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# THE ARCHITECTS'



## JOURNAL

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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.

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# TIMBER SHOW HOUSE



*THE first timber show house of those which are to be built in various parts of Britain under a scheme promoted by the Timber Development Association. The house is at Caterham, Surrey, and was opened by Lord Crawford last month.*

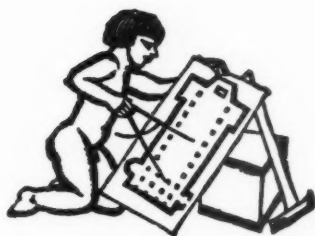


### COPENHAGEN

*A photograph taken in 1933 from the tower of the Vor Frelzers Kirke. The houses in the foreground have now made way for a flat block similar to that on the left.*



JUST



FANCY

*"But art was also imagination and—though the word was much abused—fancy. It was their mission, not only to give people what their bodies needed, but what appealed to their imagination, what tickled their fancy."*—Mr. Goodhart-Rendel at the R.I.B.A. Banquet at Bristol.

"Oh, tell us where is fancy bred," we murmured, as at the end of the Conference banquet the P.R.I.B.A. made his sudden plea for the tickling of this organ. And the President would probably have replied with Shakespeare, "It is engendered in the eyes." But those who were reminded by that repast of Mrs. Woolf's thesis, that a varied diet helps the mind to bear its more luxuriant blossoms, may have had doubts. Fancy needs foundations.

In the first place, could the President's words, themselves the fine flowers of fancy, bear any relationship to the sequence of preceding dishes? No, they were apparently premeditated. A more serious question then occurs. Is fancy a substance or an accident? Can we all by the mere twirling of our  $\frac{1}{2}$ " screwdown bibcocks release the full spout piped straight from the whatsisname spring, from Artesian borings into the sub-soul or from catchment areas for starlight; or is fancy nearer in kind not to the company's water but to the lights which play on it as it lies in a cut-glass beaker? And what if there has been a drought; and out of the taps come forth a little moribund pond life and a smell?

We would like to be able to report that the President said "Fancy" and they went away and fancied. But, harping on banquets, the student of Mrs. Beeton will know that a substratum is needed. Though, from the pictures, her works would seem all compounded of frills and garnish, the text begins "take fourteen eggs and a pint of cream." Fortified with this analogy we would reply to the poet and the President: "No; it is surely appetite that is engendered in the eyes." And appetite does not die "in the cradle where it lies." It is slain by fourteen eggs and a pint of cream on a different field.

While the poet probably was really talking about appetite, the President appeared to be speaking of something that the cook does. The recipe goes on: "Beat the eggs for forty minutes and stir slowly for an hour." With mind and muscle toned to perfection by these rhythmic disciplines, the cook is at last ready to dissipate his accumulated nervous tension in flights of decoration. He rebounds, as it were, from his concentration back towards the world of men; and the curling wake of his flight is that play of fancy which in turn will guide back men from the world into the heart of his creation. The mounting potential breaks in fire across the gap to form a two-way path.

You cannot arrange cascades in most gardens without first piling up a head of water. You cannot write "Alice" without being a professor of mathematics. You

can only grow rococco in the leaf-mould from two millennia of deciduous acanthus. And though nowadays we can get our tested seeds from any dealers, they do not always come up like the picture on the packet. The soil is tired. It needs a root-crop.

We have had a mere quarter-century since the protomorphs of a new serenity and crispness appeared in architecture. We can safely assume that when the pioneers of the Doric order had advanced, patient as coral-insects, as far or much farther in their labours, there was no lack of enlightened complaint of the bareness and sameness of their results, no want of witty Egyptophils to lament the dryness of the home product, no scarcity of leading men in all spheres to deplore the rigid uniformity of the emerging canon. Doric architecture, of course, was highly-coloured. But we imagine that, for some rather obscure reason, this sort of relief would not be acceptable to those who now complain of dullness. Mr. Goodhart-Rendel himself has said that architects should not be over-concerned with colour.

There may be some who are in need of the President's pill; sufferers perhaps from a rather costive solemnity. But these minor digestive troubles are best treated in private. To dose the whole family indiscriminately and in public is to ask for embarrassments. The effect on our neighbours was deplorable.

Our enquiry, however, is not so much concerned with the gist of Mr. Goodhart-Rendel's remarks as with his, perhaps incidental, appeal for the exercise or production of fancy. For fancy itself is surely incidental. It is not a separate faculty that can be geared in or left idle at will. It is not an accomplishment that can be learnt, like tap-dancing or Cape Dutch. It is an epiphenomenon, a by-play, an overflow of spirit. It is what happens to men speaking a mature and common language who meet in the same universe of discourse. It is the trained dancer inventing arabesques. It is the garnish, the cascade, the after-dinner speech at its best. It is not safely to be prescribed to men struggling to digest the elements of a new syntax; nor to those makers of scrap-books, the newest comer to whose collections must sometimes be heard saying "Fancy you fancying me."

Tell me why is fancy fled  
Into the dark, among the dead,  
How forgot, how vanished.  
Reply, reply.  
It is dismembered by the eyes  
With gazing fed up. Fancy dies  
On façades compact of lies.  
Knick-knack, bric-à-brac,  
Give a dog his own.



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## NOTES & TOPICS

### THE TRIBUNALS

SEVERAL new cases have come to my notice lately of fully qualified architects whose work has been condemned as too modern, too plain, or too foreign by a tribunal consisting of a justice of the peace, a surveyor and an architect (usually over 70).

Why should a tribunal so composed be privileged to judge the æsthetic merits of the work of qualified architects—particularly in neighbourhoods where the illiteracies of the speculative trade rise uncondemned? Who thought of this tribunal, anyway?

Will all *fully qualified* readers who have suffered under this perverted town-planning practice please let me know? Cases are all I want at present—details of cases can come later. Names need not be made public. Address your letters to me, at 9 Queen Anne's Gate, Westminster, London, S.W.1, merely stating the number of buildings you have had submitted by a local authority to a tribunal, and the results of the tribunal's labours on your behalf.

### EX-CAVALRY OFFICER BECOMES BUFFER

Both clients and architects will, I am sure, be interested to hear of Mr. Arundell Clarke's new activity.

In a small handbook Mr. Clarke explains, very politely of course, that architects and clients rarely get on together owing to the self-opinionated obstinacy of the former, and the vacillating ignorance of the latter. Accordingly, Mr. Clarke (who was educated at Wellington and Sandhurst) has decided to set up as "a sort of buffer," to use his own words, "between them."

Clients who want houses, therefore, instead of going direct to an architect, go to Mr. Clarke, who, after putting their requirements into shape, hands them over a complete architect-designed house, which they can enjoy without experiencing the tedious anxiety of dealing with an architect. Similarly an architect avoids the worry of having a client.

### IN THE AIR

Gliding has become front-page news since two young men broke last week the world's record for staying up aloft in the national competitions now being held at Dunstable Downs.

Among those competing is Mr. Christopher Nicholson, the architect of the elegant buildings which form the headquarters of the London Gliding Club. He is a well-known sailplane pilot, having been the first in this country to make a night glider flight, and for a short time was holder of the English long-distance record.

Apart from the difficulties encountered in the air, his greatest struggle is said to be in trying to prevent journalists from describing his building as "stream-lined."

Consider now the situation which would arise were Mr. Arundell Clarke to act as a buffer between Mr. Nicholson and his client. First we have the buildings gradually taking shape on the ground. Secondly, Mr. Arundell Clarke, also on the ground, doing his work as a buffer. And up aloft Mr. Nicholson gliding gracefully up and down Dunstable Downs dropping perhaps an occasional ½-inch detail into Mr. Arundell Clarke's waiting hands.

### MOVEMENTS IN BUILDINGS

Some years ago Mr. Henry Ford tried to persuade the Bishop of London to sell him one of the City churches, to round off his collection of old English monuments. The plan fell through—surprisingly enough in view of the Bishop's fairly recent scheme to demolish the whole lot of the city churches and to sell the sites for offices.

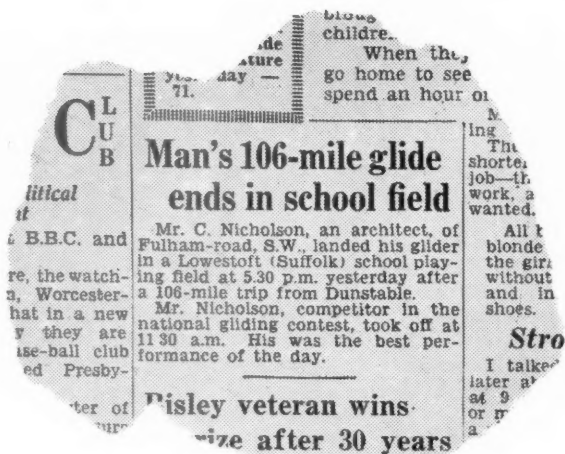
Once again, however, the American market for old buildings seems to be picking up a bit. The latest proposal by an American syndicate is to move Castle Lodge, Ludlow, a mediæval building adjacent to the castle. Efforts are being made, however, to persuade the Minister of Health to prevent it, as he is empowered to do under the Town and Country Planning Act of 1932, and as he did in fact do last year in the case of Grange Court, Leominster. It will be interesting to see if the usually unavailing protests are successful.

Over the entrance to what *The Times* has called "a huge bully of a building," has been inscribed the one word "Adelphi." Protests have already been made against this blunt and explosive title, which is not even qualified by "House" or "Buildings." It certainly seems an ungracious tribute to the brothers, with whom this site will always regretfully be associated, without such arrogant memory-jogging.

### BICYCLE TAKES WINGS

Seeing a crowd of telegraph boys in the Charing Cross Road I naturally elbowed my way to the front, and found—at long last—the Streamflow bicycle, painted a bright Post Office red, and leaning against the pavement supported by a streamflow support.

This remarkable piece of industrial design has (a) a speedometer reading up to 50 miles an hour, (b) the beginnings of streamflow boxing-in, and (c) one or two frame members which looked like struts taking pure compression stresses, but these had been streamflowed into graceful curves.



The above cutting is reproduced from "The Daily Express" for July 12.

Of course I'm just a *démodé* old man who's getting left behind by progress, but I couldn't help wondering why this work of art looked so much heavier than an ordinary bicycle.

#### PALACE OF SOVIETS

It has been announced that during this summer work will start on "the Palace of the Soviets" in Moscow, the tallest building in the world. It is scheduled to be completed by 1942, and will cost about four million pounds.

The dimensions and scale of this building are in the true "largest-ever" tradition. The Grand Hall, covering an area of two acres, is roofed by a dome thirty storeys high, and could contain (with room to spare) the entire "Cathedral of the Redeemer" which used to occupy the Palace site. The seating will be made to sink into a huge pit and be replaced by one or all of the eight types of display platforms. An added horror is the threat that films will be projected simultaneously on to four "super-screens."

This will presumably console the bewildered peasant for being unable to hear a word which is spoken. This state of affairs seems likely when it is remembered that the sound will take a full second to travel from floor to dome and back.

The whole building serves as a pedestal for the statue of Lenin. This colossus, constructed of stainless steel, will be the largest figure ever made by man, and depicts the leader with outstretched arm. The minatory finger with which he points will be 16½ ft. long.

Oh, well.

#### COLUMNIST'S INGENUITY

Nobody knows better than Astragal (except perhaps his readers) how difficult it can be sometimes to fill a regular column of news items.

The method used by Charles Graves (of the *Daily Mail*) is interesting if slightly elementary. It is to walk to the office by a different route every morning, cataloguing the number of houses which are being painted, have geraniums in their window boxes, or are just "To Let." The result,

if a little boring, is good for a couple of columns at least, and gives an opportunity for moralising on such significant subjects as the disappearance from Mayfair of ivy.

And don't say "Ivy who?"

#### GEORGIAN GROUP

About 2,000 inside and apparently almost as many looking over the railings should mean a financially successful evening for the Georgian Group's party to save Mecklenburgh Square (with a ballet, an Oliver Messel tent, and various period carriages parked round the outskirts). While the County turned up in force, were there as many architects present as there should have been? One of last Sunday's papers carried a story about a bricklayer's apprentice who rushed straight from the scaffolding to perform in the ballet: once again the rank and file of the industry has shown its leaders the way.

#### FOCUS

A prospectus of a new publication, got together by students and young architects of the A.A., has just been sent to me. *Focus* is its name. Its object is to project on to the chaos of the architectural world the light of clear thinking. Among its outside contributors is the maestro himself: we are to read some hitherto unpublished maxims of Le Corbusier.

Other features are a brilliant *projet* (though this is hardly the word) by a group of students for a new town of 20,000 souls in Oxfordshire; articles by Blanco White, Maxwell Fry and E. A. A. Rowse (of happy memory), and an open letter from Anthony Cox (past president of the students' committee) to H. S. Goodhart-Rendel.

*Focus* will be out today, price 1s. 6d., and if 500 of you buy a copy it will be successfully launched as a termly periodical.

#### THE ASTRAGAL FELLOWSHIP

This awakens my old interest in the A.A. I wish the authorities would come clean. The A.A. school is famous as the most progressive architectural influence in the country, but with so many ugly (i.e. Beaux Arts) rumours going around, what is one to think?

At the first sign of retrogression I shall organize a rival school. It will be along the lines of the Taliesin Fellowship. (Frank Lloyd Wright is so much more modern than Corb.). The site for it, Burnham Beeches, by the greenbelt.

There we shall hew our own timber, build our own camp—with the help of Mr. Boulton of the T.D.A.—and get Mr. Arundell Clarke to act as a buffer between us and our clients.

ASTRAGAL

This issue is devoted entirely to buildings recently completed in Birmingham and district. The *Working Detail and Current Prices of Materials - Part I* are held over until the next issue.



## NEWS

POINTS FROM  
THIS ISSUE

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- "Fancy . . . is not an accomplishment that can be learnt, like tap-dancing or Cape Dutch" . . . 59
- "One of the chief practical advantages of the group system is that it can be indefinitely expanded" . . . 64
- Photographs, plans and description of the Birmingham Hospitals Centre to be opened today by the Duke of Gloucester . . . 90

PROPOSED INDUSTRIAL ART CENTRE  
IN LONDON

The Council for Art and Industry has formulated proposals for the establishment in London of an Industrial Art Centre, at which modern industrial production, British and foreign, would be displayed. A memorandum submitted by the Council to the Board of Trade suggests that funds from public and private sources should be found for the purpose, and that the Centre should be a relatively small one, housing temporary exhibitions and serving as the point from which circulating collections should originate.

The proposal is referred to in the fourth annual report of the Council for Art and Industry, published in the current issue of the *Board of Trade Journal*.

## THE EMBANKMENT AT MILLBANK

In view of continued leakages at high tide in the Embankment wall at Millbank, and the general uneasiness prevailing as to the adequacy of the parapet as a protection against floods, a scheme of reconstruction has been prepared by the L.C.C. Highways Committee.

In a report before the Council the Committee, giving the reasons for the scheme, states that the existing wall is not in first-class condition. The new scheme includes widening of Millbank opposite the Tate Gallery. The Minister of Transport is prepared to make a 50 per cent. grant, subject to approval of details of the scheme. The estimated cost of the proposed works is £87,000, of which, after allowing for grants, the Council would have to pay about £18,500.

## TOWN-PLANNING AT RICHMOND

Fears which had been expressed in Richmond that a town-planning scheme for the borough threatened the demolition of the terrace of Georgian houses in Ormond Road have been removed by a decision of the Highways Committee of the Council that a reservation of land for the future widening of the road should be omitted from the scheme. It is now proposed that a building line should be prescribed on both sides of the road, providing for a width of 56 ft. between the two lines, and the Committee consider that this will be a sufficient safeguard if eventually the houses are pulled down.

## ON THE AIR

On July 20 in the Regional programme at 8.25 p.m. Scotland is broadcasting a recording of the life and work at the well-known Ballachulish slate quarries. Half of the buildings

THE  
ARCHITECTS'  
DIARY

## Thursday, July 14

LONDON SOCIETY. Visit to the Exhibition of Modern Silverwork, Goldsmiths' Hall, Foster Lane, E.C.2. 3.30 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. At Carlton Hall, Carlton Street, S.W.1. Discussion on "The Position of Architectural Assistants in Public Offices." Speakers: R. D. Manning and R. C. Fisher. 6.15 p.m.

## Friday, July 15

ROYAL COLLEGE OF ART. At the Lecture Theatre, Victoria and Albert Museum, S.W.7. Distribution of College Diplomas. By the Rt. Hon. Sir Philip Sassoon. 3 p.m. Also, Exhibition of Students' Work. Until July 30.

## Sunday, July 17

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Summer Tour to Copenhagen, Stockholm and Gothenburg. Until July 29.

## Thursday, July 21

LONDON SOCIETY. Annual River Trip. From Henley to Windsor. Depart Henley. 3.15 p.m.

in Scotland, including Iona Cathedral, Dunkeld Cathedral, Glasgow Art Galleries, the Universities of Glasgow and Edinburgh, and the Heriot-Watt College are said to be roofed with the dark blue slate of Ballachulish, one of the most durable slates in the world. The quarries are known to have been in existence at the time of the '45 Rebellion. John Gough, who directs this programme, will let the listener hear not only about the mysteries of plugging, splitting, and pressing, but also something of the social life of the quarry workers. The programme is being repeated on the following afternoon and will be heard on the National wavelength.

## ARCHITECTS AND STRUCTURAL A.R.P.

After the very successful Structural A.R.P. Conference which Sir Samuel Hoare opened at the R.I.B.A. last month, similar conferences are to be held in the chief provincial centres. These conferences are being organized by the provincial societies of architects allied to the R.I.B.A. The first is now being held at Leeds and the second at Birmingham on July 18 and 19. Further conferences are being arranged, though their dates are not yet fixed, at Manchester, Hull, Newcastle-on-Tyne, Liverpool, Nottingham, Cardiff, Glasgow, Belfast, Cambridge, Exeter, Plymouth, Reading, Norwich and Croydon. Other centres are considering holding conferences.

All the conferences will follow the same lines. Each will begin with an evening inaugural meeting, to which representatives of local authorities, commercial organizations and public institutions will be invited. At Leeds and Birmingham the Lord Mayors will preside. The whole of the next day will be occupied with a technical instructional course, at which local architects will be present, together with architects and A.R.P. officers from the staffs of local authorities.

The task of instructing architects and the technical officers of local authorities in structural A.R.P. has been entrusted to the R.I.B.A. and its allied and associated societies by the Home Office. The lecturers at the courses of instruction will be Mr. T. E. Scott, F.R.I.B.A., and Mr. E. L. Bird, M.C., A.R.I.B.A., who have represented the R.I.B.A. for the past two and a half years on a special Home Office Structural Precautions Committee. It is anticipated that they will have visited the principal cities of Great Britain before the end of the year.

## AN ARCHITECT'S WILL

Sir Edward Guy Dawber, R.A., left gross estate of the value of £10,471, with net personality £9,802.

## PROFESSIONAL ANNOUNCEMENT

The practice carried on by the late Sir Guy Dawber, R.A., and Mr. A. R. Fox will now be carried on by Mr. Fox in conjunction with Mr. T. M. Wilson, F.R.I.B.A. (late of Staple Inn, Holborn), who was associated with Sir Guy Dawber for many years in his earlier days.

They are continuing the practice together under the name of Sir Guy Dawber, R.A., Wilson and Fox at 18 Maddox Street, Hanover Square, London, W.1. Telephone: Mayfair 4935.

## A.R.P.

The name of the firm responsible for the precast R.C. units suitable for lining either surface or tunnel shelters shown in the photograph on p. 42 of our issue for July 7, is Messrs. Trollope and Colls, as will be seen from their advertisement on p. xlii of the same issue. The firm's registered design number is 827768.

## EXHIBITIONS

[By D. COSENS]

THE Goldsmiths' Company are to be congratulated on their serious attempt to raise the standard of design in silversmiths' work, and their exhibition, though by no means equal throughout, deserves every praise. It is a barren form of defeatism to say that this or that is far from perfect—the idea that design needs improvement is slowly invading the manufacturing mind and everything should be done to encourage it. The designers flop badly over trophies (but who wouldn't?), and a good many mistakes are made in the name of modernity, but there is, nevertheless, a large proportion of work of high standard. Professor Gleadowe's rosewater dish for Corpus Christi, Cambridge, and his vases for Winchester are amongst the best, and there is very promising work by L. G. Durbin, a student at the Central Schools. His well-proportioned casket, with its simple incised pattern, has an unfortunate afterthought in the shape of a very incongruous handle, and although his altar cross will undoubtedly fit in better with Mr. Maufe's designs for Guildford Cathedral, the rejected entry for the competition by R. J. Ruby (also a student), is far more interesting. Keith Murray has a good tea set, and there is some pleasant table silver, notably that with ivory handles. Mr. Howard Robertson has devised a setting, indirectly lighted, which could not be improved on for showing the various exhibits to their greatest advantage.

As Sir Kenneth Clark says in the introduction to the exhibition catalogue: "For the past seven or eight years, Shell-Mex and B.P. have been amongst the best patrons of modern art. They are all a patron should be—they employ young or little-known artists, they provide definite subjects, and they make it possible for an artist's work to be enjoyed by a very large number of people." The collection of posters, literature and advertisements which is now being shown at Shell-Mex House is excellent. Advertising, following the lead originally given by the Underground, has, in the hands of enlightened firms, afforded a means of expression to artists, and a degree of education to the public, a million times wider than has ever before existed. And that "good" art has been found to sell says a great deal for the much abused taste of the man in the street. The high standard of lithographic reproduction can be realized by comparing the original paintings with the printed posters.

Modern Silverwork. Goldsmiths' Hall, Foster Lane, until July 16.

Pictures in Advertising. Shell-Mex House, Victoria Embankment, until July 23.



# OFFICIAL DEPARTMENTS

## V. MINERS' WELFARE COMMITTEE: ARCHITECTS' DEPARTMENT

[By R. D. MANNING]

*This article is the last of a series of five devoted to conditions and opportunities in large official architects' departments. To inform the profession of strong and weak points in representative official departments is the immediate intention of these articles. Formulation of a standard system which provides the best practicable opportunities for salaried architects is the ultimate intention. The articles are based upon practical data supplied by men working, or until recently working, in the departments concerned. With this reservation the facts stated and conclusions drawn are wholly the author's.*

**T**HIS Office is a babe amongst official architects' departments. The Mining Industries Act of 1926 set up a fund which is administered by the Miners' Welfare Committee for the purpose of providing Pithead Baths throughout the coalfields, and an architect's department was organized *ab ovo* to carry out the work. It is estimated that this will be completed about 1945, when presumably the office will be disbanded.

These circumstances preclude the department from being regarded as a typical case, but it has been included in this series of articles because its organization is interesting in itself, and because certain very important lessons may be learnt from it.

### Organization

The office is under the control of a Chief Architect and Deputy, and is divided into two District Sections, each under a Group Architect, which deal with the work to be done in the northern and southern halves of the country. These are each sub-divided into four groups, which present the first interesting feature of the department.

Each of these groups forms a small architectural unit, complete in itself, led by a man who ranks officially as an Architect, and containing from three to seven men, comprising a Senior Assistant and Grade I and II and Junior Assistants according to the size of the group.

The administrative side of the Committee's work, dealing with allocation of funds, etc., is dealt with by a completely separate staff, which works, however, in close co-operation with the architects.

The department employs its own staff for quantities, heating, lighting, ventilation and sewerage, but not for structural engineering.

Salaries and conditions of service are controlled by the Mines Department, presumably in collaboration with the Senior Architects, and the regulations conform generally to those obtaining throughout the Civil Service, involving the political restrictions introduced in 1927, which include a certain amount of interference with the individual's life outside the office. Salary increases are fairly rigidly laid down, which is an

advantage to most assistants, though it may lead to a certain lack of flexibility in recognition of individual merit.

There is one important difference in the position of the staff, however, due to the fact that the office came into being for a certain limited purpose and is due to be disbanded when that purpose is fulfilled. There is no permanent establishment, so that although the staff suffer from many of the disadvantages of official employment, they do not enjoy all the corresponding benefits. There is, however, a pensions scheme now in operation, under which the committee's contributions are double those of the staff.

The working hours are from 9.30 until 5.15 (12.45 on Saturdays). No overtime is paid, and men are required on joining the staff to agree to work extra when necessary, and this is actually enforced sometimes. On the other hand, leave is generous, ranging from three weeks for Grade II Assistants and four weeks for Grade I and Senior Assistants, to six weeks for Architects, though I am told that the latter are unable sometimes to take their full leave, owing to pressure of work. Salaries are quite good, and together with the figures for leave, should be read in conjunction with the average ages of the staff, the low level of which is a remarkable feature of this department. For convenience, I append a table showing these figures:—

	Average		
Grade	ages	Salaries	Leave
Junior ...	18-24	Up to £250	2 weeks
Grade II...	21-25	£250-300	3 weeks
Grade I ...	25-30	£300-400	4 weeks
Senior ...	28-35	£350-450	4 weeks
Architects	30-45	£450-650	6 weeks

Group Architects are paid £750 per annum, the Deputy Architect receives £800-1,000 and the Chief Architect £1,000-1,200. I am informed that the ages of these officers are also considerably lower than those of their equivalents in other official departments.

### How it Works

Each group deals with the work to be done in a separate area or coal-field, usually covering about two counties. The Architect is officially responsible for the design of his group's jobs, and his name appears under any illustrations

of work in the press. In practice, apparently, the pressure of the work is very great, and the correspondence, accounts and supervision, etc., take up much of the Architect's time, and he does not do much more than exercise a general personal influence and supervision, sketch designs being actually worked out by the Senior Assistant in conjunction with Grade I assistants, the degree of authorship naturally varying with the circumstances. Working drawings are allotted to assistants according to their experience and grades. It will be observed that, so far, each group corresponds in organization and practice with the small private office which, in the opinion of many, is the ideal unit for producing good architecture.

I am told that there is a minimum of interference with the architectural work by the senior officers, whose duties are mainly administrative; that, on the contrary, they display definite sympathy with modern ideas in design and do little more than exercise a sobering influence on the more exuberant tendencies of the younger men. It is evident that the assistants who actually carry out the architectural work in this office are allowed a freedom and exercise of initiative beyond anything I have heard of in other official departments.

There is an obvious connection between the procedure followed and the atmosphere prevailing in this office and the fact that the quality of the architecture produced is so good. There is a freshness and vigour in the design of these pithead baths, and a quality of logical excellence, which has become recognized as superior to most of the work at present being done either by official or private architects.

It would be foolish, however, to represent the department as a kind of architectural paradise, and I am told that the staff are in fact inclined to be self-critical (perhaps one of the best recommendations it could have!), and view with a certain amused scepticism the praise lavished by outside observers. There are indeed certain marked defects in the organization, which do not appear to be inherent, but are perhaps partly due to the circumstances in which the department functions.

The anomalies in the staff administration, due to the imposition on a temporary organization of regulations framed for other permanent departments, have already been mentioned. One serious difficulty under which the staff labours is a pressure of work which is apparently constant. Jobs are done to a rigid timetable on the drawing-boards and in the quantity surveyor's section, and delays are regarded seriously. The result is that work often leaves the drawing office in a condition which affords little satisfaction to the group responsible for it. The inference is that the office is understaffed, and the cause may be a reluctance to overstaff a temporary organization which might be carried too far.

I am told, however, that the factor which causes most feeling is a rule which forbids visits to jobs by anyone below the grade of Senior Assistant (it seems that even the latter do not in fact get out of the office). None of the junior and intermediate grades ever see a job, either in progress or completed. The seriousness of this point is surprisingly seldom realised by the senior officers in official departments. From the assistants' point of view, the rule is exceedingly unfair; it means that a man may spend years in such offices, and may rise to senior posts, without ever knowing anything of the practical side of building, and without ever being able to check up his designs on paper with their material results. From both the assistant's and the office's point of view, the practice is unwise; it leads to the perpetuation of errors in detailing and construction which must be repeatedly corrected (if, indeed, they are corrected!) by the Clerk of Works or the contractor, and to the development of "drawing-board design" which the assistant has no opportunity to correct. Any extra cost of travelling involved by an alteration of this custom would undoubtedly be compensated by the minimising of the risk of expensive mistakes, and by an increase in enthusiasm and the standard of work on the part of the staff.

#### Conclusions

It is obvious that there is a definite connection between the reputation acquired by this Department and the way in which it is run. There appear to be two principal factors responsible for the quality of its work and the atmosphere prevailing among the staff.

First, in spite of the handicap of regulations devised by clerical officers for other departments, it has been found possible to organise this office primarily as an architect's office, on logical and intelligent lines. It is significant, for instance, that although the attendance book is in evidence, its fundamental unreason is tempered by a certain reason employed in its use. I am told, for example, that considerable latitude is permitted as regards punctuality to men who have been working overtime (this has, of course, the additional effect of softening any possible irritation caused by the lack of payment for overtime). It may be argued that the organization of this office is only made possible by the peculiar circumstances of its existence; I do not think this contention will bear much examination. It might also be argued that such a system can only be applied to a small department; I think, on the contrary, that one of the chief practical advantages of the group system is that it can be indefinitely expanded, and that it cannot develop the unmanageable unwieldiness which is so bad a feature of some large official offices.

Secondly, there has been no hesitation about allowing responsibility and initia-

tive to men at ages when their faculties are at their liveliest, and before their inventive powers and enthusiasm have had time to be dulled by years of subjection to the ideas and prejudices of much older men whose faculties have previously been crippled by similar treatment in their own younger days. It may be argued here that this attitude towards the staff has been made possible only by fortuitous circumstances, and that, were this department to acquire a permanent character, it would develop the same failings as do so many other official departments. This argument is, however, irrelevant; the point to be emphasized is that this department exists, that its organization is such and such, and that the result is so and so. Moreover, I think that such arguments miss the point of the lesson to be learnt from this office. The organization of the average official architect's department results in the development of large staffs of assistants who are treated as subordinate draughtsmen whose job is to obey instructions; they are given little responsibility or scope for initiative; they are dominated in matters of design by a small number of men (sometimes only one man) who have reached positions and salaries to which the vast majority of the staff have no hope of

attaining. The few who do are usually long past the condition in which they are likely to become good architects. The inevitable result is the mediocre standard of design which is so lamentably common, and a state of mind in the subordinate staff which is met, in despair, by the multiplication of petty disciplinary rules which are, at one and the same time, incapable of maintaining any genuine discipline, and yet the only way to control men who have lost any impulse to discipline themselves. If, on the other hand, these men were encouraged to develop their powers and sense of responsibility from the beginning of their careers, the habit of mind so engendered would remain with them, however much they developed the sobriety of increasing age, with incalculable benefit to their work. Men so treated will have no need of pettifogging discipline, nor will they feel the impulse to hamstring the enthusiasm of their juniors.

To those of us who believe in the function of architects as servants of the community, and in the possibilities of the official department as a vehicle of good architecture, the Miners' Welfare Committee Architects' Department, with all its defects, represents a confirmation of our beliefs and a reason for hope in the future development of our work.

JOHN L. HARRISON

## LETTERS FROM READERS

### A.R.P.

SIR,—Regarding the articles published from time to time in the JOURNAL on the subject of A.R.P., I would refer you to your footnote to Mr. Kenneth F. Wray's letter in the JOURNAL for June 23 issue. "... they should examine the evidence available." This remark would be much fairer if we had some articles published pointing out the ineffectiveness of the alleged protection, in addition to those which tell us of the effects of bombs and the lightly assumed methods to counteract the effects thereof; actually, the published articles should reveal that serious attempts at real protection would be economically impossible; further, if we allow that full protection can be ultimately obtained against the present methods of attack (and full protection should be aimed at, not the apologetic fractions that are at present being put into being), then it can be taken for granted that any potential enemy will not be long in finding a means of destroying this protection. Thus the whole situation becomes a vicious circle, and as such should be definitely avoided instead of being pushed further and further into the public eye.

It has been said that A.R.P. is purely a defensive measure, but this can hardly

be true when we are preparing long-range bombers and other aggressive weapons at the same time, which would be used against enemy countries for the self-same purpose against which we are attempting to defend ourselves. An attempt at efficient A.R.P. is only a method of keeping the offensive services better organised to do their paid job of death and destruction.

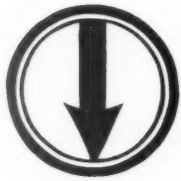
I would like to state that, in my opinion, no average thinking architect can agree with A.R.P. in any respect whatsoever. The JOURNAL is a professional paper, and as such could be a useful deterrent to this menace becoming totally overbearing. It is pitiful to contemplate the effects that A.R.P. will have, and is having, on design; if the rush goes on unchecked we shall have no architectural style, everything will be solid masses of reinforced concrete with tiny apertures to crawl into and cower; it will breed a continual fear and dread of a thing that *might* happen.

As the JOURNAL can only deal with general problems near to the building trade and be a technical guide in this matter, I cannot go into the question of retrogressive moral and mental effects that A.R.P. is already having on the general public. I would, however, stress the importance of keeping in mind the present-day trend to war-like thought, and its effects on a reasonably decent standard of ethics.

JOHN L. HARRISON

## The Architects' Journal Library of Planned Information

# INFORMATION SHEET SUPPLEMENT

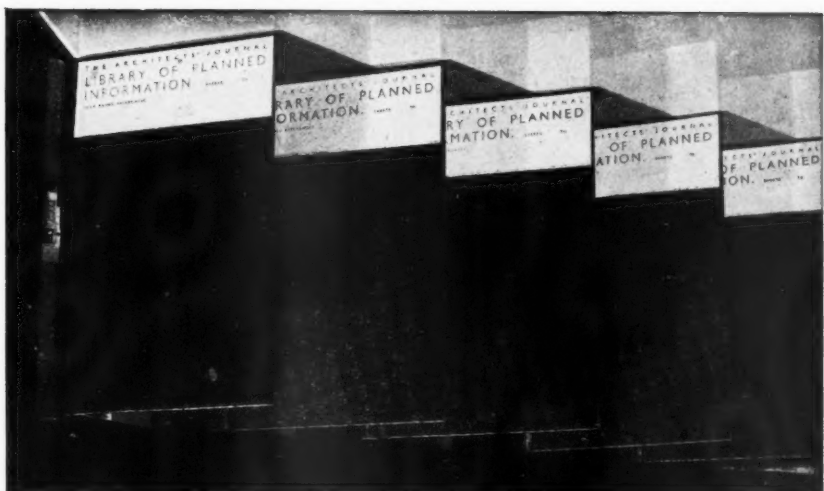


### SHEETS IN THIS ISSUE

**643** Glazing

**644** Elementary Schools—VIII

*In order that readers may preserve their Information Sheets, specially designed loose-leaf binders are available similar to those here illustrated. The covers are of stiff board bound in "Rexine" with patent binding clip. Price 2s. 6d. each post free.*



Sheets issued since Index :

- 601 : Sanitary Equipment
- 602 : Enamel Paints
- 603 : Hot Water Boilers—III
- 604 : Gas Cookers
- 605 : Insulation and Protection of Buildings
- 606 : Heating Equipment
- 607 : The Equipment of Buildings
- 608 : Water Heating
- 609 : Fireplaces
- 610 : Weatherings—I
- 611 : Fire Protection and Insulation
- 612 : Glass Masonry
- 613 : Roofing
- 614 : Central Heating
- 615 : Heating : Open Fires
- 616 : External Renderings
- 617 : Kitchen Equipment
- 618 : Roof and Pavement Lights
- 619 : Glass Walls, Windows, Screens, and Partitions
- 620 : Weatherings—II
- 621 : Sanitary Equipment
- 622 : The Insulation of Boiler Bases
- 623 : Brickwork
- 624 : Metal Trim
- 625 : Kitchen Equipment
- 626 : Weatherings—III
- 627 : Sound Insulation
- 628 : Fireclay Sinks
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- 630 : Central Heating
- 631 : Kitchen Equipment
- 632 : Doors and Door Gear
- 633 : Sanitary Equipment
- 634 : Weatherings—IV
- 635 : Kitchen Equipment
- 636 : Doors and Door Gear
- 637 : Electrical Equipment, Lighting
- 638 : Elementary Schools—VII
- 639 : Electrical Equipment, Lighting
- 640 : Roofing
- 641 : Sliding Gear
- 642 : Glazing



## THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## STANDARD LETTERING IN THERMOLUX GLASS :

For variations in technique see notes on the back of this Sheet.

STYLE OF ALPHABET : ROMAN : REFERENCE N° T.3A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

STYLE OF ALPHABET : ROMAN with interspaced outline : REF. N° T.OO.3A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

STYLE OF ALPHABET : ROMAN in borderline : REF. N° T.B.3A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

STYLE OF ALPHABET : FANCY SCRIPT : REF. N° T.4A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

STYLE OF ALPHABET : FANCY SCRIPT in borderline : REF. N° T.B.4A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

STYLE OF ALPHABET : COPYBOOK SCRIPT : REF. N° T.5A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

STYLE OF ALPHABET : OLD ENGLISH : REF. N° T.7A.

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ

abcdefghijklm  
nopqrstuvwxyz  
& 1234567890

*Information from The Thermolux Glass Co. Ltd.*INFORMATION SHEET : STANDARD LETTERING IN THERMOLUX GLASS : N° 2.  
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C1. *Wm. & B. Byrne*

THE ARCHITECTS' JOURNAL  
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## INFORMATION SHEET

• 643 •

## GLAZING

Subject: Standard Lettering in Thermolux  
Diffusing Glass, No. 2

## General:

This is the second of two Sheets setting out the standard lettering adopted for use in Thermolux glass. This lettering can be specified by reference number and can be executed in any size at the established rates given in the price list below.

These standards do not, however, limit the variety of letters obtainable in Thermolux glass—lettering can be executed to architects' details and special designs are prepared by the Company to order.

## Thermolux Glass:

The glass is a combination of two sheets of plain clear glass with a layer of glass fibre between. For full details of the glass and of its light diffusing and heat transmission resisting qualities see Sheets Nos. 372, 373 and 499.

## Decorative Thermolux Glass:

This glass is the same in construction as the standard Thermolux, but the inter-layer is formed in coloured glass fibre, one or more colours being used to form any pattern or design required.

## Lettering:

There are five different methods of obtaining lettering in the glass, and in each method the lettering itself is on the inner side of the plain glass sheets, and is therefore permanently protected from dirt and weathering agencies and will not deteriorate or lose its freshness of colour from these causes.

Lettering may be formed in any of the following ways:—

(a) By cutting the glass fibre forming the "field" and setting into it letters cut from glass fibre of a different colour. The lettering is then formed purely by the glass fibre and both letter and field are translucent.

(b) By painting the outline of the letter on the inner side of the glass and filling in the body of the letter with glass fibre of a colour the same as or different from the colour of the field.

This gives a translucent field and letter, and the painted outline of the letter may be either translucent or opaque.

(c) By painting in the letter solid on the inner face of the glass. The letter may then be either translucent or opaque.

(d) By a combination of (a) and (b), by which a translucent letter is made of different colour from the field and a painted borderline is provided for definition inside the perimeter of the letter formed in the glass fibre, i.e. the coloured glass fibre letter fills in the body within the line and also forms a margin outside it.

(e) By a combination of translucent and opaque painted work.

Wherever work is painted, the area to be painted is first sand blasted to give a permanent key and a slight recess in which the paint can lie.

## Schedule of Lettering:

The following schedule sets out the alphabets shown on this Sheet and those derived from them by variation of technique. For sans serif and other types of letter see Sheet No. 642. In the descriptions given in this schedule "translucent letter" means (unless noted to the contrary) a letter formed in translucent paint.

All opaque work is formed in paint.

Reference Number	Description	Price per inch of height
T.3A ...	<i>Style of Alphabet—Roman</i> As shown on this Sheet. Opaque letter	s. d. 0 6½
T.3B ...	Alphabet as T.3A. Translucent letter	0 8
TD.3B ...	Alphabet as T.3A. Translucent letter formed in coloured paint and backed with a white interlayer, the general background consisting of a coloured interlayer	1 0
TOO.3A	<i>Style of Alphabet—Roman with Interspaced Outline</i> As shown on this sheet. Opaque letter with opaque outline	0 9½

Reference Number	Description	Price per inch of height
TTO.3A	Alphabet as TOO.3A. Opaque letter with translucent outline	s. d. 0 11
TOO.3B	Alphabet as TOO.3A. Translucent letter with opaque outline	0 11
TTO.3B	Alphabet as TOO.3A. Translucent letter with translucent outline	0 11
TB.3A ...	<i>Style of Alphabet—Roman in Borderline</i> As shown on this Sheet. Opaque letter	0 8
TB.3B ...	Alphabet as TB.3A. Translucent letter	0 9½
TX.3A ...	Alphabet as TB.3A. Opaque line with body formed in an interlayer, different in colour or direction of fibres from the general background	1 0
TX.3B ...	Alphabet as TB.3A. Translucent line with body formed in an interlayer, different in colour or direction of fibres from the general background	1 1½
TN.3A ...	Alphabet as TB.3A. Translucent letter formed by an opaque borderline and separated from an opaque, painted background by a translucent interspace of about 1/16 in.	0 8
TN.3B ...	Alphabet as TB.3A. Translucent letter formed by a translucent borderline and separated from an opaque, painted background by a translucent interspace of about 1/16 in.	0 9½
T.4A ...	<i>Style of Alphabet—Fancy Script</i> As shown on this Sheet. Opaque letter	0 8
T.4B ...	Alphabet as T.4A. Translucent letter	0 9½
TD.4B ...	Alphabet as T.4A. Translucent letter formed in coloured paint and backed with a white interlayer, the general background consisting of a coloured interlayer	1 1½
TB.4A ...	<i>Style of Alphabet—Fancy Script in Borderline</i> As shown on this Sheet. Opaque letter	0 8
TB.4B ...	Alphabet as TB.4A. Translucent letter	0 9½
TX.4A ...	Alphabet as TB.4A. Opaque line with body formed in an interlayer different in colour or direction of fibres from the general background	1 0
TX.4B ...	Alphabet as TB.4A. Translucent line with body formed in an interlayer different in colour or direction of fibres from the general background	1 1½
TN.4A ...	Alphabet as TB.4A. Translucent letter formed by an opaque borderline and separated from an opaque, painted background by a translucent interspace of about 1/16 in.	0 8
TN.4B ...	Alphabet as TB.4A. Translucent letter formed by a translucent borderline and separated from an opaque, painted background by a translucent interspace of about 1/16 in.	0 9½
T.5A ...	<i>Style of Alphabet—Copybook Script</i> As shown on this Sheet. Opaque letter	0 8
T.5B ...	Alphabet as T.5A. Translucent letter	0 9½
T.7A ...	<i>Style of Alphabet—Old English</i> As shown on this Sheet. Opaque letter	0 9½
T.7B ...	Alphabet as T.7A. Translucent letter	0 11

## Uses of Thermolux Lettering:

Since lettering in Thermolux glass need not affect the light diffusing properties of the surrounding glass in a panel, a lettered panel may be used both as a sign board and as an efficient lighting medium, such as a fanlight or shop transome. This combination is of particular value in shops where good daylight is required on the showcases or displays, and where shop signs are required at a low level where they can be easily read.

Lettering on translucent glass does not vary greatly in visibility with different lighting conditions. If suitable colours are used such lettering will stand out strongly, both by daylight from the outside and by artificial light from the inside. It seems very likely that great economies in night lighting of shop signs can be effected by the judicious use of low-powered lights behind letter panels of this kind.

Manufacturers: The Thermolux Glass Company, Ltd.

Address: 1 Albemarle Street, Piccadilly, London, W.1

Telephone: Regent 8171

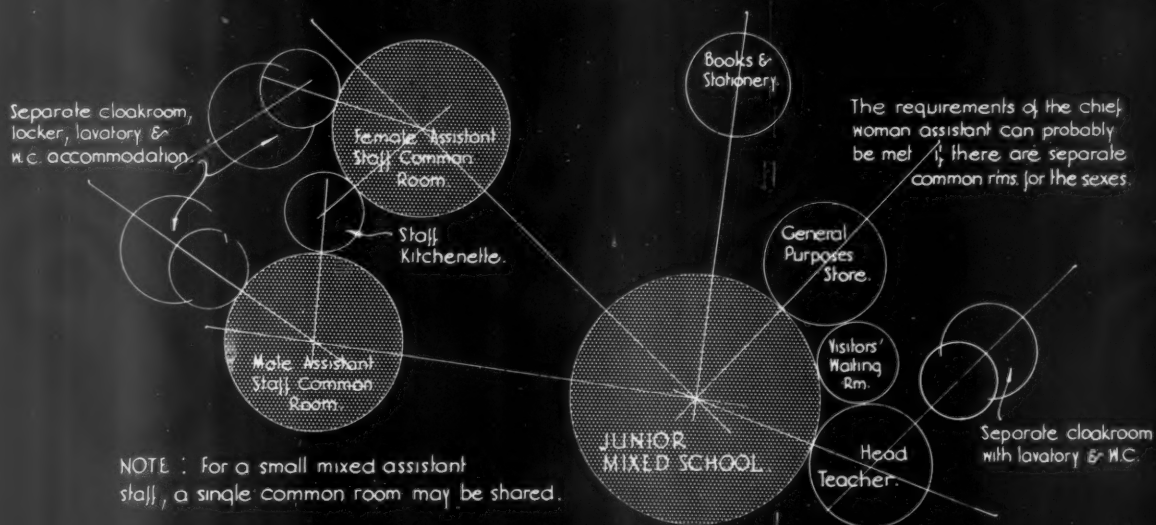




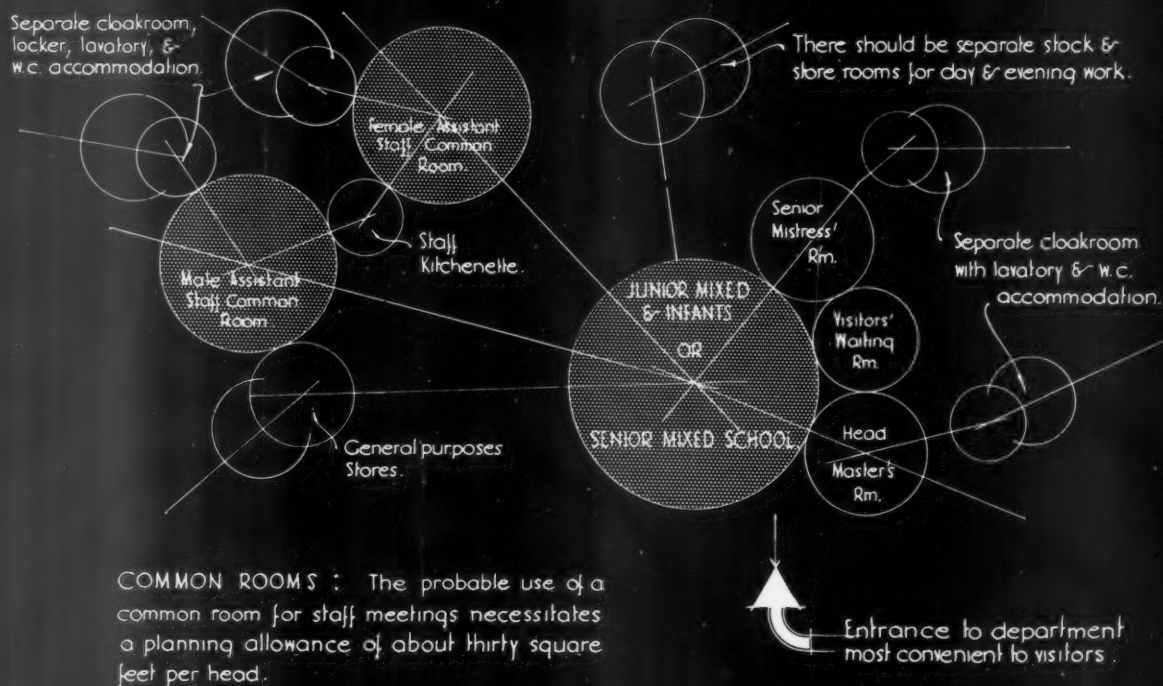


## THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

DIAGRAMMATIC SCHEDULE OF STAFF ACCOMMODATION FOR DIFFERENT TYPES OF SCHOOL :  
 PUPILS' ACCOMMODATION : For schedules of the general requirements of Nursery, Infants, Junior, & Senior schools, see previous Information Sheets No. 4, 5, 6 & 7 of this series.



LAVATORY ACCOMMODATION : Where possible, the staff should be provided for on the following total basis : six to nine persons, 2 basins (h & c) & 2 W.C.'s, ten to fifteen persons, 3 basins (h & c) & 3 W.C.'s.



COMMON ROOMS : The probable use of a common room for staff meetings necessitates a planning allowance of about thirty square feet per head.

*Extracts from 'Elementary School Buildings' issued by the Board of Education, 1936.*

INFORMATION SHEET : ELEMENTARY SCHOOL BUILDINGS : No. 8  
 SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C1 • 9022 A. Baynes

THE ARCHITECTS' JOURNAL  
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INFORMATION SHEET

• 644 •

ELEMENTARY  
SCHOOLS—VIII

Subject : Staff Accommodation

The information on this Sheet is a summary of the recommendations regarding staff rooms for different types of schools, contained in the Board of Education's Pamphlet No. 107, "Suggestions for the Planning of Buildings for Public Elementary Schools," published in 1936 by His Majesty's Stationery Office, and is reproduced here by permission of the Controller.

**Head Teacher's Room :**

This should preferably be placed near to the entrance of the department most convenient to visitors. A separate cloakroom with lavatory and w.c. should be provided, preferably adjacent to the room but not communicating with it. A small waiting room or seating for visitors near at hand is a desirable addition.

**Senior Mistress :**

The Board states that it has been the practice in Senior Mixed Schools under a Head Master for a special position to be held by the Senior Mistress or chief woman assistant. In such cases the provision of a separate room for her may be considered. This may be quite small and in the nature of

an office, furnished with a table and some chairs, but the provision of such a room will mark effectively the position of the Senior Mistress and her special responsibility for the girls, and will enable her to interview parents and children in privacy.

In those cases where local circumstances may necessitate the placing of a Head Master in charge of a Junior Mixed and Infants School, it will be desirable for similar accommodation to be provided for the mistress who will be in special charge of the infants. In a Junior Mixed School with a Head Master, the requirements of the chief woman assistant could probably be adequately met if there were separate common rooms for the two sexes.

**Common Rooms :**

Where there is a staff of both sexes, adequate and separate cloakrooms, locker, lavatory and w.c. accommodation should be provided near to, but not opening out of, the Common Rooms for the assistant staff. The w.c.s. should be completely partitioned, and provided on the total basis shown overleaf.

Only one common room will be required for exclusively Nursery or Infant Schools, or Junior Schools for Girls, and the Board considers that one common room can be shared by a small mixed staff. Where, however, there is a large staff of both sexes, it may often be desirable to provide separate common rooms for each sex.

**Cooking :**

The provision of a kitchenette adjoining the common rooms is a convenience for cooking or heating food where the staff stay for a mid-day meal. If a kitchenette is not provided, a small cooker or combination cooking and heating stove should be fitted in the common rooms.

**Previous Sheets :**

The first seven Sheets in this series are Nos. 486, 511, 545, 546, 549, 550 and 638.

## B I R M I N G H A M

*THIS week Birmingham is celebrating the centenary of its incorporation as a borough. For this reason we illustrate on this and the following 35 pages, a selection of buildings of various types (including the new Hospitals Centre) recently completed in Birmingham and district. With two exceptions the buildings shown are by local architects.*



WILLIAM T. BENSLYN

**GENERAL**—The site, in the centre of one of the new housing estates, presented considerable difficulty on account of its levels. The accommodation is for 432 Juniors and 288 Infants, and the higher portion of the site has been left for future development. Each classroom has one side completely glazed; the other side, where facing south, has double doors opening on to a veranda, with a clerestory light above. The back wall of the room, opposite the blackboard, and the ceiling are covered with fibre board, for sound-absorption. There are two assembly halls, one for the Juniors, fitted with a stage, and the other for the Infants, with platform only. A similar system of lighting to that adopted for the classrooms is used.

Above, the Junior playground from south-west.

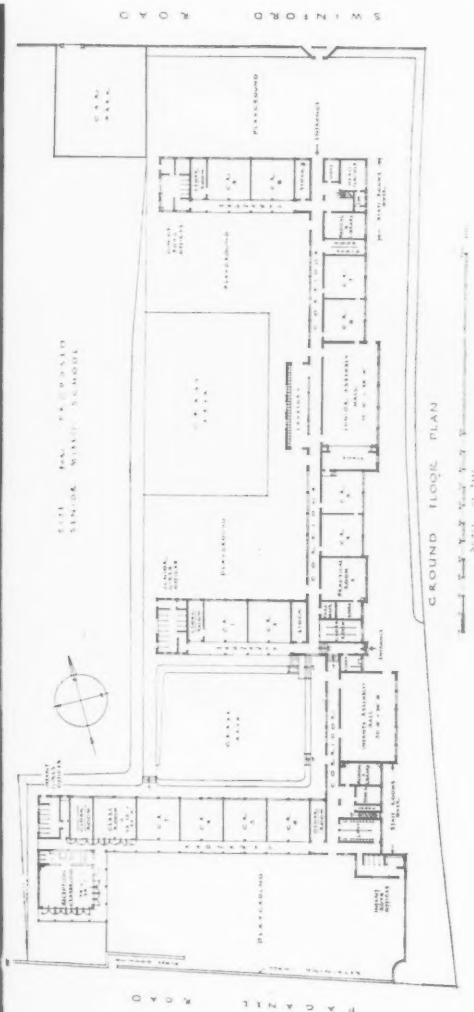
Infant and Junior School, Harborne

F

WILLIAM T. BENSLYN



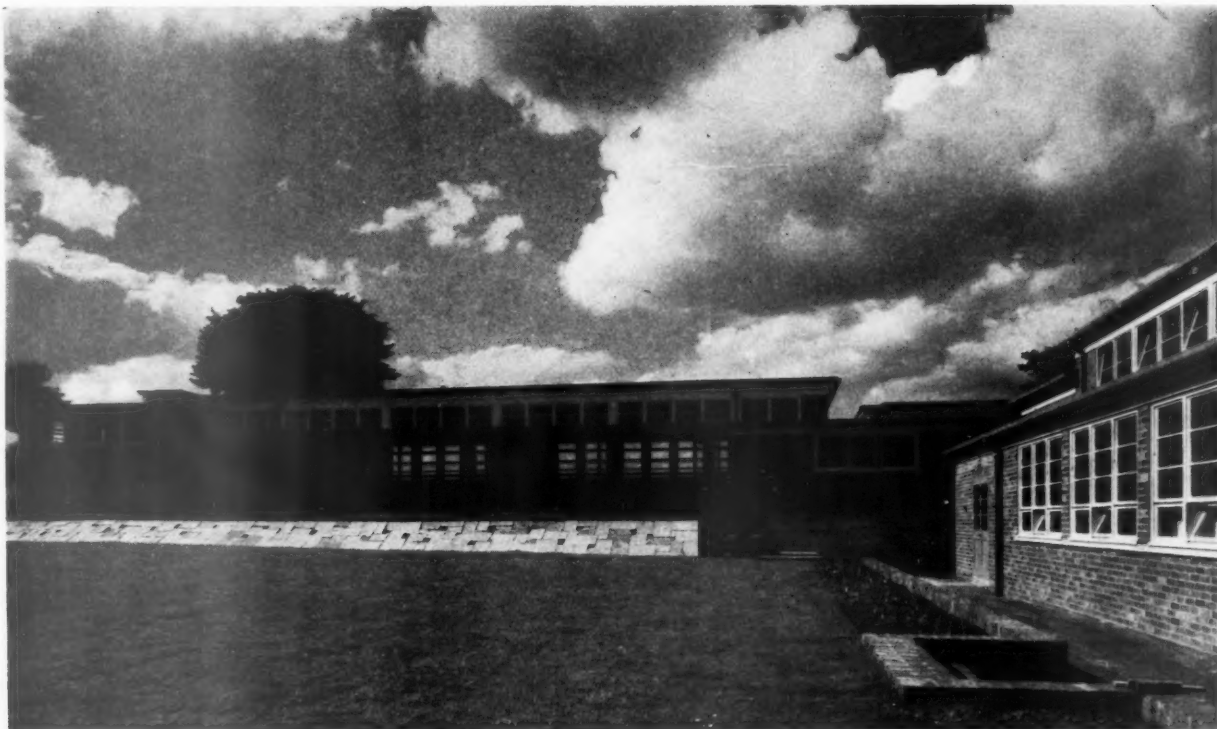
Infant and Junior School,  
Harborne



CONSTRUCTION—Steel frame; 12-in. hollow external walls; half brick internal partition walls; teak block floors. The elevations are finished with rustic facing bricks.

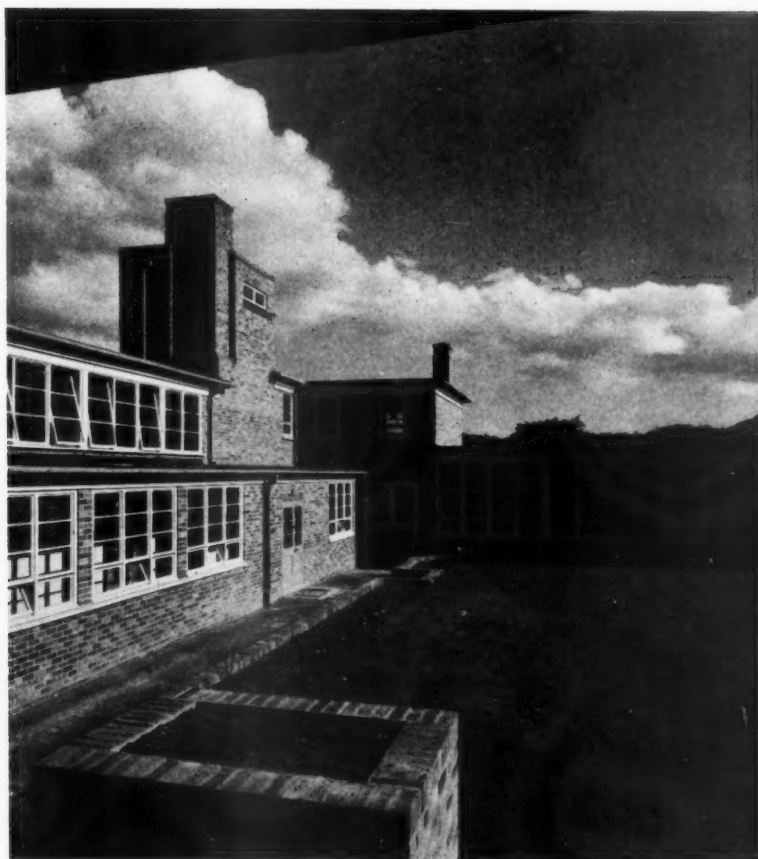
Above, the Junior playground from the north.





WILLIAM T. BENSLYN

Infant and Junior School,  
Harborne



INTERNAL FINISH—Walls mainly plastered and distempered; dadoes cement painted; ceilings fibre board.

SERVICES—Low pressure H.W. heating.

Above, Infant quadrangle from the south; right, Infant quadrangle from the north.

## Children's Home, Smethwick

ROLAND FLETCHER





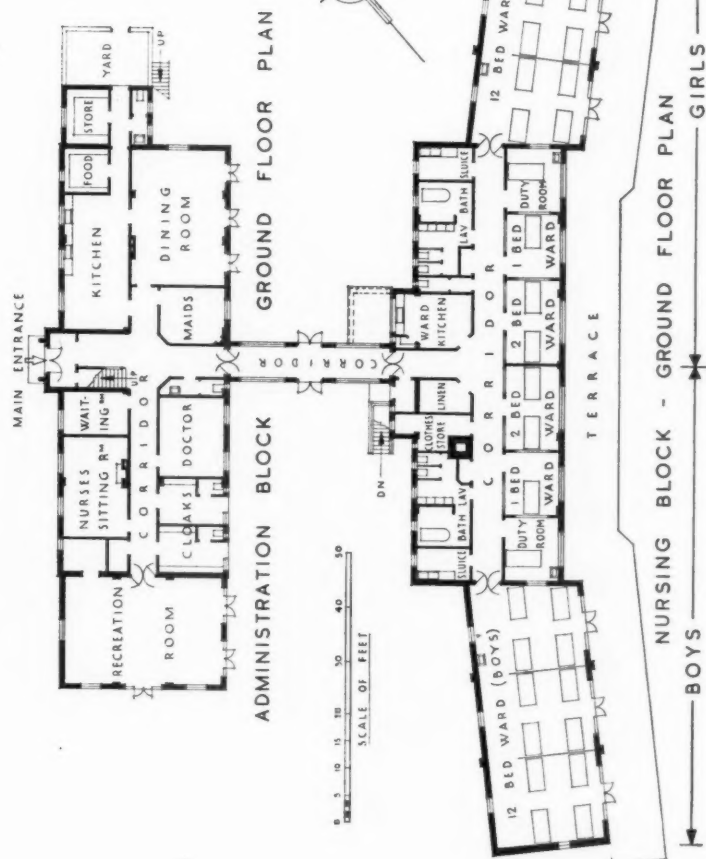
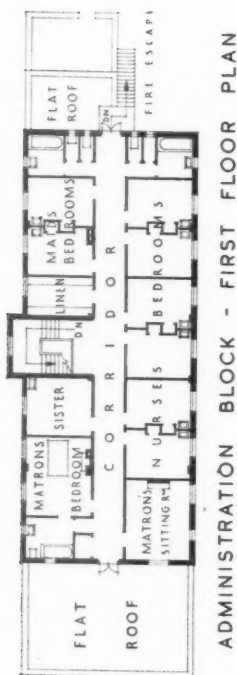
**GENERAL**—The scheme has been carried out under the direction of the borough engineer and surveyor, Mr. Roland Fletcher, assisted by Mr. Chester Button, A.R.I.B.A., chief architect, and Mr. Douglas H. P. Roberts, A.R.I.B.A., architectural assistant.

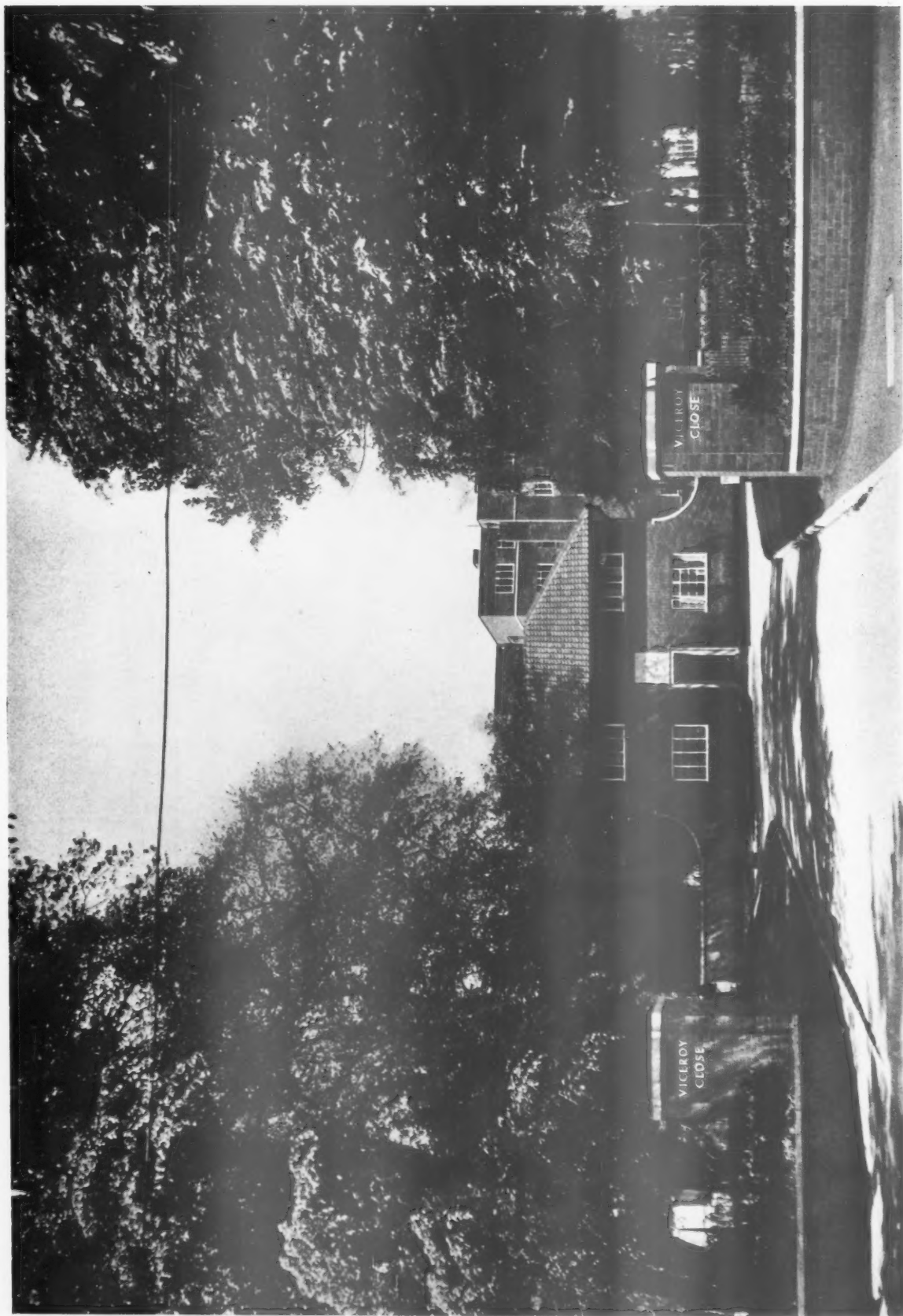
**ACCOMMODATION**—The buildings are divided into two sections, a two-storey block for the requirements of the staff, with dining and recreation rooms for children and a single-storey block with two twelve-bed, two two-bed and two one-bed wards for nursing, approached by a connecting corridor between the two buildings. Particular consideration has been given to the siting of the nursing block for a sunny aspect.

**CONSTRUCTION AND FINISH**—The buildings are of brick with 11-in. hollow walls. First floors are reinforced concrete and hollow tile covered with linoleum. Ground floors generally are finished with beech wood blocks excepting the two twelve-bed wards, which have joisted floors finished with beech strip flooring. The floors of the sanitary sections are covered with terrazzo, with dados of the same material. The roofs are covered with green and grey slates laid in diminishing courses. A sandfaced brick of light colour has been used for all facing work.

**HEATING**—By a low-pressure hot water radiator system, the two boilers being fired by mechanical stokers with an independent hot water supply for domestic purposes.

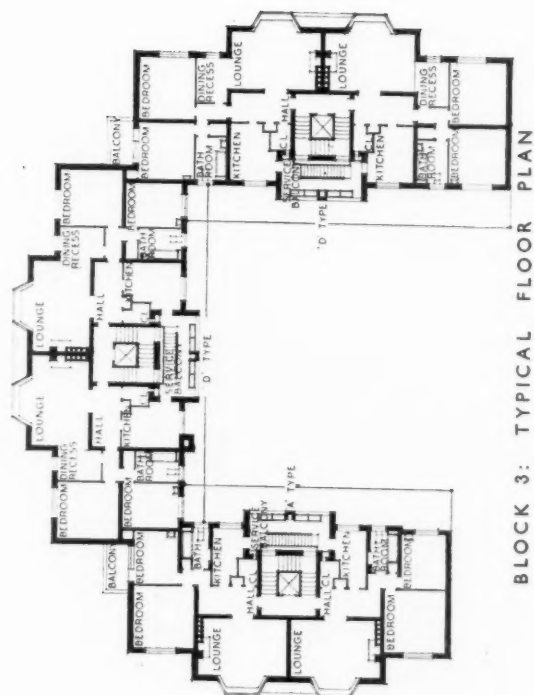
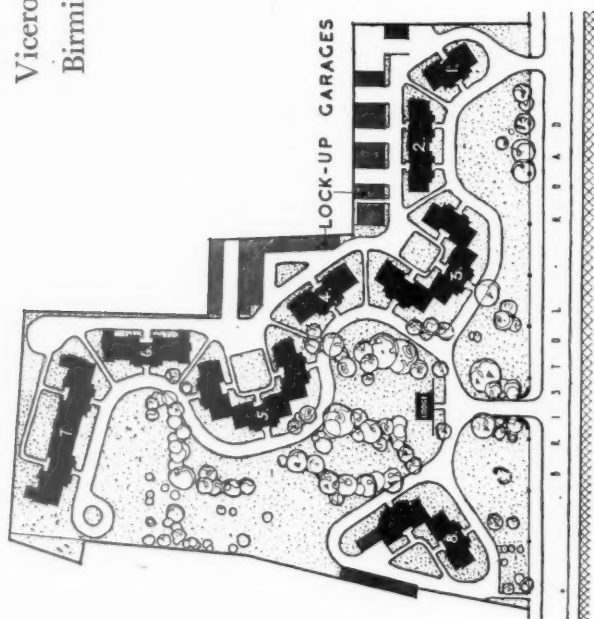
On the facing page is a view of the administration block; above, the nursing block.



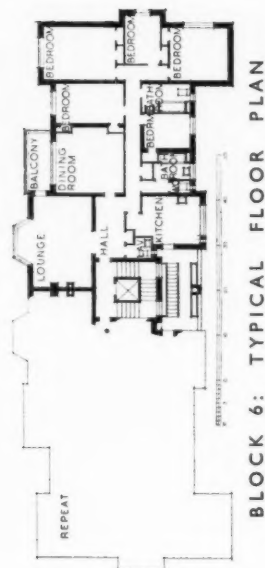




Viceroy Close,  
Birmingham



BLOCK 3: TYPICAL FLOOR PLAN



BLOCK 6: TYPICAL FLOOR PLAN

On the facing page is a detail of the entrance and entrance lodge from Bristol Road. Above, a general view of Blocks 4 and 5 from the approach drive.

## MITCHELL AND BRIDGWATER : GOLLINS AND



Viceroy Close, Birmingham



**GENERAL**—There are eight main types of flats, ranging from small flats containing one bedroom, bathroom, reception room, dining hall and kitchen, to those containing five bedrooms, two bathrooms, two reception rooms, lounge hall, kitchen and cloak room. Garages, a pump-room for water supply, porters' mess room, and a petrol station, etc., are incorporated in the scheme.

The architectural assistants were Messrs. E. G. Mambery, L. W. Aked, and H. G. Round.

Above, the principal entrance to one of the blocks; left, view of dining recess from living-room.

## S M E E T O N : A S S O C I A T E D A R C H I T E C T S



**SITE**—In Bristol Road, a mile from the centre of Birmingham. Several old Victorian houses were demolished and a layout adopted that ensured the maximum of sunshine in living-rooms, and the preservation of practically all the fine trees on the site. A great deal of garden work, planting and turfing, has been done. There are three main courts, all open on one side to the sun, giving a considerable amount of privacy in spite of the large number of flats. In each block a standard entrance hall, staircase and lift give access to the various flats.

**CONSTRUCTION**—The buildings are almost entirely of brick wall and concrete floor construction, with little steel used other than for reinforcement. Over each entrance is a sculptured keystone by Mr. O'Connor Barrett, who has also carved a decorative panel on the lodge.

The photographs show: above, entrance to block 1; right, one of the kitchens.



*MITCHELL & BRIDGWATER : GOLLINS & SMEETON, ASSOCIATED ARCHITECTS*

Viceroy Close,  
Birmingham

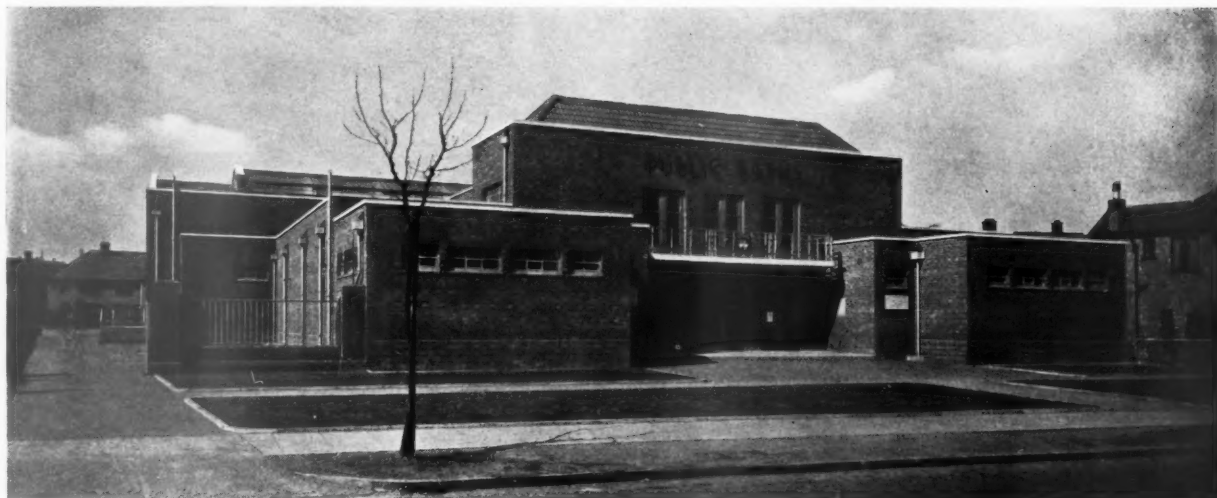


*The photographs show : left, quadrangle of Block 5 ; below, Block 2 with lock-up garages in the foreground.*

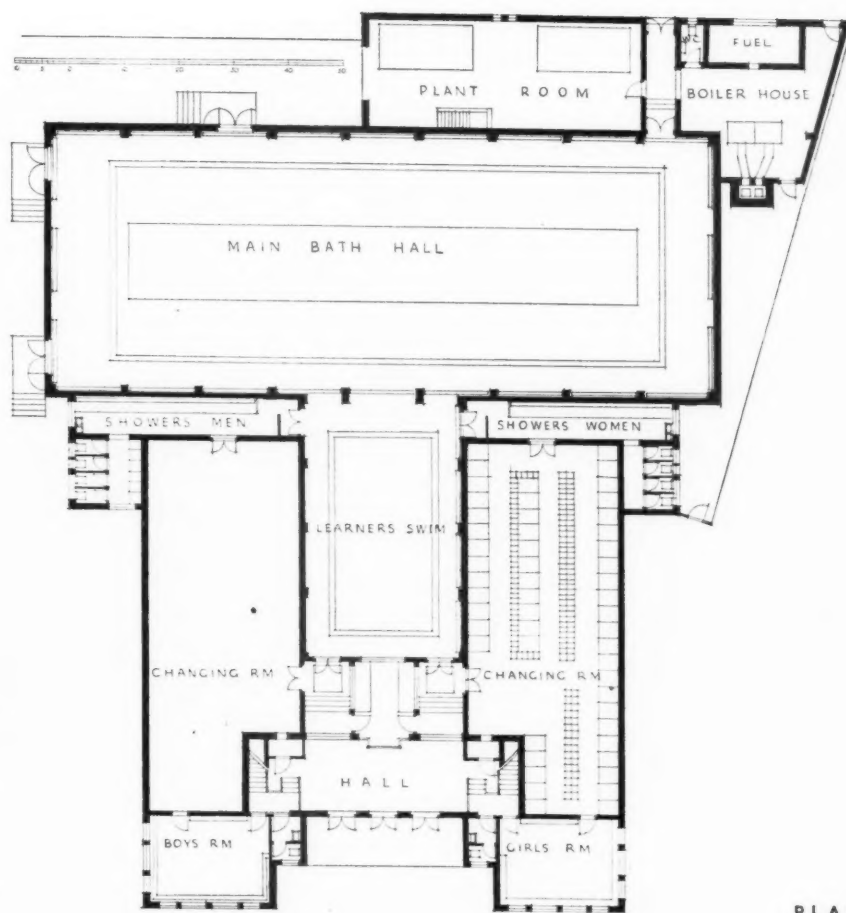




## CHERRINGTON &amp; STAINTON

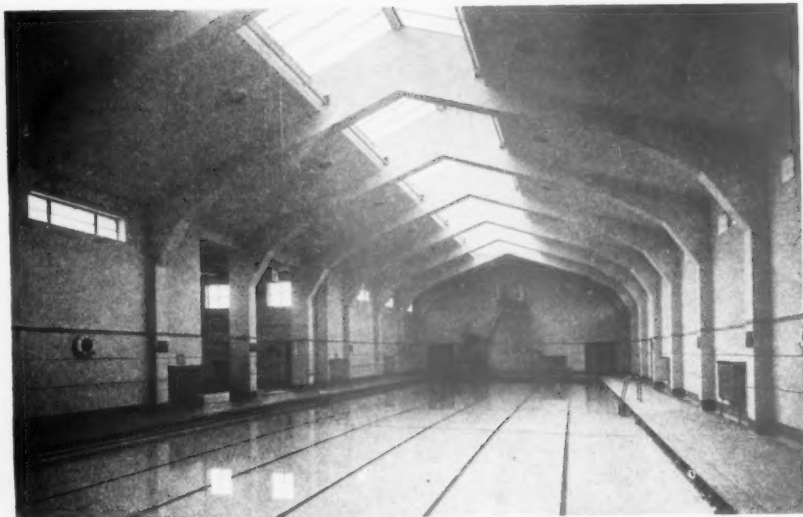


Kingstanding Swimming Baths



PLAN

**DRESSING ROOMS**—Each dressing room contains 52 metal cubicles for changing purposes only, and 153 metal clothes lockers, which are opened by an attendant when the bather presents a rubber wrist band numbered to correspond with the respective locker. Access to the swimming pools is through the pre-cleansing or shower rooms, which contain foot and shower baths, wash-hand basins and lavatories.



## CONSTRUCTION AND INTERNAL FINISH

—The bath halls are finished to a height of 7 ft. in marble terrazzo, lined and skirted in green. Floors to promenades and dressing rooms are non-slip tiles. Entrance hall is finished with tiled green rubber flooring, oak panelled walls and green terrazzo skirting.

Left, the main bath hall.

S. N. COOKE

Church at Northfield

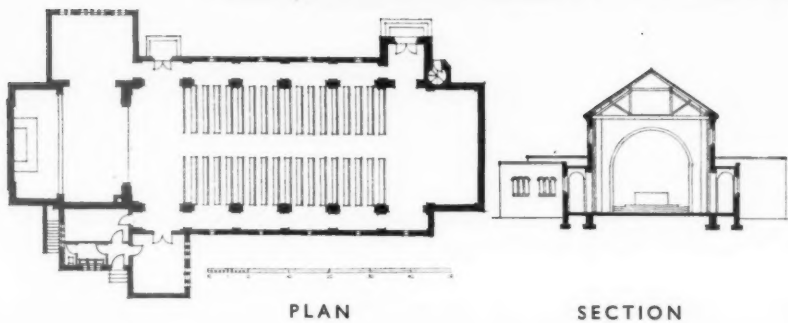


**GENERAL**—St. Bartholomew's Church, Allen's Cross, Northfield, built under the Bishop of Birmingham's Appeal. The placing of the church on the site allows a church hall and extensions to the church to be built at a later date. The choir gallery and the organ are placed at the opposite end of the church from the pulpit. The extensions will include a chancel and Lady Chapel.

S. N. COOKE



Church at  
Northfield

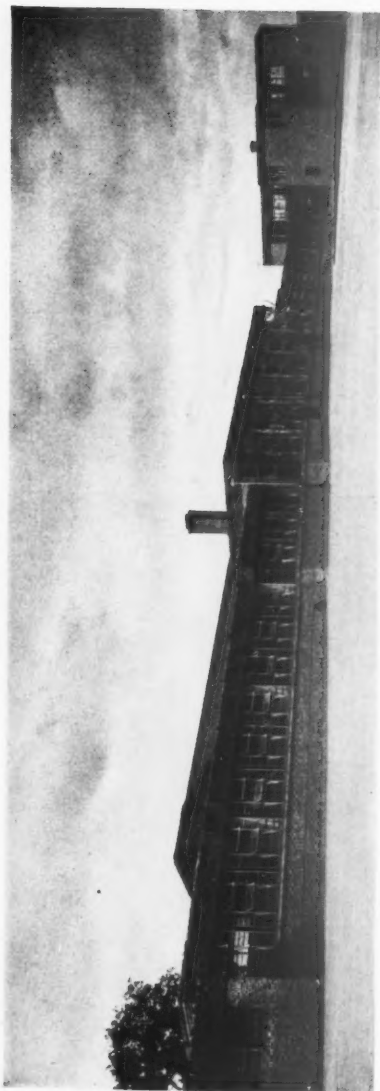


**INTERNAL FINISH**—Plastered walls, distempered ivory; gallery, organ case and communion rails, wax-polished oak; dossal blue and dull gold. Floors, oak blocks; Roof, deal, left natural.

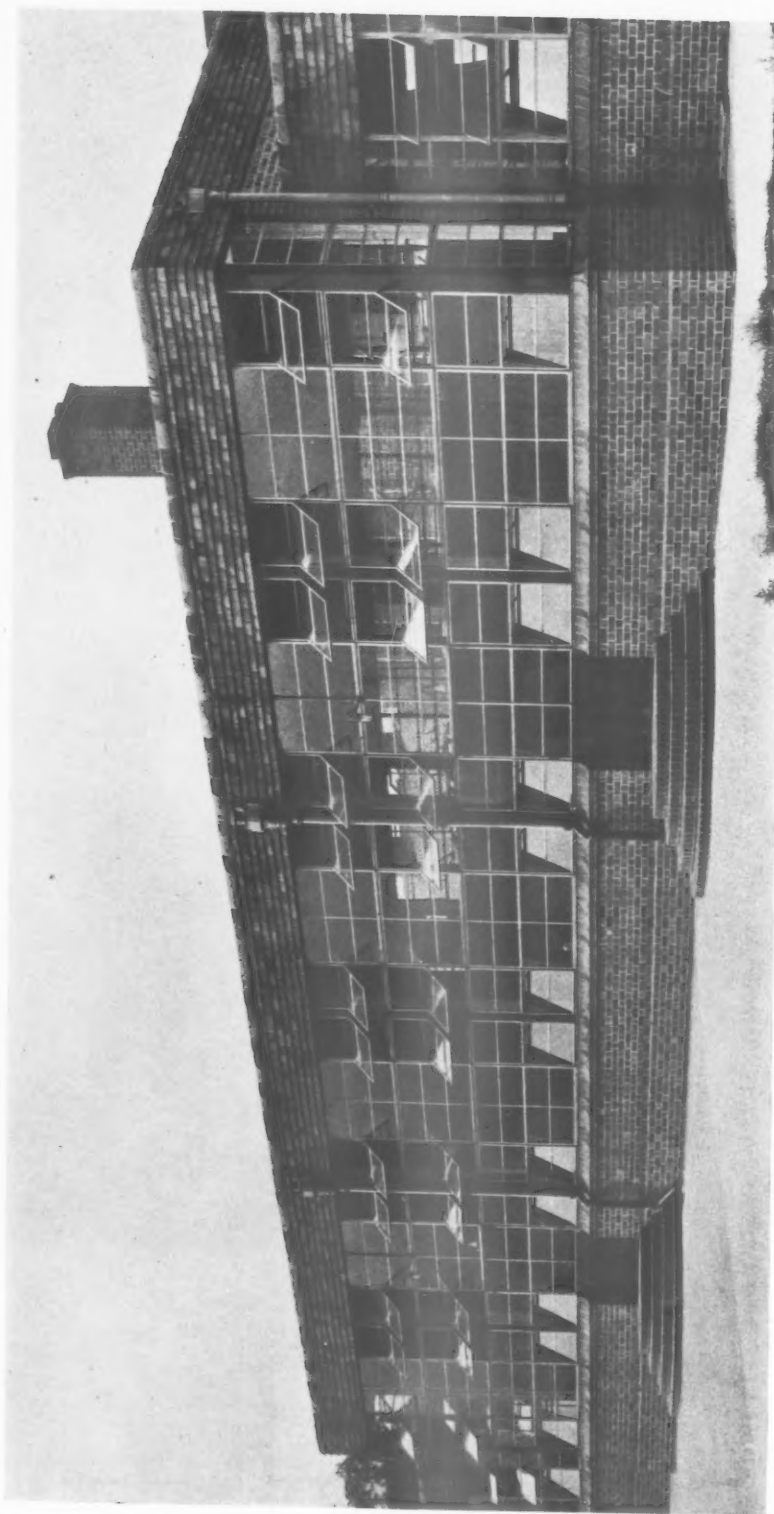
Top, the altar and communion rails; above, a general view looking towards the altar.

H. T. BUCKLAND

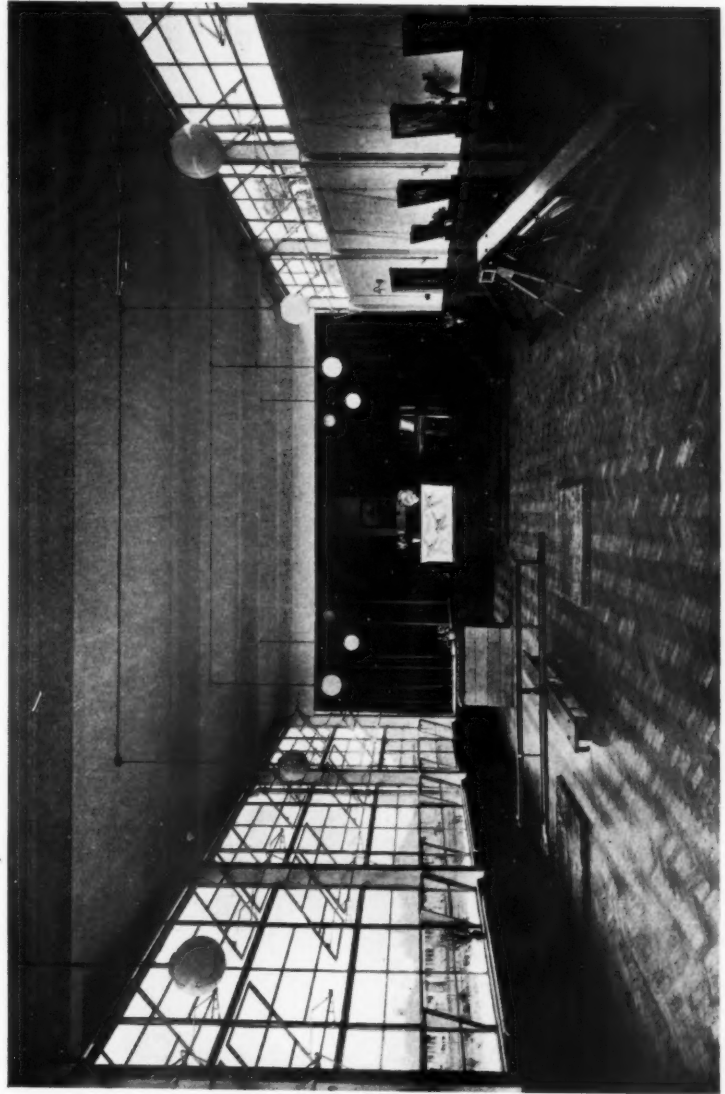
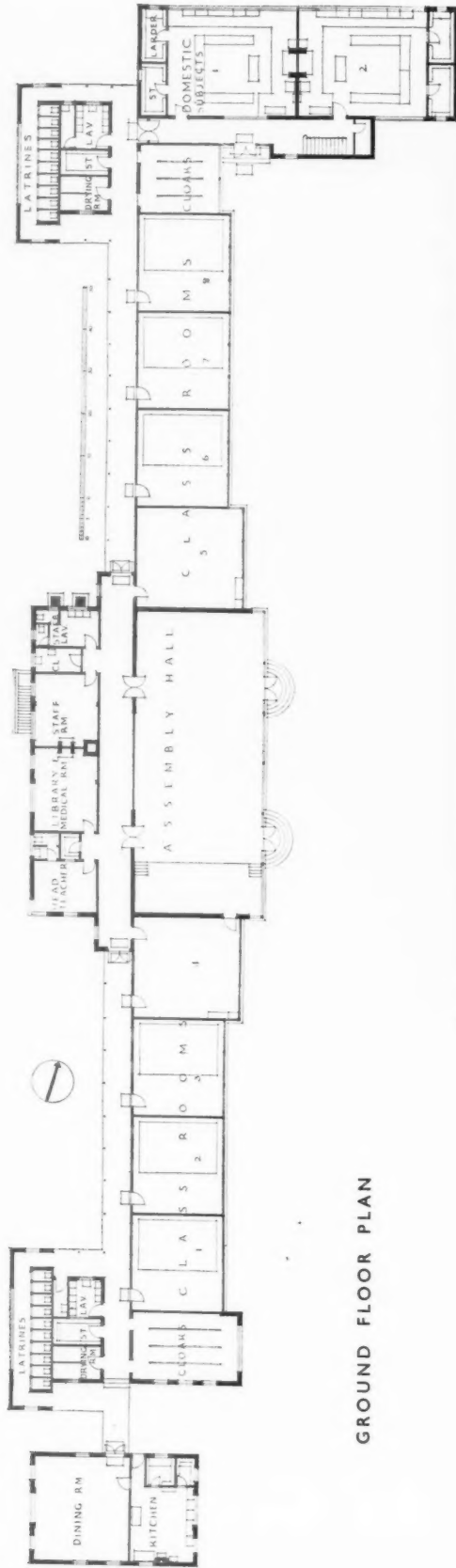
School at Yardley Wood, Birmingham



*Right, view from playground; below, assembly hall.*







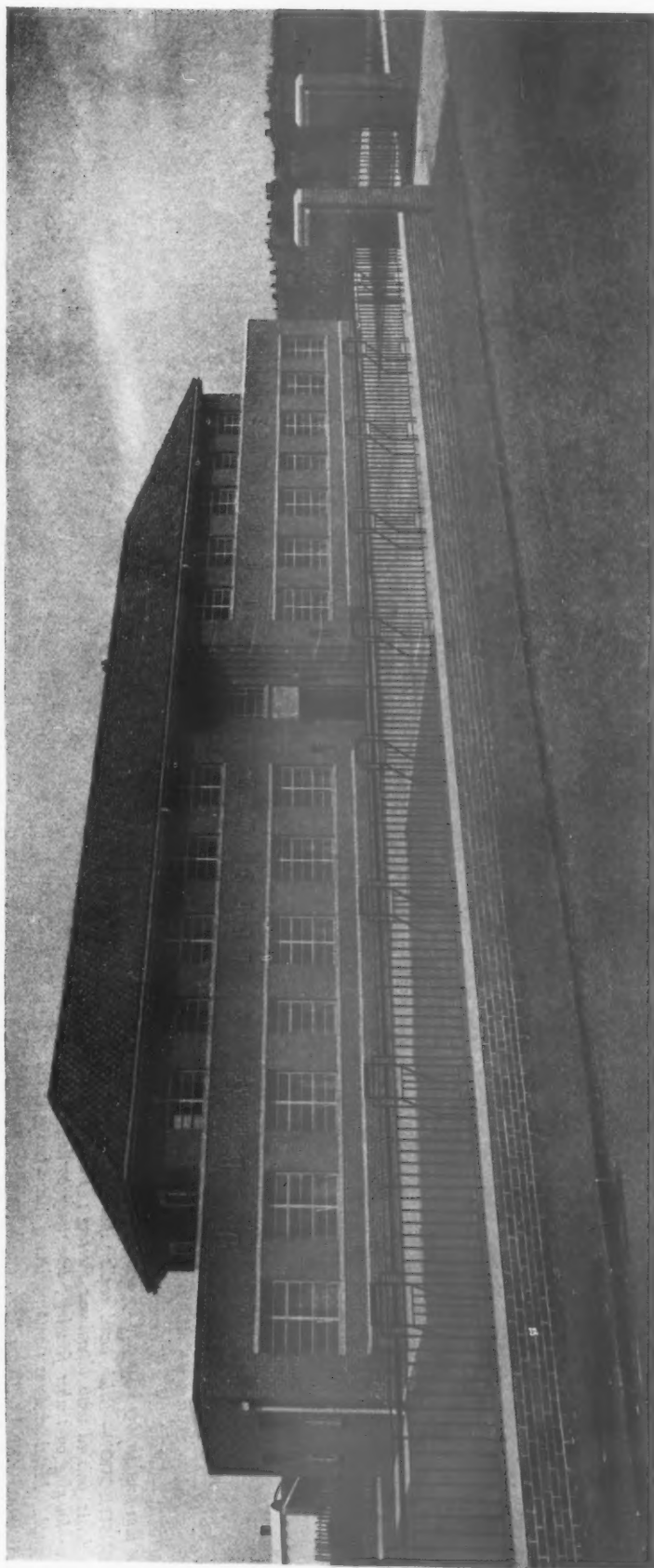
**GENERAL**—School for 400 Senior girls. The position on the site was considerably influenced by drainage difficulties.

**CONSTRUCTION**—Brick panel walls; flat roofs of boarding on joists finished with bituminous sheeting; Parapets are of tile—hanging on timber framing; two-storey portion is steel-framed. Metal windows; multi-coloured rustic facing bricks.

**INTERNAL FINISH**—Plaster finish with acoustic plaster in assembly hall; floors, teak blocks.

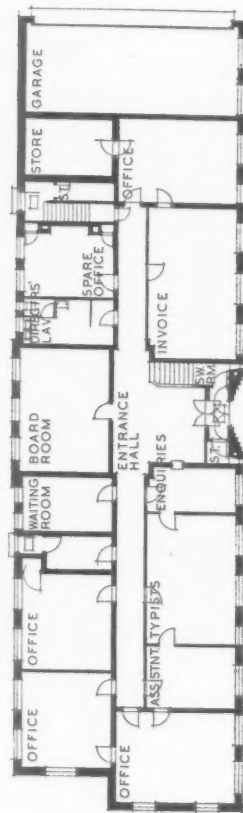
*Right, the assembly hall.*

## CECIL E. M. FILLMORE

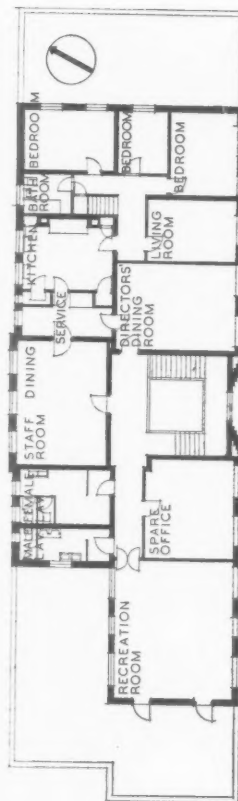


Offices at West Bromwich

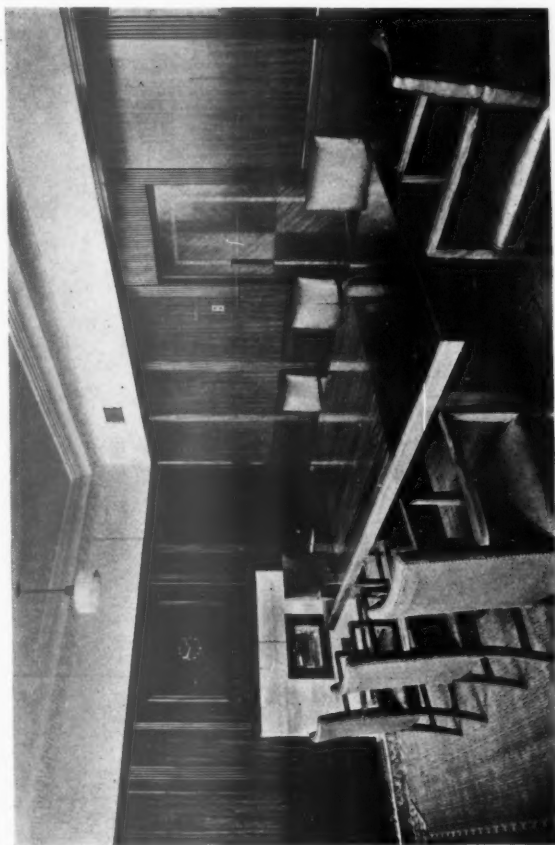
GENERAL.—New offices for Messrs. J. B. and S. Lees, steel strip manufacturers. There are offices with staff, dining, recreation and garage accommodation, and a caretaker's flat. The site consisted of made-up ground necessitating the use of a reinforced concrete raft. Above, the entrance front.



GROUND FLOOR PLAN



FIRST FLOOR PLAN



CONSTRUCTION—1½ in. brick cavity walls; pitched roof to front block; asphalt flats on wood joists elsewhere. Brick walls internally and wood joist floors.

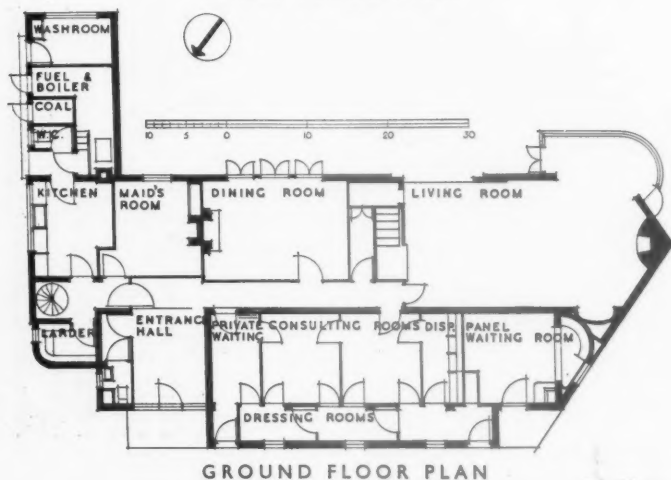
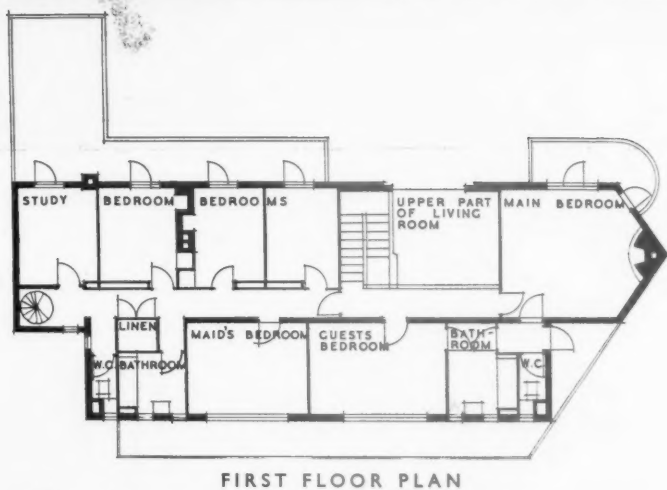
SERVICES—Automatic stoker and boilers; generally veclair concealed radiators; ventilation system, extract.

Above, the main entrance; right, the board room; and the entrance hall and staircase.

T. M. ASHFORD



House and  
Surgery, Smethwick

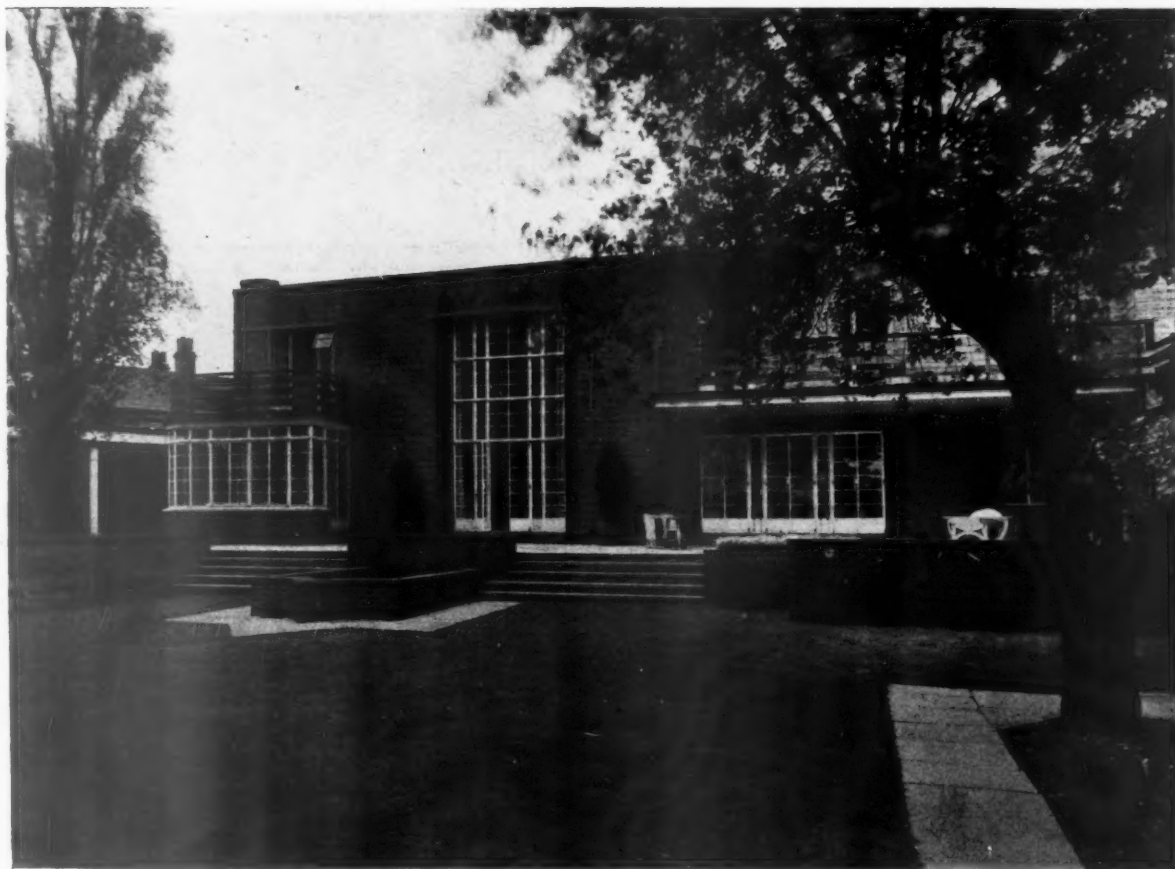


GENERAL AND SITE — House in Smethwick, for a doctor and family of five and two maids, and to include surgery accommodation for three doctors. One large room was required for entertaining purposes, and on such occasions the two consulting rooms and private waiting room are used. The site was a particularly awkward one, a canal feeder running its entire length, through the middle underground, continuing as an open waterway at the boundary. This gave an important axis which was considered in the placing of the hall. As many bedrooms as possible were required to face south, away from the street; and sleeping balconies were particularly asked for. The canal authorities insisted that no weight of the building was allowed to be taken by the brick panel vault of the feeder. This difficulty was overcome by the use of steel. An existing stable block was converted into garages with covered access to the house.

Above, the entrance front.



T. M. ASHFORD

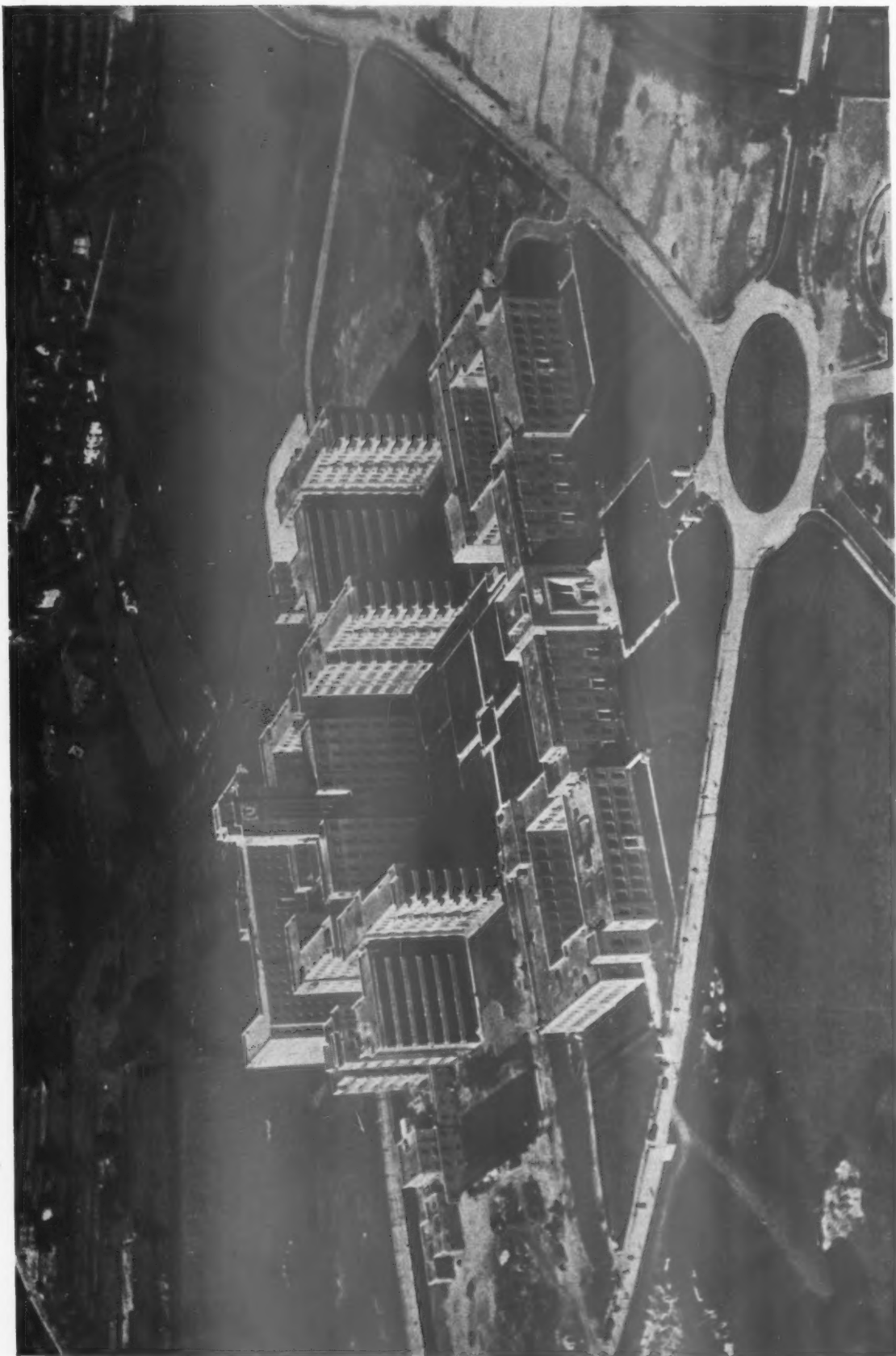


House and  
Surgery, Smethwick,

**CONSTRUCTION**—Walls, 9-in. cellular flettons with waterproofing in first coat of plaster; floors, generally wood; balconies, cantilevered wood joists; flat roofs, asphalt insulated with fibre-board; partitions, plaster on lathing on steel rods. R.W. pipes on south elevation on either side of large window, copper. Balustrades, oak boarding, bolted to galvanized iron uprights.

**INTERNAL FINISH**—Generally plaster walls and ceilings; bathroom floors, rubber; kitchen floor, cream terrazzo; entrance hall, passages, surgery, rubber; lounge hall, oak flooring (strip); staircase, oak; flush balustrades and panelling and sliding folding doors, oak plywood. Above, the garden front; right, the living-room.





## LANCHESTER AND LODGE



**SITE**—Birmingham has been fortunate in having been presented with an excellent site for the erection of its Hospitals Centre, as not only does the land have a fine commanding view of the surrounding country and the City, but also immediately adjoins the University, of which the medical school forms part.

**LAYOUT**—In arranging the general layout of the buildings, the architects have worked on a main axis line running almost due north and south, the buildings forming three main groups on this axis. *a*: At the top and highest part of the land is the nurses' home, consisting of three blocks for nurses, night nurses and maids; *b*: next below this are all the main hospital buildings, consisting of administration, wards and operating theatres, special department, out-patients, paying patients, chapel, kitchens, etc.; and *c*: at the lower end is the medical school, arranged in such a way as not to form an obstruction to the high ward blocks behind it. In addition, there is a further group comprising the laundry, workshops and power house, arranged on the lowest part of the site in the south-west corner, separated from the main building by the road.

**ACCOMMODATION**—The accommodation provided in the completed scheme is for 740 patients, 360 nursing staff, 100 maids, 50 resident medical staff and 100 paying patients. Certain blocks, however, are not included in the first section now completed, and these include the night nurses' home, maids' home, out-patients' and casualty departments, paying patients' block, a section of one large ward block, and the chapel. The central block of the medical school, consisting of the library and large lecture theatre, is also temporarily omitted.

**CONSTRUCTION**—The buildings generally are of steel frame construction, with brick panel walls faced with a buff coloured facing brick. The floors are hollow tile and reinforced concrete construction; roofs are of similar construction with cork insulation and asphalt. Internal walls generally are brick, with hollow tile partitions in a few instances. Windows are metal, those to the nurses' home being in wood frames. Ward windows have three sections: (a) top bottom hung ventilator opening; (b) balanced double hung centre opening; (c) fixed portion at cill to exclude draughts. Open-air wards

have sliding folding doors full width of the room with bottom hung ventilators over. These open on to balconies for open-air treatment.

**HEATING AND VENTILATION**—Heating of the buildings is by five large boilers, four of which are installed, each 30 ft. long and 9 ft. in diameter and fed by automatic stokers. The calorifiers are placed in a separate house adjoining the boilers, from which a large pipe duct 13 ft. by 9 ft. connects to the various blocks. Heating of the rooms and corridors is by the panel system, consisting of pipes buried in the ceilings, giving radiant heat from the ceilings. The nurses' bedrooms are warmed by radiators, and both systems are thermostatically controlled. Ventilation generally is by natural means, but special air conditioning is provided in the special departments, operation theatres and kitchens. All services have been planned in accessible ducts adjacent to the fittings they serve.

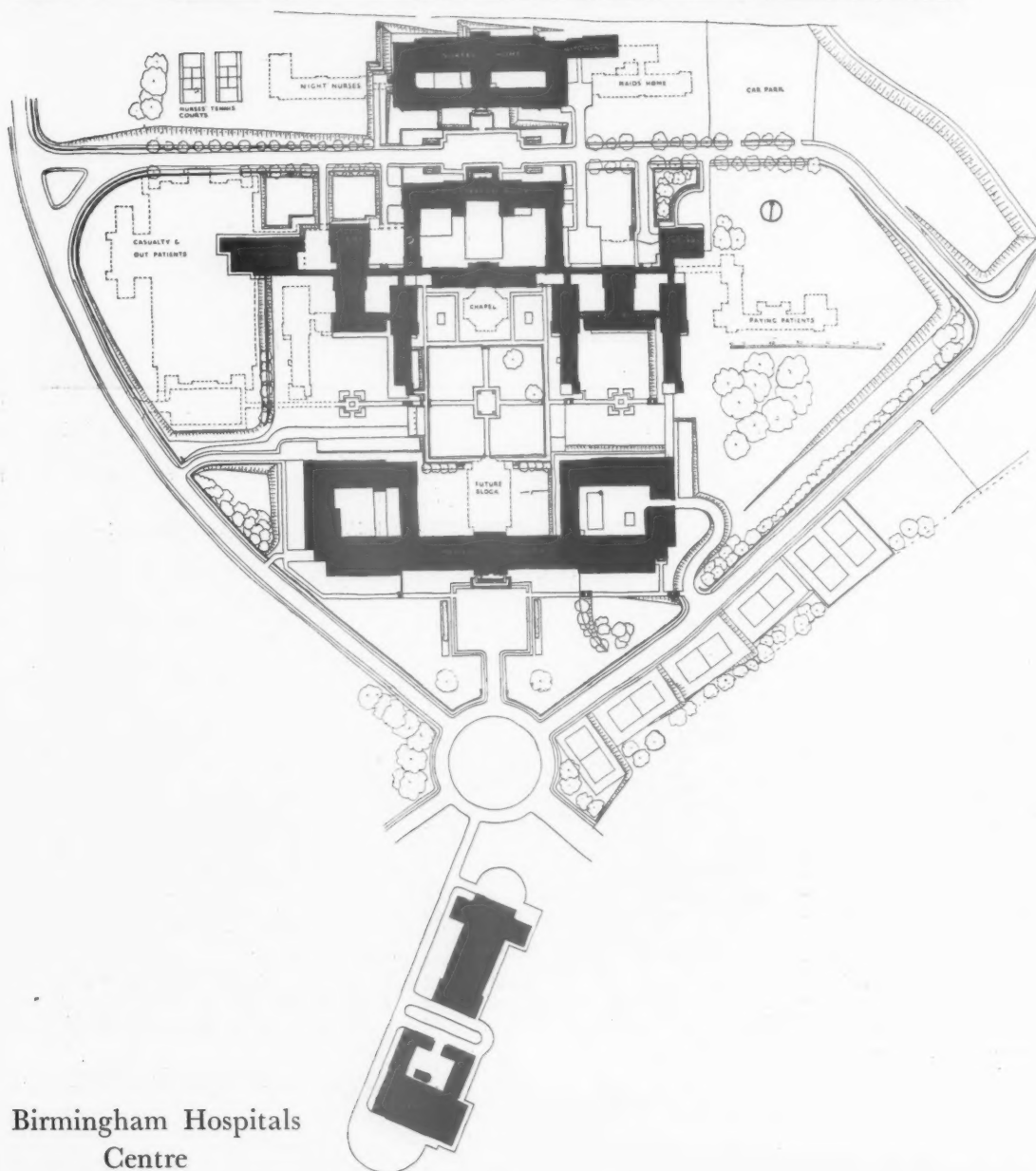
On the facing page is an air view of the Hospitals Centre, taken from south-west; above, a view of the centre court, looking east.

**Birmingham Hospitals Centre**

## LANCHESTER AND LODGE



*Left: The main front of the Medical School.*



Birmingham Hospitals  
Centre

SITE PLAN



LANCHESTER AND LODGE

*Right: Administration Block.*

*Below: Nurses' Home.*



Birmingham Hospitals Centre

## LANCHESTER AND LODGE



*Above, ward  
block ; left, the  
museum in the  
Medical School.*

Birmingham Hospitals Centre

LANCHESTER AND LODGE

*Right, a staircase in the Medical School; below, the kitchen in the Administration Block.*



Birmingham Hospitals Centre

## LANCHESTER AND LODGE



Birmingham Hospitals Centre

**INTERNAL FINISHES**—In the hospital section the finishes have been kept simple and in accordance with latest hospital practice. Walls generally are hard cement and enamelled finish, but in the bedrooms and the administrative offices lime plaster distempered has been used. Sink rooms, sanitary rooms, etc., where necessary have tiled or terrazzo finishes. The sound correction of certain rooms has been achieved by acoustic plaster. Almost every type of floor covering has been used, each being selected with a view to its suitability for its specific purpose. Wards generally are in wood block, sanitary rooms tiles or terrazzo square; corridors and staircases throughout are in rubber. Doors throughout are flush either in walnut or mahogany, and most are fitted with a device to prevent noise from slamming. Throughout the hospital decorations have been kept as bright as possible consistent with practicability; wards generally are buff, with lighter ceilings, and the corridors have dark green floors with black edge and skirting, pastel green dado, and cream walls and ceilings. In the medical school the corridors are mostly laid with rubber of dark green shade, and the walls have a low pastel green dado; the rooms are finished in a cream colour with light green windows. Above, the board room in the Administration Block; left, the recreation rooms in the Nurses' Home. These are arranged en suite, and can be separated by folding partitions for dancing or meetings.



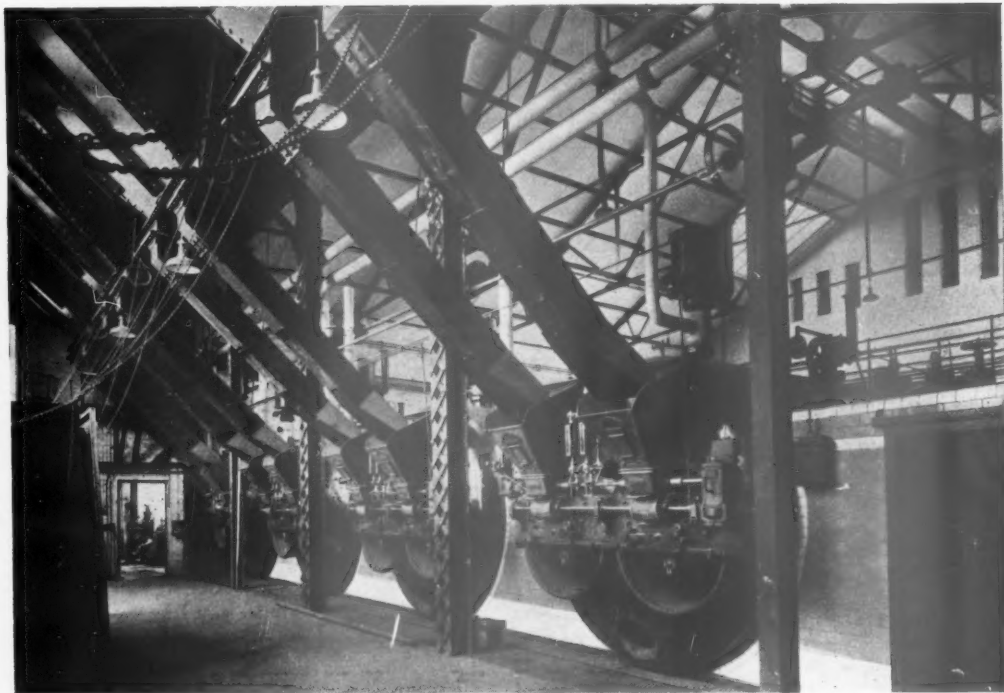
LANCHESTER AND LODGE



*Looking up one of the staircases from  
the entrance hall in the Nurses' Home.*

Birmingham Hospitals Centre

## LANCHESTER AND LODGE

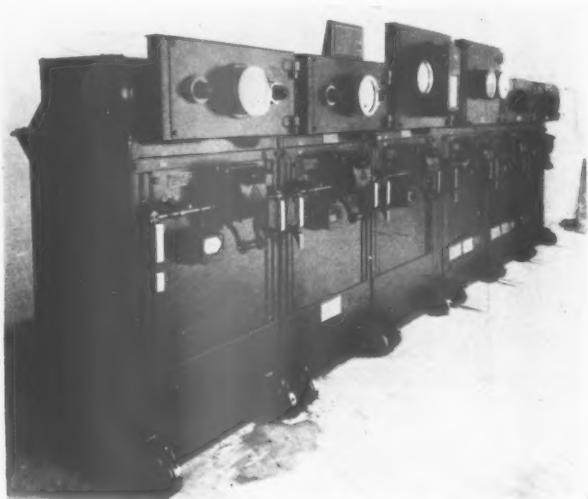
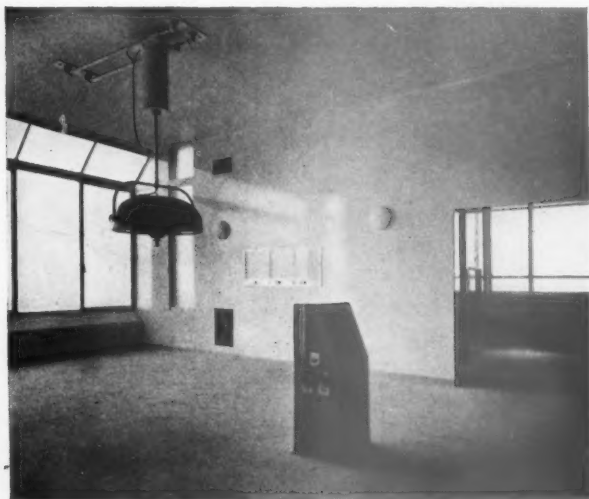


*Left, the boiler house : below, left, operation theatre, and right, the 11,000 volt. electrical switchgear.*

**LIFTS AND FIRE PROTECTION** — *There are 17 lifts, distributed to provide adequate service to the various points of the buildings, and designed to provide accurate levelling, to ensure that hospital beds when wheeled in and out of the lifts will not be subjected to shocks. An adequate fire protection system has been provided with hydrants both inside and outside the buildings ; and alarm indicators in prominent positions.*

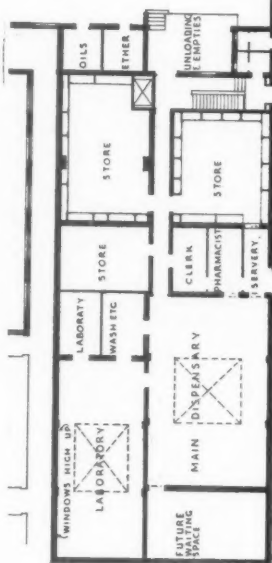
**SERVICES** — *The varying levels of the site have largely governed the entrances and service corridors, the main entrance giving access to the ground floor being entirely devoted to the in-patients' use, for patients and doctors. The out-patients' entrance and also the casualty entrance are at a higher level between the ground and first floors and these are connected by an independent corridor leading directly to the special departments housed in the first-third floors of the Administration Block.*

*The main stores and goods entrance is again at ground level, but one storey lower than the main entrance, and gives access to the kitchens, from which food is taken direct to the two food service lifts in each block. At a still lower level is the entrance to the mortuary and the pathological laboratories on the north of the main hospital corridor, and these communicate direct, crossing under the main hospital corridor, with the pathological department of the medical school.*



Birmingham Hospitals Centre

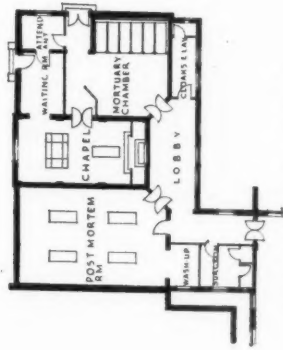
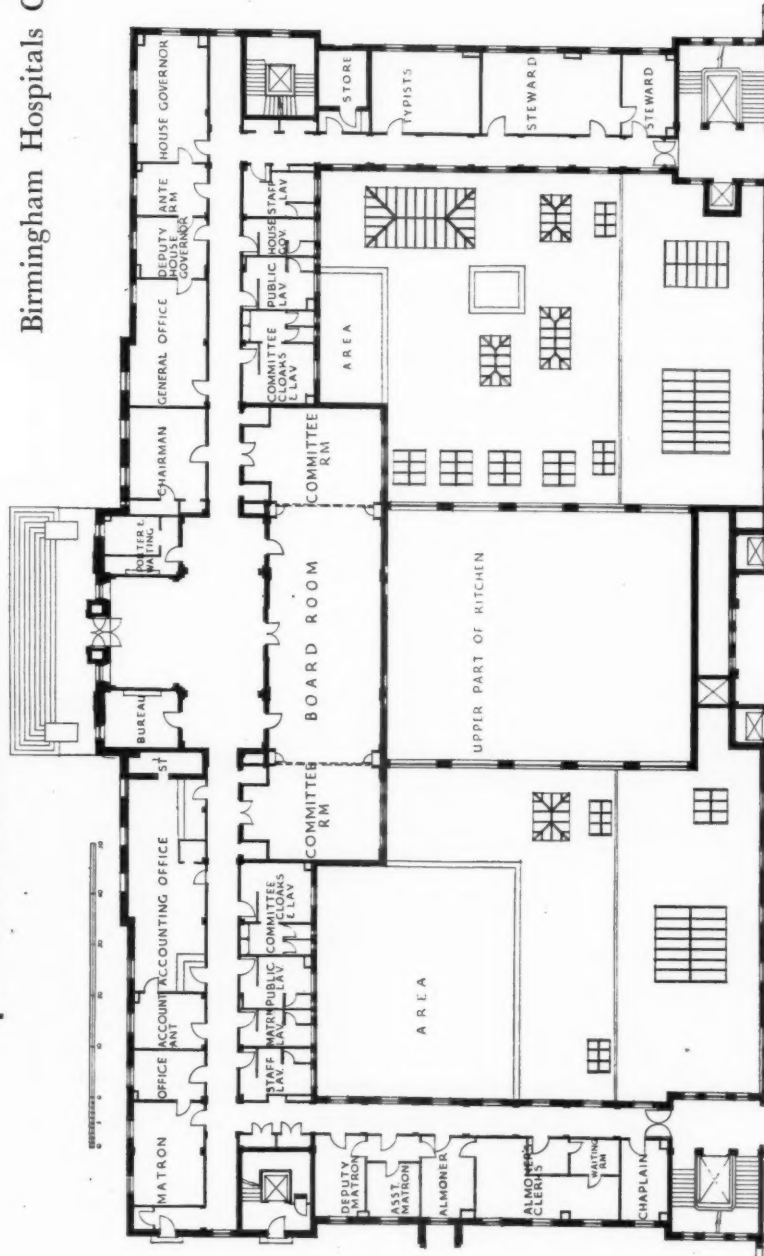
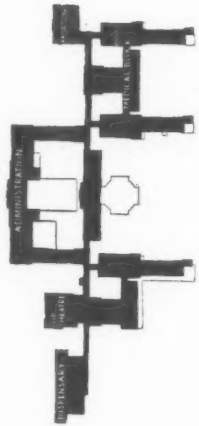
# LANCHESTER AND LODGE



DISPENSARY:  
GROUND FLOOR  
PLAN

## Birmingham Hospitals Centre

KEY PLAN



MORTUARY BLOCK

ADMINISTRATION  
BLOCK: GROUND  
FLOOR PLAN

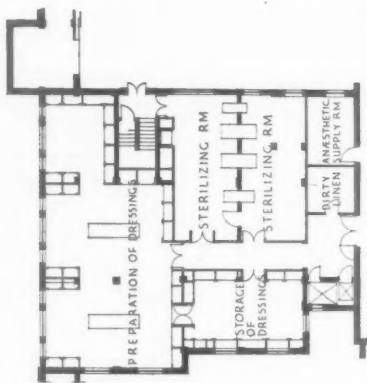


# LANCHESTER AND LODGE

## Birmingham Hospitals Centre



OPERATION THEATRE:  
FIRST FLOOR PLAN



OPERATION THEATRE: GROUND  
FLOOR PLAN

ADMINISTRATION BLOCK: LOWER  
GROUND FLOOR PLAN

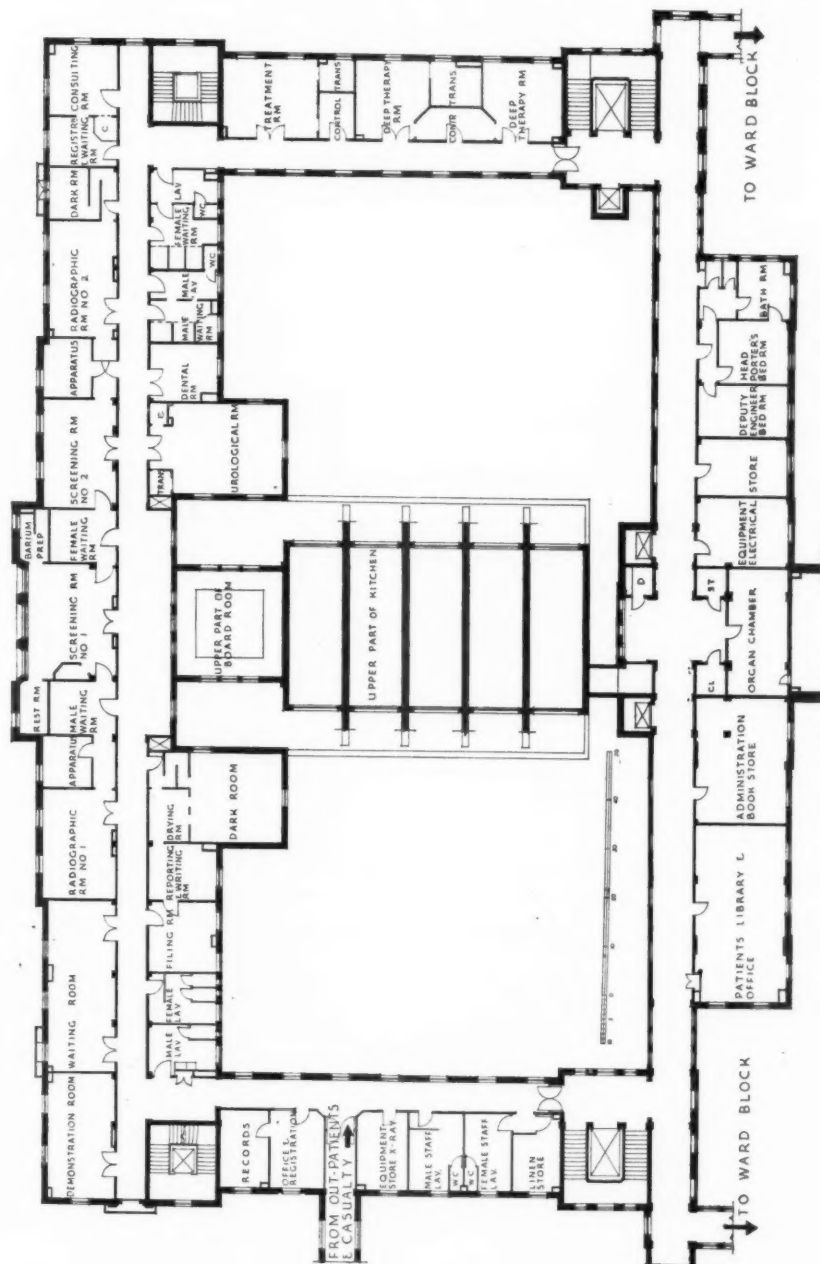


## Birmingham Hospitals Centre

**THE MEDICAL BLOCK ANNEXE—**  
*This has not been constructed in the first section but, when erected, will contain three lecture theatres, each for approximately 130 persons, and above the operation theatre for the gynaecological unit, and an isolation unit.*

**CASUALTY AND OUTPATIENTS' DEPARTMENTS**—The casualty and outpatients' departments, not yet erected, will be at the extreme west end of the main corridor, the casualty on the north side and the outpatients' on the south. These departments will be at a level half way between the ground and first floors, and by sloping corridors patients will be able to proceed either to the ground floor of the hospital or to the X-ray department on the first floor, without going either up or down steps. The casualty department will have a large central waiting hall around which will be four surgery rooms. It will also have an operation theatre and ward unit of 20 beds. The outpatients' plan is similar in character, being arranged round a central hall 102 ft. by 41 ft. This hall will be provided with seats divided into groups for surgical or medical cases, etc., and there will be also a canteen providing refreshments for the patients. There will be 12 consulting suites, so arranged that the patients who are waiting pass from the central hall to the particular doctor they wish to consult, and then past the dispensary to separate exits.

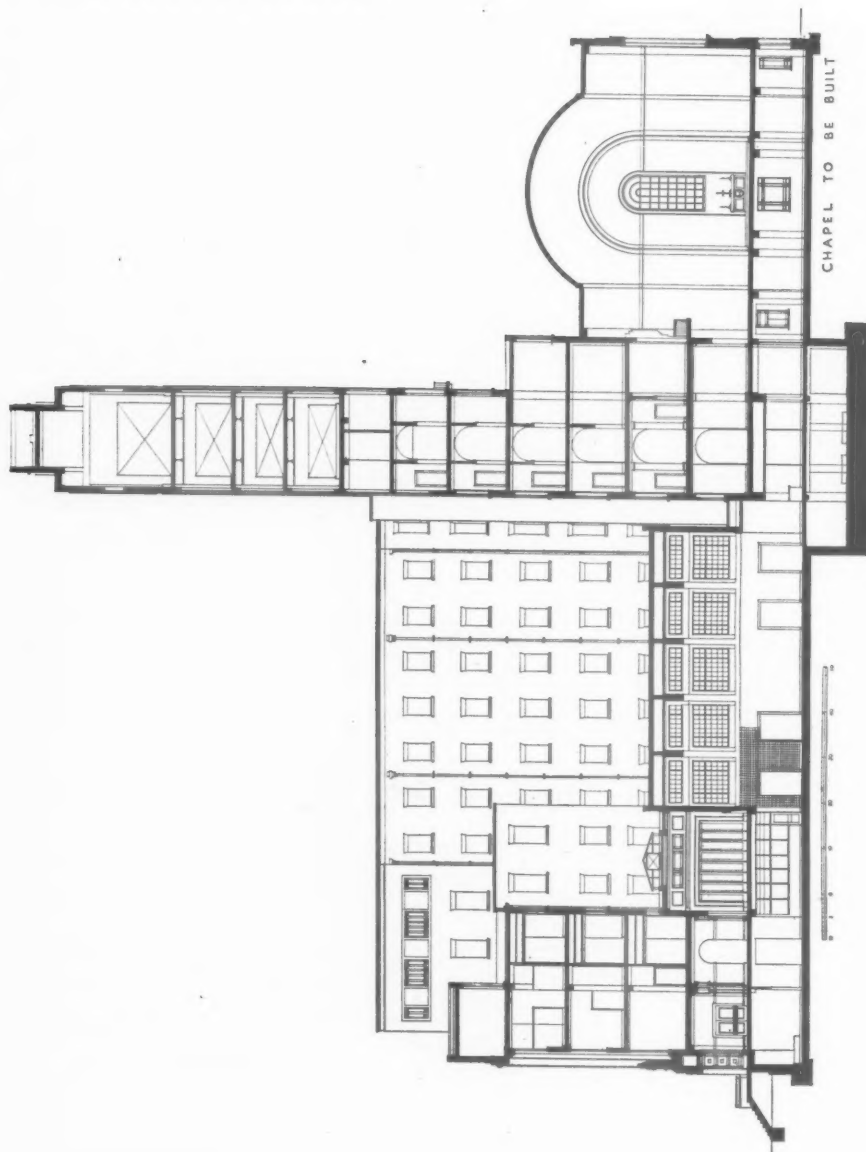
**PAYING PATIENTS' BLOCK**—Provision has been made in the plan for a block for paying patients, but this is not yet erected. The building will be at the east end of the main hospital corridor, and while having its own entrance, will be in close communication with the special departments of the hospital.



ADMINISTRATION BLOCK: FIRST FLOOR PLAN

## LANCHESTER AND LODGE

Birmingham Hospitals Centre

ADMINISTRATION BLOCK:  
CROSS SECTION

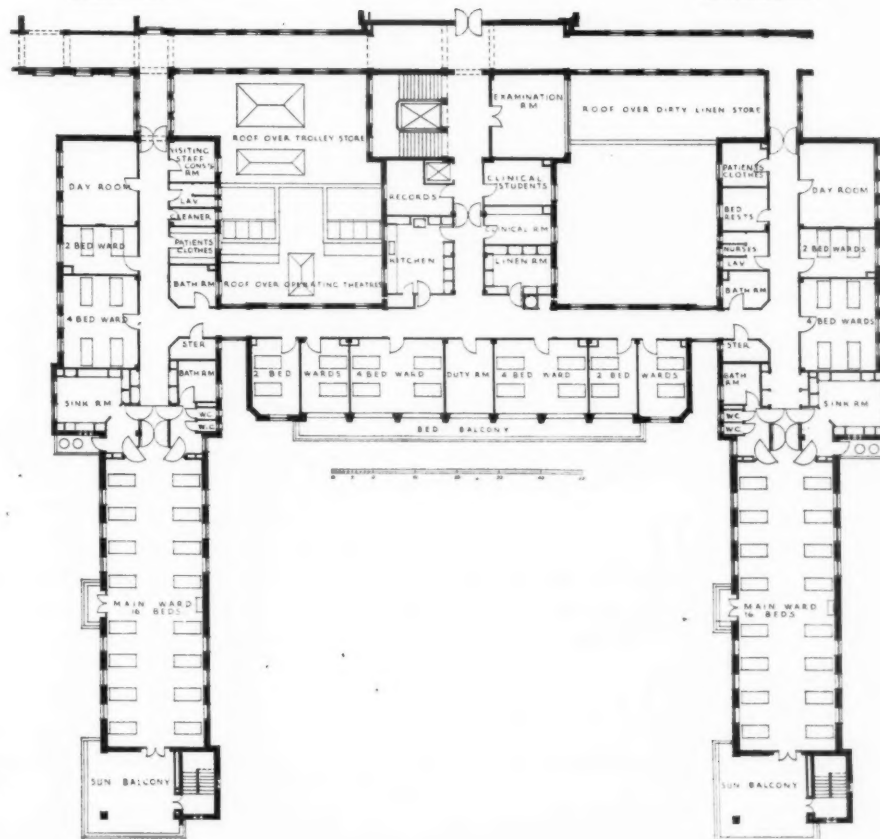
**WARD UNIT**—The general surgical and medical units consist of 60 beds, which are subdivided into two halves each of 30 beds for males and females. Each section of 30 beds is provided with a sink room, bathrooms and sanitary arrangements, whilst common to the 60 beds are the kitchen, sisters' room, demonstration room, clinical rooms and linen store. Each section of 30 beds is composed of one large ward of 16 beds, two wards of 4 beds each, and three wards of 2 beds. These small wards, being arranged between the large wards, face due south and can be used for either males or females. They are constructed to be used for open-air treatment. There is also a staff signalling system by means of coloured lights which enables the doctors to be communicated with wherever they happen to be in the hospital buildings.

LANCHESTER  
AND  
LODGE

MEDICAL BLOCK: FIFTH  
FLOOR PLAN

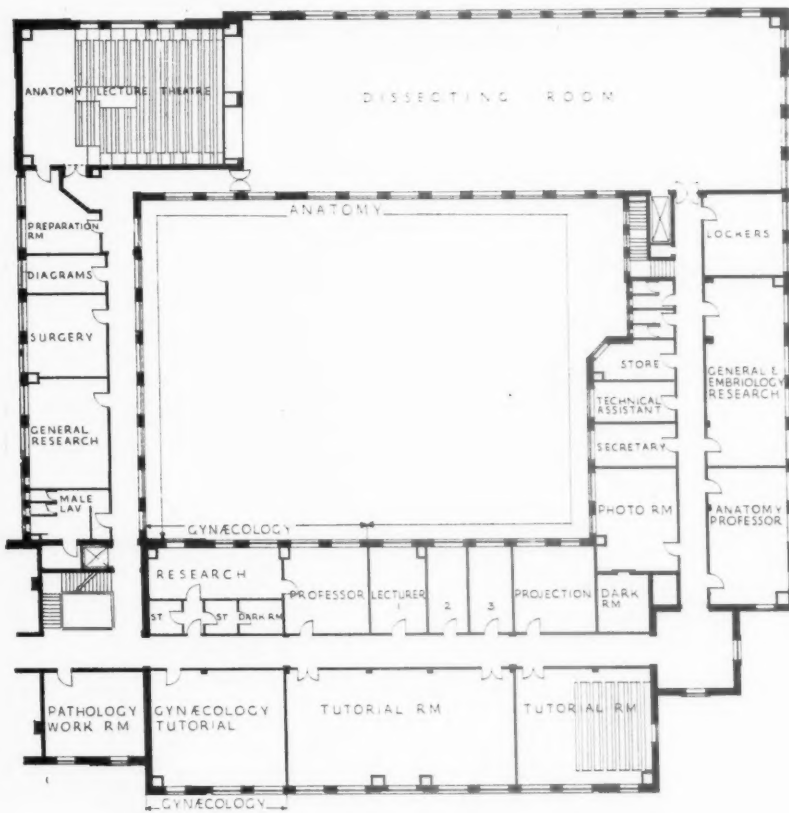


MEDICAL BLOCK: FIRST  
FLOOR PLAN

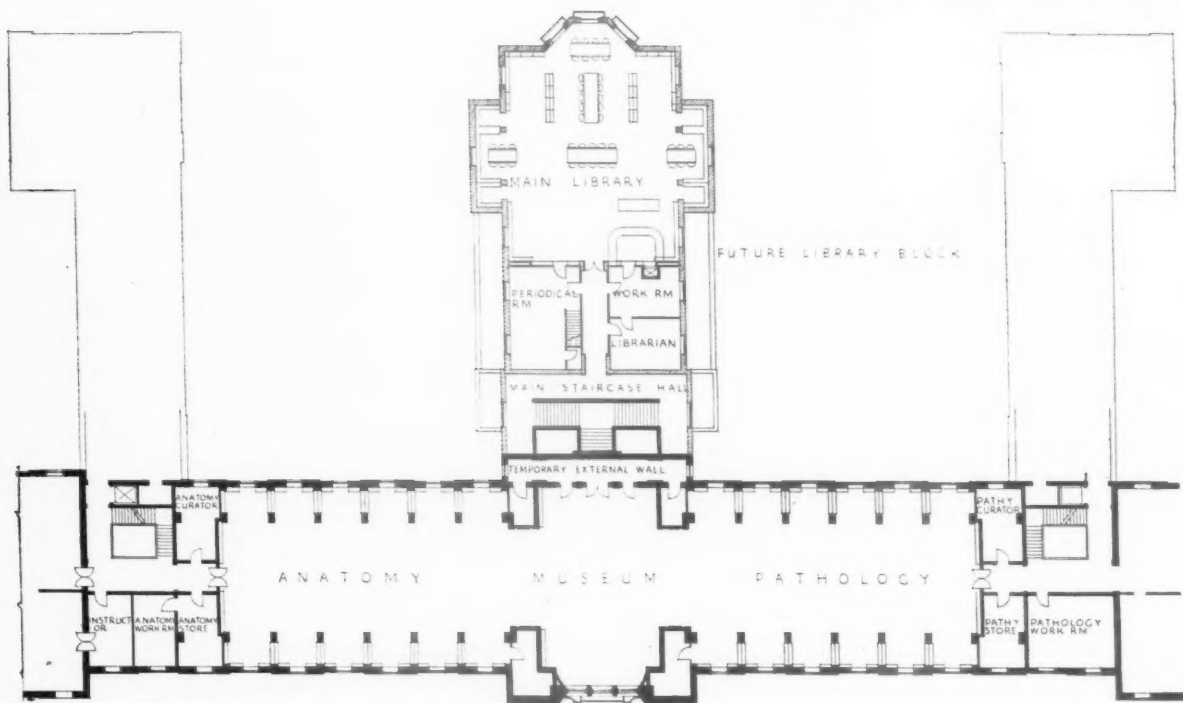


Birmingham Hospitals  
Centre

## LANCHESTER AND LODGE



KEY PLAN

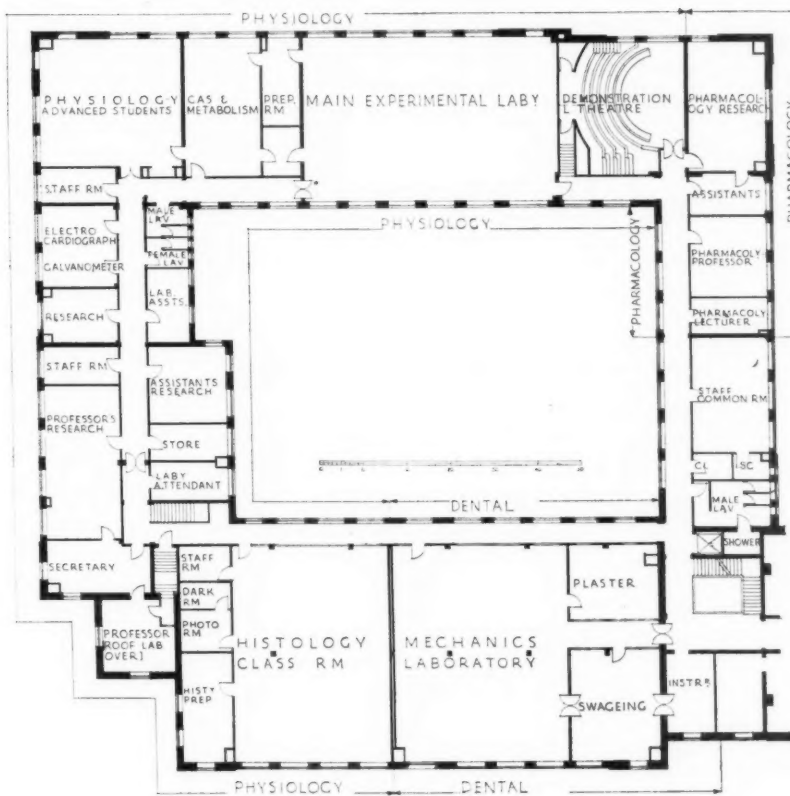
MEDICAL SCHOOL,  
EAST BLOCK: FIRST  
FLOOR PLANMEDICAL SCHOOL, CENTRE  
BLOCK: FIRST FLOOR PLAN

Birmingham Hospitals Centre

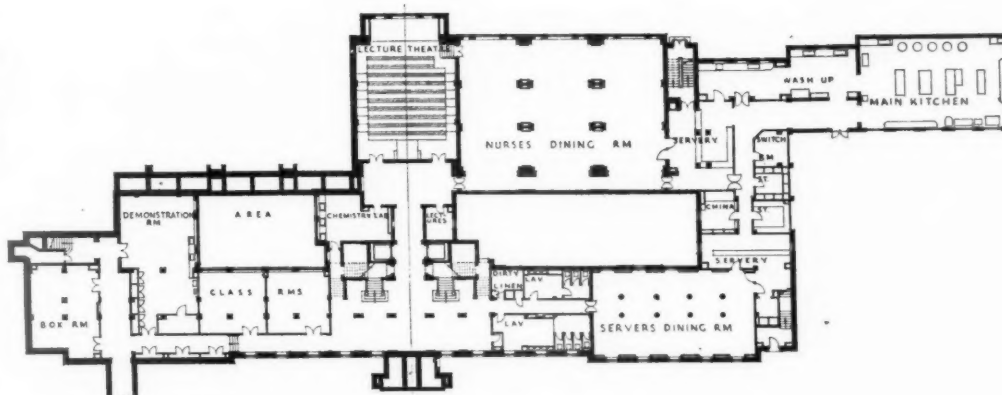


LANCHESTER AND LODGE

MEDICAL SCHOOL,  
WEST BLOCK:  
FIRST FLOOR PLAN

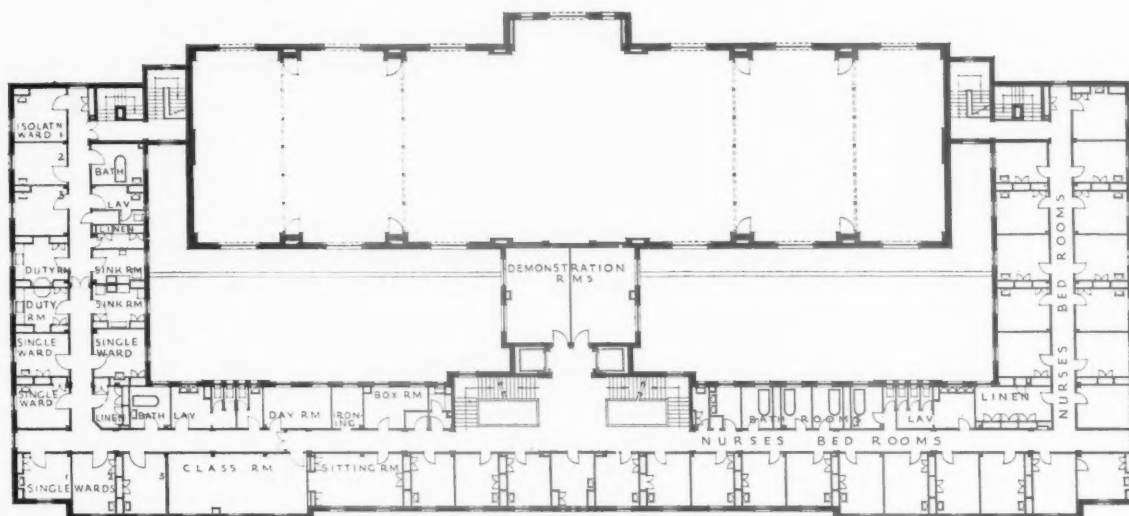


NURSES'  
HOME:  
LOWER  
GROUND  
FLOOR  
PLAN

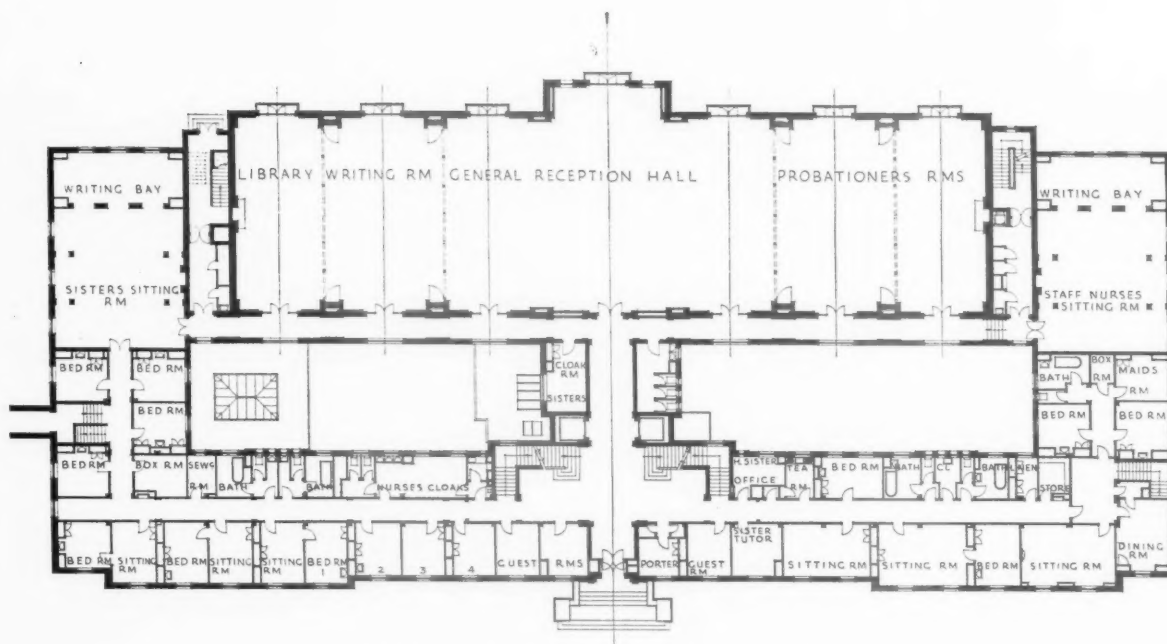


Birmingham Hospitals Centre

## LANCHESTER AND LODGE



NURSES' HOME: FIRST FLOOR PLAN



NURSES' HOME: GROUND FLOOR PLAN

**NURSES' HOME** — The main building of the home houses 230 nurses and 42 sisters, with accommodation for the matron, assistant matron and the charge sisters. The lower floor is given up to dining rooms, etc., the ground floor principally to recreation rooms, matron's flat, offices, and a few bedrooms, the first floor to the nurses' sick unit and preliminary training school, and the upper floors to nurses' bedrooms, bathrooms, lavatories, boxrooms, etc. Perhaps the most interesting feature in the plan is the planning of the recreation rooms. These are arranged en suite and separated by folding partitions so that

they may be used for dancing or meetings as may be required, the total length of the hall being 172 ft., and the width 44 ft. Adjoining the home, to be erected at a later date will be a separate block for 88 night nurses, this block being balanced on the east by the servants' home for 100, behind which are the kitchens to serve both buildings. The homes are connected to the main hospital by a subway under the forecourt giving nurses access under cover to the centre of the hospital. For the names of the general and sub-contractors for the buildings illustrated in this issue see page 109.

## Birmingham Hospitals Centre



## TRADE NOTES

[By PHILIP SCHOLBERG]

### *Glazing in Thermolux*

SOME weeks ago it was suggested in these Notes that the use of Thermolux for straightforward external glazing was not quite as simple as it looked because the voids would not look like voids at all. The manufacturers make no attempt to pretend that this difficulty does not exist, but send me a photograph (reproduced on this page) to show that it can be very adequately dealt with. The job is a cinema in Venice and is used for the International Festival held there every year. A competition scheme won by Luigi Quagliata, an engineer who has been working on cinemas for about five years in the States. Thermolux has been used here not only for the centre windows over the entrance, but for the semi-circular corner windows as well. The general effect seems very satisfactory and is probably helped by the deep reveals, and though to some people the open corner windows may have a slightly toothless look, there is nothing about the glazing to give one the impression that the windows aren't really there at all. One has, of course, been accustomed to almost the same thing by all these glass and concrete windows which don't look like voids either, so the transition to Thermolux is a comparatively painless one. Whether or not Thermolux will ever become a facing material which one can use for the whole elevation I do not pretend to know. Mr. Misha Black has used it as such for the Esso people's pavilion at the Glasgow Exhibition, and very well this looks, much better in the flesh than in the photographs. But perhaps we must wait until Sir Owen does another newspaper building.

It is worth mentioning, however, that the Thermolux people seem to be really concerned that their material shall be

properly used, a refreshing change from the firms who sell as many square miles as possible of some new product and care not a pin how it looks on the job. This short-sighted policy is so common that one must in fairness draw attention to a firm who are trying to take a sensible long-term view.—*(The Thermolux Glass Co., Ltd., 1 Albemarle Street, Piccadilly, London, W.1.)*

### *My Apologies*

In the last instalment of these Notes I referred to Mr. Charles (Perkeo) Moody, meaning, of course, that he was the Moody who sells the Perkeo door track and fittings I had described a fortnight or so before. To my horror I now realize that Mr. Moody is Charles P. Moody, and that people may think that his middle name is really Perkeo. I gather that the German word means diminutive or miniature, and as Mr. Moody is about six feet high (and sounds even larger over the telephone), I withdraw my unfortunate remark with all possible haste.

### *The Freezing of Building Materials*

For many years frost has been looked upon as the most powerful agent in bringing about the disintegration of building materials such as natural stone, bricks or tiles. Recent research work has shown, however, that the damage generally attributed to frost is frequently caused by other agencies such as the crystallization of salts in the voids or pores of the materials. Disruption apparently due to frost may be no more than the cumulative effect of a series of causes of which freezing is but the last. For instance, the freezing of water in cracks or fissures caused by some other form of attack may bring about the complete disintegration of a material, which, if uninjured,

would have withstood quite severe frost action. There is no doubt, however, that frost is an important factor, and some experiments have recently been carried out by Dr. W. N. Thomas to determine the conditions which influence the frost resisting properties of building materials in general. In the Report\* recently issued, the main course of events appears to be as follows:—

As the temperature of the surroundings falls the specimen becomes cooled below 0°C. until freezing starts. The temperature then rises almost to 0°C. and some ice is formed very rapidly. As the surroundings are cooler than the specimen, heat continues to be drawn from it, and more water freezes. Pressures are simultaneously developed in the material owing to the entrapping of water, and they prevent the complete change of the water into ice until there has been a fall in temperature. The action is progressive; as more ice forms higher pressures are developed and unfrozen water is prevented from freezing; the temperature falls as heat is extracted from the specimen, more water then freezes, more pressure is exerted, and a further fall in temperature is needed to freeze more water, and so on. In the pores of the specimen near the surface the water, being at atmospheric pressure on one face, is probably frozen at temperatures very near 0°C., and a small increase of pressure within the pores of the stone will be enough to make the ice liquefy, and the water will thus be pushed out and will lie on the surface of the stone. At lower temperatures this does not apply, since far larger pressures are required to bring the ice to liquefying point, with the result that extrusion is almost impossible. It would appear, therefore, that, from the point of view of damage to the stone, the rate of freezing is more important than the actual amount of water frozen, and this contention is borne out by experimental slow freezings where, with a long pause at a temperature of 0°C., there is a fair amount of extrusion from the surface and only small strains are developed. Materials not fully saturated with water have the additional advantage that the water may intrude into previously unfilled pores. Generally, if the saturation is below 80 per cent. little or no damage is done, though the effect varies with different materials, and with the rate of freezing. After all the water has become frozen a further fall in temperature does not appear to cause further damage, the strains actually being diminished.

Since extrusion is such an important factor in providing relief to the stone, it follows that any condition which tends to limit or prevent it will reduce the frost resistance of the material. Thus the choking of the pores near the surface, either by the deposition of salts due to natural weathering action, or by the application of preservatives such as paints or waxes, may increase the liability to damage through frost if the water can get in through other faces of the stone and so saturate it. The remedy for this seems obvious.

A most excellent and worth-while piece of research which does a lot to clear up a

\* *Experiments on the Freezing of Certain Building Materials.* Building Research Technical Paper, No. 17. H.M. Stationery Office. 3s. 6d.

rather complex problem, for far too many people have taken the mechanical details of frost action more or less for granted and assumed that there was no need to know anything more about it.

#### Reinforced Brick Lintels

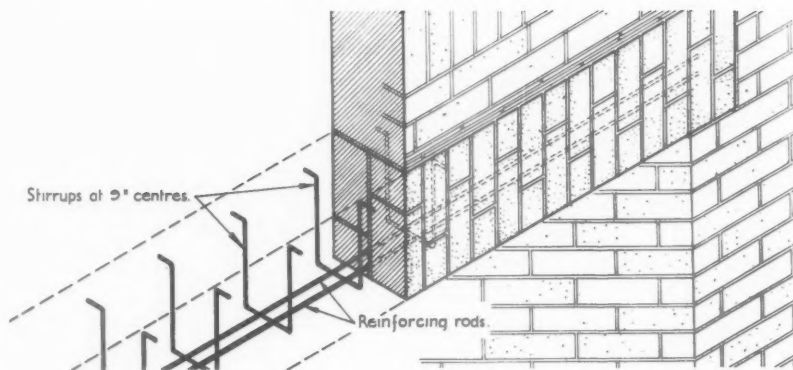
Just how far reinforced brickwork will get as a complete structural system it is difficult to guess at the moment. Logically, of course, it should go right through the job, beams, walls, floors, roof and all, but so far not a great deal is known in this country about its behaviour, though a certain amount of research work is in progress, and the Building Research Station has already published the results of some tests carried out on reinforced brick beams. So far the use of reinforced brickwork has been confined in this country to simple jobs such as panels and lintels, for which it is a very handy way of solving minor difficulties. The sketch on this page shows a lintel in the new St. James's Chapel and Meeting Hall at Bexley, designed by Mr. P. M. Andrews. The reinforcement is simple and is simply arranged; it consists of two rods with light stirrups in every third vertical joint between the bricks set on end.

#### Steelwork Tables

Dawnays have just issued a booklet of steelwork tables for structural work, the working stresses being calculated in accordance with those usually adopted in this country under British Standard Specification No. 449-1937, and the L.C.C. By-laws which came into force at the beginning of this year. There are various appendices of useful notes and the whole thing has a good strong cover, a sensible detail when one thinks of the hard use which tables of this kind generally get.—(*Dawnays, Ltd., London, S.W.11.*)

#### Resin-Bonded Plywood

While the ordinary plywood is quite good enough for most of the jobs for which it is used there is a lot to be said for a plywood which will really stand up to bad conditions of dampness and heat. In this country not very much of it has been used except for aeroplane work, but in America the material is becoming popular for boat building and at least four very distinguished firms are satisfied that it does all that is claimed for it. The process of manufacture is much the same as for ordinary plywood except that the bonding material consists of a sheet of paper impregnated with Bakelite in its transitional stage, so that pressure and heat finish off the job. In America the product is marketed under the name of Weldwood, and tests carried out by a firm which didn't believe the salesman's story sound pretty severe. A sample was left in the steam compartment of the firm's glue pot for a fortnight so that it got boiled, steamed and cooled as the water level rose and fell at night and over week ends; afterwards it was suspended from a dock so that it was alternately in and out of water as the tide rose and fell; then back in to the glue pot for a few days; then into a refrigerator for a fortnight; then a few days in a very dry heat between the sections of a steam radiator. After which "the only visible effect is a bleaching and ageing of the



colour of the wood." Fairer than which one could not well say.

For architects the use of this material may be limited; in fact one manufacturer with whom I discussed the matter seemed to think that the subject was hardly worth mentioning, though this, of course, is the invariable reaction to any suggestion which might mean thought for an executive. But what about garden furniture for instance? At the moment teak is the most obvious choice, and a very nice wood too; but might not a really waterproof plywood give designers the freedom they need? The U.S. Forest Products people have been experimenting with pre-fabricated houses built up of plywood panels glued to a stud frame. This would seem to offer another outlet; in fact the longer one thinks about it the more possibilities there seem to be, though the building industry will doubtless need a good deal of stimulation before anything is done about it.

After which it may be as well to add that there are three firms now making this plywood: Venestas, Saro Laminated Wood Products of Cowes, I.O.W., and Flexo Plywood Industries of South Chingford.

#### Manufacturers' Items

The electrical energy for the Birmingham Hospitals Centre is supplied in bulk at 11,000 volts by the Birmingham Corporation Electric Supply Department on a ring main system. By this method alternative routes for the supply are provided, so that in the event of one branch being disconnected the supply is maintained by the other. This energy is controlled by Ellison 11,000-volt switchgear. The bulk supply is fed to three transformers, one of 400 kVA and two of 500 kVA and reduced to working voltages of 400 volts for motors and 230 volts for lighting. This working voltage is fed to the Ellison low voltage distribution switchboard through four cables, one supplying the current for lighting, another for motors and two the current for domestic power. Each of these groups is then subdivided in the following way and controlled by a separate circuit breaker. Lighting: Medical faculty, laundry and power-house, and hospital. Power: Medical school, laundry and power-house, hospital, medical. Motors: Medical school, laundry, power-house and hospital. Although each particular group is supplied separately from

the transformers, in the event of the supply from one transformer being temporarily cut off the group affected can be maintained by a supply from the other two. From the main distribution switchboard, feeder cables are taken to the Ellison sub-distribution switchboards in various parts of the centre. Here, again, the supply is sub-divided into smaller groups, each group being controlled by a separate circuit breaker. The final stages of the system are reached through fuseboards for the lighting and small circuit breakers for the power and motor loads. An idea of the magnitude of the electrical system can be gained when it is considered that appliances and lighting are installed that will require a current equal to 1,000 h.p. This is roughly divided into the following groups: 600,000 candle-power of lighting, 500 h.p. of domestic power, 250 h.p. of electric motors. In order to meet the demands for future extensions to the hospital and additional electrical equipment in all parts, the electrical system has had to be planned for incorporating these extensions with as little inconvenience as possible. With this in view, space has been left in the main sub-station for a further transformer which will enable the load to be increased by about 30 per cent.

In the Birmingham Hospitals Centre all departments are ventilated by Sirocco fans driven through "V" ropes by Bull super-silent motors.

In Viceroy Close, Birmingham, refuse is discharged from the kitchens by hoppers into a chute delivering into a chamber at ground-floor level. The hoppers are fume- and dust-tight in both open and shut positions. The main chute itself is ventilated by a cowl ventilator. Messrs. Thos. Ash & Co. Ltd., are the manufacturers.

#### SLUM CLEARANCE AT SOUTHWARK

As part of an extensive scheme to clear Southwark of slum property the Borough Council has erected a block of flats in Comus Place, Old Kent Road, S.E., and the building was opened by the Mayor (Mrs. P. Tidy). Comus House, as the new building is named, has 70 flats to accommodate about 354 persons. The undertaking has involved a total expenditure of £54,277, to be raised by loan. Each flat is provided with a kitchenette and bathroom, and the courtyard is laid out as a garden with ample recreation accommodation for children.



## THE BUILDINGS ILLUSTRATED

**JUNIOR AND INFANTS' SCHOOL, BIRMINGHAM** (pages 71-73). Architect: William T. Benslyn, A.R.C.A., F.R.I.B.A. General contractors P. W. Cox, Ltd.; Sub-contractors and suppliers included: Birmingham Asphalte and Paving Co., tar paving; Grip Steel Bar Co., Ltd., reinforced concrete; Himley Brick Co., Ltd., bricks; J. C. and J. K. Dow, stone and artificial stone; W. Robbins, Ltd., structural steel; Permanite, Ltd., asphalt and special roofings; R. W. Brooke & Co., wood block flooring; Diespeker Co., Ltd., patent flooring; Seymour Sweet & Co., central heating (designed by G. Hart, M.I.H.V.E.); Lumby's, Ltd., boilers; The Stuart Electrical Co., electric installation; P. V. Wall, plumbing; Pearce and Cutler, Ltd., sanitary fittings; A. Brown & Co., ironmongery and door furniture; Midland Plastic and Granolithic Co., Ltd., plaster; Kingfisher, Ltd., and Midland Educational Co., Ltd., furniture; Parker, Winder and Achurch, Ltd., cloakroom fittings; Bayliss, Jones and Bayliss, wrought iron railings; Wyckham, Blackwell, Ltd., oak fences.

**THE "HOLLIES" CHILDREN'S HOME SMETHWICK** (pages 74-75). Borough Engineer and Surveyor: Roland Fletcher, M.INST.C.E., assisted by Chester Button, A.R.I.B.A., Chief Architect, and Douglas H. P. Roberts, A.R.I.B.A., Architectural Assistant. General contractors: Housing, Ltd. Sub-contractors and suppliers included: Henry Hope and Sons, Ltd., metal windows, French doors, pressed metal door frames; Attoc Blocks, Ltd., reinforced concrete and hollow tile floors and flats; Permanite, Ltd., asphalt works; Wormells, tiling with Precelly slates; G. Prince, Ltd., plastering; Merrick and Heath, Ltd., glazing; Lyne and Sons, Ltd., terrazzo flooring and dados; Walker & Co., electric installation; Gent & Co., electric clocks; A. G. Curtis and Son Ltd., plumbing; Hope's Heating and Lighting, Ltd., heating installation; A. Bagnall and Sons, Ltd., painting; Hollis Bros. & Co., Ltd., beech strip and block flooring; James Gibbons, Ltd., door furniture; L. N. Pressly, sanitary fittings; Blockleys, Ltd., facing bricks; Smethwick Gas Dept., gas appliances; Bayliss, Jones and Bayliss, Ltd., boundary railing; Lewis's, Ltd., "Battleship" linoleum; Dunlop Rubber Co., Ltd., rubber flooring; A. Brown & Co., Ltd., special cloakroom fittings; Roneo, Ltd., metal screens to wards; Kerner-Greenwood & Co., Ltd., "Pudlo" brand waterproof.

**VICEROY CLOSE** (pages 76-80). Associated Architects: Mitchell and Bridgwater and Gollins and Smeeton. General contractors: Kirk and Kirk, Ltd. Sub-contractors and suppliers included: Kirk and Kirk, Ltd., demolition and excavations and foundations; Lawford Asphalt Co., asphalt; F. Bradford & Co., reinforced concrete and floors and water storage tank and waterproofing materials; Brick Marketing Co., Ltd., bricks; Dows Granolithic, artificial stone; Banister Walton & Co., Ltd., structural steel; Permanite, special roofing; Celotex, roofing insulation; Crittall Manufacturing Co. Ltd., patent glazing, and casements; Ellis (Kensington), Ltd., central heating; Bratt Colbran, Ltd., grates and mantels; Birmingham Supply Co., gas fixtures and gas-fitting and refrigerators; A. H. Cornwall, Ltd., electric wiring and electric light fixtures, electric heating, bells; Marshall (Edward), Ltd., sanitary fittings; Peter Jones, Ltd., stair; C. A. & A. Haward, iron staircase; W. A. Telling, Ltd., plaster; Buss & Elston, joinery; J. Whitehead and Son, marble; Ramsden's (London), Ltd., tiling; A. Sanderson and Sons, Ltd., wallpapers; Milner Son and White, shrubs and trees; Rota Products, Ltd., kitchen fittings; Hammond Bros. and Champness, lifts; Le Grand Sutcliffe and Gell, water supply; Ellis, water supply and water softening; Bir-

mingham Guild, Ltd., signs; Osborne, petrol tank; Morris Singer Co., Ltd., handrails; Cork Insulation Co., cork insulation; G. A. Harvey & Co., Ltd., coal bins; Hill and Smith, railings; Thomas Ash & Co., Ltd., dust chutes; Electrical Components, refrigerators; Radio Furniture and Fittings, Ltd., anti-static aerials; Modern Spray Decorations, spray painting; Bull Motors (Branch of E. R. & F. Turner, Ltd.), Bull super-silent electric motors.

**PUBLIC SWIMMING BATHS, BIRMINGHAM** (pages 81-82). Architects: Messrs. Cherrington and Stainton, F.R.I.B.A. General contractors: C. Bryant and Son, Ltd. Sub-contractors and suppliers included: London Brick Co., Ltd., brickwork; The General Asphalte Co., asphalt; Wilfred Robbins, Ltd., structural steelwork; Helical Bar and Engineering Co., hollow tile floors; The Stourbridge Glazed Brick and Fire Clay Co., Ltd., glazed tiles in ponds, etc.; Marble Mosaic Co., Ltd., terrazzo lining to bath hall; Stuart's Granolithic Co., Ltd., stairs; Mellowes & Co., Ltd., windows; Hills Patent Glazing Co., Ltd., lanterns and lightings; Drytone Joinery, Ltd., doors; J. R. Pearson (Birmingham), Ltd., handrails, wrought iron fencing, etc.; James Gibbons, Ltd., dressing cubicles; Fisher and Ludlow, floor channels in ducts; Elcock and Wood, lightning conductor; Walker and Wood, Ltd., ironmongery; Roneo, Ltd., lockers; The Ridgacre Foundry Co., Ltd., manhole covers; Mundet Cork Products, Ltd., cork flooring; Universal Rubber Paviours, Ltd., rubber flooring; Binks & Co., Ltd., sanitary fittings; Parker, Winder and Achurch, Ltd., wall vents; Tarmac, Ltd., kerbs; Birmingham Asphalte and Paving Co., tar paving; Allied Guilds, copings; H. Pratt, Ltd., lighting; The London Midland Steel Scaffolding Co., Ltd., diving stage; Lion Foundry Co., Ltd., fountain heads; Swinden, electric clock; Celotex Co., Ltd., Celotex; Norman Turner Engineering Co., Ltd., heating; Price and Saveker, bronze sash window; Birmingham Sculptors, inscription tablets; Permutit, Ltd., filtration; Kerner, Greenwood & Co., Ltd., "Pudlo" Brand waterproof.

**ST. BARTHOLOMEW'S CHURCH, ALLEN'S CROSS, NORTHFIELD, BIRMINGHAM** (pages 82-83). Architect: S. N. Cooke, F.R.I.B.A. General contractors: Parsons and Morrin, Ltd. Sub-contractors and suppliers included: R. W. Brooke & Co., wood-block floors; Hoskins and Sewell, Ltd., windows; Hopes Heating and Lighting, Ltd., central heating and hot water; Baxter and Impey, electric lighting; W. J. Bird and Son, organ installation; George Prince, plastering; Harvey and Ashby, leaded lights; Blockleys, bricks; N. F. Ramsay & Co., Ltd., ironmongery; Empire Stone Co., Ltd., reconstructed stone; Watts & Co., dossal and chairs; W. Bloye, A.R.B.A.S., font; Ellis Partridge & Co., Ltd., roofing tiles; Kerner-Greenwood, Ltd., "Pudlo" brand waterproof.

**RAVENSHILL ROAD SCHOOLS** (pages 84-85). Architect: H. T. Buckland, F.R.I.B.A. General contractors: Isaac Langley. Sub-contractors and suppliers included: Himley Brick Co., bricks; Rubery, Owen & Co., structural steel; Blockleys, Ltd., tiles; D. Anderson and Son, Ltd., roofing felt; R. W. Brooke & Co., Ltd., wood-block flooring; G. N. Haden and Sons, Ltd., central heating; The Gordon Hughes Electrical Co., Ltd., electric wiring; S. G. B., Ltd., sanitary fittings; John Gibbs, Ltd., steel casements; Bradshaw Bros., shrubs and trees; James Gibbons, Ltd., cloakroom fittings; Kerner-Greenwood & Co., Ltd., "Pudlo" brand waterproof.

**J. B. & S. LEES, LTD., NEW OFFICES, WEST BROMWICH** (page 86-87). Architect: Cecil E. M. Fillmore, A.R.I.B.A. General contractor: J. R. Deacon. Sub-contractors and

suppliers: included British Reinforced Concrete Co., R.C. raft; Concrete, Ltd., precast R.C. floors; J. Alfred Pratt & Co. (1928), Ltd., bricks; Ward and Croft, grates; Permanite, Ltd., asphalt; Lyne and Sons, Ltd., terrazzo; Dunlop Rubber Co., Ltd., rubber; Korkoid and Ruboleum, korkoid; Ferodo, Ltd., nosings; Langley London Ltd., roof tiles, fixed by S. Jackson & Co.; J. A. Hewetson & Co., Ltd., oak flooring; G. T. Rackstraw, panelling to board room and elsewhere; Venesta, Ltd., doors; K. S. Neale, ironmongery; Birmingham Guild, Ltd., staircase balustrade; Hills Patent Glazing Co., metal windows; Metalline Enamelling Co., lettering; Birmingham Sculptors, fibrous plaster; Carter & Co., Ltd., entrance wall tiling; F. R. Pearce, lavatory tiling; W. Arnold and Sons, Ltd., sanitary fittings; Electromobile Eng. Co. (West Bromwich), Ltd., electrical work; Paton Eng. Co., heating and ventilating; Kerner-Greenwood & Co., Ltd., "Pudlo" brand waterproof.

**HOUSE AND SURGERY BLOCK** (pages 88-89). Architect: T. H. Ashford, A.R.I.B.A. (DIP.L.). General contractors: William Jackson (Langley Green), Ltd. Sub-contractors and suppliers included: La Brea Asphalte Co., Ltd., asphalt; The British Reinforced Concrete Engineering Co., Ltd., reinforced concrete; London Brick Co., Ltd., bricks; Redpath, Brown & Co., Ltd., structural steel; Adamite Co., Ltd., plaster on briccanion lathing; Pilkington Bros., Ltd., glass; Haywards, Ltd., patent glazing, saucer domes over passage; Venetian Flooring Co., terrazzo flooring; Kerner-Greenwood & Co., Ltd., "Pudlo" brand waterproof; Rosser & Co., central heating; Samuel Smith and Son, Ltd., grates; Etna Lighting and Heating Co., Ltd., electric wiring and bells; Best and Lloyd, Ltd., electric light fixtures; Parker, Winder and Achurch, Ltd., sanitary fittings, door furniture, tiling and signs; Henry Hope and Sons, Ltd., casements; Bigwood Bros., iron staircases; W. H. Fraley and Sons, Ltd., metalwork.

**BIRMINGHAM HOSPITALS CENTRE** (pages 90-106). Architects: Lanchester and Lodge, F.R.I.B.A. General contractors: Wilson Lovatt, Ltd. Sub-contractors and suppliers included: The Acme Flooring and Paving Co. (1904), Ltd., wood block flooring; The Adamite Co., Ltd., "Colemanoid" waterproof solution; G. Armitage and Sons, Ltd., York stone; Thomas Ash & Co., Ltd., linen chute; J. Avery & Co., dark blinds; W. and T. Avery, Ltd., weighbridge; A. Bagnall and Sons, Ltd., painting sub-contractors; Baird and Tatlock (London), Ltd., viewing screens; Baldwin's (Birmingham), Ltd., sanitary fittings; Bigwood Brothers, metal doors; The Birmingham Guild, Ltd., metalwork and handrailing and bronze metalwork; Bratt Colbran, Ltd., electric fires and surrounds; The Brightside Foundry and Engineering Co., Ltd., pipework; The Carron Company, kitchen equipment; The Caxton Floors, Ltd., fireproof floors; The Cement Marketing Co., Ltd., cement; The Chimney Construction Co., Ltd., power house chimney; Henry A. Clegg and Sons, Portland stone sub-contractors; The Cork Insulation Co., Ltd., insulation; Coxeter and Son, Ltd., anaesthetic equipment; R. Crittall & Co., Ltd., panel heating and suction plant; E. Danks & Co. (Oldbury), Ltd., boiler equipment and coal handling plant; Dent and Hellyer, Ltd., bedpan washers; Diespeker & Co., Ltd., terrazzo floors and suspended concrete floors; Doulton & Co., Ltd., sanitary fittings, gas taps and stoneware pipes and gullies; The Educational Supply Association, Ltd., fittings for folding screens; George Ellison, Ltd., electric switchgear; The Flexo Plywood Industries, Ltd., lead line plywood protection; Frazzi, Ltd., patent roofing; B. French, Ltd., electrical sub-contractors; W. J. Furze, Ltd., lightning conductors; City of Birmingham Gas Department, gas cookers; G. B. Equipments, Ltd., lantern screen; Gents, Ltd., clocks; W. H. Gaze and Sons, Ltd., tennis courts; John Gibbs, Ltd., metal windows;

James Gibbons, Ltd., locks and floor springs; E. Gillick, sculptor; G. N. Haden and Sons, Ltd., ventilating and services, hot water panels and pipework; J. Hadfield and Sons, Ltd., tarmac and roads; Harrison (Birmingham), Ltd., curtain rails; Haywards, Ltd., lantern lights and escape stairs; The Himley Brick Co., Ltd., common and brindle bricks; Hobbs Hart & Co., Ltd., floor springs and strong room doors; Henry Hope and Sons, Ltd., metal windows; Horsley Piggott, Ltd., water softening plant; The Imperial Chemical Industries, Ltd., hydrated and lump lime; Thomas Ingram, cat ladders; The Inlaid Rubuleum Tile Co., Ltd., Rubuleum; Jaconello, Ltd., terrazzo; The Korkoid Decorative Floors, rubber floors; The Lamson Engineering Co., Ltd., metal linen chute; Lenscrete, Ltd., roof lights; Lewis's, Ltd., linoleum; Light Steelwork (1925), Ltd., handrailing; The Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt sub-contractors; The Lion Foundry Co., Ltd., rainwater heads; Lockerbie and Wilkinson (Birmingham), Ltd., ironmongery; Manlove Alliott & Co., Ltd., sterilizing equipment and laundry equipment; Maple & Co., Ltd., curtains; Marshall, Sons & Co., wrot ironwork; H. H. Martyn & Co., Ltd., hoods and glazed screens, handrails, wrought iron gates and panelling; May Acoustics, Ltd., acoustic plaster, fibrous plaster; The Medical Supply Association, Ltd., instrument cupboards; Herbert Morris & Co., Ltd., stacking machine; Newalls Insulation Co., acoustic plaster; The North British Rubber Co., Ltd., rubber flooring; Parker, Winder and Achurch, Ltd., sanitary appliances and equipment; Pearce and Cutler, Ltd., glazing sub-contractors; J. R. Pearson (Birmingham), Ltd., metalwork; Rabone Peterson & Co., Ltd., ironmongery; Redpath Brown & Co., Ltd., steelwork sub-contractors; Roberts & Co. (Wednesbury), Ltd., metalwork; Roneo, Ltd., steel fittings; Ronuk, Ltd., floor polishing; The Rugby Portland Cement Co., Ltd., cement; Scaffolding (G.B.), Ltd., suspended scaffolding; Shanks & Co., Ltd., sanitary fittings; W. B. Simpson and Sons, Ltd., wall tiling; J. Slater & Co. (Engineers), Ltd., water boilers; D. R. Smart and Son, Ltd., patent flooring; J. Starkie Gardner, Ltd., metalwork; J. C. Staton & Co., white plaster and Keene's cement; S. G. B. (Dudley), Ltd., wall and floor tiling; William Sugg & Co., Ltd., gas incinerators; Sulzer Bros. (London), Ltd., borehole equipment; The Surgical Manufacturing Co., Ltd., specimen cupboards; Sutton and Sons, Ltd., grass seed; Tarmac, Ltd., artificial Portland stone; Jesse Tildesley, Ltd., metal racks; Turners Asbestos Cement Co., asbestos ducting; The Victor X-Ray Corporation, Ltd., X-Ray equipment; Waring and Gillow (1932), Ltd., blinds; Waygood-Otis, Ltd., lifts; J. Whitehead and Sons, Ltd., marble; John P. White and Sons, Ltd., flush doors and panelling; Williamson, Cliff, Ltd., facing bricks; D. Wiseman and Bros., Ltd., plumbing sub-contractors; E. Wright & Co. (Stourbridge), Ltd., manhole covers; York Shipley, Ltd., refrigeration; Alfred Allen, panelling; The Art Marbles Stone and Mosaic Co., Ltd., marble and terrazzo; Baird and Tatlock (London), Ltd., lantern screens and diagram racks; F. Braby & Co., Ltd., animal cages; J. C. Broadbent & Co., slag wool; Carter & Co. (London), Ltd., tile partitions; The Caxton Nameplate Manufacturing Co., bronze letters; Diespeker & Co., Ltd., suspended concrete floors; Jos. F. Ebner, Ltd., wood block flooring; S. Elliott and Sons (Reading), Ltd., flush doors; Etchells, Congdon and Muir, Ltd., lifts; W. Freer, Ltd., plumbing; G. N. Haden and Sons, Ltd., pipework for water, gas, steam and fire hydrants, and panel heating; Haskins, Ltd., steel roller shutters; Hobbs Hart & Co., Ltd., locks; The Inlaid Rubuleum Tile Co., Ltd., linoleum; The Kleine Co., Ltd., suspended concrete floors; The London Brick Co., Ltd., cellular flettons; Marshall, Sons & Co., steel doors; Osler and Faraday, Ltd., lanterns and fittings; F. Sage & Co., Ltd., showcase

fittings and diagram cabinet; W. B. Simpson and Sons, Ltd., terrazzo; Smith and Ansell, Ltd., lanterns; Tarmac, Ltd., granolithic paving; C. Trumper and Sons, Ltd., plastering sub-contractors; Ingram and Kemp, Ltd., Best and Lloyd, Ltd., and Troughton and Young, Ltd., lighting fittings and fittings; Instanta Electric, Ltd., annunciator; G.E.C., Ltd., transformers, operating theatre fittings, fire alarm system and electric lamps and telephones; B.I. Cables, Ltd., and Siemens Bros. (London), Ltd., electric cables and underground cables; Chloride Electrical Storage Co., Ltd., emergency battery; Metropolitan Vickers Electrical Co., Ltd., and British Thomson-Houston Co., Ltd., electric lamps; Watford Electrical Manufacturing Co., automatic starters; Drayton Regulator and Instrument Co., transmitters and indicators; G. P. Dennis, Ltd., fuse boxes; Reliance Telephone Co., Ltd., P.A.X. telephone equipment; G.P.O., Post Office telephones; Bull Motors, (Branch of E. R. & F. Turner, Ltd.) Super Silent Motors, Verity's, Ltd., Laurence Scott Electric Motors, Ltd., and Crompton Parkinson, Ltd., electric motors; George Kent, Ltd., meters and instrument panels; Donovan Electrical Co., Ltd., switch-fuses and contactor gear; Cressall Manufacturing Co., Ltd., dimmers; Westinghouse Brake and Saxby Signal Co., rectifiers; Walsall Conduits, Ltd., well glass fittings and accessories; Revo Electric Co., Ltd., acid-proof fittings; Watson and Sons (Electro-Medical), Ltd., operating theatre panels; Magnetic Valve Co., Ltd., magnetic valves; Brookhirst Switchgear, Ltd., automatic starting equipment; A. Reyrolle & Co., Ltd., contactor gear; Rheostatic Co., Ltd., thermostats; Royleys, Ltd., calorifiers and steam traps; Walker Crossweller & Co., steam traps; Hopkinsons, Ltd., boiler mountings; Goodbrand & Co., Ltd., economiser; Oldnall Colliery Co., firebricks; R. J. and J. Pearson, Ltd., flue covers; James Hodgkinson (Salford), Ltd., coal stokers; The Ivo Company, explosion doors; Babcock and Wilcox, Ltd., ash elevator, etc.; John Thom, Ltd., deep well; Railway Accessories, Ltd., light steelwork; Dudley Foundry Co., Ltd., ah-set racks; Wills Patent Pressure-filled Joints, Ltd., joint rings; British Arca Regulators, Ltd., automatic steam regulators; G. & J. Weir, Ltd., boiler feed pumps; Pulsometer Engineering Co., Ltd., fire and circulating pumps; Staveley Coal and Iron Co., Ltd., cast iron pipes; Cochranes, Ltd., Middlesbrough, cast iron pipes; Stewarts and Lloyds Ltd., and Bromford Tube Co., Ltd., steel pipes; Hudson and Wright, Ltd., I.C.I. Metals, Ltd., and Charles Clifford and Sons, Ltd., copper pipes; H. Keeling, Ltd., copper radiators and rails; Dewrance & Co., isolator and reducing valves; Hunt and Mitton, Ltd., valves and fire appliances; Charles Winn & Co., Ltd., valves and expansion joints; Smith Bros. (Hyson), Ltd., and Whitley Partners, Ltd., valves; Glenfield and Kennedy, Ltd., sluice valves; Ham Baker & Co., penstock valves; John Russell & Co., Ltd., gunmetal fittings; Crane, Ltd., gunmetal and M.I. fittings; Constructors, Ltd., steel valve boxes; J. M. Smith & Co. (Leicester), Ltd., bedpan racks and mackintosh rails; Howard and Hill, Ltd., stainless steel sinks; J. W. Lightburn and Son, Ltd., automatic clutches; Smith and Paget, Ltd., starching machine; R. G. Whitaker, Ltd., laundry presses; Isaac Braithwaite and Son, Ltd., cuff and collar ironer; Lister Bros., glad irons; The Dowling Co. (Electrical Manfgs.), Ltd., hand irons; Granville Tin Plate Co., Ltd., ventilation ducts; Davidson & Co., Ltd., fans and air washers; Visco Engineering Co., Ltd., air filters; Christie and Grey, Ltd., sound insulation; Samuel Hodge & Co., Ltd., air heaters; Keith Blackman & Co., Ltd., refrigeration fans; Lee, Howl & Co., Ltd., centrifugal pumps; Hydroautomat, Ltd., hydrostat chemical injection unit; Tangyes, Ltd., chemical pump; Moss Gear Co., worm reduction gear unit; J. and W. Baldwin, Ltd., wood wool filter; George Garside, Ltd., sand and gravel filter; Gresham and Graven, deelely blower; F. Leroy

& Co., Ltd., and William Kenyon and Son, non-conducting covering; Caston & Co., Ltd., lift gates; Stourbridge Glazed Brick and Fire-clay Co., glazed tiles; Wailes Dove Bitumastic Ltd., paint; Richard Lloyds & Co., Ltd., workshop equipment; Parkinson and Cowan, Ltd., gas meters; Bryan Donkin Co., Ltd., gas valves; Aveling-Barford, Ltd., milk-can Sterilizer; Brown and Son, Ltd., dispensary pans and stills; J. W. Pindar & Co., steam-jacketed percolator; William Gardener and Sons, Ltd., disintegrator and steam pan; Barnett and Foster, Ltd., soda-water machine; S. W. Wilkinson & Co., ointment mill; Ormerod Engineers, Ltd., emulsifier; Baker Perkins, Ltd., powder mixer; Peerless Electrical Manfg. Co., Ltd., paste mixer; Manesty Machines, Ltd., tablet mixer; Thomas Hill Engineering Co. (Hull), Ltd., ampoule rinser; Butlers (London), Ltd., filter; Priestley and Ford, hand drier; John C. Carlson, washing and rinsing machine; Sutcliffe Ventilating and Drying Co., Ltd., bottle drying cabinet; B. French, Ltd., wiring for light and power; Foster Engineering Co., Ltd., transformers; The Westinghouse Brake and Signal Co., Ltd., rectifiers; Hailwood and Ackroyd, "Hailware" opal shades; Wardle Engineering Co., Ltd., fittings; John Lightfoot, Ltd., electric panels; Siemens-Schuckert (G.B.), Ltd., B.Th.U. meter; Reavell & Co., Ltd., air compressor; Matthews and Yates, Ltd., fans and air conditioning.

#### RECONDITIONING COTTAGES

The value to rural tenants of an internal water supply, bathroom and electric or gas lighting, and the need for publicity in making known the provisions of the Act, are among the matters to which the attention of local authorities is drawn in a communication on the Housing (Rural Workers) Amendment Act, 1938, recently issued by the Minister of Health.

This new Act, which received the Royal Assent on June 23, extends the period of operation of the already existing Acts, which provide free grants for the reconditioning of old rural cottages, to 1942 on slightly more advantageous terms.

Under the Housing (Rural Workers) Acts of 1926 and 1931, local authorities were empowered to make grants amounting to two-thirds of the cost of improvements (subject to a maximum of one hundred pounds per house) to owners of country cottages wishing to bring their property up to date, half of which grant was repaid to the local authority by the Exchequer, and conditions were attached which ensured that the cottage so renovated should be reserved for an agricultural worker or a similar person at a low rent for a period of twenty years.

The new Act, in addition to extending the period of operation of these facilities, contains amendments, including the following: Grants made may in future be paid by instalments as the work proceeds; owners who wish to free themselves from the conditions of the grants will in future have to pay back only a proportion of the sum originally advanced to them, corresponding to the unexpired part of the 20-year period during which the conditions were to operate and not, as hitherto, the whole grant; if a house for which a grant was paid before the passing of the Overcrowding Act of 1935, has remained overcrowded, further grants may be made to relieve overcrowding, provided that the further grant does not exceed one hundred pounds or two-thirds of the cost of the work, whichever is the less, and that all grants together do not exceed £150.