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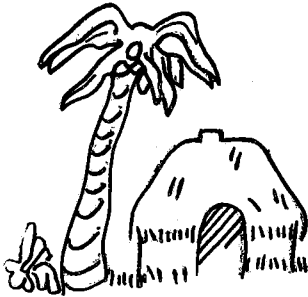
No. 30 - June 1952

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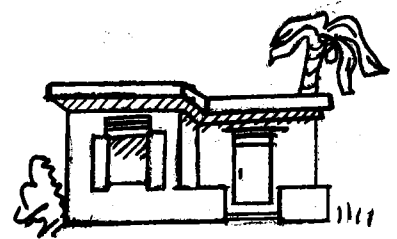
F O R E I G N H O U S I N G

(Abstracts of Recent Publications on Foreign Housing and Planning)



Compiled by the

International Housing Activities,
~~Office of the Administrator~~
U.S. Housing and Home Finance Agency



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ARCHITECTURE

1. "Slab Architecture" by L. G. Pearson. Covent Gardens: Town and Country Planning, July 1952. pp. 330-334.

A discussion of a growing architectural fashion, the "slab" form. The terms "slab" and "monoblock" describe a multi-story building which contains the required accommodation in one block rather than in several blocks of varying shapes and sizes. It can be seen in office buildings, blocks of flats, hospitals, railway stations and recently in school buildings. The article shows that the form derives from a compact, straightforward planning and appeals to the architect because of the simplicity of the resultant forms.

The article illustrates this style of architecture with such examples as the United Nations' building, Lake Meadows' housing scheme in Chicago and the new Bellevue hospital buildings in New York. It is shown that it is often the case in so-called functional buildings, one has the impression that the external appearance of the building counts for more than the health and comfort of the inhabitants.

The article concludes with a quotation by Sir Hugh Casson who wrote, "The first essential is to retain human scale. This is the most important of architectural values, just as humility should be the first virtues in an architect . . . The over-blown Georgian vicarage is as futile as the monster filing cabinet is degrading."

BUILDING CODES

2. Surface Water and Subsoil Drainage. London: The Council for Codes of Practice for Buildings, 1952.

This code describes the methods of collection and disposal of rain water from roofs, paved areas, etc. and of ground or subsoil water. The works described are limited to sewers and drains such as would be required for small housing schemes, schools, factories and individual properties. Such topics are discussed as materials, appliances and components, design considerations, work off site, work on site, inspection and testing, and maintenance of the drainage systems. 15 pp.

BUILDING RESEARCH

3. "The Short Bored Pile Foundation." London: Building Research Station Digest No. 42, May 1952.

This Digest is concerned with the short bored pile foundation. Part I describes the major practical aspects of the construction of

such a pile foundation based on the experience gained in collaboration with builders and local authorities on a number of jobs in which the method has been used in England.

The pamphlet shows how the system consists of a series of short concrete piles, cast in holes bored in the ground and spanned, for load-bearing walls, by light beams, usually of reinforced concrete. In a framed structure, it states, each stanchion is carried on a pile or group of piles. The system, it shows, has many advantages over a strip foundation, such as greater cleanliness on the site owing to the reduced amount of spoil, and a greater speed, especially if the holes are bored mechanically; moreover, work can proceed when the weather has made trench digging for strip foundations impossible.

Part II of this pamphlet describes the application and design of the short bored pile foundation. It discusses the load-bearing capacity of the pile, design of foundation, design of beams, and concludes with notes on soil and load tests. 8 pp.

4. "The Hail Resistance of South African Roofing Materials" by Charles A. Rigby and Keeve Steyn. Johannesburg: South African Architectural Record, April 1952. pp. 101-107.

This paper gives the results of laboratory tests carried out on 29 roofing materials in order to assess their hail resistance. Certain types of corrugated iron and a solid reinforced concrete slab were found to be the most satisfactory from the point of view of hail damage. It is suggested in this paper's conclusions that the use of steep pitches for roofs may also minimize the damage from hail.

5. "The Treatment of Damp Walls." London: Building Research Station Digest No. 41, April 1952.

This booklet explains that the problem of dampness has to be considered individually and the cause diagnosed before a method to cure the defect can be prescribed. It states that Digest No. 33, which was written to direct attention to those features that would be most likely to indicate the causes of dampness, can be used as a guide to the diagnosis. Even when a cause that would appear to account for the dampness has been found, it states that it is wise to continue the examination until it is reasonably certain that there are no other contributory causes. If any of these latter are missed, it can happen that the cure for the main cause may accentuate the dampness from these other causes and the treatment will then be regarded as a failure.

This Digest lists several suitable treatments for damp walls. It is assumed that the defective walls are of brickwork or masonry or other solid construction. The following are recommended for external treatments: tile or slate hanging, renderings, cement paint, oil, bitumen

and tar paints, and colorless waterproofers. Recommendations given for internal treatments are: battening out, dense internal renderings, and several internal waterproofers. It also touches briefly on the treatment of damp walls due to rising ground moisture.

Other problems such as damp basements, deliquescent salts and special cases such as chimneys, parapets and projections, sills, cracked dense renderings, and condensations are also discussed. 5 pp.

CONSTRUCTION MATERIALS AND TECHNIQUES

6. Memoria Sobre La Construcción de Encofrados en Una Obra de Edificación by Isidoro de Blas Gomez. Madrid: Instituto Tecnico de la Construcción y Del Cemento, January 1951. (In Spanish).

An account of tests taken under actual working conditions relating to form work technique. These tests confirmed some theoretical investigations of the author on the possibility of economizing in the cost of shuttering; an analysis being made of the cost of manual labor throughout the various stages of shuttering. The conditions and the difficulties under which the tests were taken is described in this paper.

In order to improve the efficiency of the working parties, a new method of planning the carpentry work was tried out in this experimental work. The training of workers was also studied. It was found that when non-skilled laborers were included in the shuttering teams, working alongside skilled operators, they became reasonably skilled assistants within six months. 55 pp.

7. "Houses Built in Seven Weeks - Concrete Walls to Save Labour." London: The Times, March 8, 1952.

This newspaper article describes houses which were built in seven weeks by unconventional methods for private purchasers at Eastcote, Middlesex. It states that houses built by non-traditional methods take up to 50 percent fewer man-hours on the site than brick-built houses, and an even lower proportion of skilled labor in some trades. On the average, they are completed in four-fifths of the time needed for traditional houses, they can be built at fully competitive prices, and less coal is used in making the main building materials.

The houses were built in response to the Minister's appeal for houses which preserved good accommodation standards while embodying ingenious and economical use of materials. The article shows how speed in construction was achieved by making the walls of concrete made with cement and shingle from which all sand and fine stones have been removed; this being poured into moulds. The walls of a pair of houses can be

poured out in one day and on the following day the moulds can be removed and re-erected ready for another pair of houses. This operation saves bricks and bricklaying work amounting to 400 man-hours for each house. The method used at Eastcote would permit 25 houses to be built of materials that were used for 20 traditional houses.

The approximate cost of building the Eastcote houses, when built in lots of 100, is £1,320 for a two-bedroom terrace end house, £1,350 for a three-bedroom intermediate house, and £1,330 for a three-bedroom semi-detached house. Houses are being sold for about £1,560 each to people who were selected by the local council.

COOPERATIVE HOUSING

8. "Cooperative Housing in Germany." London: Review of International Co-operation, April 4, 1952. pp. 92-93.

An article describing the organization and operations of the German Union of Social Housing Enterprises. This German General Union includes, besides Co-operative Housing Societies proper, also a number of other "social" housing enterprises with different legal forms, but all of which come under the German Social Housing Law. The Co-operative Building Societies proper are organized in eight Provincial Auditing Unions and the Union of Western Berlin, comprising altogether about 700,000 members.

The article shows the aim of the General Union to be that of promoting the building of small dwellings, a task pointed out to be of special importance in view of the acute post-war housing shortage in Germany. Dwellings in the hands of the organizations of all types affiliated to the General Union numbered 900,000 at the end of 1950, of which 353,000 belonged to Co-operative Housing Societies proper.

It is shown that capital required by social building enterprises is derived from three sources, viz. the general money market, public funds and "other sources" such as savings banks, life insurance societies, public and private mortgage institutes and most of the social insurance institutions.

HOUSING DOCUMENTATION

9. Bibliografia Preliminar Vivienda y Planeamiento en America Latina (Preliminary Bibliography of Housing and Planning in Latin America). Prepared by Victor Mantilla Bazo. Washington, D. C.: Pan American Union, 1952. (In Spanish).

A bibliography in Spanish of publications on housing and town and country planning published in each of the Latin American countries. 112 pp.

HOUSING FINANCE

10. NHA Loans for Homes. Ottawa: Central Mortgage and Housing Corporation, November 1951.

The purpose of this booklet is to show how a person living in Canada can take advantage of the provisions of the National Housing Act of Canada. It explains how loans are determined, the initial financial requirements, repayment arrangements and how to apply for a loan.

The basis on which the National Housing Act operates is a system of joint loans. They are called joint loans because part of the money is provided by an approved lending institution and the remainder by the Central Mortgage and Housing Corporation, a crown company purposefully set up to administer the National Housing Act.

This booklet describes the various sections of the act applicable to securing a housing loan. It describes the size of the loans in terms of the type of house to be purchased, amount of equity, advances, repayment, taxes, interest, inspections, and other information which would be of use to the prospective home owner. 23 pp.

HOUSING RESEARCH

11. "Housing Clinic." Washington, D. C.: Americas (Pan American Union), June 1952. pp. 28-29.

A short article describing the OAS Housing Research and Training Center which recently opened in Bogota, Colombia. It states that this center provides the means and the place for American nations to pool their techniques under a share-the-skills program for better housing. Types of research being done include accumulating data on rural housing, studying types of roofing materials, advising on the rehousing of a group of gold miners, and studying savings-and-loan policies for middle-class families. In general, the Center is prepared to gather any information that will result in better homes for people in Latin America.

HOUSING SITUATION

12. Economic Survey of Germany, Section C-Housing, Section G-Building and Contracting. London: Foreign Office and Ministry of Economic Warfare, Economic Advisory Branch, December 1944.

The sections of this Economic Survey of Germany concerned with housing and construction have been bound as a separate publication.

The housing section contains a good analysis of the housing situation in Germany describing the pre-war housing policy under both the Weimar Republic and the Nazi regime. It shows the change that occurred in the housing policy during the war, the war-time housing construction, the emergency controls, and the post-war housing prospects. A description of housing in Austria is also included.

The section on building and contracting contains an analysis of the present status of the building materials industries in Germany including good descriptions of cement, brick and tile, lime, timber and steel production. The various types of building controls are described also. 36 pp.

13. "Building Operations in Queensland-Fourth Quarter and Year 1951."
Brisbane: Bulletin No. 10 of 1952, 1952.

A progress report from Australia presenting the amount of housing being built there. It shows that house building in 1951 reached its highest level since the end of the war. New dwellings during the year numbered 10,937 which was 848 more than the total for 1950. Commencements of new dwellings, 11,998 showed an even greater rise, the increase over the 1950 total being 1,723, which included 913 imported prefabricated houses. The report states that timber was the principal building material used in home construction. Workers in the building industry numbered 19,904 at the beginning of 1952.

Also discussed in this report are the types of dwellings built, cost of building, and employment in the building trade. 7 pp.

14. Australian Housing, Bulletin 23. Canberra: Ministry of National Development, February 1952.

This, the last of the Australian Housing Bulletins, contains the following articles:

(1) "The Progress of Housing" showing the rate of house construction, the number of houses imported, building materials produced, the labor force, and housing costs. pp. 476-478.

(2) "Building Research by C.S.I.R.O." describes the work of the Division of Building Research and the Division of Forest Products of the Commonwealth Scientific and Industrial Research Organization. In the former, studies are being performed on gypsum, lime, clays, bituminous roofing materials and acoustics. In the latter, various studies on wood and wood structures and timber physics and timber mechanics have been undertaken. pp. 484-496.

(3) "Siting on Housing Estates" shows various city planning practices employed in the layouts of various neighborhood schemes in Australia. pp. 497-503.

15. "Man-Made Johannesburg." Johannesburg: South African Architectural Record, January 1952. pp. 2-33.

This entire issue of the South African Architectural Record is devoted to an exhibition of the various aspects of construction in the City of Johannesburg. It shows these man-made physical features from the point of view of architecture, construction and city planning. The many illustrations convey the exact nature of the progress being made in these fields.

16. Housing in Costa Rica. Prepared by Rafaela Espino and Leonard Currie. Cambridge: The Architects Collaborative, November 1951.

A report on housing and community development, commissioned and made possible by cooperation between the Government of Costa Rica and the Government of the United States.

It is in four parts. Part one discusses the housing problem in Costa Rica showing the background for housing, the nature of the problem, relevant vital statistics, and the housing situation today. Part two presents the privately-built housing picture as it exists in both urban and rural areas. Part three presents the government housing picture, the legislation, financing and management policies. Part four discusses a proposed national housing program for the country--legislation, organization of a housing agency, stimulation of private housing, government-financed housing, slum clearance, and rural housing. 105 pp.

TOWN AND COUNTRY PLANNING

17. TVA as a Symbol of Resource Development in Many Countries. Knoxville: Compiled by the TVA Technical Library, 1952.

In a number of countries over the world, TVA has become a symbol of the unified development of resources; the idea having traveled to many foreign countries by various means. This booklet shows that visitors to TVA, who have studied and examined the TVA unified development program, have been especially responsible for its wide dissemination. These visitors have come from over 60 different countries and have included top government officials, public-spirited citizens, technicians, and students.

To provide some concept of the scope and magnitude of foreign projects or plans which have been influenced by the TVA example, this digest describes the many TVA-like developments now in building all over the world. They are divided into two classifications: (1) Developments which appear to approach within a reasonable degree the TVA conception of the development and utilization of resources, and (2) projects on which available data were meager or where, in planning and development, the TVA idea--although recognized--appears to have been used only to a limited

extent. The former category includes such projects as the Jordan River Development Plan, the Mahanadi Valley Project in India, the Rhone Valley project, the Puerto Rico Water Resources Authority project, etc. The latter type of projects includes, among others, the Clarence River Scheme in Australia, a project in the Nile Valley, and several projects on the smaller river systems in southwest India. 55 pp.

TROPICAL HOUSING

18. "Housing Problems in the South Pacific" by J. P. Thijsse. Noumea, New Caledonia: South Pacific Commission Quarterly Bulletin, January 1952. pp. 27-28.

Prof. Thijsse, who has recently finished a survey of native housing conditions in the eastern and central Pacific territories presents some of his observations on this subject in this short article.

He begins this paper by stating that the problem of suitable housing in the South Pacific area has arisen largely as a result of changes in native ways of life in recent years, giving rise to new needs and desires in respect to housing facilities. However, attempts to improve upon the old style of native dwelling have often taken the form of simply copying Western building types. These are generally unsuited to the climate and provide little, if any, improvement over the original native style. Frequently, no consideration is given to ventilation or lighting or to sheltering the walls from direct sunlight. Houses are built much too close together and with corrugated iron roofs in areas where the hot weather makes such living conditions extremely uncomfortable.

The problem is a multi-phased one. The author states that efficient housing in the islands involves consideration, not only of climate, but also of social, economic and hygienic factors, and these vary markedly between the island groups. For example, the very closed Fijian "bure's" with their thick thatched walls and heavy roof constructions give shelter against the Fijian winter and are able to withstand the hurricane. But the "bure" would not be appropriate in the more equable climate of Samoa where it is never cold and where there is no very strong wind.

The availability of building materials, which varies greatly in different parts of the area, is an important economic factor to be considered, says Professor Thijsse. These differences, together with differences in administration policies among the territories, make a uniform type of housing throughout the area impracticable and undesirable.

In the case of native dwellings, however, a compromise must be made between social wants and what is economically possible. Since economic conditions in many parts of the South Pacific are on a low level compared to Western standards, low-cost housing is essential.

He goes on to show that the use of building materials which are available locally is of prime importance for this reason, and every effort should be made to improve the durability of such materials as well as to explore the potentialities of local products not heretofore used for building purposes. The possibility of introducing certain vegetable building materials in islands where they are lacking should be investigated.

In conclusion, he proposes that the ideal long-term housing program for the islands should strive for a type of native dwelling suited to each particular region in the area with regard to climatic conditions, economic level and social custom. Because these conditions vary considerably in the different regions, there can be no one type of dwelling suitable to all the area. Secondly, such a plan should incorporate hygienic standards common to the Western World, and thirdly, it should aim to utilize building materials which are available locally in the islands.

19. "The Role of the French Central Bureau of Research for Overseas Development in the Field of Tropical Housing" by Maurice Blanc. Port-of-Spain: Caribbean Commission Monthly Information Bulletin, May 1952. pp. 289-291.

An article describing the role of the Bureau of Research for Overseas Development. In it is outlined the areas of study under consideration now by the Bureau. The author shows that with the need for building quickly, "there is the necessity, in the interests of public health and humanity, to do everything possible to improve traditional housing methods, as for example, to prevent by simple and improved techniques the annual collapse of native mud houses during the rainy season."

The author shows that a general study of housing implies a deep and practical knowledge of the physical and human overseas environments, in all their diversities; and a knowledge of life in these territories, in its multiple aspects; family, social, technical, economic, administrative and financial.

The Bureau is described in terms of its method of work, its underlying philosophy, its dealing with such specific problems as that of cement and in general, showing the Bureau's role to be that of gathering general data and functioning as a technical advisor and liaison.

20. Hurricanes and Their Effect on Buildings. (Colonial Building Notes). Watford, Hert: Department of Scientific and Industrial Research, Building Research Station, March 1952.

This paper is devoted to hurricanes and their effect on buildings showing the type of damage done and the types of construction which stand up best in the storm.

It states that of all the forms of roof coverings used in Jamaica, wood shingles withstood the 1951 hurricane best, although they admitted a good deal of water. It was confirmed that well-designed and soundly-constructed buildings were little damaged in the hurricane except by flying debris. On the other hand, poorly constructed buildings, especially timber structures which had previously been weakened by termite infestation, and open sided storage sheds, were extensively damaged. It is indicated that, in conditions of severe strain, the standard of workmanship is, at least, as important as the details of design.

Mention is made of a monthly bulletin of the Florida Engineering and Industrial Experiment Station which discusses hurricanes in Florida, their velocities, extent, seasonal occurrence, tests on models, and gives recommendations of suitable constructions. For example, this bulletin describes the several kinds of damage most likely to be caused to small buildings. It also gives constructional recommendations for wood frame and concrete block buildings to withstand both gravity and wind loads. Provisions against hurricanes are shown to be contained also in American building codes.

The paper concludes with some general observations on the design of buildings. 6 pp.

21. Essai Sur L'Habitation Tropicale (Essay on Tropical Housing). Edited by Maurice Blanc. Paris: Bureau Central D'Etudes Pour Les Equipements D'Outre-Mer, 1952. (In French).

A book describing the major factors to be considered in building in the tropics. It begins by devoting a chapter to the climatological elements (temperature, humidity, winds) which must be taken into consideration in building. It states that the orientation of a house conditions for a great part the interior comfort, convenience and pleasure that the occupants find in living. A correct orientation has the advantage of costing nothing while a poor orientation can only be corrected by large expenditures.

It shows that a house must be oriented to the function of the bad season. It is important that the walls of the house expose as little surface to the sun as possible. The house must be permitted to profit from the winds. Factors relating to the orientation of the house, to ventilation and to shading of the house are dealt with in some detail. A section on the protection against sand storms, rain, infestation, etc. is also included. 70 pp.

22. La Construction en Beton de Terre (Construction with Earth Blocks). Paris: Bureau Central D'Etudes Pour Les Equipements D'Outre-Mer, 1952. (In French).

This small book describes some of the latest research on the use of earth as a building material. It shows the best ingredients and methods for obtaining the best block for withstanding the elements. It gives

detailed instructions for every step in the making of earth blocks, stating that the composition of the soil is most important and should be analyzed very thoroughly.

The section on fabrication describes the two common methods of use, construction with dried earth bricks and construction of walls with rammed earth in wooden molds. It states a preference for the former method. The book goes into some detail on the wetting and compacting of the earth, the drying process, and the making of the blocks by hand and machinery.

A chapter is devoted to earth stabilization and waterproofing. Another deals with special rules of construction. The book concludes with pictures and descriptions of various block making machines in use throughout the world. 66 pp.

23. Housing in the United States and the Use of Its Techniques in Tropical Countries by Stanley Woolmer. Cambridge: 1952.

This report represents the results of a nation-wide survey of housing in the United States made by a member of the Singapore Improvement Trust now studying in the United States under a Commonwealth Fund Fellowship.

Part I contains a general review of the whole field, excluding technical methods. It covers historical background, problems involved and achievements, and includes an evaluation of the present position and some suggestions on future prospects and possibilities. Part II is of a technical nature dealing with American practice in regard to materials, methods of construction and equipment, together with a consideration of its applicability for use in tropical countries.

The author points out that although there exists a big difference between American standards, customs and habits and those of people in tropical countries, there is still much information which can be culled from studying housing schemes and plans in the United States. For example, he shows that in the past, it has been the practice in the tropics to build with high ceilings on the grounds that rooms so built are cooler. Ten and eleven foot ceilings are usual and up to fourteen feet not uncommon. Acceptance of, or an approach to, American standards (normally 7'6" or 8') would produce, he feels, an appreciable saving. Experiments carried out by Professor Yaglou at the Harvard School of Public Health suggest that there is no detectable difference in room temperature between ceilings of 10' and even as low as 7' in height.

Another area where U. S. knowledge can be applicable to construction in tropical areas is in our efficient use of contractors, both on and off the site. In tropical countries, the author points out, estimating and costing are too often largely guesswork, subcontracting poorly organized and site arrangements wasteful. The teaching of modern business methods would be of the very greatest benefit to almost all tropical countries. The author heartily recommends further research on tropical building, pointing out that organizations have already been established in Australia, Great Britain and the United States. 84 pp.

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