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The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, JANUARY 23, 1941. NUMBER 2400 : VOLUME 93

PRINCIPAL CONTENTS

Owing to the paper shortage the JOURNAL, *in common with all other papers, is now only supplied to newsagents on a "firm order" basis. This means that newsagents are now unable to supply the* JOURNAL *except to a client's definite order.*

To obtain your copy of the JOURNAL *you must therefore either place a definite order with your newsagent or send a subscription order to the Publishers.*

OFFICES IN STOCKHOLM

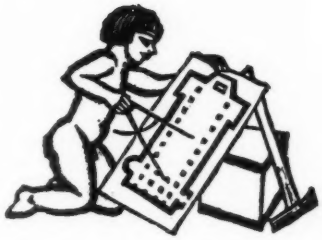
The headquarters of the Swedish Co-operative Society at Stockholm, designed by E. Sundahl, with the lift giving access to the roof garden restaurant. The ramp and the general form of the famous clover leaf crossing in Stockholm are also shown in the photographs.

1941

Throughout 1941 *the building industry, with its Ministry, professions and manufacturers, has to carry out two jobs in spite of a constant, serious hindrance.*

The so-called siege of Britain is the hindrance and will call for continuous changes in materials and technique. With these ever-changing methods, builders must first of all keep running the general social mechanism in spite of bombs. Bombs have damaged or destroyed some famous buildings, but the mass of damaged buildings have been such as that shown on the left — of no special merit, often a good riddance, but all making by their destruction some demands on building skill and building labour.

Yet all such work of repair must be only a large-size sideshow for the industry. The main job for builders in 1941 *is to construct, quickly, simply and robustly, war buildings of all kinds and the means of protecting their occupants from air attack. In doing this work they will have the certainty—denied to other war workers—that the organization and techniques that must be used to win the war will be as necessary in the work of reconstruction which will follow.*



RECONSTRUCTION

A YEAR ago the war, as we now understand it, had not begun. Today we can only say it has begun. In January 1940, a series of calamitous battles lay a few months ahead. In January 1941, an even greater battle lies a few months —or a few weeks or days—away from us, with its exact form and terrain equally unknown. Last year we had barely started to develop military resources. This year we are still a long way from full strength.

Despite these great resemblances, January 1941 differs from January 1940 as grey mist differs from grey cliffs.

A year ago the realities of total war were, for Britons, so many speculations. Modern battle, mass bombing, Civil Defence Services and British nerves—against the nature, efficiency or endurance of these, only a question mark could be put. Nor was that all. In scale, in mechanism and in direction, preparations for war seemed to far too many intelligent people to be sadly lacking: not least in building.

Today these things have been greatly changed. It would be grimly unwise to say we now know all the horrors and the methods of total war, but at least we have faced enough to be ready to face the rest. The methods and means of total war and the work that must be done to counter them have—in the last year—acquired definition; that is one great gain of 1940. This war is not pleasant and may be worse yet. But the formless threatenings of 1940 have changed into the huge, but on the whole sharply outlined demands of 1941. It is a change for the better.

The second achievement of 1940 only began to be apparent as the year ended, but its potential importance far transcends experience of war and even the understanding of what must be done to win it. This second achievement is the realization—only partial, only fitful at the moment—of what a highly developed nation can do, if it likes; the realization of the constant glaring parallels between what it must do to win a total war and what it could do to win a peace. Nor has this achievement consisted only of fleeting glimpses of what is possible—such glimpses were responsible for half the political catchphrases of 1919–1939. Glimpses have been followed by belief, by determination and—mark this—by the first, small beginnings of action. When Ministers of the Crown proclaim that large scale unemployment will never be tolerated again, the average Briton may put his tongue in his cheek and may or may not put the cutting in his pocket-book. When Mr. Arthur Greenwood is made Chairman of a Ministerial Committee to consider all major aspects of post-war national living, the British public opens a keener eye . . . and feels something very like a beginning of something very like hope. But when Lord Reith—a hard-boiled no-nonsense administrator of the first class—says that the best motto for the future Minister of Reconstruction would be "No longer tolerate the intolerable," there is no longer any doubt about it: it is clear that some of the measures and means we must use for war can be used for peace and that our rulers are coming to the determination so to use them.

We do not know, we cannot yet know, the exact aims which these measures and means must seek to achieve after the war. But we do know the stages by which alone the great changeover can be made a change for the better. First must come decisions on the Big Things—industrial policy, the location of industry and the social and administrative services, the transport and housing necessary for each geographical section of industry. Second comes the planning policy which will provide the framework for the execution of the Big Decisions. Third comes the Building Industry which, in filling in the framework, will have its biggest task of this or any other age.

Under the Ministry of Building, the building industry is moving towards greater efficiency in war and also towards greater readiness for peace. The frills are being cut out, luxury has gone, soon nothing except the simple, plain and durable will be there for builders to work with: and simple units, simply grouped, are the fundamentals of all great architecture.

But—even in this grim January—all builders should remember that whether post-war building is good in bits or good altogether, depends not on the builders, but on the Framework and the Big Aims. For the next years these Big Aims cannot have first place in the first minds, yet they must not be out of all minds. A few able men must work at them constantly, the rest must be able to examine, every now and then, what has been done and what is proposed.

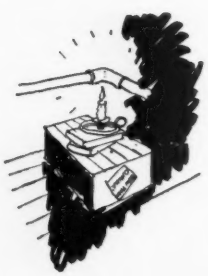
Let us remember that our problems today are great because we did not prepare for them yesterday. The problem tomorrow will be greater unless we prepare today.

1940

By Astragal

JANUARY

AS 1939 drew to its close it administered, via the Government, a puzzling farewell to a puzzled profession by striking it off the schedule of Reserved Occupations. The actual decision was not unexpected. Indeed architects had asked for it. But that it should have even been taken meant that architects had failed to convince the public of their use in war-time. The New Year then planted them on their own feet and left them to it, well behind in the struggle for war jobs. The war itself was still in the stage sometimes described by those who had no part in it as "phoney." To many, especially to our Merchant Navy and to the Finns, who were then gallantly stemming the Russian advance, it was genuine enough, but in the air there was undoubtedly an atmosphere of disinterestedness, even of unreality. On the Western Front generals were escorting their unresponsive schoolboy sons round the Maginot Line, and musical comedy stars were to be met in the War Zone as frequently as soldiers. Mink, indeed, was almost as common as khaki. At home Mr. Hore-Belisha was resigning from the cabinet, Gracie Fields was the National idol, and in America Mr. John D. Rockefeller, Jnr., had driven a silver rivet into the last building of Radio City. Mr. Yerbury's atelier started work, and THE ARCHITECTS' JOURNAL published a series of articles on temporary and semi-permanent buildings by Messrs. Faludi & Samuel. As the month ended the great freeze-up began.



FEBRUARY

For weeks snow lay in the streets of London. The temperature reached 20 degrees below freezing point, the Thames at Surbiton was frozen, and hardly a house escaped a bursting pipe. This year censorship forbade the usual public outcry against the building industry, and architects had no need to take off their telephone receivers and skulk within doors. Meanwhile it was fast becoming clear that the Government's half-hearted evacuation policy was leaving many thousands of children completely without schooling. Accordingly it was announced that all children, evacuated or not, must go to school, with half-attendance as a compulsory minimum. Schools in urban areas were to be re-opened and equipped with air-raid shelters.

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Still no bombs fell (except in Finland) and inevitably boredom took its toll in resignations from the Civil Defence Services. It was often remarked—happy carefree days!—that the first bomb to fall would definitely be a relief. In order to save timber the Government announced that broom handles were in future to be square instead of round in section.

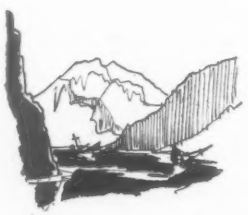
*

In Europe, Mr. Sumner Welles was making his "no comment" tour in company with his Bournemouth-born valet, and in Norway the *Cossack* rescued British prisoners from the *Altmark*.

MARCH

The seventh month of the war found the Building Industry still in a state of puzzled confusion. B.I.N.C. sent a deputation to discuss the problem with a committee of M.P.s, the only result of which was an appeal for suggestions. Mr. Howard Robertson began in THE ARCHITECTS' JOURNAL a series of articles in which he analysed the failures present within the industry. Two well-known figures in the architectural world, the Earl of Crawford and Dr. Thomas Adams, died during this month. Abroad, Finland had signed a peace with Russia, M. Reynaud had taken over from M. Daladier, and Hitler and Mussolini were closeted in their armoured train on the snowswept Brenner Pass. The war was beginning to show signs of movement. A British general announced that we would welcome a German attack.

APRIL



The month started with a Cabinet re-shuffle, with a result so inconspicuous that it was acidly suggested that in future it would be simpler for Cabinet Ministers to remain in their offices and merely change their names. But by now the war was beginning to come to urgent life, and events pushed cabinets and building industry alike into the background. Denmark was overrun and Norway invaded—an event which gave (in Quisling) a new word to the English language. The battles of Narvik were fought and Mr. Burgin (still then Minister of Supply) was photographed in a white military cloak—later declared in the House to be the only one of its kind—while seeing off the B.E.F. on a campaign which was to end in failure.

MAY

The loss of Scandinavia meant among other things the loss of timber and of paper. Various substitutes for the

former were devised and published in the technical press, which in common with all newspapers and journals became drastically reduced in size. No longer was it necessary to be pretty fit in order to handle *The Architectural Review*. The Civil Defence Services had their first and successful test when a German bomber crashed and exploded at Clacton—an event which gave rise to a hundred generalizations on the effects of blast, and which was safer than what.

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The Select Committee on War Expenditure revealed, to the surprise of nobody but the Government, shocking examples of extravagance, waste and delay through the muddled organization of official building contracts. The size of these contracts can be seen from the fact that war-time building reached more than half its normal peace-time activity. In Europe events were moving fast. Germany had invaded the Low Countries. Holland was defeated and Belgium capitulated without warning. At the height of the crisis Mr. Churchill became Prime Minister and it looked as if his first task would be to announce the loss or destruction of the whole B.E.F. This catastrophe was to be averted, but the times were naturally anxious.

JUNE

All through the blazing summer weeks the British Army, rescued from Dunkirk, was being re-organized and re-equipped. On June 10 Italy entered the war, and a few days later France capitulated. Within a week another armistice was signed in that weatherbeaten railway coach at Compiègne. At home things looked black indeed, and the invasion seemed imminent. The Home Guard was founded and a campaign of witch-hunting (for witch read Fifth Columnist) began. Aliens, friend and foe alike, were packed into camps or sent abroad ; vicars were imprisoned for ringing church-bells ; pub facetiousness was described as defeatist talk and punished with heavy fines ; we were exhorted by Mr. Duff Cooper to join (for a very short period as it proved) the Silent Army. Travel became difficult, as signposts and railway station names were removed, barriers were erected on all main roads, and to ask the way was to invite the deepest suspicion.

*

A tremendous programme of coastal defence works was initiated and quickly resulted in a shortage of bricks and cement, a state of affairs which would have been avoided had there been a Ministry of Building to plan future requirements.

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Mr. Stanley Hall, president of the R.I.B.A., died during this month and was succeeded by Mr. W. H. Ansell. The deaths in France were also announced of two young architects, Paul Quennell and Val Harding.

JULY

After such overwhelming events, July was quiet enough to enable everyone—including the surprised German army—to get their second wind. London had its first air-raid warning since September, and it proved uneventful—though you might not have thought so from the stories next morning. Coventry, ignorant of the unhappy fate in store for many of its buildings, decided to proceed with the building of 2,500 houses. These were designed by the City Architect—Mr. Gibson—to be built of precast concrete units and to incorporate air-raid shelters within their walls.

*

Mr. Bevin announced that there would be a Ministry of Building *after* the war, and the demolition was started of the water towers on Sydenham Hill—the last relics of the Crystal Palace.

*

In France, Marshal Pétain had assumed power, and in America the death was announced of Sir Raymond Unwin—perhaps the most distinguished personality who has ever presided over the R.I.B.A. Gracie Fields left for America, leaving her idol's crown to be scrambled for by Jack Warner and Priestley.

AUGUST

On August 1, the architectural profession closed its back doors and emergency entrances. All those unregistered as architects before that date, or who had not applied for registration, were no longer to be entitled to that name without qualifications. This important step forward was taken at a time when it attracted the minimum of attention. But though immediate results cannot be expected from it, it is nevertheless an essential preliminary to the future development of better building.*

*

During this month the Fighter Command won their decisive battle over the Luftwaffe. Enemy losses were so heavy that the mass daylight raid was afterwards only rarely attempted and eventually abandoned. Raiding, however, intensified, and sirens wailed day and night in the London area.

SEPTEMBER

The raids increased in number and violence until one evening after a day of raids, Londoners saw the Eastern sky glowing like a sunset from dockland fires, and realized, as they rattled homewards in bus and train, that London was " for it " that night. Some 400 people were killed in that first night-long raid of the Blitz, and though the casualties rarely rose so high again, the night raider was to become a regular visitor. The Civil Defence services worked magnificently, but breakdown occurred in several areas in the arrangements for feeding and re-housing the homeless. People who had been bombed out did not know where to go or whom to ask for help. A star American journalist reported that London was in so chaotic a state that, had Hitler persisted, it would have been conquered in a week. This, even for a star American journalist, was nonsense, but the situation was serious enough to cause what papers call " grave concern."

* The first conviction (against an estate agent) for misuse of the title architect was secured last month.

The deep *versus* dispersed shelter argument broke out afresh, while the public showed their views by trekking off nightly in thousands to the Tube stations. This was in direct conflict with official arrangements, but the authorities could not ignore the situation ; and white lines were painted on platforms to keep sleepers clear of passengers, and rough sanitary arrangements installed. " Andersons " and street shelters were unpopular. They were damp, dark, noisy and, in the public view, unsafe. In any case they were not designed for all-night use. Tube stations may be unhealthy and crowded, but at least they were warm, safe and fairly quiet.

*

The JOURNAL'S solution to the shelter problem was the requisitioning and strengthening of all lower floors in multi-floored, framed buildings. Like all compromises it has disadvantages and received some criticism, but seemed on the whole the most sound and workable scheme.

*

Meanwhile the bombs continued to fall, the most publicized of them burrowing its way below St. Paul's.

OCTOBER

Despite the incessant enemy attack, air-raid damage proved to be on a lighter scale than was anticipated, and the Government was encouraged by this to announce the preparation of a compulsory insurance scheme for all property owners, the details to be worked out later. Next came the welcome if belated news that a Ministry of Building was to be formed at once under Lord Reith. Press comments on the new Ministry's duties were ill-informed, and not much enlightened by an ineffective little letter to *The Times* from the President of the R.I.B.A.

*

Lord Reith's task, it soon appeared, was to guard the building industry's store cupboard, to allocate materials as they were most urgently required, to encourage standardization and to organize research. One of its first announcements was to prohibit all private building over the value of £500 except under licence.

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The Ministry came just in time. The whole building front badly needed overhaul and reorganization.

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However, shelter conditions were slowly improving, and to hasten the advance the Government informed all local authorities that they would be reimbursed by the Government for the cost of building and equipping shelters in their areas.

*

Abroad, the Germans were busy occupying Roumania, while America had introduced conscription.

NOVEMBER

It was fast becoming clear that those of the public who went to night-shelters—and though in London it was only 10 per cent. of the population it was a tidy number of people—preferred them to be deep and were prepared to put up with overcrowding. The official policy remained one of dispersal, but the authorities had to face up to the situation which had arisen, and arrangements were made to extend and improve accommodation in the Tubes and similar places. The recommendations of Lord Horder's Committee on shelters were accepted, but as the carrying out of them lay in the hands of local authorities, standards varied from the good to the frankly unspeakable. Such evils as queues and overcrowding were bound to continue so long as standards of comfort varied in different boroughs, and the fantastic situation remained, whereby a central authority bore the cost of all shelters, but was unable to secure a uniform standard of shelter conditions.

*

Even good shelters caused trouble. Some had become social centres in which the same people met night after night, and where strangers were not welcomed. One shelter indeed was so exclusive that when more bunks were fitted than were " members " to fill them, the remainder were secretly demolished to discourage outsiders. This was of course an isolated case, and the majority of " shelter clubs " were run with a more friendly spirit.

*

As the weeks drew on London grew used to its new way of living. The third month of the Blitz thumped and rumbled over the heads of a people who had accustomed themselves to the experience of being bombed. Most of them indeed had their bomb-stories, could sleep through a thundering barrage, and could deal with an incendiary bomb. The number of " shelter cabbages," who emerged from a shelter in the morning only to head the queue for the following night, was diminishing, and work no longer ceased with the shriek of the siren.

*

Soon the Blitz was diverted from London to the provinces, and Coventry, Bristol, Southampton, Manchester, Liverpool and Sheffield were in turn submitted to violent attack. Damage and loss of life were heavy, but each bombed city learned something from the experiences of its predecessor, and post-raid recovery became progressively more rapid.

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Abroad Italy launched her ill-fated attack on Greece, and in America Mr. Roosevelt was re-elected president for the third term.

*

In England the deaths were announced of Mr. Neville Chamberlain and Eric Gill.

DECEMBER

During this month the Government introduced their Insurance Schemes, compulsory for property, and voluntary for furniture and effects. The premiums were encouragingly moderate, and the whole measure was generally welcomed as a sound and workmanlike solution. Various inequalities of responsibility and other small drawbacks were disclosed, but doubtless these will be rectified after discussion by the House.

A scheme for automatic insurance for persons killed or injured in air-raids was introduced at the same time.

*

By now many of London's famous buildings had been damaged in some degree by air-raids, and the destruction in the streets, though not, in the broad view, extensive, was sufficiently obtrusive to start people thinking about the rebuilding of London. It did not need an architect to see how shoddy was most of the building laid bare by bombing, and how little of it was worth replacing. In the press facile and inaccurate comparisons with the Great Fire of London were constantly made, and Mr. Ivor Brown, writing from his penthouse on the western slopes of Mr. Garvin's Sunday article, asked if a brood of young Wrens was ready to take up its responsibilities—Young Wrens, as every school exhibition for the last five years has clearly shown, are almost two a penny. The real question is, what do we want of our new cities ?

*

The request of the ordinary citizen is simple enough. All he wants is a place which is better to live in, and by that he does not just mean a network of fast traffic roads, nor a haphazard collection of cramped and sooty parks made from areas laid flat by bombing. In order to achieve this aim—which is of course not nearly so simple as it sounds—two things are necessary.

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First, a master plan which is direct and straightforward enough for the ordinary man to understand and fight for, and, second, an authority with the powers to deal ruthlessly with the terrifying but complicated problems of ownership and property.

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If there is anything to be learnt from the Great Fire of London, it is that a city cannot and will not wait for a plan to be produced when the time for reconstruction actually comes—the plan *must* be evolved beforehand, and that means now.

PERSONALITIES

EXCEPT in the world of politics, war is a close season for personalities. Even the greatest figures of the day—film stars, financial magnates and football players—get pushed into the background, and the name even of a general is forgotten as quickly as the names of the men he commands. National Service of one kind or another draws a veil of anonymity over most of us, and here is the place perhaps to pay tribute to those many architects of all ages whose identities are thus temporarily submerged.

*

Of those who are left, there is none who dominates the architectural scene on the scale of Mr. Winston Churchill. This does not mean that Astragal's post of Personality of the Year is to be left vacant for lack of a candidate. If individuals are lacking, groups of individuals are not, and the award this year is made to the rank and file of the **A.A.S.T.A.** for the imagination, energy and initiative they have shown throughout the year.

*

Runner-up is the nameless, tireless (but very Scottish) voice at the end of the telephone of the A.J.'s **Information Bureau**. For over a year the owner of this voice has been guide, philosopher, technical adviser, poor man's lawyer, and telephone directory to the whole of the profession.

*

Astragal also doffs his tin hat respectfully to **Mr. Charles Annesley Voysey** for winning the Gold Medal and to the **News Chronicle** for describing him " as an expert in interior decoration " ; to poets **John Betjeman** and **Hope Bagenal** ; to **J. B. Priestley** for his postscripts, and to the camels at the Zoo, who were reported not even to have risen to their feet when a bomb demolished their house ; to **Michael Scott** on becoming an honorary citizen of New York for designing the Irish Pavilion and to **Mr. Epstein** for displaying " Adam " in an Oxford Street pin-table saloon ; to **Mrs. Borders** for winning her appeal, and to **Mrs. Townley** for her book on furnishing your home ; to **Mr. Frank Pick** upon his resignations from the L.P.T.B. and the Ministry of Information ; to **Mr. Rodney Tatchell** for his fire-fighting in Finland ; to **Mr. Alvar Aalto** for his services, past, present and future to that country ; to **Mr. Howard Robertson** for his analysis of the building industry—"The Next Years "—and to **Sir Alfred Hunt** for his statement that this industry has taken the place of the export trade as the vehicle of economic expansion ; to **Professor Abercrombie, Mr. Elvin** and **Mrs. Hichens** for their minority report calling for action in the problem of industrial organization ; to **Mr. Lubetkin** upon forsaking penguins for pigs, and to **Mr. John Lane** for his new batch of penguins and their authors **Mr. Thomas Sharp, Mr. J. M. Richards,** and the **25 anonymous scientists** ; to **Mr. Joseph Emberton** for being in the eyes of **Professor Reilly** a " Sir Galahad," and to **Mr. Raymond McGrath** for his work as a war artist ; to the prominent engineer who suggested that if you painted everything pale green it would be invisible from the air ; and to **Mr. Oliver Messell** who (with two pips up) is said to be more enterprizing than this as a camouflage officer ; to **Mr. Christopher Hussey** for his conversion to modern architecture upon seeing Serge Chermayeff's house in Sussex ; and to **Mr. Robert Byron** for still fighting the myth that modern architecture is nothing but functionalism; to **Messrs. Fitzmaurice** and **Allen** for their book on sound transmission ; and to the **Staff of the B.R.S.** for a good year's work ; to **Feliks Topolski** for his brilliant commentaries on war-time London, and for the first of his Penguin broadsheets ; to **Mr. Edward Carter and Staff** for keeping the library going through the Blitz ; and to the unknown opportunist who elaborated the bomb damage to his house and sold it profitably as a quaint old cottage ; to **Lord Reith** and **Mr. George Hicks** upon their appointments in the Ministry of Building, and to **Lord Horder** for his report upon Health in Shelters ; to the unknown band of **fire watchers** at St. Paul's Cathedral; and to **Lieut. Davies** and **Sergeant Wardrobe** for their extrication feat below the same building ; to ex-office boy **Albert Kahn** for continuing to design 10 per cent. of America's private industrial buildings ; and to the designer

(from the same country) of the stove pipe hat, " designed to emit, at regular intervals, puffs of scented vapour." Finally, to the **Noise Abatement League**, among whose objects, we are told, is " to assist members with their personal noise troubles."

*

They must have had a pretty busy year.

SOCIETIES

The R.I.B.A. started the year rather shaky on its feet, but still firm in its policy of not embarrassing the Government. It was obvious that it might be difficult, now that architects are unreserved, to get hold of the right type of architects once bombs began to fall in numbers. It was still obvious that if architects were to be properly used for this and other war purposes, both public propaganda and a private register (kept up-to-date to the minute) would be needed. But no pronouncements from Portland Place reminded the man in the street that architects still existed.

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Meantime an interesting census of members' occupations revealed that 63 per cent. of those who replied to it were in private practice, as against 30 per cent. in Government or official employment. These figures instead of settling an argument, merely started a new one. Among other activities the R.I.B.A. organized conferences on Housing and the Building Industry, and instituted a Research Board for the study of problems of post-war planning and research. Two other good features of the year's work were the organization of the Industrial Housing Competition—the rather disappointing results were no fault of the organizers—and the conference arranged in November to discuss a scheme for the recording by photographs and drawings of buildings damaged or likely to be damaged by enemy action.

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It is not a resoundingly impressive record. But those who criticize it should remember, first, that getting a " square-deal "—for railways or for architecture—is a full-time job for full-time, well-paid men. It is not a matter for a few evening committees and letters to *The Times*. Secondly, the Institute is heavily in debt, and in no position to assume responsibilities it cannot properly carry out. Thirdly, the majority of people who so loudly proclaim the failure of the R.I.B.A. to do this or that are those who have never given to the Institute a moment of their time, or a fraction of their active or personal support. Finally, the Institute cannot help those who will not help themselves. The figures, published in a recent *R.I.B.A. Journal*, which showed that only one-third of the architects offered a war-time post had even bothered to answer the letter, are frankly a disgrace. That lazy two-thirds shame not only themselves—which would not matter—but the whole profession, and once more they have helped to swell the cry that architects are an impossible lot. So much for the defence. For the prosecution it must be said that the lack of initiative the R.I.B.A. has displayed in public relations contrasts very sharply with the courageous and enterprising activities of the A.A.S.T.A. This society, with almost none of the professional standing of the R.I.B.A.—but blessed perhaps with more selfless and enthusiastic members—can look back on a year's work of which it may well feel proud. Its various committees have worked hard and well, and regular reports have been issued on shelter-policy, group billeting of children, temporary buildings and bunks. All these reports were excellent, concise and perfectly timed, and though none of their recommendations have yet been accepted by the Government, they are gaining support among local authorities. Several exhibitions were organized—one, dealing with A.R.P., a travelling show—and panels of technical advisers were formed to assist tenants over problems of war-damage.

*

The Housing Centre has continued its valuable work, and amongst other activities has formed a 1940 Council to promote the planning of social environment. The Town Planning Association convened a conference on National Planning Policy, and later in the year issued a report saying that effective planning under existing laws was impossible.

EXHIBITIONS

During early Summer the war provided an exhibition against whose size, cost and big-scale display not even the World's Fair, opening for its second year, could hope to compete. Work on the exhibition grounds outside Rome slackened and eventually ceased, while in England—doubtless to the great relief of Eminent Persons—there was no Ideal Homes Exhibition and no B.I.F. In the Spring, Burlington House was the scene of a vast and shapeless show of paintings, and later of the Royal Academy's Summer Exhibition, which showed, as Professor Reilly remarked, no sign of deep calling to deep!

*

In January, the Building Centre held a disappointing show of hoarding designs, but the " Railings for Scrap " exhibition organized later in the year by James Melvin and the Brothers Westwood was highly successful. Of the small galleries, the Leicester Galleries keeps top of the class with a fine record of interesting shows, kept going despite the blitz, which gave us the chance of seeing the work of (among others) Anthony Gross, John Piper, Jacob Epstein and Henry Moore.

*

The R.I.B.A. travelling exhibitions continued their successful provincial tours, and in August the A.A. opened their annual show, which was as lively and stimulating as ever.

*

All these efforts pale beside the magnificent achievements during 1940 of the National Gallery. The year opened here with a finely selected and beautifully hung show of

British Painting since Whistler. This was followed by the first exhibition of works by the war artists—an uneven but exciting show, which, if it plumbed no depths of emotional experience, at any rate avoided the rocks of banality. This exhibition remains on permanent view, but is constantly being added to as time goes on.

*

The year closed with a show of drawings by Augustus John. Not the least important of the National Gallery's activities this year has been the home it provided for the concerts organized by Myra Hess. This was an innovation which must be preserved.

*

The exhibition year came to an end with the final click, round the midriff of the 45th million visitor, of the turnstiles at the World's Fair.

CASUALTIES

The following list of buildings and places of architectural interest which have been damaged, destroyed or hit by bombs is, of course, incomplete, and will, unfortunately, become increasingly out of date. It is included, however, in the belief that it will be of considerable interest to architects who may be still uncertain of the fate of some of their favourite buildings. Here it is then, and it makes melancholy reading.

Churches

Westminster Abbey
St. Paul's Cathedral
St. Martin-in-the-Fields
St. Clement Danes
St. Giles, Cripplegate
St. Swithin's, Cannon St.
St. Augustine's, Watling St.
St. Boniface, Adler Street
St. Dunstan-in-the-East
St. Clement's, Eastcheap
St. Magnus the Martyr
St. Mary-at-Hill
St. Mary Woolnoth
St. Margaret's, Westminster
St. John, Smith Square
St. Mark's, Regent's Park
Islington Parish Church
St. Bride's, Fleet Street
St. Lawrence Jewry
St. Mary Aldermanbury
St. Andrew-by-the-Wardrobe
St. Stephen's, Coleman St.
Canterbury Cathedral
Coventry Cathedral
Liverpool Cathedral
St. James', Piccadilly

Hospitals

St. Thomas's
Great Ormond Street
St. Bartholomew's
Chelsea

Palaces

Buckingham Palace
Kensington Palace
Lambeth Palace
Eltham Palace

Museums

British Museum
Tate Gallery
National Portrait Gallery
Sir John Soane's Museum
Wallace Collection
Dr. Johnson's Memorial House
Burlington House
Imperial War Museum
Hogarth House

Squares and Streets

Berkeley Square
Leicester Square
Kensington Square
Smith Square
Gough Square
Neville's Court, E.C.
Hanover Square
Regent Street
Park Lane
Piccadilly
Royal Arcade
Savile Row
Park Crescent
Chester Terrace
Mecklenburgh Square
Brunswick Square
Portland Place
St. Peter's Square, S.W.
Lincoln's Inn Fields

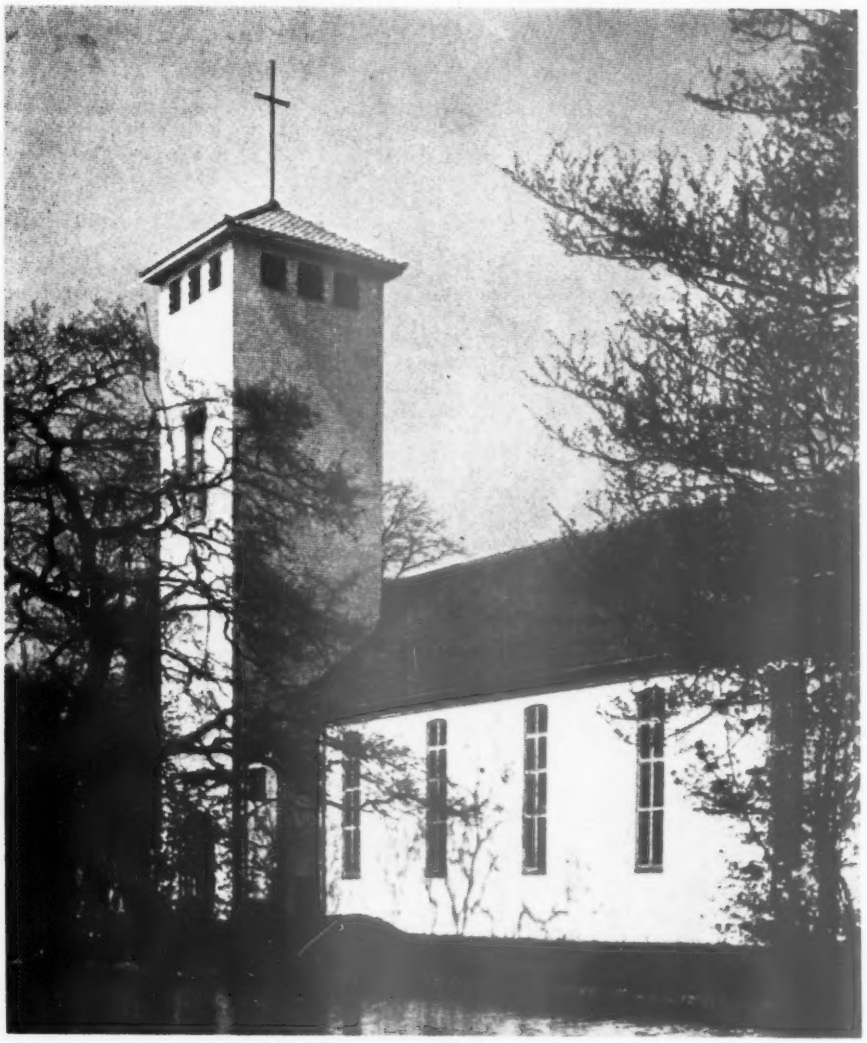
Schools and Colleges

Eton
Harrow
Wellington
University College, London
University College, Bristol

Miscellaneous

Houses of Parliament
Guildhall
Inner Temple Library
Girdlers' Hall
Somerset House
County Hall
Westminster Hall
Paymaster's Office
Bank of England
Tower of London
Holland House
Apsley House
Radnor House, Twickenham
Trinity House
Arts Club
Reform Club
Carlton Club
" In and Out " Club

ALL SAINTS' CHURCH,

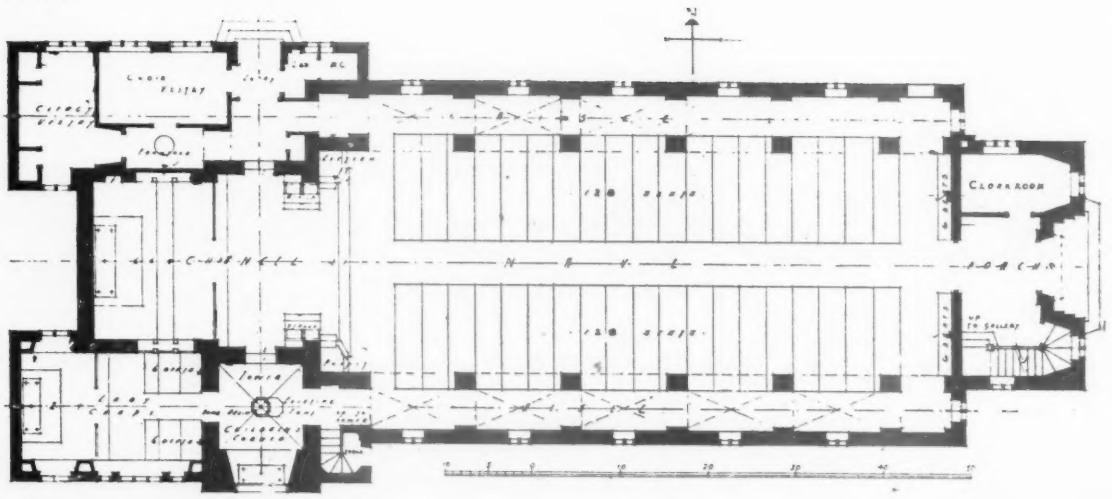


PROBLEM — Church, to accommodate approximately 320, with a tower, at a cost of £8,000. A vicarage to be built later on the same site.

SITE AND LAYOUT— The site is a very attractive one, among trees at the edge of a pond beside a common. The tower is placed at the end of the main approach road. The church is designed to group with the future vicarage. The south side of the church by the pond is laid out as a water terrace.

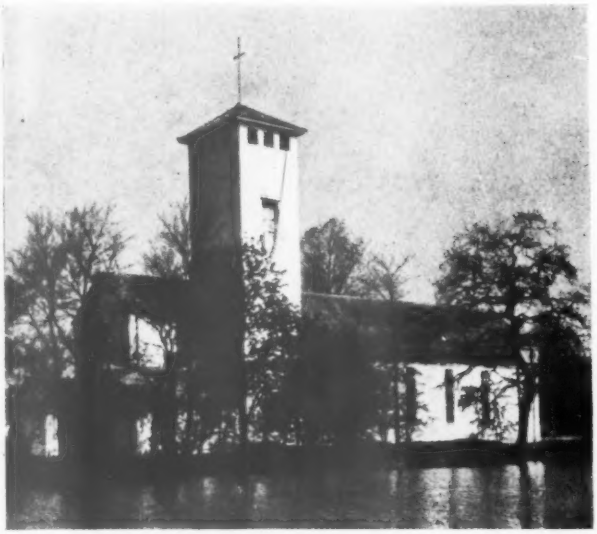
Left : view from south-east.

PLAN



WESTON GREEN, SURREY

DESIGNED BY EDWARD MAUFE

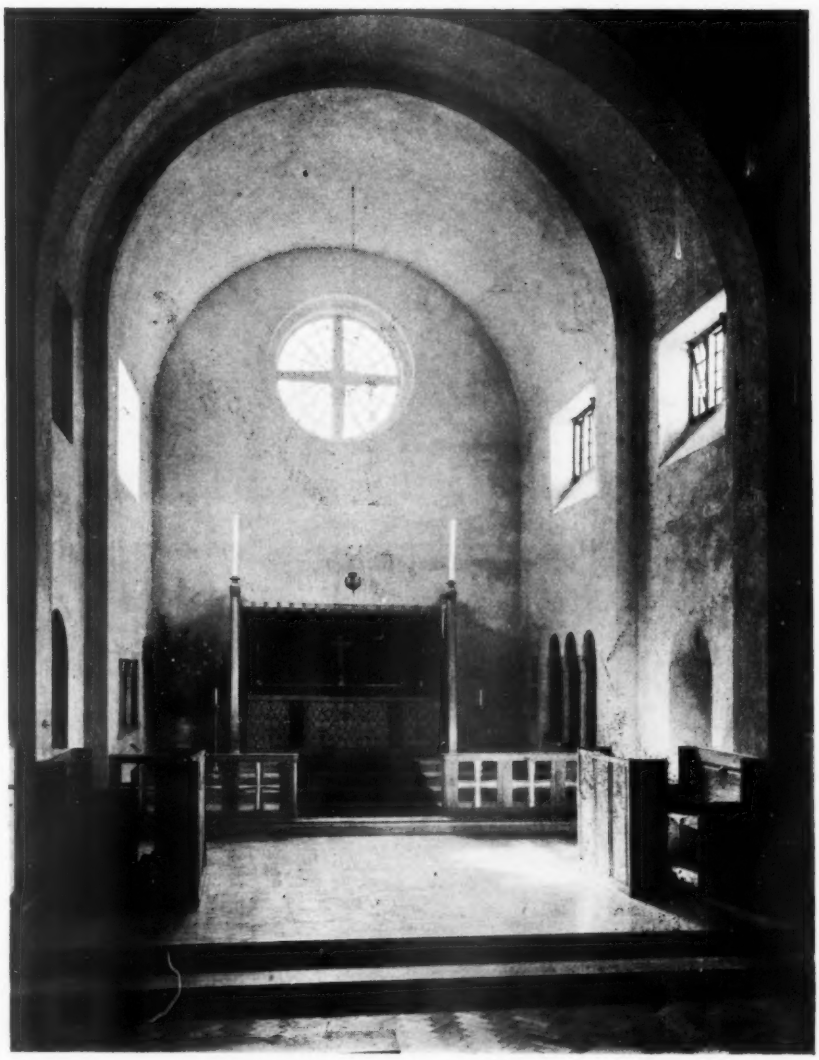


CONSTRUCTION, MATERIALS, ETC.—Cement brick walls and arches, colour-washed externally. Stone-coloured roofing tiles. The east door hood is in cast lead, with an inscription finished in gold, reading "Venite Adoremus Deo."

INTERNAL FINISHES—Walls are finished in plaster with wood floats left uncoloured. The roof is of pine beams left natural colour with silver metal stars as fixing studs. Wall boards, left natural colour, have been placed between beams. The nave floor is in Seraya from British North Borneo; the chancel floor in travertine. There is a stepped sedilia. The piscina is in Clipsham stone, with carving by Mr. Vernon Hill. Lighting is concealed. All furnishings were designed by the architect, except for font and lady chapel frontal, cross and candle-sticks, which were reused from the temporary church.

HEATING—There is a pipeless heating installation with electric fires in vestries and study.

The general contractors were H. and F. H. Higgs, Ltd. For list of sub-contractors see page 50.

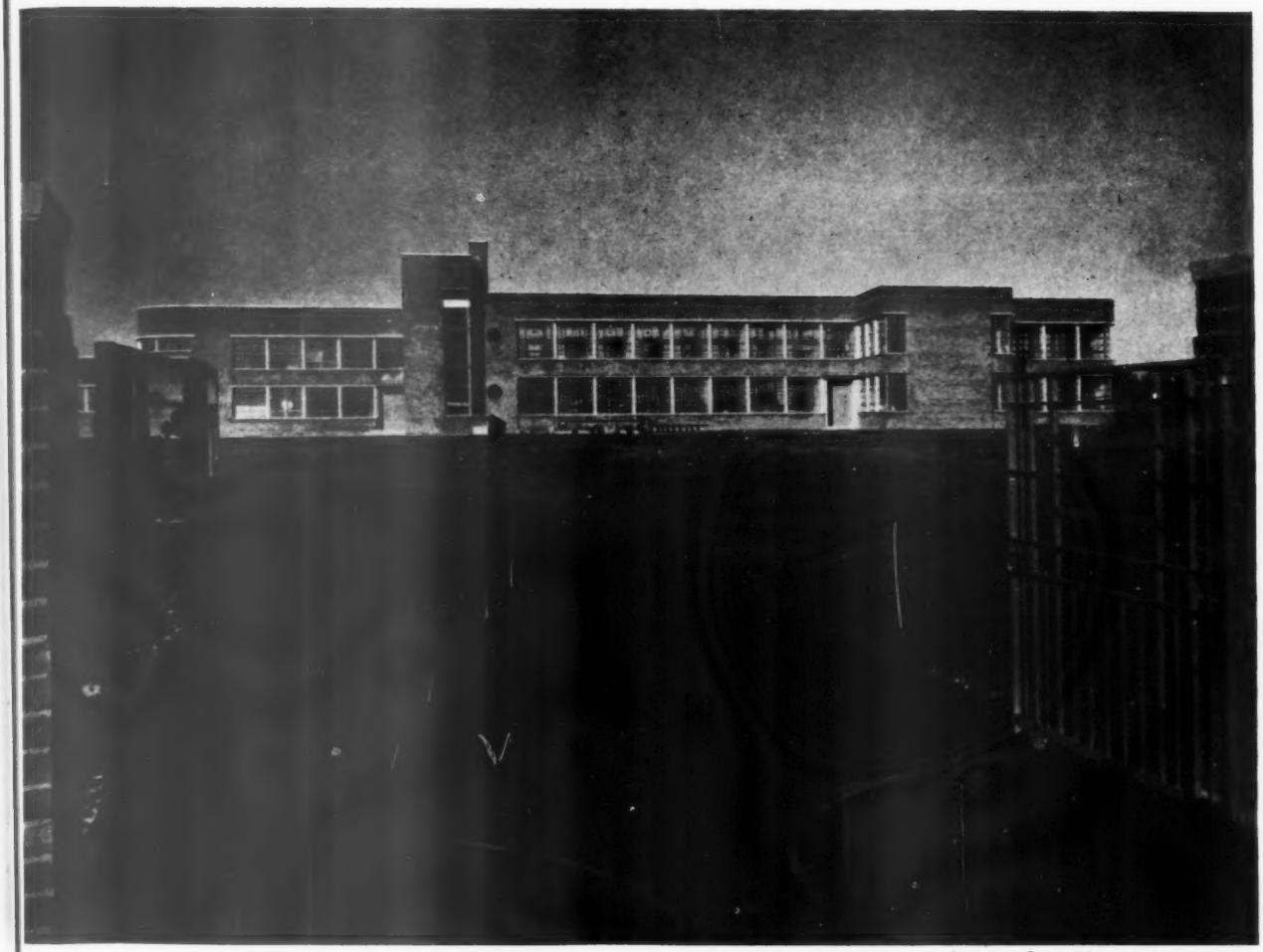


PLANNING—The approach road is on the east, and the parochial church council agreed that the main entrance should also be at the east. A passage aisle type of plan was adopted, with the lady chapel on centre of south aisle. The choir is in the east gallery, while a study for the vicar is included in the tower. There is a vaulted children's chapel at the base of the tower.

Above, the tower from the south-west; right, the chancel.

Left, chancel and choir stalls ; below, view at east end, looking into porch ; and the Lady Chapel.

CHURCH, WESTON GREEN • BY EDWARD MAUFE



A view from the entrance gates

TIDWORTH DOWN SENIOR SCHOOL

DESIGNED BY T. WALKER, COUNTY ARCHITECT

GENERAL—The school has been built as a senior mixed school for children, drawn mainly from six Wiltshire and two Hampshire villages. It accommodates 440 boys and girls. The area of the site is approximately 14 acres.

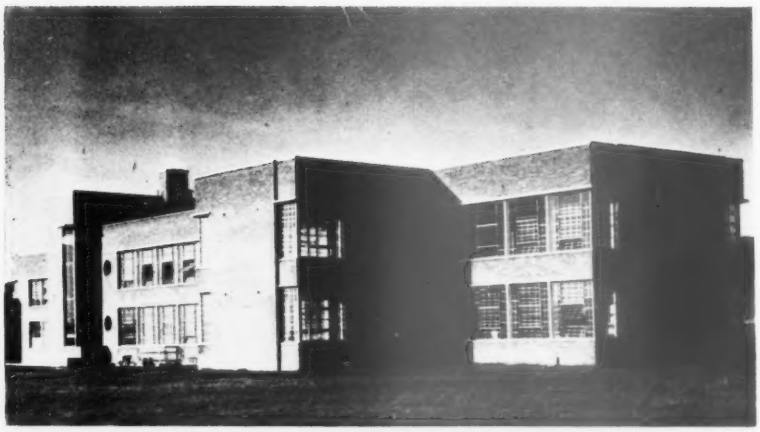
PLAN—The school has been planned in direct relation to the playing field and garden, and is arranged in blocks to minimize the movement of children between rooms. The dining room can be used as a green room for the stage in the assembly hall, and the stage as an additional dining room. The assembly hall is also used as a gymnasium, with portable apparatus. A future gymnasium will be built near the dining room block.

CONSTRUCTION—Steel frame; external walls, brick, 11 ins. and 15½ ins. thick; internal walls, brick, 9 ins. thick. Roofs and first floor, hollow tile, finished with asphalt; ground floor and basement, concrete, reinforced with fabric.

INTERNAL FINISHES—Floors: classrooms, wood block on concrete; corridors and cloakrooms, granolithic finish; showers, coloured asphalt; assembly hall, maple strip on joists. Walls and ceilings of classrooms and corridors, plaster with distemper finish; walls of changing rooms, fair faced brickwork, distempered; staircase, pre-cast concrete with granolithic finish. Fittings generally, deal; wall benches, deal with teak tops; library fittings, walnut; flush doors. Each practical room and science room has its own store, and there is a generous amount of storage space throughout the building. In the ordinary classrooms the blackboards are designed as part of a cupboard and locker unit, and in the corridors there is a locker for each child. The interior of the school is treated in pastel shades of green, blues, and greys.

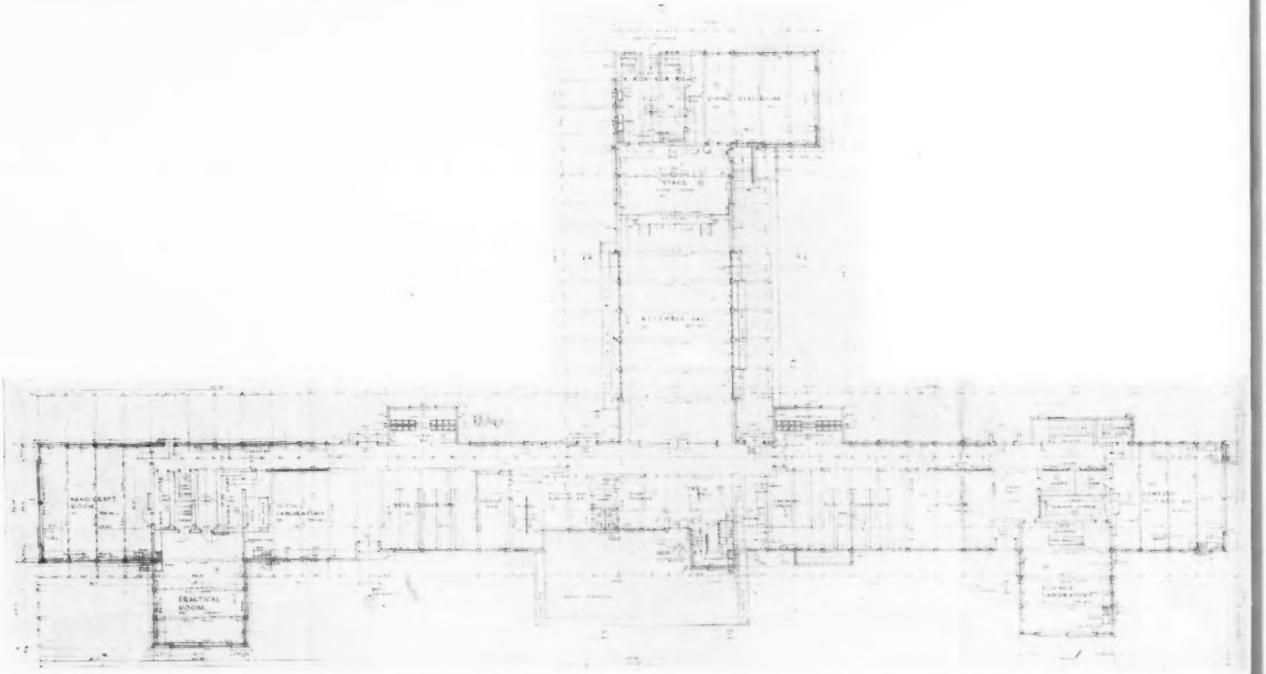
SERVICES—Heating, low pressure accelerated hot water, with radiators and ceiling panels in the assembly hall. Direct hot water service to basins and showers.

The general contractors were Messrs. W. E. Chivers and Sons, Ltd.; for list of sub-contractors see page 50.



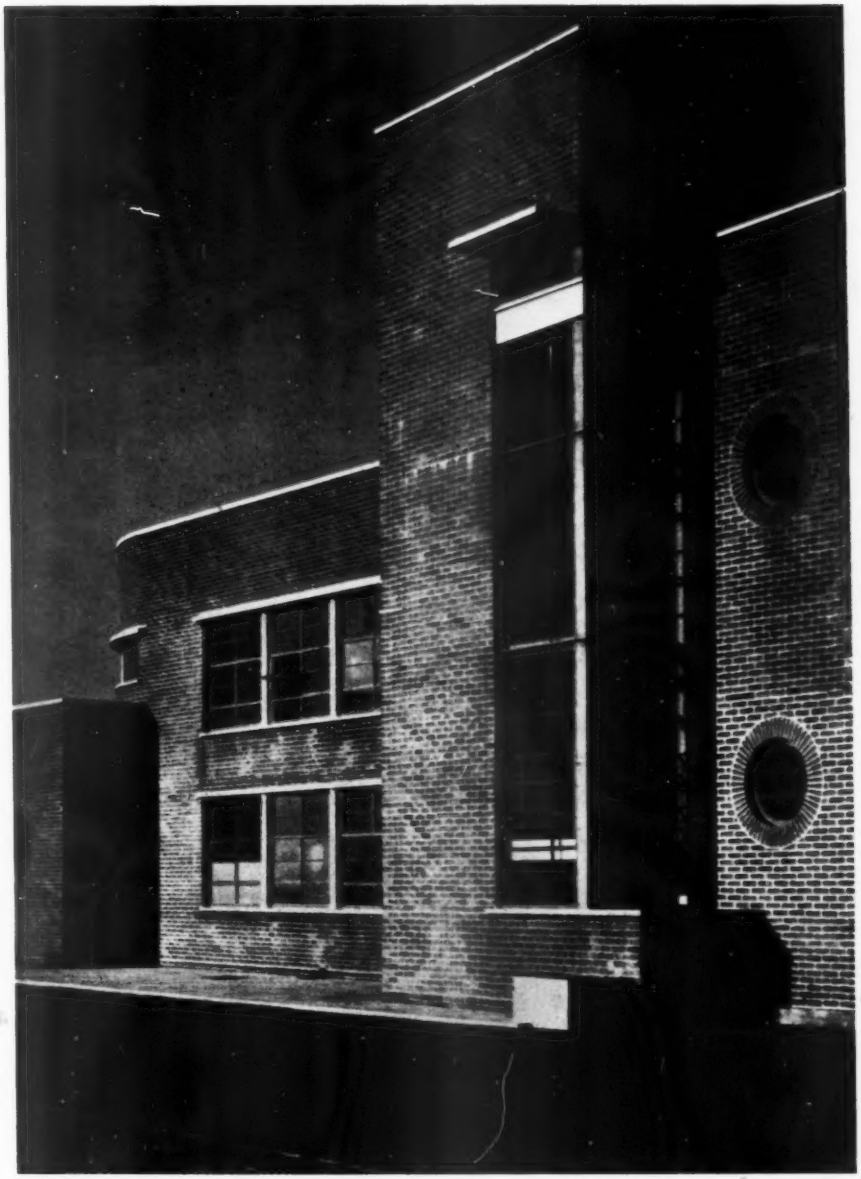
Left, a general view of the main front, taken from the south-east; below, looking east from the main entrance.

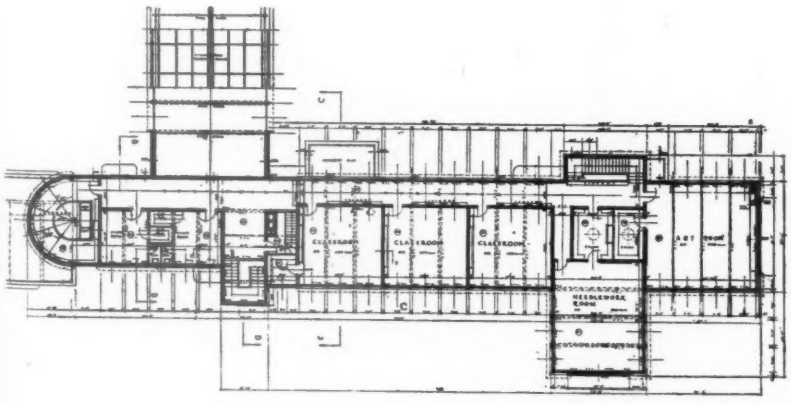
GROUND FLOOR PLAN



TIDWORTH DOWN SENIOR SCHOOL • DESIGNED BY

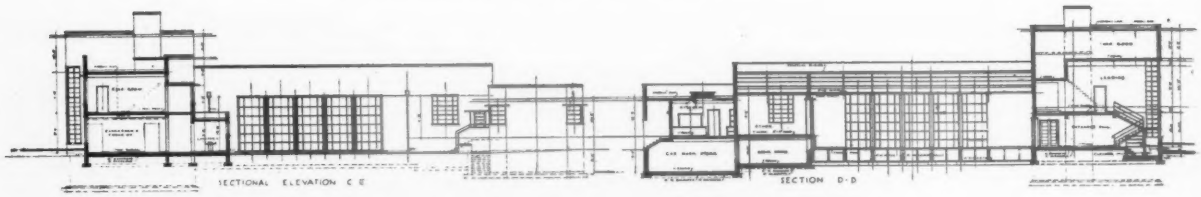
Right, the main staircase window.





FIRST FLOOR PLAN

BY T. WALKER, COUNTY ARCHITECT, WILTS.



ASSEMBLY HALL: ELEVATION AND SECTION

Left, the south-west side of the assembly hall. The north-east side has a similar treatment, as shown by the elevational drawing reproduced above.

TIDWORTH DOWN SENIOR SCHOOL • DESIGNED

Top, the assembly hall, looking towards the stage ; right, doors to assembly hall from crush hall, and the children's lockers, first floor corridor.

BY T. WALKER, COUNTY ARCHITECT, WILTS

NEWS

THE PRIME MINISTER

The Council of the R.I.B.A. have invited the Prime Minister to accept the Honorary Fellowship of the R.I.B.A.

The Prime Minister has sent to the President—Mr. W. H. Ansell—the following reply :—

10, Downing Street,
Whitehall.
8 *January*, 1941.

Sir,—I have great pleasure in accepting the invitation of the Royal Institute of British Architects to elect me to an Honorary Fellowship. I am grateful to you and the Council of the Royal Institute for the honour which you do me and I shall be proud to be associated with such an illustrious body.

Yours faithfully,
WINSTON S. CHURCHILL.

The President of the
Royal Institute of British Architects.

R.I.B.A.

NEW MEMBERS

On January 7 the following members were elected :—

As Fellows (4).—Carter, P. G. J. (Watford, Herts) ; Peat, J. T. W. (London) ; Binns, H. W., F.S.I. (London) ; Wright, A. (Glasgow).

As Associates (20).—Allen, T. P. (The Polytechnic, Regent Street, London), (London) ; Cathery, E. L. (London) ; Crook, P. H. (Architectural Association), (Eastbourne) ; Dobson, G. G., Dip. Arch. (Distinction), (Liverpool). (University of Liverpool), (Auchterarder, Perthshire) ; Garrod, A. R. (Architectural Association), London) ; Henderson, J. M. (Uddingston) ; Hyde, L. A. (Earlsdon, Coventry) ; Kearsley, E. D. (Leeds School of Architecture) (Meltham Mills Vicarage, near Huddersfield) ; Lemon, A. L. C. (Aberdeen School of Architecture, Robert Gordon Technical College), (Stonehaven) ; Marshall, E. W. (Architectural Association), (Warminster, Wilts.) ; Murphy, F. F., B.Arch. (University College, Dublin), (Cork) ; Pascall, C. (Architectural Association), (Purley, Surrey) ; Paul, W. F. E. (R.W.A. School of Architecture, Bristol and the Architectural Association), (Bristol) ; Ward, K. (Leeds School of Architecture), (South Milford, Yorks.) ; Wright, J. H. (The Polytechnic, Regent Street), (London).

Overseas.—Brown, D. M. (Port Elizabeth, South Africa) ; Le Roith, H. H., B.Arch. (Johannesburg, South Africa) ; Parker, R. S., B. Arch.Rand. (Salisbury, S. Rhodesia) ; Stern, M. F., B.A.(Arch.), (Cape, South Africa) ; Thorrold-Jaggard, W. (University College, Auckland, N.Z.), (Palmerston North, New Zealand).

As Licentiates (7).—Bell, A. P. (Liverpool) ; Fendick, J. R. (Stratford-on-Avon) ; Gilbert, R. L. (Woking, Surrey) ; Irwin, G. F. (High Wycombe) ; Lord, H. K. (Isle of Man) ; Smith, F. A. (Leicester) ; Wright, R. (Carlisle).

R.I.B.A. EXAMINATIONS

INTERMEDIATE EXAMINATION

The R.I.B.A. Intermediate Examination was held in London, Leeds, Newcastle and Plymouth, from November 15 to 21, 1940. Of the 96 candidates examined, 34 passed and 62 were relegated. The successful candidates are as follows :—

Brendon, A. G. C. ; Campbell, R. C. ; Cockburn, G. C. ; Cook, L. A. L. ; Cook, W. H. ; Dawson, D. S. ; Dimond, J. F. ; Farrow, D. G. ; Fowler, R. K. ; Garner, M. J. ; Gillett, R. P. H. ; Green, C. S. ; Haley, E. A. ; Hammond, G. N. ; Hatton, J. S. ; Hayman, G. A. C. ; Iredell, J. C. L. ; Jarrett, M. C. ; Knapton, A. D. ; Lupton, T. M. ; McWiggan, G. ; Nicholls, W. E. ; Porritt, H. H. ; Price, L. R. C. ; Reynolds, J. I. ; Singleton, R. A. ; Skelton, N. T. ; Slatter, G. E. F. ; Stedham, R A. ; Susskind, A. J. ; Tindall, K. ; Waller, C. A. ; Wilkinson, G. H. ; Wilson, A. M. S.

FINAL EXAMINATION

The Final Examination was held in London and Edinburgh from November 27 to December 5, 1940. Of the 85 candidates examined, 53 passed as follows :—

Passed whole examination		27
,, ,, ,,	subject to approval of thesis	10
,, ,, ,,	subject to approval of thesis and remaining Testimonies of Study	3
,,	subject to approval of remaining Testimonies of study	2
Passed Part 1 only		8
,, ,, ,, ,,	subject to approval of remaining Testimonies of Study	3
		53

32 Candidates were relegated.

The successful candidates are as follows :—

Addison, A. J. (subject to approval of thesis and remaining Testimonies of Study) ; Bailey, D. C. (subject to approval of thesis) ; Betham, R. M. (subject to approval of thesis and Testimonies of Study) ; Brown, B. G. ; Burton, H. E. (subject to approval of thesis) ; Bushell, P. E. ; Carney, J. E. (Part 1 only) ; Chilton, E. R. ; Chivers, T. A. (subject to approval of thesis) ; Clark, F. (subject to approval of thesis and remaining Testimonies of Study) ; Clayton, R. W. ; Collington, F. W. L. (subject to approval of thesis) ; Cooper, S. E. ; Corner, T. H. ; Crookes, R. (subject to approval of thesis) ; Cuthill, C. M. ; Dorey, W. A. ; Dowland, B. H. ; Eaton, T. A. (Part 1 only) ; Ferguson, W. K. ; Frearson, A. ; Gemmell, A. ; Godfrey, J. A. (Part 1 only) ; Haddy, J. A. ; Hains, E. P. (Part 1 only) ; Hazlewood, W. R. ; Heape, E. (Part 1 only) ; Hodgkinson, D. W. (Part 1 only ; subject to approval of Testimonies of Study) ; Holtby, R. (*Distinction in Thesis*) ; Johnson, S. A. E. (Part 1 only ; subject to approval of remaining Testimonies of Study) ; Kay, H. A. ; Kent, P. (subject to approval of thesis) ; Leggatt, R. W. ; McClelland, J. ; Martindale, C. B. (subject to approval of thesis) ; Moore, R. I. (subject to approval of remaining Testimonies of Study) ; Osgood, F. F. (Part 1 only) ; Peat, E. F. ; Rymills, W. G. ; Salisbury, G. ; Singer, T. S. (subject to approval of thesis) ; Slater, J. M. (subject to approval of thesis) ; Smith, H. T. D. (Part 1 only ; subject to approval of remaining Testimonies of Study) ; Strong, A. J. ; Thompson, R. G. ; Thornton, W. R. ; Tocher, W. R. ; Todd, A. S. (subject to approval of remaining Testimonies of Study) ; Upright, M. ; Wagg, D. (Part 1 only) ; Ward, B. V. (subject to approval of thesis) ; Whelan, R. St. G. (Part 1 only) ; Wilson, H. E. (*Distinction in Thesis*).

SPECIAL FINAL EXAMINATION

The Special Final Examination was held in London and Edinburgh from November 27 to December 4, 1940. Of the 14 candidates examined, 11 passed (1 of whom sat for and passed in Part 1 only) and 3 were relegated.

The successful candidates are as follows :

Baxter, D. ; Coates, L. R. ; Fletcher, F. J. ; Gould, S. C. ; Higson, T. F. (Part 1 only) ; Hunter, D. M. ; Lewis, D. E. W. ; Mundy, W. H. ; Sanderson, G. S. ; Stone, S. J. ; Waites, R. R.

EXAMINATION IN PROFESSIONAL PRACTICE

The examination in Professional Practice for students of Schools of Architecture recognized for exemption from the R.I.B.A. Final Examination was held in London and Edinburgh on December 3 and 5, 1940. Of the 8 candidates examined, 6 passed and 2 were relegated.

The successful candidates are as follows :

Currie (Miss), M. E. ; Hamilton, H. J. D. ; Lennon, J. D. Lewis, B. A. ; Murray, J. E. ; Yardi, S. R.

CEMENT COMMITTEE APPOINTED

Lord Reith, Minister of Works and Buildings, has appointed a committee, under the chairmanship of Mr. George Balfour, M.P., to consider Cement Production. The appointment of this committee was mentioned in the House of Commons by the Parliamentary Secretary, Mr. George Hicks, recently. The terms of reference are :—

"To consider and report to the Minister of Works and Buildings whether, bearing in mind the probable demands for cement in meeting current needs and in post-war reconstruction, and taking into consideration economic, strategic and other factors affecting the allocation of cement, new cement works should be established, existing ones extended or old plant modernized ; and, if so, what general considerations, financial, geographical and economic, should apply."

The Committee is as follows :—

Mr. George Balfour, M.P., J.P. (Chairman), Chairman of Messrs. Balfour, Beatty and Company Limited, one of the leading firms of civil engineering contractors and chairman of a number of electricity supply companies.

Mr. R. Bullock, a National Industrial Officer of the National Union of General and Municipal Workers.

Major F. C. Cook, C.B., D.S.O., M.C., M.Inst.C.E., Chief Engineer, Highways Division, at the Ministry of Transport.

Mr. R. Coppock, General Secretary of the National Federation of Building Trades Operatives, President of the International Federation of Building and Woodworkers.

Mr. A. Deakin, Acting General Secretary of the Transport and General Workers' Union.

Mr. Joseph Stanley Holmes, M.P., Liberal National M.P. for the Harwich Division and Vice-President of the Building Society's Association.

Sir William McLintock, Bart., G.B.E., C.V.O., Senior Partner of the firm of Thomson, McLintock and Company, chartered accountants.

Mr. George Parker, director of Messrs. George Parker and Sons, Limited, builders and contractors, chairman of the National Joint Council for the Building Industry, past president of the National Federation of Building Trades Employers.

Mr. P. E. Thomas, O.B.E., LL.D., F.R.I.B.A., who was president of the R.I.B.A. from 1935-1937.

The Secretary will be Mr. C. I. C. Bosanquet, Lambeth Bridge House, S.E.1.

THE BUILDINGS ILLUSTRATED

ALL SAINTS' CHURCH, WESTON GREEN, SURREY (pages 42-44). Architect : Edward Maufe, A.R.A. The general contractors were H. and F. H. Higgs, Ltd. Among the sub-contractors and suppliers were the following : Eric Munday, foundation stone and lettering ; Hunziker, Ltd., bricks ; Chase and Co., Ltd., heating ; Roberts, Adlard and Co., Ltd., roof tiling ; Wainwright and Waring, Ltd., windows and cross ; J. Whitehead and Sons, Ltd., paving ; Hollis Bros. and Co., Ltd., flooring ; R. C. Cutting and Co., Ltd., lightning conductor ; Trussed Concrete Co. and M. and E. Equipment, Ltd., suspended ceilings ; Haywards, Ltd., iron vertical ladder and dome light ; R. L. Pickard and Co., rainwater heads ; Fredk. Braby and Co., ventilators ; Shanks and Co., Ltd., sanitary fittings ; W. L. and F. M. Jones, Ltd., electrical installation ; Heal and Son, Ltd., Ediswan Electric Co., Tucker and Edgar, and Holophane, Ltd., electric light fittings ; Mears and Stainbank, bell ; J. Starkie Gardner, Ltd., balcony, railings and flagstaff ; Plashett Saw Mills, field gates ; Mealing Bros., Ltd., chairs ; Gent and Co., Ltd., clock ; Ferranti, Ltd., electric fires ; James Gibbons, Ltd., ironmongery ; F. and H. F. Higgs, clergy stalls and fittings in clergy vestry ; Chas. Farris, Ltd., alms boxes ; A. R. Mowbray and Co., Ltd., aumbry ; Norrington and Adams, altar furnishings ; Heal and Son, Ltd., altar and riddle posts.

TIDWORTH DOWN SENIOR SCHOOL (pages 45-49). Architect : T. Walker, F.R.I.B.A. The general contractors were W. E. Chivers and Sons, Ltd. Among the sub-contractors and suppliers were the following : Asphalte Specialists, Ltd., asphalte ; Market Lavington Brick and Tile Co., bricks ; Blokcrete Co., Ltd., artificial stone ; Gardiner Sons and Co., Ltd., casements, window furniture, and structural steel ; Frazzi, Ltd., fireproof construction ; Turners Asbestos Cement Co., Turnall asbestos sheets ; G. R. Speaker and Co., Ltd., Eonit partitions ; Stevens and Adams, Ltd., maple strip flooring and woodblock flooring ; Brightside Foundry and Engineering Co., Ltd., central heating ; James Bros. (Wiltshire), Ltd., electric wiring and gas fixtures ; Shanks and Co., Ltd., sanitary fittings ; Carter and Aynsley, Ltd., door furniture ; John Hall and Co. (Warminster), Ltd., wall papers ; A. G. Matthews, Ltd., school fittings ; Potter Rax Gate Co., Ltd., cloakroom fittings.

A Grim Fairy Story

The Poor Student

By Brian Herbert

IT seems that once there is a poor student of architecture and it is me and I am sitting in my fourth-floor back thinking beautiful thoughts like Ham and Eggs which is very uplifting, as I have not eaten in so long I do not remember when.

Suddenly I see in the corner there is a rat. I do not mean it is a no-good guy like a hoodlum, but it is a lousy animal with a long tail and some fancy whiskers. It is like my Aunt Mehitabel which I do not care for and I throw a crust of bread at it. This crust is so old I am not able to eat it and it has been around so long it is part of the fittings. Well, this rat looks at me kinda old-fashioned and there is a flash and a lotta smoke and suddenly there is no rat but there is a toney blonde, which is a very nice thing as I do not like rats, but this blonde is a lulu. I am not surprised on account of, I have seen this done in the movies but not so good, as this blonde has wings in back of her all in Glorious Technicolour.

She keeps smiling at me and waving a stick and saying O thank you, O thank you, O thank you, O thank you, she says. I get it. She is pleased about something.

This dame says Listen! I am the good fairy Peach Blossom and a wicked jealous old witch turns me into a rat until someone shares his last crust with me. You must be the Good Youngest Son O thank you. Me, I think this O thank you stuff is getting in my hair and I say I have not any brothers but I have read old man Andersen and the Grimm boys and I reckon she will now grant me three wishes, and she says I will now grant you three wishes, and she looks at me like she swallowed some rock alum. I see she is not happy that I am talking through her lines.

"It is a lousy animal with a long tail and some fancy whiskers . . ."

Well, I am feeling like I have won a Civic Centre competition, so I pipe down and I think of my stomach which is so empty, it could give the great open spaces some pointers, and I say Okay and I say Well I wish for a ritzy set of eats like minestrone soup and stuffed goose and bœuf-pressé-à-la-gelée and œufs-en-cocotte and some pine-apples and a great flagon of mead which sounds swell, but I am wondering what will it be like. I wonder what will it be like and my gastric juices are starting in chasing around lickety-split, when this dame waves her stick and says Hi-cockalorum, Hi-cockalorum, and there is another flash which singes the bed-drapes and when some smoke clears away there on the table is a can of beans.

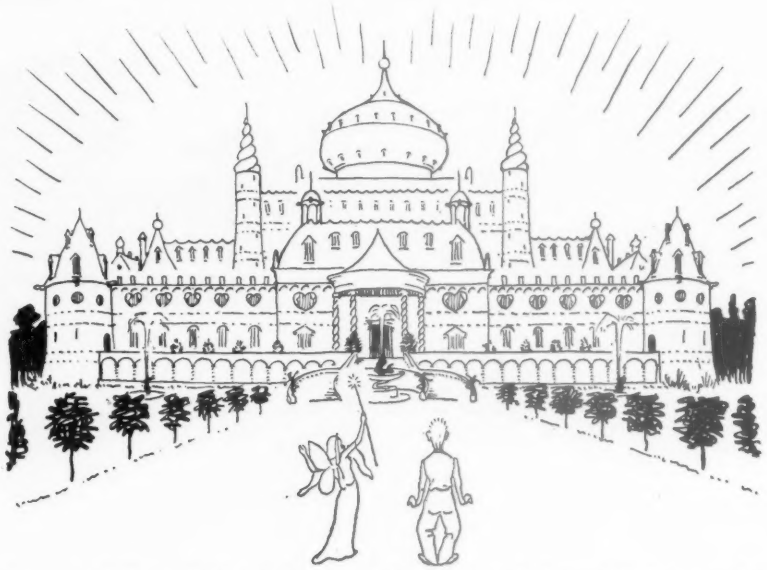
"O thank you, O thank you, O thank you! . . .

Now this is disappointing to me and not just a little. Listen Peaches, I say it is not time for pulling some gags. Where is the stuffed goose and co.? And then she busts out crying into a piece of spider's web and I see that it is not some gags but her act is a flop. I tell her There, There, and not to mind on account, I guess it is not easy to do this sorta thing when a while back you are a rat. And she says It is not at that and smiles like a dentifrice ad. and says, Now for the second wish, what is it to be; how

about Seven League Boots? I do not reckon hiking is very interesting and I tell her No. So she says, Would you like to have Eyes-that-can-see-through anything, Dear Student? It used to be a very highly thought of wish and I can recommend it.

I go into a huddle and do a lotta quick thinking. I reckon these Eyes will be a useful thing to have around when the builder tells you O I am sorry but I have covered it in now. Also am telling you that any guy outside a kid's comic supplement would wish to have his wishes all over again.

So we scram out on location to the open spaces and I tell her Let it go baby, and she lets it go and she swings into her Hicockalorum number and when I have got the smoke outta my nose and am rubbing my eyes after the lightning I hear this fairy say, There I knew it was only practice.



"... and there is the palace and believe me I do not feel so good."

for Find the Lady. But I am thinking of how this Peach Blossom gets herself taken care of for muscling in on some other dame's racket and also how just now she could not even raise a can-opener she could not even, so may be she is not really so hot and if she starts in monkeying around with a guy's pan, maybe the guy will not be feeling so good.

Well she says, How about having me build you a lovely palace in place of this lowly abode? I look at her to see if she is high-hatting me, but she is still aiming to please, so I think maybe this idea is not so screwy at that. If she falls down on this, I do not have to live there anyway and if she makes the grade and everything is jake, I still got one more wish coming to me, and I look up and there is the palace and believe me I do not feel so good. This palace is in striped mauve and yellow marble and there are domes and twisted candy columns all over the place. There is a gold-plated staircase down front and there are fountains, and behind the windows shaped like some hearts there are a lotta green curtains tied up with pink ribbon, so it looks like the last act of a Pantomime. I reckon it is not the fondest thing I am of, and there is Peaches smiling and pleased with herself like she done something clever. I get it. This dame has got not much taste. I ask you is this palace lousy or is it? I get the sick.

So Peaches says One more wish and it is my duty to warn you that cheating is barred and you cannot wish for your wishes again or anything silly like that, because it is against the rules and the last man who has tried it suddenly turns into an aspidistra.

Well and this has gummed up the works all right, all right, as I do not admire to be an aspidistra, and I am wondering what shall I do when there is a lotta shouts and I turn round and there is a big guy coming and in back of him a bunch of guys and dames. This guy asks me am I building this place. and I guess I must protect Peaches against this mob, so I take the blame so I say Yes.

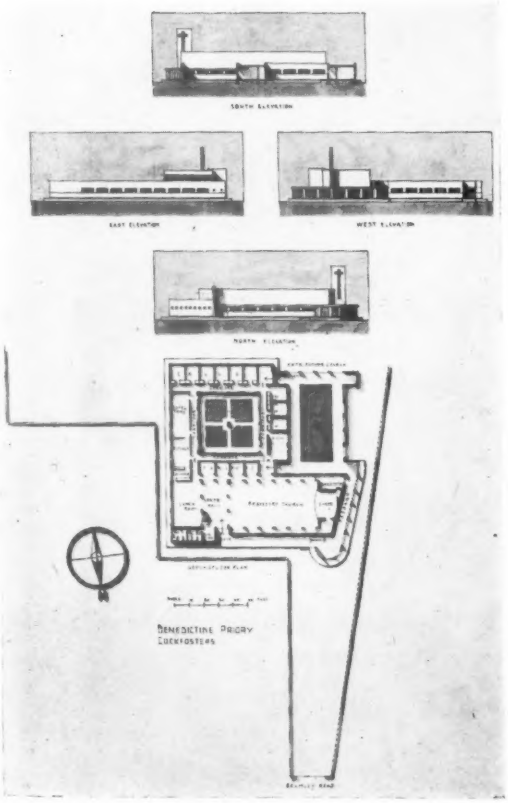
Well, this palooka says how I am the greatest designer and builder ever and says he will buy the joint as it has got what it takes, and I think he is a phoney but this guy gives me some bags of dough and O boy, am I wanting these potatoes or am I?

So all of this mob say how I must build one for them too and they gumshoe into this dump and they give it the onceover, and I am so pleased I wrap my arms round Peaches and I tell her, O Sugar you are such a sweetie pie I wish I could eat you, and when the smoke is gone and I can see, there I am

"gives me bags of dough ..."

holding a dish of peach pie. Well, I reckon I am hungry at that, and when I am saying that this Peaches has got not much taste it seems I get it wrong on account of the taste is swell.

Me, I live happy ever after.



CHURCH AT COCKFOSTERS

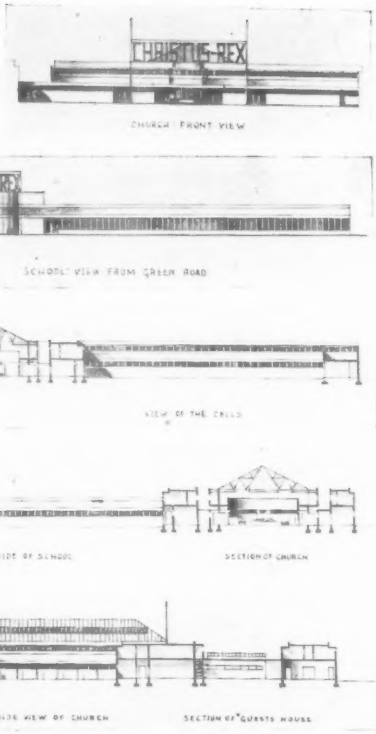
FIRST SECTION OF BENEDICTINE PRIORY

GENERAL—The church is the first portion to be built of a new Benedictine Priory at Cockfosters, Middlesex, and will be used as the parish hall when the remainder of the buildings are erected. The scheme owes its inception to the Father Prior, Constantine Bosjchaerts.

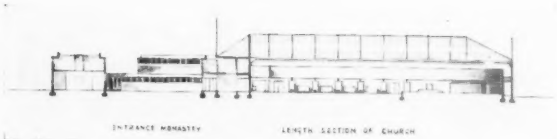
PLAN—The sketch plans and elevations, by Father Bosjchaerts, show two designs for the priory. In each case the future church is planned to the south of the temporary church, just completed. It will be seen that certain modifications have been made both to the plan and the elevations of the building erected.

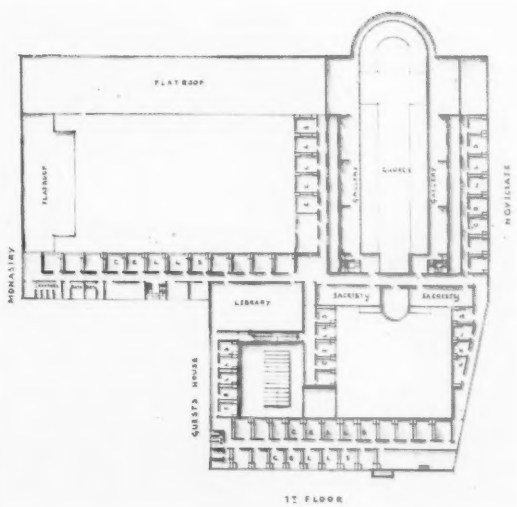
CONSTRUCTION AND EXTERNAL FINISHES—Reinforced concrete frame, faced with white bricks ; flush doors ; metal casement windows, with frames painted bright red. The cross, sunk in the brickwork of the tower, and the letters Vita et Pax are also finished bright red. The cross can be floodlit bright red at night.

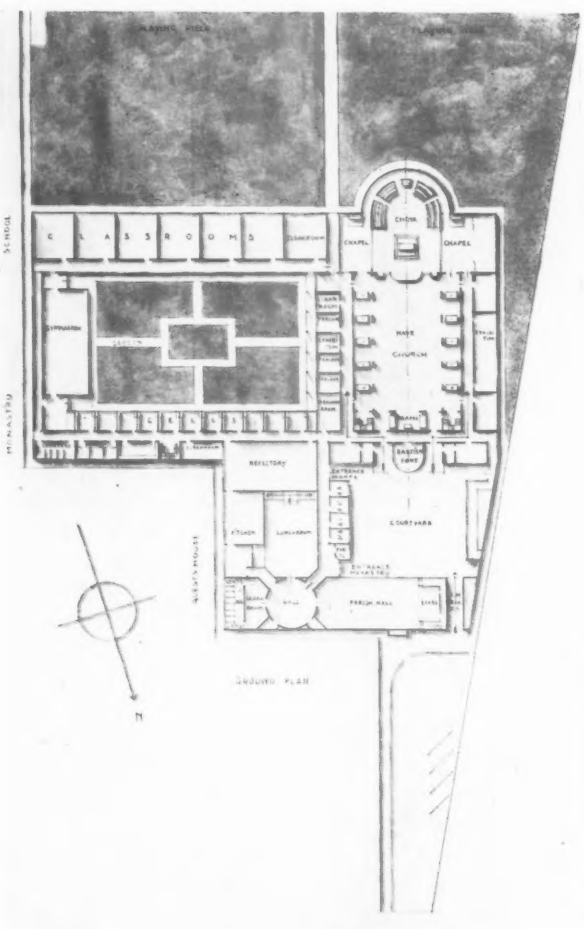
Above, the north front ; left, a sketch design, by Father Constantine Bosjchaerts, for a section of the priory



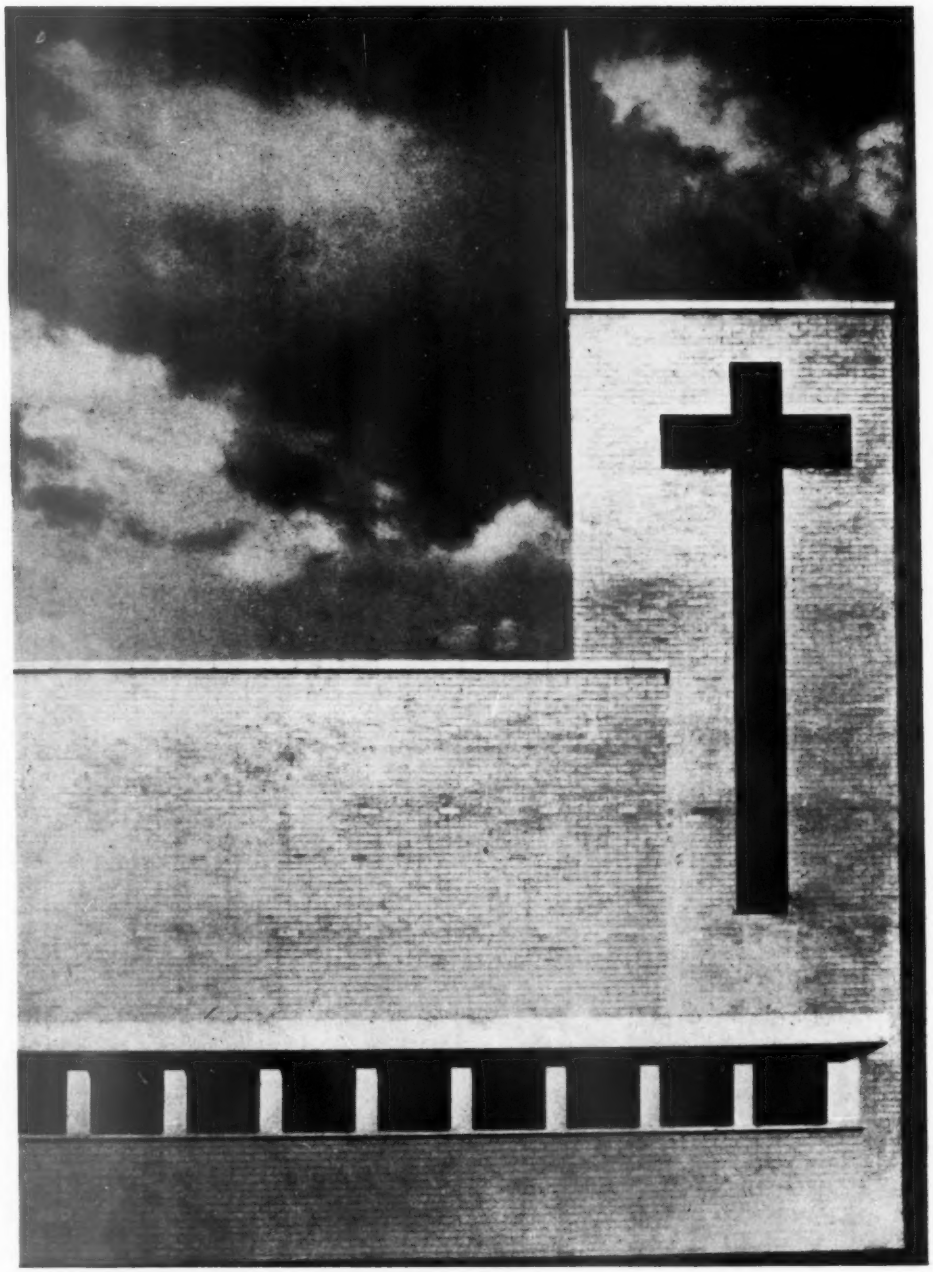
Above, detail of the north front; Right and below, a design by Father Constantine Bosjchaerts for the complete priory.

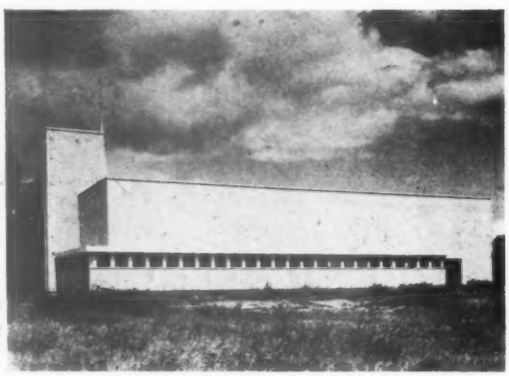






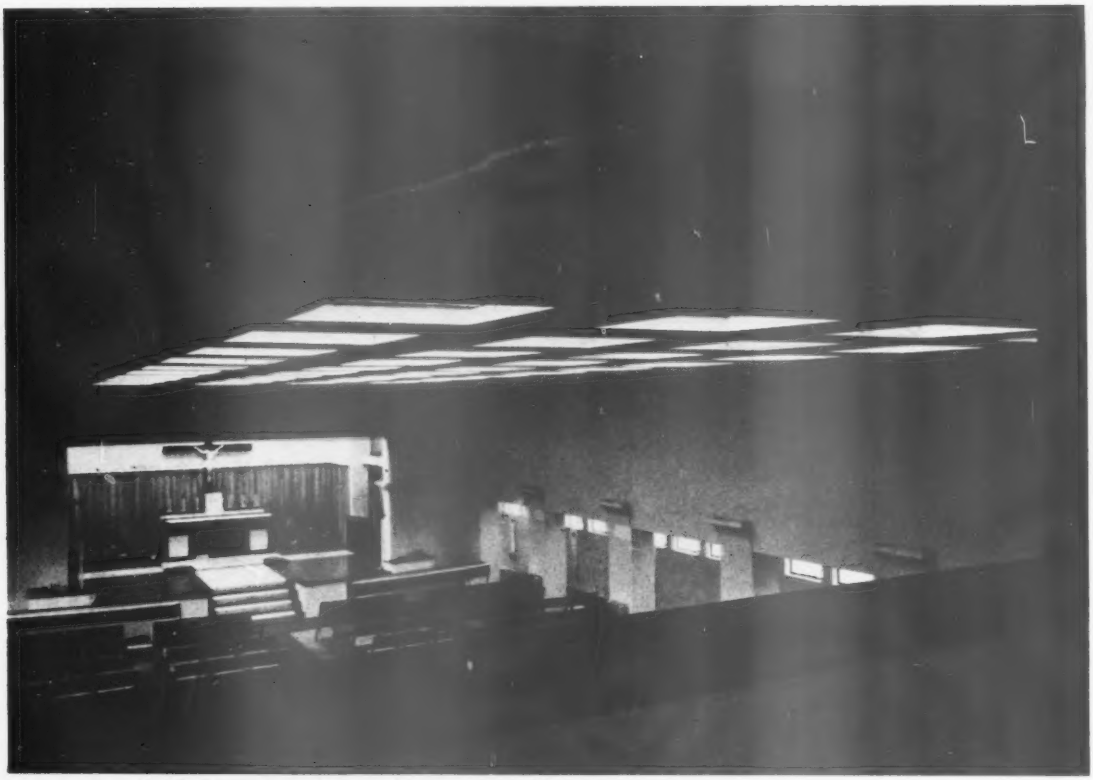
CHURCH AT COCKFOSTERS • FIRST



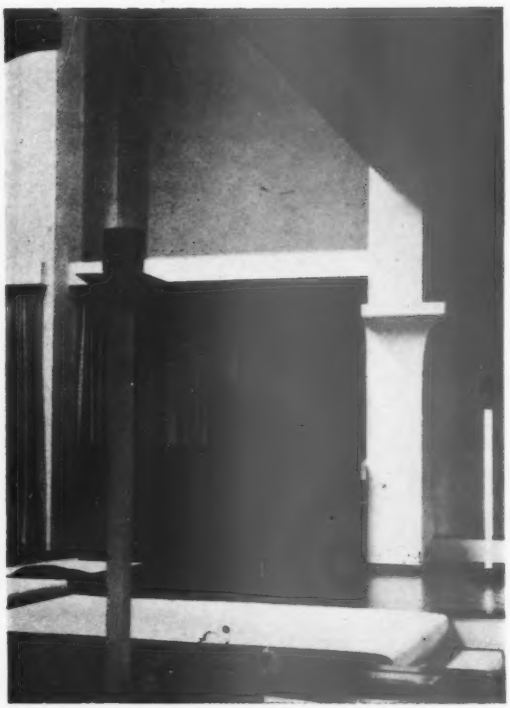


Above, the north side of the tower; left, the south side of the church.

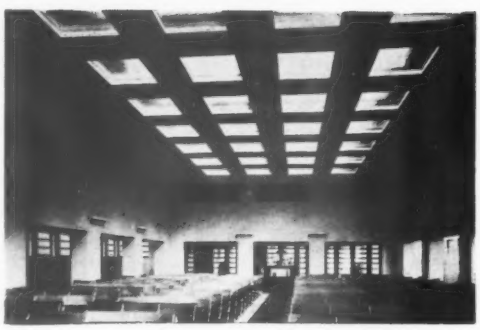
SECTION OF BENEDICTINE PRIORY



Above, the church from the gallery; below, a detail, looking across the altar, and one of the aisles.



CHURCH AT COCKFOSTERS • FIRST



INTERNAL FINISHES—Walls and ceilings, plaster, rough finish, coloured cream; doors, black, picked out in bright red; Crucifix cross and lettering above the altar, window frames and door furniture, bright red. Seating, pitch pine; floors, linoleum finished. The altar cloth and vestments were designed and made by the nuns.

SERVICES—Concealed electric lighting from roof lights and tops of pilasters ; central heating.

Above, the entrance hall ; left, two views in the church.

SECTION OF BENEDICTINE PRIORY

D

★ **THIS article deals with problems which many architects are now trying to solve, and its author has had day to day experience of bomb damage in a London district since September.**

But Mr. Poulton calls his treatment of his subject "notes" for two important reasons. First, worthwhile "general rules" concerning bomb effects on structure could only be based on the detailed comparison of an immense range of examples — a comparison which only Government experts have had the opportunity of making. Second, it is clearly inadvisable — to use no stronger term—to proclaim that in certain stated conditions an H.E. bomb of average size does little damage, but in certain other stated conditions it does a great deal.

It is with these two limitations very firmly in mind that readers must consider "The Blitz and Buildings." But the Journal believes that despite these limitations the article will be of some help to architects in setting about their most difficult war work.

THE BLITZ AND BUILDINGS★

By Denis Poulton

THE following notes are intended only to give a little help to those who may be called upon to survey, report upon or repair buildings that have been damaged by enemy aerial bombardment.

In attempting to give anything like an accurate picture of the damage caused by H.E., one of the greatest handicaps is not knowing the exact sizes of bombs which have fallen. This makes comparison of the effects on different types of structures very difficult. The only expert on H.E. with whom the writer has spoken was himself very loth to give an opinion: this same shyness does not appear to deter those who are not experts. After a little experience it becomes possible to say whether a bomb was fairly large or fairly small, but this would not appear to be of much value for purposes of exact comparison, and for this reason practically all reference to bomb sizes has been omitted.

In considering the various aspects of war damage it is simplest to divide the subject under three main heads.

1 *The general effect on different types of structures.*
2 *The recognition of damage.*
3 *How to set about doing first aid and other repairs.*

In the first two sections it will only be possible to indicate a few principles which have been found to obtain with reasonable frequency during the last four months. The exceptions and variations are many.

1: EFFECTS OF HIGH EXPLOSIVE

Modern Framed Buildings

OF all forms of construction that have been widely used either in the past or the present day, the fully framed building is the only method which withstands really well the effect of H.E. This means that if an unframed building has been totally destroyed or very seriously

damaged by a bomb of any given size, it is fair to assume that the damage would have been substantially less if the same building had been of fully framed construction.

The overwhelming majority of framed buildings in this country are framed with structural mild steel, consequently experience of the way in which reinforced concrete framed buildings withstand H.E. is bound to be very limited. In the borough in which the writer has been principally working since the bombardment of London began there are not many reinforced concrete framed buildings, and of these, very few have been damaged. It seems, however, in comparing the available data, that in the main there is little to choose between the two methods of construction so far as shelter is concerned. Both are probably equally good. There would, on the other hand, appear to be some difference between the two systems so far as the actual effect on the fabric of the structure goes. Reinforced concrete beams and stanchions that have been fractured or even damaged by explosion, have in all probability been stressed beyond the elastic limit. It thus follows that, in order to be sure of making a satisfactory repair, it will be necessary to take down more of the structure than has actually been damaged.

A case is known of R.C. beams supporting an R.C. slab floor where the beams have all been cracked through in the centre. The floor and beams will have to be completely renewed, and it seems probable that had the beams been steel joists the damage would have been less.

On the other hand another case has been observed of an R.C. framed building, also directly hit, where the damage was very localized. This may have been due to the fact that the framing and doors formed a continuous R.C. structure.

The more buildings damaged by H.E. that are examined, the more reluctant one becomes to make any dogmatic statements as to the effects, but the opinion may be ventured that R.C. as a material appears to be at its best when in a building of R.C. framing, and not so satisfactory when in a steel framed building, as, for example, in floor slabs and lintols. If this is actually the case it may be due to the rigidity of steel framing, the R.C. becoming a kind of safety valve for the fabric.

It would be well at this point to consider in more detail some aspects of structural steel framing, and, dealing with the question of rigidity, it has been suggested by some competent observers that the rigidity of steel framing may itself be productive of detrimental effects to the fabric, as for example, stanchions being blown out of plumb and undue tortional stresses forced upon joints. That this may be so is of course possible, but where such damage is not very severe probably no great harm will accrue to the building, and even where it is severe, the necessary repairs can be effected relatively easily. One of the most severe explosions that has been observed occurred only a few feet away from a very robust and rigid steel framed building in a narrow street. The steel framed building suffered fairly extensive damage to windows and partition walls, but the essential framing has not been hurt, and the masonry covering it, though scarred and pitted, was not affected from a structural point of view. In fact, the impression has been gained from examining this and other examples that the rigidity of steel framing may be an asset in withstanding the force of explosion. In certain other forms of construction, rigidity appears to be a defect, and further reference to this will be made later.

The effects of high explosive on internal partitions is an important point in dealing with framed buildings.

Where the plan is multi-cellular—as in blocks of flats and office buildings—the effect is generally localized, though walls in the immediate vicinity of the explosion are likely to be destroyed. Brickwork usually stands up well to high explosive, and though not a great deal of reliance can be placed upon 4½ in. work, it is interesting to note that the many forms of slab partition blocks, if they are 3 in. or 4 in. in thickness, usually stand remarkably well. 4½ in. brick partition walls are usually bonded into the cross walls: these partitions are generally blown in or severely cracked. Slab partitions are rarely bonded in and are freer to move. Instances have been noted where they have moved bodily from their original position but yet remained intact. This is a case against rigidity—but the nature of the material must be borne in mind.

Where the plan is free and open, as in departmental stores, or in offices divided up by light glazed partitions, the area of damage is usually much greater, the blast sweeping unhindered over the floor space and travelling both up and down staircases and lift shafts.

Unframed Buildings: "Hard" and "Soft"

This heading covers many different types of buildings and constructional media, but in every case, whether the buildings are close built or isolated, the extent of damage will be greater than had they been of framed construction. From observations that have been made of a large number of houses and other unframed buildings it has been found that they divide themselves quite sharply into two main categories, which for the sake of simplicity may be referred to as "hard" and "soft."

To be a little less unscientific, the former category consists of modern solidly constructed buildings (both large and small) in Portland cement mortar, and the latter of older buildings (again size apart) constructed in lime mortar the virtue of which has long since gone, lath and plaster partitions (not infrequently used for some external walls in Regency days), and sometimes robust enough looking walls consisting in actuality of two brick-on-edge skins with a dry rubble infilling. Bombing has certainly exposed as a fallacy the belief that jerry building was unknown before the war of 1914–1918.

The degree of destruction in the immediate vicinity of the explosion in close-built property is likely to be heavy, but how soon adjoining property will begin to come into the category of "damaged but capable of repair" generally depends upon whether it is old or new—in fact, *Hard* or *Soft*.

Houses of "soft" construction adjoining one which is directly hit suffer relatively little from the explosion of a bomb. Indeed, cases have been seen where the houses immediately adjoining the crater have been capable of repair. In short, the extent of really serious damage is not wide, unless the explosion is exceptionally violent.

On the other hand a similar explosion appears to produce more serious damage over a wider area in newer and harder buildings. It has also been noticed that damage to this kind of building does not generally pass through a descending scale of serious, medium and slight, but that serious damage will travel a certain distance and then come to a more or less abrupt end, often followed by nothing much more than broken windows which cannot be classified as structural damage.

These notes naturally do not cover the whole field of H.E. on unframed buildings. To do so would require a detailed description of a large number of cases, and it is doubtful whether such an examination would show that any phenomena occur sufficiently often to indicate a general rule. But the conclusions stated above have appeared often enough in three months to make them at least worth recording.

One more general observation appears justified. It is the writer's opinion that a large number of buildings both "hard" and "soft" that today appear to be quite sound will, in the course of time, call for a good deal of repair. The extent of damage to foundations is unknown, or to the ground upon which foundations rest. In one case a responsible architect who was in a row of Georgian houses four doors away from a direct hit remarked that "the whole house appeared to rise up like a ship on the crest of a wave and then subside." Today there is hardly a crack in that house, but it will be very remarkable if in the course of time there are no further results.

In the case of unframed buildings it is more difficult to say what may reasonably be expected from an explosion than it is in framed buildings. In unframed buildings all the parts or members have more or less a constructional value, and it follows that if some of these are disturbed there will be an effect upon the construction as a whole dependent upon the degree of violence of the disturbance. From this follows the important conclusion that it is not necessary to be an expert in H.E. to determine bomb damage any more than any other damage. A sound knowledge of building construction is the chief necessity, and the places where damage or failure would ordinarily be sought—foundations, window heads and cills, the corners of door frames, the junctions of partition walls with weight bearing walls, movement of untied walls, the thrust of hip rafters and movement of roof plates, the join of stairs with landing—to mention a few, will still provide the evidence.

2: RECOGNITION OF DAMAGE

IT is not possible to judge the degree of structural damage to a particular building type by the general appearance of the effects of the explosion; nor are there any other definite signs which point to a particular kind of damage.

As has been said before, assessment of degree of damage depends upon the structural knowledge and experience of the person inspecting the damage. The effects of blast vary infinitely, and because a bomb landing in front of a certain kind of terrace house has done in two or three cases damage of a particular kind, is no guarantee that similar damage will occur in the same circumstances on subsequent occasions.

To the generalizations about the kind of damage usually inflicted on framed and *Hard* and *Soft* unframed buildings which have been made above, only two others can usefully be added here.

A direct hit, while being very destructive of two or three buildings, usually causes far less total damage than a bomb exploding in a street. And the street façade of typical London four or five-floored houses is often cut by an explosion straight down a party wall or down the line of the window jambs, with little damage to the buildings past this line.

Beyond these very vague guides, degree of damage can only be estimated by careful inspection of each building

3: FIRST AID REPAIRS

The Procedure

FOR the purpose of dealing with this subject two Acts of Parliament have been passed, and architects should possess copies of these Acts together with their explanatory Circulars.

They are:—Housing (Emergency Powers) Act, 1939, together with Circular 1810, and Essential Buildings and Plant (Repair of War Damage) Act, 1939, together with Circular 1848. They are obtainable from H.M. Stationery Office, prices 1d., 1d., 3d. and 1d. respectively.

It is the former Act that concerns the general repair of living accommodation, though architects should have a working knowledge of the latter Act, as in certain circumstances application will have to be made, through the Local Authority, to the appropriate Government Department. For instance, if there are four bakeries in a certain district and one only is damaged, it is probably not an essential building, but if the other three are destroyed it may be possible to repair the damaged one as an essential building, in which case the Food (Defence Plans) Department should be approached.

As to the repair of housing, local authorities are required to make a return—after any damage has resulted from war action—for the purpose of dealing with possible claims, for transmission to the District Valuer at the Inland Revenue Valuation Office, which will show among other things the number of buildings which are:—

(*a*) totally destroyed,

(*b*) so badly damaged that demolition is necessary,

(*c*) seriously damaged but capable of repair,

(*d*) Slightly damaged.

For purposes of their housing duties, authorities have been asked to make additional copies of the Summary part of the return, and to send one copy to the Ministry of Health at Whitehall, and one copy to the Ministry of Health Regional Office for their region.

Immediate first aid repairs to buildings damaged in a raid can be carried out by the local authority where they are satisfied that such repairs are immediately necessary to avoid danger to health. No prior notice to the person having control, nor the consent of the Minister of Health is necessary, and the authority can enter upon the building and execute the repair.

Where more permanent repairs are proposed, the legislation provides that the local authority must give 14 days' notice to the person having control of the building that at the expiration of that time they propose to carry out the works named in the notice, the estimated cost of which is also given. These works would be such as to make the house or building *reasonably fit for human habitation having regard to the existence of an emergency*, and would include such things as reinstating roof tiling, brickwork, windows, etc., but *not internal decoration*. The local authority would consider any representations made by the person having control of the house or building and would endeavour to reach agreement with him, but there would be no question of appeal against the works or the decision to do them. The Act gives these powers to local authorities where such authorities are satisfied:

(*a*) that any building, whether a house or not, is in any respect unfit for housing purposes by reason of war damage; and

(*b*) that the building is capable at reasonable expense of being rendered fit for housing purposes; and

(*c*) that lack of housing accommodation in the area of the authority makes it necessary that the building should be rendered so fit; and

(*d*) that the person having control of the building is unable or unwilling to carry out the works necessary to render it so fit.

It will be appreciated that all the above conditions must be fulfilled, excepting for the carrying out of first aid repairs where the lack of these is a danger to health.

The cost of any works carried out by the local authority is registered as a charge on the premises, but there is no right of recovery until the end of the war.

Before the Minister's consent to more permanent repairs is given he must be satisfied that the number of premises on which these repairs are to be undertaken bears a reasonable relation to the needs of the district. It must be kept clearly in mind that the local authority's duty will not be to repair every house that has been damaged but to see that repairs are carried out, or to carry out those repairs themselves where necessary, on such number of houses or other buildings used as housing accommodation as will ensure that a reasonable amount of habitable accommodation is kept going in their area.

In deciding how much should be done in addition to first aid repairs, it is probable that local authorities, in view of difficulties associated with the supply of labour and materials, will find it necessary to make a selection of the houses damaged and to confine the repairs to the minimum necessary to make them reasonably fit as housing accommodation in war time. In making their selection the authority will take into account the accommodation available in undamaged property in the area at any given moment, the liability of the property to further damage if repaired and the possible effect of evacuation schemes or transference of industry. One very relevant factor will be the relation between the value of the property when repaired to the cost of repairs. Houses which were unfit for human habitation before being damaged would not, save in very

exceptional circumstances, be repaired, and where there is a choice it is clearly better to spend £50 on a house worth £400 than £100 on a house worth only £300.

The foregoing notes on the Act and circulars connected with it relate chiefly to the local authority carrying out the work. The actual machinery with which the authorities put the work into effect varies in different areas according both to the size of the area and the intensity of bombing which has been experienced.

There is of course no reason why owners of property should not carry out their own repairs, either first aid or otherwise, if they are able and willing to do so, with their own architect and builder. Such a course, particularly in heavily raided districts, would go far to ensure a speedy repair by helping to relieve the burden on the local authority. An owner carrying out his own repairs, will of course be responsible for all payments to his builder. The owner will then proceed in the ordinary way with the presentation of his claim for compensation for the damage sustained by his building. Architects would do well to go into this matter with their clients and make suitable arrangements with a builder who could be called in should the need arise. In many cases this has already been done but it is a service that is still capable of considerable expansion, particularly in the case of private houses and shops, which form the largest part of buildings that have been damaged.

Also it should be noted that the local authority cannot do repairs to shops, commercial or business premises, unless these can be shown to be essential buildings within the meaning of the Act. An exception to this is where a shop has living accommodation over, all in the one construction and all in the one tenancy.

A few remarks on the meaning and extent of first-aid repairs may be helpful.

The Repairs

First-aid repairs may be taken to mean that which is immediately necessary to render premises reasonably wind and weather tight to avoid danger to health, i.e. repairing broken windows, external doors, and slightly damaged roofing (a roof completely burnt out by an incendiary bomb is not within the scope of first-aid repairs). A roof completely stripped of slates but with timbers intact can be re-slated if the material is available, using up any unbroken slates, or covered with roofing felt, battened at the edges and given a coat of tar. A whole roof completely stripped is perhaps rather extreme for first-aid work, but this serves to show the principle, and the method suggested can also be resorted to for more permanent repairs. Minor holes in roof coverings are best repaired with the same material as the rest of the roof covering. The use of tarpaulins on roofs should be reduced to a minimum. They are difficult to obtain, and even more difficult to fix satisfactorily. Broken external doors should be put together again with the existing material as far as possible. Wall boarding is a suitable substitute for panels.

The repair of damaged brickwork must be taken on its merits. If the damage is only quite slight it is perhaps best repaired permanently, but holes or bad cracks can be temporarily covered by the use of tarpaulins, wall board, or roofing felt.

A memorandum has recently been issued concerning the repair of windows*, which admirably covers the subject. On this the notes given below are based.

Broken glass should be replaced only where there is little likelihood of further damage. Where only a few panes in a window are broken the simplest plan is to replace with any readily obtainable opaque materials such as cardboard, linoleum or plaster board. Where the window is of wood fixing presents no difficulty, and where it is of steel, the panel can be held in position by screwing at one or two points to a wood lath laid across the inside of the casement. Stiff materials can be puttied in. The panel should be painted on the external surface and exposed edges to protect the material from the weather. Where damage to the glass is more extensive there will not be time to replace individual panes and an overall treatment will be appropriate. In arranging this provision should be made for the ventilation of all habitable rooms. A reasonable amount of daylight is clearly desirable and this can be obtained by covering part of the window with translucent material, say to the extent of a-half to two-thirds in living rooms and kitchens and a-third to a-half in bedrooms. For the general lighting of a room the translucent material will be more effective in the upper part of the window than in the lower part.

There are a number of suitable doped fabrics on the market which are weather resisting and which let through a fair amount of light, but where these are not readily available butter muslin or calico sized and varnished after fixing provide a useful alternative. To give adequate strength it is advisable to use two thicknesses of the butter muslin.

Materials of this type are liable to be either destroyed or to be torn from their fixings by blast or violent wind pressure, and the ideal fixing would appear to be one that is absolutely secure along the top and such as will give way along the sides and bottom before the material itself is ruptured. In practice the proper degree of side and bottom fixing may be difficult to attain, but for the top fixing the best plan is to wrap the material round a wood lath, which can then be nailed to the sash if this is of wood, or screwed through to a second lath laid across the inside of the casement if this is of steel. For the sides and bottom, fixing by a waterproof adhesive is probably the best method. Large unsupported panels are soon dislodged by wind and where there are no sash bars to which the fabric can be fixed intermediate supports must be provided. (This is most important.) Waterproof adhesives are now available, supplied in tubes with special nozzles for the rapid application of a band of adhesive of the required width. (Should adhesive not be to hand, it has been found that a good fixing is obtained by wrapping the material round a lath and nailing down the two sides. A lath is then superimposed over the top and bottom. If the material is simply nailed round all four edges with no laths, it will quickly tear away.)

Where the window itself is destroyed to such an extent that rapid repair is impossible and where a new window cannot be obtained from stock a light wooden frame to cover the opening should be provided. About a quarter to a third should be made to open, as in a top hinged panel for example, and the opening portion should be at a height convenient for looking out of the window and yet not too low to give adequate ventilation.

Damaged Ceilings: These often represent an urgent repair that may easily be overlooked where the plaster key is broken but the plaster has not yet fallen. Generally the best plan in top floors will be to screw a sheet of stout cardboard to the ceiling joists, with or without the removal of the damaged plaster. In other floors the damaged plaster should be removed and the laths left bare or preferably covered with paper.

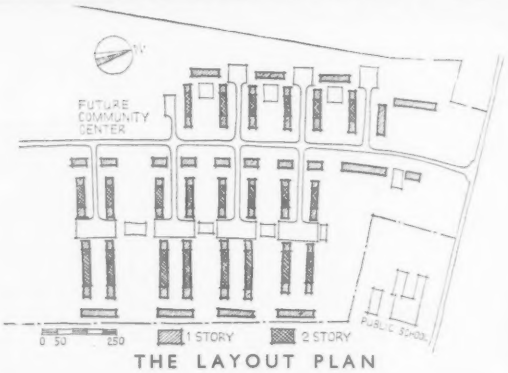
These remarks on first-aid repairs indicate the type and approximate extent of this work that it is possible to carry out with the utmost speed to make premises wind and weather tight.

Recourse may have to be made to improvizing even in the more permanent type of repairs. For example, it is often quite possible to replace a burnt out pitched roof by a flat roof consisting of joists spaced fairly wide apart and covered with insulating board and roofing felt, the whole being given a coat of tar. Drainage connection would be made to the first available existing down pipe. Such a roof may not be ideal or best suited to the design of the building, but it will provide a serviceable covering at reasonable cost *having regard to the existence of an emergency*, which is the keynote to be observed in this work.

* Circular 2227 (Ministry of Health, S.W.1, to Housing Authorities). *War Damage: Emergency Repairs and Supplies of Materials.*

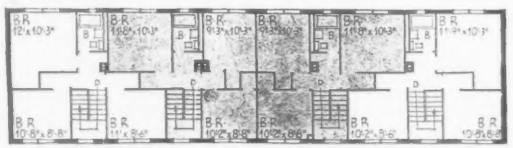
HOUSING SCHEME IN FLORIDA

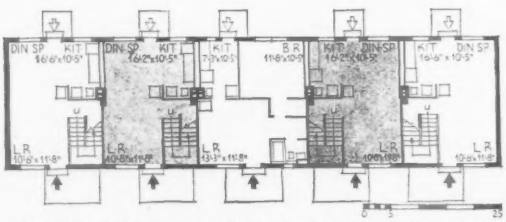
DESIGNED BY MELLEN G. GREELEY AND ASSOCIATED ARCHITECTS



THE LAYOUT PLAN

PLANS OF THREE AND FOUR ROOM SINGLE-FLOOR UNITS





GROUND AND FIRST FLOOR PLANS OF TWO-FLOOR BLOCKS

PROBLEM — A United States Housing Authority scheme at Jacksonville, Florida.

SITE AND PLAN—230 dwellings are provided in one and two storey houses around courts served by single drives. The planning of the two-floor blocks is ingenious—four two-floored houses and one ground-floor flat are arranged so that the whole of the first floor is given over to the bedrooms of the four two-floored houses.

CONSTRUCTION—Walls : concrete blocks. Partitions : 2 in. plaster. Floors : reinforced slab with mastic tile or linoleum finish. Roofs : trussed rafters, felt and shingles.

EQUIPMENT—Electric cookers and refrigerators, oil heaters and oil fired boilers.

COST—The average cost per dwelling is about £600. This price appears high even when allowance is made for the higher living costs in the U.S.A.

Above, a general view of the scheme. Right, a detail of single-floored block under construction. The illustrations of this scheme are reproduced from "The Architectural Forum."

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THE DETERMINATION OF STRESSES IN TYPICAL RIGID FRAMES.

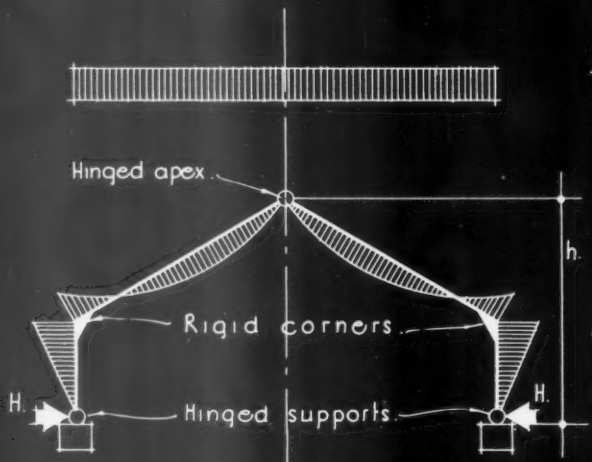


FIGURE 1 : THREE-HINGED FRAME.

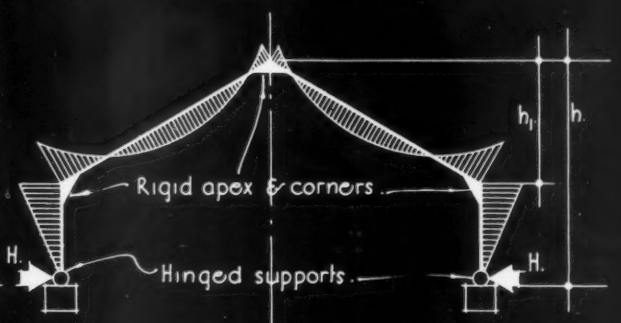


FIGURE 2 : TWO-HINGED FRAME.

BENDING MOMENT DIAGRAMS FOR SIMPLE FRAMES.

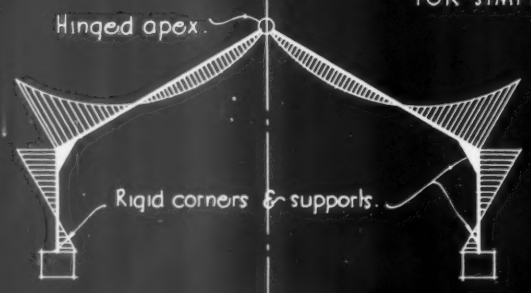


FIGURE 3 : ONE-HINGED FRAME.

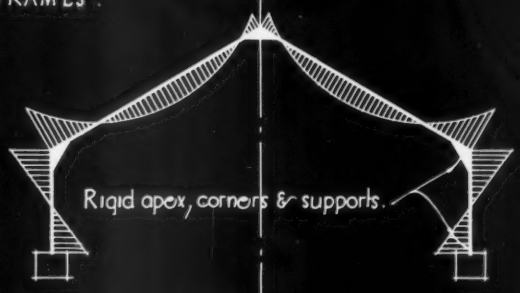


FIGURE 4 : FRAME WITHOUT HINGES.

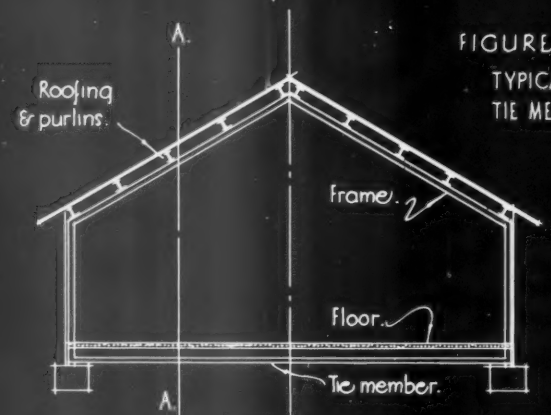
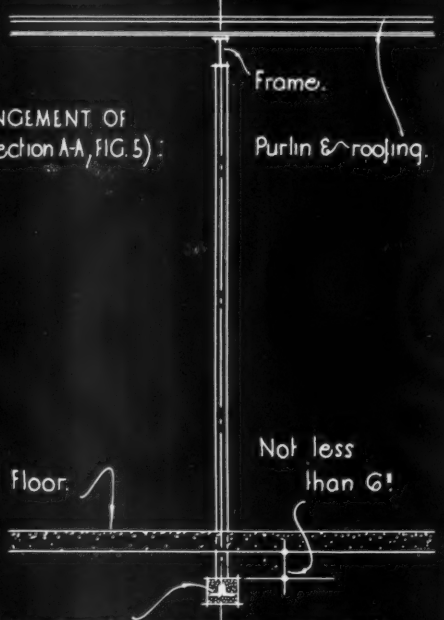


FIGURE 5 : TIE MEMBER AT BASE TO SUSTAIN HORIZONTAL THRUSTS.

FIGURE 6 : TYPICAL ARRANGEMENT OF TIE MEMBER (Section A-A, FIG. 5) :



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INFORMATION SHEET : STEEL FRAME CONSTRUCTION : N° 42.
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INFORMATION SHEET

• 814 •

STRUCTURAL STEELWORK

Subject : Steelwork for Roof Construction, 10 : Determination of Stresses in Rigid Frames.

General :

This series of Sheets on steel construction is not intended to cover the whole field of engineering design in steel, but to deal with those general principles governing economical design which affect or are affected by the general planning of the building. It also deals with a number of details of steel construction which have an important effect upon the design of the steelwork.

Both principles and details are considered in relation to the surrounding masonry or concrete construction, and are intended to serve in the preliminary design of a building so that a maximum economy may be obtained in the design of the steel framing.

This Sheet is the forty-second of the series, and describes the determination of stresses in typical rigid frames. Typical arrangements of this form of steel frame construction are illustrated on Sheet No. 43 of the series.

Rigidity :

For convenience of design, rigid frames may have certain points (hinges) where the rigidity is interrupted. Not more than three hinges (including any at the support) are possible, otherwise the frame would be unbalanced.

There can be distinguished, therefore, three-hinged frames (Figure 1), two-hinged frames (Figure 2), one-hinged frames (Figure 3), and frames not hinged at all (Figure 4).

Stresses :

The types of construction shown in Figures 3 and 4 involve bending moments to be carried through to the foundations, and as this necessitates excessive footings, their application is rare.

The construction in accordance with Figures 2, 3 and 4 is statically indeterminate, i.e. stresses cannot be calculated by the application of the laws of equilibrium alone, but depend on the deformations, and thus, indirectly, on the Moment of Inertia of the parts, in a similar way as in a continuous beam. The three-hinged frame (Figure 1) is statically determinate and the bending moments do not depend on the Moment of Inertia of the single parts.

Horizontal Thrust :

For all frames it is usual to determine at first the horizontal thrust, either by calculation from first principles or by the application of formulae. Once the thrust is known, all other forces, bending moments, etc., can be calculated by the application of the laws of equilibrium. For the thrust of all three-hinged arches, the following formula obtains :

$$H=\frac{M_o}{h} \qquad \text{(see Figure 1)}$$

where M_o would be the bending moment in the centre which would occur if the loads were to be sustained by the ordinary beam, and h is the height of the centre hinge above the level of the other two.

For two-hinged frames the following formula is approximate :

$$H=\frac{3M}{4h-h_1}$$

where M has the same significance as before and h is the height of the frame in the centre, and h_1 the difference of apex and eaves height (see Figure 2).

Shape :

The shape of frames can vary greatly, and many other forms, apart from those shown, are possible. Bending moments in simple cases are shown in Figures 1, 2, 3 and 4.

Erection :

As a rule, three-hinged frames are easier to erect, but unless the apex is much higher than the eaves, the two-hinged frame is more economical in the use of material.

Tie Members :

All frames exercise a horizontal force called " thrust " on the foundations, and the ground must either be able to sustain such thrust on both sides or if this should not be the case, a tie member (Figure 5) is to be arranged, holding both ends together. Such a tie member should always be independent of the floor, see Figure 6, as owing to the stress and its length, the deformation involved is considerable.

A tie member should never be stressed with more than half the permitted stress, and even then, a certain movement of the foundations is to be expected.

Previous Sheets :

Previous Sheets of this series dealing with structural steelwork are Nos. 729, 733, 736, 737, 741, 745, 751, 755, 759, 763, 765, 769, 770, 772, 773, 774, 775, 776, 777, 780, 783, 785, 789, 790, 793, 796, 798, 799, 800, 801, 802, 804, 805, 806, 807, 808, 809, 810, 811, and 813.

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THE YEAR'S WORK

[*By PROFESSOR C. H. REILLY*]

ADMITTEDLY it takes this time a little extra energy to look through the pile of last year's illustrations in these days of destruction. One does not know whether the buildings one is looking at are still standing or not. If they were the first buildings of the New Britain which everyone is thinking about, what a different matter it would be! With what excitement would one view them then! Are they worthy of the great country we mean shall arise out of the present distress or not? Let that anyhow be the standard, with the quiet but unexpressed thought at the back of one's mind that if they are not a bomb may yet fall on them.

The surprising thing is the pile looks almost as big as ever. Although illustrated last year, the majority of the buildings were no doubt built in 1939 and conceived in 1938, in those days of continual crisis. It would be charitable then to put down some of their weaknesses to the generally weak state of the nation in those days of surrender and appeasement.

There is one thing further I would like to say before plunging into the various categories. As in other years, the mass of work is too great for any complete consideration of any one building mentioned. One can only give a quick general impression largely from the exterior. Admittedly, this is a poor way of judging architecture. One should first be versed in the client's requirements and then walk about the plan and see whether these requirements have not only been met but met with that touch of imagination which turns the results into things of beauty. Even so, one must take the soundness of the construction for granted. Less still can one probe into that from a few photographs and perhaps, but not always, a plan. One must therefore crave the indulgence of the reader and more particularly of the authors of the buildings. What follows is no complete criticism of any single structure. It is a quick glance at a great number, the sort of glance one might give in driving through a town followed by expressions like "By God, that's a jolly thing! Do stop a moment," when, of course, the driver does nothing of the kind. Or "Good Lord! Did you see that? Some funny old Victorian R.A. must have been at work here," and so on. Nothing more serious, I fear, with a thousand illustrations, and only four thousand words in which to sum them up.

The biggest pile this year is not the pile of great lumps of flats built on roads designed for buildings a tenth the size, but of small houses, altered cottages, and the like. These are so much more human and enjoyable. One can imagine oneself living in them and not merely one of five hundred prisoners, if not with a long number sewn on one's clothes, with one nailed in brass letters to one's door.

The week-end house I like best—it is strange how small modern houses suggest the week-end rather than continuous living—is Mr. Brian O'Rorke's one at Kingsgate, Kent. I like the balanced composition in this case with the two arms, as it were, stretching out to the sea, yet with a certain irregularity of feature to the whole, like the face of a friend. I like the long lines of the weather-boarding holding the upper storeys together and somehow lightening the whole. So often the little thin solid steel posts on which these houses perch, one can hardly say stand, seem to old-fashioned folk like myself, far too fragile. Here, with the solids given a little life by the weather-boarding, they seem equal to the task, though in this case they only carry the first floor balcony which must be counted part of the living room if the latter is to have any size. The owner has given himself a fine suite at the top which I should like very much to borrow when the war is over.

Another delightful week-end cottage, and one I have seen in the flesh, is that which F. R. S. Yorke has fashioned

1: House at Kingsgate, Kent. By Brian O'Rorke.

1

2

3

4

2: Cottages at Sutton, Sussex, by F. R. S. Yorke.

3: House at Hampstead, by Samuel and Harding.

4: Houses at Hampstead, by Ernö Goldfinger.

out of two very ordinary cottages in the village of Sutton, Sussex, for Gerald Barry, by a modern addition at the back. Here is no attempt at making the old and the new "go" together, whatever that may mean. Indeed, there is a very exciting change. From the village street one enters the low rooms of one of a pair of workmen's cottages, but quickly one gets a glimpse of a fairyland beyond, so lofty and gay and unreal does the modern studio at the back seem at first glance. Later, as one walks through the house one realizes that it all combines very satisfactorily into a charming residence, where one could live very happily all the week round if one had the luck. Strange to say, too, the big scale of the addition does not look awkward from the garden. It is so obviously an addition of our own

5

6

5 and 6: House at Highgate, by Taylor and Green.

7: Offices at Thames Ditton, by Kenneth Layton.

time and not an attempt to be sympathetic to the old stuff. It seems to pay it a compliment of leaving it alone, the sort of compliment additions to old buildings always paid in the real building eras, but rarely in our own. One ought to add that the architect has been greatly helped by the decorating skill of the owner's wife, though the delightful delicacy of the little circular staircase, and things like that, must be given to him.

The house in Arkwright Road, Hampstead, by Messrs. Samuel & Harding, has a melancholy interest in that the latter partner has already been killed on active service. This was a young firm which always turned out interesting, refined work of a clean efficient modern type and this house is no exception. It is on a steeply sloping site, with a south aspect over the garden at the back. The client required more bedrooms on the top floor than the site warranted, hence its crowded state. There is, however, to make up a fine spaciousness about the two living rooms on the first floor, with three fine windows and verandas overlooking the garden all very delicately detailed.

There are three new houses at Hampstead by Erno Goldfinger, whose work, too, is always refined and interesting. In this case it is the interiors, particularly that of the centre house, his own, which are exciting in the unexpected views and fine shapes they reveal. In this respect they are like F. R. S. Yorke's work.

Near by, at Highgate—Highgate and Hampstead will soon be the London Mecca of the young architect, if they are not so already, with Maxwell Fry's, Oliver Hill's and Messrs. Connell and Ward's work—is a house, largely glass, rising like a Phœnix, or better like an Aphrodite from the foam, above the old pantile roofs of surrounding cottages. It is by Messrs. Taylor and Green, and contains a gloriously large and gloriously light studio and living room, occupying practically the whole of the second floor, with windows completely filling two adjacent sides, and I suppose all London laid out as a map to be seen therefrom. The semi-circular tower staircase which buttresses the house runs on to a fine roof garden above outlined by screens. This house, from the photograph, looks one of the most attractive of its sort yet built. It has a unity inside and out that anyone bred in the older school like myself cannot help appreciating, even if the detail is not always as finely drawn as in the other examples.

MUNICIPAL AND PUBLIC BUILDINGS

It is curious today with what reluctance one passes from houses to Municipal Buildings. Till the last ten years it would have been all the other

7

way. A town hall then was the dream and opportunity of everyone. Now one mostly finds the results rather a bore. There is a new public organization's offices at Thames Ditton, a large stretch of competent-looking, plain, two-storeyed buildings with a double row of Georgian windows with stone reveals and a plain stone band for cornice, which look quite pleasant for the first hundred yards and till one comes to the main entrance, where the architect has felt obliged to add the stigmata of his classical style, a wide heavily built portico with columns *in antis*. Sir Giles Scott has felt in his County Hall addition he must at intervals repeat the same motive just to show that the building belongs to the same traditional classical school, however shorn it is of its other traditional trappings. These two set in columns between piers are the old school tie of this kind of architecture. Sir Edwin Cooper is the chief wearer of it.

It is a relief to turn from this competent, but rather dead piece of work to the Wembley Town Hall by Mr. Clifford Strange. It is not an exciting building, but it is honest in its expression. The plan is a T-shaped one with the leg of the T containing the main hall. The other arm of the T is bisected by a long narrow corridor on each floor, which, from its length and narrowness, must be very tiring to traverse even in thought.

Sir Edwin Cooper, R.A., has a large extension to his Town Hall at Marylebone which is quieter and less exuberant than the first half. There is, nevertheless, a chastened Imperialism about this kind of heavy Roman architecture which is, I am afraid, the British analogue to the plain heavy classical stuff the Nazis are piling up. The interior, with its fine rooms broadly panelled, is much more humane.

The Church House at Westminster by Sir Herbert Baker, R.A., although not a municipal building in some of its interiors, looks so like one that I am including it in this category. It is planned, or rather placed, round the great circular Assembly Hall, with a maze-like complication of staircases and lifts at each of the spandrels between the centre circle and the rectangular blocks. The younger clergy could play a grand game of hide and seek in these corners while the bishops are in conclave. I hope they do. Externally the building does little to lessen one's regret for the old houses in Dean's Yard which had to make way for this vast and dull business-cum-meeting house. The split flints to the ground storey, interspersed with coloured coats of arms, seem in the photograph curiously incongruent with large stretches of plain brickwork above.

The last building in this category I have chosen is a lovely lady compared to its predecessors. It is P. D. Hepworth's

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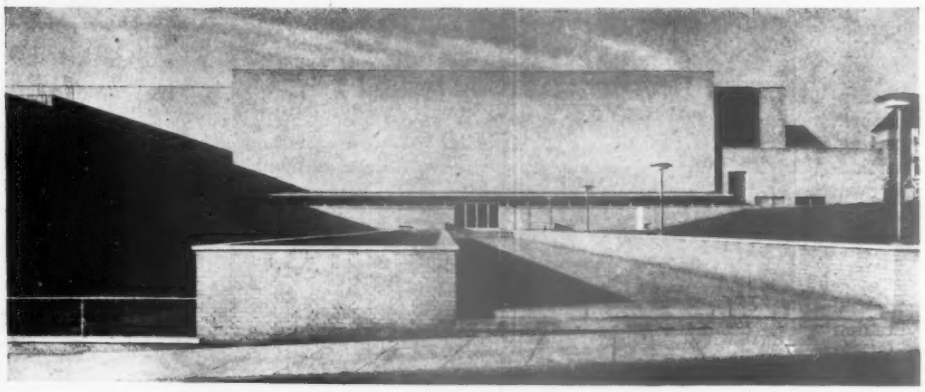

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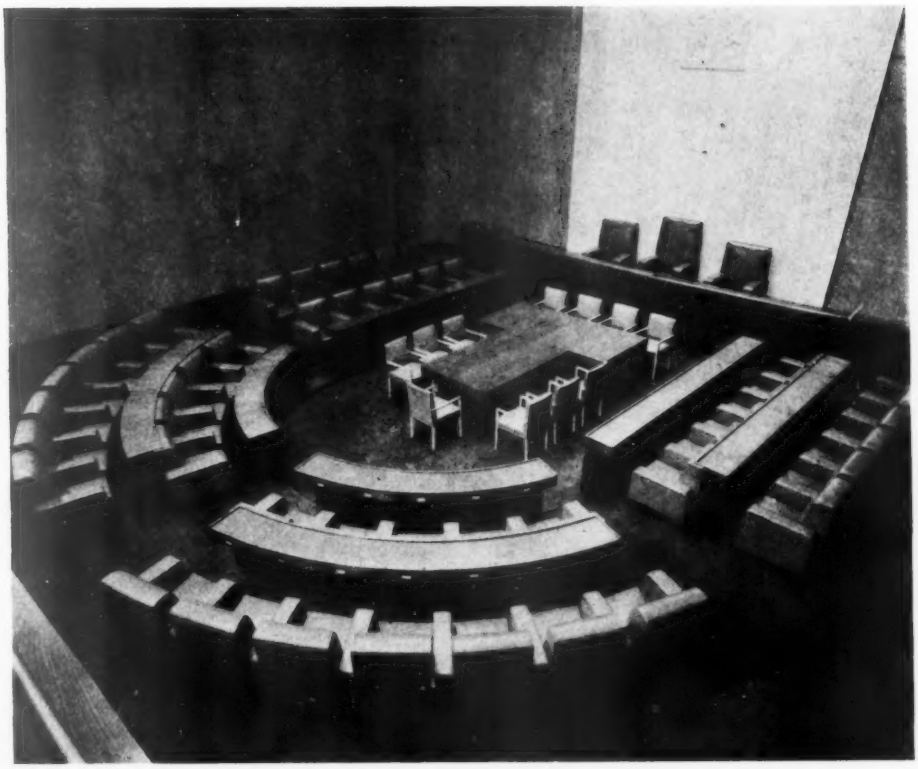
8: London County Hall Extension, by F. R. Hiorns and E. P. Wheeler. Consultant: Sir Giles Gilbert Scott, R.A.

9 and 10: Wembley Town Hall, by Clifford Strange.



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11 and 12: Library and Town Hall Extension, St. Marylebone, by Sir Edwin Cooper, R.A.

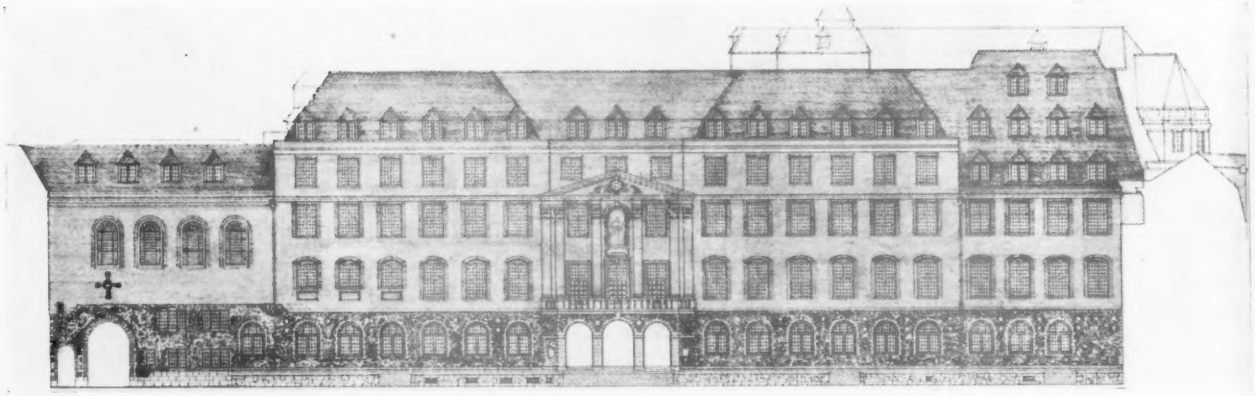
11

12

Council Offices at Trowbridge, Wiltshire. It is a highly finished stone building, with fine stretches of plain ashlar, rather French in general character, but with a judicious mixture of Lutyens' detail. How well the old Rome scholar knows his classical grammar and also his Lutyens, and with what taste and skill he uses his knowledge of both!

HOSPITALS AND NURSING HOMES

This is another large pile, and, on the whole, rather a dull one. The big general hospital, with its many highly articulated masses, can be a fine composition, but it must be very difficult to make a satisfactory piece of architecture out of a multi-cellular building like a Nurses' Home with so many small cells all the same size. Messrs. Symington, Prince and Pike do best, largely by having a big recreation hall and adjacent loggia allowed to them in theirs for the Isolation Hospital at Gilroes. All Sir John Brown and A. E. Henson have to play with at Northampton Hospital is a staircase



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13: Church House, Westminster, by Sir Herbert Baker, R.A., and A. T. Scott.
14: Council Offices, Trowbridge, by P. D. Hepworth.

which is treated in the fashionable way as a curved bastion running up the side of the building. Here the bastion seems to me a little too heavy and dominant for the masses of little cells on either side of it.

The pleasantest hospital building is the Dental one for Manchester University by Messrs. Thomas Worthington and Sons, really I suppose by Hubert Worthington, not his grandfather, Thomas. The blank curved corners of the main mass which give it such character happen to make convenient dark-rooms—the sort of good luck a good architect deserves now and then.

SCHOOLS

This section contains the News Chronicle Competition School by Denis Clarke Hall in the flesh. The North Riding County Council wisely commissioned it, or something like it, for Richmond, Yorkshire, and this brave young architect got his chance. There, at any rate, is built the most striking feature of his " News Chronicle " plan, a terrace at the side of each classroom, with garden and open ground facing one another on two of the remaining sides. Two opposite sides, therefore, of each classroom are of glass facing greenery, and at the side is a sheltered terrace, with the same double outlook, where a class can be held out of doors with the pupils and teacher in exactly the same relative positions. There are many other interesting points which cannot be dealt with here. A noble attempt has been made to use local materials. There are large stretches of rough stone walling whose texture contrasts sometimes—perhaps a little too strongly as on the main staircase—with the smooth plaster finish of adjacent walls. There is a fine light Entrance Hall where the whole school can assemble. It is, however, the revolutionary plan which this young architect has now set as a standard for all schools except on the most crowded sites (sites which probably will no longer exist after the war, and certainly should not for schools), which is the fine achievement. Here it is in the solid for the most dense Educational Committee to understand and with the added excuse of a visit to a grand little Yorkshire town much painted by Wilson Steer thrown in.

At Accrington, Mr. Stephen Wilkinson has designed a large secondary school for four hundred and forty-five girls on a nineteen-acre site round two quadrangles in the usual traditional manner, even to a really elegant front façade and portico and a really Mary Ann back portion, which is by far the larger section.

Guildford, Surrey, has a new modern school for three hundred " Mixed Seniors," a difficult crowd to cater for anywhere one would think, and especially on a small five and a-half acre site. Of course, the class rooms

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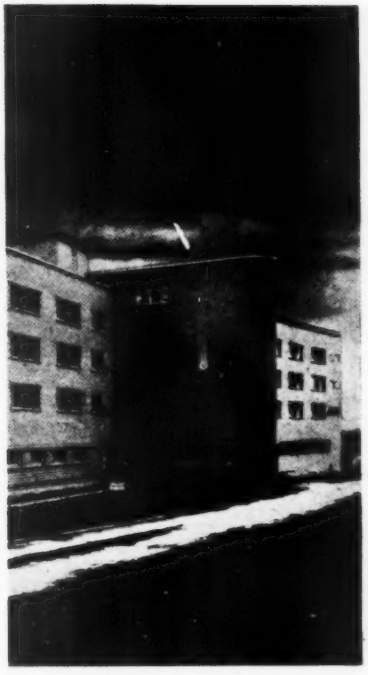

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15 : Dental Hospital, Manchester, by Thomas Worthington and Sons.

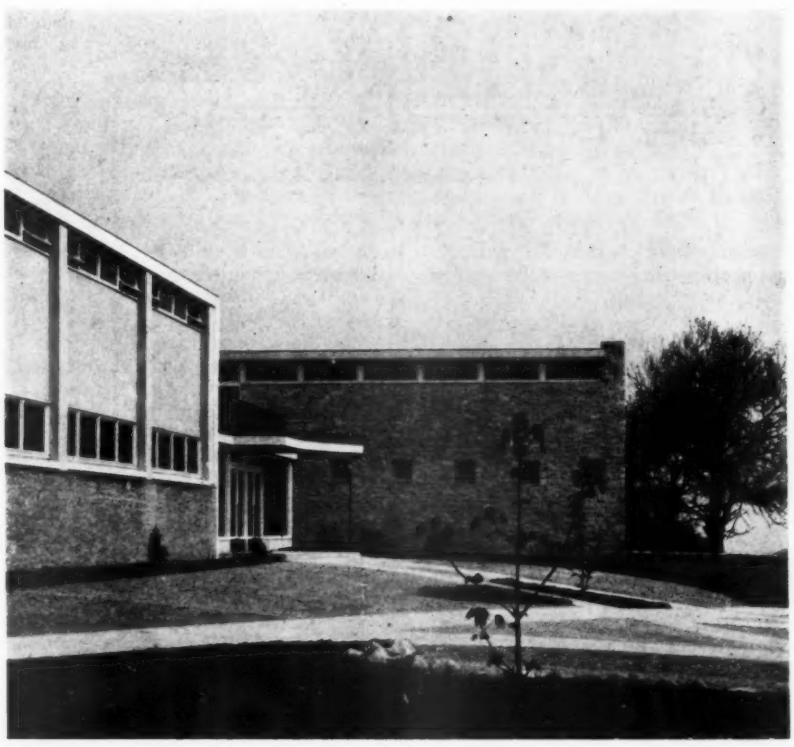
16 : Nurses' Home, Northampton, by Sir John Brown and A. E. Henson.

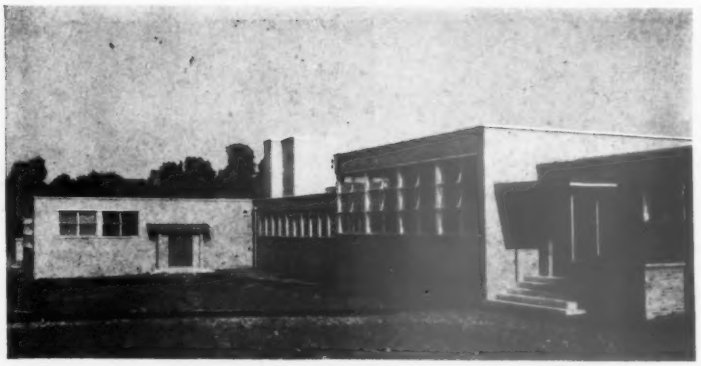
17 : School at Richmond, Yorks, by Denis Clarke Hall.

are not separated in the Clarke Hall manner, but the long range of them with continuous windows on opposite sides suggests an airy open plan, a copy of which I cannot find among my illustrations. Still, this is clearly from various photographs of the interior a well-thought-out school. It is by Messrs. Leslie Hiscock and Duncan Scott.

Finally there is a very elegantly finished dining hall block which

17





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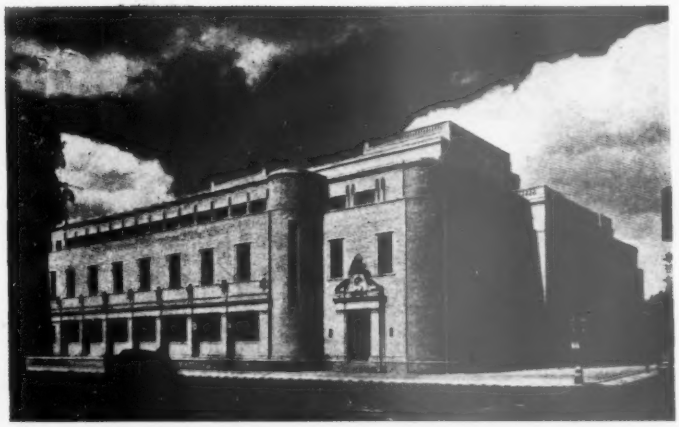

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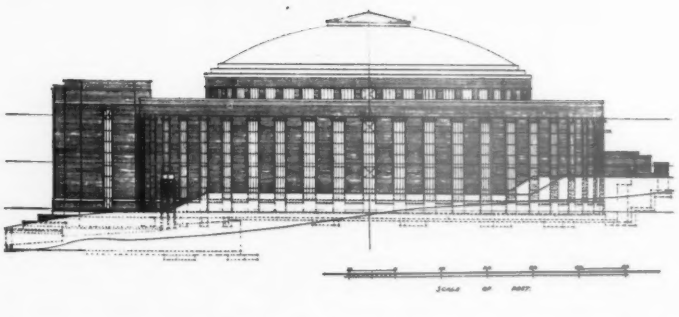

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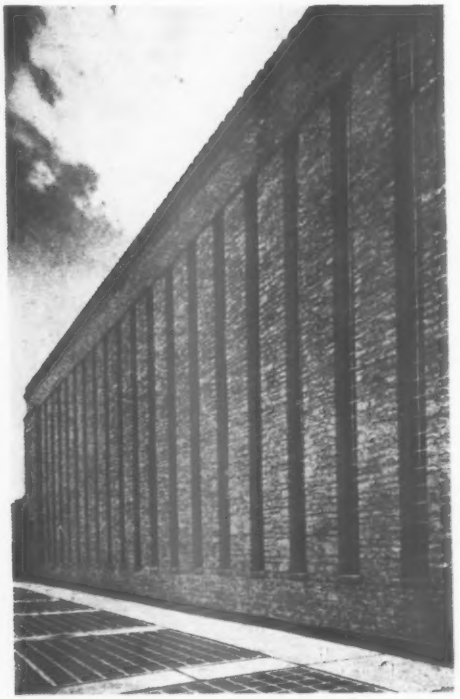


20

18 : School at Guildford, by Leslie Hiscock & Duncan Scott.

19 and 20 : Bodleian Extension, by Sir Giles Gilbert Scott.

21 : Reading Room, Glasgow University, by T. Harold Hughes.

deserves mention. It is by Mr. J. E. K. Harrison for the James Allen Girls' School, Dulwich.

LIBRARIES

First in importance stands Sir Giles Scott's big extension to the Bodleian at Oxford. This is mainly a great rectangular steel stack, but it is a stack clothed on all four sides by three storeys of exhibition and research rooms. For two storeys below ground the stack spreads out under the whole site. In the centre it rises for three more storeys and in all there are eleven storeys of it. One of the chief problems has clearly been to hide this mass of books, which seems a pity in a University where books are the fountain of life. There is, I believe, an agreement between the City and the University that in the centre of the town no one should be allowed to build higher than sixty feet above the street level, and it looks as if the architect has had to keep within this. He has done it with great ingenuity, but was it not worth while to obtain a relaxation of the regulation for such an important enterprise and to give external expression to the stack ? Here it is surrounded with rough stone walls and complicated Jacobean details as if it were a palace which Lord Nuffield had commissioned in the manner of the seventeenth century instead of the noble simple thing we know the architect could have made of it. There is a photograph of a set back portion at the fourth floor level showing plain walling and long stack windows, which cannot be seen from the street, which shows how fine the whole building might have been if the regulation and the supposed *genus loci* had not been too much for the designer.

Professor Hughes has a large circular reading hall, with some added study rooms, for Glasgow University which, unlike most circular domed buildings, looks much better outside than in. In the interior the long windows, which are the main feature of the exterior, are crossed by a balcony and obscured by a tremendous hoop of lights, which suggests young men on the flying trapeze rather than young men reading.

OFFICE BUILDINGS

There is a curious dearth of these this year. Perhaps this is an early sign of the breakdown of the capitalist system so many foresee. If so, I think it is a cheerful thing for architecture and for the younger men especially. They will not be so dependent on hanging on to

the coat-tails of the rich as we were for our work. There is only one block of private offices, that for Messrs. Doultons which includes their showrooms. It is at Lambeth and designed by Mr. T. P. Bennett, somewhat in the Shell-Mex manner. The most interesting thing in it appears to be a solemn hall ending in a sort of reredos with an altar below it which turns out to be a bath. It is said to be one only of the bays in the showroom, so that there must be other strange and exciting things to be seen. Perhaps the architects who now help Lord Reith in an adjacent building might while away a little time there. Perhaps they could even persuade the new Controller of Bricks to step across and show them his work.

FLATS

Flats, too, are an astonishingly small pile. As usual the buildings of this group with the most charm, the most direct and obvious appeal, are the working class ones by Mr. L. H. Keay and his group of architectural assistants at Liverpool. I mention the latter because, although Mr. Keay's work is always recognizably his own, he does such vast schemes that he clearly has to have a large number of men helping him, many of whom, I am proud to say, are old Liverpool students. The Wavertree Garden scheme is built round the three sides of a large courtyard with one side open to let in the sun and air. Unity is given by the three long brick balconies which run across the three fronts, but forming, however, such forceful lines that the sloping roof above is almost overpowered. What I am always anxious about in Mr. Keay's great Liverpool schemes, dotted as they are all over the town, is whether one day we shall find they all link up together as elements in a great plan for the town as a whole or whether they are just happy incidents, some of which may in their turn have to be swept away one day.

The Garratt Lane Flats at Wandsworth by Mr. Culpin I took at first glance to be Mr. Keay's. I can scarcely pay them a higher compliment. Though they, too, have sloping roofs and smallish windows, these blocks of flats are in one particular more up to date than Mr. Keay's, for they pay the modern respect to orientation. Most of the blocks run north and south so that the living rooms get sun morning or afternoon. Although in this respect they are alike, and follow the Gropius rule, the individual blocks have more individuality and character than the followers of that great scientific architect usually allow themselves. There are, too, one or two blocks with a different orientation (and I trust a different internal plan) so that a semi-courtyard effect instead of an asylum one is obtained. One feels that the great community that the flats must house, if they still exist, will not all grow alike in their manners and politics, which is one of the arguments used, whatever truth there may be in it, against these big communities.

SHOPS

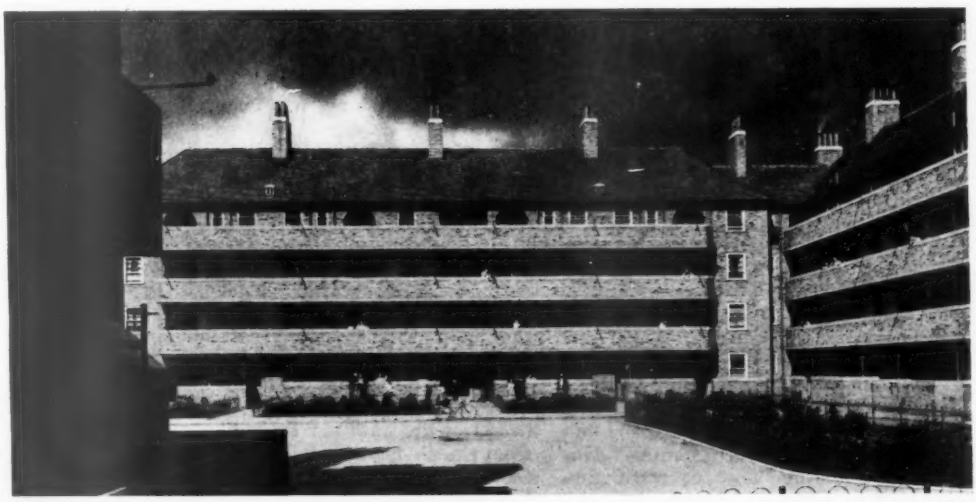
This too is a small section, but it includes one of Mr. Joseph Emberton's fine examples of the display of small goods. Everyone knows his Simpson shop in Piccadilly and how good it is inside from the display point of view, as well as from many others. The Victorian Warehouse in Wood Street in the City which he now presents is for a firm of silk stocking wholesalers who needed show rooms for the buyers from retail establishments who visit them. Mr. Emberton's work consisted in making these show rooms attractive, and clearly he has done this to an extraordinary degree. There is a detail of the reception room with its screens of polished plywood as exciting as a Gordon Craig set for the Moscow Art Theatre. Being able to do these delicate and charming compositions it must have hurt him to have had to have woven into his carpet for this room a silly bear waving a tall hat, the trade mark, I suppose, of this firm. How a firm intelligent enough to employ Mr. Emberton in this way can have such a trade mark is a mystery, but commerce is full of such things.

The other building I have selected for this group is not strictly a shop but a charming open air café by Mr. H. A. Rowbotham, of the L.C.C. Architects' Department—how good it is to see the individual designer's name appearing here!—in Battersea Park. Rightly set among trees but otherwise in the open it is a circular building. Moreover, it is inviting, elegant and fairly "modern" all at the same time. I invite those who say all modern architecture is factory-like to consider this.

CINEMAS AND THEATRES

There are very few of these, too. There is, however, a quiet little cinema at Towcester by Sir John Brown and A. E. Henson, simple and straightforward inside and out and yet not too selfconsciously so. The slight curve to the front should be noticed, taking away from the box-like effect and giving a welcoming air without any elaboration.

Mr. Alister MacDonald has designed in the new Toynbee Hall a composite building which, though it includes a cinema on the ground level, which justifies its inclusion here, contains several other halls and a children's court as well. The interior of the cinema is a little harsh in its lines and in that respect not quite as pleasing as others by this architect, but it contains a brave decorative panel—a pair I imagine—one of which is of a large winged white horse and a dark girl in the manner of Cherico. So little today do architects embellish their necessarily rather bald buildings with their expanses of plain wall with modern decorations, that it is worth calling attention to when it is done. Unfortunately in this case the decoration seems a little large in scale for the



22: Flats near Liverpool, by L. H. Keay. 22

23

23: Café at Battersea Park, by H. A. Rowlotham.

architecture, which it masters rather than serves. The juvenile court on an upper storey is a very pleasantly finished room in a modern edition of linen panelling.

CHURCHES

I have kept churches to the end because today they seem to me, now that we have freed ourselves from the archæological prejudices of even twenty years ago, to offer more scope to the imagination and to genuine feeling for architecture in the abstract than any other kind of building. They can be modern and functional, without the cubist shapes other types naturally lead to, for their function in the first place is to stir the spirit rather than to comfort the body. There are certain forms of worship to be carried out in them which dictate certain arrangements of the interior, but beyond these, which are not very exigent, the architect of a church to-day is extraordinarily free and should have the happiness such freedom gives to those who can use it with the right mixture of imagination and restraint.

Edward Maufe, F. X. Velarde, B. A. Miller and Cachemaille-Day seem to me the leaders to-day in this modern church building movement. Unfortunately we have a specimen of the work of only one of them this year, Edward Maufe, but it is a good specimen. It is a brick church at Hove with a lofty, airy nave set off by narrow ambulatories. These latter are crossed at each pier by sharply pointed arches springing practically from the ground. I think the cool, calm spaciousness of the nave is much enhanced by this contrast, but it owes a great deal, too, to the colour effects of which Maufe is a master. Here his lofty nave has flattish ceiling beams of a pale blue with natural coloured acoustic slabs between and his walls, if I remember aright, are of a greyish yellow brick. It is worth mentioning that a large mural painting is now being made as a result of a competition by Mr. Augustus Lunn to fill a big panel over the altar. This will add another note of distinction to a fine interior. Externally, the most distinctive features are the impressive, lofty pointed recess in the plain west wall which holds the west window and door, and the long elegant campanile seen against the plain mass of the church, but finding its lines echoed in the widely spaced long narrow windows. There is nothing strained or over dramatic in this quiet building which gains its peaceful character, its beauty one would say if one were not so stupidly afraid of the word, from the harmony of its parts and proportions. To me this plain brick building is the building of the year.

The new church of St. Gabriel's, Eastbourne, by Peter Stoneman and Son and the late A. R. C. Fenning, with Messrs. Tatchell and Godfrey Wilson as consulting architects, looks at first sight a grand thing externally, with its immense height set off by two low balancing buildings, one on either side, the parish hall and the vicarage. After a while one begins, however, to have doubts which the interior confirms. Clearly this is a case where the architects have had plenty of money at their disposal. Could not they have made a more unified scheme of the whole like a group of convent buildings instead of Georgian side buildings and Gothic church? The great centre building seems even a little clumsy as one looks into it more closely. With its great height it would probably have been better if the transepts had been omitted and the nave and chancel had run through as one big simple mass, with a range of long slender windows down either side. There is a church in Brighton, St. Bartholomew's, by Alban Scott, built in 1874, of, I should judge, about the same size proportions, but far simpler in design, which seems to me, perhaps partly because I have had so many opportunities of studying it, the finest English church of modern times. The buttresses there are internal ones, so the exterior is not broken up by them as it is here, and the great height of the walls rise sheer like cliffs from the pavement, while in the inside the side windows are so recessed that their light does not detract in any way from the view of the east end. With St. Bartholomew's in my eye, this great Eastbourne church, at first sight so striking, seems a grand opportunity which has not been fully taken.

P. D. Hepworth has done a most delightful little Roman Catholic church and clergy house—this time perfectly unified—at Newbridge in Monmouthshire. Over his Trowbridge County Offices I remarked how well he knew his "Lutyens." Now, looking at this little colour-washed church inside and out, I realize that he has much in common with Mr. Maufe. This is a very complete scheme, bent round the edge of what looks like a quarry, with several individual features like the single ambulatory, the grouping of the chapels into one compartment, as well as the brave painting of the roof and the delightful little wrought-iron electroliers. An interesting external feature is a series of short triangular buttresses which stop a third of the way up on the side next the quarry. I imagine these are due to and justified by the exigencies of the site. They are, nevertheless, very effective in breaking the plain mass of walling above and around them.

24: Church at Hove, by Edward Maufe.

24