SOUTH AFRICAN ARCHITECTURAL RECORD

THE JOURNAL OF THE CAPE, NATAL, ORANGE FREE STATE AND TRANSVAAL PROVINCIAL INSTITUTES OF SOUTH AFRICAN ARCHITECTS AND THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS.
PHONE 34-2921 VOLUME THIRTY-ONE NUMBER SIX
611, KELVIN HOUSE, 75, MARSHALL STREET, JOHANNESBURG.
JOINT EDITORS: PROFESSOR G. E. PEARSE, W. D. HOWIE.

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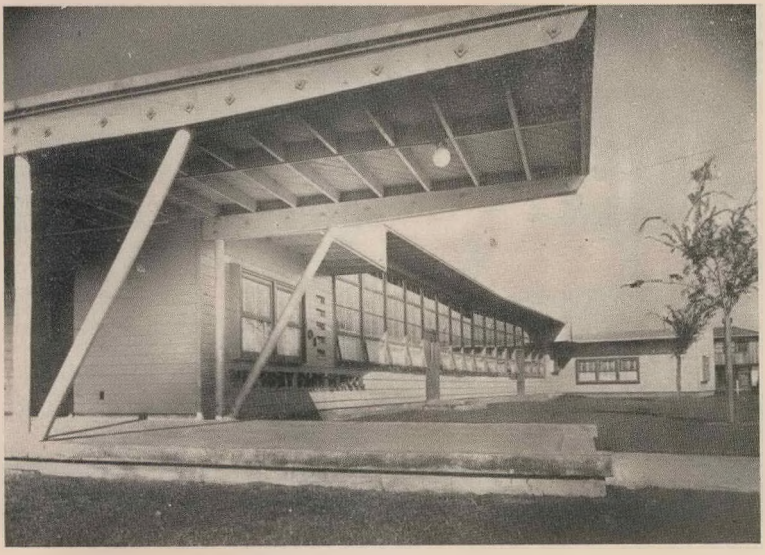
Architects for the housing; Adrian Wilson and Theodore Criley, Jr. For the school building: H. L. Gogerty; Wilson and Criley, Associate Architects.

Victory Park Housing Project, Compton, California

General view and site plan. The whole project is laid out around an interior parkway along which the administration and community buildings and school are located.

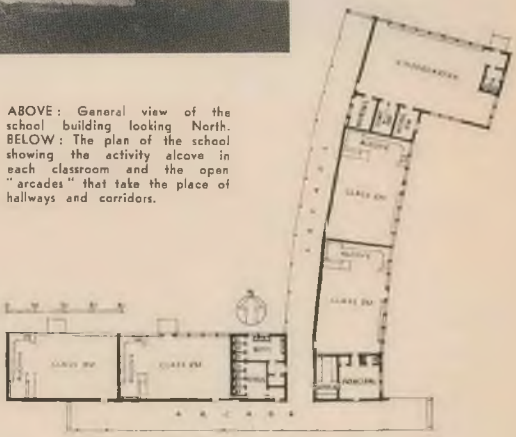
Planned for 500 families of shipyard workers, this complete community (including a school building and an administration and community centre) in Compton, California, is organized on 80 acres of land which was completely unimproved property. Small groupings of the buildings are arranged geometrically; the total project is laid out in generous, flowing curves. A modified superblock system is used in the design, with a network of pedestrian parkways connecting the housing with the central play area and with the school and community building.

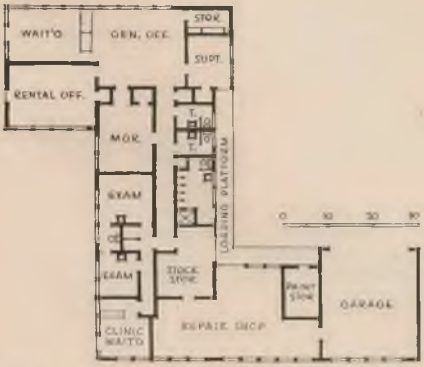
For each group of dwellings, an off-street automobile parking space is provided. At the street end of each of these cul-de-sacs, fenced enclosures are provided where trash and garbage are centralised for easy public collection. Garden sites of all houses face the pedestrian parkway, with a 70-foot minimum space between the buildings used for the tenants' lawns and gardens.



With acknowledgements to the "Architectural Record" January 1945

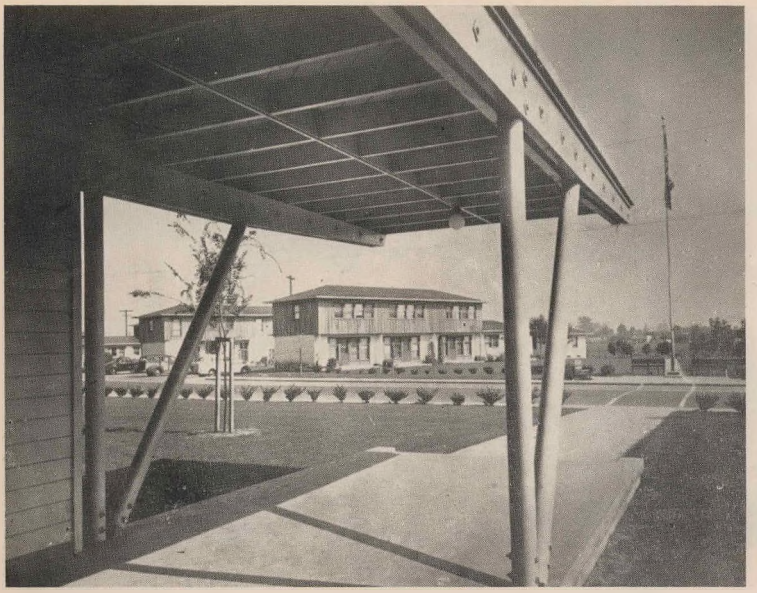
ABOVE: General view of the school building looking North. BELOW: The plan of the school showing the activity alcove in each classroom and the open "arcades" that take the place of hallways and corridors.





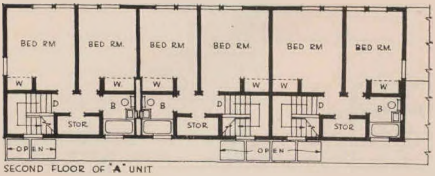
Plan of the administrative and public health wing of the community building.

The elementary school building includes activity or workshop space in connection with each classroom. Lighting of the classrooms comes from two sides. Outdoor arcades take the place of costly interior corridors. The community building is made up of two parts—one, a large, flexible auditorium structure to serve communal gatherings of various sorts (lecture, meetings, community suppers, social affairs); the other, an efficient project-management office, plus a health clinic and nursery school for small children.

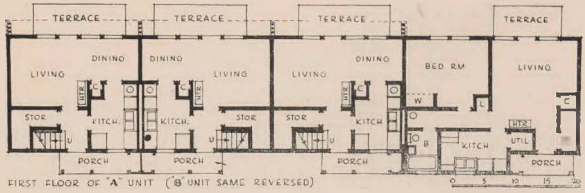


A view of the typical dwelling units of the schema as seen from the entrance porch of the elementary school.

The project was built by a site-prefabrication method. All framing members were pre-cut; roof assemblies were constructed on standard jigs; plumbing assemblies were shop fabricated; exterior boarding was dipped in creosote stain after cutting, and sash, roof lookouts and exposed eaves were painted before assembly. After the second-floor decks were framed, second-storey walls were laid out, with boarding and sash applied while the walls lay horizontally on the decks. The whole wall was then raised as a unit, completely finished on the exterior, avoiding the need for scaffolding. All of the buildings are framed in wood and built on concrete foundations; exterior walls are stucco over wire lath and felt; redwood boards and battens are used at porches and at the second-storey level.



SECOND FLOOR OF "A" UNIT



FIRST FLOOR OF "A" UNIT ("B" UNIT SAME REVERSED)

Upper and lower floor plans of the typical one- and two-bedroom dwellings of the project.

"ARCON" PREFABRICATED HOUSES AT CRAYFORD, KENT

By David Brownlie

Information has now been published concerning the "Arcon" pre-fabricated houses at Martin's Grove Estate, Crayford, Kent, of which 50 houses have been completed, all being occupied.

These houses have gas and electric heating, including electric cookers, the rent being only 19/6 per week inclusive of rates and standing charge for electricity. All the hot water tanks have electric immersion heaters, and Anderson shelters bricked out at each end are used for housing coal, perambulators or bicycles.

Of these "Arcon" temporary pre-fabricated houses 41,000 have been ordered by the Government up to date out of a total programme of 165,000, designed by a firm of architects named Arcon. The house is a joint production of a group of firms, including Imperial Chemical Industries, Stewarts & Lloyds Ltd., Williams & Williams Ltd., and Turners Asbestos Cement Co., Ltd., and the whole project is co-ordinated and managed for the Government by Taylor Woodrow Construction Co., Ltd., civil engineers and building contractors, who are also responsible to the Government for 50% of the storage and distribution of internal fittings, such as baths, stoves, and kitchen units, as well as components of certain other types of house.

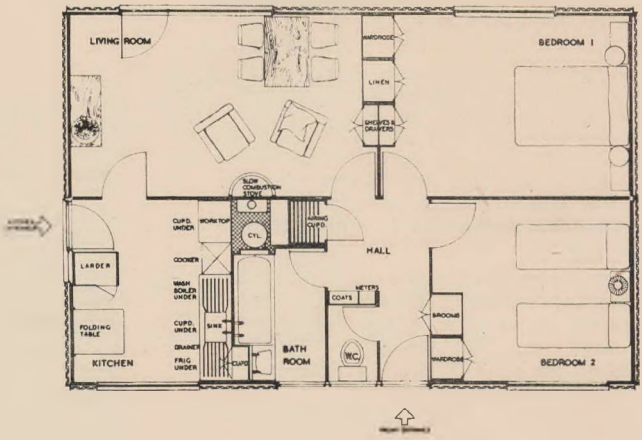
The "Arcon" is a one-storey steel frame house with an inner and outer skin of specially designed asbestos cement sheeting lined inside with plasterboard, and timber floors. As usual the house has two bedrooms, one living room, kitchen, bathroom and separate W.C. It is well insulated against cold and sound. Also it has larger windows than other temporary houses, and is specially well-equipped with built-in cupboards, including hall cupboard and airing cupboard. One of the luxuries is a heated towel rail in the bathroom.

Expert teams have erected houses in 175 man-hours, and these teams are used to demonstrate their methods to local erection contractors in all parts of the country. 6,000 "Arcon" houses have already been produced, and the present rate is 600-700 per week, while 1,100 have been delivered to sites in the London area alone.

Focal points for the vast organisation for the supply and erection of the Government's 165,000 pre-fabricated temporary houses are the distribution centres organised and staffed on behalf of the Ministry of Works by the managing contractors. Taylor Woodrow have five of the distributing centres, and a total of 33 centres in all. Components and fittings are assembled from hundreds of factories up and down the country in sufficient quantities to allow of a continuous outflow of complete house sets to the sites. The "Arcon" house consists of 400 major components and fittings, and 2,500 small fittings and bolts. The whole organisation works on the one-way traffic principle, with constant checking and counter-checking. Small items like jointing plates, door knobs, channels for electric wiring, nuts, bolts and screws and washers are sorted out in the correct numbers for each house, and tied up in five bolt bags, each having a code number. This is called "kit-marshalling," and the whole of it is carried out at one centre, that is Ruddington, in the Midlands, and the boxes distributed to the other centres. The complete house set is carried in four lorries which are distributed in the following manner: first lorry, steelwork (frames and panels), second lorry, wooden floors and asbestos cladding; third lorry, internal wall partitions, and fourth lorry, internal equipment, including kitchen and bathroom units, cooker, refrigerator, sink, and cupboards. Last to be put on the last lorry are the coal and dust bin, in which are placed small plumbing fittings and other odds and ends.

Arcon Mark V prefabricated house at Crayford, Kent. Exterior.

Front elevations of the Arcon houses at Crayford.



FLOOR PLAN

View of the Living Room, showing the slow combustion stove.

Beddington, at Croydon, is one of the five main distributing centres of the country for "Arcon" houses. The storage space is 106,000 sq. ft., hard standing in the open 374,000 sq. ft., and 68,000 sq. ft. of roads, making a total of 548,00 sq. ft. The first house sets were issued from this site on the 19th November last, and the output of houses is steadily working up to the maximum capacity of 150 a week.

The number of lorries in and out of the centre daily is at present about 100, and the number of employees at the centre 300, of whom 22 are clerical staff, and 155 Italian prisoners of war. Each house weighs approximately 10 tons, and when working at maximum rate each man will handle over 20 tons per working week, while the area supplied from this centre includes London, the south-east coast, with Oxford and Dorset as the western boundaries, and East Anglia. 1,100 "Arcon" houses have already been built in the London area, as stated, although not all from this centre, and the figure will reach 2,500 by the end of March, with 45,000 by the end of June.

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The main dimensions of the "Arcon" house are 32 ft. 4 ins. overall length, and 21 ft. 3 ins. overall width, the height inside from floor to ceiling being 7ft. 6ins. The plan view shows a neat and well designed entrance hall, connected by two doors at the right to two bedrooms, one at the front 110 sq. ft. and the other at the back 145 sq. ft. On the left, also opening into the hall, is the living room at the back 165 sq. ft., while the front is occupied by the kitchen, 95 sq. ft. and the bathroom with separate W.C. and door to the hall. The kitchen is equipped on the latest modern lines, having larder, folding table, electric cooker, wringer and wash boiler, sink and refrigerator, including the "M.O.W." service unit.

The windows and doors, which have been designed by Williams & Williams, Ltd., Reliance Works, Chester, who have also made all the steelwork required except the tubular roof trusses and the internal metal trim, are a fine example of the advantages of this method, especially as regards neat and artistic appearance and maximum light admission, as is well indicated by the living room window. Hinges also are of the special self-aligning type, similar to those used for automobiles, and yale locks are included specially suitable for steel casement doors. Included is the "Siesta" stove which heats and circulates the cold air, resulting in a great improvement in heating efficiency. Up to the 12th January, 1946, the number of "Arcon" houses under contract was 2,381, of which 1,064 have been delivered to the different local authorities.

J. H. FORSHAW

ONE OF BRITAIN'S LEADING ARCHITECTS AND AUTHOR OF THE COUNTY OF LONDON PLAN

By Thomas Hodges

Between 1926 and 1939, J. H. Forshaw did outstanding work as Chief Architect to the Miners Welfare Commission. In 1943, while he was Chief Architect to the London County Council, the County of London Plan was published —work done jointly by him with Sir Patrick Abercrombie as consultant. In November, 1945, he was appointed Chief Architect and Housing Consultant to Britain's Ministry of Health.

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Housing is the most urgent among all the tasks of social reconstruction being undertaken in Britain to-day, so that the appointment in November, 1945, of J. H. Forshaw as Chief Architect and Housing Consultant to the Ministry of Health is an event of great importance. The Ministry is the department chiefly responsible for Britain's housing policy and its fulfilment, and the Ministry's architect, who shoulders this vast task, has to be a person of unusual ability and courage. No other architect in the country will be subjected to such searching scrutiny, both by the people of Britain and by his professional colleagues, but it is significant of the respect with which Forshaw is held that his appointment has been welcomed universally.

He goes to the Ministry of Health in his fiftieth year after a distinguished career spent almost entirely in public service —for the Liverpool City Council, the Miners' Welfare Commission and, for five years during the recent world war, for the London County Council. In Britain, as in many countries, there is a continuous friendly argument between those who suggest that employment in government departments allows no scope for imaginative and truly creative work, and those who suggest that the vast tasks and responsibilities of public service and departmental employment can be the finest possible stimulant that an architect could desire. Whatever argument may be produced on either side, there is no doubt that every architect in Britain would agree that Forshaw seems to have found stimulus enough in his work for government and local government authorities and that his thirteen years' work as architect to the Miners' Welfare Fund has enormously increased the prestige of government architecture. Of all the architecture in Britain between the wars of 1914-1918 and 1939-45, none maintained such a high level of design and technical competence over such a large body of work.

J. H. Forshaw had his boyhood education at Ormskirk Grammar School in Lancashire, and from 1915 to 1919 served in the army, being adjutant of the 55th Divisional Royal Engineers. He won the Military Cross. After the war he went for his architectural training to the famous school at Liverpool University to learn his architecture from Professor Sir Charles Reilly and his town planning from Sir Patrick Abercrombie, later to be his partner in the preparation of his greatest personal achievement, the County of London Plan. At Liverpool Forshaw won the Certificate in Civic Design and the First Civic Prize for Townplanning. After a time of work in private architects' offices, including a period in New York, he received his first public appointment as consultant to the Lancaster and District Regional Planning Committee.

The great step forward—not only for Forshaw, but also for British architecture—came in 1926 when a newly formed government department to improve the welfare of workers in British coal mines chose Forshaw as its Chief Architect. This department, known as the Miners' Welfare Commission, which draws its funds from a levy on all coal produced, has the task of providing pit-head baths, playgrounds and recreation centres for all mines throughout the length and breadth of Britain. Forshaw stepped into this work without precedents to follow either in the administrative organisation or in the character of the building to be provided.

In solving the administrative problems he had behind him a committee who viewed the work as Forshaw viewed it, as a task of inspiring social significance; it was not dull or bureaucratic or heavily burdened with administrative routine. A job was to be done and done well. The architectural problem Forshaw and his assistants had to work out for themselves, and in doing so Forshaw showed one part of his genius in choosing a staff of first class men and working with them as the leader of a team. In fact, his office was a perfect justification of the phrase "team spirit." This was largely due to Forshaw's modesty, not always shown by high officials, in taking, indeed in seeking, every opportunity of giving credit to his juniors who were given personal responsibility for their buildings and whose names were always attached to them; even the juniors who did the perspective drawings were given personal credit for their handiwork.

If this had been all, Forshaw might have appeared only as an efficient "bureaucrat" but, in fact, he set the architectural

J. H. Forshaw (on the right) at the opening of the County of London Plan Exhibition in 1943. He, Sir Patrick Abercrombie and Miss Florence Horsburgh, then Parliamentary Secretary to the Ministry of Health, are looking at the plan for the south bank of the Thames.

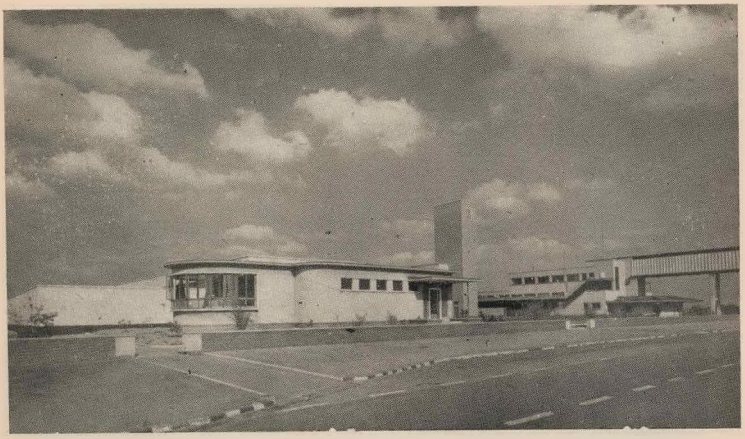
Topical

space and created the nearest thing yet achieved in British architecture to a natural modern British idiom. His buildings are distinguished by their directness of style and their freedom from eccentricity, their expression of efficiency and their use of a combination of materials old and new. There is much in the design which, despite its naturalness as characteristic British architecture, will be detected by architects as being derived from Holland, from Dudok in particular, but that in itself is significant of the period in which they were designed and in no sense detracts from their all round excellence and suitability for the British scene.

Forshaw, as was said above, earned both his first and his most recent laurels as a town planner, and this work as architect to the Miners' Welfare Commission can be considered also in its planning sense. British coal mines are, of geological necessity, in some of the loveliest parts of the country, but too often the men who developed them lacked respect for the beauty of the surrounding country or the civic amenities of the mining towns and villages which their enterprise had created. Forshaw's work, even if in detail it involved only the designing of one lovely building to serve a simple utilitarian purpose of cleanliness, was the first step in a process of civic regeneration which has now entered deep into the British conscience.

In 1939 Forshaw was brought to the London County Council as Deputy Architect. The Chief Architect to the Council had about three years to serve before retiring, and he called Forshaw in as his deputy to gain experience in the Council routine before assuming the senior post; he was also specially charged with the duty of revising the whole administrative structure of the architectural and planning departments, because it was realised that readjustment was needed to meet the Council's ever growing tasks.

Before Forshaw could tackle this work and before he took over as Chief Architect—which he did in 1941—the 1939-45 war began, and Forshaw had to abandon creative architecture, and even the reorganisation of his department, to be head of the London Heavy Rescue Service. This service, largely composed of men from the building industry, was responsible during the terrible years of air-raids for all the immense and arduous work of saving buildings from collapse and for the



Some colliery buildings in Lancashire which were designed by J. H. Forshaw when he was Chief Architect to the Miners' Welfare Commission. His buildings are distinguished by efficiency, a directness of style and a freedom from eccentricity, and a high standard of design.

Stewart Bale

demolition of dangerous structure and the perilous work of mining away dangerous ruins so as to save life. He was also Director of the War Debris Survey, which salved materials from ruined buildings at a time when every good brick or beam had to be saved for such building work as could be done in war time.

In 1941, soon after he became Chief Architect, he was charged by the London County Council with the preparation of the post-war plan for the 116 square miles of the County. No such immense planning task had ever been considered in Britain before and this commission was given in the middle of a world war. As is well-known, Sir Patrick Abercrombie, Professor of Town Planning at University College, London, worked with Forshaw as consultant.

The County of London Plan, published in 1943, is too large and complex an achievement to be described in an article about its author—and it has been so well described in articles in the technical journals of almost every country in the world that description here is probably unnecessary. Forshaw has now left the London County Council, leaving behind him a living monument of his brief period as its Architect which is larger in significance for the future of the capital city of Britain than any task he could possibly have foreseen when he came to the Council in the fateful year 1939.

HOUSING HUSTLE--PREFABRICATED HOUSE SET UP IN THIRTY-FOUR MINUTES

Recently, in California, a five-room, 13-ton house was set up in the amazingly short time of 34 minutes. The house has 700 square feet of floor space, and is intended for permanent construction. The walls, floors and roofs are made of a new variety of concrete said to be fireproof, waterproof and able to withstand earthquakes and hurricanes. The material can be sawed and nailed like wood and is lighter than any other type of concrete.

1

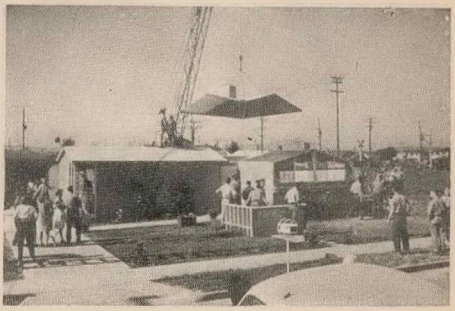
The kitchen and bathroom section is swung into place on the foundation. A plumber is connecting kitchen installations. The front lawn has been dug up and some shrubs planted. Other shrubs (far right) are ready to be transplanted to the grounds by a landscape gardener working with the construction crew.

4

The main window section, complete with blinds and drapes, is lowered into place. The gardeners have finished landscaping the grounds. (Note shrubs in foreground.) Wallpaper was pasted on the walls when the house was prefabricated. At this stage of assembly, the interior was almost complete.

2

The main wall, with door attached, is fastened to the foundation by workmen. The bedroom (right) is in place and the furniture has been moved in. Through the window (centre) a man may be seen laying the living room rug. At right, gardeners continue work on the grounds.



5

The final section of the roof is lowered on to the walls to complete the house. This model home, which may set a new mode for post-war housing in the U.S., has a combination living room-dining room, two bedrooms, a kitchen and a bath. Its builder predicts a selling price of $2,000 when large scale production is started.

3

Workmen and the tenants of the new house move in furniture and set the living room in order while a crane lowers a window section, complete with curtains, into place. The plumber (left) has finished connecting the kitchen installations.

6

The occupants of the new house play with their young child while curious neighbours gather around one of the large windows. Prefabricated houses are being planned by many American builders in the hope of easing housing problems.

THE INSTITUTE OF SOUTH AFRICAN ARCHITECTS

A REPORT OF THE OPENING SESSION OF THE ANNUAL MEETING OF THE CENTRAL COUNCIL HELD IN JOHANNESBURG ON WEDNESDAY, THURSDAY AND FRIDAY, APRIL 24th, 25th AND 26th, 1946

There were present at the Opening Session representatives of the National Federation of Building Trade Employers in South Africa; of the Witwatersrand and Pretoria Master Builders' Association; Members of the Professions of Architecture and Quantity Surveying; Students; and the Press.

In opening the proceedings, the President-in-Chief extended a cordial welcome to those present, and the following letters were read :

From the Minister of Health :

" Dear Mr. Lewis :

I very much regret that I am not able to attend the Annual Meeting of the Institute of South African Architects and its Chapter of Quantity Surveyors, which is to take place on the 24th April. As I am not able to be present I shall be very pleased if you will convey to the meeting my good wishes for the success of its deliberations.

I sincerely hope that the happy relationship existing between the Institute and my Housing Directorate will continue. The success of the Government's housing plans is attributable in no small measure to the assistance given so willingly by your Institute and its Chapter and I trust that the helpful co-operation it has been my good fortune to experience in the past will continue unabated.

Yours sincerely,

(Sgd.) Henry Gluckman."

From Mr. H. R. Raikes, Vice-President of Associated Scientific and Technical Societies of South Africa :

" I very much regret that I shall be unable to attend the Opening Meeting of the Institute of South African Architects on Wednesday, 24th April, at 10 a.m., since I shall be at Bloemfontein attending the Conference of the S.A. Library Association. I trust you will have a most successful conference."

ADDRESS OF THE PRESIDENT-IN-CHIEF, MR. D. St. C. LIGHTFOOT

Our Institute's year 1945-1946 has been noteworthy for great changes in the world's affairs. The struggle of the Democracies against the Axis has ended in complete victory for the Allied Nations of the world and we, in conjunction with all other sections of the community, must now adjust our thoughts from war to peace-time conditions.

Unfortunately too many people, especially in South Africa, were convinced that immediately upon the cessation of hostilities the world would or could be turned back to peace-time conditions overnight. I think it has been proved that this was and still is wishful thinking. I, together with Mr. Haddon and Mr. Eaton, members of the Institute, was extremely fortunate in being able to obtain a true perspective of the position during my recent trip overseas.

Members of our profession and members of the general and building public must realise that Building Control cannot be lifted for some considerable time. It is not just hearsay, but a definite fact, that there is a very serious shortage of building materials throughout the world to-day. America, Canada and England have vast housing and industrial building projects to catch up with before they can supply South Africa with more than a very small quota of our supplies of essentials compared with such supplies pre-war.

Therefore, I would like to appeal to all members of the Institute to make every endeavour to assist Control rather than oppose or condemn it. In my opinion the best way to assist Control, which method will eventually end it, is to sponsor a Union-wide campaign against needless waste of building materials. Throughout the war years we had Anti-Waste Campaigns in respect of paper, food, petrol, etc. Therefore why not an Anti-Building-Material-Waste-Campaign?

I contend this is primarily the Architect's responsibility. He must watch carefully every drawing, especially every detail drawing, which is issued from his office to see that the absolute minimum use of any particular material (which is known to be in short supply) is incorporated in his building. He must ever be on the lookout for new and improved methods of design and construction which will tend to save valuable materials. He must also refuse to prepare schemes for submission to an already overworked Building Controller, which he knows are not essential to the housing or industrial needs of the country to-day.

The other important essential to good, sound building is labour, and an anti-labour-waste-campaign must go hand in hand with an anti-material-waste-campaign. In order to achieve this we must have the full support of the allied building trades and industries as well as that of the skilled artisans and labourers. I feel certain, however, that we will get this support provided we do our job well and efficiently.

I would now like to touch on National Housing. During the past year a considerable number of our Members have been actively engaged on this important work. I have no

hesitation in saying that I consider the profession has given of its best and been of great assistance to the Government in an honest attempt to alleviate the acute housing shortage. There has been, and still will be, considerable adverse criticism about design, costs, etc., of this work, but I can assure you that the Institute and its Members who have participated in the scheme can rightfully say that in their opinion no fundamental errors have been made in the design of these houses. It may be claimed that in certain instances the costs are comparatively high, but we can set against this criticism the fact that we have used the soundest construction and the best materials available. We considered, and I claim rightly so, that our ex-servicemen were entitled to the best we could get for them, and should they buy these houses they should do so with the knowledge that they would not be faced with large repair bills, due to jerry-built houses, shortly after taking over occupation.

The Director of Housing recently approached the Architects of Cape Town with a request that they endeavour to design a cheaper house for National Housing. This matter is receiving the attention of the Architects engaged on this work, but under no circumstances will they be prepared to sacrifice the high standard of construction which has been carried out up to date.

It is of interest to note here that on my recent overseas trip I discovered that South Africa was a long way ahead of the United States, Canada or England in their National Housing programmes. Of even greater interest to Architects is the fact that the South African Institute of Architects is the only one which is working as a body in the fullest collaboration with the Government in an attempt to solve their problems.

I would now like to say a few words about architectural design and construction as I saw it overseas. Naturally in some of the countries we visited we saw strange designs and strange methods of construction. In Brazil we visited a little village called Petropolis, in the mountains, about 75 miles from Rio de Janeiro. Here we found possibly the most fantastic hotel in the world. The site where it stands was originally a swamp. It has all been reclaimed and a large artificial lake created in front of the hotel. The exterior is a fantastic interpretation of a Swiss chalet and the interior is full of very baroque Portuguese detail. The hotel consists of the usual public rooms and bedrooms, but in addition it has a casino, two night clubs and a private theatre. If one could imagine the most eccentric and fabulous scene concocted by Hollywood for a musical revue picture, one might arrive somewhere near the interior decoration of this amazing hotel. Most of you have probably seen illustrations of the modern design in Rio in a book called "Brazil Builds." There are certain aspects of this work in plan and design that are extremely interesting, but I trust South African Architects will beware of attempting to copy this type of work without taking the climatic and other conditions of our country into consideration before doing so.

There is not enough time to go into detail about the varied and interesting types of buildings and construction we saw in South America, the United States and Canada, but I would like to give a word of sincere encouragement to the Architects and the builders of South Africa. The standard of architectural design, and particularly the standard of the building and finish of our jobs, is equal to anything I saw during my travels.

In concluding this short address, I would like to say that everywhere we travelled we were received by the various Institutes of Architects with open arms, and we endeavoured to impress upon them that the South African Institute of Architects is a body of professional men which can hold its head up with any other professional bodies throughout the world. I sincerely hope this will always be the case, but I must warn you all that the next few years of practice will be fraught with difficult times before we can resume the full swing of pre-war practice.

I regret that I was unable to give the full time to Institute affairs I should have liked to do during my year of office as your President-in-Chief, but this was impossible owing to my absence from the country. I would therefore like to take this opportunity of officially thanking Mr. Douglass Cowin for the magnificent way he carried on during my absence and also acted as Chairman of the Executive Committee during the year. I am afraid I have landed him or the Registrar, in another job as I have requested them to give you a resumé of the Executive Committee's activities during the year under review. I would also like to thank all members of the Executive Committee for the loyal support they have given me during my year of office. Lastly, I would like to thank Mr. Lewis, our Registrar, personally and on behalf of the whole Institute for the continued and unflagging interest he takes in our affairs.

ADDRESS OF THE CHAIRMAN OF THE EXECUTIVE COMMITTEE, MR. DOUGLASS COWIN.

In view of the fact that he has been overseas on Government business for some months of his term of office, and has therefore not been able to attend as many meetings of the Central Council's Executive Committee as he would wish, our President-in-Chief has asked me to address you in my capacity as Chairman of that Committee.

As an office-bearer both of the Cape Provincial Institute and our Central Council, Mr. Lightfoot's guiding principle has always been the elevation of the status of our professions, and it is my intention to confine my remarks to the progress made in this direction during the year under review.

Unfortunately, the lay public's conception of the Architect as the individual responsible for the embellishment of the

carcase of a structure (presumably designed by an engineer) persists very strongly. Perhaps more unfortunate still is that this view is shared by the people's elected governors, both National and Local. It has been agreed that the mass can only be disabused of this misconception by subtle educational propaganda. A more direct approach can, however, be made to various individuals in positions of authority, and it is gratifying to report considerable progress in this direction.

On the Government's announcement of its intention to constitute a National Housing and Planning Commission with a technical Directorate, immediate steps were taken to ensure adequate representation of our professions on both bodies. The Institute was at first unsuccessful, being asked to accept equal status in the sphere of housing, with that of a sanitary engineer. Continued pressure, however, resulted in the Institute being granted direct representation on the Commission, a position most ably filled by Mr. Norman Hanson. The majority of our members are aware of the contribution which Mr. Hanson has made towards the solution of a problem in housing which has assumed National proportions. What is not so readily appreciated, however, is the high regard which not only the other members of the Commission, but the present Minister and his predecessor, have for him as representing the architectural profession. On behalf of both professions, I wish to express here a very sincere vote of thanks to Mr. Hanson for the time and energy which he has spent not only in our own, but in the National interest.

Considerable publicity has been given recently to the resignations from the staff of the Directorate of the Commission, three of whom were members of our Institute. Your Executive Committee has not been inactive in this connection, and some two weeks ago a deputation attended upon the Minister of Health, Dr. Gluckman, for the second time within four months. Some rather harsh allegations had been made against our members employed in the Directorate. It was not difficult to prove that these were entirely without foundation, and in fairness to those concerned I feel it my duty to add that without the assistance of the architects in question, the progress of the Housing Programme, unsatisfactory though it is, would certainly not have reached even the stage it has to-day.

A special tribute is due to Mr. Irvine Smith, who achieved so much in very difficult circumstances. The loss which the Commission will suffer through his resignation will only be realised during the coming months.

An outcome of the discussions with Dr. Gluckman was his undertaking that the position of Architect to the Directorate, which has now become vacant, would be filled by an individual acceptable both to the Director and the Institute, and that the present remuneration of £850 would be increased to £1,000 per annum. In view of the responsibilities attached to the post, however, the Institute is not satisfied with this salary in relation to that paid to the Director, and intends to make representations for a very considerable increase.

At this same meeting the Minister outlined the reasons for the hold-up in the Housing Programme which has taken place during the past two months, and your representatives were given to understand that the original programme would be resumed shortly. In all these circumstances the Institute has offered its continued support to both the Minister and the Commission.

The strong stand taken in regard to National Housing is consistent with that taken by the Institute with the Minister of Railways and other public authorities. It is history now that the method of approach adopted by the Minister was of little avail in the case of the proposed Railway Hotels Competition, and he was obliged to devise other means for the selection of his architects.

During the past year a similar approach was adopted by a Public Utility Company of Cape Town. The efforts of its Chairman, who made a special trip to Johannesburg to dissuade your Executive Committee from one of the Institute's basic principles of the assessing of competitions, were equally unsuccessful.

There are members of our Institute, I know, who consider the attitude adopted too rigid, and that two opportunities for competing for major works have been lost. That is a short-sighted policy, and on mature reflection I feel sure they will agree that in the long run the hand of our professions has not only been strengthened, but their whole prestige has been given a tremendous fillip by the actions of the Executive Committee.

I have not the time to detail all other work done in the interest of our professions generally, and can only mention agreements with the Public Works Department, with the Provincial Administrations of the Transvaal, Cape and Natal, made indirectly through the Institute's Constituent Bodies; and the newly constituted National Building Research Institute. Under this heading I can only refer you to the Report to be read by the Registrar.

I cannot conclude without some brief reference to Building Control. In spite of the fact that its existence has had a markedly adverse effect on the livelihood of both Architects and Quantity Surveyors, the Institute has continued to support this Government Department in the belief that Building Control is a necessary evil, to be maintained in the National interest. Relations have, not surprisingly, become a little strained during recent weeks owing to the use of a Ministerial prerogative to issue permits for building projects which would not otherwise receive consideration. Since the inception of Control, the Institute has been represented on all Local Advisory Committees whose function it is to make recommendations on applications for building permits, both in regard to essentiality and priority. For some time now there has been a feeling that the services which they and their colleagues, representing other branches of the Building Industry, are rendering, are redundant.

Some evidence of this has been forthcoming in the recent issue of a permit for a house of 2,800 square feet in Pretoria, the details of which are well known to you. It is hardly necessary for me to state that the Institute takes a grave view of this action. The matter is being dealt with at this stage by the Transvaal Provincial Institute, who requested the Minister to suspend the permit pending the outcome of an interview, which, as a matter of fact, is taking place at this moment. The explanations offered so far to a technical body such as ours are a strange expression of a layman's regard for our professional intelligence. The outcome of to-day's interview will form the subject of discussion later to-day, and I shall therefore leave matters as they stand at present with the assurance to members that the Institute will not retract on any matters of principle.

It has only been after considerable effort and steadfast adherence to a long term policy that we have so strengthened ourselves as to win recognition from the Minister of Health, who described us as "a very powerful body." With this recognition to encourage us, it is now time for the Institute and all its members to proceed with a vigorous programme for the further recognition of the profession by both authoritative bodies and the general public.

REPORT OF THE EXECUTIVE COMMITTEE

The Registrar read the following Report :

Meetings

During the year there was one two-day meeting of the Central Council; nine meetings of the Executive Committee; and a similar number of meetings of Sub-Committees. Now that the cessation of military hostilities is happily a matter of history, consideration will be given to the advisability of the Central Council meeting twice yearly.

New Registrations and Enrolments

Forty-six new registrations as Architects, and 22 enrolments as Quantity Surveyors, were effected during the year.

The Transvaal Provincial Institute has obtained 32 new members, the Cape Provincial Institute 10, the Natal Provincial Institute 3, and the O.F.S. Provincial Institute 1. Of the 46 new Architects, 20 joined as practising members, 26 as salaried members. As to the academic qualification of these new members, 15 are possessed of the Degree in Architecture; 16 of the Diploma; 4 of the Certificate; 6 passed a Special Qualifying Examination, and 5 have the R.I.B.A. Associateship qualification. Three of the 46 new members are Women-Architects.

Of the 22 new Quantity Surveyors, 18 joined as salaried members and 4 as practising members; and of the 18, 3 have since transferred to practising membership. One of the Chapter's new members is possessed of the Degree in Quantity Surveying; 14 of the Diploma; 3 have passed Special Final Examinations, and 4 have passed the Final Examination of the Chartered Surveyors' Institution.

War Measure No. 46 of 1945

The Minister of Education, as the result of the Central Council's representations, promulgated War Measure No. 46 in July, 1945. The effect of this War Measure is that the Central Council may, subject to the approval of the Minister, recognise twelve months of National War Service as if that period had been spent in the office of an Architect or Quantity Surveyor. This measure is quoted as one of the steps taken by the Central Council to assist ex-volunteers in every way possible. On this point it may be added that much has been done in the sphere of Professional Education, the details of which will be published in the Annual Report of the Institute's Board of Education.

Since the promulgation of War Measure No. 46, in July 1945, 40 individual cases have been dealt with. In every case the Central Council's recommendations have been adopted by the Minister. As a result, 4 returned-soldier Architects and 3 returned-soldier Quantity Surveyors have been admitted to registration and enrolment; three similar recommendations are en route to the Minister; and 22 recommendations applying to returned-soldier students have been made. In four cases the Central Council was unable to make an affirmative recommendation.

Government Work

The Central Council has pleasure in recording that during the year various architectural commissions have been offered by the Public Works Department to individual practitioners throughout the country.

Joint Council for the Building Industry

Several years ago the Central Council agreed with the National Federation of Building Trade Employers that, in the interests of South Africa, her third main industry should be represented nationally by a Joint Council. This important matter was another of those deferred "for the duration." With the cordial support of the Federation, it is anticipated that in the very near future there will be established a Joint Council for the Building Industry, representative of all its constituent sections, and governmentally recognised.

Matroosfontein Lay-out Competition

After prolonged consideration and negotiation, a deadlock arose between the promoters of this comprehensive competition and the Central Council. Because of the important part that Architectural Competitions have played and may continuously play in the life of the profession, the following extracts from the Central Council's final letter to the promoters are quoted :

"(a) Where an Open Competition is expressly required, the Promoters cannot fairly insist upon what is in effect the power of finally determining who the winner(s) of the Competition shall be;

(b) The Promoters can, within the framework of these tried and established Conditions of Competition,

embark upon a Limited Competition—limited by their personal invitation;

(c) Alternatively, an Open Competition is available to the Promoters on the basis of the outright purchase of the designs placed in order of merit by the Assessors."

It is understood that the Promoters have abandoned the idea of a Competition and have proceeded with their scheme by way of a direct appointment.

Post of "City Architect"

The Central Council is confident that it is only a matter of time and education when the larger Local Authorities will appreciate the wisdom of appointing a City Architect as a senior officer, with his own Department. According to the information obtained by the Central Council, 57 Local Authorities in Great Britain (amongst which are Aberdeen, Bradford, Bristol, Coventry, Derby, Dundee, Durham, Edinburgh, Gloucester, Halifax, Hull, Liverpool, Manchester, Newcastle, Sheffield, Southampton and Swansea) have taken this step. Representations have been made by the Central Council, so far without success, to the Pretoria and Johannesburg City Councils.

Membership

When the Regulations which govern the Institute and the Chapter, as statutory bodies, were framed in 1927, two main classes of membership were decided upon, viz., Practising and Salaried. When the Central Council assumed office, in 1928, the total Practising Membership of the Institute and Chapter was, in round figures, 300; the total Salaried Membership, 210. As at this date those numbers have grown to 554 Practising Members, and 337 Salaried Members. In so far as the percentage-proportion may prove of interest, in 1928 the Practising Members constituted approximately 58 per cent; Salaried Members 41 per cent; and as at this date, the corresponding percentages are, Practising Members, 62, Salaried Members, 38.

Consideration has from time to time been given, and will again be given at the present session of the Central Council, to the question as to the desirability or otherwise of maintaining this regulatory distinction in membership of the Institute and Chapter.

With effect from January 1st, 1946, the annual subscription of Practising Members has been increased from five to ten guineas; the subscription of Salaried Members remaining at three guineas. Consideration will be given by the Central Council as to the way in which this necessary additional revenue can best be utilised in the interests of the Professions.

National Housing

A very considerable amount of thought, time and energy has been devoted during the year by the Central Council, its Executive Committee, the Provincial Institutes, the Chapter, and individual members, towards assisting the National Housing Commission in its endeavours to cope with the housing problem. Those who have studied this problem in overseas countries comparable with South Africa will realise its almost identical universality.

There is much that bodies of professional men, capable and desirous of promoting the national welfare, wish that they could be permitted to attempt and to achieve.

The Central Council has from time to time made, and gladly reiterates, its offer of the fullest possible assistance to the authorities in providing the housing so urgently required.

The Central Council's thanks are due, and are tendered, firstly to those individual Architects and Quantity Surveyors to whom was allotted the always unenviable task of performing several months' work in a few weeks; secondly to those Architects and Quantity Surveyors in various parts of South Africa who have continuously served on the Housing Directorate's various Technical Committees; thirdly, to those Committee members who have given so generously of their time, at and away from meetings; fourthly, to the Architects who joined the staff of the Housing Directorate at a time when their very acceptance of the onerous duties which they knew would be theirs was a public-spirited gesture which has but to be known to be appreciated; and finally to Mr. Hanson, to whose services as the Institute's representative on the National Housing and Planning Commission the highest tribute is gladly paid.

Houses for Ex Volunteers; Small House Bureaux

Steps have been taken by the Central Council and the Provincial Institutes towards the expansion of what are known as Small House Bureaux, to serve the requirements of the National Housing Commission, in the interests of ex-volunteers. Details will be published shortly.

American War-Time Housing Exhibit

Through the courtesy and with the collaboration of the U.S. Office of War Information, the Central Council arranged for this excellent exhibit to be displayed in the Selborne Hall, Johannesburg, for one week. An additional feature of the exhibit, prepared by the Witwatersrand Architectural Students' Society, was devoted to the problems of housing in South Africa. Added interest was provided by a full-scale model of the pre-fabricated plumbing unit for National Houses, prepared under the direction of the Institute.

The entire exhibit will be similarly available to the other larger towns in South Africa.

National Building Code

A study has already been made of the Building Bye-Laws of various overseas Local Authorities. The establishment of a satisfactory National Building Code for South Africa is another of the important post-war items engaging the attention of the Central Council.

Historic Monuments Commission

The Central Council gladly interested itself firstly in the move to have proclaimed as Historic Monuments, La Provence and Morgenster, two famous Cape Dutch farm houses; and secondly in assisting the Commission in the preservation of what the Commission describes as historically important buildings.

Professional Education

A separate annual report will be issued, and published in the "Architectural Record," by the Institute's Board of Education, which is composed of representatives of the Professions, of the Universities of Cape Town, Pretoria and Witwatersrand, and of the Union Department of Education.

Congress

The Central Council appreciates the necessity for another Congress of South African Architects and Quantity Surveyors. A decision on this matter will be made within the next few days.

The Institute's Year Book

Since 1940-42 there has been no publication of the Year Book. Because of printing and other difficulties, delay has occurred, but it is anticipated that the next comprehensive issue of this informative book will be available about October next.

Miscellanea

Various other matters — some of which have not been brought to finality—have engaged the attention of the Central Council and its Executive Committee during the year; inter alia, the bringing of the Statutory Regulations up to date; the Revision of the Statutory Scale of Fees, with especial reference to a more workable subdivision in respect of partial services; the Regional and Town Planning Development of the Free State Gold Mining Areas; and the next Competition for the Sir Herbert Baker Scholarship.

ADDRESS BY MR. J. C. BITCON, DELEGATE OF THE NATIONAL FEDERATION OF BUILDING TRADE EMPLOYERS IN SOUTH AFRICA

On behalf of the National Federation I thank you for this invitation to attend your Annual Conference, and I am sure that the cordial relations existing between the Institute and the Federation will be further strengthened.

During the past few years the experience of members of the National Federation of Building Trade Employers in South Africa has shown that the labour position in the Building Industry has steadily deteriorated both as regards quality and quantity. This deterioration has arisen from a variety of causes, but it can be said without hesitation that the principal causes are that the amount of building work in hand and in the immediate prospect has been far greater than could be overtaken by the available labour supply and that the artisan labour output has shown a steady and serious decline.

Another factor which adversely affects the already acute labour position is that because of the enormous demand for housing and the repair work to be done, large numbers of employees are setting themselves up as building contractors. In the majority of cases these men are competent artisans but are not necessarily capable builders and apart from the flooding of the Industry by small firms, the working output value of many artisans is lost to the Industry. Due to their inexperience they often employ methods that prove to be wasteful and costly, and labour is thus dissipated over a wide area with a loss in production and efficiency. During the months of January and February of this year no less than 250 new firms of building contractors have obtained registration in Johannesburg.

Further, highly skilled artisans find themselves working next to lesser skilled men receiving the same rate of pay and a tendency to slacken off has become evident. In these circumstances, coupled with the higher rates of wages paid to entice artisans, the object in issuing permits for houses of 1,400 square feet with the apparent intention of encouraging the building of houses of a cheap type is defeated and houses esimated at amounts ranging from £1,800 to £1,900 invariably cost a good deal more on completion and when they are sold. There is no check by the authorities on the selling price or the margin of profit.

The following suggestions are submitted :

1. The control of registration of employers in the Building Industry by the Controller of Industrial Manpower.
2. The expansion of the C.O.T.T. Training Scheme and the immediate application of the relative labour control regulations. In addition every encouragement should be given to employers to engage and train apprentices through the normal channels.
3. The keeping of the issue of permits well within the available supply of labour and materials.

I now wish you a successful Congress.

THE STUDENT'S FORUM

THE INTERNATIONAL EXHIBITION AND ITS RELATION TO FUNCTIONAL ARCHITECTURE

By Cyril A. Stoloff. Dip. Arch. III.

The simultaneous announcement of the first post-war International Exhibition to be held in Paris in June this year, and of the intention to hold a great International Exhibition in London in 1951, has resulted in the writing of this article.

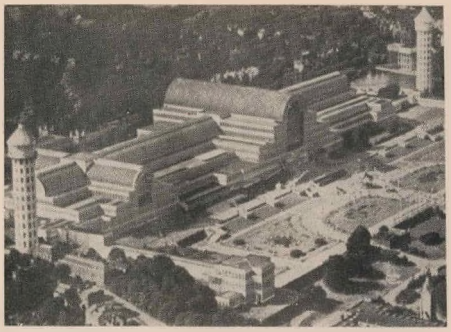
As it is now seven years since the last great Exhibition was held, namely the New York World's Fair of 1939, it is certainly heartening to read of the "Paris Fair, 1946." It is something essentially connected with the arts of peace.

Exhibitions have always served as the nursery of young architectural ideas and as architecture's testing-ground. They have given scope for imaginative architecture of the highest degree, and as exhibition buildings are only temporary, the designers are able to make experiments that might be rash elsewhere. We have thus seen "architecture at play" through a sequence of great exhibitions for almost a century.

The first important International Exhibition was held in London in 1851. A great event in Victorian life, this was held in the famous Crystal Palace, designed by an English gardener, Joseph Paxton. All the world ran to marvel at the fairy palace in Hyde Park. The building, designed in standardised pre-fabricated units of glass and iron, was later recognised as the first great functional building erected on mass production lines. Covering 18 acres, it was completed in 4 months. In subsequent years it became the venue for functions relating to science, sport, music and the arts. In 1936, a disastrous fire destroyed the entire building. Thus disappeared the drop scene of Victorian England.

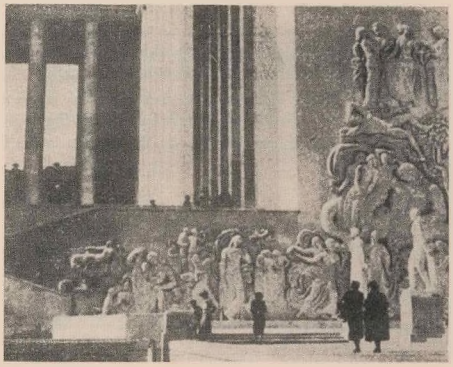
Numerous exhibitions on an international scale followed. In 1878 in Paris, in 1888 in Glasgow, and in 1892 in Chicago — coinciding with the 400th anniversary of Columbus' discovery of America. The 20th century opened with a flood of magnificent exhibitions. In 1915 San Francisco was the site of the Panama-Pacific International Exposition.

The first British Empire Exhibition took place at Wembley, London, in 1925. This did much to stimulate a reviving trade after the depression subsequent to the Great War. Covering 216 acres, it had several concrete buildings for the display of numerous products. The exhibition building as a functional unit had not yet emerged. The Wembley Exhibition produced innumerable pseudo Indian Palaces and the like. In 1933 the Chicago World's Fair celebrated the centenary of that city, while in 1935 an International Exhibition was held in Brussels. To celebrate the Golden Jubilee of Johannesburg, the Empire Exhibition of 1936 was held at Milner Park. Although not strictly speaking "international" it represented a large percentage of the world's countries. Covering 100 acres, it resulted in a series of simple yet very effective exhibition halls grouped around what has become an important feature — the Theme Centre. In this case it was the 150 ft. high "Tower of Light," a cylindrical tower constructed of reinforced concrete.



1 LONDON, 1851.

2 JOHANNESBURG, 1936.



3 PARIS, 1937.

The setting of the 1937 Paris International Exhibition was delightful. Covering 200 acres, it spread along both banks of the Seine, with the Eiffel Tower as the focal point. It was one of technical arts as applied to modern life, and the subjects ranged from television, city planning, interior decoration and printing on the one hand, and transportation, travel equipment and clothing on the other. Some delightful architecture was to be found in this Exhibition, especially the Swedish and Finnish Pavilions, which, apart from pleasing aesthetic values, possessed distinctive national characteristics. The majority of the buildings were of frame construction covered with asbestos sheeting. Thus these pavilions were temporary and easily dismantled. There were, however, several buildings of the inevitable "pseudo-Classical" and "jazz-modern" type. This Exhibition saw the emergence of fountains planned in conjunction with adjoining pavilions.

The most important aspect of the 1938 Glasgow Exhibition was the consistency of architectural style, and the extensive use of colour. The colour of flags, signs and ground equipment was carefully considered as part of the whole scheme. Although several pavilions showed no advance on Wembley, the majority indicated a directness of approach and suitability of purpose. It covered 175 acres, and the Theme Centre was the 300 foot high steel "Tower of Empire."

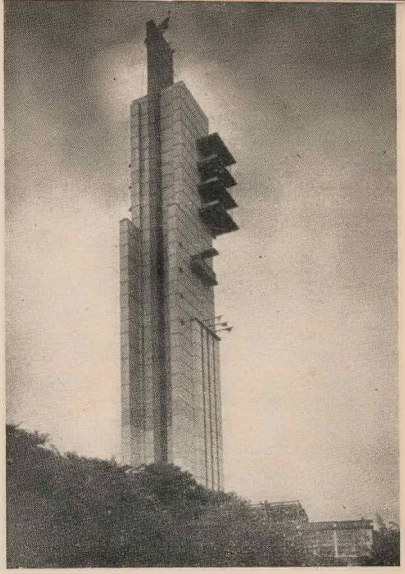
The last great International Exhibitions before war broke out took place in 1939, first in Zurich, Switzerland, and then in New York and San Francisco. The New York World's Fair was remarkable. Representing 60 nations, it covered an area of 1,216 acres. The Fair's 280 acre Amusement Park alone, was three times the size of the Johannesburg Exhibition.

A unique architectural symbol was used for the Theme Centre —the Trylon and Perisphere. The Perisphere was a 200 foot sphere supported by 8 columns. The Trylon beside it was a 700 foot high triangular obelisk. This was the first case of a truly functional Theme Centre, in that the Perisphere housed the exhibit of the "City of the Future."

Especially noteworthy of this Exhibition was the exterior colour scheme. At the Theme Centre the dominant hue was soft white, while along three main avenues leading from this Centre, the buildings displayed firstly, a series of blues ranging from pale tints to deep ultramarine, secondly a sequence of yellows ending in deep gold and finally an octave of reds from rose to burgundy

The 1946 "Paris International Fair," although representing only 20 nations, will display goods varying from heavy machinery to jewellery. There is also to be a food section—a post-war one, showing the greatest attractions — now almost painfully uninteresting! Although this first peace-time Fair is not on the grand scale of pre-war days, it is nevertheless a good sign, and augurs well for the future.

And what of the future of the International Exhibition? The answer is simple. It is a vital necessity, in order that men may come together "to mingle in friendship and security, and to contemplate the marvels that can be wrought when the genius and labour of man unite to make this a better world in which to live."



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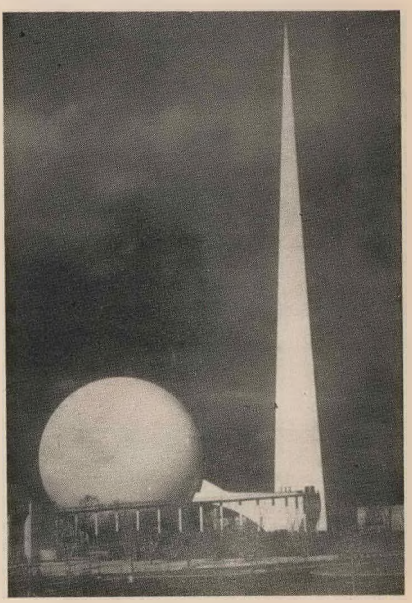
GLASGOW, 1938.



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NEW YORK, 1939.

Acknowledgements: 1, "The Sphere"; 2, J. L. Smith; 3, "Weekly Illustrated"; 4, "Architectural Review"; 5, Ewing Galloway.

CONTEMPORARY JOURNALS

"THE ARCHITECTURAL REVIEW," March, 1946.

Among the items of architectural interest in this issue is the Theatre at Malmö in Sweden, previously noted when published in the "Forum," and an article on Uni-built Stations by Dr. J. L. Martin, which includes the modern experimental system for the L.M.S. Railway developed in the office of William H. Hamlin, architect for the L.M.S. Railway Company. An appendix to the latter entitled "The Functionalist Sharawag" gives some delightful coloured lithographs of nineteenth century railway engineering.

Under the title "Crusader Country," Robin Feddon describes some of the more notable of the crusader castles in Syria.

"THE ARCHITECTURAL FORUM," March, 1946

"$75,000 Showcase" is a Hollywood version of the Model House. It is a lavish demonstration of new developments, sponsored by the millionaire builder Fritz B. Burns. It is fitted with novelties and gadgets and includes both structural and mechanical innovations.

"Report from Europe," is a survey by Phillip Kelly, of the "Forum," of the chaos of Europe ranging over France, Germany, Italy, Switzerland and Britain. "The Navy Builds" is an impressive picturization of the remarkable projects carried out by the "Seabees" during the war, and includes drydocks, workshops, airbases, housing, recreation centres, hospitals and chapels.

Included in this issue is the second of Garnett Eckbo's articles on landscape gardening, dealing with community planting with various projects illustrated.

"ARCHITECTURAL RECORD," March, 1946.

Some indication of the programme for UNO Headquarters is given in an article by Ed Allan, International News Correspondent, and some mention is made of the proposed international competition—supported by editorial comment.

W. A. Holford, who with Charles Holden, is consultant for the reconstruction scheme for the City of London, discusses the County of London Plan. A report is also published of the account given by Le Corbusier of the plans for the reconstruction of France, and even in this short statement one is again conscious of the drive and personality of the man who has so greatly influenced the development of contemporary architecture.

Building Types Study III is on Schools, and includes a comprehensive series of studies embracing the planning, construction and lighting of the contemporary school in the U.S.A.

"PENCIL POINTS," March, 1946

In his editorial, Kenneth Reid, a prime mover in the matter, urges the holding of an international competition for UNO Headquarters.

The project for the "Faith Hospital," St. Louis, Missouri, designed by Joseph D. Murphy with Angelo G. Corrubia as associate architect, is fully illustrated. It is an attractive contemporary design with clean, rational planning and displays a close attention to such items as wards and lighting. Considerable space is given to an illustrated report of "Bryn Gweled" — a co-operative homestead development in Pennsylvania—which describes the origin and development of the venture and the planning and housing which constitutes the scheme.

Under "Materials and Methods," "Mobilar Structures" which signifies a new structural system using tubular steel framing and movable walls—applicable to many types of structure—is fully described and illustrated. The system was invented by Konrad Wachsmann, architect, with engineering design by Paul Weidlinger.

BOOKS

Arising out of the publication of plans for the reconstruction of various cities in Britain and reflecting the marked public interest in the town planning proposals for both the devastated and redevelopment areas, three publications recently received are typical. They are the abridged versions of the "plans" for three different cities, prepared primarily for the layman, and present the proposals in a manner readily grasped. The scope is such as to make an appeal to any person interested in the problems and procedure of town planning and reconstruction.

The first, "A Handbook of the Plymouth Plan," published by Nisbet and Co., Ltd., London, 1945, is a summary of the report submitted by J. Paton Watson, City Engineer and Surveyor, and Sir Patrick Abercrombie, written by Andrew Scotland. It contains a brief historical sketch and presents the essentials of the report supported by layout plans of the various precincts.

The second, "The Future Coventry," published by the Corporation of Coventry at 2s. 6d., gives "some proposals and suggestions for the physical reconstruction and planning

of the city." This is a remarkably complete review, very well supported by plans, coloured layout plans, and many well-chosen photographs designed to make the point of improvement immediately apparent, as well as photographs of the model illustrating the new developments carried out under the direction of the city's active and progressive architect, D. E. E. Gibson.

The third, "City of Manchester Plan, 1945," published by Jarrold & Sons, Ltd., London, 1945, is an abridged edition by the City Surveyor and Engineer, R. Nicholas. This is more in the nature of a preliminary survey accompanied by general suggestions for re-development. Good town planning points are made by the use of comparative photographs, particularly those dealing with housing and open space—the former being supplemented by a representative series of plans for houses and flats. The proposals for redevelopment are presented on a series of coloured layout plans.

PROFESSIONAL NOTES AND NEWS

BRITAIN'S NEW TOWNS BILL

The active developments in Town Planning in Britain are reflected in the following cable.

Twenty new towns in England and Wales are to be formed under national powers which the Government are seeking from Parliament in New Towns Bill debated yesterday in the Commons. Their population will be from thirty to sixty thousand. The Minister of Town and Country Planning, Mr. Silkin, said towns would be built as quickly as possible and it was hoped to spend fifty million pounds in less than five years.

Although they will absorb "overspill from crowded cities, the new towns will not be mere dormitories, but essentially self-contained communities with their own industries. The Board of Trade already has lists of manufacturers wanting to establish factories in the new areas.

Under the Bill, after making the order designating the site of a new town, which may include as a nucleus an existing town, the Minister of Town and Country Planning will appoint for its development a corporation of up to nine members after consultation with the local authorities concerned. This Corporation will have power to acquire land by agreement or compulsorily. It is assumed that provision of houses and services will be undertaken by existing authorities or private enterprise, there being no ban on the latter, though normally leases will be limited to ninety-nine years. Nevertheless, the Corporation will have power to provide any amenity that is lacking, from gasworks to shop or cinema.

Being responsible for making the overall plan, the corporation will be able from the start, to make provision for services adequate for the eventual population of the town. Ultimately, in ten or fifteen years' time, the Corporation will be wound up and its property transferred to the appropriate local authority. This is one of the points on which the Bill differs from recently published proposals of the Reith Committee. The Government has also not accepted the Committee's suggestions for alternative types of corporation and central Advisory Committee with limited executive powers.

It is proposed to preserve what is best in existing portions of the new towns—charm and traditional character—and not to segregate people of differing incomes. Plenty of theatres, concert halls and meeting places will be provided, the Minister added; and space for playing—not merely watching—games, including golf, which need not be a rich man's game. One experiment about to be tried is the formation of small units of forty to fifty families living round a green, each with nursery school, communal kitchen and restaurant. The aim is to reproduce in new towns the friendliness, comradeship and cheerfulness chiefly evident now in villages and slums.

The Opposition did not vote against the Bill, hoping that the procedure for acquiring the land would be made so manifestly fair that new corporations would be regarded as beneficent organisations working for the public good. Their spokesman, Mr. W. S. Morrison, however, threatened to adopt a different attitude on third reading if the requisite co-operation from the Minister was not forthcoming.

SOUTH AFRICAN STANDARDS INSTITUTION

The following list of new and revised British standard specifications have recently been issued by the British Standards Institution. The list contains a number of references to outstanding points in each specification and these are included for the guidance for those desirous of obtaining and using these specifications.

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BRITISH STANDARD SPECIFICATION FOR HINGES (B.S. 1227—1945)

The British Standard covers a range of Cast Iron, Steel and Brass Butt and Tee Hinges, and various types of Hooks and Bands selected to meet the needs for normal house building.

A range of standard sizes for each of the various types of hinges specified are included, together with the principal dimensions, minimum weights, standard finishes and a clause covering quality of material and workmanship.

AMENDMENT TO BRITISH STANDARD SPECIFICATION FOR FIBRE BUILDING BOARD FOR GENERAL BUILDING PURPOSES (B.S. No. 1142—1943) P.D. 350.

In view of the possible use of fibre building board for linings in houses for post-war work, an amendment has recently been issued to the existing standard B.S. 1142 for fibre board, which provides for a type of board which has been treated to render it flame retardent.

The standard provides for three classes of treatment which are all related to the rate at which flame spreads across the surface of the board. Class 1 boards are the most retardent to flame spread and classes 2 and 3 represent decreasing resistance according to the method of treatment adopted. The boards may be treated on one or both sides. The amendment is given the reference number P.D. 350.

BRITISH STANDARD SPECIFICATION FOR CONCRETE CYLINDRICAL PIPES AND FITTINGS (B.S. No. 556—1945)

The British Standards Institution has just revised B.S. 556 for Concrete Cylindrical Pipes and Fittings. The revision has been chiefly to provide for fittings, including Manholes, Inspection Chambers and Street Gullies. The specification now provides for the composition and dimensions of pipes, bends, junctions, manholes and inspection chambers for drainage purposes, and street gullies. Tests for internal hydraulic pressure, absorption and crushing are specified, together with a method for selection of samples and rejection.

BRITISH STANDARD SPECIFICATION FOR CAST STONE (B.S. No. 1217—1945)

This specification defines Cast Stone as a building material manufactured from cement and natural aggregate for use in a manner similar to, and for the same purpose as, natural building stone. It specifies the cement, aggregate, composition, reinforcement, pigments, colour and texture, the compressive strength and drying shrinkage, together with tests for determining these.

BRITISH STANDARD SPECIFICATION FOR A.C. & D.C. MOTORS AND GENERATORS.

A revision of B.S. 1156, A.C. and D.C. Motors and Generators for Government Department Requirements, has recently been issued by the British Standards Institution. This applies to all motors and generators up to 660 volts and up to 300 H.P., kW or kVA, but excludes fractional H.P. machines and shipborne or airborne machines. The main feature of the revision is the addition of a section dealing with equipment for tropical conditions, with special reference to materials and tests.

BRITISH STANDARD SPECIFICATION FOR CABLES FOR SWITCHBOARD PANEL WIRING.

A specification B.S. 1231 has just been issued by the British Standards Institution for cables, flexible cables and cords for switchboard (metering and control) panel wiring. The cables are intended for use at voltages not exceeding 250 V., and the insulation is polyvinyl chloride (P.V.C.). The specification prescribes the dimensions of the conductors and standardises seven colours for the insulation. Voltages tests are also specified.

BRITISH STANDARD SPECIFICATION FOR SWITCHBOARDS AND MOTOR CONTROL EQUIPMENT.

With a view to facilitating the supply of switchgear and motor control equipment to meet the requirements of the Services, a specification (B.S. 1220) has been issued by the British Standards Institution for low and medium-voltage D.C. single-phase or 3 phase equipment with total load not exceeding 300 kW, kVA or H.P. per panel.

The specification does not purport to apply to equipment for special purposes, nor to shipborne and airborne equipment. A special feature is a section dealing with tropic design and the treatment required to provide protection against damage due to corrosion, insects and mould growth in damp tropical climates.

BRITISH STANDARD SPECIFICATIONS FOR DRAINING BOARDS (B.S. No. 1226—1945).

This specification provides for Draining Boards, not being integral with sinks, manufactured from one of the following alternative materials:—

Asbestos Cement.
Cast iron, Porcelain enamelled.
Fireclay.
Plastics.
Pressed steel sheet, Porcelain enamelled.
Stainless steel.
Wood.

Requirements in regard to the quality of the various materials are specified, together with constructional details in regard to wooden draining boards. The surface shall be either flat or grooved, and shall possess a fall to the sink not greater than $\frac{1}{4}$ inch per foot. It is required that raised edges shall be provided which shall be so arranged as to be horizontal when the draining board is correctly fixed in position.

The Specification lays down a range of nominal lengths of 18, 21, 24, 27, 30, 33 and 36 inches, the nominal length being measured from the outer extremity of the draining board to the outer end of the sink.

BRITISH STANDARD SPECIFICATION FOR THREE INCH SEAMLESS NECKS FOR DRUMS (B.S. No. 1223).

This specification covers 28 s.w.g. seamless necks for drums, including plugs and capsules. It also gives diagrams

and details of the ring gauges used for measuring the necks, plugs and capsules.

BRITISH STANDARD SPECIFICATION FOR ELECTRO-PLATED COATINGS OF NICKEL AND CHROMIUM ON STEEL AND BRASS (B.S. No. 1224—1945).

The British Standards Institution has recently issued a new British Standard (No. 1224—1945) covering electro-plated coatings of nickel and chromium on steel and brass.

This specification has been drawn up with the object of providing the essential qualities of electro-plated coatings, but it is realised that it is impossible, in the present state of the art, to specify completely every factor affecting the performance in service of such coatings. In view, however, of the fact that large numbers of electro-plated articles will be required in the immediate post-war period, the Institution was pressed to publish its present findings since it was felt that these would form a workable basis between manufacturer and purchaser. The Committee is continuing its investigations and hopes to provide a more complete specification at a later date.

The specification classifies the requirements of the various coverings according to the types of weather conditions to which they are likely to be subjected, and in an Appendix gives examples of the articles falling into the different classes. Each class is designated by a code number and letter. Tests are given for thickness of coating and adhesion and, for the Class subject to the most severe outdoor conditions, a porosity test.

BRITISH STANDARD SPECIFICATION FOR METAL WALL TIES (B.S. No. 1243—1945).

This British Standard provides for metal wall ties manufactured from mild steel coated with zinc, and from copper or copper alloys. Two main types are provided, comprising a vertical twist type constructed from strip and a "butterfly" type constructed from wire, whilst provision is made for other types subject to compliance with certain limiting requirements.

Overall lengths of 6 in. and 8 in. are provided in both types. The requirements in regard to the zinc coating of mild steel ties are laid down in some detail, together with the method of determining the weight of coat.

BRITISH STANDARD SPECIFICATION FOR MANHOLE STEP IRONS (B.S. No. 1247—1945).

This British Standard provides for manhole step irons manufactured from malleable cast iron conforming to B.S. 309 or B.S. 310 and comprising two main types. The first of these is for general purposes and the second for use with pre-cast concrete manholes and inspection chambers as described in B.S. 556.

The range of sizes for the first pattern includes two lengths of tail, viz. $4\frac{5}{8}$ in. and $9\frac{1}{8}$ in.; three lengths of tail are provided for the second pattern viz. $1\frac{3}{8}$ in., 2 in., and $3\frac{1}{4}$ in. The step itself is standard for all patterns and has a projection from the wall face of 5 in. and a width overall of 6 in. The width, in plan, of the metal forming the iron is also standard in all patterns, being $1\frac{1}{8}$ in.

The Standard sets out full dimensions with illustrations of the two patterns and requires all articles to be galvanised. A malleability test is specified as a part of the manufacturing process whilst details are given of a proof load test which may be conducted by arrangements between the manufacturer and purchaser.

BRITISH STANDARD SPECIFICATION FOR METHODS OF TESTING CLAY BUILDING BRICKS (B.S. No. 1257—1945).

This specification has been produced in an endeavour to unify the methods adopted for determining certain physical properties of building bricks, as tests have previously varied according to the individual views of the testing authority with the result that tests from two different sources could not strictly be compared.

The specification lays down requirements in regard to sampling, both in the case of bricks in motion and bricks taken from a stack. Tests covering compressive strength, water absorption and calculation of saturation, co-efficient, soluble salts analysis, efflorescence, and drying shrinkage measurement are specified. An Appendix gives details of a convenient form of apparatus for the measurement of drying shrinkage.

A further Appendix gives a series of suggested suitable brickwork tests which can be conducted quickly and easily by a manufacturer to follow the variations in quality which might occur in his product. These tests are not in substitution of the standard tests, but are set out for the convenience of the manufacturer. They include compressive strength and water absorption whilst a method of sampling is laid down.

BRITISH STANDARD SPECIFICATIONS FOR W.C. FLUSHING CISTERNS (B.S. No. 1125—1945).

This edition was issued to supersede the war emergency publication but maintains the bulk of those requirements which had been taken from the Ministry of Health Model Specification.

The specification deals firstly with general requirements for high and low level cisterns, setting out appropriate materials and requirements in regard to workmanship and the general features of construction. The separate sections give the dimensions it has been possible to standardise in respect of high level and low level cisterns. The former are reversible whilst the latter are non-reversible.

The types covered include cast iron, ware, pressed steel, lead-lined or copper-lined wood and composition. Flush pipes for high level cisterns include steel tubes, lead pipes and copper or copper alloy pipes.

BRITISH STANDARD SPECIFICATION FOR ASBESTOS CEMENT SLATES AND SHEETS (B.S. No. 690).

The British Standard Specification for asbestos cement slates and sheets has just been revised and issued (B.S. 690).

The specification covers slates and flat and corrugated sheets, both straight and curved. The revision is chiefly concerned with the reduction in the number of sizes. It covers the composition, colouring matter and dimensions and the tests for ensuring conformity with the specification.

P.D. 374 AMENDMENT TO BRITISH STANDARD SPECIFICATION FOR FIRE RESISTANCE, INCOMBUSTIBILITY AND NON-INFLAMMABILITY OF BUILDING MATERIALS AND STRUCTURES (B.S. No. 476).

An amendment has just been issued by the British Standards Institution to B.S. 476 describing a further method of testing to be applied to materials for use as linings for ceilings and walls. The test determines the rate at which flame spreads across the surface. In narrow passages, e.g., in halls and staircases, the use of material as a lining which has a rapid flame spread might constitute a serious fire hazard. The new test has, therefore, been devised to provide a means whereby this characteristic of materials can be determined and they can be classified into one of four groups according to the results obtained.

BRITISH STANDARD SPECIFICATION FOR GYPSUM PLASTERBOARD (B.S. No. 1230).

This specification defines the types of gypsum plasterboard, their quality and dimensions, and includes appendices for the conditioning of specimens, the method of measuring dimensions and the method of determining the weight, the transverse strength and the emissivity.

B.S. 1151—1945 STANDARD FORM OF TIME AND WAGES SHEET AND PAY PACKET FOR THE BUILDING AND CIVIL ENGINEERING CONTRACTING INDUSTRIES.

At the request of the Ministry of Works, a committee of the British Standards Institution, representative of the Federation of Civil Engineering Contractors and the National Federation of Building Trades Employers, was appointed to make recommendations regarding the rationalisation and simplification of forms in the building and civil engineering contracting industries.

The committee prepared standard time and wages sheets and a standard pay packet. These were approved and issued together with a revision occasioned by the introduction of pay-as-you-earn (B.S. 1151—1944).

The introduction of payment for time lost due to inclement weather and of a guaranteed minimum has occasioned the present revision. The opportunity has also been taken of incorporating certain suggestions for the improvement of the original specification.

One standard time and wages sheet has now been recommended and a sample sheet with specimen entries is included in the specification which also gives a detailed explanation of the various columns in the sheet. Alternative methods of recording recoverable items are shown together with a full explanation in the appendix.

Ease of payment of wages, simplicity in recording, economy in labour in preparation and economy in stationery have been the guiding principles in the preparation of the wages sheet.

BRITISH STANDARD SPECIFICATIONS FOR ASBESTOS CEMENT SPIGOT AND SOCKET RAINWATER PIPES, GUTTER AND FITTINGS, AND SOIL WASTE AND VENTILATING PIPES AND FITTINGS (B.S. Nos. 569 and 582).

These specifications have been recently revised chiefly from the point of view of including the fittings and tests for bursting strength, water absorption and resistance to acidic water.

BRITISH STANDARD SPECIFICATION FOR FIRECLAY WASHTUBS AND TUB AND SINK SETS (DIMENSIONS AND WORKMANSHIP) (B.S. No. 1229—1945).

A range of six items is specified which comprises single washtubs, washtub and sink sets in two places and combination washtub and sink sets in one piece, all being available with or without shelves.

The quality of the material is described and overall sizes are laid down, together with requirements in regard to the waste holes and outlets, overflows and tap holes. A full range of drawings illustrates the various types covered.

AMENDMENT No. 3 TO BRITISH STANDARD SPECIFICATION FOR SCREW THREADS OF WHITWORTH FORM (B.S. No. 84—1940) P.D. 377.

In the 1940 issue of B.S. 84, "Screw Threads of Whitworth Form," some preliminary recommendations were made in respect of the amounts of reduction of the nominal major diameter of bolts when the deliberate intention was to produce bolts with flat crests, commonly known as "truncated threads."

Since the 1940 issue, a more detailed study has been made of the most suitable amounts of truncation and of the appropriate tolerances on such flat crested bolts, and new standards, superseding the recommendations of the 1940 edition, have now been published as Amendment No. 3 to B.S. 84.

This Amendment gives the complete series of tolerances for truncated bolts and nuts in the B.S.W., B.S.F. and B.S.P.

series. The formulae from which the limits and tolerances have been calculated are also given and explained, so that the appropriate figures for special threads may be readily determined.

Recommendations are given for a suitable gauging system for controlling truncated Whitworth form threads.

BRITISH STANDARD SPECIFICATION FOR DRAWING BOARDS AND TEE SQUARES (B.S. No. 1265-68—1945.)

The British Standards Institution has just issued a publication containing the first four of a series of specifications relating to drawing office equipment and materials. These specifications have been prepared in collaboration with the Drawing Office Material Manufacturers' and Dealers' Association.

The individual standards bear the following titles:—

B.S. 1265—Engineers' pattern drawing boards.
B.S. 1266—Engineers' pattern ebony edged tee squares.
B.S. 1267—Students' clamped drawing boards.
B.S. 1268—Students' tee squares.

Each of these specifications comprises nominal sizes and names, a general description, materials, workmanship and constructional details, finish and limits of sizes. Illustrations of the two types of drawing board are also included.

BRITISH STANDARD SPECIFICATION FOR MALLEABLE CAST IRON AND CAST COPPER ALLOY PIPE FITTINGS FOR STEAM, WATER AND GAS (B.S. No. 1256—1945).

The British Standards Institution has recently issued a British Standard relating to malleable cast iron and cast copper alloy pipe fittings for steam, water and gas installations. This specification is comparable in its scope to B.S. 143 but provides for fittings which have B.S.P. taper male threads and parallel female threads.

The specification gives complete dimensions for all of the customary types of equal and reducing fittings for nominal pipe sizes from ½ in. to 6 in. The fittings are, in general, suitable for working pressures up to 200 lb. per sq. in. in the case of water, and up to 150 lbs. per sq. in. in the case of steam and gas. The specification also includes tests for porisity and ductility and lays down the procedure for selecting the samples to be submitted to these tests.

BRITISH STANDARD SPECIFICATION FOR ASBESTOS CEMENT HEAVY QUALITY FLUE PIPES & FITTINGS FOR HEATING AND COOKING APPLIANCES (B.S. No. 835 — 1945).

The recent publication of B.S. 835—1945 Asbestos Cement Heavy Quality Flue Pipes and Fittings and Heating and Cooking Appliances completes the revision of the asbestos cement pipe specifications.

As in the previous specifications fittings have been included as far as possible, and where it has not been possible to include actual dimensions, a list and illustrations of the most suitable and frequently used fittings are included, together with notes on the correct direction of assembly and on a suitable cement for the joints. By this means it is hoped to facilitate the work of the designer to establish good practice and prolong the useful life of the flue.

It is hoped to establish at the earliest possible date definite standards for all the dimensions.

BRITISH STANDARD SPECIFICATION FOR METAL SINKS (B.S. No. 1244 — 1945).

This specification covers a range of metal sinks manufactured from porcelain enamelled cast iron, porcelain enamelled pressed steel, stainless steel, or Monel metal. The types specified comprise the following:—

Single sink—24 in. x 18 in. overall.
Sink with draining board—42 in. x 18 in. overall.
Sink with draining board and work slab—63 in. x 18 in. overall.

Each of these three main types may be constructed with or without a back ledge.

The quality of materials, surface finish, sizes and positions of overflow, waste and tap holes, are laid down.

In the case of models with a back ledge, the width is increased to 21 in. The internal dimensions of the sink bowl are specified as 21 in. x 15 in. x 8 in. with a medium capacity of 7 gallons, but there is provision for reducing the length with a compensating increase in the width, provided the depth and minimum capacity remain unchanged.

BRITISH STANDARD SPECIFICATION :— GUARANTEED MINIMUM RECKONERS FOR THE BUILDING AND CIVIL ENGINEERING CONTRACTING INDUSTRIES (B.S. No. 1151 : Part 2 — 1945).

These guaranteed minimum reckoners have been prepared for use in the preparation of wages under the new Working Rule Agreements of the Civil Engineering Construction Conciliation Board and of the National Joint Council for the Building Industry — the Reckoners particularly facilitate the calculation of the guaranteed minimum for a man whose normal working hours available are less than the normal hours laid down in the Working Rule Agreements; a proportionate guarantee will in some cases be payable and this also has been provided for.

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All British Standards Specifications are obtainable at or through the Central News Agency, Ltd. (Handel House Branch), P.O. Box 1161, Johannesburg.

Any information concerning the activities of the British Standards Institution, the South African Standards Institution or the Specifications issued by these bodies, may be obtained from the Secretaries to the South African Standards Institution, Kelvin House, 75, Marshall Street, Johannesburg.

BOOK REVIEW

"IF YOU WANT TO BUILD A HOUSE," by Elizabeth B. Mock. Published by the Museum of Modern Art, New York. Vanguard Booksellers, Johannesburg, 12/- (postage 6d.).

Written by the Museum's Curator of Architecture, this book displays a sympathetic knowledge and a keen perception of the essentials of contemporary domestic architecture. It is, thus, not only of practical worth to those in the architectural profession, but, combining as it does a refreshingly pertinent and simply written analysis of the problems of house planning, design and construction, with a photographic survey of modern domestic work of the high standard one is accustomed to expect from the Museum, it makes a direct appeal to the intelligent and discerning layman—the person for whom the book is, of course, intended.

The text, well written and free from dogma, explains the many advantages accruing from the correct assessment of the contemporary approach to home building, and in avoiding technical complexities, it seeks to show the prospective client that his own well-being "depends largely, though even unconsciously, upon the character of the space, shape, light, materials and color" of his home.

It is also sympathetic to the problem with which the architect is often faced in dealing with his client in that both the text and photographs ably demonstrate that a new house need be neither a traditional imitation nor a de-humanised laboratory. The author gently refutes the idea that sentimental prejudice should be pandered to in this regard. With its one-hundred and sixteen excellent photographs, each of which makes a specific point, and the seventeen whimsical cartoons by Robert C. Osborn, which dramatise the many "subtle and frequently distressing relationships between a man and his house," this book is surely the answer to the vexed question, "Should the Architect dictate to his client?" For by positive example and pertinent comment the author adequately justifies her contention that "Only in Modern Architecture is any serious attention given to the peculiar problems of the small house," and this is done without having recourse to dictatorial methods.

"IF YOU WANT TO BUILD A HOUSE" offers no packaged solution to the problems faced in the design of the small house and no abbreviated recipe for the ideal home, but by carefully examining and bringing to light the many facets which comprise the modern home, it points the way for the intelligent appreciation and unprejudiced application of the vital qualities of contemporary domestic architecture.