable promenade, an area for social as well as military display.

That the comparison with the great squares of Europe was not lost on the Burgher Senate is evidenced by the fact that in 1805 Thibault was commissioned to design a monumental public fountain as a focus at the Heerengracht end of the Parade. This was described by a contemporary witness as 'a needle of about 30 or 40 feet high, based on squares of stone, with four spouts running from

1. Stavorinus says 'two'.

2. Wilberforce Bird, 'The State of the Cape in 1822'. London,1823, 159) commented that the hospital 'remains a magnificent monument of the splendour of the Batavian establishment'. (It was demolished sixty years ago).

3. cf.Sigfried Giedion, 'Space Time and Architecture', Cambridge, U.S.A., 1940, 502.

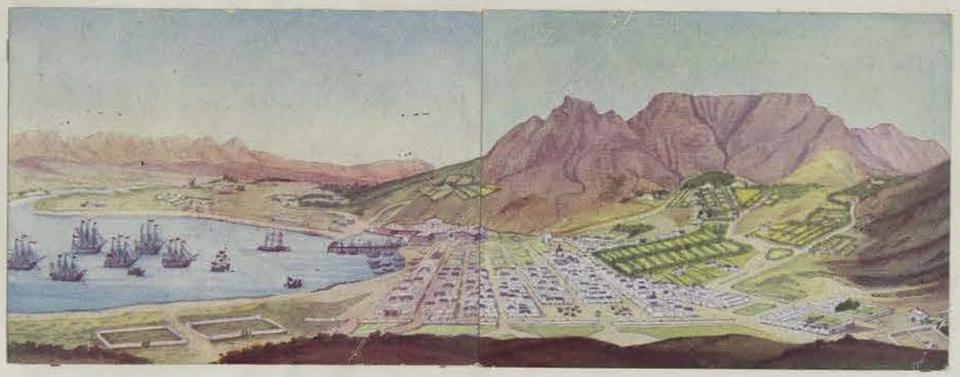


8. Panorama of Cape Town c.1798 with the Great Hospital (the Great Barracks) on the left and the Parade in the foreground; watercolour by Lady Anne Barnard. (Lord Crauford).

9. Map of Cape Town c.1826, from Thompson's 'Travels', London,1827.

1. At the end of the eighteenth century one side of the square was bordered by the canal and the white-washed wall which served as the defining limit of the town, and ran along the present line of Buitengracht Street (Plate 7). During the first British Occupation houses were built on the other side of the wall, and eventually it was pulled down.

2. Swellendam in 1746, and Graaff Reinet in 1786.



9:A. Cape Town from the north-west. A modern colouring which emphasizes the dominance of the Company's garden.

the mouths of lions, ... a beautiful specimen of architecture ...' (See Plate 64 on page 75).

But the installation of a piped water supply in 1814 removed the need for the fountain, which at that time was still unfinished, and the Burger Senate, possibly motivated by the intense personal acrimony which then existed between some of its members and M.Thibault, voted for the demolition of the building. Its function as a centre of interest at that end of the Parade was filled soon afterwards by the Commercial Hall, begun in 1819, and a year later the Acting-Governor had a sundial column erected in front of it on the central axis of the square. (Plate 10 on page 413).

It is clear that the earliest British authorities considered that the extension of Cape Town should take place around a number of public squares of the type particularly common in England. Hottentot Square - now Riebeeck Square - was consolidated during the first British Occupation, when the theatre was built as a kind of free-standing 'Temple of Dionysus' in its centre (Plate 29 on page 53).[1] In 1812 a new market square was laid out within the lines, and was rapidly surrounded on three sides by neat Georgian town houses. Caledon Square was formed at about the same time on one side of the Great Barracks. But thereafter no more formal open spaces were planned, and in the main the subsequent development of Cape Town followed along quite different lines.

In the years just before the first British Occupation three new country towns had grown up at the Cape; Swellendam, Graaff Reinet and Tulbagh. All were regional centres, the former two evolving around administrative outposts established years before to enforce the Company's rule beyond Hottentots Holland,[2] while the latter had a church as its nucleus. Attempts were made from the first

10. Swellendam in 1809. (Elliott).

About Swellendam - I think M.E.R. & her daughter: „Ek dink die oud wet het nog nie van Swellendam gehoor nie" „Ja, my kind, hy het wel — maar hy het dit nog nie nie begin aanbei nie" -

1. Lichtenstein, 'Travels...' London, 1812, II, 139.
2. Barrow, 'Travels'. London 1804.

to establish towns around the Drostdy buildings at Swellendam and Graaff Reinet. Building plots were on sale after 1750 at Swellendam, while it appears that Graaff Reinet was laid out as a town on a plan by the Western Cape farmer, Philip Meyburgh, in the late eighties.[1] But it was some years before the growth of trade with Cape Town created markets at the two district centres and houses began to appear.

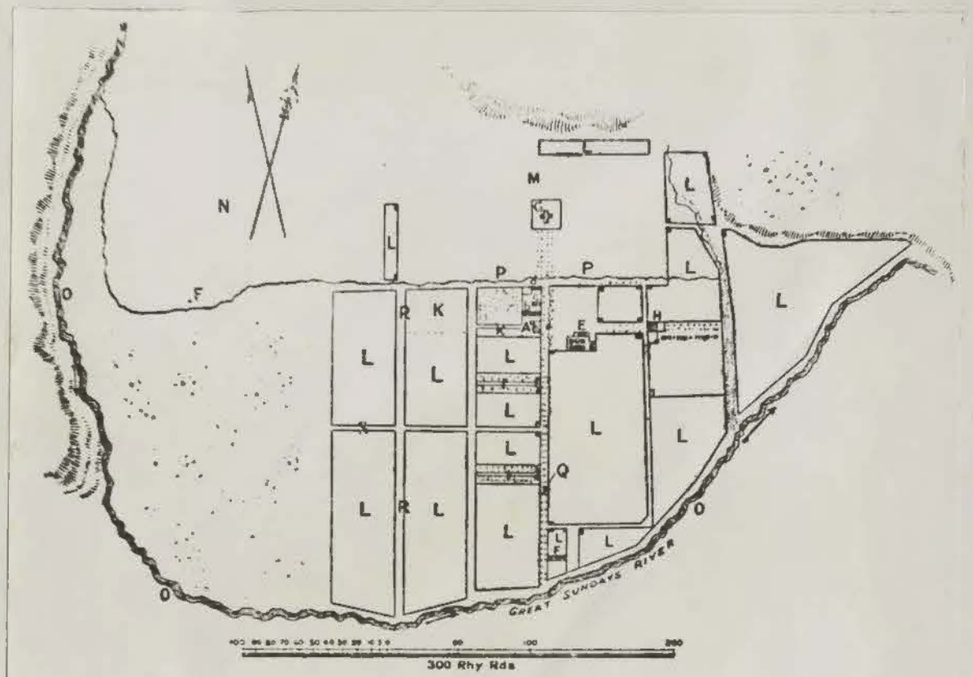
Swellendam was essentially a linear town, the buildings strung along the main wagon track to the interior. In the heart of the village the road widened into a grass uitspan which doubled as the market square. The Drostdy House bore no formal relationship to the town, occurring as it did beyond the other side of the river overlooking the wagon-crossing. It is probable that the growth of Swellendam was so slow that the original plan was eventually forgotten, and ribbon development negligently allowed to take its place (Plate 10). (At any rate, most of the surviving houses are thought to have been built since 1800, and were arranged on an extremely haphazard basis.)

Graaff Reinet grew more rapidly, but was for some years, as Barrow (1800) tells us, nothing more than 'an assemblage of mud huts placed at some distance from each other, in two lines, forming a kind of street. At the upper end stands the house of the landdrost, built also of mud, and a few miserable hovels that were intended as offices for the transaction of public business; most of these had tumbled in, and the rest were in so ruinous a condition as not to be habitable... Its appearance is as miserable as that of the poorest village in England.'[2]

But the political upheaval consequent upon the British capture of the Cape, when both Swellendam and Graaff Reinet declared themselves independent republics brought the latter especially under surveillance, and in quelling the revolt the

1. Cory. 'The Rise of South Africa'. London, 1910-30, I, 137.

2. Burchell, 'Travels'. London, 1822, 103. Entry of April 1st,1812. Backhouse ('Narrative', London, 1844) mentions that in 1839 the whitewashed houses had 'Oleanders and Melias, or other ornamental trees in front,' as well as the Lemon trees which bordered the streets.



PLAN OF GRAAFF REINET AT THIS DATE.

A Dwelling House and Office of the Landdrost.
b Stables and Slave Quarters of the Landdrost.
cd Carpenter's Shop and Waggon House.
E House of Substitute and Prison adjoining.
F Magazine (Blockhouse?) of the Drostdy.
G Church.
H Parsonage.
I The Two Church Erven.
K Land belonging to the Drostdy.
L Land (Private Individuals).
M Church Square.
N Government Land.
O Great Sunday's River.
P Water leading from Sunday's River.
Q Church Street.
R Long Street.
S Dwars (Cross) Street.

11. Graaff Reinet. Plan in 1812. (Cory).

British authorities strengthened the establishment and refurbished the public buildings. This policy was further supplemented by the Batavian Republican representatives, who in 1804-5 granted a total of Rds.25,000 for the erection of a commodious Drostdy House, gaol and houses for various officials. The original church, which was destroyed by fire in 1799, had been rebuilt by the inhabitants and was now rendered secure and creditable.[1]

The heyday of Graaff Reinet had now been reached, and it is probably from this date that the town plan as we now know it stems (Plates 11, 12 and 14). In 1812 the splendid parsonage was erected on a site especially provided for it in the layout of the town, and Burchell, who visited the place in April, describes an entirely different scene from that observed by Barrow.

'... one broad principal street, of detached houses, adjoining to each of which is a garden well planted with fruit trees and continually supplied with water. The church, a large handsome building, on the ground plan of a cross, stands on a spacious plain at the northern end of the main street, of which it forms the terminating object; while the river, with its banks beautifully cloathed with trees and shrubs; closes the southern end ... on the northern side of the principal street, several others intersecting at right angles, together with many detached dwellings, were rapidly rising in every quarter ... Along the principal street a row of orange or lemon trees, at this time loaded with fruit, formed a decoration as novel to an English eye, as it was in itself beautiful by the clean glossy verdure of the foliage, and the bright contrast of the golden fruit. The general fruit season was past, but quinces were still hanging on the trees.'[2]

It will be noted from Plate 3 that Graaff Reinet has the same basic characteristic in its planning as Stellenbosch, which surely served as its

12. Graaff Reinet from the west; photograph c.1910. (cf.Plate 13).

model. Public buildings terminate vistas, which are emphasised by regularly planted rows of trees, as the colonnades of Palmyra unified its street scenes sixteen hundred years before. In the centre of the town a short cross street shaded with trees serves as the major civic space instead of a wide square. The market place, whether by design or accident - but almost certainly the former - is zoned away from the public buildings, a little to one side, where the noise and smell of the cattle sales did not intrude on the work of the magistrate's court and the dignity of the finer houses. We will see examples of this careful planning in other, later, towns. In this grid plan houses tend to have little choice in orientation, though in fact east and west facing seems to be generally preferred, either of which gave a view to the nearby mountains. In 1814 Cradock Street, running parallel to Church Street, was formed by the sale of more building plots.[1] The orientation was again east and west. The trees planted in the streets softened the harsh lines of the grid, and sheltered the house walls from the east and west sun.

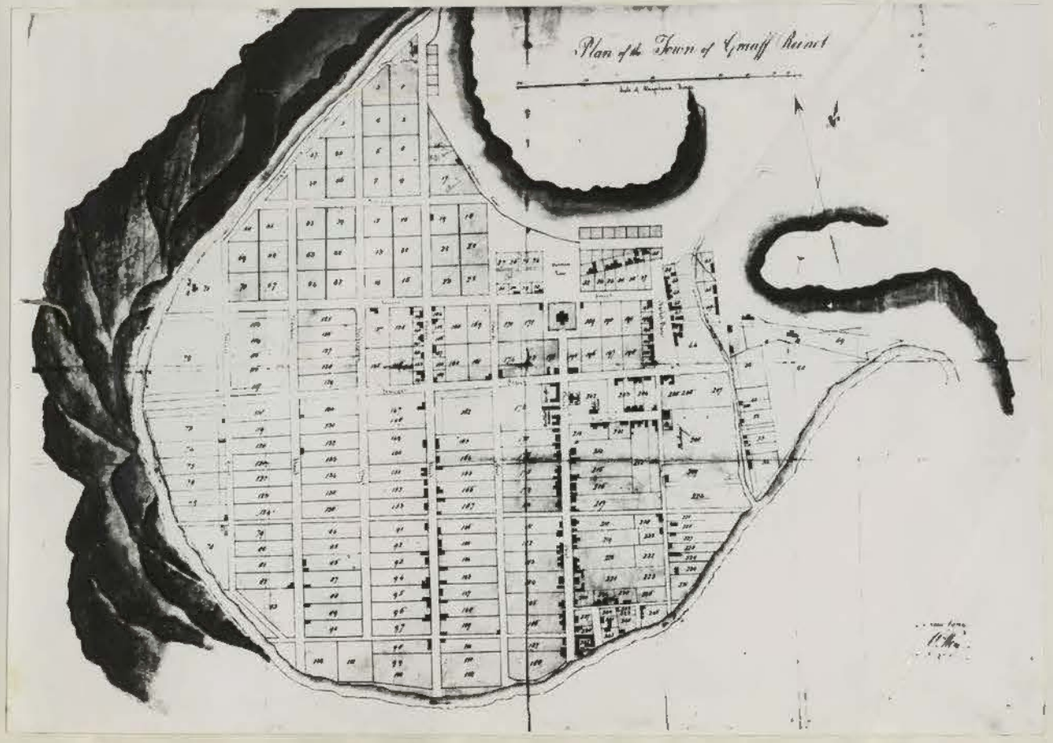
One more aspect of Graaff Reinet remains to be remarked - its rapid growth: 'Seven years before this the number of houses was between fifteen and twenty: but at this date (1812) there were seventy four; of which, indeed, some were not yet completed; besides eight more already planned.'[2] I saw at this time, three smith's-shops, a waggon-maker's and several shops or houses at which a variety of European goods might be bought. There was also a town butcher and baker, and a pagter, or retailer of wines and brandy...' (Burchell, 'Travels', 103. Entry of April 1st, 1812.)

This precipitate accumulation of trades is characteristic of frontier towns in South Africa. With a church or a Drostdy to act as a catalyst, the establishment of a market and then a town is a foregone conclusion. Every month

1. Cory, I, 154.
2. In the year 1806 alone 37 houses had been built. (Ibid).

13. Sketch of a 'Nagmaal' at Piquetberg, Cape, by Poortermans. (Library of Parliament).

14. Plan of Graaff Reinet in 1830. (Cape Archives, Maps).



or two the farmers travelled in, some as far as 100 miles, for the 'Nagmaal', the Communion, and naturally took the opportunity to bring in their produce for barter or exchange. The main town square presented, for the duration of one week-end, an animated scene worthy of a much larger centre; buyers passed and repassed among the waggons in which the farmers camped with their families, while the tradesmen and craftsmen whose premises ringed the square enjoyed a brief prosperity. (Plate 13) The 'Nagmaal' once over, the town relapsed again into its former languor.

Tulbagh evolved as a rural grouping around a church. Though the latter had been completed in 1748 and a parsonage built for it a little further up the valley, it was not until nearly fifty years later that the site of the church became the focus of an exchange centre, and only in 1804 that the Batavian Republican authorities considered that the rapid growth of the district warranted the establishment of a magistrate's court and residence there. The ill-considered decision which led to the erection of the Drostdy House on a farm two miles beyond the town was frequently bemoaned by the successive landdrosts, and probably contributed materially to the eventual transference of the district centre to Worcester. The village itself was equally illogical in its ribbon development along the road between the church and the parsonage (Plate 15), as was shrewdly observed by Burchell when he visited it in 1811: 'The town at this time was nothing more than half a score of neat white houses placed in a row, with here and there an intervening space between them: at the back of which there are as many more of an inferior size. In front, but on the opposite side of the road, and running under the shade of [oak] trees, is a strong rill of excel-

15. Tulbach; an engraving of the main street in 1811 from Burchell's 'Travels'.

lent water, led there, as well for the supply of the inhabitants, as for the irrigation of their gardens, which lie on a gentle declivity immediately below it. No plan could be more inconvenient than that, which has been here adopted, of separating the gardens from the houses. At a few hundred yards from the lower, or southern end of the street stands the church ...'[1]

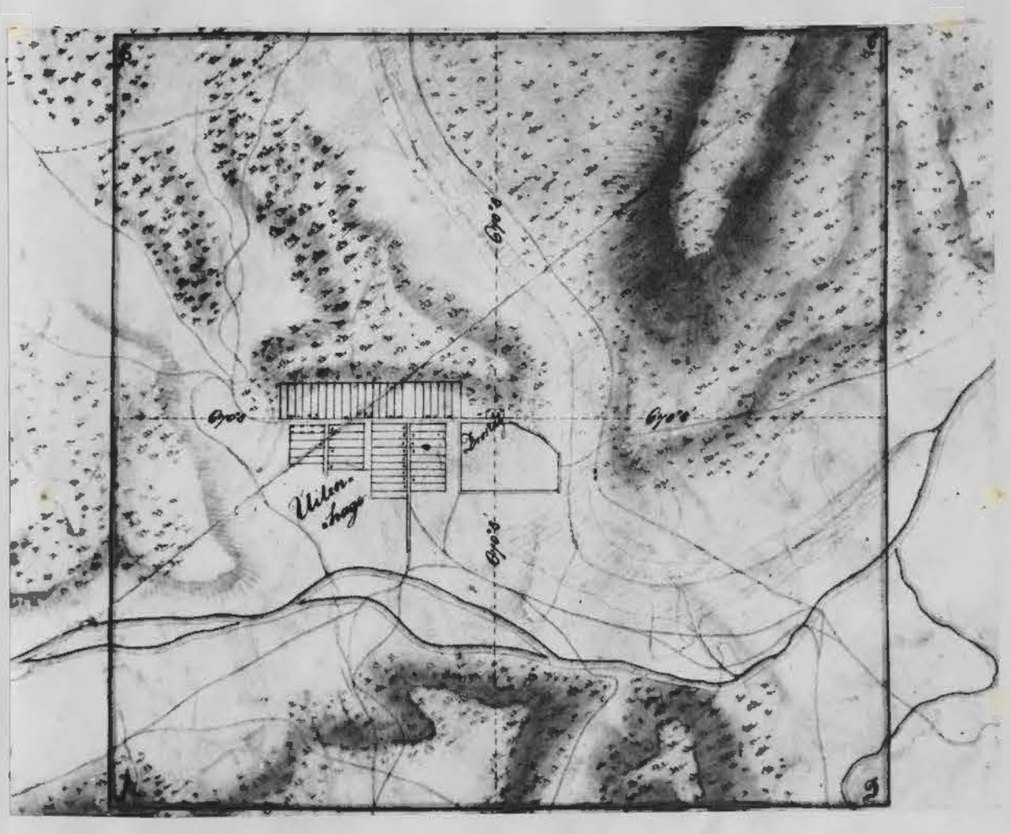
Swellendam and Tulbagh were thus towns which expanded steadily in the early years of the nineteenth century, without control, or even the benefit of a clearly formulated concept of what their desirable form ought to be. That Graaff Reinet was better off seems likely to have been due more to the chance presence of a wealthy and intelligent farmer from the Western Cape than to any far-sightedness on the part of the central government. But this state of affairs, which persisted under the demoralized Company's rule and the chaotic early years of the first British Occupation, then began to change under the influence of enlightened principles imported from the Continent and England.

Especially during the regime of the Batavian Republic were serious efforts made to encourage civic pride among the inhabitants, by town improvements such as those we have seen at Cape Town and Graaff Reinet.[2] Perhaps this was partly due to the influence of Louis Thibault, who held a high post in the administration, but there are indications that both Commissioner-General de Mist and Governor Janssens took a personal interest in these developments.

Yet the only town which was entirely laid out at this time was sited and planned by a military officer, Captain Alberti, Commandant at Fort Frederick, who was appointed provisional landdrost of the new district of Uitenhage in 1804, a step which was taken because it was felt that the unsettled conditions

1. Burchell's 'Travels', London, 1822-4, I, 92-3. Entry of April 16th 1811.

2. v. also Chapter 5 page 105.



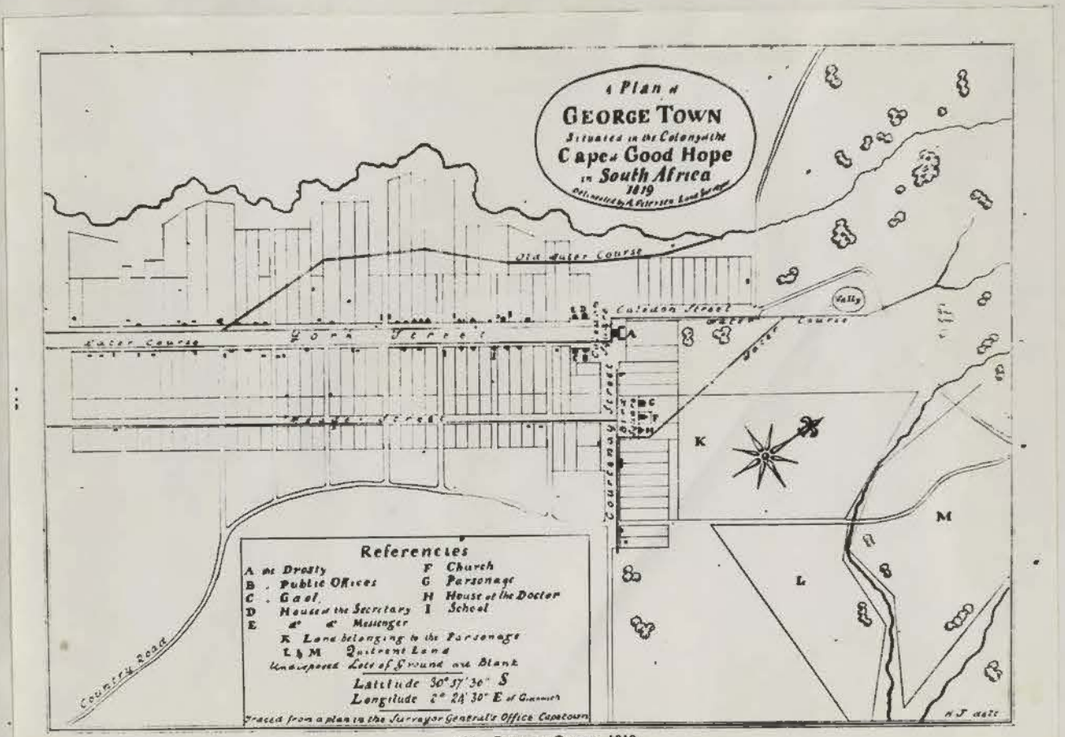
16. Plan of Uitenhage in 1814 (Cape Archives, Maps).

on the frontier necessitated the direction of affairs being in the hands of a military man. This policy was continued by the British in 1806 (and for many years thereafter) with the result that Uitenhage was developed on an army camp pattern, static, symmetrical and sadly lacking in inspiration.

The centre of the new town was the Drostdy, geometrically as well as figuratively, for the boundary of Uitenhage was determined as a square with its centre on the Drostdy steps (Plate 16). A remarkable aspect of the design was that the Drostdy farm (always attached to a Drostdy to allow the Landdrost to supplement his meagre salary) was also placed in the heart of the town, directly in front of the Drostdy House, thus precluding the possibility of the main administrative building having a more than theoretical visual relationship to the built-up area, the focus of which now became the church, at the upper end of the main residential street. It is only fair to note, however, that the Drostdy, the Public Offices, Messenger's House, Gaol and Church to some extent all dominated over the town, for they all lay on the upper side of the main cross street (one of the central axes of the square) looking down on the houses to the south-west. (Plate 37, on page 135).

This authoritarian arrangement doubtless had military associations. But, however effective it might be in time of defence, it produced a curious frontal character in the setting of public buildings, and by making provision for no important type of activity other than administrative and religious, forced the public square, when one eventually proved necessary, to be placed at a distance down one of the residential streets, where it was seriously divorced from the other functions. (A situation that was only redeemed years later by abandoning the administrative buildings in the upper street altogether and building a Town Hall on one side of the square.)

1. cf. Plate 108 on page 359.



155. PLAN OF GEORGE 1819

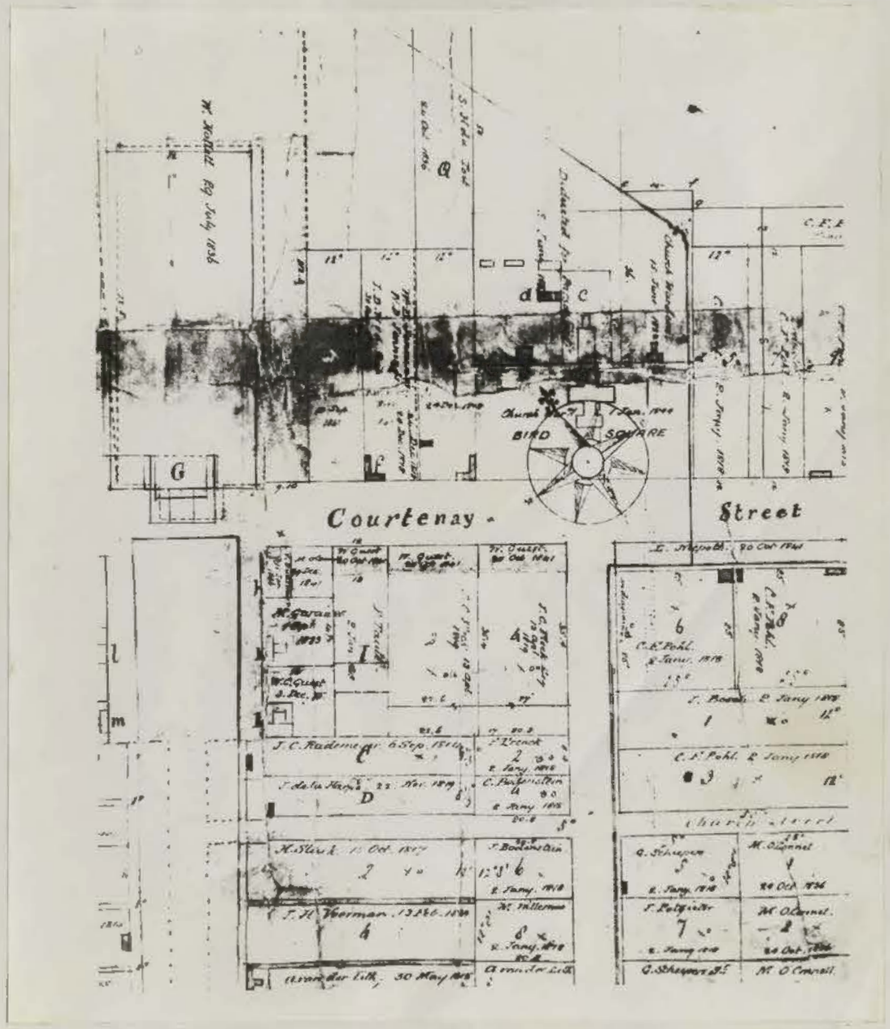
17. Plan of George Town in 1819, a plan by A. Petersen (from Pearse 'Cape of Good Hope', Pretoria, 1956).

Uitenhage was first settled on plots one morgen in extent which were given free on application. After the British re-occupied the Cape attempts to attract a larger population to Uitenhage resulted in the extension of further free grants to people prepared to erect, within a specified time, buildings of reasonable size and respectability. By 1810 it was reported that 461 male inhabitants were capable of bearing arms in defence of the place, and the increasing number of houses led to regulations for the preservation of the banks of the Zwartkops River, and the fair distribution of the water, not always abundant. Inhabitants were also held responsible for the repair of the road and the water-leading outside their dwellings. From early drawings it appears that for many years no attempt was made to relieve the bareness of the town plan and it was probably only after the influx of the British settlers, moving into the towns from their abandoned locations, that the first trees were planted in the streets.[1]

The plan of Uitenhage noticeably affected the later developments, as may be seen by studying the design of George. (Plate 17). The layout of building plots, roads, and public buildings was 'framed by the Surveyor Voorman' from Swellendam in 1811. (C.O.2576/George 1) Here the same cross street at the upper end of the town serves to unify all the public buildings, and in exactly the same way as Uitenhage the residential streets run off endlessly, one with the Drostdy dominating its length, and the second street with the church as its focus, at one end. Further extension to the town was simply to be provided by extending these two streets - which was, in the main, what eventually happened.

But the superior skill of the European trained surveyor, as Voorman was, is to be seen in the assumption that positive open spaces should be provided at the

1. The tradition of placing gaols on the central town square is a mediaeval one, and was still assumed to be desirable by Palladio; 'To return to the principal square, to those that ought to be joined to the Prince's palace ... the public treasury ... ought to join them likewise, as well as prisons ...'. G.Leoni, 'The Architecture of A.Palladio, in Four Books'. London, 1715, III.



18. Detail of Title Deed Office Plan of George, showing the Drostdy (G) with Caledon Square in front of it (left); and Bird Square; with the first D.R. Church (c), the second, or 'Long Church' (d) and the final church on the Square itself.

ends of the two main streets to strengthen the formality of the focal buildings and at the same time provide (in the case of that in front of the Drostdy) a large public square for community functions. The Drostdy house was subtly situated so that it projected into the space in front of it ('Caledon Square') thus terminating the vista down Courtenay Street by its side elevation, and further emphasising its importance as the focus of affairs in the district. In front of the Drostdy the public offices, gaol,[1] and secretary's and messenger's houses flanked both sides of the square, while the clergyman's and the doctor's houses were symmetrically placed on either side of the church at the head of Meade Street. With notable skill Voorman avoided the sense of monotony which would have occurred if he had exactly duplicated the public squares: instead, one occurs on the lower side of Courtenay Street, and the other on the higher side. Unfortunately, the effect of the setting for the church, Bird Square, was completely ruined when in 1832 the Dutch Reformed Church Board built their large new church on it, instead of in the position occupied by the earlier building. (Plate 18).

The importance which Voorman and the authorities attached to the public buildings, including the church, in the development of this town is shown by the speed with which they were erected. They were all built simultaneously between 1811 and 1817. The first six plots in the town were granted to woodcutters from the nearby forests, on condition that they provided all the timber that would be necessary for the public buildings. In October 1811 thirty further plots were sold by public auction.

'The situation was selected by Lord Caledon ... and it has, I think, been judiciously chosen as a proper place for a town. A more pleasant one I have not seen in Africa,' wrote the Rev. John Campbell of his visit on 3rd March

1813. 'It abounds with wood, water and majestic scenery. The Landdrost's house is building - the prison and the courthouse are finished ... the streets will be 200 feet wide; on each side of them is to be planted a row of trees. With much labour a considerable stream of water has been carried across the wood from a neighbouring mountain to supply the town...' (J.Campbell 'Travels in South Africa'. London, 1815.)

In March 1816 Rev. C.I. Latrobe visited George: 'The houses are two storey high, having an 'erker' or bow window over the door. They stand detached from each other by intermediate gardens, and form a broad street facing the Drostdy.' (Rev. C.I. Latrobe 'Journal of a visit to South Africa' London, 1818).

19. Knobel's plan of Grahamstown (redrawn).

Grahamstown, like Wynberg, (Plate 9 on page 37) was established first as a military encampment. And like Wynberg, the disposition of its parts was for some years extremely loose and flexible. The two camps had in common the separation of administration from residential zones, and the further division of the residential accommodation by the segregation of officers from men. All three zones were orderly in themselves, but quite arbitrary in their interrelationship. And in both Wynberg and Grahamstown the irregular arrangement of the camp was permanently preserved in the later village development which took its place.

The site of the military camp at Grahamstown was chosen early in 1812 with two important factors in mind: defence and a ready water supply. Just how much significance was attached to them may be understood when it is realised that camp buildings were already well advanced on another site, seven miles away, which were abandoned on the advice of Ensign Andries Stockenstrom, after the

20. Title deed office plan of Grahamstown; apparently in use c.1822-3, with a few later annotations.

1. v. the thoughts of Major Fraser on the subject. C.O.2603/Uit.10, 18th May 1815.

advantages of the new situation had been pointed out.

The Grahamstown camp (Plate 19) consisted of groups of buildings arranged round an open parade ground in front of a ruined Boer farmhouse which, re-roofed, served as the Officer's Mess. Encircling the entire site were two arms of a stream, and between them and the parade ground were, on the west, eighteen huts for the men arranged in three parallel rows. On the north there was a row of thatched houses for the officers, parallel to the stream, and on the south the old Boer farmhouse (Behind it, on the opposite side of the second arm of the stream, there were more officers' houses.) The shape of the parade ground was thus determined by the natural topography, and became a triangle, the apex of which to the east was closed by the Commissary's house and garden.

Later, in 1812, it was decided to establish a Sub-Drostdy in Grahamstown, and in November the Deputy Landdrost and the Commanding Officer were instructed to select sites for the Drostdy house, prison and messenger's house. This they did at a considerable distance to the west of the military camp, it clearly being their intention to keep the two apart.

But since the policy of the Administration was to strengthen the position on the frontier by encouraging settlement in the area, it was decided early in 1814 to lay out a town at Grahamstown. This was done by the District Surveyor of Uitenhage, J.Knobel, who, after conferring with the Deputy Landdrost, came to the conclusion that the military encampment (i.e. in particular the hutting of the troops) should be moved even further down the valley[1], leaving room for the expansion of the town in the area it had occupied.

The most permanent erections so far existing (though yet incomplete) were the stone Messenger's house and tronk. The fronts of these were accordingly used to fix the line of the main street, which was surveyed to run along a ridge

21. View down the High Street, Grahamstown, looking towards the Drostdy, from the Church tower. (Albany Museum).

between the two streams into the western side of the Parade ground, a cross street to be formed at the point of junction. (Plate 19). In Knobel's own words: 'The lots granted to the officers to remain as they are only bringing them so far out as to allow them a space for building other houses in front of those now standing, and then from the opposite corners of the last two lots a straight street might if necessary be extended in any length which would be found most expedient...' (Knobel, 'Report on the Survey of Grahamstown'. C.O.2592/Uit., and Cory 'Rise of South Africa', I, 267-72).

The only important public building budgeted for, the Drostdy House, had not yet been begun, so Knobel decided to fix its position on a large plot at the opposite end of the main street near the other public buildings. With this his town plan was complete: 'This method would give the Drostdy House a view of the whole street and although a triangular space would be left open, that space having the most elevated ground at its centre, might allow a very convenient situation for a church or any public building.' (Knobel, 'Report on the Survey of Grahamstown'. C.O.2592/Uit. and Cory, 'Rise of South Africa', I, 267-72).

Thus, almost fortuitously, he gave rise to one of the finest town designs in South Africa. Although the plan was extended, during the overwhelming building boom of the 1820's, on a grid pattern which ran rather arbitrarily over hill and valley, the essential unity of the conception was never lost (Plate 20). The church was eventually built in the place suggested, and the two answering dominants of church and Drostdy, one of them generally visible from most parts of the town, created such a powerful axial focus of the High Street and its triangular public square that even the sprawl of modern times has not succeeded in overcoming it (Plate 21).[1]

1. The church is, of course, more dominant today with the addition of Gilbert Scott's tower, while the Drostdy House has been replaced by Rhodes University main building. Knobel's work does not seem to have gone entirely unappreciated in the opinion of Sheffield. ('The Story of the Settlement' Grahamstown, 2nd edition, 1884), the planning of the town 'was most judiciously done...'

1. In Cape Town a treadmill, worked by slaves, was in use in the 1820's. (C.O.221/1 15th Jan. 1824).

2. Sheffield ('The Story of the Settlement', 209) cites as 'the first Settler's house in Grahamstown, one on the corner of York & Market - streets, and mentions other early developments around the new Market Square and in Lawrance street - which has a splendid view over the Fort England barracks.

On hills on either side of the town windmills reared their grotesque silhouettes. They, with water mills, were essential to the existence of any industry, even the simple grinding of grain, before the advent of mechanical power in the 1830's.[1] Their masses formed an obtrusive part of the skyline of the new towns.

Two aspects of the later development of Grahamstown remain to be noted:

The areas to be first laid out after the influx of the 1820 Settlers were a street parallel to the High Street and called New Street, which became the tradesmen's quarter, and an area on the hill behind the officers' houses to the south, which was divided up into very small lots for speculation and became the artisan's quarter (Plate 20).

The latter forms an interesting study in itself, for it evolved breaking down a block of the normal town grid by the imposition of two narrow streets crossing in the centre. And in order to ensure a separate character in this quarter the corners of the cross streets at the centre were cut back to form a polygonal open square, a fine star focus to the whole.

A further working-class quarter was opened up by 1822 with an extension of the grid plan on the east side of this earlier development.[2] Of Grahamstown at this time Rev. William Shaw wrote:

'The principal streets pursue straight lines along the ridges, and at convenient distances are crossed at right angles by other streets which are rendered continuous by bridges over the intersecting streams. So that every cross street has one or two small bridges, while a bridge of considerable size, at the north-eastern end of High Street, spans a deep gully, through which the principal stream flows...' (Shaw 'Story of My Mission'. London, 1860, 76.)

In the new area to the east of the old a large market square was laid out,

1. v. very early maps, where it is so labelled.

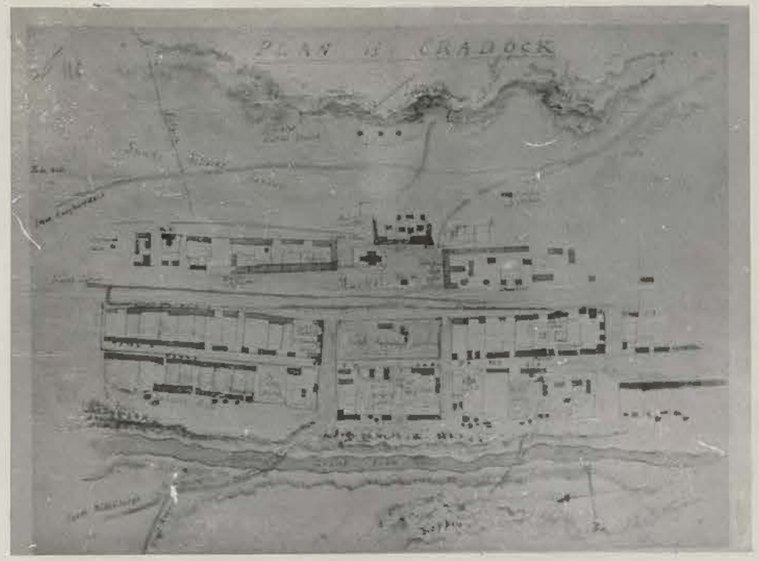
2. Referring to Grahamstown in general.

22. View down Bathurst Street, Grahamstown, with the Settler Church closing the vista; from Beaufort Street.

although for some years the church square continued also to serve as a market place.[1] But before the end of the 1820's the 'large market was attended every morning by people from the country and traders from the interior, to sell their produce. This is not the only source of supply to the town of a large portion of its daily wants ... the assemblage on the market is likewise a kind of public exchange, where the merchants and dealers meet, and business transactions are often negotiated. The market is held in the morning, after the breakfast hour.' (Shaw, 'Story of My Mission'. London, 1860-76). The natural result was that the market square, although at a distance from the centre of the town, became the focus of a select residential area itself, and some of the most splendid and costly houses of that period were built overlooking it.

The roads in many of these early towns are extraordinarily wide, those of Grahamstown being particularly so. Shaw remarked that 'the streets are crowded with wagons drawn by long teams of oxen' (Shaw 'The Story of My Mission', 78) which needed an extensive space in which to wheel and turn. The rapid growth in the importance of the new market led to one of these wide streets, Bathurst Street, (which linked the church square and the market) becoming the centre of the commercial growth of the town with 'shops for the sale of wares and goods of all kinds' and 'large and well-stocked stores' (Ibid, 78).[2] When the Jubilee of the landing of the 1820 Settlers was held, advantage was taken of the opportunity of giving visual recognition to the importance of this section of Grahamstown by the erection of the Commemoration Church in the High Street in such a position that it dominated the length of Bathurst Street (1845 - Plate 22). The erection of the Town Hall on the triangular Church Square completed the integration of the plan in 1870.

1. For this, and other information given, see 'History of Cradock' written for the Van Riebeeck Tercentenary. Acc.709, No.3-11.



23. Plan of Cradock c.1820. (Cradock Public Library).

24. Cradock; the main street leading to the Great Fish River in the 1870's, dominated by the new Dutch Reformed Church. (Cradock Public Library).

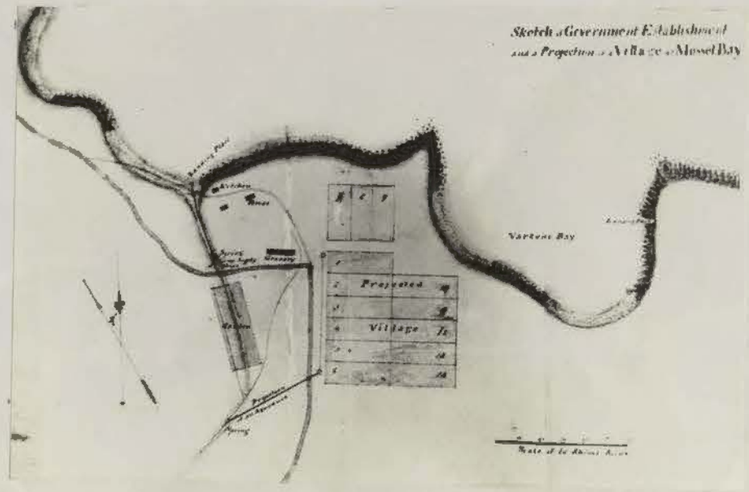
At much the same time as Grahamstown was taking haphazard form as a military encampment, the village of Cradock was founded at the north of the frontier Around the house of the deputy Landdrost building lots were surveyed leaving a large open space in the centre (Plate 23). Through this public commonage was led a canal, parallel to the nearby Great Fish River; and the first building plots seems to have been laid out on either side of it. Other streets were formed running down from the square to the bank of the river. By 1818 sufficient plots had been bought and houses begun to warrant the establishment of a church in the village, and this was accordingly sited on one side of the public space and finished c.1824.[1] The parsonage occupied the other side of the square, which eventually became a market with a 'town house' in the centre. But nothing could disguise the essentially disorganised character of the town, which persisted until an extraordinarily bold move in 1864 resulted in the demolition of the old church and the removal of the site to a position in which it would dominate the main street leading down to the river. The completion of the new church in 1867 (a free version of Gibb's St.Martin's in the Fields) largely solved the earlier problems by giving the whole town a powerful architectural focus. (Plate 24).

During this period a number of other villages, distinguished alike for their utilitarianism and lack of foresight, were laid out in the colony by district surveyors. They need not concern us long. In each case the surveyor has been content to subdivide an adequate area of ground into ½ morgen or morgan erfs, provide water leadings and, where necessary, devise streets as means of access

1. In eighteenth century South African towns, north seems to have been the preferred orientation (Stellenbosch, Cape Town) Uitenhage, George and Somerset East appear to have been designed so that the majority of the houses and public buildings faced south. (It is interesting to note that 1820 settler farmhouses generally faced south). In Graaff Reinet, however, the orientation is mainly east-west, as it is also in Cradock and Beaufort West.

2. C.A. Map 805.

25. Cradock Church, 1864-7.
26. Plan of Mossel Bay in 1818. (C.O. 2614/9).



on a basic grid plan. Of the relationship of the houses to the position of morning and afternoon sun, prevailing winds and storms, there seems to have been little or no thought.[1] Beaufort West[2] and Mossel Bay (C.O.2614/9. 27th Feb. 1818) are of this type (Plate 26) and, furthermore, in these examples no provision was made in the original designs for sites of any public buildings. (In both cases, administrative buildings already existed in haphazard arrangement beyond the limits of the town.) Nor was any attempt made to incorporate public open spaces, or achieve visual or functional unity in the plans. If anything may be said to have been the major determining factor in the design it was probably the water supply and the drainage! A sad reflection on the humanism of the age!

Simonstown, the residential section of which was laid out in 1815, had smaller erfs because of its steep contours, with parallel rows of building allotments climbing up the hillside behind the barracks (C.O.68/35 12th July, 1815 - Plate 36). The regimental mind of the practising surveyor approached the design of each new residential sector armed with the aesthetic of his drawing instruments, and a strongly conservative conviction that the only visual aspect which mattered was an appearance of regularity, law and order. The result was only too often banality and boredom.

To the cultivated British official, with the town-scaping heritage of the eighteenth century behind him, such a design must have appeared an anathema. Accustomed to the quiet spaciousness of the London square with its lawns and trees, the ovals, crescents and circuses of Dublin, Edinburgh and Cheltenham and the graceful undulating terraces following the contours of Bath and Brighton he could, while appreciating the best qualities of South African towns, at the

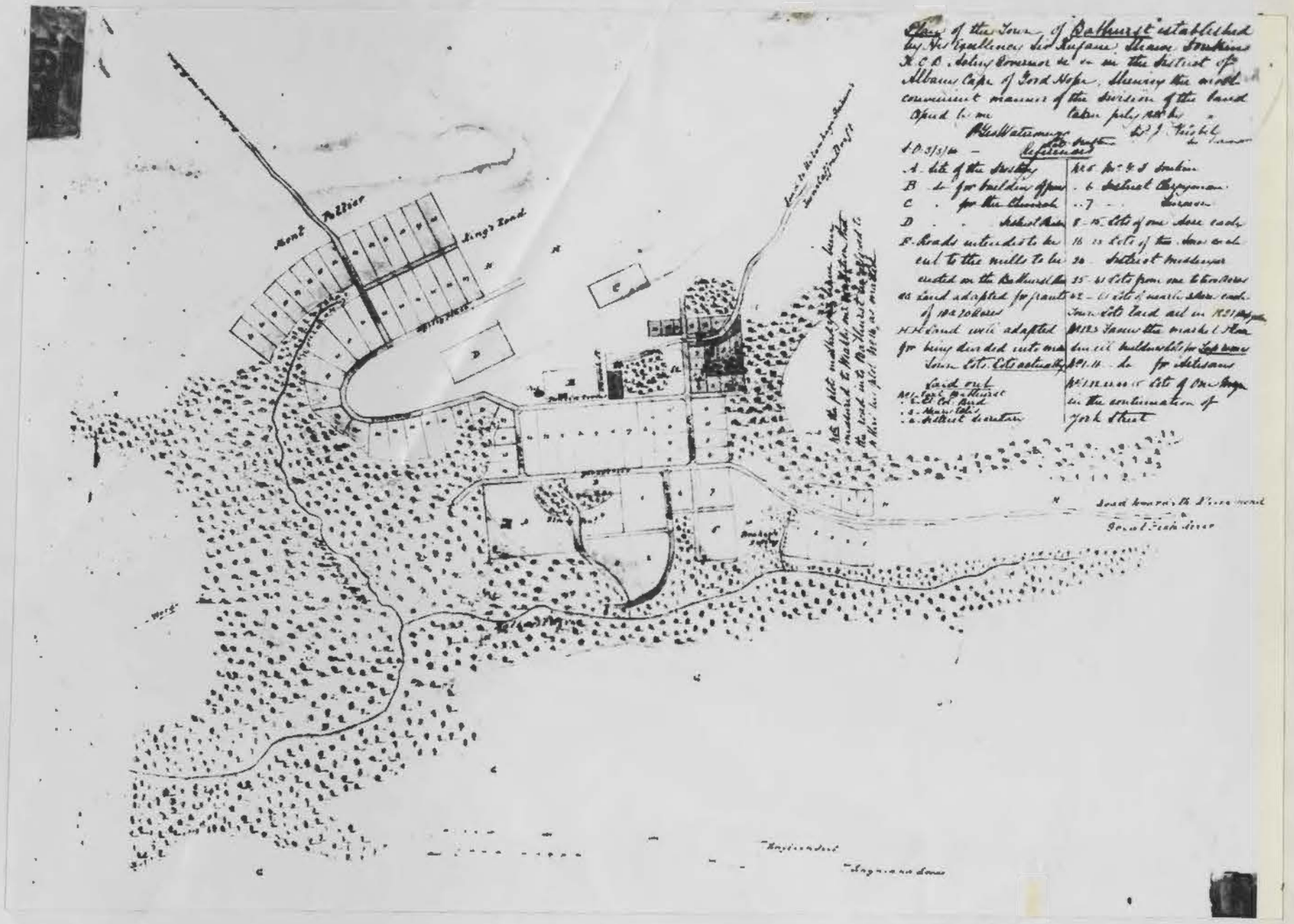
same time deprecate the worst, as few of the local inhabitants can be expected to have done.

The earliest clear evidence we have of a desire to introduce Georgian townscaping principles at the Cape is to be found in some of Melville's proposals for the development at Simonstown we have just been discussing. Although they (lamentably) proved impractical on that difficult site, he had, he reported, 'tried ... the figure of a Horse Shoe, also three Crescents and three sides of a square.' (C.O.68/35 12th July 1815). It is especially unfortunate, considering the number of towns actually laid out during his tenure of office, that Melville does not seem to have been consulted again on town design. Thus five years passed before another opportunity presented itself of applying English concepts.

This occurred in May 1820, when Sir Rufane Donkin determined upon the establishment of the town of Bathurst, and commissioned the provisional magistrate, Captain Trappes, and the District Surveyor, J.Knobel, (responsible for the original design of Grahamstown) to lay out the town. It is not known to what extent Donkin, who was in the district at the time, interested himself in the design, but it is clear that Knobel's was not the determining hand.

In place of the axial vistas and geometrical ordering of parts in Knobel's work (albeit sensitive and logical) we find an organic design folded to the contours of the site without the vestige of an axis in it, and with all the hallmarks of a Regency town (Plate 27).

The English town had always remained close to nature. The heritage of the Mediaeval village formed the conscious basis of later planning; the harmonious relationship of the streets to the irregularities of the countryside was a tradition already at least six hundred years old. By prolonging it in the late



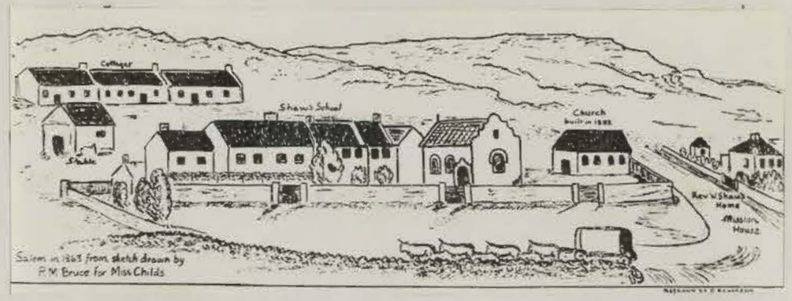
27. Knobel's plan of Bathurst; A is the site for the Drostdy, B for the Public Offices, C for the Church, D for the Gaol, 62 the Market, sites below 61, the Taprooms.
(Cape Archives, Maps).

Georgian town the 'Man of Taste' broke down the barrier which tended to grow up between the town and countryside. From the landscape garden, through the offices of Repton, it was but a step to a whole town designed as a garden. The principles of the 'Picturesque' were applied to town planning, and formed the basis of 'some of the most concrete achievements of Regency architects.' (Donald Pilcher, 'The Regency Style'. London, 1946, 88). In order to ensure a continuous flow of space and the overall unity of the 'garden' theme, houses were now designed to be free-standing, a succession of villas instead of terrace houses abutting against each other, and the plots were accordingly made considerably larger.

In the Bathurst design a geometric plan is cleverly adapted to the landscaping into which architects of the time were trying to transplant the town house.

The road from Grahamstown was to have led into a market square which would divide the tradesmen's district on the east from 'Donkin Terrace' the first of the select streets, on the south and east. The market (provision was made that it should be bordered by no less than three tap-rooms) was only one part of a large park-like commonage which was to have contained, on a hill to the north, the dominating church, and behind it, considerably to the west, the prison. Encircling this hill, between it and a higher one behind ('Mont Pellier') was 'Somerset Crescent', doubtless intended for a superior villa development, which was further extended to the north on Mont Pellier itself.

The one curious anomaly in this design was the situation of the Drostdy and public offices, in a separate zone below the rest of the town and bearing little direct relationship to it. This can probably be explained as a personal preference for a particular site for his house on the part of Captain Trappes,



28. View of Salem in 1863; the village green is in the foreground.

which even town planning principles would not make him sacrifice. Certainly some attempt was made to integrate the Drostdy House with the town by making the main carriage drive into the grounds an extension of Bird Street. But it seems likely that the view from his stoep down the Kowie Valley across the natural pool in the foreground dissuaded him from making any further concessions.

Even so, Bathurst is a stimulating enough example of design liberated from the shackles of geometrical patterning and the drainage grid. Roads follow the contours naturally and inoffensively and the shapes thus produced are turned to advantage in producing a townscape of continual variety and interest. Though the village that survives is but a pale shadow of the original project, it is yet possible to appreciate the quality of its design, and the 'rus in urbe' atmosphere which was its main attribute.

In several other parts of the district settled by the immigrants of 1820 communities gathered together around a church, or for mutual assurance and defence. Of these villages, the most interesting survival is Salem. Refuge against a hostile environment is the age-old genesis of a community, and the Albany district must have seemed very insecure to the new settlers.

The first church at Salem, a reconstructed Boer farmhouse, stood near the centre of a large clearing at the confluence of two rivers. Around it the settlers built their first huts.[1] When a new church was erected in 1822 its site was moved back to the edge of this space, which henceforth served the same functions as the village green in England.[2] The scattered thatched houses of the village fringed this space, and stretched along the river valleys on either side. Near the church was the rector's house, and on the other side 'the Salem

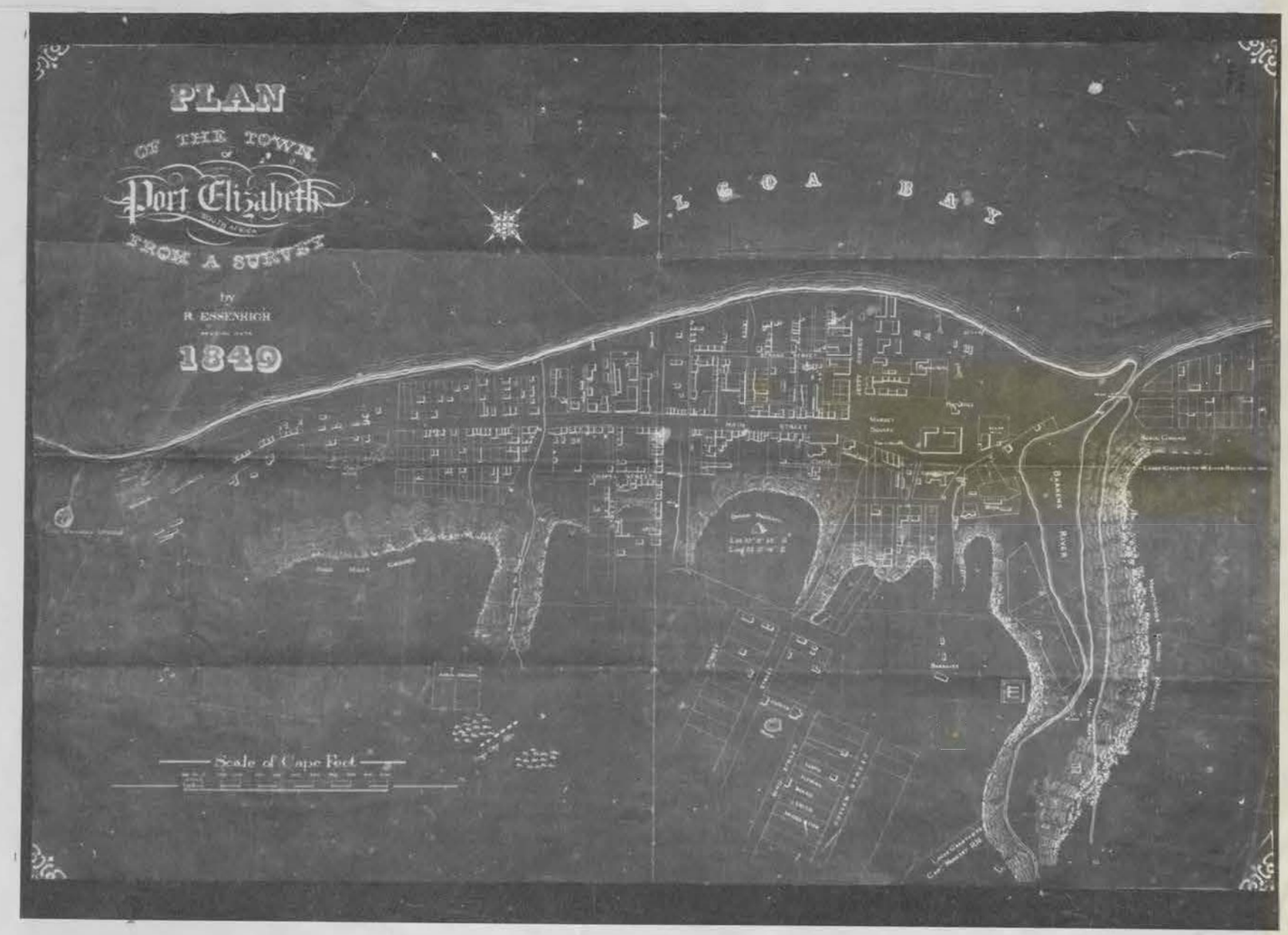
1. E.R.Willmore 'Sephton's Salem Settlers' in 'The 1820 Settlers of Sevenfountains & Salem' Grahamstown, 1959, 37.

2. and is still known as 'The Green', Ibid.

Academy' which also faced out onto the green (Plate 28). The plan was always haphazard and informal, but, although the village has steadily shrunk in size with the years, it remains strongly unified, South Africa's strongest link with the English rural tradition. Villages such as this, clusters of buildings in the open countryside, with a dominant aesthetic provided by their thatched roofs, were once quite common in the Albany district.

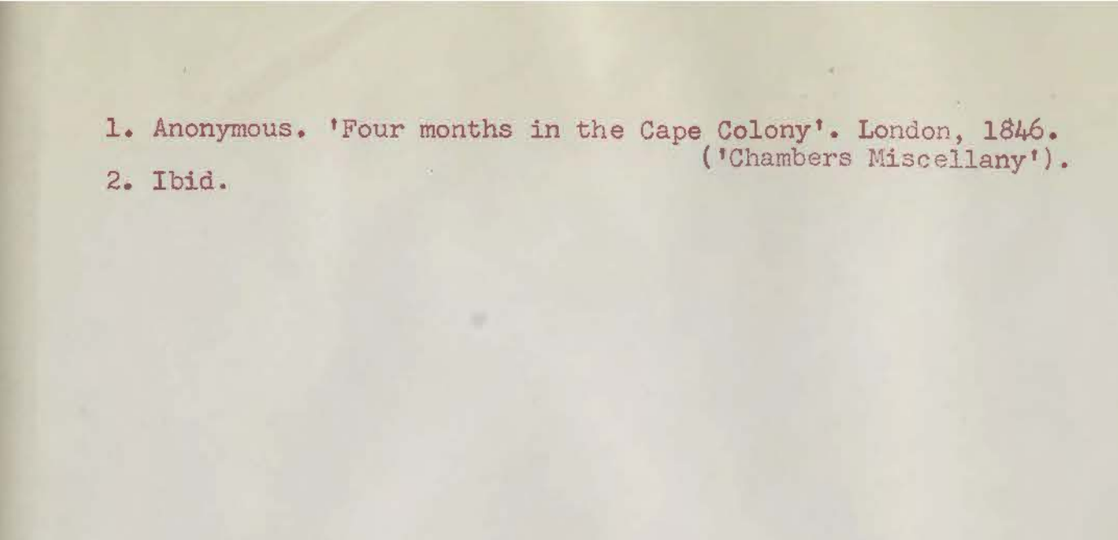
Port Elizabeth may be said to have scarcely ever had a satisfactory town plan. Split into two by marine cliffs, the town centre constricted into a long narrow space along the edge of the sea, its prospects were never propitious. The best that can be said for those responsible for its development is that they preserved an open space at the head of the landing stage as a public square (Plate 29). Into this converged three roads: one, from the interior and Fort Frederick, descended the hill behind the square; another, to the south-east, led to the southern coast; and the third, from the opposite direction, brought traffic in along the northern coast from Uitenhage and Grahamstown (Plate 18 on page 42).

The earliest village grew up haphazardly around the landing place. Hudson, describing the town in 1822, called it 'a parcel of miserable Huts huddled together ... this might be obviated would the Commandant, with the sanction of the Landdrost, form some plan for regular Streets and Houses of a certain description - First, Second and Third Class - and confine everyone in future to build in a line to give something like a Christian place of resort.' (Acc.602. Document 8). A main street was eventually surveyed along the coastal road to the north, which then became an impressively awkward example of ribbon development. Between the main street and the sea there was room for but one narrow street more, and that



29. Port Elizabeth in 1849. Fort Frederick appears as a square on the lower right, with the Barracks next to it.
(Cory Library).

1. Anonymous. 'Four months in the Cape Colony'. London, 1846. ('Chambers Miscellany').
2. Ibid.

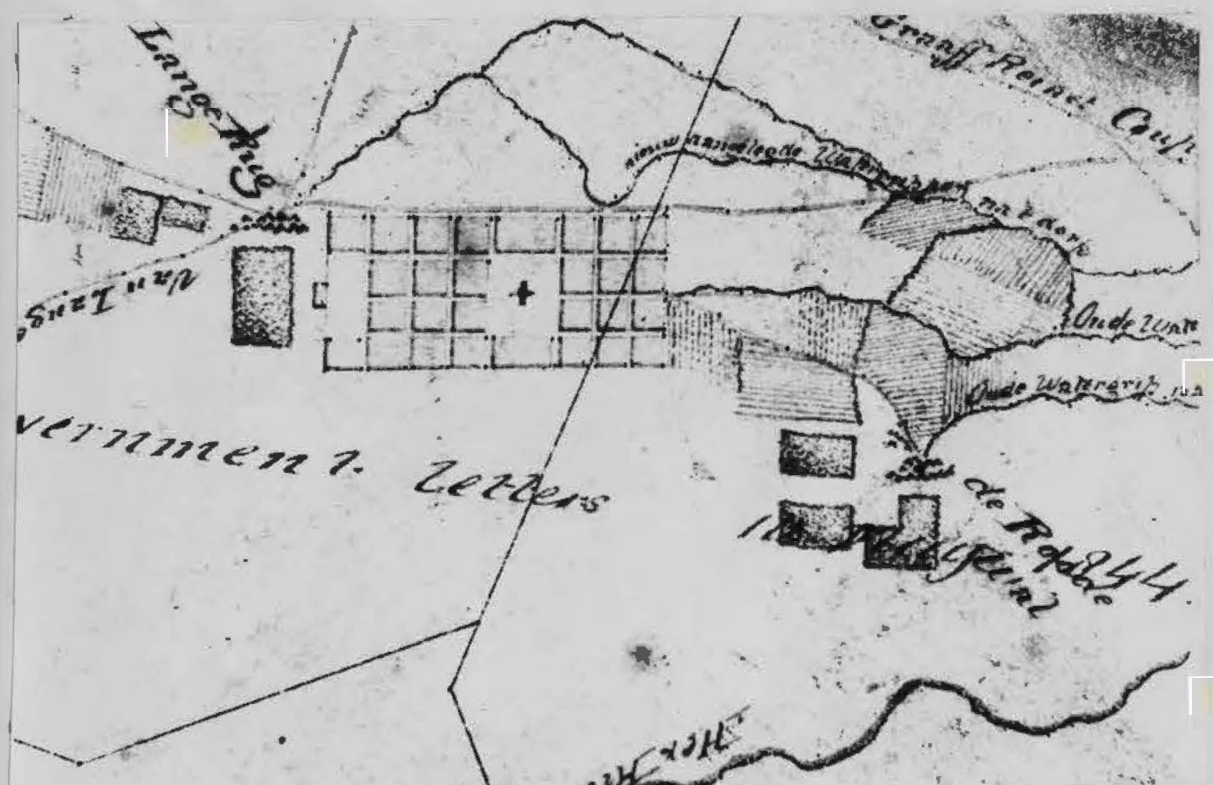


30. View of Port Elizabeth in 1862 (Port Elizabeth Public Library).

only for a short distance. A tradesmen's quarter grew up on the opposite side further along, with narrow lanes which stepped up the hillside following the contours.

The most valuable attribute of Port Elizabeth was, and is, the Donkin Reserve, a large open green overlooking the main street, on one side of which Donkin's Memorial Pyramid to his wife had been erected. Remaining in the Donkin family for a considerable time this land was never available for building purposes and became both functionally and visually the focus of the town, (more so than even the Market Square below). Another development took place behind this green on the upper level of the town, where a select residential area grew up. In the 1840's a visitor further noted that 'Beyond the pyramid on the other side of a ravine to the North West, were a cluster of huts forming a Fingoe hamlet, and between the main street and the sea are the huts of the Malay people ...'[1] (It is interesting to note that the seaward side of the old settler village had already become the coloured quarter.) Owing to the restricted nature of the site, land values soared along the Main Street, the rent for 'a house of any pretensions in this situation costs from £60 to £100 per year ... Over the aclivity between the main street and the inland flat many dwelling houses are scattered.'[2]

Soon the Donkin Reserve was entirely surrounded by residential development, which gradually retreated from the lower level leaving it for the most part a business and commercial area. A solution to its topographical difficulties seemed in sight and Port Elizabeth might yet have become an attractive and organically healthy town. But all such hopes were dashed by the advent of rail. It posed so difficult a problem that only the most impartial and judicious action by the City Fathers could have handled it. With the momentous decision to bring



31. 'Sketch of the new projected town' of Worcester, 1822. (Cape Archives, Maps).

the railway into the centre of the town, thus cutting the main road off from the sea and causing immense congestion, the fate of the city was sealed. Port Elizabeth has never recovered the promise of its middle years.

Worcester is an example of a town preconceived on an authoritarian pattern (Plates 31 and 32). The streets are arranged on a rational, geometrical plan such as might have been designed to impress on the inhabitants a visual appreciation of law and order. Lord Charles Somerset, whose project it was, and Captain Trappes, the Landdrost, were both autocrats of a type that only England under the Georges could approve.

For a town which begins life by forcing its inhabitants into a preconceived framework of streets necessarily subjects human interests to the tyranny of a higher authority. By stressing the artificiality of that framework the town may even be made to serve to glorify that tyranny, as was the case with the colonial towns of Imperial Rome. It is a Classic concept, revived by the despotic magnates of the Baroque Age, and promulgated around the world under the all-powerful autocratic rule of the Colonial governors.

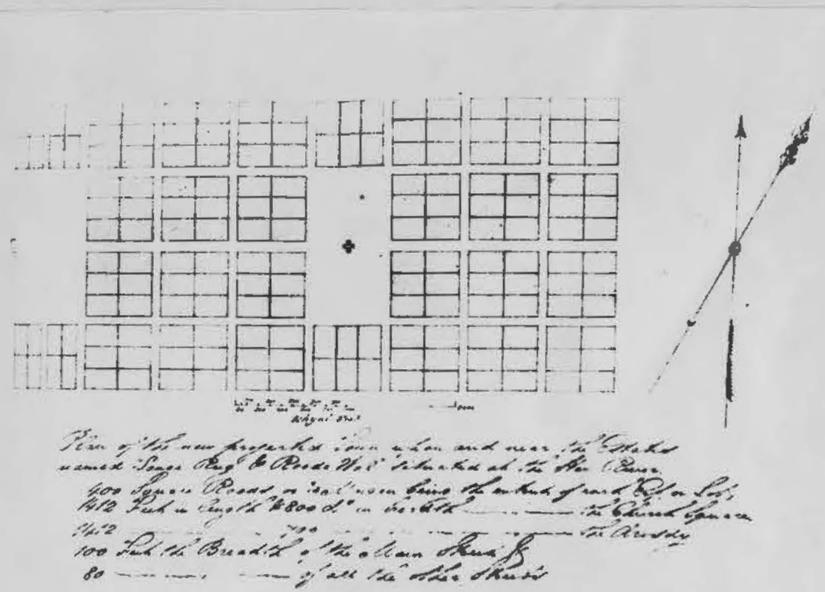
For Worcester represented the Governor's law, the Governor's order, the Governor's society, imposed by a single mind working under his command. For those in the government, and their aristocratic associates, the design was in effect organic; it reflected the formal values they had assumed to themselves as a class.

In principle Worcester appears, perhaps, merely an extension of the earlier Baroque towns at the Cape, such as Stellenbosch. But in basic concept there are subtle differences. Stellenbosch yet retains something of the democratic

and humanitarian traditions of the sixteenth century Dutch burghers. Town planning under the Somerset regime, on the other hand, is impersonal and grandiose.

Worcester is entirely symmetrical about a central axis which runs longitudinally through the town, and is dominated throughout its great length by the residence of the Landdrost. It was originally intended that the church, in the centre of the market square (which is in turn in the centre of the town), should also lie on the central axis. Had this been done, temporal and spiritual would have been joined in a powerful visual unity - as at Grahamstown. The Drostdy House was provided with its own setting in the form of a planted forecourt, two town blocks wide. A rectangular block of trees behind the building was laid out to serve as a backdrop (Plate 14 on page 414).

Thus Worcester represented the translation of Neo-Classicist ideas of composition into the town plan. All power radiated from the seat of authority which embraced the compass of the town by a rigidly balanced axial pattern, and even the church paid obeisance to it. The spiritual centre of community life remained subservient to the material. The importance of the two buildings which served as foci was further visually emphasised by setting, centralization and scale. Nothing was to be left to chance.



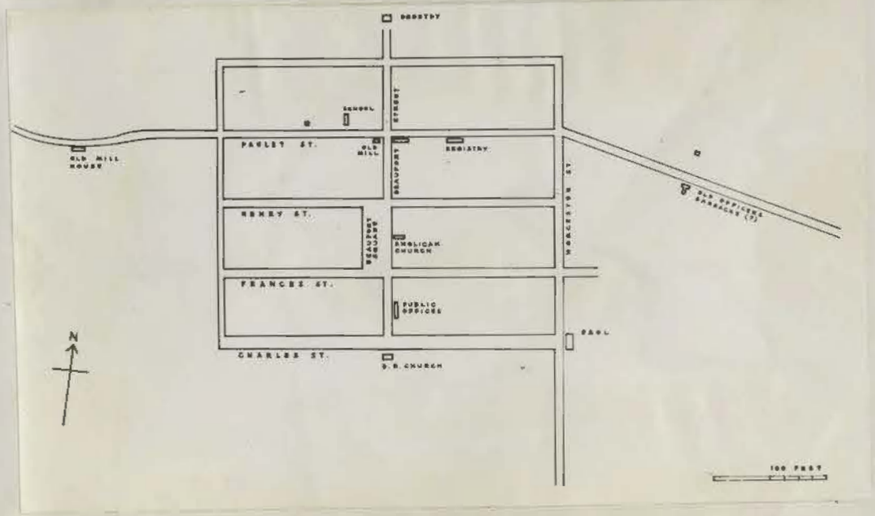
32. Plan of Worcester, 1822 (British Colonial Office Records, 48/78 No.49).

While the Drostdy at Worcester was still incomplete, and the church only contemplated, the creation of a new town in the Eastern Province gave further expression to the character of Lord Charles Somerset's government.

The Somerset Farm, established under Macrill in 1815, was already causing embarrassment to the Governor because of the hostility its protected crops aroused among the 1820 settlers, even before the Commission of Enquiry. In

33. Beaufort Street, Somerset East, the main axis of the town, running across the valley from Charles Street to the steps of the Drostdy in the distance.

34. Plan of Somerset East; Beaufort Square was perhaps originally meant to be symmetrical about the axis.



1. The development to the east of the town appears at first to have been a military encampment.

February 1825 the farm was accordingly closed down and a village laid out on the site, the old farm buildings serving as public offices, gaol, church and houses for the officials.

The character of the town which subsequently rose there was largely determined by the disposition of the original farm buildings, but as these in any case reflected the planning attitudes of the age, and were all executed under the Somerset administration, we may concern ourselves here with the final result. (Plate 34).

Somerset East was laid out in a shallow valley between two ridges of hills, the Boschberg, forming a backdrop to the Drostdy House, the highest building on its slopes. Below the Drostdy the original town spread out symmetrically on either side of the main axial vista which runs across the valley to terminate in the Dutch Reformed Church on the opposite hill. Streets at right angles to this central axis formed the main residential streets, that nearest the Drostdy being the earliest to be developed. At the limits of the town side roads completed the original plan as an approximate rectangle.[1]

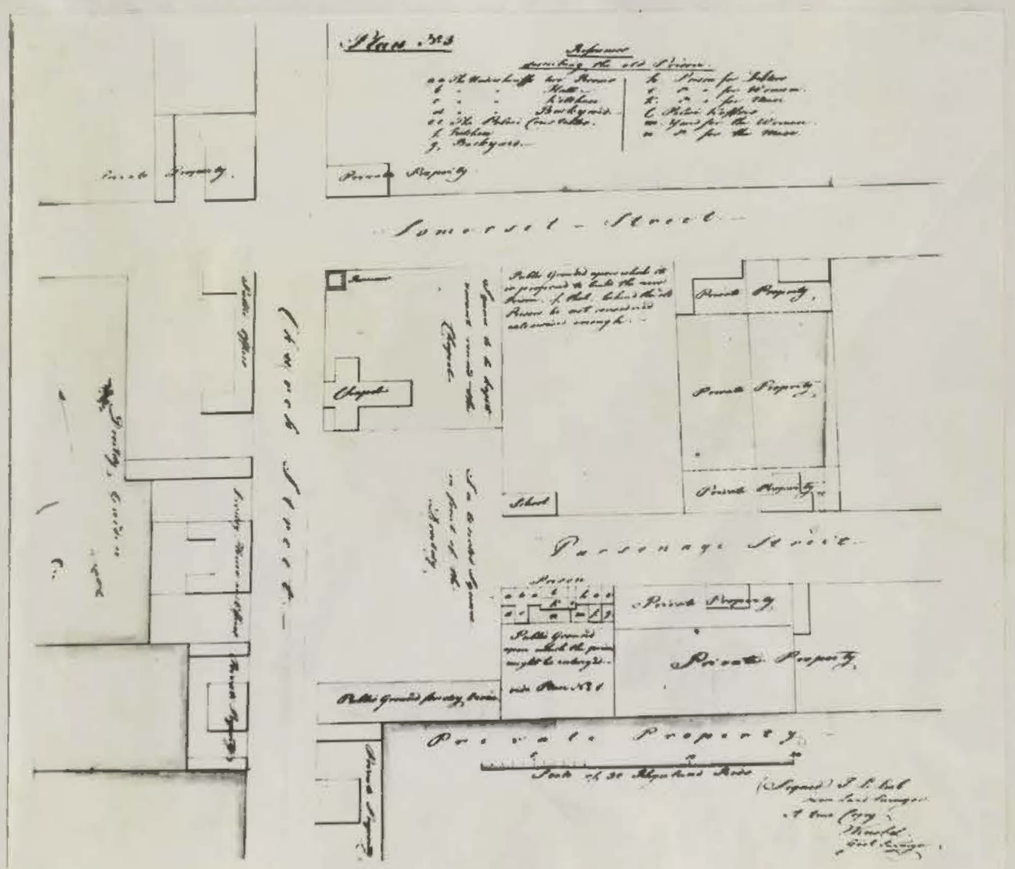
Thus in Somerset East, as in Worcester, the whole town conformed to the pattern of absolute power vested in the governor and his representative. But here the site contributes to the total effect, and provides one of the most splendid townscapes in Southern Africa. The main street sweeps down across the valley and up to the facade of the Drostdy, flanked by avenues of alternate oak and plane trees, with a grandeur reminiscent of the great schemes of Classicism and the Baroque in Europe. (Plate 33).

In the middle of the long vista down the main axis, at the lowest point of the valley, a public square (Beaufort Square) was laid out, the Anglican Church being symmetrically related to it on the main street. Thus the problem of inte-

1. One further improvement, proposed at the time of Somerset's departure for England early in 1826, but never carried out, was the creation of a public square in front of the Drostdy in Graaff Reinet, which would strengthen the formal unity of the town and emphasise the dominance of the Drostdy, presumably in danger of being overshadowed by the splendid Pastorie opposite. (Plate 35). (G.H.26/15 No.31.Enclosure to dispatches).

2. Theal, 'History of South Africa 1795-1834'. London, 1891, and Cory, 'Rise of South Africa'. IV, 222).

3. It is believedthat the present site of the church, axially arranged, is not the original one, but that the church stood at the corner of the two streets. (Cory, 'Rise of South Africa, 5 Vols., London, 1910-30, IV, 222).



35. Plan of the 'Intended Square in front of the Drostdy' at Graaff Reinet, 1826. (G.H. 26/15 No.31).

grating two rival churches into the plan was solved. The Goal terminated the cross street in front of the Dutch Reformed Church which then turned right to join the main route to the coast. The whole street pattern dominates the underlying and enclosing landscape with magnificent power.

These were the last major examples of autocratic planning.[1] In 1827 Somerset resigned, and subsequent governors were careful to avoid a repetition of the circumstances which led to his disgrace. The character of government imperceptibly but steadily changed. Occasional new towns laid out by the army revealed the military outlook in siting and planning, but the majority of subsequent developments, for the next generation, at any rate, took place as rural groupings around the nucleus of a church or market place, and were largely organic in evolution and democratic in character.

Colesberg is an example, perhaps not unique, in which the formation of a town was inevitably bound with a decision to provide a church in the far-flung northern area of the frontier. No matter how great the need for religious facilities the Cape Government was not always able to persuade the British authorities to vote money for the purpose. While funds were at a premium, however, land was not, and Colesberg was marked out in 1830 in order to provide erven which could be sold to raise an adequate sum to pay for the erection of the church.[2] It is hardly surprising in the circumstances that the plan comprised one long street, bordered by the new allotments, leading up to the church, with a cross street at the top in front of it.[3]

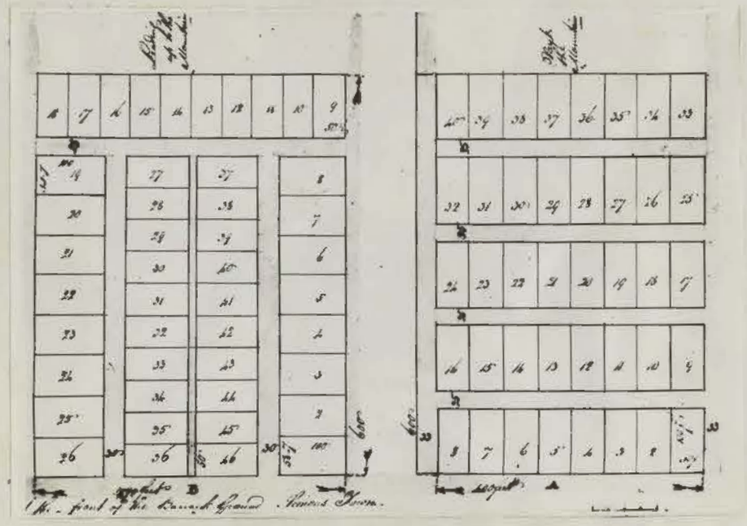
Fort Beaufort is a typical case of a town which grew as an army camp, be-

1. Letter of Frederick Rex to his father George Rex, 17th Nov. 1835. ('Index of Unofficial Manuscripts ...' ed. Una Long. Cape Town, 1947, 183).

2. There seems some hint in Sheffield ('The Story of the Settlement' Grahamstown, 2nd Ed. 1884, 205) that, at any rate in the second half of the century, it was thought that the grid should observe the cardinal points of the compass. In praising the layout of the streets of Grahamstown, he says: 'though not running quite true to the compass, they all run as straight in the direction of the cardinal points as the nature of the ground would allow, except where, in recent times, their course has been diverted or new ones formed, where it was impossible for them to run in straight lines from north to south, or from east to west.'

3. This town was not on the same site as the present Smithfield.

4. Theal, 'History of South Africa', London, 1893, 155. It was surveyed by a Swedish naturalist, J.A. Wahlberg. In this case the erven were approximately an acre in size.



36. Housing proposals A and B for Simonstown, 1815. (C.O. 68/35).

came an exchange centre, and was eventually laid out on a surveyed town plan. The Fort itself was originally built in 1822-3, but abandoned in 1825. Re-occupied in 1827, it had by the Sixth Kaffir War become the nucleus of a scattered collection of commissariat buildings, officers' quarters and traders' houses. In the later part of 1835 the military commander (Capt. Armstrong) and the district surveyor (Frederick Rex) were commissioned to make some kind of order out of this haphazard development, and to lay out building plots for sale on the basis of a considered townplan. The problem was an extremely difficult one. Rex commented that '... if a Town is laid out there m[ust] be some regularity in the streets and th[at] we find is not to be done without making people pull down their houses ...'[1] This difficulty was at last partially solved by introducing modifications in the town grid. But grid there certainly was, and it did involve the demolition of a number of huts; 'regularity' was highly valued in those days. The mess-house became the first Resident's quarters, and a town square was laid out next to it, in the approximate centre of the plan.

Here we have the typical pattern of nineteenth century town planning, which repeated itself wherever organised development was thought of in hundreds of later towns throughout the Colonies and the Republics. The pattern of streets was laid out in the form of grid, with dimensions generally fixed by the size considered most ideal for the individual erven.[2] The focus was a large public square, placed centrally in the town, onto which faced all the major public buildings. It served at various times as a market place, uit-span and assembly place. The plan was unimaginative but direct, involving no great skill or loss of time in surveying, and with a boldness which appealed alike to the military, British administrators, and voortrekkers. The first towns across the Orange (such as Waterval, afterwards known as Smithfield - c.1838)[3] were of this type; so was Pietermaritzburg (laid out in March 1839).[4] In the latter case the

1. Completed 15th March 1840. Hattersley 'British Settlers in Natal', 58 et.seq.

2. Ibid.

3. 'Natal Centenary Official Handbook, 1824-1924', Durban, 1924.

4. Hattersley, 'British Settlers in Natal', 206, and Theal, 'History of South Africa 1834 - 54', 128-9.

5. This plan was several years in implementation. The final grid plan was based on this but with many modifications. (Hattersley 'British Settlers in Natal', 17 et.seq.

37. Somerset East; a side street off Charles Street.

Church of the Vow was built at the eastern end of the public square,[1] the Raadzaal at the western end.[2]

What we know of the first plan of Durban suggests that it conformed to the same pattern. On June 23rd 1834 the citizens of the place resolved at a public meeting to lay out a town and to name it in honour of the Governor of the Cape Colony. The design is said to have been the work of Captain Allen Gardiner.[3] Provision was made for a church and a hospital fronting on to a central market square. (A wattle-and-daub Wesleyan Chapel was later built there.)[4] The streets were to be made especially wide to allow manoeuvrability, and to follow a grid pattern related to one relatively straight side of the Bay.[5] A separate grid which was laid out at the port on the Point was later to form a series of awkward junctions with the main plan midway between the two centres .... But the disadvantages of grid planning belong to another undreamt-of age of fast transport and rapid expansion.

Nineteenth century colonial town planning is characterized - like the architecture - by the general lack of skilled, or even of informed, designers. Towns were either allowed to grow organically, or, by the misplaced zeal of some administrator, given a form which was 'regular' but frequently on all other counts inferior to the organic, haphazard growth of the smaller villages. Only rarely did South African towns achieve an integrated character based on sound guidance and control. In a few cases, such as Stellenbosch and Bathurst, the impetus was provided by ideas directly imported from Europe. Towns like these naturally had a wide subsequent influence on their own account. In other designs, such as Worcester and Somerset East, the layout of the towns reflects, perhaps unwittingly, the special atmosphere of the times, and in consequence, imparts a vivid and tangible aesthetic quality. There are also valued examples,

like that of Grahamstown, in which a fortuitous Providence has created by a series of happy but largely unpredictable circumstances, a splendid town on the foundations of a temporary military camp.

The mid-nineteenth century decay in standards of design is nowhere more significant or tragic than in the sphere of town planning. The rapid growth of the larger centres following the economic prosperity of the forties led to concentric development on frequently ill-considered lines. The grid plan, with its total disregard for influences of topography, orientation or prospect, was invariably adopted. While the geometrical approach had a certain value to clarify and guide the development of the town, its value ceased unless it could be made to come to terms with reality. When the greed of the speculator and the haste of the administrator overrode such essential facts such as topography or long-term development, the nineteenth-century city was doomed. The easiest way of developing new estates was thought to be by dividing them into rectangular blocks, all of equal size, separated by streets and roads of standard width. Thus the awkward shapes and delays of organic or contour planning could be avoided, and a plan evolved which was so simple that even a clerk could handle the subdivisions of land without faltering, while the deed of sale could become a standard document. Every street could be a traffic street, every intersection a focus of business. With T-square and set-square the municipal engineer, without the least training in social science or architecture, set out confidently to plan large cities. The chess-board pattern was soon expanding almost without limit in every direction, and no attempt whatever was made to separate commercial, civic, residential and industrial buildings.

Ribbon development along the main traffic arteries was widely accepted, even

38. West Street, Durban, c.1855, showing the effect of the planting.

encouraged. The centre of the towns became constricted, resulting both in an unwieldly increase in densities, and a gradual engulfment of public open spaces, as sites for public amenity buildings became scarce. The long-established civic principles of the Georgian Age, grace, restraint, unity and scale, were forgotten in the scramble for position, size and dominance.

Almost the first things to go in the older towns were the trees, landmarks of humanism in town planning. Only by tying the alley of trees very close to the urban architecture could a certain bleakness in the street scene be avoided. When those on the north-west side of the Heerengracht, Cape Town, were cut down in the early 1840's, the character of Cape Town was irredeemably altered. The remainder of the trees were removed in 1845 in preparation for the covering in of the canal,[1] and the trees in the other fine streets of early Cape Town (notably St. George's St. and Wale St.) followed soon afterwards. In 1851 the first streets were paved with wood blocks,[2] and in 1854 the town engineer of Cape Town advocated the abolition of the 'unsightly stoeps' and their replacement with paving. An ordinance requiring their widespread removal - even in streets which were still lined with fashionable houses and were in no sense traffic routes - in 1862, was hailed with delight.[3] Thus the very basis of Baroque unity was destroyed, the canals, the trees and the stoeps, which together created a visual and social harmony in the old domestic streets of the town. But rapid growth increased land values, and encouraged a false sense of advancement by the thoughtless aping of European metropoli. Everything which did not conform to the new atmosphere of industrial progress was condemned, if it could not be ignored.

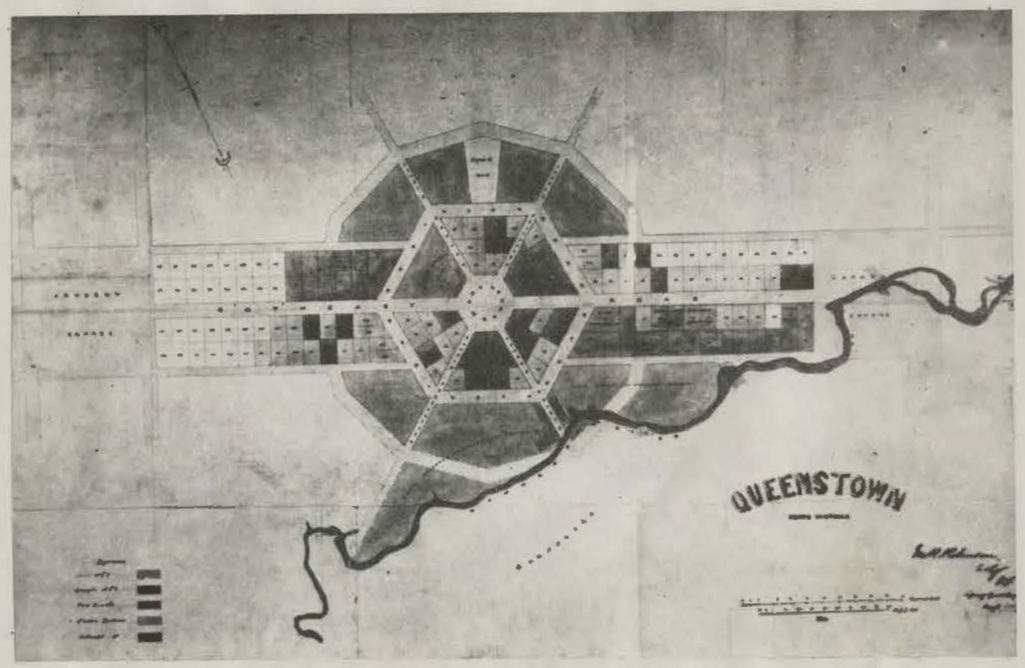
In an environment of this kind we must not expect great advances in civic design. True, an occasional late development, such as the visual shaping of

1. Laidler, 'Growth & Government of Cape Town', Cape Town,1939, 256.
2. Laidler, 'Growth & Government of Cape Town', 309.
3. Laidler 'Growth and Govt. of Cape Town',309-11. Cf.Rasmussen, writing of such streets in Amsterdam ('Towns and Buildings', Liverpool, 1951, 92) who commented: '...just outside the houses is a special area called, in Amsterdam, the "stoep", which is partly a pavement and partly a threshold of the house.... As it is actually part of the house, the owner takes pride in keeping his stoep as immaculate as possible. Every morning, in front of all the houses, there is a scrubbing and flushing of stairways and stoeps like that on board the most ship-shape of vessels. On the whole, the visitor is always being reminded that he is in a city in which shipping plays a prominent role...'

Wynberg and Rondebosch by the careful placing of public buildings, showed sensitivity and skill, and one radial town design - that of Queenstown - even reflected the fascinating military ideas of the early Renaissance (Plate 39).[1]

But these examples are rare exceptions. On the whole, Colonial town planning in Victorian times meant administrative planning on lines established and inviolate throughout the Empire. Concerned only with rapid development, mechanically rigid, limitless and generally lacking in humanism, it forms a sad break with the traditions of civic design so slowly and painstakingly built up in the earlier period we have been considering. To appreciate South African urban expression at its best, therefore, we must turn, not to the great giants, but to these early towns, among which may be found a range of atmosphere and character, allied to bold zoning and visual organisation seldom equalled since in any part of the continent.

1. Queenstown was designed by M.R.Robinson, the Assistant Surveyor-General during the Kaffir War of 1851. 'The whites fortified the little town as well as possible by constructing its streets in the form of a hexagon, so that each street terminated in the centre or square of the town, and could be easily defended at each point of entrance or egress.' (Memoir of Mr.Crouch, quoted in 'The Cape Colony Today'. Cape Town, 1907, 209).



39. Plan of Queenstown as originally laid out,1853. (Cory Library).

TWENTY ONE :

COLONIAL ARCHITECTURE.

1. Olinda, Brazil; house with a balcony, c.1685.

2. Colesberg, Cape; house with framed windows, c.1830.

1. C.Gurlitt. 'Geschichte des Barokstils in Italian'. Esslingen, 1887. H.Wolfflin: 'Renaissance and Baroque', 1889.

2. Fiske Kimball. 'Domestic Architecture of the American Colonies and of the Early Republic'. New York, 1922.

3. New South Wales has been adequately dealt with by 'Morton Hermann, 'The Early Australian Architects and their work'. Sydney, 1954.

CHAPTER TWENTY-ONE

COLONIAL ARCHITECTURE.

Academic research in the nineteenth century concerned itself with those architectural styles which were favoured by the Revivalists - to the exclusion of everything else. Baroque had to wait until 1887 for a just assessment of its value,[1] and the first serious study of a colonial architecture - that of the North-Eastern American colonies - was published only in 1922.[2]

In recent years the architecture of the Portuguese and Spanish, and to some extent the Dutch overseas possessions has received attention but French and English Colonial architecture remain largely unexplored. Of the British West Indies only a slim volume, based more on conjecture than research, has appeared, and the British architecture of India, Singapore and most of the eastern possessions has been merely touched upon in articles.[3]

In these circumstances an attempt to establish the place of early nineteenth century South African architecture in the contemporary architectural

2A. Typical examples of the Mediterranean plastered-walling technique common in the Iberian peninsula.

(i) Houses at Alecrete, Portugal.
(ii) Tomb at Sabugal, Portugal.

scene is obviously fraught with difficulty.

But enough evidence has already come to light to show amazing correspondences between the architecture of all the overseas European possessions, correspondences which are too consistent to be put down to similarity of circumstance. Indeed, in their essential features the common characteristics are so basic and widespread as to fully warrant the use of the collective term 'colonial' to describe them.

These correspondences cannot, of course, be readily appreciated by eyes which are directed only to the different shapes of gables or the profiles of mouldings, for they lie deep below the surface gloss of imported fashion.[1] The virility of the colonial idiom lay essentially in its ability to absorb foreign influences while maintaining its own identity.

A: THE COLONIAL TRADITION.

By the eighteenth century colonial architecture was already a phenomenon in its own right,[2] not lightly to be extinguished from outside. Morever it was basically an international movement, a vast melting pot - in which the prime ingredients were those residual European regional traditions most suitable to primitive or limited building techniques.[3]

From the earliest period of Renaissance colonisation a continual exchange of cultural traditions had taken place between colonies of different nationality, exemplified by the adoption of Spanish 'walling' - in fact the whole Iberian construction technique - in the Dutch (and later French and British) colonies.[4] But this interchange of ideas rarely extended to the adoption of native building solutions,[5] nor did it immediately reflect the new physical con-

1. Although even here there is a considerable amount of evidence of interrelationship.

2. Cf. Kubler. 'Mexican Architecture of the Sixteenth Century'. 2 vols. Yale, 1948. II, 430; and Kubler and Soria, 'Art and Architecture in Spain and Portugal and their American Dominions. 1500 - 1800'. Harmondsworth, 1959, 85. (H.E.Mindlin 'Modern Architecture in Brazil', Rio. 1956, 2, makes the date 'the early nineteenth century'.)

3. Kubler's statement that 'the vernacular is fundamentally the same in the islands and on the littoral of the Caribbean region, based upon the same historic sources, and combined according to the same requirements of climate, environment and economic activity' can be extended to include a large part of the architecture of other colonial possessions, including Batavia and the Cape. (Kubler and Soria, 'Art and Architecture in Spain and Portugal and their American Dominions. 1500 - 1800.', 68.

4. In Ceylon, colonised successively by Portuguese, Dutch and British, 'nearly all the words connected with building are of Portuguese origin'... (Sir Montagu Burrows 'The Conquest of Ceylon'. Cambridge History of the British Empire. Cambridge, 1929. IV, 402).

5. Cf. Kubler, who, in one of the most complete studies of a colonial architecture yet executed ('Mexican Architecture of the Sixteenth Century') is forced to the conclusion that the architecture is 'much like that of sixteenth-century Spain; the main differences are volume and intensity' (I, 187 and also II, 417). Also Keleman: 'in general, colonial buildings can be classified within the framework of European architectural forms...' (Baroque and Rococo in Latin America'. New York, 1951, 21.) In 'Art and Architecture in Spain and Portugal and their American Dominions', Kubler is finally of the opinion that on the whole of the American continent 'the only area where pre-Conquest traditions of structure and decoration survived in Colonial architectural practice is New Mexico, ...among the tribes of Pueblo or 'village Indian' civilisation', and dismisses as 'misconstruction' references to 'native influences' in other colonies (73, 76, 78 etc.)

3. Sinsacate, Argentina; an early inn,c.1600?

1. e.g. of the North American colonies T.T.Waterman says: 'The colonists...continued to build as they had in England....' ('The Dwellings of Colonial America'.New York, 1950, 239)

2. Nowhere is this more aptly illustrated than in Latin America, where the great Humanist religious movement occasionally created and maintained vast architectural works of direct Italianate, Baroque and Rococo origin, many of which belong much more firmly to the European than to the Colonial world.

3. A synthesis which also took place in northern Italy, v.Kidder-Smith ('Italy Builds', London, 1955, 22) who unwittingly comments 'The farm-houses...suggest the plantations of the Mississippi Valley...' v. also Chapter 8 p.197.

Above: 4. Fazenda Boa União, Brazil.

5. House near Batavia. c.1770?

Below: 6. Arequipa, Peru, Santa Catalina, c.1670.

7. Barbados, West Indies; stables at Colleton, 1820.

ditions - as an architectural style it was at first more 'European reactionary' than empirical. The adventurous boldness of the colonial movement consumed, phoenix-like, all its own available energies - none remained for creative architecture.

In the new overseas countries the strangeness of the surroundings only spurred the immigrants to create all the more quickly environments reassuring in their familiarity.[1]

After the first colonising phase was over the special nature of the functional architectural problems began to receive attention, but already the character of colonial architecture had begun to follow a set convention - a distillation of the most cogent mediaeval traditions from Europe.

Later monumental and military buildings may have sometimes been derived directly, in construction and style, from bold new European developments, but the great mass of the architecture remained 'colonial' stemming from this early historical source, and matured by its conformity to the common environment and social circumstances.[2]

The stylistic heritage which the earliest colonists took with them was already a synthesis of the two most prominent regional architectures of Europe - the Northern European and the Mediterranean. In the populous northern provinces of Portugal and Spain these two were combined; timber trabeated and trussed framework and high roofs of the Gothic north blended with thick clay-walled small-windowed constructions of the south.[3] Their union and subsequent transfer to the new colonies created ideal conditions for the establishment of a single type of architecture which would later prove acceptable to colonists of many different nationalities. Moreover it was - by extraordinary coincidence -

an architecture which its dissemination was to reveal as remarkably suitable and resilient under a wide variety of ecological circumstances.[1]

Within the framework of this heritage the buildings of all colonies seem to reflect the same natural pattern of development.[2] In the first phase - the hasty provision of shelter and security associated with a period of expansion - half-timbered techniques generally predominate. The rural architectures of northern Europe furnished the pattern for primitive shelters; thus the early buildings of the 1820 Settlers have their direct parallel in the shelters of Van Riebeeck's party,[3] and both are reflected in the 'kapsteilhuisies' and 'hardbeeshuisies' which formed the first dwellings of the Voortrekkers.[4]

In the second phase - the period of consolidation - the colonists undertook to replace these primitive temporary constructions by more durable and imposing buildings.[5] It was at this stage that an attempt was made to recreate the visual environment of the homeland. Van Riebeeck in one of his first dispatches asked that red bricks and roofing tiles should be sent from Holland, and soon after set about the erection of brick kilns at the Cape.[6] The earliest substantial house was then erected, of brick, at Rondebosch.[7] In exactly the same way the British colonists always attempted at first to build as they would have done in England, using such materials as red facing bricks, stone roofing slates and tiles.[8]

In the third phase, which to some extent ran coincident with the second, the influence of the special colonial idiom began to be felt.[9] The way in which this was spread throughout the overseas world makes a fascinating study.

The governing class - military, naval and civil service - was generally

1. The first colonies, of course, presented climatic and geological conditions not at all unlike those of Portugal and Spain. It is interesting to speculate whether a new colonial architecture might have risen up if the first building conditions had been more different (cf. Kidder-Smith 'Brazil Builds', New York, 1943, 20). As it was, the colonial tradition was already 100 years old before the northern European countries came on the scene.

2. The northernmost British colonies in America do not appear to have been completely dominated by the 'Iberian' heritage. Britain was the only colonizing nation which established its first colonies outside the sphere of the Portuguese - Spanish tradition. The result was that it took longer for the colonial idiom to reach and influence the New England colonies, though by the early eighteenth century it had already done so. That climatic conditions are not likely to have been the determining factor in the national conservatism of British design in these northern colonies is strongly suggested by the case of the neighbouring Dutch colony of 'New Netherland' (later 'New York') which seems to have been built largely in conformity with the main 'colonial' stream. (Waterman: 192, 208). Of the British colonies in North America, Waterman (4) adds, however: 'The English language, English common law and English political ideas set the major patterns of American thought and action, but it should not be forgotten that in arts and crafts - in architecture particularly - the traditions of other countries were a powerful influence throughout the colonial period'. South Carolina was settled by 'experienced English colonists from the West Indies' under the leadership of the Governor of the Barbadoes in 1670 (Waterman, 6). Florida, of course, always belonged to the Caribbean littoral group, having been early settled by the Spanish.

3. Thom.'Journal of Van Riebeeck'. Cape Town 1952. The first buildings, a dwelling and storehouse were erected in timber brought from Holland (I,35,37), framed and weatherboarded and thatched (I,44-45), and were so slight that they had to be braced and buttressed against the wind (I,40,60,69). After three months the first building of reeds - 'a small watch-house' was erected (I,54) and thereafter local wood was frequently used (I,61 and 30th March 1654).

4. cf. Walton 'Homesteads & Villages in South Africa'. Pretoria,1952, 92-95. Called 'English wigwams' in Colonial America, though they were, of course, indigenous to the whole of northern Europe (Fiske Kimball 'Domestic Architecture of the American Colonies', 4). Wattle and daubed construction proper, and other kinds of framed construction, seem to have been common to the early stages of every colony of which contemporary records survive (e.g. Australia: Morton Hermann, 'Early Australian Architects and their work'. London,5. North America: Waterman, 6,11,12,123,191,238. 'The temporary shelters of all parts of the American colonies had more in common than the later permanent structures.' St.Martin, Dutch East Indies: Waterman, 192. Peru: Wethey,11,29. Bermuda: Atkinson - article in 'Architectural Review', June, 1950, 405.

continued on next page.

Continuation of Note 4.

Brazil: H.E.Mindlin.'Modern Architecture in Brazil'. Rio,1956,2. Singapore: T.H.H.Hancock,169. Adobe wall construction with thatched roofing was soon afterwards established as the most common colonial structural system. (cf.Wethey,11: 'The standard church of the sixteenth century in Peru was a long narrow edifice of adobe covered by a pitched roof of tiles or cane and thatch.' Elsewhere he omits mention of tiles and speaks only of 'humble structures of adobe and thatch.', 29).

5. cf.Kubler,'Mexican Architecture of the Sixteenth Century'.I,55. Waterman,13,123. H.E.Mindlin, 1, etc.

6. Thom. 'Journal of van Riebeeck.' 24th March, 1654.

7. Thom. 'Journal of van Riebeeck.' 3rd February 1657.

8. Parallels in other colonies are common; e.g.Philadelphia, 1690:'They Build all with Stone and Brick now, except the very meanest Sort of People, which build framed Houses with Timber...'(John Goodson quoted in 'Camden History',publication of Camden Historical Soc., New Jersey,1938.); and 1697: 'houses...most of them stately, and of brick, generally three stories high, after the mode of London..' (Gabriel Thomas, quoted in Wise and Beidleman 'Colonial architecture for those about to build'.Philadelphia,1913). Jamestown, Virginia; c.1660 - Jacobean Manor Houses of brick (Waterman.13,15). Kingston, Jamaica,1755: Georgian country houses (A.W.Acworth, 'Treasure in the Caribbean' London,1949,3) etc. St.George's, Grenada (Acworth,24). Kubler and Soria refer to 'the careful academic tones of the early colony in Central America',85. Brazil. 'Within four years the first house of stone and mortar ... In less than a century ... hundreds of houses, built as much as possible in the Portuguese way'.(Gilberto Freye,referred to in H.E.Mindlin, 1).

9. cf.Wetley,69.Acworth.3.Atkinson.Illustrations:10,19,25,27,29,30,33.

1. Thom: 'Journal of Jan van Riebeeck', I.

2. M.Burrows, op. cit., 402-3.

3. cf.M.Herman 'Early Australian architects and their Work',120.

4. In Ceylon, while the biggest impact made on the Sinhalese language by the Portuguese was in words connected with building, the Dutch contribution was restricted to words connected with civilised living - domestic, utensils, food, etc. (M.Burrows. op. cit.,403).

5. Of the houses it was reported 'Some had, according to the old architecture, turned the gable-ends towards the streets; but the new houses were altered in this respect. Many of the new houses had a balcony on the roof, on which people used to sit in the summer season...' (Peter Kalm,Swedish traveller, 1742, quoted by Waterman op.cit.,208).'In Holland, building was almost entirely done in wood or brick, stone being reserved for unusually important buildings or for ornaments. In America the limitless supply of fine timber available for building argued for a wood architecture, but...masonry construction (persisted in) principle use in New Netherlands.' (Waterman,210).

inter-colonial rather than localised. That is, administrators, army regiments and naval garrisons were regularly exchanged between colonies. The early career of Jan Van Riebeeck took him to Batavia (where he lived, on and off, for three years), Formosa, Japan, Tonkin in China (4 years), and the West Indies (in 1649-50)before he founded the Cape settlement.[1] The first British Governor, Earl Macartney, was Governor of the British West Indies for three years, of Madras in India for six, and envoy to China (1792-5), before being appointed to the Cape. This pattern was repeated in the careers of many of the lower-ranking colonial civil servants. Had Thibault stayed with the Regiment de Meuron, he would have served not only at the Cape, but in Ceylon under the Dutch, and in India with the British.[2] Governors and military men, as well as engineers, architects and craftsmen, who moved so frequently about the colonial world from one hemisphere to another were mediums whereby the existing concepts of building were spread.[3]

A second cause of the strong dissemination of the colonial architectural idiom was historical. The Dutch were the true successors of the Portuguese, taking over a large number of Portuguese colonial possessions. Finding Peninsular building techniques firmly entrenched and thoroughly suitable, they contented themselves during two centuries of consolidation in building on the existing tradition.[4] Thus the expanding Dutch colonial empire retained to the last the essential character of the Portuguese, even the new colonies - such as New Amsterdam, bearing its stamp.[5] The British arrived relatively late upon the scene, and were soon involved in a struggle to wrest colonial initiative from the Dutch, French and Spanish, capturing by the end of the Eighteenth Century a considerable portion of the older Peninsular and Netherlands empires, which steadily imparted their colour and character to new settlements such as Australia.

1. 'Stone is available in most of the islands (of the Caribbean). ... For buildings of less consequence, recourse was had to the form of construction known as Spanish walling...' Acworth, 4. As early as July 1652 the first kitchen at the Cape was built 'with a strong wall of clay and heavy stone about 2½ feet thick.' (Thom, 'Journal of Jan Van Riebeeck', I, 52).

2. cf. Bermuda (Atkinson, 408), West Indies and Batavia.

3. Wethey, 69; Acworth, 3-4, 5.

8. Early houses in Durban, Natal. (Africana Museum).

B: COLONIAL CHARACTERISTICS IN ARCHITECTURE.

An obvious reason for the resilience of the early 'colonial' building tradition lay in its appropriateness to the new environmental conditions - it was a climatically adaptable architecture achieved with the employment of relatively primitive building techniques and crude materials. Thick walled,[1] uniformly plastered and white or colour-washed to ensure coolness,[2] high-ceilinged-thatched or flat-roofed, generally having only one chimney (for the cooking-hearth) or none at all, with raised covered or open veranda and shutters against the sun, it was an architecture at once practical and cheerful in a harsh land.

The attempt to erect northern European buildings in brick and tile was early found to have its limitations. The local clay materials were often inferior, and extremes of heat and cold and natural disasters such as earthquakes and storms caused damage unprecedented in the home countries.[3] Limitations in the size of timber produced buildings one room thick, which resulted in unfamiliar planning solutions, but was actually a blessing in disguise; it ensured the good cross-ventilation so vital during the hotter months.

Where cooking was performed inside the building the chimney was projected from an external wall to ensure the maximum dissipation of heat to the outside air. Internal chimneys were seldom allowed to occur in eighteenth century 'colonial' buildings except in the few areas sufficiently cold for them to be tolerable - or even advantageous. The restriction of the chimney to one end of the house sometimes produced the peculiar unbalance of a roof gabled (with chimney) at one end, and hipped at the other - a type occasionally seen at the Cape. Extensions of a small building laterally resulted in the later incorpor-

1. In New England the presence of this feature is attributed to German influence. (Waterman, 122).

2. W.Burchell, 'Travels'. London, 1804, I, 169-170.

3. Chapter 9, page 256. In 'The Architectural Magazine and Journal', I, 375. London, Dec. 1834, in an article on 'Climatic Problems in Australian Architecture' a writer from Sydney adds that the detached kitchen 'is desirable, not only on account of the heat, but also to cut off all communication with the ... servants and to avoid the smells, and the flies, which are very troublesome in summer....'

4. cf. 'Climatic Problems in Australian Architecture' op. cit.; and Chapter 9, page 267.

5. Rev. W. Shaw. 'The Story of My Mission'. London, 1860.

9. 'Perkenier's' house on Amboyna, Batavia, 18th c.
10. Fazenda Colubandé, near Rio de Janeiro, Brazil, c.1820.
11. House at Pondok Gedeh, Batavia, c.1775.

ation of the chimney within the plan; in other cases internal chimneys originated from assimilated German or Scandinavian influence.[1]

Such were the problems of heat and fire risk that many colonial homes avoided the internal cooking fire altogether, instead erecting a detached kitchen (or even an open-air shelter) behind the main building. This was a common solution on the Cape frontier in the 18th century,[2] and one which was extensively adopted by the 1820 Settlers.[3]

So severe did the northern European settlers find the sun that, in the hotter colonies of the northern hemisphere they faced their buildings towards the north-east or the north, while in the southern hemisphere they generally preferred a south-eastern or southern orientation. North and West were equally regarded as too exposed in the southern colonies.[4]

Associated with the developed colonial style were high and generous rooms. Albany settlers' houses patterned on English precedents were, in the opinion of Rev. William Shaw 'in general too small for a warm climate, and were erected rather under the prevalance of European notions, and the pressure of limited means, than with a view to the requirements of such a climate...'[5]

The majority of early colonial towns were built near the sea, in difficult conditions which - in the tropics and sub-tropics - necessitated the use of plaster to protect the walls against driving rain and salt winds. The materials for the most efficient water-proofing plaster, and also for the paint which covered it, were themselves found on the beaches, and ensured that colonial architecture preserved its littoral character, even when it had migrated to the interior of Mexico and the Karoo. Lime plaster added its own special quality to the buildings: used in large surfaces it cracked and discoloured. To preserve a respectable appearance the walls had continually to be patched and

repainted, which in no time imparted an irregular texture and softness to surfaces and mouldings. With its pliability lime plaster lent itself admirably to the flowing curves and intricate forms of Baroque and Rococo (rippling parapets, gables and spiral chimneys); but in the Classicist phases soft irregularities of wall surface were considered out of character, and large flat areas were broken as much as possible with fluted pilasters, rustication patterns and Classical cornices to ensure a more acceptable weathering.

Equally characteristic with the wall texture was colonial colouring. The rich earth colours, ochres, yellows and reds of the Mediterranean tradition were highlighted in Spain and Portugal with green and blue, and this taste for bright colours spread through all the brilliantly sunlit countries of the colonial empires.[1] From a purely technical point of view white was the most suitable colour for a tropical house (it ensured the maximum reflection of heat), but many of the early settlers complained of the dazzling effect it had on the eyes.[2] Accordingly, its glare was frequently softened, either by tinting it with some other colour (e.g. yellow or earth colours to produce cream, ochres, greys etc.)[3] or by associating with it, in juxtaposition, restful colours such as greens and blues.[4]

As far as can be traced, green was the universal colour for external woodwork throughout the colonial world in the early eighteenth century, as it is to this day in many parts of Europe and the Arab countries.[5] The reason for this seems to have had nothing to do with economy, since green was actually a relatively expensive colour to produce and had always to be imported to the colonies.[6] An intriguing explanation for the overwhelming popularity of green is that its use was a heritage of Moorish influence in Spain and Portugal,[7] for green is predominant in the Arab world, where it is the religious colour of the

1. H.D.Erberlin 'The Architecture of Colonial America'.Boston,1925, 36. '...the rough walls were ordinarily white-washed, but...the exteriors rejoiced in chromatic brilliancy that at times was positively dazzling, and, even in its weather-worn stages, presented a lively appearance... Greens, blues and reds were used with the greatest freedom...'

   cf. Lady Anne Barnard's description of the public library, Heerengracht, Cape Town (Chapter 2, page 23, n.4).

2. Percival, 'Account of the Cape of Good Hope',London,1804. '...having them whitened, a custom that in the hot season produces an intolerable glare.' S.E.Hudson.'Journal, - Building' (Acc.602 No. 9, c.1807): '...at times the glare of the buildings is injurious to the Eye...'

3. Many examples of brightly coloured colonial buildings remain to this day in the East and West Indies. Reference to yellow washing instead of white-washing are frequent in the Cape records, e.g.C.O.133/21,1st May,1820. C.O.156/17,5th Dec.1821 etc.; cf. Mrs. Eaton, 'Journal'.MSS. S.A.P.L. 'The Houses are...white, or of a yellowish colour'. 26th Sept.1818.

   For the earth-colours, 'paint-stone' found near Paarl was used. 'I send you a specimen of the paint-stone, which you may break if you like. - you will find within a fine impalpable powder of a certain colour which when mixed with oil serves all the country people here as a paint for their houses, wagons, etc. They are found of every possible colour except green.. The blue is the most rare, and is the Native Prussian blue of which I believe I have spoken to you...' John Barrow to Lady Anne Barnard (Fairbridge: 'Lady Anne Barnard at the Cape'. Oxford.1924, 41).

4. Green is frequently cited as a wall colour as well as a woodwork one at the Cape. e.g. (a) Sparrman: 'The majority of the houses are in stucco, whitened externally: some are painted in green. This colour, which one never sees in our homes in Sweden, is the favourite colour with the Dutch: with them, houses, clothes, rowing-boats, ships, all are green.' ('Voyage...' London,1782,I, 10-11.) (b) Percival: 'several of the houses of Stellenbosch are painted green...'. ('Cape of Good Hope', London,1804.) Blue was sometimes employed to colour parapets and gables, and even whole houses. (cf. Chapter 2. Note 4 page 23).

5. Green woodwork was common in the West Indies, East Indies, Bermuda Australia (cf.Herman) Singapore (T.H.H.Hancock 'Coleman of Singapore' article in 'Architectural Review', March 1954,170), North America (Eberlein), old Cairo and the Mediterranean littoral. In the Cape, 'doors and windows are generally painted green; a favourite color with the Dutch' ('Gleanings in Africa',London, 1805,17). It is specified so frequently in the Cape records that it is unnecessary to quote particular examples - indeed, scarcely any mention of another colour for woodwork occurs before 1830. However, green was sometimes used only for the windowframes, the sashes being white; but both the door frames and the doors were generally green.

6. Bright green pigment ('common green') was made by the mixture of

Continued on next page

Continuation of Note 6.

chrome yellow with iron blue. Chromium oxide green was a paler blue-green. Verdigris green, made by exposure of copper sheeting to the atmosphere, was generally also rather pale. (Tenders were called for both 'common green' and 'verdigrease green' for Government work in 1828 - 9. C.O.370/138).

7. This would explain its essential prevalence in the countries of the former Spanish empire - Austria, Bavaria and Holland, as well as their overseas domains.

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1. Even today many of the flags of the Islamic countries are based on green. Green is, in addition, the most common colour in liturgical services in the Roman Catholic and many Protestant churches. It was also, 'during nearly three centuries, the colour of the queens of France' (c.1400-1700) a fact which may not be entirely unconnected with its widespread popularity. (Larousse 'Encyclopaedia') In the reign of Louis XIV the colour became common in buildings associated with French gardens.

2. cf. The effect of the Colonial style on the town house in New Amsterdam and Cape Town.
Note 5, page 689

12. Tulbagh, Cape, Church, 1743 (gable 1796).
13. Coro, Venezuela, House of the Iron Window, c.1720.
Elaborate Baroque flowing decoration was easily achieved in the building technique used throughout most of the colonial world.

prophets: (it had been symbolic of Hope, Life and Joy since primitive times).[1] But probably the simple association of green with the idea of coolness was mainly responsible for its persistent popularity in hot climates.

C: THE DEVELOPMENT OF SOUTH AFRICAN COLONIAL ARCHITECTURE.

The mediaeval rural scene survives almost as strongly at the Cape as in its homeland. Although the first European settlement did not take place until the Baroque era, the earliest farms were uncompromisingly mediaeval in character and use, a conservatism which was emphasised rather than diminished by the impact of the colonial tradition.[2] As the Cape Peninsular farms grew in splendour to assume Baroque finery and formality the primitive farm dwelling spread out to the frontier - and beyond - to preserve in the dry heat of the Karoo a European building type which can be dated backmany hundreds of years.

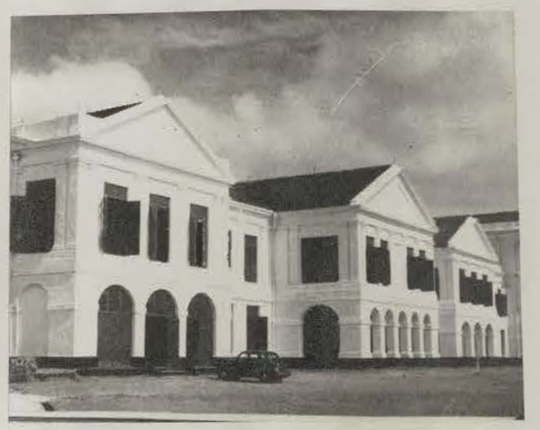
By contrast with the linear frontier farmhouse, with its life of relative intimacy with animals and servants, the houses of the Western Cape developed formal T, H, and U plans, following a pattern which had been adopted in fashionable Dutch architecture in the sixteenth century, and had spread from there to Elizabethan England and the old Colonial Empires. At the time of the Company's settlement at the Cape, Classicism was dominating the domestic architecture from Britain to Batavia. Though the strength of the Dutch influence was gradually weakened in Britain during the eighteenth century, the conquest of the Cape and Ceylon brought the two related threads together again, and, at the Cape at any rate, helped to fertilise the brief renaissance of Vingbooms style, and made a considerable and unique impression on the subsequently imported Regency fashions.

14. 'Oleanda Circle',Bermuda.

15.A. Warehouse, Bridgetown, Barbados, West Indies.

15.B. Raffles Institution, Singapore, 1836.

(All reveal colonial influence, especially in the direct expression of thick-walled lime washed construction. The resemblance of the last two to buildings at the Cape of the same period should be noted).



The British Occupations did not bring a complete alteration in architectural character either in farm buildings or the contrasting town buildings. Details changed, even for a brief period some of the British (following the second stage of the colonial evolution outlined above) attempted to build in the towns as they had at home, in face brick with Portland stone trimmings. But the continuity of tradition - Dutch to English, Classicism to Neo-Classicism, plaster to Regency stucco: these, and above all the integrating influence of the international colonial inheritance - ensured that eighteenth century conformations should flourish on into the nineteenth.

In the eighteenth century the trend of creative architecture was collective, not individual. Personal whim was generally conditioned by restraint. With the growth of the artificially cultivated styles at the end of the Age of Reason the first step was taken in the destruction of the unity of a community inspired by identical architectural tastes and ideals.

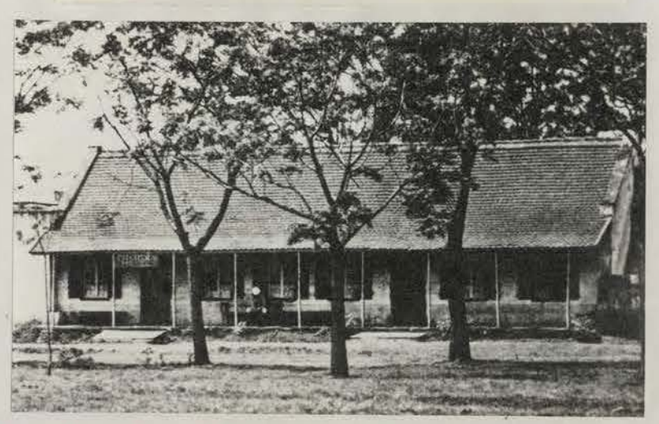
The evolving colonial idiom was the product of an ancient heritage modified by similar influences for approximately similar purposes. With the arrival of the vacillating French and then of British fashions it might be thought that the era of traditional architecture - with its roots in old Europe - must come rapidly to an end, and be replaced by academicism and eclecticism. But this did not happen at once, for two reasons. Firstly, the Albany Settlers brought a new infusion of conservative eighteenth century design, which appears, from the houses of Grahamstown and Uitenhage, to have strengthened the Cape Colonial vernacular while colouring it, and probably prolonged its life by several decades.[1] And, secondly, just when academicism seemed to have gained the ascendant in the late work of Thibault, it was supplanted by a new influence from England

1. A further strengthening of the basic colonial idiom - at least in Natal - was brought about by the pioneering activities of the Byrne settlers of 1850, while the natural isolation of the Voortrekkers ensured the persistence of the style in the northern Boer Republics and its eventual transportation into the Rhodesias.

Top: 16,17. Two houses in Colesberg, Cape.

Bottom: 18, A. and B. Two houses in Middelburg, Cape.

19. 'Glasgow Lodge', Bermuda,c.1790.
20. Early house in Longmarket Street, Pietermaritzburg,Natal.c.1840.



1. i.e. In the adoption of Venetian shutters, especially in Portland Place, and the great preoccupation with shaded balconies and terraces.

2. cf. M.Herman,120. 'Australia's early houses, with their wide verandas and spreading eaves, are not a phenomenon which leapt spontaneously from the soil; they were importations from the tropics, via England.'

3. This is the inevitable conclusion one is driven to by the available evidence. For possible qualifications cf. Chapter 8.

4. In Singapore its use was considered so obligatory, even in a church, that the Anglican church committee set aside several plans submitted to them 'because they were not provided with verandahs or any other contrivances for shading the building from the glare and the heat'. T.H.H. Hancock 'Coleman of Singapore' Architectural Review, London, March, 1954, 178. In 1822 Raffles laid down regulation for the frontages of houses in Singapore, including one that 'Each house should have a verandah of a certain depth open at all times as a continued and covered passage on each side of the street sheltered from sun and rain...' Ibid, 170.

5. London, 1823, 154.

which had unexpected repercussions.

By the end of the eighteenth century colonial functionalism had become such a fully developed architectural style that, spurred equally perhaps by the interest taken in the nascent American Republic, and the Company stations of the Far East, it became a significant influence in the home countries of Europe, even Adam being intrigued and noticeably swayed by it.[1] From Europe it was re-exported to the colonies in new guise, polished and refined, with all the swagger of the 'beau monde'.[2] And as such it was adopted by Lord Charles Somerset and his subordinates. Wide shaded verandas and Venetian shuttered French windows, therefore, made their debut in South Africa as much because they were fashionable in England as because they had been found desirable in other Colonies.[3] In these strange circumstances colonial architecture at the Cape at last came to conform fully to the international colonial idiom from which it had in the first place taken its origins!

The justification for the use of the veranda to provide shade against the heat is reflected in the impressive speed with which it was everywhere adopted.[4] Once it was introduced into South Africa it quickly became an inevitable part of Cape architecture, and was one of the most obvious features transported by the Voortrekkers to the northern Republics. At first merely covering the stoep, the veranda soon extended round the house until it entirely enveloped it, thus duplicating a development which had taken place in the rest of the colonial world a hundred years before.

'An Englishman', wrote Wilberforce Bird in 'The State of the Cape in 1822'[5], 'from the Orkneys to New South Wales, is the same unbending creature. He ac-

21. Early house in Middelburg, Cape.

22. Farmhouse near Grahamstown, Cape.

23. House in Colesberg, Cape.

comodates himself, with difficulty, to the manners of other countries, and nothing can be right or proper, that is not English, and to which he is unaccustomed.'

It is a peculiar anomaly that the immigration of British settlers to the Cape took place during a period when the 'Cottage Style' and the 'Colonial Style' were both fashionable in England. As they were considerably more suitable for use in disguising limitations of materials and workmanship than Gothic or Grecian were, the presence of a British element in the population, however conservative, did not in fact have the disrupting effect on South African architecture which might be expected. The character of the early immigrants' houses was essentially functional, and when it was not, tended on the whole to favour the more sensible contemporary fashions. And these in no way prohibited the absorption of many of the most pertinent characteristics of the old Cape buildings.

The differences between Cape architecture of the eighteenth and much of that of the first half of the nineteenth centuries will therefore be seen to be more superficial than basic. Even the Albany Settlers' homes have a quality sufficiently unified with those of the west of the colony when both are compared with the debacle of architecture of the same period in Europe.

Sharing a common heritage in domestic architecture, mutually interacting and equally eagerly accepting imported Colonial characteristics (notably the veranda and the louvred shutter), they were able to exist side by side and merge in perfect harmony; a fact which is borne out by the difficulty of distinguishing between the sources in much of the old architecture of Stellenbosch and Grahamstown.

24. 'Kromme Rivier', Stellenbosch; gable dated 1831.
25. House on the Keerbooms River, Cape. ± 1830.

The Dutch house had always been a formal building from the outside, and on the inside a relatively informal one. The stoep, the single open-air living space, was part of the symmetrical entrance facade, and could only be approached from the interior through the front door. Yet internally all the activities of the house were focussed in a central living room divided by a screen partway down its length; from this space all the other rooms opened, and this inevitably resulted in a certain informality in its use.

But by the time the British arrived the Cape plan was an archaic survival of a mediaeval type that by then persisted in Europe only in the rural districts. Although in an elementary form it was favoured in the Albany farmhouses, even there it was rapidly coloured by the new social standards originating in Europe.

There was, however, a certain similarity between the eighteenth century Cape farmhouse and the dwellings of the 1820 Settlers, and this lay in the zoning of the house into two basic types of space: the mediaeval 'hall' - in which all the living, cooking, entertaining and working took place,[1] and the descendant of the 'chamber' or 'chambers' - essentially rooms for sleeping. Outside entrances in both cases opened directly into the living space, or a section of it that might be partially screened. This was a European heritage common to all early Colonial countries.

But during the Baroque and Rococo ages there had been a great change in the status of the middle classes in Europe. The influence of Court life, the increase in formal etiquette, led to the compartmentation of the activities in a way which had been quite unnecessary in mediaeval times. Rooms for formal entertainment were balanced by rooms for private retreat. Space became specialised room by room, the kitchen separated from the dining room, the study from the drawing room. The rooms no longer opened into each other, but were approached

1. It seems likely that the provision of a separate kitchen in the Cape Dutch farmhouse was achieved relatively late by the extension of the T-plan or its conversion into the H-plan. (cf. Walton, 'Homesteads and villages of South Africa', 6.7.)

Opposite:

The Cape mid-nineteenth century vernacular: a fusion of influences, with colonial characteristics predominating.

26. House in George, Cape.

27, 28. Two houses in Colesberg, Cape.

1. 'Uitkyk' is now destroyed.

2. It is important to note in this connection that the stoep not covered by a veranda was the exception, not the rule, in Dutch colonial archictecture. Some Cape houses came close to it with the vine pergola, and there is one reference to suggest that verandas had once been found at the Cape, (Chapter 8. p.203) but at the time of the arrival of the British there seem to have been none at all. Yet verandas were a notable Dutch contribution to the architecture of New York (Fiske Kimball's 'Domestic architecture of the American Colonies etc., 222-3), of Curacao and Batavia. (cf. Plates 5, 9, 11).

3. cf. Thom, 'Journal of Jan Van Riebeeck'. I,36-7, et seq.

29,30,31. 'Uitkyk', Oranjezicht, Cape Town.

The Cape nineteenth century vernacular, with colonial construction, a Cape plan with 'stoep-kamers', and English Regency doors, windows and mouldings.

1. Waterman. 'Dwellings of Colonial America', 213.
2. Ibid, 217.
3. Ibid, 217 - 222.

32. Early house in Middelburg.
33. House in Colesberg.

great pains were taken to provide sufficient light and ventilation, through the use of gables and dormers, to the loft. Because of the difficulties of coping with draughts the staircase was usually placed outside in the open air at one end of the loft, and in those rare cases where it was put inside the plan, it rose from the kitchen, and was entirely enclosed and entered through a door. This type of arrangement was frequently copied by the Albany Settlers, and was one of the features which marked the eventual blending of the two influences in farm buildings.

In town houses the staircase generally rose in a corner of the 'achterhuis', and was again totally enclosed. The English brought the concept of the staircase as an architectural feature, with a special open volume created for it in the centre of the plan, the 'stair hall', from which the points of access to all the other rooms radiated. This type of plan was, however, often treated more freely (less axially) at the Cape than it was in England.

An interesting parallel to the interaction of English architecture with native Dutch Colonial is to be found in New Amsterdam (New York) - all the more pertinent because it took place a hundred years earlier, and can therefore be assumed to be fundamental rather than simply a matter of fashion. In New York there were, firstly, a number of changes in detail. Floor construction saw a transformation (repeated in South Africa) from widely-spaced heavy beams carrying thick floor boards to the British system of a few main beams carrying closely-spaced joists and thinner boarding.[1] Open-timber ceilings were replaced by flat decorated plaster ones,[2] and panelled door and screen construction took the place of the early boarded types. Woodwork became finer and lighter,[3] the fireplace changed from a large open or hooded cooking hearth to a small shelter-

1. Waterman 'Dwellings of Colonial America', 215-7.

2. Ibid, 213.

3. Ibid, 213.

4. Ibid, 194, 222.

5. Ibid, 224, 225: 'The old Dutch architecture modified the new English architecture until well into the nineteenth century.' New Netherlands was annexed by the British in 1664.

6. Menzel 'Description'. Glogau, 1785. Barrow, 'Travels', London,1804. Lichtenstein, 'Travels'. London, 1812. Borcherds, 'Autobiographical Memoir', Cape Town, 1861. Hudson, 'Journal', Accession 602, No. 8 etc.

34. 'Ganze Kraal', Darling district, ± 1806.

ed grate,[1] windows became higher and narrower.[2] Sash windows were soon the rule and casements the exception,[3] and divided doors were replaced by single six or eight panelled doors.[4]

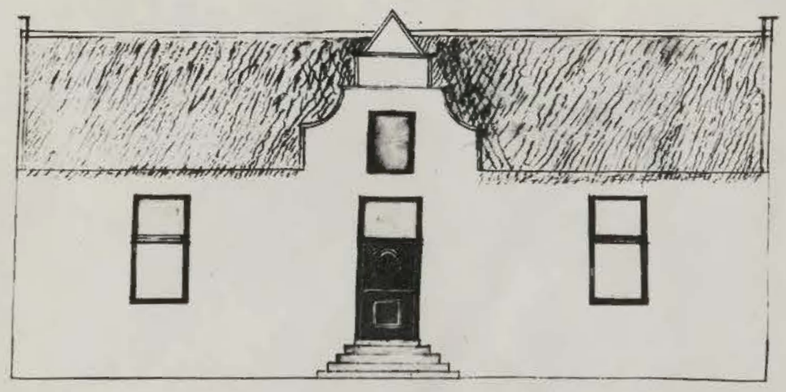
But the most interesting parallel is that, after a hundred years as a British colony, while in buildings in New York 'the interior, in both finish and furniture, had become only a variation of the neighbouring British colonies, ... in plan and exterior treatment Dutch forms persisted.'[5]

The main reason for the continuance of Dutch architectural forms may presumably be found in the fact that, even allowing for cold winters, the international colonial idiom introduced by the Dutch into New York was considerably more suitable to the local conditions of climate, materials and workmanship than much of the fashionable Queen Anne and Georgian favoured in the neighbouring colonies. Nevertheless, it is interesting to speculate that perhaps Dutch architecture had qualities of its own, distinct from those of colonialism, which favoured its survival. If so, we would expect to find similar residual characteristics extending to the Victorian age in South Africa, and their presence becomes important if we are to establish the essential nature of the early nineteenth century Cape vernacular.

In the first place, Dutch homes were renowned for their comfort. The skill of the 'huisvrou' was wedded to the shrewdness of the 'boer' to produce dwellings which were unequalled in internal convenience. In no other sphere did the indigenous architecture make such an impression on the immigrant mind.[6] So notable was the relaxed comfort of the indigenous planning that British officers like Colonel Cuyler and Robert Hart adopted it with only the most minor modifications in building houses for themselves, and the widespread general result of this influence was to reserve for the dining room an importance in the

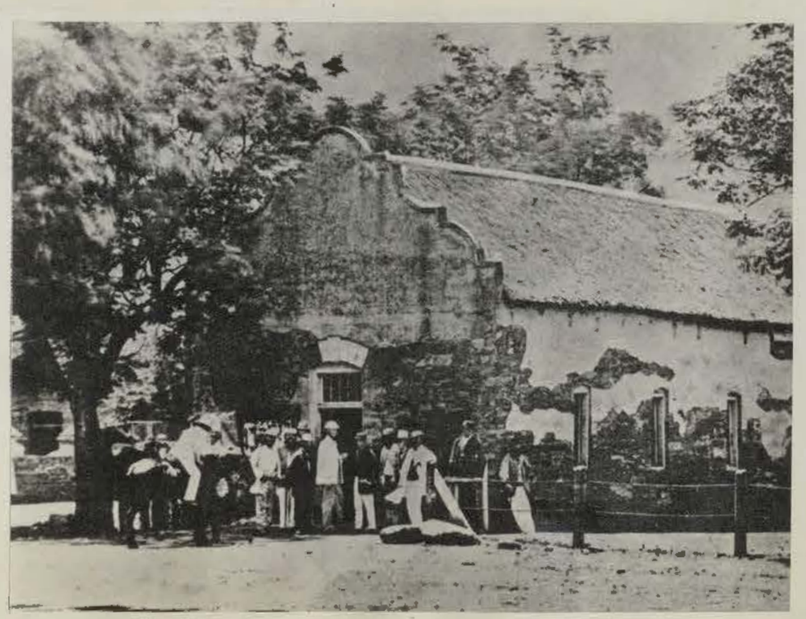
1. Cf. 'Cuyler Manor', near Uitenhage, 'Glen Avon' (Plate 82 on page 285), 'Huntley House', Grahamstown (Plate 22 on page 327) etc.

2. The traditional Cape plan was extraordinarily persistent, even in the east of the colony. Of Uitenhage in 1822 Hudson wrote: 'A long Hall useless an d inconvenient with rooms leading from it on each side is the general plan a nd deviation from this is considered almost a crime...' ('Journal' Accession 602, No. 8).



35. Elevation of the Resident's house at Mossel Bay, 1817. (C.O. 2609/19).

36. Volksraad at Pietermaritzburg, Natal, 1841; now demolished. (Dr.K. Campbell).



centre of the Cape plan which it had long since lost in fashionable England.[1] Thus the mediaeval 'hall'-plan was perpetuated in a new form.[2]

While Cape Dutch planning continued to exert a considerable attraction, the parallel with the persistence of Dutch features in New York extended also to the exterior forms of the architecture. Gabled houses on the traditional mediaeval-Baroque pattern survived all the inroads of French and British fashion, and were still being erected in the middle of the nineteenth century.

The gabled roof on a U, T, or H plan was an eminently sensible solution where the roofing material was thatch. Although hips were introduced they made little headway against the gable, perhaps because of the simpler roof construction associated with the latter. (Waterproofing was hardly a problem when it was done not by flashing but by patching with lime plaster.)

The traditional farmhouse was modified by the inclusion of high Regency windows, louvred shutters and even attic windows and verandas, but the essential form, with its centre gable, remained the same. And though, in the region nearest Cape Town, the gable gradually became straighter-sided, smaller and more spindly, even adopting Gothic Revival forms, in more remote districts it continued bold and vigorous with full-blooded Baroque profiles for another fifty years. While it shrank to nothing in Worcester, Swellendam and Wellington (e.g. Plate 23 on page 418) it made its unlikely appearance with all its original verve in the Sneuwbergen, Cradock and Pietermaritzburg. (Plates 36, and 44 on page 138).

Architecture of the flat-roofed type also spread to the hinterland, in spite of strong competition from Georgian. Encouraged by the Classicist Revival and the comparative shortage of suitable reeds for thatching in many parts of

37. Early house in Riversdale,Cape.
38. Early house in Middelburg,Cape.

1. Strangely enough the use of double windows in the gables also persisted for many years in New York State, cf. Waterman, 216, 200, 227. They were, however, not entirely unknown in England, where they must also be ascribed to Dutch influence.

2. An interesting survival, possibly from a much earlier time, is the use of two separate entrance doors side by side under the centre gable, or in the middle of the long side of a frontier farmhouse (Plate 38A). This distinctive feature, which is found also in the Hudson Valley and Eastern New Jersey, is regarded by Waterman (after careful research) as French Huguenot, dating from the latter part of the seventeenth century. 'The Dwellings of Colonial America', 198-9).

38.A. 'Klein Libertas', Stellenbosch.

the Karoo, houses with straight, stepped or pedimented parapets and brick and plaster flat roofs, early made their appearance in Graaff Reinet, Middelburg, Colesberg, Cradock, Phillopolis and even the towns of the Albany district such as Grahamstown and Salem.

Though the houses were more often single-storeyed than double, the character of many of them was still largely Dutch Classicist. In other cases the persisting flat-roofed form assimilated British characteristics in the early conservative architecture of the tradesmen among the Albany settlers, while retaining its own vernacular Cape quality. The inheritance of the Portuguese-Dutch colonial tradition long continued to bring a Mediterranean feeling into the architecture, the thick clay or brick walled, white plastered or white-washed forms, with painted dadoes, and stoeps, combining strangely with English windows, Adam fanlights, French casement doors, verandas (repeating the horizontal lines of the parapets) and Victorian fretwork. These are the basic ingredients of the unique character of Cape architecture in the nineteenth century.

Among other Cape features which persisted were the Dutch oven (forming a projecting, solid semi-circular or square mass at one end of the house,with its characteristic stepped chimney) and such small details as the typical Netherlands double windows in the gables.[1] Both these elements are equally common in combination with English forms in the architecture of the Albany Settlers, and in the later houses of the Voortrekkers.[2]

There were always two distinct types of architecture at the Cape; that of the fashionable world, and the vernacular. The former, influenced strongly by

39. Early house in Riversdale, Cape.
40. Volksraad in Pretoria, c.1860. (Transvaal Archives).

contemporary trends in Europe, lay like a veneer over the predominant colonial idiom. The fashionable homes of the British officers and rich merchants such as the Harringtons were contemporary with the more extensive locally influenced work of the Moodie artisans and the Albany Settlers. (In exactly the same way attempts, such as Thibault's, to introduce French Classicism, had earlier failed to alter the basic forms of the Cape farmhouse, even at 'Groot Constantia'.)

The indigenous Cape colonial tradition thus survived far into the nineteenth century.

With such an admixture of influences, operating in different areas, French (in the surveyors trained by Thibault), German (Schutte and von Buchenroder), as well as colonial Dutch and British, it is hardly surprising that regional differences began to appear at the end of the eighteenth century. But it is easy to receive the impression that the differences were greater than did in fact exist. The same basic forms are found in every part of the country, and most of the regional characteristics may be attributed rather to a degree of arrested development than to the influence of national styles or local materials.

The peculiar character of colonial architecture lies not alone in building traditions and interacting styles, but also in the disparity between intention and realisation. Frequently, amateur designs, semi-skilled or unskilled labour, and restricted building materials transformed the intricacies of fashion into fortuitously subtle and restrained statements, ennobling the architecture where it might have been debased. With rich styles, like the Rococo and the Gothic, the very limitations of colonial conditions proved an advantage, enforcing by

41. Arequipa, Peru, Casa del Moral, c.1715.

42. Officer's house near Madras, India, c.1830.

43. 'Round House' extension, Camps Bay, Cape. (c.1830?).

1. D.Pilcher. 'The Regency Style' 1947, 68.

simplicity the impact of the lines and forms of the styles. In this respect colonial architecture shared the advantage of that of the European provinces, which posterity has judged to have sometimes achieved higher standards than the architecture of the great capitals. At the same time, well-chosen patterns occasionally ennobled crude materials and workmanship. Excessive copying may have produced stereotyping, but it also ensured a familiarity with the true meaning of 'style' which is one of the strongest attributes of the best colonial work.

Eighteenth century Cape architecture was based on a nearly uniform financial standing and social status, which was reflected in a common standard of taste. This stable culture was upset first by the fluctuating economic fortunes of the late eighteenth century wars, and then by the distant forces of the European industrial revolution. While it is difficult to imagine anything more fundamental than most early nineteenth century colonial architecture, involving as it generally does honest materials and sensible, straight-forward architectural expressions, the impact of the pattern books and of such conflicting ideas as those of French Classicism, British 'Romanticism' and Regency eclecticism - all more or less contemporary at the Cape - eventually made major inroads on the old traditions. Indeed the pattern books and illustrated periodicals had in some respects a more profound effect in the colonies than they did in the home countries. (Witness the popularity of the Egyptian style at the Cape, where two important public buildings were erected in the fashion, while in England, according to Pilcher,[1] 'the Egyptian style seldom got beyond the cabinet maker, the interior decorator or the architect advertising his versatility in pattern book projects...'.)

It is clear that such important works as Loudon's 'Encyclopaedia of Cottage,

1. Payne Knight's 'Analytical Enquiry, etc', London, 1808.
   v. Chapter Fifteen, page 539.

2. cf. Pilcher: 71 - 2.

3. John Paterson 'Eastern Province Herald', Port Elizabeth, 1847.

44. Veranda in Colesberg, Cape.
45. Veranda house in Pietermaritzburg, Natal.
46. Veranda house in Durban, Natal.

Farm and Villa Architecture and Furniture' (London, 1833) were directed as much to the colonies as to England (e.g. ... 'To a family of two persons without a servant, in Britain, and to small farmers in America and Australia, where servants or helpers are scarcely to be got at any price arrangements of this sort should always be kept in view'). Yet, while principles like those of Payne Knight's that a house 'could be adorned with towers and battlements and still maintain the characters of a house of the age and country in which it is erected...'[1] facilitated the spread of the Romantic Revivals to the colonies, the attempts of men such as Repton to found all architecture on 'natural' principles[2] balanced the score by strengthening the case for strict functionalism in the colonies, and the acceptance of the indigenous idiom.

Though it was occasionally said of colonials that they tended to pay extravagant attention to the latest whims of European fashion, it was much more true that (in the words of an early editor of the 'Eastern Province Herald') 'the colonist lives in a separate current...resting on no support but his own...'[3]

The close approach to a direct style of architecture in late Georgian England was largely wasted in a mire of fashionable metaphors, but the germ of a living architecture were carried on overseas. Indeed, it is an arguable proposition that, on a global scale, the colonial world produced a more notable nineteenth-century architecture than that of Europe. It did not suffer to the same extent as Europe the decline from basic functionalism to empty symbolism, the unending search for individuality and social expression among the dead stones of the past. While Barry and Pugin raised their monuments to Italianism or designed churches and public buildings in a haze of mediaeval Romanticism, the best colonial work combined the products of the Industrial Revolution with

1. e.g. the use of cast iron in New Orleans and St.Louis compared with its use in Europe at the same time.

2. cf. Thomas Paine.

3. The importance of the colonial contribution to twentieth century achievements in all spheres has yet to be measured. The great intellectual giants of the early modern movement, Sullivan and Wright, appear to have been strongly influenced by the Colonial tradition. (cf. S.Giedion, 'Space, Time and Architecture', Harvard, 1941, 290-1.)

47. Entrance, 'Klein Gustrouw', Stellenbosch. (Elliott).

centuries-old established traditions to produce a sensible, integrated and frequently attractive style based on the empirical use of the new materials to satisfy functional problems in difficult environments.[1]

Thus the propriety of the early settler houses is preserved in the character of the later Victorian buildings in South Africa. Corrugated iron reduced the veranda from a luxury to a relatively cheap practical amenity without changing its form or purpose. The Industrial Revolution did not produce the nineteenth century 'colonial' vernacular; it merely fertilised an existing tradition.

In every country men are the children of what has gone before, and their mental images, ideas and hopes are largely shaped by the creations of yesterday. The impact of colonial thought may have played some part in the growth of the modern regard for performance rather than status.[2] And in colonial architecture - on the whole eminently straighforward and sensible - lies an important forerunner of that principle of the natural expression of organic functions which is the essence of our architectural philosophy today.[3]

The early nineteenth century was a period of rapid change. It made for flexibility of mind, facilitating the casting out of outmoded ideas, so that only the most valuable of basic eighteenth century concepts survived. But it also introduced an instability of standards, and provided such a surfeit of experience that eventually all the subtler aesthetic responses were dulled. Rapid changes soon left no room for refinement. Here was the tragedy of the Victorian age. But in the early nineteenth century Cape this state of affairs still belonged largely to the future: it was both the end of the old epoch and the beginning of the new.

APPENDIX.

APPENDIX : PATTERN BOOKS

I. BRITISH PATTERN BOOKS

(This list includes all pattern books published in English, and likely to have influenced overseas architecture between the years ± 1700 and ± 1840, surviving in the Library of the Royal Institute of British Architects and the British Museum. As far as can be ascertained it is the first bibliography on this subject. It includes a large number of publications not mentioned by H.M. Colvin in 'A Biographical Dictionary of English Architects, 1660 - 1840' London, 1954).

ANON: 'An Account of the Paper Roofs used at Tew Lodge Oxon.' London, 1811.

ANON: 'The Building Act of the 14th Geo. III. With plates showing the proper thickness of party walls, external walls, and chimneys. London, C.1788.

ANON: 'The Builders Dictionary: or Architect's Companion, explaining not only the terms etc. but also the theory and practice of the various branches of that useful and noble art, etc. 2 vols. London, 1734.

ANON: 'Coalbrookdale'. Catalogue of 1875. (Allied Ironfounders Limited Library).

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ANON: 'The Carpenter's Complete Guide to the whole System of Gothic Railing, containing 32 new designs.'
London, C.1788.

ANON: 'Decoration for Parks and Gardens. Designs for Gates, Garden Seats, Alcoves, Temples, Baths, Entrance Gates, Lodges, Facades, Prospect Towers, Cattle Sheds, Bridges, Greenhouses, etc. etc.'
London, 1805.

ANON: 'Designs for Monuments incl. Grave Stones....Tombs 38 Plates.'
London, C.1788.

ANON: 'Designs for Shop-fronts and Door-Cafes, on 27 Plates.'
London, C.1788.

ANON: 'A Geometrical View of the Five Orders of Columns in Architecture, etc. on a large sheet, etc.'
London, C.1788.

ANON: 'Ornamental Iron Work, or designs in the present taste, for fanlights, staircase railing, window guard irons, lamp irons, palicades, and gates. With a scheme for adjusting designs with facility and accuracy to any shape.'
London, C.1788.

ANON: 'Plate Glass Book',
London, C.1788.

ANON: 'The Representation of the Leaseholders & Contractors interested in the Houses & Buildings in Pickett Street, new Temple Bar: Skinner Street, Fleet Market, and Snow Hill, with the Schemes of the City State Lottery, and plans and Elevations of the Different Buildings Constituting the Prizes.'
London, 1807.

ANON: 'The Rudiments of Architecture: or the Young Workman's Instructor etc. with 23 elegant designs of buildings. The most of which have been actually executed in North Britain.'
Edinburgh, 1773.

ANON: 'A Gentleman'. Twelve designs of Country Houses of 2, 3 and 4 rooms on a floor.
Dublin, 1757.

ANON: 'Vitruvius Sections being a collection of Plans, Elevations and Sections of Public Buildings, Noblemen's and Gentlemen's Houses in Scotland, principally from the designs of the late William Adam Esq.'
London and Edinburgh. 1720 - 40
1810

ACKERMANN: 'Repository of the Arts' Regularly issued between 1809 - 1828.

ADAM, Robert: 'The Works in Architecture of Robert & James Adam, Esquires.'
London, 1778.

AHERON, John: 'A general Treatise on Architecture in Five Books'.
Dublin, 1759.

ALDRICH, Henry D.D.: (Formerly Dean of Christ Church)
'Elementa Architecture Civilis and Vittuvee Vitruvius Descriptions etc.'
The Elements of Civil Architecture, according to Vitruvius and other Ancients and the Most Approved Practice of Modern Authors, especially Palladio.
1750, English ed. 1789. Oxford
2nd Ed. 1818
3rd Ed. 1824

ATKINSON, William, (Architect) 'Cottage Architecture'.
Views of Picturesque Cottages with Plans. Selected from a collection of drawings taken in different parts of England is intended as hints for the improvement of cottage scenery.
London, 1805.

BARBER, William: 'Farm Buildings, or Rural Economy. Containing designs for cottages, farm-houses, lodges, farm yards etc. Dedicated to the Farming Society of Ireland.'
Also a description of the mode of building in Pisé, as adopted in several parts of France for many ages which would be attended with great advantage if practised in this country, particularly in cottages and farm-yards.
London, 1802.

BARTELL, Edmund Jun.: 'Hints for picturesque improvements in ornamental cottages ... including observations on the labourer and his cottage.'
London, 1804.

BIDDLE, Owen: 'Young Carpenter's Assistant'
London ?, 1810.

BOTTOMLEY, Joseph: 'Designs for Fanlights, Sash-frames, etc.'
London, 1794.

BROOKS, S.H.: 'Designs for Cottage and Villa Architecture, etc.'
London, 1839.

BUSBY, C.A.: 'A Collection of Designs for Modern Embellishments, suitable for Parlours, Dining and Drawing Rooms, Folding Doors, Chimney Pieces, Verandas, Friezes, etc. on 25 plates.'
London, 1810.

BUSBY, C.A.: 'A Series of Designs for Villas and Country Houses, adapted with economy to the comforts and to the elegance of Modern Life.'
London, 1808.

CAMPBELL, Colin: 'Vitruvius Britannicus or The Batiele Architect.'
3 Vols.
London, 1715, 1717, 1725.

CARTER: 'Builder's Dictionary'.
c.1778.

CARTER, J.: 'Specimens of Gothic Architecture',
London, 1824.
(Originally 'Views of Ancient Buildings in England, 6 vols. London, 1786 - 93).

CHAMBERS, Sir William: 'Plans, Elevations, Sections and Perspective Views of the Garden, and Building, at Kew In Surrey.
London, 1763.

CHAMBERS, Sir William: 'Designs for Chinese Buildings Furniture, Dresses, Machines, Utensils, etc.'
London, 1757.

CHAMBERS, Sir William: 'A Treatise on the decorative part of Civil Architecture with illustrations, notes, and an examination of Grecian Architecture by Joseph Gwilt.'
London, 1759 - 1826.

CHANCELLOR, E.B.: 'Life in Regency & Early Victorian Times'.
Batsford, 1926.

CLAVERING, Robert & Company: 'The Carpenter's and Joiner's Vade Mecum.
London, C.1788.

CLAVERING, Robert: 'An Essay on the Construction and Building of Chimneys, etc.'
London, 1793.

COLUMBANI, P.: 'A New Book of Ornaments; containing a variety of elegant designs for modern panels, commonly executed in stucco, wood, or painting, and used in decorating principal rooms'
Quarto
London, 1775.

COLUMBANI, P.: 'A Variety of Capitals, Friezes, and Cornices; how to increase or decrease them, still retaining their proportions, likewise twelve designs for chimney pieces, etc.'
Folio.
London, 1776.

COOK, Andrew George: 'The Builder's Magazine or Monthly Companion for Architects, Carpenters, Masons, Bricklayers, etc. consisting of Designs in Architecture in every style and taste, etc.
by a Society of Architects.'
London, 1774, 1779, 1786.

COOK, Andrew George: 'The New Builder's Magazine and Complete Architectural Library, etc. consisting of Designs in Architecture, in every style and Taste, from the most magnificent and superb structures, down to the most simple and unadorned together with plans, elevations and sections, etc.' 2 Vols.
London, 1820.

COTTINGHAM, L.N.: 'The Ornamental Metal Workers' Director'.
London, 1823.
Republished as 'The Smith and Founders' Director, etc. London, 1824.

COTTINGHAM, L.N.: 'Working Drawings for Gothic Ornaments, etc. with a Design for a Gothic Mansion.'
London, 1824.

CRUNDEN, J. and MORRIS, J.H.: 'The Carpenter's Companion, containing 33 designs for all sorts of Chinese railings and gates.'
London, 1770.

CRUNDEN: 'Convenient and Ornamental Architecture: consisting of original designs for plans, elevations and sections, beginning with the farmhouse etc. etc.'
London, 1768.

CRUNDEN, John: 'The Joiner's and Cabinet Maker's Darling, containing 50 different designs for all sorts of frets, friezes, etc.'
London, 1770.

CUNNINGHAM, James (Surveyor, Greenland):Designs for Farm Cottages and Steading with descriptions, specification and estimates etc.
London, 1820 - 30.

DARLY, Mathias (Professor of Ornament): 'The Ornamental Architect. or Young Artists Instruction by a society of young artists & engraved by M.C.'
London, 1769 - 70.

DARLY, Mathias: 'A Compleat Body of Architecture, etc.'
London, 1773.

DEARN, T.D.W.: (Architect of H.R.H. the Duke of Clarence) Sketches in Architecture consisting of original designs for Cottages and Rural Dwellings suitable to persons of moderate fortune and for convenient retirement with plans and appropriate scenery to each.
Over 20 plates Some general obs.
London 1807

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DEARN, T.D.W.: 'Sketches in Architecture, consisting of original designs for Public & Private Buildings, 1806'

DEARN, T.D.W.: 'The Bricklayer's Guide'
London, 1809.

DEARN, T.D.W.: 'Designs for Lodges and Entrances to Parks, 1811, 1823'.

DINGLEY, R.: 'Plans, Elevations and Sections presented to the Corporation of Bath, for the improvement of the baths in that city; intending to make the whole one grand, uniform, elegant and convenient structure of the Ionic order.
London, C.1788.

EDWARDS, G.: 'A small book of ornaments on six leaves.'
London, C.1788.

ELMES, James: (Introductions to T.H.Shepherd's) 'Metropolitan Improvements'.
London, 1827 - 9.

ELSAM, Richard: 'An Essay on Rural Architecture illustrated with original and economical design : being an attempt also, to repute by analogy, the principle of Mr. Mames Maldon's Essay in "British Cottage Architecture" etc.'
London, 1803.

FISHER VON ERLACH (Johan Bernard): 'A Plan of Civil and Historical Architecture, in the representation of the Most Noted Buildings of Foreign Nations, both Ancient & Modern etc.'
(1725 Leipzig in German & French
1730 Translated to English and published
1730 London) reprinted 1737.

FITZGERALD, Francis: Vol. V of "The General Genteel Preceptor" being a Summary Introduction to the Arts of Drawing, Architecture, etc. adapted to the service and instruction of Youth of Both Sexes, etc.
London, 1797.

GANDY, Joseph: 'Designs for Cottages, Cottage Farms and other rural buildings.'
London, 1805.

GANDY, Joseph Architect A.R.A.: 'The Rural Architect. Consisting of various designs for Country buildings Accompanied with Ground Plans, Elevations and Descriptions.'
London, 1805.

GARRET: 'Designs and Estimates for Farm Houses for the Counties of York, Northumberland, Cumberland, Westmoreland and the Bishopick of Durham.' 1747.
London, 3rd Ed.1772.

GERARD: 'New Book of Foliage'
London, C.1788.

GIBBS, James: 'Rules for Drawing the several parts of Architecture etc.'
1732, Third Ed. 1753 London.

GOODWIN, Francis: 'Domestic Architecture, being a series of Designs ... in the Grecian, Italian and Old English Styles...'
1833-4.
Republished 1835 as 'Rural Architecture'.

GRUNDEN, John (Architect): 'The Joiner and Cabinet Maker's Darling'
60 Diff. designs for fanlights.
London, 1770.

GRUNDEN, John: 'Convenient and Ornamental Architecture consisting of Original Designs for Plans Elevations and Sections - beginning with the farmhouse and regularly ascending to the most grand and magnificent villa.'
London, 1767.

GWILT, Joseph: 'Rudiments of Architecture Practical & Theoretical with Plates.'
London, 1826.

GYFFORD, E.: (Architect.) 'Designs for Elegant Cottages and small villas ... Engraved on 26 plates.'
London, 1806.

GYFFORD, E.: (Architect.) 'Designs for small picturesque cottages and hunting brakes etc. Engraved on 20 plates.'
London, 1807.

HALFPENNY, William:(Architect and Carpenter):
'A new and complete system of architecture delineated in a variety of plans and elevations.'
London, 1749, 1759.

HALFPENNY, William: 'Magnum in Parvo, or The Marrow of Architecture showing how to draw a column, its Base, Capital, etc. .... according to the Proportions laid down by the most celebrated Palladio'.
London, 1722, 1728.

HALFPENNY, W.: 'Six New Designs for Farmhouses, etc.'
London, 1951.

HALFPENNY, William: 'Practical Architecture, or a Sure Guide to the true working according to the Rules of that Science, Representing the Five Orders with their several Doors and Windows taken from Imigo Jones and other Celebrated Architects, etc.'
1724, 1730 Fifth Ed. London.

HALFPENNY, William: ('HOARE Michael' - Carpenter)
The Builders' Pocket-Companion showing an easy and practical method of laying down lines for all sorts of arches and curves used in house-building, gardening, etc. also to make the centres or ribs for vaults or ceiling and brackets for cover, either regular or irregular, etc. to which is added the Finer Archery of columns, with their Entablatures and pedestals, the proportions whereof are taken from the Immortal Andre Palladis etc.
1728, 1731 (2nd Ed.) London.

HALFPENNY, W. & J. with MORRIS, R. and LIGHTOLER, T.: 'The Modern Builder's Assistant.'
London, 1742, 1757.

HALFPENNY, William,: Carpenter and Architect
'12 beautiful designs for Farmhouses with their proper offices ... useful for gentlemen, builders, etc. measurement value of each part.'
Articled
Third edition
1749, 1744.

HALFPENNY, W.: 'Useful Architecture in Twenty-One New Designs for erecting Parsonage-houses, Farm-houses and Inns.'
London, 1752, 1755, 1760.

HALFPENNY, W.: 'Thirteen New Designs for Parsonages and Farmhouses'
London, 1752.

HALFPENNY, William & John: 'Rural Architecture in the Gothic Taste'
London, 1752.

HALFPENNY, W. & J.: 'Chinese and Gothic Architecture properly Ornamented'.
London, 1752.

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HALFPENNY, W. & J.: 'Rural Architecture in the Chinese Taste'
London, 1750, 1752, 1755.

HALFPENNY, W. & J.: 'The Country Gentleman's Pocket Companion and Builder's Assistant.'
London, 1753.

HALL, John: (Secretary to the Society for improving the condition of the Labouring Classes)
'Novel designs for cottages, small farms and schools with observations thereon showing how easily the situation of the labourers may be improved and the education of their children be rendered independent of public contributions and subscriptions.'
"The Poor you have always with you. And wherever you can you may do them good".
London, 1825.

HEPPELWHITE, A. & Co.: 'The Cabinet Makers and Upholster's Guide: etc.'
London, C.1788.

HOPPUS, E.: 'The Gentleman's and Builder's Repository: or Architecture Displayed etc.'
London, 1737, 1748.

JAMESON, George: '33 Designs with the Orders of Architecture according to Palladio etc. etc.'
Edinburgh, 1765.

JONES, Wm., Architect: 'The Gentlemen's or Builder's Companion - designs for doors gateways, ... other details.'
London, 1739.

JORES, John: 'New Book of Ironwork'
1759 (Victoria & Albert Museum).

KENT, William: 'Designs in Architecture'.
London, 1780.

KRAAFT, J. Ch.: (3 Languages). 'Plans of the Most Beautiful Picturesque Gardens in France, England and Germany, and of the Edifices, Monuments, Fabrics, etc. which contribute to their Embellishment.'
Paris, 1809.

LAING, D. (Architect & Surveyor) 'Hints for Dwellings, consisting of original designs for Cottages, Farm-Houses, Villas, etc. Plain and Ornamental, with plans to each, in which strict attention is paid to unite convention and elegance with economy. Including some designs for Town Houses. Elegantly engraved, in aqua-tint, on 34 plates with app. scenery.'
London, 1800.

LAING, D.: 'Plans, etc. of Buildings, Public & Private, executed in various parts of England, including the Custom House.'
London, 1818.

LANGLEY, Batty: 'The Builder's Chest-Book or a complete key to the Five Orders of Columns in Architecture.' (Pa Undio).
London, 1727.

LANGLEY, Batty: 'The Builder's Complete Assistant or, a Library of Arts & Science absolutely necessary to be understood by Builders and Workmen in general etc.'
2 vols.
London, 1st. Ed. 1738, 4th Ed. after 1788.

LANGLEY, Batty: 'The Young Builder's Rudiments, etc.'
London, 1730, 1736.

LANGLEY, Batty: 'The Workman's Golden Rule for Drawing and Working the Five Orders in Architecture.'
London, 1757.

LANGLEY, B.: 'The Builder's Director, or Bench Mate; being a pocket treasury of the Grecian, Roman and Gothic arches of architecture, etc.'
London, 1st. Ed. 1746, 1751, 1767.

LANGLEY, B. & T.: 'The Builder's Jewel or the Youth's Instructor'
1st Ed. 1741, 1742.
6th Ed. 1766 London
Ed. 1808 Edinburgh

LANGLEY, "B.L." Batty: 'The City & Country Builder's and Workman's Treasury of Designs on the Art of Drawing and Working the ornamental parts of Architecture etc.'
London, 1740 - 56.

LANGLEY, B.& T.: 'Gothic Architecture Improved by rules and proportions in many grand designs of columns, doors, windows, etc.'
London, First ed. 1741.
Revised 1742.

LANGLEY, Batty: 'A sure Guide to Builders: or the Principles and Practice of Architecture geometrically demonstrated for the use of Workmen in General, etc. together with the general Proportions for Pedestals, Columns, etc.'
London, 1729.

LAW: 'A New Book of Ornaments',
London, C.1788.

LEWIS, James: 'Original Designs in Architecture'.
London 2 vols. 1779 - 1780, 1797.

LIGHTOLER, T. (Architect): 'The Gentleman and Farmer's Architect' A new work containing a great variety of useful and genteel designs: being correct plans and elevations of parsonage and farm houses etc.
London, 1762 and 1774.

LORIOT: 'A Practical Essay on a Cement and Artificial Stone, justly supposed to be that of the Greeks and Romans lately re-discussed by Mr. Loriot, etc.'
Trans. from French
London, 1777 (3rd Edition).

LOUDON, J.C.: 'The Architectural Magazine & Journal, etc.'
4 Vols. 1834, 1835, 1836, 1837-8.

LOUDON, J.C.: 'Country Residences',
London, 1806.

LOUDON, John F.L.S.: 'A treatise on Farming. Improving and Managing Country Residences, ... in constructing ... mansions and other rural buildings.'
London, 1806.

LOUDON, J.C.: 'Designs for laying out Farms, and erecting Farm Buildings in the Scotch Style, adapted to England.'
London, 1811.

LOUDON, J.C.: 'An Encyclopaedia of Cottage, Farm and Villa Architecture and Furniture ... etc.'
London, 1st Ed. 1833.

LUGAR, Robert: 'Architectural Sketches for Cottages, Rural Dwellings and Villas.'
London, 1805.

LUGAR, R.:Architect. 'The Country Gentleman's Architect containing a variety of designs for farm houses and farm yards etc. labourers' cottages and small villas. Engraved on 22 plates.'
London, 1807.

LUGAR, R.: 'Plans and Views of Buildings executed in England and Scotland.'
London, 1811.

LUGAR, Robert, Architect: Folio. 'Villa Architecture, a collection of views with plates of buildings executed in England, Scotland.'
London, 1828.

MACPACKE, Jose: 'A bricklayer, labourer, OIKIAIA, or Nutshells being ichnographic distributions for small villas chiefly upon economical principles. In 7 classes.
London, 1785.

MALTON, James: 'An Essay on British Cottage Architecture: being an attempt to etc. 14 designs.'
London, 1795.

MALTON, James (Architect): 'A collection of Designs for Rural Retreats, as Villas, principally in the Gothic and Castle Styles of Architecture, etc.'
London, 1802.

MALTON, Thomas: 'Picturesque Tour through the Cities of London and Westminster etc.' 2 vols.
London, 1792.

MIDDLETON, Charles: 'Plans, Elevations and Sections of the House of Correction for the County of Middlesex, etc.'
London, 1788.

MIDDLETON, Chas. (Architect): 'Picturesque and architectural views for cottages, farm houses and country villas.'
London, 1793. Another Edition 1795.

MIDDLETON, Charles: 'The Architect and Builder's Miscellany, or Pocket Library, containing picturesque designs in Architecture for Cottages, Farm, Country and Town Houses, Public Buildings, Temples, Green Houses, Bridges, Lodges, and Gates for Entrances to Parks and Pleasure Grounds, Stables, Monumental Tombs, Garden Seats, etc.' Dedicated to the Prince Regent. London, 1st Ed. 1799.

MIDDLETON: 'Architect's Library' folio
London, C.1788.

MIDDLETON, Charles: 'Decorations for Parks and Gardens'.
London, 1810.

MILLER, J. (Architect): 'The Country Gentleman's Architect, in a great variety of new designs for cottages, farm-houses, country-houses, villas, etc.'
32 Quarto plates.
London, 1787, 1797, 1800, 1805.

MITCHELL, Robert: 'Plans, and views in Perspective with Descriptions of Buildings erected in England and Scotland, etc.'
Folio.
London, 1801.

MORRIS, Robert: 'Architecture Improved, in a Collection of Modern, Elegant and Useful Designs, etc.'
London, 1757.

MORRIS, Robert: 'An essay on Defence of Ancient Architecture, or, a Parallel of the Ancient Buildings with the Modern showing the beauty and harmony of the Farmer, and the Irregularity of the latter, etc. to which is annexed an Inspectional table, universally useful.'
London, 1728.

MORRIS, Robert: 'Lectures on Architecture consisting of the Rules founded upon Harmonic and Arithmetical Proportions in Buildings.'
London, 1734. Reprinted 1759.

MORRIS, Robert: 'Rural Architecture, consisting of regular designs of plans and elevations for buildings in the Country in which the purity and simplicity of the Art of Designing are variously exemplified etc.'
London, 1750.

APPENDIX : PATTERN BOOKS.

MORRIS, Robert: 'Select Architecture, being regular designs of Plans and Elevations well suited to both Town and Country, etc. from the Plain Town House to the stately Hotel and in the Country from the genteel and convenient Farmhouse to the Parochial Church, with suitable embellishments.
Also
Bridges, baths, summer-houses, etc.'
London, 1755.

MORRIS, Robert: 'The Architectural Remembrancer: being a collection of New and Useful Designs of Ornamental Buildings and Decorations.'
London, 1751.

MUNTZ, J.H.: 'Encaustic, or Count Caylus's Method of painting in the manner of the ancients.'
Octavo
London, C.1788 ?

NEWTON, William: 'Translation of Vitruvius' - 2 vols.
London, C.1788.

NICHOLSON, Peter: 'The Carpenter's New Guide, being a complete book of lines for Carpentry & Joinery.'
London, 1792, 1808 (2nd ed.), 1st prior to 1797.

NICHOLSON, Peter: 'The Carpenter & Joiner's Assistant, etc.'
London, 1792. Reprinted 1810.

NICHOLSON, Peter: 'The Principles of Architecture containing the Fundamental Rules of the Art, in Geometry, Arithmetic, mensuration etc..., Geometrical Rules for Shadows etc. Many Useful and Elegant Ornaments 1795 - 8.'
2nd Ed. 1809. London 3 vols.

NICHOLSON: 'The Architectural Dictionary' 2 vols.
London, 1812 - 19.

NICHOLSON, Peter: 'The Student's Instructor',
London, 1804.

NICHOLSON, Peter: 'Treatise on the Construction of Staircases and Handrails.'
London, 1820.

NICHOLSON, Peter: 'The Builder & Workman's New Director Comprehending the Principles of Construction etc.'
London, 1824. 2nd Ed. 1832.

NICHOLSON, Peter: 'New Practical Builder and Workmen's Companion in Carpentry, Masonry, etc.'
London, 1823 and 1924 (2nd. Ed.)

NICHOLSON, Peter: 'The mechanic's Companion, or the Elements and Practice of Carpentry, Masonry, Painting, Joinery, Slating, Smithing, Bricklaying, Ironing.'
Oxford 1825.

'NUTSHELL': 'Plans for Houses' Octavo
London, C.1788.

OAKLEY, Edward: 'Every Man a Complete Builder. Easy Rules and Proportions for Working and Drawing and the several Parts of Architecture, etc.'
London, 1766-74. Reprint 1774.

OAKLEY, Edward: 'The Magazine of Architecture, Perspective and Sculpture in 5 parts etc.'
Westminster, 1730.

OAKLEY, Edward: 'Ornamental Architecture in the Gothic, Chinese and Modern Taste'.
London, 1758.

OVERTON, T.C.: 'The Temple Builder's most useful companion containing original designs in Greek, Roman and Gothic etc.'
London, 1766.

PUGIN, A.C.: 'Examples of Gothic Architecture.' 2 Vols.
London, 1828 - 31.

PUGIN, A.C.: 'Specimens of Gothic Architecture.'
2 Vols.
London, 1821 - 3.

PUGIN, A.C.: 'Gothic Ornaments from Ancient Buildings in England and France.'
London, 1831.

PUGIN, A.C.: 'Ornamental Gables.'
London, 1831.

PAIN, William: 'The Builder's Companion and Workman's General Assistant, demonstrating etc. all the principal rules of Architecture.'
London, 1762.
3rd. Ed. 1769.

PAIN, William: 'The Builder's Pocket-Treasure or Palladio delineated and explained etc. Illustrated with new and useful Designs of Frontispieces, chimney pieces, etc.'
London, 1763. New Edition 1771.

PAIN, William: 'The Practical Builder, or Workman's General Assistant. Showing the most approved and easy Methods for Drawing and Working the whole and separate parts of any Building, etc.'
London, 1774. Reprinted 1804.

PAIN, William: 'The Builder's Golden Rule, or the Youth's Sure Guide: Containing the greatest Variety of Ornamental and Useful Designs in Architecture and Carpentry.'
London, 1781.

PAIN, William: (Architect and Carpenter) 'The Carpenter's Pocket Directory containing the best methods of framing timbers of all figures and dimensions, etc. With the plan and sections of a barn.'
London, C.1785.

PAIN, William: 'The Practical House Carpenter, or, the Youth's Instructor: containing a great variety of Mouldings at large for Practice, with their proper embellishments. Two Designs for Gentlemen's Houses, with their Plan Elevations and Sections Likewise, a great variety of stair-case work, laid down to a very large scale for practice. To which is added a Treatise on Gothic Architecture etc.'
London, 1792.

PAIN, William & James: 'The Carpenter's and Joiner's Repository.'
London, 1st Ed. 1778.

PAIN, William & James: 'The British Palladio, or The Builder's General Assistant; Illustrated with several new and useful designs of houses, with their plans, elevations and sections.'
London, 1786.

PAIN, William: 'Plans, elevations, etc. of Noblemen's Seats, etc.'
folio. 2 vols.
London, C.1788.

PAPWORTH, John B.: 'Rural residences consisting of a series of designs for cottages, small villas, etc. interspersed and some observations on landscape gardening.'
London, 1818. 2nd Edition 1832.

APPENDIX : PATTERN BOOKS

PAPWORTH, John Buonarotti: 'Hints on Ornamental Gardening consisting of a series of designs for Garden Buildings, useful and decorative Gates, Fences, Railings, etc. accompanied by observations on the principles and theory of Rural Improvements interspersed with occasional remarks on Rural Architecture.' London, 1823.

PASLEY, C.W.: 'Outlines of a Course of Practical Architecture compiled for the use of the Junior Officers of the Royal Engineers.' Cheetham, 1826.

PASTORINI, B.: 'A new book of Designs for Girandoles and Glass Frames.' London, C.1788.

PETHER, J.: 'A Book of Tablets, done to the full-size commonly used for chimney pieces.' London, C.1788.

PIRANESI: 'Works' London, C.1788.

PLAW, John: 'Ferme Ornée, or rural improvements. A series of domestic and ornamental designs suited to parks, plantations, rides, walks, rivers, farms, etc.' London, 1795, 1800, 1803.

PLAW, John: (Architect and Surveyor) 'Rural Architecture or Designs from the Simple Cottage to the Decorated Villa.' London, 1785, 1794, 1796, 1800, 1802, 1804.

PLAW, John: 'Sketches for country houses, villas and rural dwellings, etc.' London, 1803.

POCOCK, W.F.: 'Designs for Churches and Chapels.' London, 1819.

POCOCK, W.F.(Architect): 'Architectural Designs for Rustic Cottages, Picturesque Dwellings, etc. Practical remarks on buildings on the cause of dry rot.' 33 Plates. London, 1807, 1819, 1823.

POCOCK, William Fuller: 'Modern Finishings for Rooms: a series of designs for vestibules, halls and staircases .... to which are added some designs for villas and porticoes.' London, 1811, 1823.

PRICKE, Robert: 'The Architect's Storehouse being a collection of several designs, etc.' London, 1700.

RANDALL, James: (Architect). 'A collection of Architectural designs for Mansions, Casinos, villas, lodges, and cottages from original drawings. Elegantly engraved in aquatint on 34 plates.' London, 1806.

RAWLINS, Thomas: 'Familiar Architecture, consisting of original Designs of Houses for Gentlemen and Tradesmen, Parsonages and Summer Retreats, with Back-Fronts, Sections, etc. together with Banqueting-Rooms and Churches, etc.' 50 plates. London, 1789.

RICHARDSON, George: 'Original Designs for Country Seats or Villas.' London, 1795.

RICHARDSON, George: 'Treatise on the five orders of Architecture...' folio London, 1760 - 63, 1787.

RICHARDSON, George: 'The New Vitruvius Brittanicus consisting of Plans and Elevations of Modern Buildings erected in Great Britain by the most famous architects.' 2 vols. London, 1802 - 8.

RICHARDSON, George: 'New Designs in Architecture consisting of plans, elevations and sections, etc.'
London, 1792.

RICHARDSON, George: 'Ornaments in the Grecian, Roman and Etruscan Tastes.'
London, C.1795, 1818.

RICHARDSON, George: 'A New Collection of Chimney Pieces.'
London, 1781.

ROBERTSON, W.: 'Design in Architecture. Garden Chairs, Small Gates for Villas, Park Entrances, Aviaries, Temples, Boat Houses, Mausoleums, and Bridges.'
London, 1800.

SALMON, William: 'Palladio Londiniesis or The London Art of Building.'
London, 1734. 6th Ed. 1762.

SAUNDERS, G.: 'A Treatise on Theatres.' quarto
London, 1790.

SEMPLE, G.: 'A Treatise on Building in Water.' quarto
London, C.1788.

SHEPHERD, Theo. H., and ELMES, M.R.I.A.: 'Metropolitan Improvements or London in the Nineteenth Century : being a series of views of the new and most interesting objects, etc.'
London, 1827.

SKAIFE, Thomas: (P.A.Carpenter & Jnr.) 'A Key to Civil Architecture or the Universal British Builder etc. with a New Criterion or Universal Estimator in which are considered the Quality and Quantity of Materials etc.'
London, 1774.

SMEATON, G.A.: 'The Builder's Pocket Manual, or rules and instructions in the art of Carpentry, Joinery, Masonry and Bricklaying, etc. and a variety of recipes (etc.) for cements, washes, etc.'
London, 1825. Reprinted 1847.

SOANE, (Sir) John: 'Plans, Elevations and Sections of Buildings, executed in the countries of Norfolk, Suffolk, Yorkshire, Wiltshire, Warwickshire, Staffordshire, Somersetshire, etc.' 47 folio plates.
London, 1788.

SOANE, (Sir) John: 'Sketches in Architecture, containing Plans and Elevations of cottages and villas, etc.'
London, 1793.

SOANE, (Sir) John: 'Designs in Architecture, consisting of plans, elevations and sections for temples, baths, casinos, pavilions, garden seats, obelisks, and other buildings, for decorating pleasuregrounds, parks, forests, etc. etc.'
London, 1778, 1790, 1797.

SOANE, (Sir) John: 'Designs for Public and Private Buildings.'
London, 1828.

STEVENS, Francis: 'Views of cottages and farm-houses in England and Wales. Etched by Francis Stevens from the designs of the most celebrated architects.'
London, 1815.

STUART, James: 'The Antiquities of Athens.'
3 vols. London 1762-95.
Plus 2 supplementary vols. London 1816-30.

SWAN, Abraham: 'The British Architect: or the Builder's Treasury of Staircases.'
London, 1745, 1750, 1758.

APPENDIX : PATTERN BOOKS

SWAN, Abraham: 'A Collection of Designs in Architecture containing New Plans and Elevations of Houses for General use with a variety of sections of rooms from a common room to the most grand and magnificent, their Decorations etc. Curious designs of stone and timber bridges, etc. Likewise some screens and partitions.' 2 vols.
London, 1757.

SWAN, Abraham: (Architect). 'The Carpenters Complete Instructor, in several Hundred Designs, etc.'
London, 1759, 1768.

THOMAS, William: 'Original Designs in Architecture, etc.'
London, 1783.

TREDGOLD, Thomas: 'Elementary Principles of Carpentry. A Treatise on the Pressure and Equilibrium of Beams and Timber Frames, the Resistance of Timber: and the Construction of Floors, Roofs, Centres, Bridges, etc.'
London, 1820. Reprinted 1828.

WAISTELL, Charles (the late): 'Chairman of the Committee of Agriculture of the Society of Arts.'
London, 1827.
Designs for Agricultural Buildings including Labourer's cottages. Farm-houses and out-offices, etc. "12 very superiorly engraved copper plates of plans etc."

WALLIS, N.: 'The Carpenter's Treasure, a collection of designs for temples with their plans, gates, doors, rails and bridges in the Gothic Taste, etc.'
London, 1774.

WALLIS, N.: 'A Book of Ornaments in the Palmyrene Taste; etc.'
London, 1771.

WALLIS, N.: 'The Complete Modern Joiner; or, a collection of original designs in the Present Taste, for chimney pieces and door cases, with their mouldings and enrichments at large, etc.'
London, 2nd Ed. 1772.

WARE, Isaac: 'A Complete Body of Architecture adorned with Plans and Elevations from Original Designs, etc.
London, 1st Ed. 1718. 1747, 1756.

WHITEHURST, John, (F.R.S.): 'Observations on the Ventilation of Rooms, on the Construction of Chimneys, etc.'
London, 1794.

WILDS, William: (Surveyor Hertford)
'Elementary and Practical Instructions on the art of building cottages and houses for the humbler classes, an easier method of constructing earthern walls .... to which are added practical treatises on the manufacture of bricks in lime etc.'
For the Use of Emigrants to the better lodging of the peasantry of Ireland, etc. etc.'
London, 1835.

WOOD, John, the younger, of Bath. (Architect)
'A Series of plans for cottages or habitations of the labourer, either in husbandry or the mechanic arts.
Engraved on 30 plates.
London, 1781, 1792, 1806.

WRIGHT, William: 'Grotesque Architecture, or Rural Amusement, consisting of plans, elevations and sections for summer and winter hermitages, retreats, terminaries, Chinese, Gothic, Moresque pavilion, Grotesque greenhouses, etc. and Rustic Seats, Greenhouses, etc.'
London, 1767, 1790.

PERIODICAL: 'The Builder' Monthly Magazine. 1843 -

II. SELECTED CONTINENTAL PATTERN BOOKS.

BLONDEL, J.F.: 'Cours d'Architecture on Traité de la Décoration distribution & construction des Bâtiments, etc.'
6 Vols.
Paris, 1771.

CAUVET, Gilles-Paul: 'Recueil d'ornements à l'usage des jeunes artistes qui se destinent à la décoration.'
Paris, 1777.

DETOURNELLE (Architecte): 'Recueil d'Architecture Nouvelle.'
(Contains design for a monument circular temple Durand and THIBAULT. Plates 91-6.)
Paris, 1805.

DURAND, J.L.N.: 'Precis des Lacone d'Architecture donnee a e'Ecole, Royale Polytechnique.'
3 vols.
Paris, 1809. Reprinted 1817, 1823.

GENELLI, Hans Christian: 'Exegertische Briefe uber des Marcus Vitruvius Pollio Bankunst.'
An August Rode van H.C.Genelli
Braunschwey, 1801.

JOMBERT, Charles Antoine: 'Architecture Moderne ou L'Art de Bien Bâtir etc.'
1. De la Construction IV du Toise de Batmer.
2. Des Escaliers 5. des as et contumes.
3. Des Devis VI de la distribution.'
Paris, 1764.

LE CANU: 'Architecture et Parties que en Dependent.'

NEUFFORGE, Jean-Francois de: 'Recuiel élementaire d'Architecture.'
Paris 1757 - 1772.

BIBLIOGRAPHY.

BIBLIOGRAPHY

A: SOUTH AFRICAN ARCHITECTURE & HISTORY.

GOVERNMENT BLUEBOOK: Documents referred to in the reports of the Commissioners of Inquiry upon the government and finances of the Cape of Good Hope.
London, 1827.

GOVERNMENT BLUEBOOK: Reports of the Commissioners of Inquiry upon the administration of the government and the finances of the Cape of Good Hope.
London, 1827.

GOVERNMENT SESSIONAL PAPERS. Vol. XXI, 17th May 1827, and 1838.
Report of the Commissioners of Eastern Inquiry.

AFRICANA NOTES AND NEWS: Various articles in - Published Quarterley.
Johannesburg, 1943.

ALEXANDER, Captain James Edward: Narrative of a voyage of observation among the colonies of Western Africa in the flagship Thalia, and of a campaign in Kaffirland on the staff of the Commander-in-Chief in 1835. 2 Vols.
London, 1837.

ANON: An account of the colony of the Cape of Good Hope, with a view to the information of immigrants; and an appendix containing the offers of government to persons disposed to settle there.
London, 1819.

ANON: Centenary Souvenir of the Roman Catholic Church, Grahamstown, 1844 - 1944.
Grahamstown, 1944.

ANON: Gleanings in Africa, exhibiting a faithful and correct view of the manners and customs of the inhabitants of the Cape of Good Hope and surrounding country. With a full and comprehensive account of the system of agriculture adopted by the colonists &., &., &.
London 1805 - 6.

ANON: Notes on the Cape of Good Hope, made during an excursion in that colony in the year 1820.
London, 1821.

ANON: 'Report of the Society for the Relief of Distressed Settlers in South Africa, 17 Sept. 1823'
(Theal Records, XVI, 264-290).

ANON: Scenes and Occurrences in Albany and Cafferland, South Africa.
London 1827.

AYLIFF, Rev. John: 'Memorials of the British Settlers of South Africa'. An address delivered by ... at Bathurst, on the 14th of May 1845 in commemoration of the foundation of the settlement in the year 1820.
Grahamstown, 1845.

BACKHOUSE, James: A narrative of a visit to the Mauritius and South Africa.
London, 1844.

BARKER, Arthur: Notebooks. Manuscript. S.A.P.L.

BARNARD, Lady Anne: 'Letters and Journal - South Africa a Century Ago'. Ed. by W.H.Wilkins, 1908,
Cape Town.

BARROW, John: An autobiographical memoir of Sir John Barrow, Bart., late of the Admiralty; including reflections, observations, and reminiscences at home and abroad, from early life to advanced age.
London, 1847.

BARROW, John: Travels into the interior of Southern Africa, in which are described the character and condition of the Dutch Colonists of the Cape of Good Hope and of the several tribes of natives beyond its limits, etc., etc., etc.
London (second ed.) 1806.

BECHER, L.E.: Three albums of photographs. S.A.P.L.

BIERMANN, B.E.: 'A Contribution to the Study of the Origins of Colonial Architecture at the Cape'.
Ph.D. Thesis. University of Cape Town. 1952.

BIERMANN, B.E.: 'Bokuns in Suid-Afrika.'
Cape Town, 1955.

BIRD, John: 'The Annals of Natal.' 2 Vols.
Pietermaritzburg 1888.

BIRD, Wilberforce: 'State of the Cape of Good Hope in 1822.'
London, 1823.

BORCHERDS: 'Autobiographical Memoir.'
Cape Town, 1861.

BOWKER, Bertram: 'Reminiscences'. Manuscript. Albany Museum.

BOWKER, J.M.: 'Letters and Speeches',
Grahamstown, 1864.

BRADLOW, E. & F.: 'Thomas Bowler'.
Cape Town, 1955.

BRINK, C.: Nouvelle Description du Cap Amsterdam 1778.
The Journals of Brink & Rheims. Transcribed and translated. Van Riebeeck Society.
Cape Town, 1947.

BUNBURY, Charles: Journal of a Residence at the Cape of Good Hope, with excursions into the interior, and notes etc.
London, 1848.

BURCHELL, W.J.: Hints on Emigration to the Cape of Good Hope.
London, 1819.

BURCHELL, W.J.: The South African Drawings of ...
Vol. I. Johannesburg 1938.

BURCHELL, W.J. (McKAY, H.M.) The South African drawings of ...
Vol.II (1952) Landscape Sketches.

BURCHELL, William J.: Travels in the interior of Southern Africa. 2 Vols.
London, 1822 and 1824.

BURROWS, E.H.: 'Overberg Outspan',
Cape Town, 1952.

BURROWS, E.H.: 'The Moodies of Melsetter',
Cape Town, 1954.

THE CAPE OF GOOD HOPE LITERARY GAZETTE.(monthly magazine) 1831-1833.

CAMPBELL, John: Travels in South Africa, undertaken at the request of the London Missionary society; being a narrative of a second journey in the interior of that country.
2 Vols. London, Oct. 1822.
(Manuscript 2 Vols. together with 1 Vol. drawings in S.A.P.L.).

CAMPBELL, Colin: 'British South Africa',
London, 1897.

CAMPBELL, John: Travels in South Africa, undertaken at the request of the Missionary society.
London, October 1815.

CAPE MONTHLY MAGAZINE.

CHASE, John Centilivres: The Cape of Good Hope and the Eastern Province of Algoa Bay. &., &., with statistics of the colony.
London, 1843.

CHRISTOPHER, J.S.: Natal, Cape of Good Hope, comprising descriptions of this well-endowed colony from the year 1575 to the present time by government officials and travellers.
London, 1850.

CLOETE, Catherine Dorothy: 'Sketches of Cape Peninsula & India' 1850 - 54.
Manuscript S.A.P.L.

COLENSO, John William: 'Ten Weeks in Natal',
Cambridge, 1855.

COLLINS, Richard: Letter to Earl Caledon
May 30 1808. Manuscript S.A.P.L.

CORY, Sir G.: Articles in 'Souvenir in Commemoration of the Centenary of the 1820 Settlers of Albany'.
Grahamstown, 1920.

CORY, G.: 'The Rise of South Africa'. 5 Vols.
London, 1910 - 30.

CROFT, E.L.H. and FFOLIOTT, P.: 'One Titan at a Time'.
Cape Town, 1960.

DE BOSDARI, 'Anton Anreith',
Cape Town, 1954.

DE BOSDARI, C.: 'Cape Dutch Houses & Farms'
Cape Town, 1953.

DEGRANDPRE, L.: 'Voyage a la Cote Occidentale d'Afrique'.
Paris, 1801.

DÉHÉRAIN, Henri: 'Louis Thibault', translated by G.E.Pearse.
(S.A. Architectural Record. Sept. 1928).

DE JAGER,D.M.: 'Gedenkboek van die gemeente George, by geleentheid van die Honderdjarige Herdenking van die Kerkinwyding, 1842 - 1942'
George, 1942.

DE JONG, C.: 'Reizen naar de Kaap de Goede Hoop, Ierland & Noorwegen'
Haarlem, 1802-3.

DE KIEWEIT, C.W.: 'A History of South Africa, Social and Economic'.
Oxford, 1941.

DE KOCK: 'The Economic Development of South Africa'
London, 1936.

DE KOCK, V.: 'Our Three Centuries',
Cape Town, 1952.

DE ST. PIERRE, J.H.B.: 'A Voyage to the Isle of France, the Isle of Bourbon, and the Cape of Good Hope'.
London, 1800.

DODWELL, H.H. Editor. 'The Cambridge History of the British Empire'
Vol. IV.
'British India. 1497-1858'.

DONKIN, Lieut.Gen. Sir Rufane: 'Letters to the Earl of Bathurst'
London, 1827.

DUCKITT, William: Diary 1799. Manuscript. S.A.P.L.

DUGMORE, Rev. H.H.: 'The Reminiscences of an Albany Settler'.
Grahamstown, 1871.

DU PLESSIS, I.D.: 'The Cape Malays'.
Cape Town 1944.

EATON, Mrs. Sarah: Journal 1818 - 24. Manuscript. S.A.P.L.

FAIRBRIDGE, D.: 'Lady Anne Barnard at the Cape of Good Hope 1797-1802'.
Oxford, 1924.

FAIRBRIDGE, Miss Dorothea: 'Historic Houses of South Africa'.
London-Cape Town '22.

FAIRBRIDGE, Miss Dorothea: 'Historic Farms of South Africa',
London, 1931.

FFOLIOTT, P. and CROFT, E.L.H.: 'One Titan at a Time'.
Cape Town, 1960.

FINCH, J.R.: 'The Cape of Good Hope'. (The official handbook of the City of Cape Town.)
Cape Town, 1926.

GARDINER, Captn. Allen F.,: Narrative of a Journey to the Zooloo Country in South Africa, undertaken in 1835.
London, October, 1836.

GEYSER, O.: 'Die Ou Hoggereshof Gebou'.
Cape Town, 1958.

GODLONTON, Robert: A narrative of the irruption of the Kaffir Hordes into the eastern province of the Cape of Good Hope, 1834-5.
Grahamstown, 1836.

GODLONTON (Editor of the 'Grahamstown Journal') Introductory Remarks to a narrative of the irruption of the Kaffir hordes into the eastern province of the Cape of Good Hope in the years 1834-5.
Grahamstown.

GODLONTON (Editor of the 'Grahamstown Journal') Case of the colonists of the eastern frontier of the Cape of Good Hope in reference to the Kaffir invasions of 1835 and 1846.
Grahamstown, 1847.

GODLONTON (Editor of the 'Grahamstown Journal') Memorials of the British Settlers of South Africa, being records of public services held in 1844 in commemoration of their landing in Algoa Bay in the year 1820.
Grahamstown, 1844.

GODLONTON & IRVING: 'Narrative of the Kaffir War', which contains engravings of High Street, Grahamstown, c.1850.

GOLDSWAIN: 'Chronicle' (ed. Una Long). I, Van Riebeeck Society Publications, 27.
Cape Town, 1946.

GOULD, Charles: 'Grahamstown Cathedral',
Grahamstown, 1924.

GUBBINS, R.: 'Extracts from the letters of Lieut.Col. Richard Gubbins, C.B. (1809-10).

HARRIS, Robert: 'South Africa - 104 Photos.'
Port Elizabeth, 1888.

HATTERSLEY, A.F.: 'The British Settlement in Natal'.
Cambridge, 1950.

HATTERSLEY, A.F.: 'Oliver the Spy and Others',
Pietermaritzburg, 1959 (?).

HERSCHEL. Camera Lucida: Sketches of the Cape (1834-38) Originals S.A.P.L.

HEWITT, Rev. James Alexander: 'Sketches of English Church History in South Africa from 1795 to 1848'.
Cape Town, 1887.

HOCKLY, H.E.: 'The Story of the British Settlers of 1820 in South Africa'.
Cape Town, 1949.

HOOKER, William Jackson LL.D.,: 'Botanical Miscellany' 3 Vols.
London 1830 - 1833.

HUDSON, Samuel E.: 'Journal' c.1807 - 1822. Acc.602. No.9.

HUDSON, Samuel E.: 'Diary. 1798-1800' Manuscript Copy. S.A.P.L.

IMMELMAN, R.F.M.: 'Men of Good Hope'. The Cape Town Chamber of Commerce.
Cape Town, 1955.

IRONS, W.: 'The Settler's guide to the Cape of Good Hope and Natal'.
London, 1858.

ISAACS, Nathaniel: Travels and Adventures in Eastern Africa, descriptive of the Zoolus, their manners, customs, etc., etc., with a sketch of Natal. 2 Vols.
London, 1836.

JARDINE, A.: 'Fragment of Church History at the Cape of Good Hope'.
London, 1827.

KANNEMEYER, Margaret: 'Farmhouse Fortresses' (A.N. & N. Vol. XI No.7)
Johannesburg 1954.

KANNEMEYER, Margaret: 'Dr. Mackrill's Notebook' (Africana Notes & News, Vol. VIII, No.2, 1951).

KENDALL, F.K.: 'The Restoration of Groot Constantia'
Cape Town, 1926.

KEPPEL-JONES: 'Philipps, 1820 Settler',
Pietermaritzburg, 1960.

KINDERSLEY, Mrs.: Letters
London, 1777.

KIRBY, P.: 'James Hancock, China Painter' (Africana Notes and News, XIII, No.1)
Johannesburg.

KOLBEN: 'The Present State of the Cape of Good Hope, 1731'

LAIDLER, P.W.: 'The Growth & Government of Cape Town'
Cape Town, 1939.

LAIDLER, P.W.: 'A Tavern of the Ocean',
Cape Town, 1926.

LANHAM, W. Bain: 'In the Land of the Settlers'.
Grahamstown, 1956.

LANHAM, W. Bain and WILLMORE, E.R.: 'The 1820 Settlers of Seven-fountains and Salem'.
Grahamstown, 1959.

LATROBE, Rev. C.I.: Journal of a visit to South Africa in 1815 and 1816, with some account of the missionary settlements of the united brethren near the Cape of Good Hope.
London, 1818.

LEIBBRANDT, H.C.V.: 'Precis of the Archives of the Cape of Good Hope.'
Cape Town 1898-9.

LE VAILLANT, F.: 'Travels into the Interior Parts of Africa, by way of the Cape of Good Hope.
London, 1790.

LICHTENSTEIN, Dr. Henry: 'Travels in Southern Africa in the years 1803 to 1806.'
Quarto Eng. Trans. London, 1812.

LINDSAY, A.W.C.: 'Lives of the Lindsays'. 2 ed. (Extracts from the Journal of a Residence at the Cape of Good Hope and a short Tour of the Interior).
London, 1858 - Vol. 3.

LONG, Una: 'Goldswain's Diary', I Van Riebeeck Society Publication, 27.
Cape Town, 1946.

LONG, Una: 'Index to Unofficial, Privately Owned, Manuscripts relating to the History of South Africa 1812 - 1920'
U.C.T.1947.

MACMILLAN, W.M.: 'The Cape Colour Question'
London, 1927.

MENTZEL, O.F.: A complete and authentic Geographical and Topographical Description of the famous and (all things considered) remarkable African Cape of Good Hope.
Glogau, 1785.
Translated by H.J.Mandelbrote. Van Riebeeck Society, Cape Town, Vol. 4, 1921 and 1923.

MENTZEL: 'Life at the Cape in mid-eighteenth century.'
Cape Town 1919.

MENTZEL: 'Biography of Rudolph Siegfried Allemann'.
(1784) Reprinted Van Riebeeck Society, Cape Town.

MERRIFIELD, C.H.N.: 'Thesis on Town Houses at the Cape'
Johannesburg Library.

MERRIFIELD, C.H.: 'Old Domestic Architecture of Cape Town' (South African Architectural Record). Vol. XIII, No.49.
March, 1928.

MEURANT: 'Sixty Years Ago',
Cape Town, 1885.

MILBERT, J.G.: 'Voyage Pittoresque à l'Ile-de-France, au cap de Bonne-Esperance et a l'Ile de Ténériffe.
Paris, 1812.

MORRISON: Catalogue of the Morrison Collection of Elliott Photographs.

MULLINS, F.W.: 'The Castle', Cape Town. (S.A. Arch. Record, Vol. 12 No.47 P. 61-66) Sept. 1927.

NEWTON, A.P., BENIANS, E.A., and WALKER, E.A., Editors. 'The Cambridge History of the British Empire' Vol.VIII. 'South Africa, Rhodesia, and the Protectorates.'
Cambridge, 1936.

NOBBS, Eric A.: 'William Duckitt's Diary, (Archives Year Book)
Pretoria. 1942.

PEARSE, G.E.: 'Eighteenth Century Architecture in South Africa'
London, 1933.

PEARSE, Prof.G.E.: 'Eighteenth Century Furniture in South Africa'
Pretoria, 1960.

PEARSE, G.E.: 'The Cape of Good Hope 1652-1833' An account of its buildings and the life of its people.
Pretoria, 1956.

PERCIVAL, Capt. Robert: An account of the Cape of Good Hope, containing an historical view of its original settlement by the Dutch, its capture by the British in 1795, and the different policy pursued there by the Dutch and Engligh governments. Also a sketch of its geography, productions, the manners and customs of the inhabitants ... etc., etc.
London, 1804.

PHILIP, Dr. John: 'Researches in South Africa' - 2 Vols.
London, 1828.

PHILLIPS, Thomas: 'Scenes and Occurrences in Albany and Cafferland'.
London, 1827.

PRINGLE, Thomas: Letters from the Cape of Good Hope to Sir Walter Scott, bt. (5) and Sir George Stewart Mackenzie, bt., (1)
1820 - 1823. Manuscript: National Library of Scotland.

PRINGLE, Thomas: 'Some Account of the present state of the English Settlers in Albany, South Africa'
London, 1824.

PRINGLE, Thomas: Article: 'A Settler's Cabin in South Africa'. (The Penny Magazine of the Society for the Diffusion of Useful Knowledge. 282-3).
London, 1833.

PRINGLE: 'Narrative of a residence in South Africa'
London, 1824.

THE QUARTERLY BULLETIN OF THE S.A. LIBRARY - September 1946 onwards.

REDGRAVE, J.J.: 'Port Elizabeth in Bygone Days'
Cape Town, Rustica Press, Wynberg. 1947.

ROGGEVEEN: 'Tweejarige Reyze'
Amsterdam, 1774.

ROSS, F.: Journal written in South Africa, Manuscript. S.A.P.L. Illustrated.
1825 - 26.

SCHOONEES, L.A.: 'Die Drosdy op Worcester' (Die Huigenoot)
15 November 1940, 35.

SCHUTTE, S.O.H.: Catalogue of Rare Books, Pamphlets, Newspapers, Broadsheets, &c., relating to South Africa. Early Original Maps, Charts and Plans executed for the Dutch and English Authorities. An extremely valuable collection of Manuscripts, Documents and Autographs of the Dutch Governors, Officials, and Settlers. Curios and Antiques; Heirlooms in an old Dutch Family. Cape Photographs - Historic Old Buildings, many of which are now demolished; Scenes and Persons of the days gone by. An extensive Series of Items relating to Anreith, Thiebault, and Herman Schütte, including two of Anreith's famous Wax Models, and many rare Old Prints from their Collections. Together with Books in General Literature, Prints, &c., which Mr. Will. H. Phillips, will sell at Auction at his Auction Mart, 12 Darling Street, Cape Town, on Monday, the 2nd Day of December, 1912, and following days, if necessary, commencing each day at 2.30.p.m.

In the Estate of the late Mr. S.O.H. Schütte.
C.Christian Silberbauer, Attorney at Law, &c., Executor Dative, Provincial Chambers, 14 Keerom Street, (opposite New Law Courts), Cape Town.

CAPE TOWN: 32p. Roy.8vo.
1912.

SEMPLE, Robert: Walks and sketches at the Cape of Good Hope: to which is subjoined a journey from Capetown to Plettenburg's Bay.
2nd Ed. London, 1805.

SHAW, William: Memoirs of Mrs. Anne Hodgson, compiled from materials furnished by her husband the Rev. T.L. Hodgson; comprising also an account of the commencement and progress of the Wesleyan mission amongst the Griqua and Bechuana tribes of Southern Africa.
London, 1836.

SHEFFIELD, T.: 'The Story of the Settlement',
Grahamstown, 2nd. Ed. 1884.

SOUTH AFRICAN ALMANACK,& DIRECTORY, The
1827.

SOUTH AFRICAN QUARTERLY JOURNAL, The
Oct. 1829 - Oct. 1835.

SPARRMAN, Anders: 'A Voyage to the Cape of Good Hope'.
London, first ed. 1782.

SHAW, William: The Story of my mission in South-Eastern Africa, comprising some account of the European colonists, with extended notices of the Kaffir and other native tribes.
London, 1860.

STADSRAAD STELLENBOSCH: Stellenbosch 1679 - 1929.

STAVORINUS, J.S.: 'Voyages to the East Indies',
London, 1798.

TAYLOR, I.: 'Scenes in Africa' 1821.

THEAL, George McCall: 'History of South Africa, from the Foundation of the European Settlement to Our Own times.
Vol. III. 1795 - 1834 London (1891)
Vol. IV. 1834 - 1854 London (1893)
Vol. V. 1854 - 1872

THEAL, G.: Records of South-Eastern Africa collected in various libraries and archives in Europe. 9 Vols.
Cape Town, 1898 - 1903.

THEAL, G.McC.: 'Records of the Cape Colony from Feb.1793 to April 1831'.
36 Vols. Cape Town, 1897-1905.

THOM: 'Journal of Van Riebeeck',
Cape Town 1952.

THOMPSON, George: 'Travels and Adventures in Southern Africa, etc.'
2 Vols. London, 1827.

THOMSON, D.H.: 'A Short History of Grahamstown',
Grahamstown, c.1949.

THUNBERG, C.P.: 'Travels in Europe, Africa & Asia', 1770 - 9.
London, 1793.

TOMBE, Charles Francois: 'Voyage aux Indes Orientales pendant les années 1802, 1803, 1804, 1805, et 1806, contenant la description du cap de Bonne Esperance, des iles de France, &., &. 3 Vols.
Paris 1810.

TROLLOPE, A.: 'South Africa'
2 Vols. London, 1878.

TROTTER, Mrs. A.F.: 'Old Cape Homesteads and their Founders'
Cape Times 1898.

TROTTER, Mrs. A.F.: 'Colonial Houses of the Cape of Good Hope'.
London, 1900.

TROTTER, Mrs. A.F.: 'Old Cape Colony'.
London, 1903.

VALENTIA, George, Viscount: 'Voyages and Travels to India, Ceylon, the Red Sea, Abyssinia, and Egypt in the years 1802 to 1806'
4 Vols. London 1809-1820.

WALKER, Eric: 'Historical Atlas of South Africa'. 1922.

WALKER, Eric: 'A History of Southern Africa'
London, Third Ed. 1957.

WALTON, James: 'Homes of the Early South African Stock Farmers'.
(Africana Notes & News) Vol.VIII, No.2, 1951.

WALTON, J.: 'Homesteads & Villages of South Africa'.
Pretoria, 1952.

WARDEN, Robert: Journal Manuscript S.A.P.L.

WILLMORE, E.R. and LANHAM, W.Bain: 'The 1820 Settlers of Sevenfountains and Salem'.
Grahamstown, 1959.

WALTON, James: 'Vroeë Plase en Nedersettings in die Oranje Vrystaat'
Cape Town, 1955.

WILSON, Col. Robert: 'Description of the Cape Colony',
London, 1806.

B: ARCHITECTURE IN BRITAIN.

ANON: 'Farmhouses & Cottages in Wales'
Cardiff, 1952.

BATSFORD, H. & FRY,C: 'The English Cottage'.
London, 1938.

BAINES: 'History of the Reign of George III',
Leeds, 1820.

BANNISTER, Turpin: 'The First Iron-Framed Buildings' (The Architectural Review'
London, April, 1950.

BELCHER & MACARTNEY: 'Later Renaissance Architecture in England' 2 Vols.

BOLTON, A.T.: 'The Architecture of Robert and James Adam' - 2 vols.
London, 1922.

CASSON, H.: 'An Introduction to Victorian Architecture'
London, 1948.

CLARK, Kenneth: 'The Gothic Revival',
London, 1950.

COLVIN, H.M.: 'Biographical Dictionary of English Architects'
1660 - 1840.

THE CONNOISSEUR Period Guides 'Early Victorian' 1830 - 1860
London, 1958.

THE CONNOISSEUR Period Guides 'Regency'
London, 1957.

THE CONNOISSEUR Period Guides 'Late Georgian'
London, 1956.

DUTTON, R.: 'The Victorian Home'
London, 1954.

GLOAG, J. & BRIDGEWATER, D.: 'A History of Cast Iron in Architecture'.
London, 1948.

GLOAG, John: 'Georgian Grace',
London, 1956.

GODFREY, W.H.: 'The English Staircase'
London, 1910.

HITCHCOCK, H.R.: 'Early Victorian Architecture in Britain',
2 Vols. Yale. Newhaven. 1954.

HUSSEY, Christopher: 'Late Georgian Country Houses',
London, 1958.

HUSSEY, Christopher: 'The Picturesque'
London, 1927.

JOURDAIN, Margaret: 'English Interior Decoration 1500 - 1830'
Batsford, London. 1950.

KNIGHT, Payne: 'Analytical Enquiry, etc.'
London, 1808.

LEES-MILNE: 'The Age of Adam',
London, 1947.

LINDSAY, I.G.: 'Georgian Edinburgh'
Edinburgh, 1948.

LISTER, R.: 'Decorative Cast Ironwork in Great Britain',
London, 1960.

LISTER, R.: 'Decorative Wrought Ironwork in Great Britain',
London, 1957.

LITTLE, Bryan: 'Cheltenham'
London, 1952.

PEVSNER, N.: 'The Buildings of England-London'
Harmondsworth, 1952.

PEVSNER, N. and LANG, S.: 'The Egyptian Revival' (The Architectural Review)
London, May 1956.

PILCHER, D.: 'The Regency Style 1800 - 1830'.
London, 1947.

RAMSEY, Stanley C. and HARVEY, J.D.M.: 'Small Houses of the Late Georgian Period'.

RASMUSSEN, S.E.: 'London, the Unique City',
Copenhagen, 1934. London, 1937.

REILLY, Paul: 'An Introduction to Regency Architecture',
London, 1948.

RICHARDSON, A.E.: 'An Introductiontto Georgian Architecture'
London, 1949.

RICHARDSON, A.E. and GILL, C.L.: 'Regency Architecture in the West of England'.
London, 1924.

RYDER, W.W.: 'The English Staircase',
London, 1939.

SCRIVENOR, Harry: 'A Comprehensive History of the Iron Trade, etc.'
October, London, 1841.

SHEPPARD, R.: 'Cast Iron in Buildings'.
London, 1945.

SITWELL, S.: 'British Architects and Craftsmen'
London, 1945.

SLATER, G.: 'The Growth of Modern England.'
New York, 1933.

STEEGMAN, John: 'The Rule of Taste',
Macmillan 1936.

SUMMERSON, J.: 'Architecture in Britain: 1530 - 1830'
Harmondsworth, 1953.

SUMMERSON, J.: 'Georgian London',
London, 1945.

TIPPING, H.A.: 'English Homes' Period VI, Vol. 1. 1760 - 1820.

TURNOR, Reginald: 'Nineteenth Century Architecture in Britain', London, 1950.

C: ARCHITECTURE IN HOLLAND AND THE CONTINENT.

BAER, C.H.: 'Deutsche Wohn-und Festräume aus sechs Jahrhunderten'. Stuttgart.

BLOMFIELD, R.: 'History of French Architecture' 1661 - 1774. London, 1921.

DOYON, G. & HUBRECHT, R.: 'L'Architecture Revale et Bourgeoise en France' Vincent, Fréal et Cie, Paris. (In possession of Dr. B.E. Biermann).

HOLME, C.: 'Old Houses in Holland', London, 1913.

VAN HOUTEN, E.: 'Amsterdamsche Merkwaardigheden' Amsterdam, 1946.

WILLIS, Peter: 'A Background to Decorative Ironwork in Cheltenham from 1800 - 1850'. University of Durham Arch. Thesis. 1956.

KLOOS, W.B.: 'De Stedebouwkundige Ontwikkeling in Nederland' Amsterdam, 1947.

SITWELL, S.: 'The Netherlands', London, 1948 (?)

VERMEULEN, F.A.J.: 'Handboek tot de Geschiedenis der Nederlandsche Bouwkunst'. 2 vols. 's- Gravenhage, 1941.

VOLCKERS, Otto: 1. 'Wohnraun und Hansrat' 2. 'Deutche Hansfibel'

VRIEND, J.J.: 'De Bouwkunst van ons Land' 2 Vols. Amsterdam, 1950.

WATTJES & WARNER: 'Amsterdam Bouwkunsten Stasschoon', Amsterdam 1944.

WITTKOWER, R.: 'Architectural Principles in the Age of Humanism, London, 1952.

YERBURY, F.R.: 'Old Domestic Architecture of Holland' London, 1924.

D: COLONIAL ARCHITECTURE.

ATKINSON, F. & ONIONS, W.: 'On the Ocean's Boson Unespied' in (Architectural Review, June, 1950, 405).

PEERS, George: 'Houses of Australia' Sydney.

BURROWS, Sir Montague: 'The Conquest of Ceylon' in 'Cambridge History of the British Empire'. Vol. IV. Cambridge, 1929.

CAMERON, R.: 'Shadows from India', London, 1958.

ERBERLIN, H.D.: 'The Architecture of Colonial America', Boston, 1925.

GOODWIN, P.L.& KIDDER-SMITH, G.E.: 'Brazil Builds', New York, 1943.

HANCOCK, T.H.H.: 'Coleman of Singapore' (Architectural Review, London, 1954, 170.)

HERMAN, M.: 'The Early Australian Architects and their Work', Sydney, 1954.

JOHNSTON, F.B. & WATERMAN, Thomas T.: 'The early Architecture of North Carolina', University of Carolina Press 1941 & 47 - Chapel Hill.

KELEMEN, P.: 'Baroque and Rococo in Latin America', New York, 1951.

KIMBALL, Fiske: 'Domestic Architecture of the American Colonies and of the Early Republic'. New York, 1927.

KUBLER: 'Mexican Architecture of the Sixteenth Century', 2 Vols. New Haven, 1948.

KUBLER, G. (with SORIA, M.): 'Art & Architecture in Spain and Portugal and their American Dominions, 1500 - 1800'. Harmondsworth, 1959.

LAUGHLIN, C.J.: 'Plantation Architecture in Louisiana' in (Architectural Review), 1948.

MINDLIN, H.E.: 'Modern Architecture in Brazil', Rio, 1956.

NEWCOMB, Rexford: 'The Colonial & Federal House', Philadelphia & London, 1933.

NICHOLS, Frederick Doveton: 'The Early Architecture of Georgia' with a Pictorial Survey by Frances Benjamin Johnston. University of North Carolina, 1957.

SITWELL, S.: 'Portugal and Madeira', London, 1954.

VAN DE WALL, D.I.: 'Bouwkunst in Idonesia' Antwerp, c.1945 (?)

WATERMAN, Thomas Tileston & JOHNSTON, Frances Benjamin: 'The Early Architecture of North Carolina'. University of North Carolina Press 1941 and 1947.

WATERMAN, T.T.: 'The Dwellings of Colonial America', New York,1950.

WETHEY, H.E.: 'Colonial Architecture and Sculpture in Peru'. Cambridge, Mass. 1949.

WILSON, Hardy: 'Old Colonial Architecture in New South Wales and Tasmania. Vienna, 1924.

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I N D E X A

THE ARCHITECTS AND CRAFTSMEN.

The additional information given below is compiled mainly from the 'Registrar of Births and Deaths' (M.O.O.C.) and the file of 'Permissions to Remain, 1806 - 1838' (C.O.6055) in the Cape Archives; also the Cape Almanacs, the Register of Wills in the Master's Office, Cape Town, and newspaper obituaries. The following abbreviations have been used :

b = born; a = arrived at the Cape; d = died;

Where the reference occurs in a footnote, the number of the note is given in brackets after the page number.

I N D E X B G E N E R A L

Note : where the reference occurs in a footnote, the number of the note is given in brackets after the page number.