ARCHITECTS' JOURNAL



standard

contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur

NEWS and COMMENT

Astragal's Notes and Topics Letters News Diary Criticism

SECTION TECHNICAL

Information Sheets Information Centre Current Technique Working Details Questions and Answers Prices The Industry

Registered as a Newspaper

CURRENT BUILDING

Major Buildings described: Details of Planning, Construction, Finishes and Costs Buildings in the News Building Costs Analysed Architectural Appointments Wanted and Vacant ICA ICE Vol. 134 No. 7 IEE THE ARCHITECTURAL PRESS IES 9, 11 and 13, Queen Anne's Gate, Westminster, IGE IHVE SWI. Phone: Whitehall 0611 IIBDID Price 1s.

*A glossary of abbreviations of Government departments and societies and committees of all kinds, together with their addresses and telephone numbers. The glossary is published in two parts—A to II one week, Il to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

	LOTALOTT TO IMPROVE III THE MEGICOL.	
AA AAI	Architectural Association, 34/6, Bedford Square, wcl Association of Art Institutions. Secy.: J. H. Holden,	eum 0974
ABS ABT ACGB ADA ARCUK BAE BASA BC BCC BCCF BCCF BCIRA BDA	College of Art, Cavendish Street, Many Architects' Benevolent Society. 66, Portland Place, wl Lang Association of Building Technicians. 156, Waterloo Road, SE! Arts Council of Great Britain. 4, St. James's Square, swl White Aluminium Development Association. 33, Grosvenor Street, wl Architects' Registration Council. 68, Portland Place, wl Lang Board of Architectural Education. 66, Portland Place, wl Lang British Architectural Students Association. Building Centre, 26 Store St Euilding Centre, 26, Store Street, Tottenham Court Road, wcl British Cast Concrete Federation. 105, Uxbridge Road, Ealing, ws British Cast Iron Research Association. Alvechurch, Birmingham British Door Association. 10, The Boltons swl0	ham 5533 oo 5427/8 shall 9737 air 7501/8 ham 5861 ham 5721 reet, wc1 eum 5400 beck 4185 sliing 9621 Iditch 716 antle 8494
BE BEDA	British Electrical Development Association, 2 Savoy Hill, wc2 Temple	Inter 1951 Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, c2	-41 2001
BINC BOT BRS BSA BSI CABAS	Board of Trade. Whitehall Gardens, Horseguards Avenue, sw1 Building Research Station. Bucknalls Lane, Watford Building Societies Association. 14, Park Street, w1 British Standards Institution. British Standards House, 2, Park St., w1 Ma City and Borough Architects Society. C/o S. A. G. Cook, ARIBA, Borough Architect and Director of Housing, Town Hall, High Holborn, wc1	tham 2785 algar 8855 rston 4040 yfair 0515 yfair 9000
CAS CCA CDA COID CPRE CUC DIA EJMA	County Architects' Society. C/o J. Hurst, ARIBA, County Hall, Dorcheste Cement and Concrete Association. 52, Grosvenor Gardens, sw1 Copper Development Association. 55, South Audley Street, w1 Council of Industrial Design. 28, Haymarket, sw1 Council for the Preservation of Rural England, 4, Hobart Place, sw1 Coal Utilization Council. 3, Upper Belgrave Street, sw1 Belgi	ravia 6661 enor 8811 algar 8000 oane 4280 ravia 8141 ehall 0540 use,
EPNS FAS FASS	English Place-Name Society. 7, Selwyn Gardens, Cambridge	beck 9966
FIDOR	14, Bryanston Street, w1 Wel Fibre Building Board Development Organization Ltd. (Fidor)	
FBI FC FCMI FDMA FLD FMB FPC FRHB	Forestry Commission. 25, Savile Row, w1 Federation of Coated Macadam Industries. 37, Chester Street, sw1 Flush Door Manufacturers Association Ltd. Trowell, Nottingham Friends of the Lake District. Pennington House, nr. Ulverston, Lancs. Ulverston of Master Builders. 33, John Street, wc1 Federation of Painting Contractors. St. Stephen's House, sw1 Whit Federation of Registered House Builders. 82, New Cavendish Street, w1 Lang	ehall 6711 egent 0221 oane 1002 ceston 623 erston 201 33 (6 lines) ehall 3902 gham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E	
GC GG	Gas Council. 1, Grosvenor Place, sw1 Belg	narch 8888 gravia 4321 gravia 3081
HC IAAS	Housing Centre. 13, Suffolk Street, sw1 Incorporated Association of Architects and Surveyors.	tehall 2881

Institute of Contemporary Arts. 17-18, Dover Street, wl Grosveno
Institution of Civil Engineers. 1, Great George Street, swl Whiteha
Institution of Electrical Engineers. Savoy Place, Victoria Embankment, wc2

Illuminating Engineering Society. 32, Victoria Street, swl Ab Institution of Gas Engineers. 17, Grosvenor Crescent, swl Slo Institution of Heating and Ventilating Engineers. 49, Cadogan Square, wl

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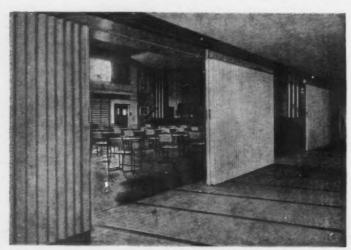


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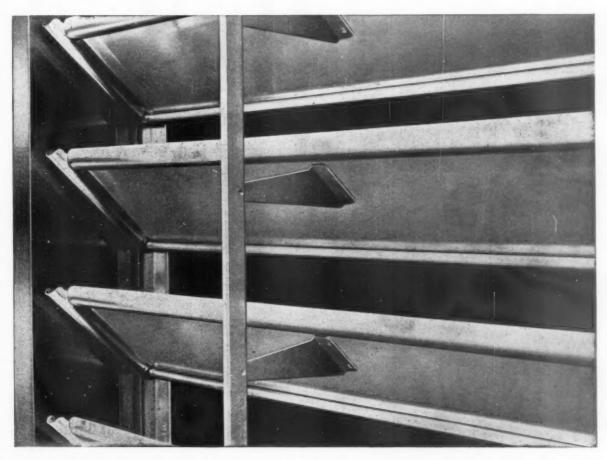
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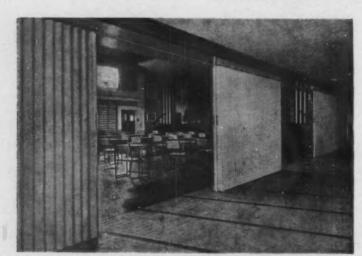
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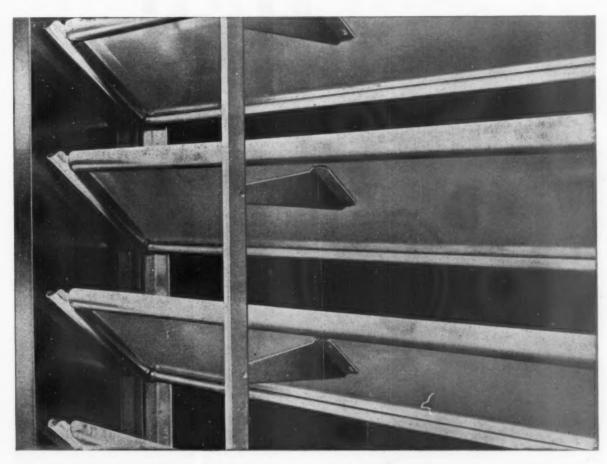
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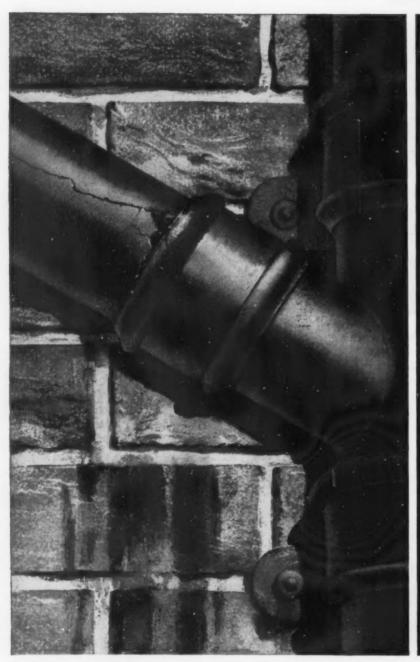
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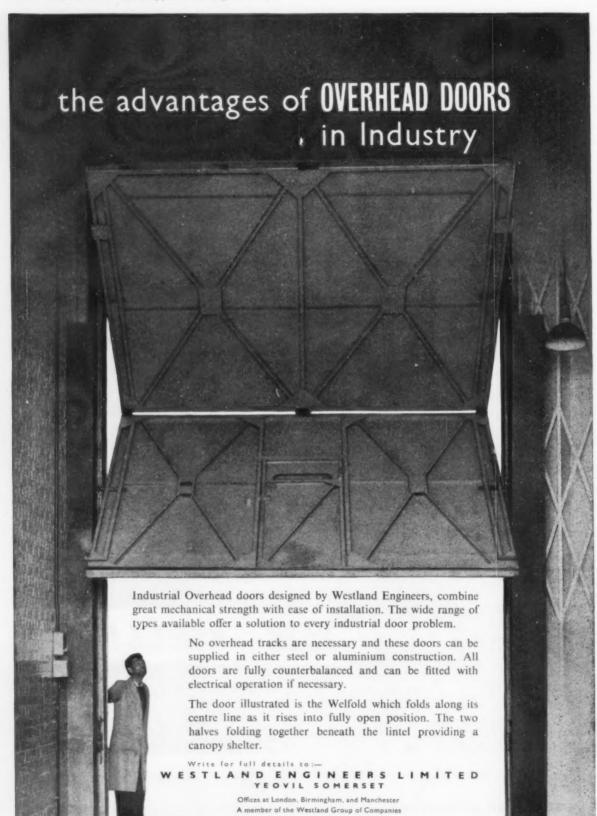


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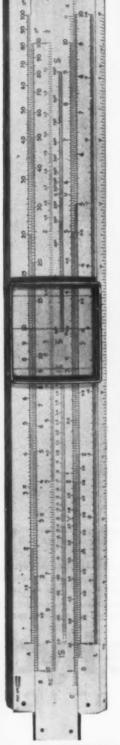
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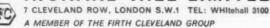


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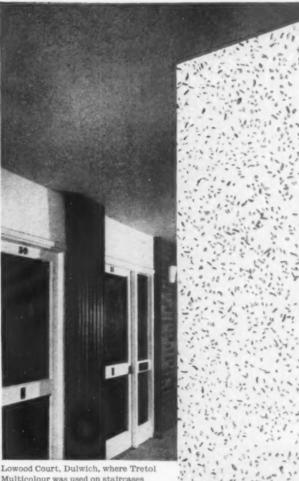
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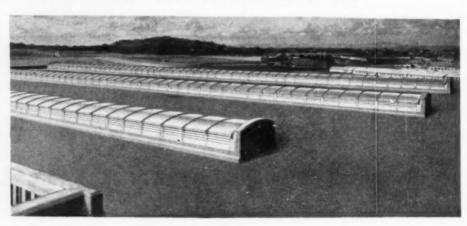
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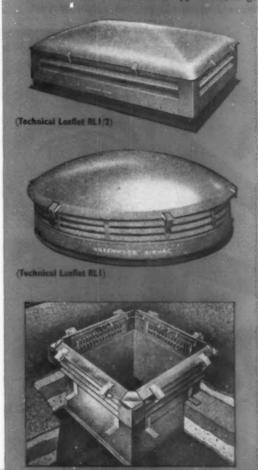
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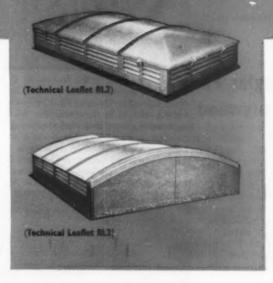
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THE ARCHITECTS' JOURNAL (Supplement) August 16, 1961



(Technical Leaflet RL1/1)



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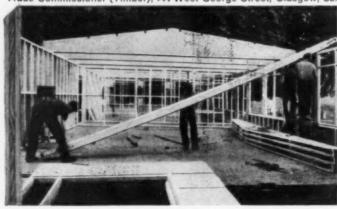


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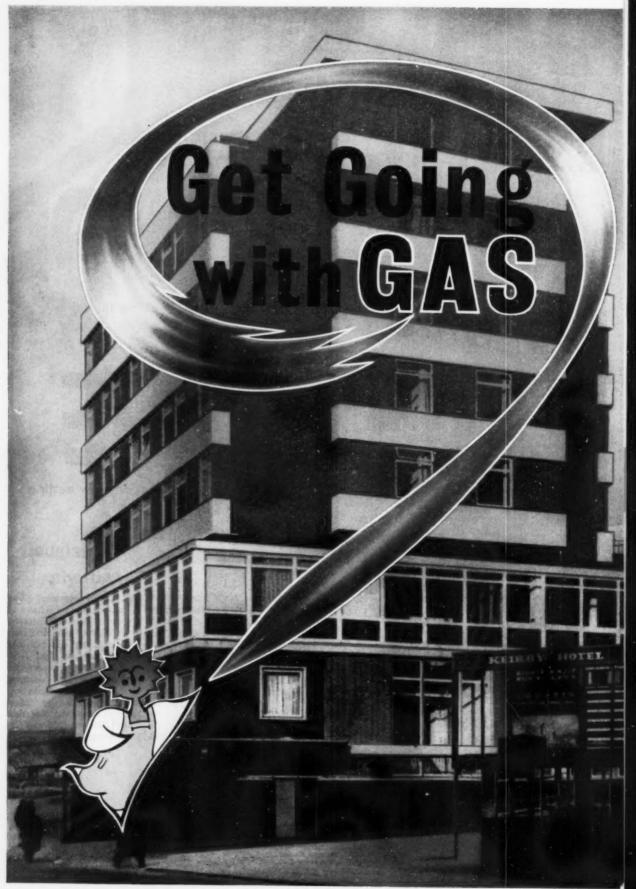
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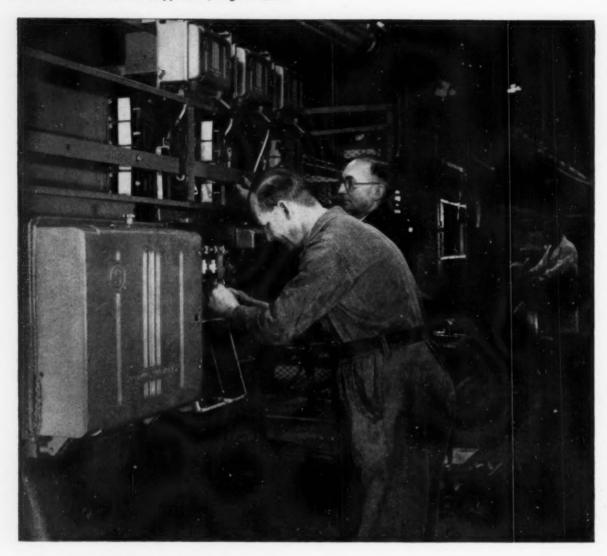
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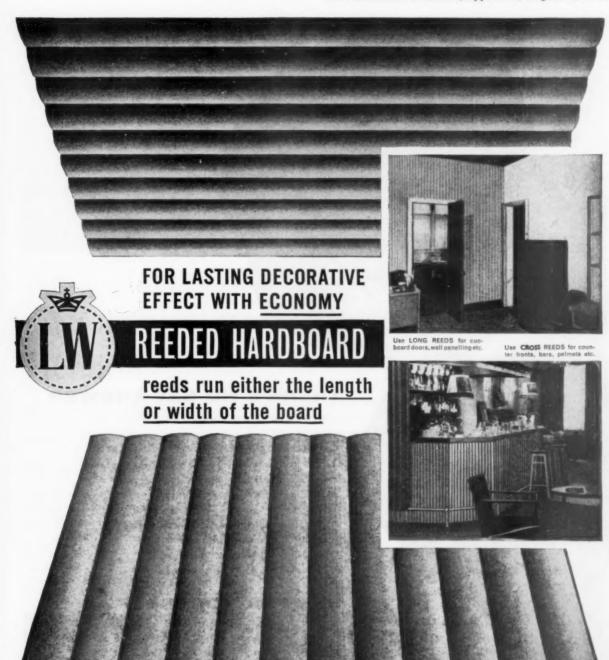


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News from Hull



New Flats for Old at Hendon

'Standard' Hostess Sinks in Modern Kitchens

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The flats have been re-designed to provide

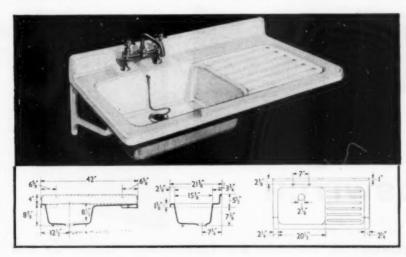
a separate modernised kitchen fitted with a 'Standard' Hostess sink. The Hostess sink is made from cast-iron heavily coated in high quality, acid-resisting porcelain enamel. It is the most rigid sink available and for this reason, is popular with many Councils including the L.C.C.

The design is also unusually good; there is a roomy bowl, and the draining board is at just the right angle to obtain efficient drainage, while not allowing the crockery to slip into the sink and be broken.

The flats have been re-decorated throughout; more electric power points added; constant hot water laid on; modern fireplaces installed and more storage space added both inside and out.

Careful programming has ensured the minimum amount of inconvenience to the tenants, who are mainly older people whose children have left home. The scheme, which qualified for a grant under the Housing (Financial Provisions) Act, 1958, and the House Purchase and Housing Act, 1959, is being carried out by the direct labour staff of the Housing Department under the direction of Mr. W. A. Plevin, A.A.I., A.I.Hsg., the Borough Housing Officer. The work is being supervised by Mr. B. J. Storey, M.R.S.H., A.I.Hsg., Senior Assistant in the Housing Department.



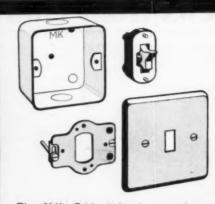


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The 'Standard' Hostess sink is ideally suitable for council dwellings. It is rugged, long-lasting, and has been designed to withstand rough treatment. High quality porcelain enamel covers a tough, rigid cast-iron basis. From the Housewife's point of view, too, the Hostess is extremely practical. There is a generous sink area, and the draining board is set at exactly the right angle to allow efficient drainage without the risk of crockery slipping into the sink. The draining board is available sited on either the left or right-there is also a double draining board model. Hostess sinks are made in white, cream and opal green. For full details of the Hostess and other 'Standard' equipment, contact IDEAL BOILERS & RADIATORS LIMITED, Ideal Works, Hull.

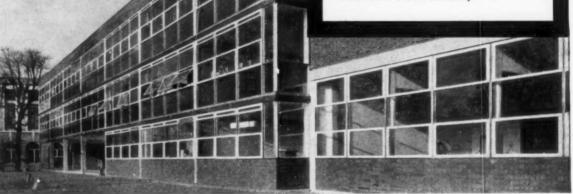
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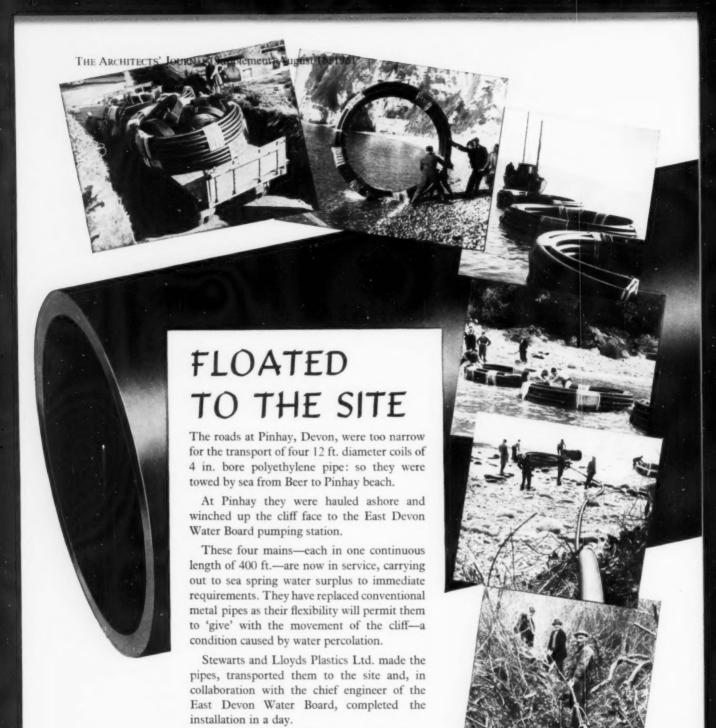
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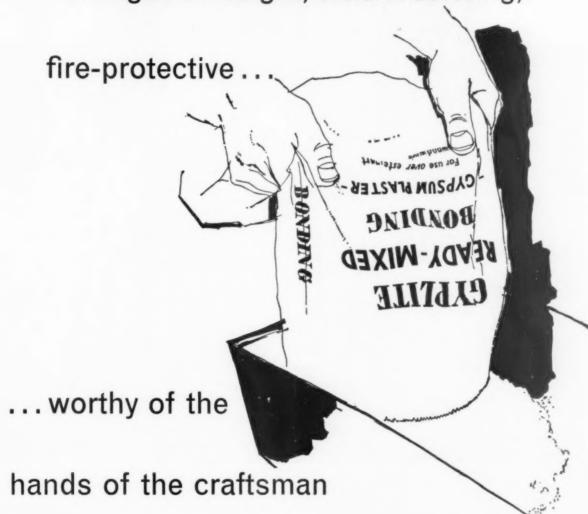
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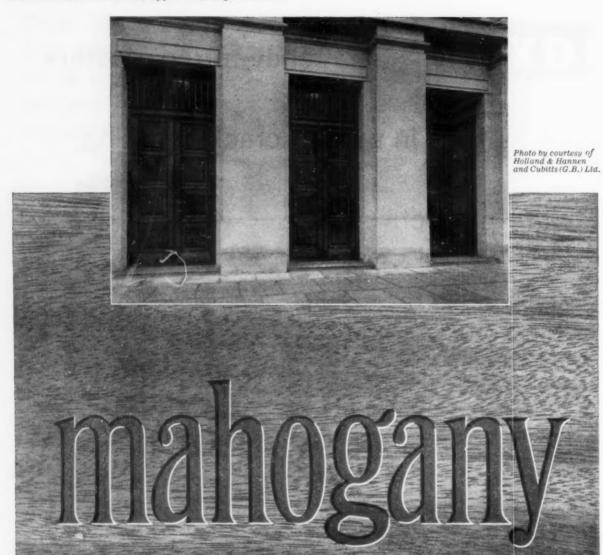
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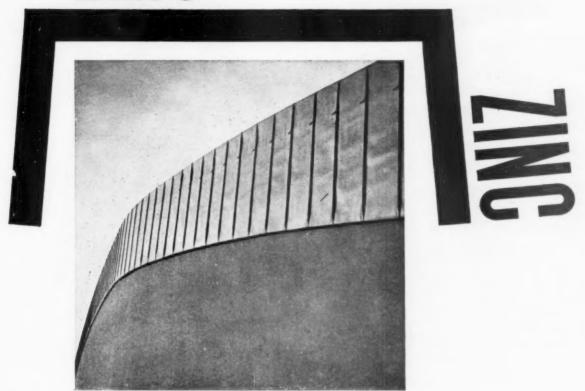
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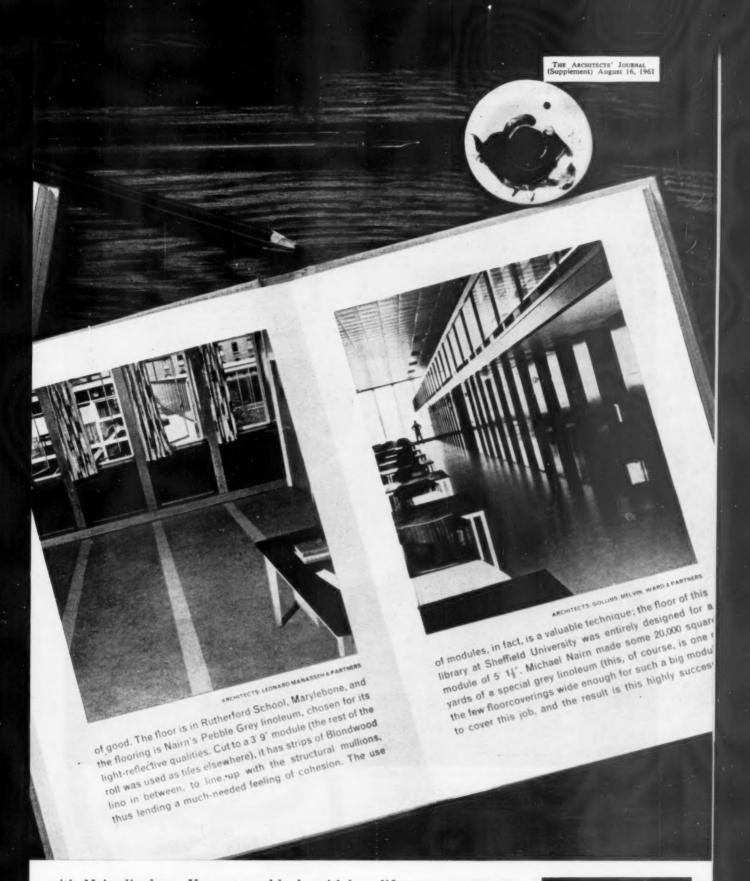
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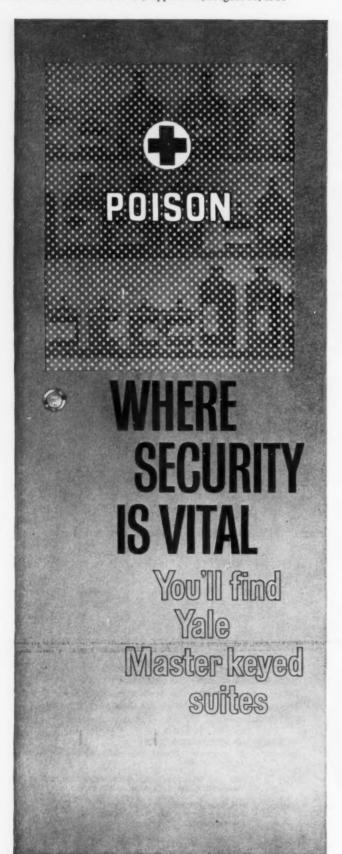
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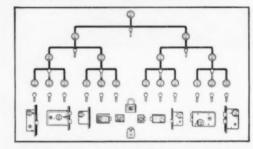
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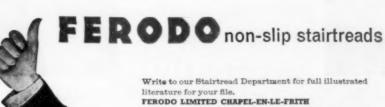


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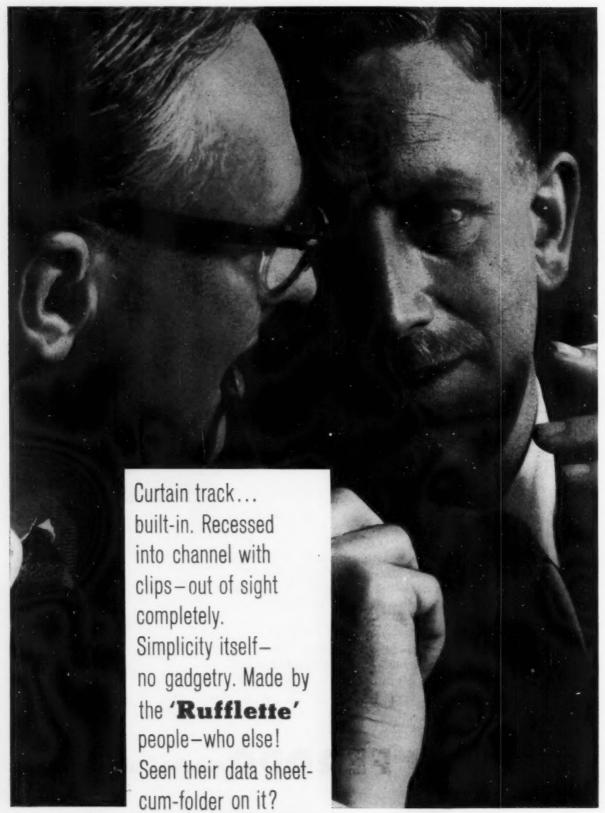


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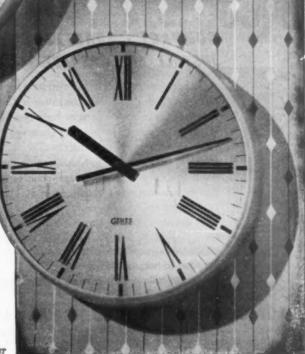
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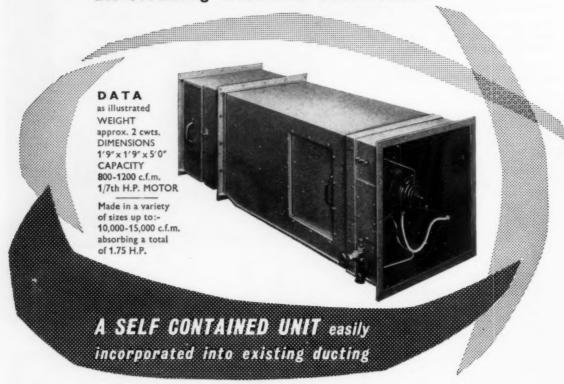
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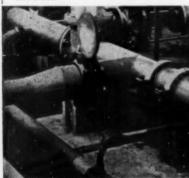
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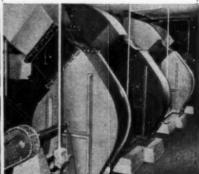
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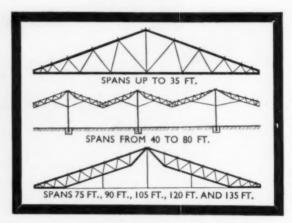
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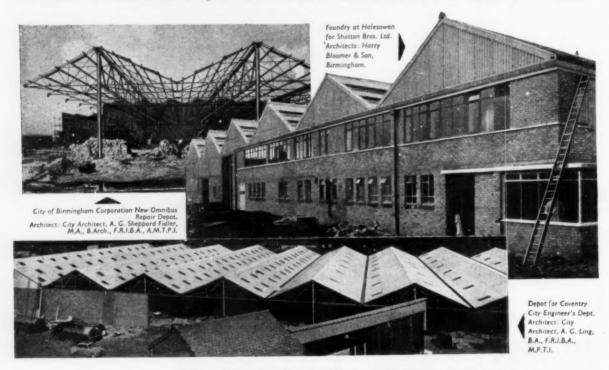
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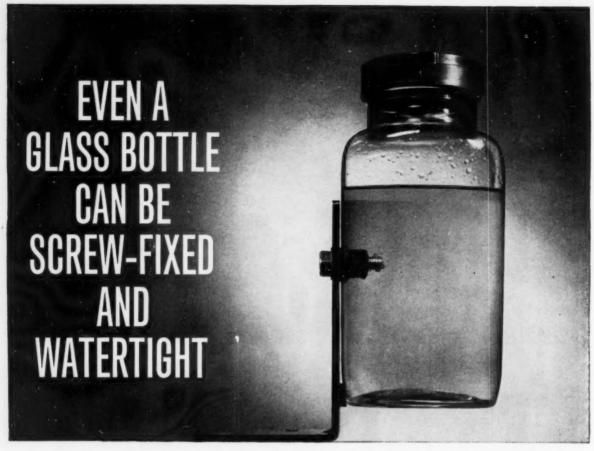
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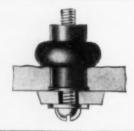
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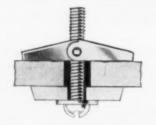
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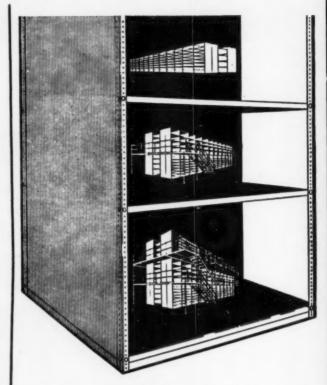
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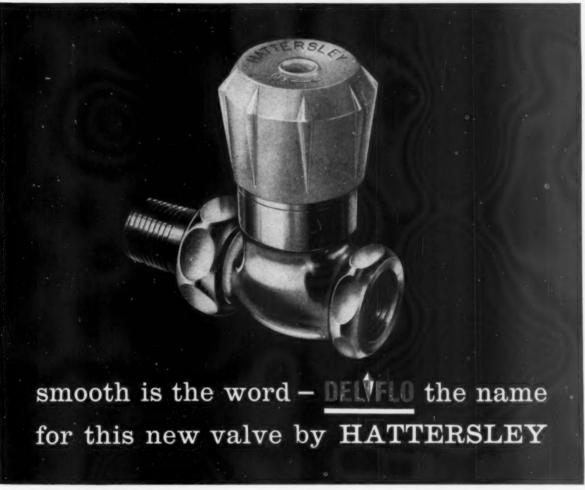






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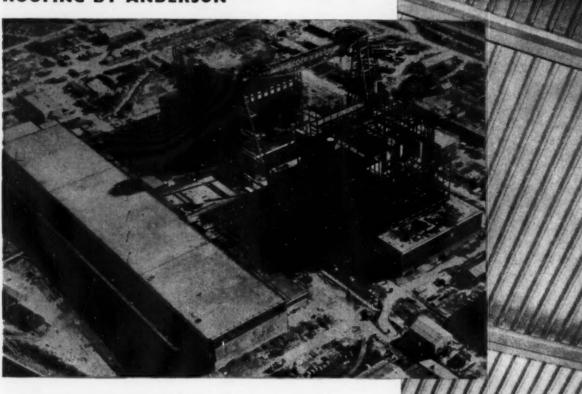
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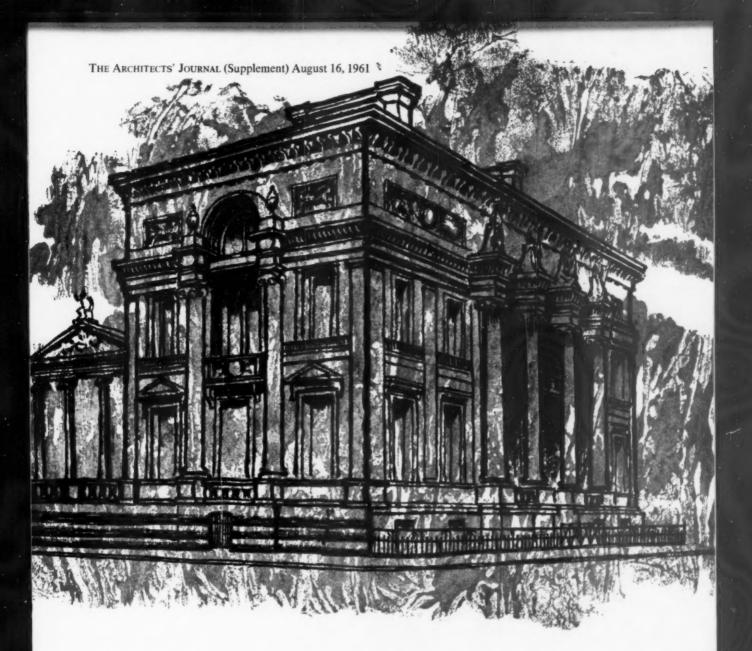
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Charles Robert Cockerell The Greek Revivalist

Cockerell began his career with the advantages of an orthodox education. This was not surprising, for his father, Samuel Pepys Cockerell, as his name indicates, had Samuel Pepys among his ancestors. So Charles attended Westminster School, and then entered his father's office at sixteen. After five years there, and a further year in Sir Robert Smirke's office, he started in September 1810 for travels about which lasted seven years and profoundly influenced his subsequent life. He set sail with £200 in his pocket and in the convenient guise of a King's Messenger, in a Government despatch-boat. The French war was on but, after sundry scares, they reached Constantinople safely, and Cockerell spent three months there, sketching palaces, houses, and mosques. With another young English architect, Foster, picked up in Turkey, he proceeded to Athens in December. It was then a small and squalid town with no proper hotel. The two architects, together with two German tourists, made a trip by boat to Aegina, and pitched their tents on the island for three weeks. In the course of measuring the Temple of Jupiter there, they discovered various fragments of statuary which later came to be known as the famous "Aegina Marbles" (now in the Munich Museum), and most shockingly smuggled them out of Greece at night, eventually to be bought at auction by the King of Bavaria. Cockerell's other archaeological scoop was the so-called "Phigaleian Marbles", to be seen in the British Museum, which purchased them in 1813. These came from the Temple of Apollo at Bassae, which Cockerell also measured. The lively account of his seven years' journeying in the Levant makes excellent reading

for architects or anybody else. His companion, Foster,

deserted him for a Greek girl encountered at Smyrna,

and there are many other amusing incidents. The commandant of the Acropolis (then a fortress) at Athens offered to give him a souvenir if he would take it away. So he arrived at midnight with a cart, and the commandant pitched down to him, from aloft, a huge marble block forming part of the south frieze of the Parthenon (somewhat battered and now in the British Museum).

Two years of study in Rome, diluted with social dissipation, followed Athens, but in 1817 he returned at last to London. For some time he concentrated on preparing three magnificent imaginative drawings—of Rome in her glory, of Athens in her glory, and of the works of Wren; but a practice quickly came to him, almost unsought. He succeeded his father as Surveyor to St. Paul's in 1819; became Architect to the Bank of England in 1833; and the long list of his buildings from that date up to his retirement in 1859 included the Ashmolean Museum and Taylorian Institution at Oxford; He was Professor of Architecture at the Royal Academy, and was elected R.A. in 1836; President R.I.B.A. in 1860 and its Royal Gold Medallist in 1848. Altogether, a distinguished career.

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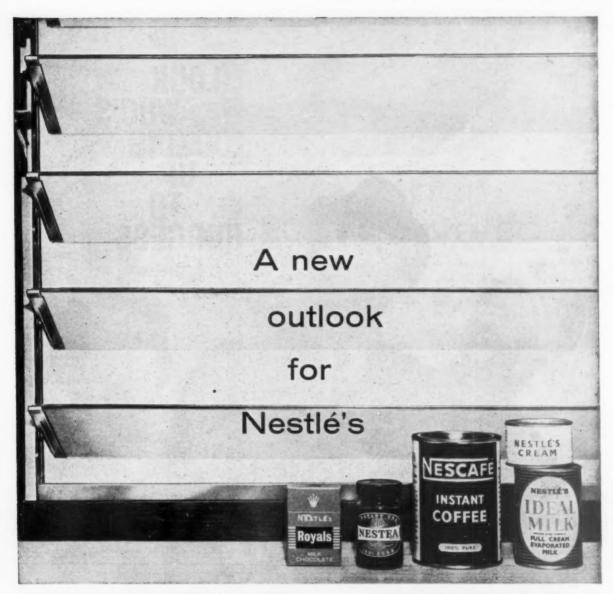
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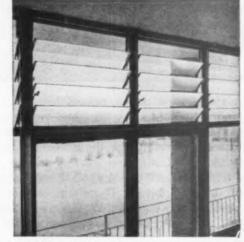
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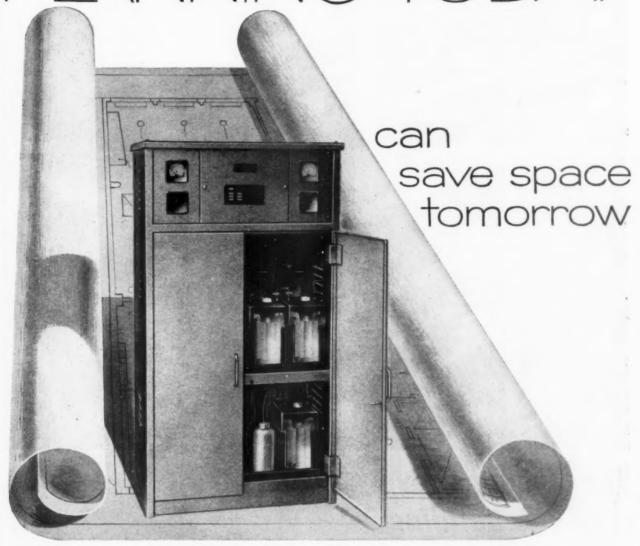
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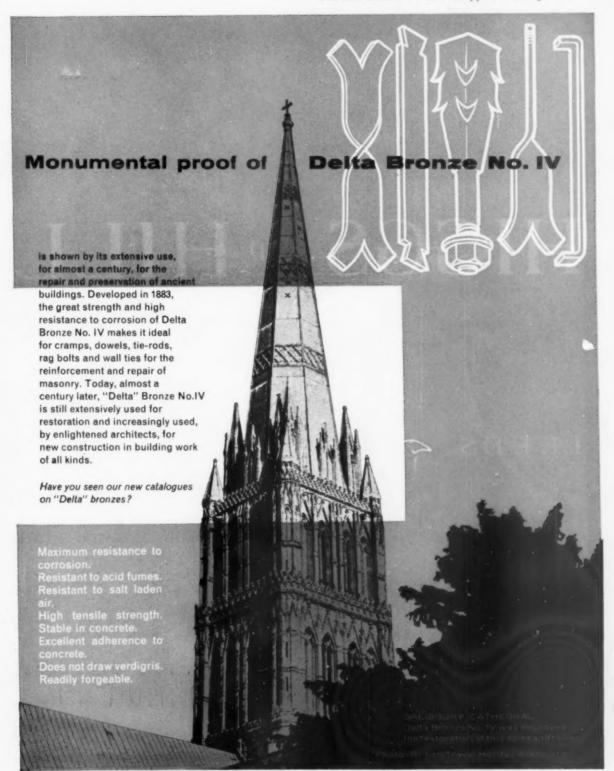
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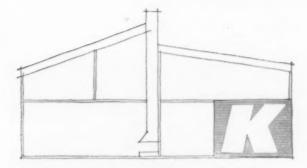


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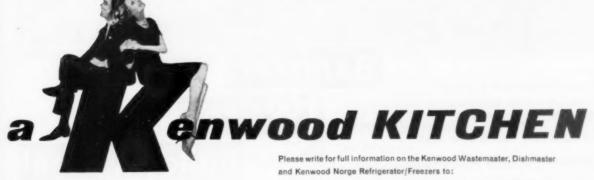
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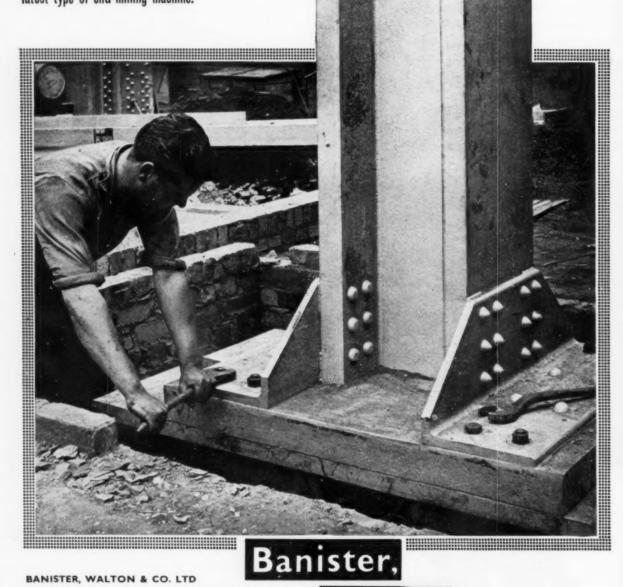






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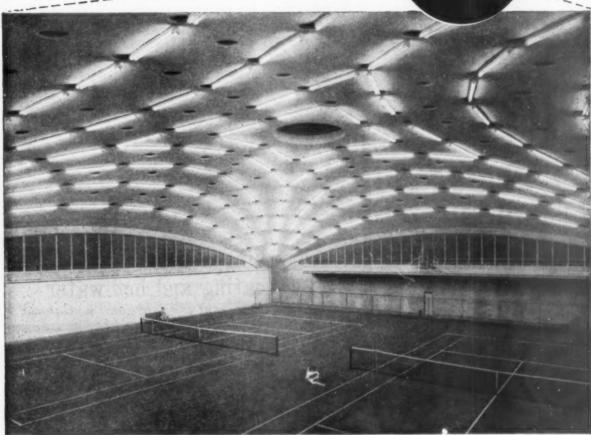
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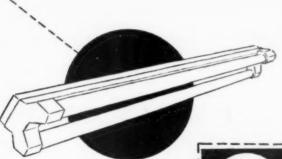
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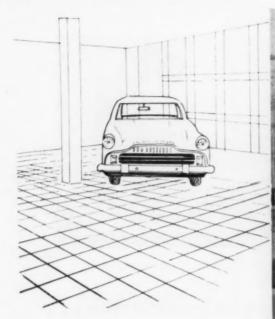




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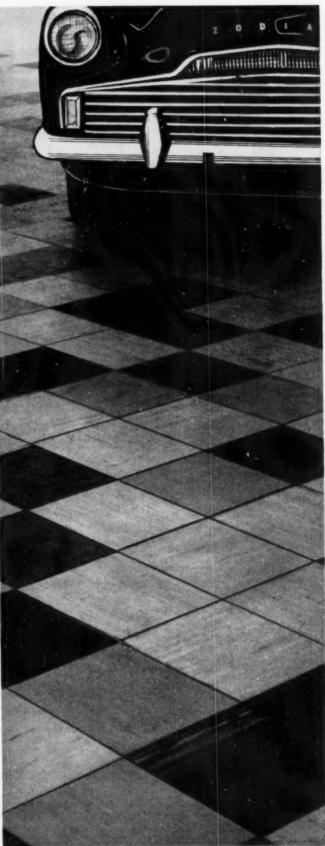
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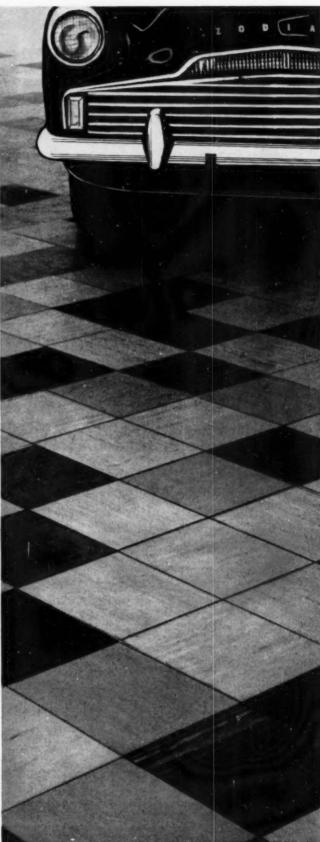
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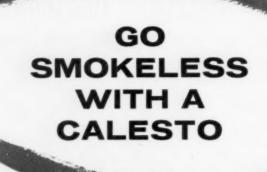
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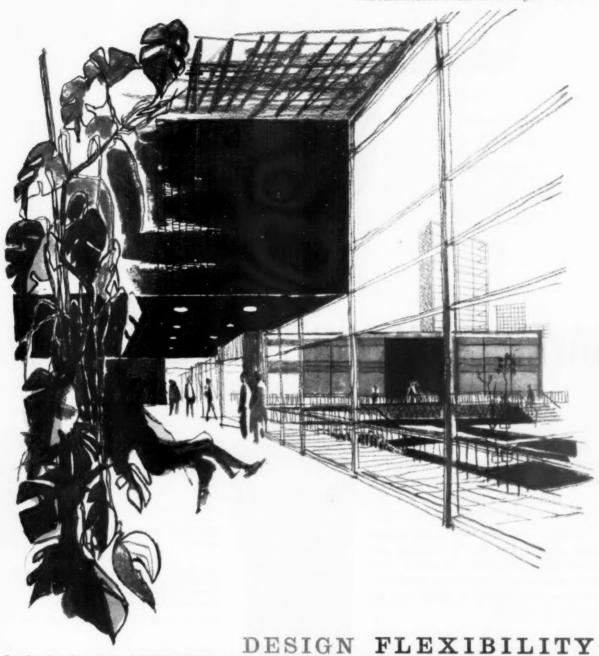


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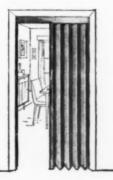
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The Architects' Journal

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NOT QUITE ARCHITECTURE

Back to the start of it all

The Island of San Giorgio Maggiore at Venice has a dreamlike quality. Delegates to the twelfth International Hospital Congress, whether arriving by private launch from Ciprianos or water-bus from St. Marks, were pleasantly distracted by their surroundings. Between sessions they were apt to be found discussing whether or not Venice was slowly sinking into the lagoon. They were confused also by bad acoustics and misled by even worse translation: for instance, a question about "chronic sick" answered in terms of "acutely ill"

Isola San Giorgio, Venice





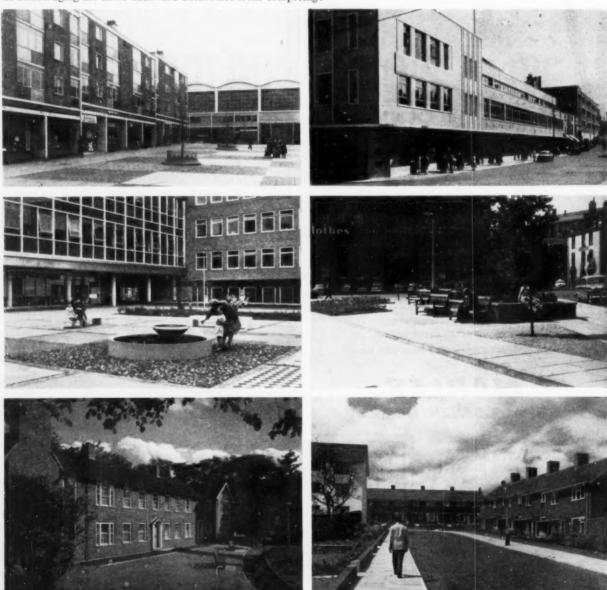


Civic design in 1960

The second round of the Civic Trust's annual awards shows what a labour of Hercules the Trust has taken on in attempting "to encourage an appreciation of civic design." This time county boroughs were invited to submit schemes and "many assessors complained of the poor number of entries and that only a small proportion were worth their serious attention." Fifty-three authorities submitted 243 large schemes (40 awards) and 130 small schemes (26 awards) of which the seven shown here are a fair sample.

of which the seven shown here are a rair sample.

Top, a café in Darlington by Godsmark & Miller-Williams; below, reading from left to right, Plymouth, Pannier Market (Walls and Pearn) and shops and flats (H. J. W. Stirling)—the only joint award; Bolton Co-op (Bradshaw Gass & Hope); Coventry, courtyards of Municipal Offices (Arthur Ling); Leeds, Nalgo Jubilee Gardens (L. G. Knight); Liverpool, old people's flats (Ronald Bradbury); Exeter, housing estate (Harold B. Rowe). Some well deserve to carry the Trust's triangular plaque: others must make one ask whether the standard ought not to be raised, even at the risk of discouraging the more backward authorities from competing?



patients; while the Cardinal of Venice invited us to hear Mass in St. Mark's "in memory of fellow workers who had lost their livers in hospital." A restaurant solicited our patronage with the promise that English visitors would receive "familiar treatment."

Later, when we had become acclimatised to this, an excursion to Padua led us straight from one of the most modern Italian hospitals, still in course of construction, to the ancient Anatomy Theatre of the University, where the foundations of modern medicine were laid. This must be one of the weirdest interiors in Europe. It is like something out of the Cabinet of Dr. Caligari. Small in size, simple in plan and approached from below through a central anteroom and a series of tortuous passages, the walls are black and without windows. Strictest secrecy was necessary, permission having been granted by the Serenissima in defiance of the Pope -and of protestant opinion also.

The table on which six dead criminals were dissected each year after being ferried by night from Venice, is a rough wooden platform about 8 ft. long with a top that can be raised to admit the corpse. Close round this, concentric galleries rise steeply to provide standing room only, from which to peer over white and gold strap work balustrades at proceedings conducted entirely by candle light. Sessions, we were told, lasted 20 or even 30 hours. As there were no facilities for preserving bodies, work on each had to be concluded at a single sitting, at the end of which all that remained of the subject was lowered through the hatch again and disposed of in a villainous black stove, which still stands at one side of the antechamber. Among famous men who studied at Padua were Gallileo and William Harvey whose treatise De Motu Cordes was published in 1628.

What this conference lacked in efficiency it certainly gained in perspective. This visit to Padua, and another to a modern tuberculosis sanatorium on one of the islands of the Venetian lagoon, which was pronounced by English medical officers to have been rendered superfluous by modern drugs, together demonstrated with dramatic clarity the rate at which scientific medicine is developing. Though not so sensational, this biological revolution could have results as far reaching as those which have followed from Gallileo's physics.

AILEEN TATTON-BROWN

Al programme of weekly SfB supplements:

A STATEMENT TO ADVERTISERS

We are appealing to advertisers to join with us in giving architects more concise, classified technical information.

A successful journal is a joint venture of editorial and advertising interests. We, as editors, do our utmost to give architects the news, comment and technical information necessary for them to keep abreast with new developments and to practise efficiently. Our advertisers form a complementary service by supplying information on new materials, products and services,

and by keeping this information up to date. We believe that a neglected field of advertising lies in the preparation of Informative Advertisements. This is the field where the most response to an advertisement can be expected from a responsible, professional reader. In our policy of providing information for the architect we want to give every encouragement to advertisers to produce concise, logically ordered material, in tabular, drawn or diagrammatic form, fully dimensioned and annotated where necessary. This is a method which has been successfully demonstrated by the AJ's Information Sheets. Advertisements that present information in an acceptable, authoritative way will be preserved by readers.

Informative advertising is not intended to take the place of full catalogue information or the visit of technical representatives, but rather to assist the architect to make basic decisions and selections during the initial stages of his design when

speed is vital.

In particular, THE ARCHITECST' JOURNAL seeks the co-operation of all the advertisers in its forthcoming series of supplements, which, commencing on October 4, will provide within a year the nucleus of a personal library (based on the sfB filing system) for every architect. Easily detachable, the supplements will deal with a different building element each week, and contain a check list, design information, references and information sheets. We hope that manufacturers will see the value of making their own contribution to this library by providing as much informative advertising as possible for each subject dealt with. Such advertising being an integral part of the supplement can then be easily filed by readers as complementary to the editorial.

If any advertiser or his advertising agent seeks advice or further information on this we will be pleased to give it.



COME UP AND SEE MY MONUMENT

One or two misconceptions seem to be floating around about the Euston Arch. Some people want to have it preserved, together with the Great Hall and Board Room on the present site. But at the moment Euston, like nearly all our termini, is hopelessly out of date and inefficient, and it is unlikely that a decent modern station could be built round such vast existing monuments. The best thing to do would be to get rid of the Hall (even the consultant, Peter Shepheard, accepted this) and to put the arch near the entrance to the new station, which will be further south because northern expansion is prevented by a cutting and the flanking buildings on each side of it.

British Railways are obviously too much in debt to spend £190,000 on moving the Arch, but couldn't a private fund be started? My own cynical editors and colleagues would be quite prepared to contribute to such a scheme. This shows how strongly people feel about a monument which, as Nikolaus Pevsner has pointed out, is as grandiose of its kind as anything the Greeks ever accomplished. If we can find £100,000 for a Goya portrait of Wellington, and private individuals can pay large sums for priceless etchings, why can't someone find £200,000 for a monument to our engineering and railway pioneers?

TELEVISION BLUES

I admire the speed with which the Tonight team get on to architectural subjects these days, but I wish they had more time to prepare the presentation of what are, sometimes, quite complex ideas. They were absolutely right to send to Stevenage for Leonard Vincent the other day to comment on the MOHLG's report on the New Towns. (It was bright of them not to call in a member of the TCPA front-and-backgarden brigade.) But they missed the chance of putting over some useful information. Instead of taking up the report's comment on the need for greater urbanity and less sprawl, they settled for a quick stab at that chestnut, the New Town "blues." Alan Whicker's interview of a couple of flashy boys who didn't think the new town of Corby had much to offer annoved Leonard Vincent as much as it annoyed me. As Vincent said, you can find that sort of discontent anywhere: you don't have to go to a new town for it.

He didn't have much chance of saying anything else-though with the right sort of questions and a few pictures he could have disproved the theorymentioned in the report-that all New Town residents want front gardens. His own scheme, at Elm Green, for a pedestrian housing area has been well received locally. In fact, at a meeting of residents some time after they had moved in there were no complaints at all. And it is quite clear, if you wander round the pedestrian precinct housing areas at Cumbernauld New Town, that the tenants catered for by Hugh Wilson and his team of architects, engineers and planners would have no complaints about the absence of front gardens.

Tonight is in a unique position. Its producers realise that frequent references to architecture, when it is in the news, are more valuable than any single, hour-long documentary about architecture. But they really mustn't throw their subjects away. A combination of good scripting and good camerawork could say far more about the architecture of New Towns in a few minutes, than any amount of interviewing of tenants.

NO BRIGHTON AFFRONT

You may have seen a sketch of the

latest proposals for Brighton in the Observer and the Guardian. I think the block model reproduced here gives a better idea of what is going on. The scheme is a revision by Russell Diplock Associates of one they submitted for their clients, the Taylor Woodrow Group, last year when Brighton Corporation invited several developers to submit ideas for the 12-acre site near the Grand Hotel. The revision was made in collaboration with Sir Hugh Casson (now acting as architect consultant to Brighton) and the Corporation, and it incorporates an improvement recommended by the Royal Fine Art Commission—the enlargement of the site. The enlargement has been achieved not only by the demolition of the Grand Hotel (in theory: no-one has yet agreed to this) but also by an extension to the north (to the right of the picture).

Briefly, the alterations which have now been approved by the Corporation and submitted to the Ministry of Housing and Local Government include the addition of one more tall block (on the assumption that a group of tall buildings is better than two) and an opening up of the pedestrian squares, which Hugh Casson thought were too tight. The key on the picture shows everything but the provision for car parking (underground roads will service shops, hotels, offices, etc., and lead to car parks for 2,000 cars) and the site of the conference hall, which would be in the entertainment centre-on the plot where the Grand Hotel now stands.

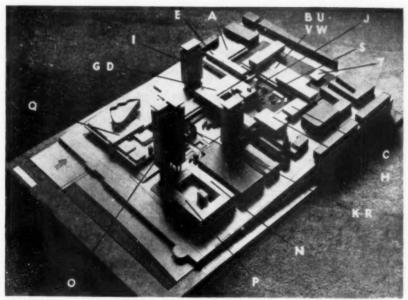
Next move? Probably a public inquiry. Anyway, it looks as if Brighton's decision to call in Hugh Casson has saved the sea-front from being overwhelmed by unsuitable buildings.

TROWELS AND TEE-SQUARES

Apart from some penetrating comment in its general introduction, Industry and Careers* is not exactly bedside reading even for parents or schoolmasters, but it interests me to find that at least architecture has a place in it. Unfortunately, however, there is little in the half-dozen pages on architecture (including building) to indicate its increasing dependence on the manufacturing industries at large and the architect's ever-growing concern with them. There is no reference to prefabrication, and the chapter on



See "Just like Daddy Makes



Brighton's revised development scheme (see "No Brighton Affront") ABCEUVW. new areas of shops and offices surrounding broad patio fronting Western Road; D.G. central block of shops and offices; H department store; I shops and restaurant; KR pub and café; N " five-star " hotel; S10 flats; P shops; Q entertainment centre; T tourist hureau

building-with its emphasis on bricks and mortar-could have been written 40 years ago. The book claims (with justification in many subjects) to analyse not only the location, organisation and managerial structure of each industry dealt with, but also the techniques and plant it uses, its personnel and their work and skills. To see architects thus, in the same context as electronics and telecommunications. for example, is to realise that they are still admitted to the popular notions of industry more by grace than conviction.

JUST LIKE DADDY MAKES

Arkitex. Triang's new construction kit, complete with curtain walling, is a

great advance on the usual dolls' house block affair. But how useful it would be to architects, students and clients if it was not merely a toy, but a scale model of CLASP components. A model of bits and pieces like this could take the place of the bill of quantities-at any rate for the shell of the building. Just hand the model over the builders' estimator, tell him to take it to bits and then reckon up how much it would cost to put it together again full-size. Each model component could have a punched card symbol for rapid counting and there would then be great potential virtues for the simple scheduling of finishes and so on. Why

don't the Notts and bolts boys get together with Messrs. Triang?

CENTRE DE TOURISM

If you are idling about in the Strand this month, it is worth popping into the entrance hall of Charing Cross Underground to have a look at the exhibition of HMSO guide-books there on show under the title "Visitors' Britain."

No Government department has smartened itself more successfully in the past few years than HMSO, and its guides, which cover national monuments, national parks, castles, cathedrals, historic houses, should stimulate a lot of visiting, not only by the foreign tourists at whom the show is principally aimed, but by old inhabitants as well.

STOP AND GO

Our present housing policy seems rather like a poor old car, which can't stop at the red light and can't start again when it turns green. Earlier this year we have the Housing Bill, which it is claimed will get the houses built where they are most needed. No sooner is it through than comes the economic crisis, and the Minister of Housing announces that he intends to slow down the starting dates of new housing projects.

New projects are starting every week and for months to come they will inevitably go on starting, having been ok-ed by the Minister before the economic crisis. Then he will start stopping new projects, the current lot will start stopping themselves, the building industry will announce that it's in the doldrums and with a great bustle the Minister will have to stop stopping things and start starting them.

Meanwhile, before he had even announced his intention, the National Council of Building Material Producers reported a decline in house building (completions of local authority housing till the end of May were 4,800 units down on last year), and BMP admitted to "an uncomfortable feeling that just when the Chancellor of the Exchequer is likely to impose measures which are intended . . . to reduce the level of building activity, the latter may be beginning to level off and even to fall away . . . of its own accord."

Stop-and-go seems a pitiful alternative to an economic policy.

ASTRAGAL

LETTERS

C. R. Whittaker, ARIBA, AADipl.

A. Ray-Jones, BA, ARIBA

P. B. Wright, ARIBA

Christopher Pratt, ARIBA

A Nuffield for Euston?

SIR: You suggest that we should look to our leading property speculators for the £190,000 to save Euston Arch. Why should we accept that the Government has not got the money, when we know perfectly well that it has—and most of it being spent for purposes which will be regarded by posterity as far more criminal than the destruction of one monument?

The property developers, in making their millions, are at least providing work for architects. Selwyn Lloyd, Macmillan, Eccles et al (not you, Al!) by their cuts and squeezes are taking it away. Couldn't the Conservatives—just once—save something of our way of life at home? If it were the Brandenburg Gate, they would be ready enough to make a gesture.

If your invitation goes unchallenged we shall soon be back in feudal days, looking to the landowners for all our amenities.

I have no doubt that, if it were not for private land ownership, a perfectly satisfactory scheme for Euston Station and Euston Arch and the Grand Hall could be evolved, by the rational use of the surrounding land, which now costs the thousands we have to save by demolishing another bit of London.

C R WHITTAKER

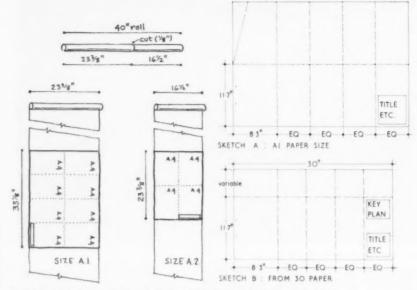
London, N6

Size of drawings

SIR: I must disown the misleading diagrams which you added below my letter about drawing sizes (AJ, 2.8.61), although my only quarrel with the first sketch is that the way to fold a drawing which is exactly eight times A4 down to A4 is to fold it into eight, not ten!

The drawing size shown in the second sketch can, like any other size, be folded (with difficulty) down to A4, but it has none of the merits of the A series. These merits were listed by Mr. Crowther in a recent letter (AJ July 19) and I was only concerned to show that A size drawings can be cut without waste from a 40 in. roll and are thus related to existing roll sizes, like Mr. Alexander's drawings.

The advantages of using drawing sizes which are multiples of stationery sizes suggest, however, that A4 will be a better "basic module" for drawings than Mr. Alexander's "basic module" of 15 in. × 9 in.



Paper-folding, diagram I by A. Ray-Jones; diagram II by P. B. Wright

It is, of course, high time that some enterprising drawing office supply firm produced some continental length rolls.

A. RAY-JONES

Derby

THE EDITORS REPLY: By a regrettable chance we received two letters giving proposals for folding paper into A-sizes, one accompanied by a diagram, and Mr. Ray-Jones' previous letter got published accompanied by a diagram from P. B. Wright. We now publish Mr. Wright's letter, with reprint of his diagram, and, above, the diagram now sent us by Mr. Ray-Jones with apologies all round.

SIR: In an attempt to encourage others to give further consideration to standardisation in office drawings I feel I must state my agreement with Mr. Crowther's comments on the Practice series (At 19.7.61)

Some time ago, when the use of A-size papers seemed well worth adopting, I devised a sheet layout of AI paper that would permit folding, as in the BS booklet on office procedure, so that it could readily be filed with other A4 papers (as sketch A). Such a sheet was highly suitable for preprinted negatives and pre-cut dye-line papers in use in the office at the time.

Later, when in a small private office, I devised a method of using 30 in. wide tracing and printing paper economically, capable of being folded to A4 for filing or posting (as sketch B). The sheet was variable in height, which might well suit other small practices, and on the first WD negative, the facing title also carried the 1/2,500 scale key plan (as required for planning applications) for further identification.

With regard to the article (AJ 5.7.61) surely in finding that small drawings were detested, anything, other than one size drawing for a job, would seem a bad compromise. I would rather a half-empty sheet in place than a full small one misplaced.

I suspect that the author might well have developed his drawing sizes so that they could be folded to A4, if nothing else, had he appreciated, at the time, the advantages of this size for letters, literature, folders, and files, etc.

P. B. WRIGHT

Oxford

Drawing board view

sir: So far your correspondents on the subject of drawing paper sizes have expressed great concern for such considerations as ease of filing, site handling, existing paper sizes, photographic reductions and printing costs, with no mention of the poor guy working on the drawing board.

After a comparatively short period of clambering on coffins and lying flat on my chest I have decided that most drawing sizes are too large and all of them too high. I suggest that many drawings could make more use of the horizontal than the vertical, resulting in greater comfort for the draughtsman, and at present I am experimenting with a size 16·6 in. high by 35·1 in. wide, which will fold into the A4 size.

CHRISTOPHER PRATT

Ingatestone, Essex

DIABY

4,000 Years of Mexican Architecture: exhibition at the Building Centre, Store Street, wc1, opening by the Mexican Ambassador today

AUGUST 16 to SEPTEMBER 9

Visitors' Britain: Exhibition of HMSO guide books, Charing Cross Underground entrance

Open now

Railway and Canal Buildings: residential course, York Institute.

AUGUST 19 to 26

Cotton, Clore and Cambridge



Aerial view of the centre of Cambridge, from the Backs: L marks the Lion Yard area in the centre of the town, S the shopping centre it is proposed to develop beyond Parker's Piece (right) and Christ's pieces (centre)

Rude things have been said of Mr. Jack Cotton and Mr. Charles Clore, but nobody would call them small fry. When they do a little deal, we may be sure that a big purpose lies behind it. What, then, are we to make of the recent purchase by their development organisation. City Centre Properties, of the Lion Hotel in Petty Cury, Cambridge?

By Cotton-Clore standards this was a very petty deal indeed. The Lion Hotel site forms only a minor part of the Lion Yard area, which has been earmarked for comprehensive redevelopment as an extension of the city centre since 1954, when the Minister of Housing and Local Government declared himself satisfied (in principle) that it needed such treatment. A major part of this area already belongs to the Cambridge Corporation, while most of the rest is in the ownership of colleges and established retailers. And in the light of recent history, City Centre Properties can hardly hope to make much profit on the outlay required to buy them out.

When the Corporation and the County Council (as planning authority) jointly invited leading property concerns to submit scheme-and-ground-rent bids for the redevelopment of the Lion Yard area as a whole, Mr. Cotton's was one of the rejected offers. The scheme prepared by his successful rival-the "Edger Scheme" was in turn rejected by the Minister, primarily on the ground that it would crowd too much shop and office development on the site. In a subsequent "clarification" of this decision it was explained that "the only points of disagreement were the intensity of commercial development which the proposals envisaged and the programming of the redevelopment in one continuous operation." A revised scheme, the Minister suggested, should seek to develop the shopping area at a lower density, "if necessary in gradual stages and in conjunction with redevelopment elsewhere, for the primary purpose of relocating existing shops in the central area rather than of attracting further

In short, the Minister is convinced of the need for a comprehensive redevelopment of the Lion Yard area, but will allow it only for the reception of overspill from the piecemeal redevelopment of the existing commercial centre. Its pace must be geared this piecemeal redevelopment-even though, as the Minister admitted in his decision letter, such a restriction may well prevent it from being "an assured success as a business proposition." What, then, can there be in it for Messrs. Cotton and Clore? Nothing, obviously. The larger objective behind the purchase of the Lion Hotel must be sought elsewhere than in the still problematical future of the Lion Yard comprehensive development area. As landlords of the Lion, City Centre Properties have acquired a local standing in Cambridge. Beyond that, this picayue transaction may well be designed only to divert attention from the frying of much bigger fish. For if my information is correct (and it comes from a knowledgable source) what the Cotton-Clore interests have in mind is an undertaking ten times the size of the Lion Yard scheme. Through the good offices, as honest broker, of Mr. Cotton's erstwhile antagonist in Piccadilly Circus, the Civic Trust, they are said to have been induced to finance the realisation of Cambridge University's fondest dream-the building of a complete new regional shopping centre, beyond the ring of colleges and open spaces that encircles the historic heart of Cambridge.

The site proposed is the 65 acres bounded by Newmarket Road, East Road, Park Side and Emmanuel Road. In the approved development plan this area is largely zoned for high-density housing; but it already contains, in the Fitzroy Street-Burleigh Street sector, a secondary shopping centre with a supermarket, a co-op, and other departmental, furniture and hardware stores, which serves the everyday needs of most East Cambridge shoppers. The county planning authority is actively encouraging the expansion of this centre by allocating to it more shopping and car-parking space and by improving road access and traffic circulation. But that, of course, is quite a different matter from what the University has in view, which amounts to transposing the functions of the existing primary and secondary shopping centres. Under this scheme the shops that draw customers from all over Cambridgeshire and beyond would all be resited in the Fitzroy Street area, while the shops remaining in the traditional centre of the city would cater only for the everyday needs of local townspeople-including members of the University.

Hitherto the University's proposal has been generally regarded as a mere academic talking-point, devised to reconcile its proponents' own demands for more central sites with the undeniable needs of Cambridge as a regional capital. It must now be taken more seriously, and its implications more closely studied. There is not the slightest prospect, however, that it will find favour with the County Council, which will remain the planning authority for the city area if Parliament accepts the Local Government Commission's recently revised recommendations.

The main objections to such a functional turnabout, in the County Council's view, are: (a) that it will not happen, and cannot be made to happen; (b) that there is no need for it: and (c) that it would ruin the traditional character of Cambridge.

On point (a) the County Council accepts the judgment of Sir William Holford and Professor Myles Wright, whose advisory report, "Cambridge Planning Proposals," formed the basis of its statutory development plan. "Nothing in planning has less hope of success," they said, "than the attempt to remove a well-established shopping centre before the traders concerned have decided that it is in their interests to move." As yet there has been no sign in Cambridge of the shift in site values that would immediately reflect any such tendency on the part of the traders in the central area. But a firm decision by Messrs. Cotton and Clore to put their money on the University's scheme would certainly induce a reappraisal of its feasibility.

As to points (b) and (c), there can be no doubt that if the development of Cambridge as a regional capital calls for a much larger shopping and commercial centre, the existing constricted centre will have to be abandoned; and that if the centre has to be relocated, the site proposed is the right one. The planning authority, however, maintains that provided prompt action is taken on its revised highway and parking proposals (which would go a long way towards converting the historic centre into a pedestrian precinct) a fully developed Lion Yard area will afford all the additional space that is required

The contrary view, the planning authority argues, is based on a misconception. In these days a regional capital does not need a large central area provided it is not also an industrial town. The modern development of regional centres is essentially a process of fundamental specialisation rather than of physical growth. As standards of living and mobility rise, it pays the shopkeepers of the most accessible centre in each region to concentrate increasingly on meeting the whole region's demand for a wider selection of the more expensive and less frequently purchased goods, like cameras, pianos and fishing tackle. But in the same circumstances it pays those shops (including multiple stores) which sell standardised hardware and mass-appeal drapery to move out, with the supermarkets, to secondary, suburban and small-town centres: they no longer need a region-wide market, and therefore no longer need a highlyrated central location. Thus the historic centre of Cambridge, for example, might fully meet the specialised shopping requirements of a growing regional community from a smaller number of larger and betterserviced shops, calling for no great increase in total site area. (In actual fact, the number of regional customers to be served may tend to shrink as not-far-distant towns like Peterborough, Bedford and Haverhill themselves develop into regional centres.)

The validity of this argument depends entirely on the continued success of the planning authority in holding back the expansion of Cambridge itself by a strict control over its industrial development, and on the vigorous prosecution of its newly formulated policy of establishing major local shopping centres with adequate parking space. Under these conditions, the intimate mingling of academic, civic and commercial uses that gives the historic heart of Cambridge its traditional character can and should be preserved. The assumption implicitly made by those who regard the removal of the regional centre as eventually inescapable is that the growth of Cambridge itself cannot or will not be kept in check.

It would not be surprising if this view were gaining ground in the Ministry: in the light of the preliminary census report its temptations are plain and powerful. A new regional shopping centre in Cambridge, financed by private funds, on a site capable of indefinite extension, must be a mouthwatering prospect for those whose task it is to find room for a million more households in South-East England over the next 20 years without subtopianising what is left of its countryside. For the Cambridgeshire County Council, so far triumphant in its efforts to stop Cambridge from going the way of Oxford, the hardest battles lie ahead. DEREK SENIOR

NEWS

PEP

The cost of roads

A recent PEP pamphlet, The Cost of Roads (3s. 6d.), has the distinction of questioning a number of assumptions about expenditure on roads that were in danger of becoming dogma.

It raises the questions, does the cost of traffic congestion justify the expenditure needed to relieve it? Should expenditure on roads be related to the revenue from taxes on motorists? How far and under what circumstances is it proper to use restrictive measures to reduce congestion? And can the price mechanism be a satisfactory alternative, or supplement to these? After giving the figures of traffic increases and expenditure on roads-of which trunk roads and motorways will take 75 per cent-PEP comments that it is not easy to decide whether proposed spending will be too much or too little, but "one criterion which can be applied . . . is to try to measure the economic benefits accruing each year to individual users as a result of new road construction and improvements. These benefits can be related to the capital cost of the works and expressed as an annual rate of return.

A difficulty in assessing future traffic is obviously Government policy, which can strongly influence it, and PEP points out, for instance, "if greater use were made of public transport there would be less 'need' for expenditure on roads. The freight-carrying capacity of the railways is underutilised, and the public bus services could carry more passengers even at peak periods without using more vehicles if there were less congestion on the roads."

A factor in the growth of private cars may have been past failure to improve public transport, and PEP comments: "the increasing number of vehicles . . . should not be taken entirely as an inevitable trend to which road policy must be adapted. It presents a problem that can be influenced not only by measures which increase the capacity of the roads, but also by measures which reduce the demands of motor vehicles on existing road space."

The pamphlet goes on to discuss on what grounds so much of the MOT's expenditure on roads has gone to rural motorways: the Minister has claimed that new schemes are selected which will benefit industrial traffic most. PEP considers the motorways as generating increased traffic, which in turn increases congestion of urban roads, and that if the needs of industry were truly the criterion urban improvements might well have priority. It concludes: "The need for co-ordination of plans for road and rail investment . . . becomes increasingly urgent. Plans for investment in both sectors should be reviewed jointly with the constant object of promoting the best use of available transport resources."

EDUCATION

Changed status for CATs

Sir David Eccles has written to local education authorities to suggest that the Colleges of Advanced Technology at present maintained by them should be transferred to independent governing bodies, and receive direct grant from the MOE.

One of the advantages of the change would be that staff of the CATS would no longer come under the Burnham scales, and it would be possible to pay higher salaries related to university scales.

MOT

Landscape architect

The Ministry of Transport has created the post of landscape architect, because of the increased landscaping work of the Ministry in connection with the accelerated road programme, and has appointed M. R. Porter, former senior landscape architect at Basildon New Town, to the job.

DESIGN CENTRE

Exchange with Sweden

For the first time ever foreign designs will be on show at the Design Centre this autumn for the exchange exhibition between Britain and Sweden arranged by COID and Svensk Form, Stockholm.

About 40 prize-winning Swedish products are expected for the display in London opening on October 5. On October 18 at the Svensk Form Exhibition in Stockholm the Design Centre Exhibition will open, showing all the 1961 award-winning products.

Displays of British goods are planned for retail stores in Stockholm to tie up with the Svensk Form display.

It is hoped that exchange exhibitions with other countries will follow.

CIB

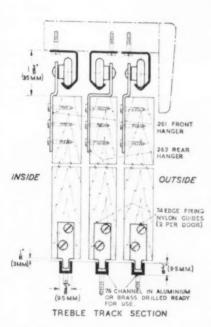
Second congress

The second congress of the International Council for Building Research, Studies and Documentation, organised jointly by the CIB General Secretariat and the BRS, will be held in Cambridge from September 6 to 11, 1962. Its one main theme is "the influence of changing requirements and developments in materials and components on design and construction."

One session will be devoted to the problems of transmitting information on new developments and particularly the needs of the multitude of small builders, on which Authors from The Netherlands, Finland, India, the UK and the USSR have been invited to prepare papers.

Provisional registration for congress may be made by writing to the CIB General Secretariat, Po Box 299, Rotterdam.

echnical section



Hill Aldam sliding door fitting

This week Brian Grant describes sliding door fixes, partitioning, paint samples, call systems, a masonry plug, hard setting putty, small hinges, and a handbook on vermiculite

Sliding door fixes

Hill Aldam have just introduced a new Twin 60 two-track top-hung system for cupboard and other doors up to 60 lb. in weight. Nylon wheels and hangers are fixed to the tops of the doors, and run in veesection tracks. Bottom guides can be arranged in various ways, either with a channel section sunk in the floor of the cupboard and a tongue in the foot of the door, or with the foot of the door slotted and an upstanding tongue in the floor. The gear can be used for single, double and treble run installations with almost any

thickness of door as long as the sliding arrangement is a straight run. Finger pulls and door stops are available in various types. (E. Hill Aldam Ltd., Britannic Works, Red Lion Road, Tolworth, Surbiton, Surrey.)

Office partitioning

Mallinsons took over Medino partitioning some months ago from Saro Products of Cowes and have now built up stocks of material and also appointed a number of specialist firms who can carry out erection jobs in all parts of the country. The system is based on a framing of standard extruded aluminium sections and panels having a core of compressed cork faced with hardboard on both sides and finished in colour with a hardwearing plastic surface. Standard panel sizes are up to 12 ft. by 4 ft. and doors or glazing can be arranged where required. The system is suitable for many jobs other than offices, notably hospitals, and for cubicles of all sorts, in swimming baths and elsewhere. (William Mallinson & Sons Ltd., 130-150, Hackney Road, London, E2.)

Paint samples

Berger Paints believe the size of the paint samples on the average colour card is too small to be of much use, and they have therefore produced a large wallet with





Mallinson office partitioning

A WELCOME HOME...





The 'Rancher' House featured in the magazine, "House Beautiful" with an upward opening Austin Garage door. Property of Mr. A. F. Curtis, Reading.

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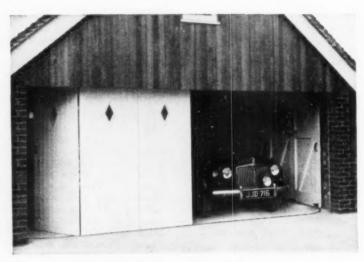
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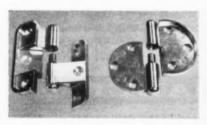
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cards measuring 8 × 5 in., which should be large enough for almost anyone. Each card is perforated so it can be divided into four if clients want to walk off with samples, and each wallet has a stamped postcard for use when replacement cards are needed. A simple but sensible scheme. (Lewis Berger (Great Britain) Ltd., Freshwater Road, Dagenham, Essex.)

Internal telephones and call systems

There are now several systems for locating staff, particularly in hospitals and factories, which make use of a miniature radio receiver picking up signals from a loop aerial running round the perimeter of the building. In nearly all of them the individual's receiver emits a buzz or flashes a light, but there is now an alternative system in which a message can be received. The receiver is inevitably larger than the simpler pen-size jobs which merely buzz, but as can be seen from the illustration, it is about average transistor size. It is not yet possible to carry on a two-way conversation without fairly bulky apparatus, but is certainly an advantage to be able to pass on a message, for the recipient can make up his mind whether there is any urgency about it or not. The standard equipment allows for messages to be sent to any one of 210 receivers, and the receivers themselves are recharged overnight, so there is no need for battery replacements.

The same firm also produces the conven-



tional automatic internal telephone system with instruments in a range of colours. There is also a tycoon's version where the secretary answers and keeps you at bay until the master has decided whether he is in or not. A useful form of shelter, no doubt, when dealing with outside calls, but not yet standardised with internal systems. Maybe some firms will be run more efficiently when secretaries decide what is to be done without worrying their bosses. (Modern Telephones (Great Britain) Ltd., Olding's Corner, Hatfield, Herts.)

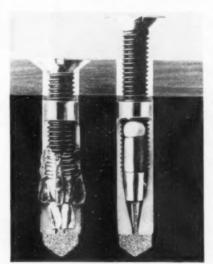
Fixing to masonry

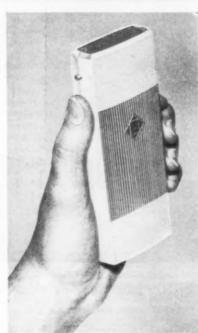
The Obo K-plug is a Swiss design and consists of a cylindrical brass shell inside which is a brass cone and a lead core. The plug is placed in the bored hole, and when the screw is driven in, the cone at the bottom of the plug pushes out the wings of the brass shell and the lead core also squeezes between the expanded wings so that they are firmly locked and the shell cannot thereafter be withdrawn. The screw threads themselves are also partly covered by the squeezed lead, and help to prevent any loosening through

vibration. Several types of screw head are available, including a hook bolt, an eye bolt and a double eyed wall plate bolt, as well as the usual countersunk and hexagon heads. The γ_6^6 in. bolt will hold up to 3.000 lb. according to the wall material. (Douglas Kane Ltd., 243 Upper Street, London, N1.)

Hard setting putty

Talurit plastic putty is not intended for window glazing but for general repair work as it is a good electrical insulator and also sets very hard, so that it can be drilled and tapped. The putty consists of a resin and a hardener which are mixed in equal proportions, the result being quite workable and sticking to almost anything. The material cures naturally at room temperature and develops quite considerable strength, as well as having good resistance to oil and water. The illustration shows the putty applied to the joint of a house service cable to give protection and waterproofing: other uses include the repair of porcelain insu-





lators, terminal blocks and suchlike, or leaks in tanks and piping. (Cable Covers Ltd., St. Stephen's House, Westminster, London, SWI.)

Door and casement hinges

Industrial Devices Ltd. are marketing a range of hinges for doors and casements. The hinges are self-aligning and self-greasing and are made either in an aluminiumsilicon alloy, or in brass, the latter with a nickel or chromium finish. The wing of the hinge fitted to the door post or sash needs a recess, the other wing being screwed straight to the door or window; doors or windows can be lifted out vertically, leaving one half of the hinge still fixed. The hinges are made in various sizes to take doors up to 600 lb. or casements up to 550 lb., at prices from about 5s. 6d. to 20s. according to material and finish. (Industrial Devices Ltd., 171, Wool Exchange, Basinghall Street, London, EC2.)

Information about vermiculite

Mandoval Ltd., who are suppliers of vermiculite ore mined in North Eastern Transvaal, have just issued a quite informative handbook on vermiculite and its uses for both insulation and fire protection, whether in the form of lightweight concrete or plaster. The publication, which is to A4 size, is devoted mainly to the building industry, but a page or two deal with other uses such as packaging and horticulture. (Mandoval Ltd., Barrington House, 59, Gresham Street, London, EC2.)

Far left, hinges made by Industrial Devices Left, Obo K-plug Below left, message receiver by Modern Telephones Below, cable joint before and after application of Talurit plastic putty



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The Modern Teaching Hospital

Symposium at Dundee

This symposium was organised by St. Andrew's University with the co-operation of the Scottish Eastern Region Hospital Board to enable a small group of well-informed people to study and discuss the content and design of the modern teaching hospital. An exhibition was mounted illustrating three schemes in the United States and three in the United Kingdom, viz.:

Stanford Medical Center, Stanford, USA. University of Washington Medical Center, Seattle, USA.

National Institute of Health, Bethesda, USA.
St. Thomas's Hospital, London, England.
The Welsh Medical Teaching Centre, Cardiff. Wales.

Ninewells Teaching Hospital, Dundee, Scotland.

The third American scheme, the National Institute of Health, is not in fact a teaching hospital but is a specialised research centre with extensive laboratory facilities for clinical research. The main interest in comparing the other five schemes was in finding out to what extent site restriction was the main determinant in the architectural approach and to what extent the solution was based on a positive idea of how a teaching hospital should work, or, in other (American) words, "on the basic philosophy" behind the scheme. Perhaps the greatest point of interest in the three British schemes is that for the first time a teaching hospital of over 700 beds, viz., Ninewells, Dundee, has been designed as a predominantly three-storey scheme and much of the discussion centred on the horizontal versus vertical solution, the defects of lifts, the problems of distance and expansion, the economics of mechanical services, etc. These discussions can be summarised under five heads:

- (1) The Nature of the Teaching Hospital
- (2) Student Teaching
- (3) Planning Techniques
- (4) Departmental Planning Wards, Theatres, Laboratories
- (5) The Architect's Brief.
- (1) The nature of the teaching hospital
 The functions of clinical teaching and re-

search can be related to the hospital service in different ways, but the discussions related to two types of teaching hospital:

(a) The London-type teaching hospital-with teaching needs as a primary determinant. (b) The integrated teaching hospital-where teaching, research and community service are combined in one hospital serving ali needs, e.g. Ninewells Hospital at Dundee. There was general agreement that in Britain the second type is providing the pattern for the future, but of course there will be local variations in the organisation of the medical school, e.g. the inclusion (as at St. Thomas's) of the pre-clinical as well as clinical teaching. The main argument in favour of the second type, as put forward by Professor McMichael, is that, if the teaching hospital is to gather a sufficiently wide range of patients, it must offer a community service and continuity of care. Many expressed the view that we cannot afford to neglect any clinical problem and that there should be much less distinction between the teaching and non-teaching hospital, between the professorial and non-professorial department: this amounted to a plea not only for more research facilities generally, but also for research facilities to be provided in the nonteaching hospitals.

There was considerable discussion of this second function of a teaching hospital, viz., medical research. The contrast between the resources devoted to medical research in the USA and in Great Britain was very evident. The National Institute of Health near Washington serves as an example of the volume and quality of medical research in the USA; it is a highly specialised research institute concerned with specific medical problems requiring extensive patient investigation facilities.

There is now general agreement on the particular relationship of the medical school to the hospital, *i.e.* on the policy of "embedding" the school within the hospital in the interests both of effective clinical teaching and of patient-investigation studies. In the general sense it means the integration of patient care, teaching, patient investigation,

and scientific research within one building; in the particular sense it means the closest possible relationship between the clinical departments and their respective ward units. The problem is, of course, how to interpret this policy in terms of buildings. Embedding is a matter of degree and it is a question of how far it is possible to carry the physical integration of school and hospital without the function of each entity being seriously compromised.

The two American and the three British hospitals all reveal interesting and different approaches to this problem of "embedding," and from the general discussions on this problem there appeared to be wide agreement that

(1) The needs of patient care must come first

(2) Embedding should not mean dispersal of the medical school departments; the clinical and paraclinical* departments must be in close physical association

(3) The research activities must be kept separated from patient care activities

(4) Ready means of expansion should be provided for the laboratory areas.

Considerable emphasis was laid by many speakers on this point of future expansion, which in itself suggests a degree of detachment between wards and laboratories—"semi-embedding" as Professor Hunter called it. The architectural problem is essentially one of circulation and mechanical services, and requires the identification of the "points of contact" between hospital and school.

One aspect of this problem caused some disagreement, viz., whether the patient investigation laboratories of the clinical departments should be grouped as part of the main laboratory complex or be attached directly to each ward unit. Grouping them with the clinical departments within the main laboratory area inevitably detaches them from the ward unit—this problem is one of distance: how far and how easy is

A paraclinical department is one that closely supports the work of the clinical department. At Ninewells these departments are Pathology, Bacteriology, Biochemistry, Biophysics, Pharmacology and Social Medicine.

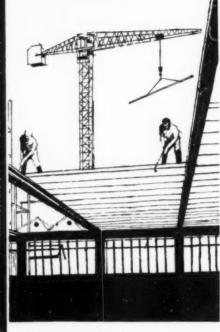
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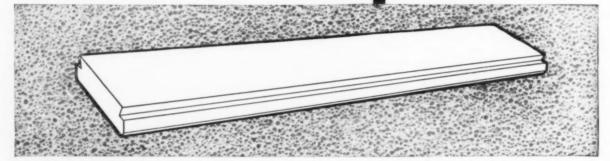
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it for the patient to be brought from the ward to the patient investigation laboratory?

(2) Student teaching

The large body of students presents a number of problems to the architect, not least being the circulation problems. The formal lecture, practical work in the laboratory and the ward, and the tutorial remain three of the corner stones of medical teaching. But the teaching round on the ward is on the way out: there was general agreement that it be replaced by the method of group teaching in a demonstration room on the ward. Cases of special interest which need to be shown to wider numbers of students usually means bringing them to one of the central lecture theatres to the gaze of an invited audience. This may be obviated, however, by the use of closed circuit television.

Much of the discussion centred on how to bring the student into contact with the patient in a way that recognised that the latter is no longer just interesting "clinical material"; in this respect Norman Graham of the Department of Health quoted a question which Professor Querido of Amsterdam posed in his opening address to the International Hospital Federation in Venice last month-" How far has th teaching of medicine been tainted by the fact that its material was selected from the poorer layers exclusively?" Considerable stress was laid on the need for students' facilities on the ward, for studying patients' records, for group discussions with the clinical staff, for simple laboratory work using specimens from patients, and the opportunity to see and hear about the whole clinical problem. The importance of clear policy decisions on clinical teaching methods was referred to by Dr. Sommerville and other speakers; for example, the polyclinic* is of increasing importance in student teaching but there appears to be no general agreement on teaching methods relative to out-patients.

A feature of interest at Ninewells is the provision of an exhibition area for mounting rapidly changing displays. It will be a method of integrating specialist aspects of medicine or medical science into a wider framework, of giving the student "the synoptic view."

One question was repeatedly put-where does the medical student have his base? If he cannot be provided with any living accommodation (which must surely be the real answer) in the hospital grounds, then he needs some kind of study cubicle-some corner to call his own. A place in the main library reading room is not good enough.

(3) Planning techniques

Some of the papers and much of the discussion referred to several environmental and economic factors which are influencing current thinking on layout and design.

(a) Bacteriological control. The bacteriologist is now demanding much more exacting control over the quality, quantity and flow of air, and the location of certain critical spaces and functions in areas of least traffic. The demand in the operating theatre was lucidly described by Professor Douglas, but it is apparent that most hospital design is based on an imperfect understanding of this problem.

(b) Lighting and ventilation. For many kinds of buildings a high degree of environmental control can now be provided only by mechanical assistance. The use of mechanical ventilation and permanent supplementary artificial lighting has advantages not only in terms of predetermined and controllable standards but also in compact layouts, as evidenced in the layout of the Stanford, Seattle and Ninewells designs. The recognition of these advantages is long overdue in Britain and several members, including those from America, expressed considerable surprise and amusement at the heated opposition to this concept of "deep planning" expressed by the radiologists who were present.

(c) Standardisation. Standardisation of size and design lies at the root of economic production and this concerns space in buildings as much as any other commodity. With the increasingly scientific nature of the work in a teaching hospital, the design of space is inseparable from the design of mechanical services. There was widespread agreement on the need for a planning module on which spaces and mechanical services are based; this must suit a variety of accommodation from laboratories and libraries to wards and casualty depart-

(4) Departmental planning

Considerable discussion arose on the design of three major components of the teaching hospital, viz., wards, operating theatres and laboratories.

(A) Wards

All the American hospitals illustrated were planned on the familiar pattern of singleand two-person rooms, with occasional four-person rooms. The ward units of the three British hospitals all differed in size and in the amount of teaching accommodation provided on the ward; but despite many other variations in layout, all have adopted the T-shaped plan. The explanation of this is primarily because the units are to cater for both sexes, one half male, one half female, i.e. the "duplex" arrangement. All three designs are based on a high degree of centralised services, but the layouts reflect little agreement on such matters as the care of the seriously ill patient, the use of the treatment room, the location of the nurses' station, the provision of bathroom accommodation, and the influence of early ambulation. In the post-Nuffield era much basic thinking on ward design has yet to be done. The table below gives a comparison of space per bed and number of beds per 10 ft. run of ward.

The concept of embedding, in the particular sense, has been applied to Cardiff and Ninewells by placing the clinical departments as near to the wards as possible. In the case of Ninewells the concept is essentially a horizon one, i.e. all similar ward units are on the same level (e.g. all surgical wards) and the ward units are on the same level as their respective clinical departments.

(B) Operating theatres

Both Professor Douglas and Mr. Erwin Pütsep referred to the need for much improved means of bacteriological control, with a clear definition of dirty, clean, aseptic and sterile zones in the theatre suite, and more effective mechanical ventilation. They both pointed out three developments in recent years, viz.:

(a) The important role of the anaesthetist in the surgical team.

(b) The increasing use of electronic equipment in modern surgery.

(c) The use of colour television or colour

film for teaching purposes.

In the case of the Ninewells Hospital, these developments can be seen firstly in the provision of both reception and recovery wards in the theatre suite and the embedding in the suite of the department of anaesthetics. Secondly, special laboratories are provided overlooking the theatres in which most of the electronic equipment can be housed, with information from various machines relayed by repeaters on the theatre wall. One further significant feature of the Ninewells design is the abandonment of the twin theatre layout in favour of single theatre units each with its own ancillary accommodation. Such a layout ensures the isolation of one theatre unit from its neighbour and allows the ventilation system to maintain positive pressure in the theatre. From the discussion no new ideas were produced for an effective and economical

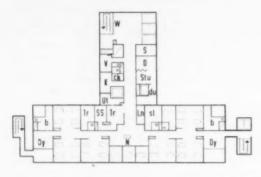
lighting system. (C) Laboratories

The need for the adoption of a standard planning unit for laboratories was emphasised by John Musgrove who explained that. from the Nuffield studies, it has been conclusively shown that, with a standard servicing layout, it is possible to provide an economical framework to meet the demands of a wide range of scientific disciplines. By such means also the time taken to plan and design can be shortened; the programme is simplified to a process of specifying the type of work, numbers of staff and equip-

This approach is only now making an impression and was illustrated by a model of the typical graduate laboratory for Ninewells. It showed the typical planning unit (11 ft. 6 in. frontage, 26 ft. depth) placed either side of a central corridor, with long serviced bench runs at right angles to the

* Polyclinic	is an	out-patier	nt departr	nent w	hich is
equipped wi					
patient facili	ties, co	insultative,	diagnostic	and tre	atment

	No. of beds per ward	Gross area of ward in sq. ft.	Sq. ft. of gross area per bed	No. of beds per 10 ft. run of building	
St. Thomas's	28	7,960	284	1 · 86	
Cardiff	32	11,060	346	1 · 68	
Ninewells	48	15,730	328	2 · 30	



CARDIFF, right: Points about this plan:

the stem of the T

[Scale: 1 " = 1' 0"]

(a) A ward unit of 32 beds, eight of which are in single rooms, with two eight-bed rooms and two four-bed rooms (b) There will be no teaching rounds, a demonstration room being provided in

(c) A nurses' station is provided in the

ST. THOMAS'S, left:

Points about this plan:

(a) A ward unit of 28 beds, four of which are in single rooms, the remainder in four-bed bays

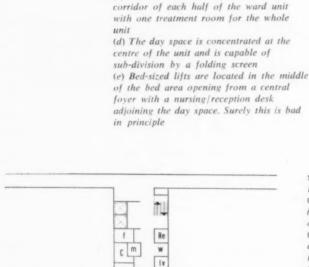
(b) The traditional teaching round of up

to 20 students has been retained

(c) The nurses' station and the two treatment rooms are placed in the centre of the ward

(d) The day space is split into two parts and grouped with the bathrooms at the extreme ends of the ward

(e) The clinical staff all share one room on the ward



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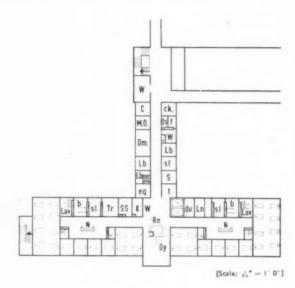
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[Scale: 1," = 1' 0"]



NINEWELLS, left:

Points about this plan:

(a) A ward unit of 48 beds, 12 of which are in single rooms, the remainder in six-bed open bays

(b) There will be no teaching rounds, a demonstration room and a tutorial room being provided at the centre

(c) A nurses' station is provided at the extreme end of each 24-bed ward in the "acute zone," linked to the clean utility room and the treatment room

(d) The day space is concentrated at the centre and is divided into two quiet rooms, one male, one female, with a common social room for dining, TV, conversation, etc.

(e) Relatively compact planning is achieved by means of a central core of utility and bathroom accommodation in each half of the ward unit

I ist of	abbreviations	used	on	word	nlane

- airlock al
- b bathroom
- C consultant
- cloakroom ck
- Dm demonstration
- ds domestic service room
- dirty treatment room de
- du dirty utility
- Dv day space
- equipment room
- examination room

- female lavatories
- H head of unit (professor or clinical chief)
- HO house officer
- interview room Iv
- K kitchen
- Lav lavatories
- Lb Laboratory
- Ln linen store
- male lavatories
- MO medical officer N nurses' station
- Re reception

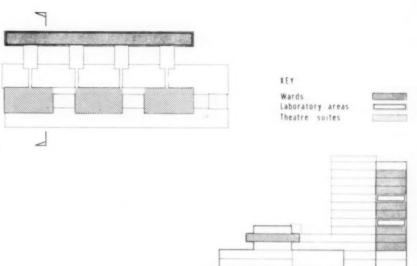
sister

- staff room: rest room
- sluice room
- SR senior registrar
- sterile supply store
- Stu students' room
- trolley park
- Tr treatment
- Tu tutorial
- Ut utility visitors
- waiting area

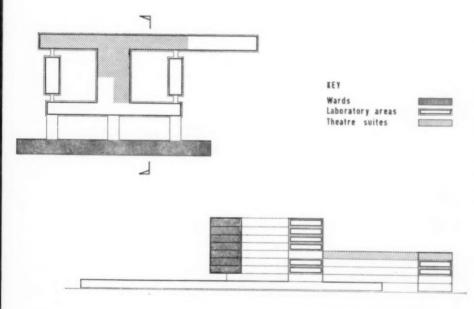
ST. THOMAS'S, right:

The St. Thomas's plan is based on the twin-theatre unit, so that each theatre shares sink and disposal rooms and there are four theatres per suite. The suite is entered from the bottom of the stem of the T-shaped ward unit. Some attempt at zoning has been made in the layout. One corridor serves the primary circulation of all staff and patients. Access to each pair of theatres is by two secondary corridors which are separated by a recovery bay and ancillaries. The sterile preparation room and sink room of each pair of theatres are served by a further corridor which runs along the rear of each unit. This arrangement does not allow complete separation of traffic since all the service and theatre access corridors connect to the main entrance corridor. Each theatre has a viewing gallery on the floor above but there is no allocation of equipment laboratories

NOTES: All sections shown on pp. 231 to 233 are reproduced to twice the scale of the plans. On all plans "laboratory areas" includes all clinical and paraclinical departments



Clinical departments sandwiched in on the fourth and seventh floors of the 10-storey ward block, the whole being on a very small site



CARDIFF (800 beds), left: The block layout of Cardiff shows that the suite is T-shaped with the theatres in the cross of the T with changing rooms and central sterile supply department on either side of the stem of the T Clinical departments accommodated in a separate block to the ward block (both seven storeys). The paraclinical departments are in a separate four-storey block, which also contains the main operating theatre suite. Space for future expansion available

window wall. The economies of this arrangement are not only the small proportion of non-usable space, but the high proportion of usable and serviced space.

(5) The architect's brief

Many speakers referred to the inordinate length of time it takes in Britain to prepare and complete the design drawings for a new hospital. In some cases the brief is never properly completed and additions and amendments continue into the working drawing stage; in one instance the preparation of the plans was described as "a tremendous muddle from the beginning."

Planning team

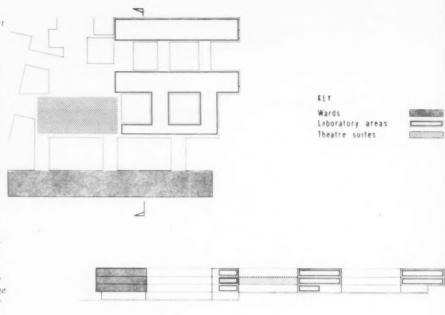
Andrew Hughes of the Department of Health stressed that it was essential to create a small full time planning team with delegated authority who can devote all their energy to the task of defining problems. making theoretical studies, and drafting proposals for the main working committee; he instanced the Ninewells project which had attempted to do this and, by having two representatives of the Department on the working committee, the time for official approval of the architect's proposals had been cut to two or three weeks. There was general agreement that to be really effective the planning team must operate with sufficient authority, considerable imagination and by means of systematic investigation-it was no job for a part-time committee of semiamateurs.

Objective data

Much concern was expressed at the lack of objective data on which to programme and to design; more field studies are needed as to the what, the how and the why of the things

NINEWELLS, right:

The Ninewells Scheme is based on a strict principle of zoning. Reception and recovery wards and the department of anaesthetics are separated from the six theatres by a bank of changing rooms and air-locks so that patients and staff can only enter the "clean" access to theatres through these controls. The theatres are planned in a line and each one is a self-contained unit so that there is no shared accommodation; in addition each unit has been "handed" so that room to room relationships are always the same. A disposal corridor connects the disposal rooms of each theatre at the rear of the row, so that there is no connection between this and the "clean" area of the suite. At the centre of the line of theatres is a theatre sterile supply unit which is connected with the main CSSD on the floor below. This unit will do local sterilising and handle the distribution of all sterile supplies to the suite. It is also intended to provide facilities for the repair and storage of instruments under the care of a curator in this area. On the floor above the suite are equipment laboratories and a viewing gallery overlooking each theatre



STANFORD, left:

(475 beds, expanding to 1.000) Wards and paraclinical departments occupying the wings of a closely knit three-

Storey complex. Future expansion will take the form of additional wings LEY Wards Laboratory areas Theatre suites

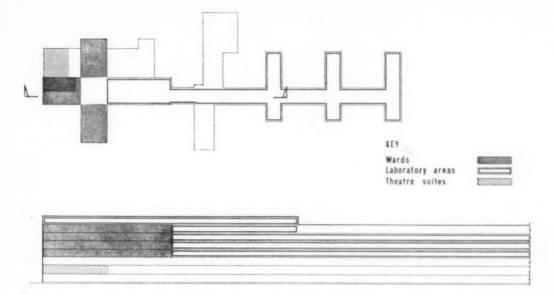
we do before accepted standards are established. We cannot afford to put into a teaching hospital "more than it clearly requires"; but without the means of objective guidance how can we tell what is clearly required (and the "corporate client" has so many points of view)?

Timetable

Some reference was made to the time needed not only to brief and to plan but to build in Britain, as compared with America. Several possible explanations were offered, e.g. the inability to make quick decisions and to make them all before building starts, the changes of mind, and the cumbersome contract procedure which divorces designer and contractor. It was clear that in America time was not wasted in pleasing everyone or trying to. They benefit enormously from a consistent growth of hospital building and research over the past 25 years, years which have been so lean in Britain.

Conclusions

It is impossible to draw a neat list of conclusions from the wide ranging discussions, but certain themes stand out by their frequent repetition, firstly in relation to immediate needs, secondly in relation to



anticipated developments. These are as follows:

Immediate needs

- (1) More adequate resources for experimental work devoted to objective study of functional needs, performance standards, and design techniques.
- (2) A high degree of standardisation in space layout, in mechanical services, in equipment and in constructional compo-
- (3) The greater use of mechanical ventilation and artificial lighting to give more positive control and better standards in the interior environment.
- (4) A building which by planning and design is adaptable, i.e. capable of limited adjustments to changing needs with the lines of growth well defined.
- (5) A clear organisational basis for the design of
- (a) the hospital-"establish the production line flow of supplies and equipment in a predetermined manner" (Gordon Friesen). (b) the medical school-"ensure that the curriculum and teaching methods are determined first" (Professor Lowdon).

Further anticipated user requirements

- (1) Better facilities for individual study by the student on the ward, in laboratory and in the library.
- (2) More facilities available for post-graduate students.
- (3) Expanding scientific work, especially with animals, radio-isotopes and electronic equipment.
- (4) Additional facilities for outpatient work. consultative, diagnostic and treatment, with simple hostel-type accommodation for the short-stay patient.
- (5) Improved methods of making, storing and using all kinds of clinical and scientific
- (6) Higher standards of amenity for the inpatient, the nurse and other staff (food, relaxation, recreation, shopping facilities).

Finally, whilst this symposium, like all such

SEATTLE (300 heds)

Clinical and paraclinical departments accommodated in an eight-storey building (with several wings) and with the ward units in three wings directly attached at one end. Allowance made for future expansion up to 15 storeys high

gatherings, had its defects (e.g. the time lost by some speakers talking in generalities with too little explanation sometimes of ideas and purposes behind thin and ill-defined pro-

posals), it was an unusually successful meet-

ing of minds at an opportune moment.

Its success was due to

(a) A relatively small number of active participants, representative of university, regional board, and central authority.

(b) The direct experience which the members of the symposium from Europe and America were able to bring to the conference

(c) A well-organised programme.

(d) The living and eating together of all members in the College residence, thus ensuring continuous contact for the whole three and a half days of the symposium.

The proceedings of the symposium will be published in due course.

Ninewells Hospital report

Review of Report on Ninewells Hospital, Dundee (copies obtainable shortly from the Secretary, Eastern Regional Hospital Board. Price. 3 guineas)

As the hospital building programme gathers momentum a mass of hitherto unco-ordinated and unrecorded information is beginning to be sifted and presented in an intelligible form. This report on the preliminary sketch plans for a new 700-bed teaching hospital and medical school at Ninewells. Dundee (architects: Robert Matthew and Johnson-Marshall), is a most welcome addition. The information it contains has been carefully selected and beautifully presented by a multi-disciplinary team of specialists. The result is an excellent example of how an architect's report should be compiled. Its approach is perfectly straightforward. There is a minimum of "bull" and a maximum of factual information clearly organised into relevant sections and sub-sections. The text is succinct yet lucid and is admirably reinforced by strikingly simple coloured diagrams. These are used to demonstrate every major point throughout the report and add greatly to its clarity and impact.

The two clients for the project are the Eastern Regional Hospital Board and St. Andrew's University. In the earliest stages they combined to form a joint planning committee served by Hospital and University planning sub-committees and working parties. These, with the aid of a technical committee and the appointed architects, undertook a co-ordinated investigation that has led to the compilation of a most thorough brief. (The layout and construction of this brief is itself masterly and were it to be made available to other hospital planning committees it would provide a valuable model upon which future briefs might be based.) The whole brief was completed in August 1960, and the preliminary sketch plans finalised less than a year laterclear evidence of efficient co-ordination between client and architect.

The report may be divided into two major parts. The first gives a general background to, and analysis of, the problem. The second consists of a detailed description of the scheme. To these are added five very valuable appendices concerning memoranda on (i) laboratory planning by John Musgrove, (ii) Services engineering by Steensen, Varming & Mulcahy-Engineering Consultants, (iii) Building engineering by Ove Arup & Partners, together with preliminary proposals for site landscaping by H. F. Clark, PILA, and an occupancy chart.

In the first part of the report under the section entitled "General Analysis of the Brief," which includes such well-known phrases as, multiplicity of function, control of environment, adaptability etc., appears a relatively new term-"embedding." Restricted to teaching hospitals it is used to signify "the closest possible relationship between the medical school and the hospital." As yet very little information on the particular problem of combining student teaching and research facilities within a functioning hospital is available. It is recognised that the student's direct contact with the patient is an essential part of his training, yet the exact relationship of students to patient, patient to research, and research to student, is sometimes difficult for architects to determine, and its consequences in terms of planning are only just beginning to be explored. The Ninewells experiment, with its demonstration rooms adjacent to each ward, will be a further step in this unexplored field. The use of closed circuit television at a "point between ward and school" will undoubtedly increase in the near future and will certainly bring the patient nearer to the student. It may even reduce the guinea-pig complex at present experienced by so many patients, but since it can never completely supplant studentpatient contact, many of the planning problems will remain for many years to come. "Embedding" is a matter of degree, and this report wisely states just how far the process is to be taken in Dundee, where extensive laboratories and teaching facilities for five hundred students and post-graduates are provided.

The preliminary scheme, which the second part of the report presents, defines outline proposals only. The general pattern of circulation, services, supply routes and external traffic organisation is given together with any relevant details which affect or describe the main features of the plan. With the aid of sections, contour maps, and climate graphs the site is carefully analysed. This is followed by a list of the main planning decisions and a detailed account of each major department. Each sub-section is accompanied by coloured diagrams, line plans and sections. The general grouping of departments is logical, with the main entrance, a transport pool, and "shared" facilities being centrally placed. The link between the radiology department and certain wards is however slightly tenuous and the clinical departments (although on the same level as their corresponding wards) are restricted to one end of the professorial ward units. The supply floor is separated

horizontally but not vertically from inpatient accommodation, whilst pedestrian access is divorced from service vehicles at all levels. The overall pattern of the Ninewells plan despite its many courtyards and open-ended corridors, designed to allow for future growth, is still a little unrelaxed. The detailed plans of some units betray a certain rigidity. For example it would be difficult to introduce a "two-table" technique in the main theatre plan as it now stands, while the wards do not allow for the easy expansion and contraction of nursing units usually called for in a teaching hospital. It must be remembered however that these are only the preliminary plans and much refinement has yet to come. An interesting feature is the basic bed complement of 24. not 30 as the Ministry have recently suggested. It is to be hoped that further experiment in bed numbers will be allowed, for there is no conclusive evidence at present to support one figure over another, particularly in teaching hospitals.

The appendix on laboratory planning is a valuable introduction to the subject and contains much basic information since several of the sections have been compiled from extracts taken from interim papers presented to the planning team at a time when the schedules were in the process of analysis. The second appendix on services engineering is both comprehensive and exceptionally well illustrated. These two appendices together with the building engineering memorandum and the preliminary proposals for site landscaping, complete a

really first class report.



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The building is sited at right angles to the main road

Branch Library

ST. AUSTELL, CORNWALL

designed by F. K. HICKLIN, county architect

H. DOOTSON, assistant county

architect

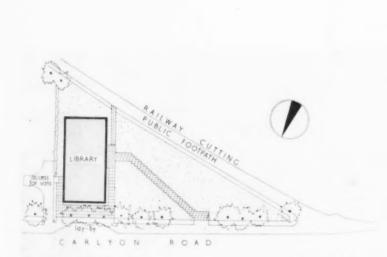
assisted by

C. J. PAGE K. M. G. KIRKBRIDE

quantity surveyor JOHN N. TUCKER

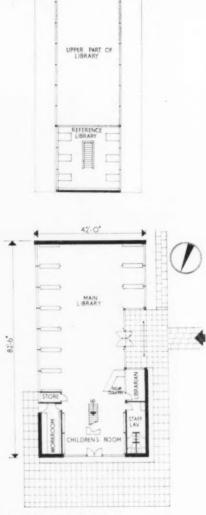
electrical consultants HOARE LEA & PARTNERS

This design illustrates admirably the current trends in the design of small public libraries towards a more flexible layout, with a character which is friendly enough to attract the casual reader



Block plan [Scale: 1" - 80']

Top, upper floor plan $Bottom, ground floor plan \\ [Scale <math>\frac{1}{M}'' = 1' \ 0'']$



APPRAISAL

The building has been sited so that it will eventually become one element of the future Civic Centre for the town of St. Austell, close to the main-line railway station. Although it is at present outside the shopping area, it will eventually be in a key position, well able to attract the casual user. The building has been treated as a single block, sited along the eastern boundary, retaining as much of the site open as possible and providing pleasant contained views westwards out of the main reading area.

The main entrance is on the west side of the library, overlooking the rest of the site, and away from the traffic noise of the main road, from which there are views straight into the lending area, so there is no danger of the library being overlooked because it does not face the main road.

Slight confusion results from a secondary entrance into the children's section directly off the pavement. Such additional access is sometimes considered necessary to cope with the limited peak periods when most children use libraries, normally in the afternoon immediately after school, when a member of the staff may be fully occupied with the issue

and return of their books. An independent issue desk in the children's section, however, even if it is only open when their separate entrance is open, at peak periods, involves some extra work and organisation for the staff, as most of the time there are not enough children to occupy one person fully. At St. Austell, in fact, the separate entrance is not being used, although it was asked for in the brief, and the barred entrance fronting directly onto the pavement of the main road could confuse anyone not familiar with the building. The idea of a children's entrance may be attractive, but its usefulness will depend very much on how the librarians decide to organise their work.

In line with the current trends in lending library design, the interior is treated as one volume. The planning is somewhat similar to the library at Beaconsfield (AJ July 25, 1957), using the same device of having a main double-height volume, with the reference section on the first floor. In this case, however, the general adult-section shelves are sited in bays off the main volume, hung directly off the structure at right-angles to the windows. This arrangement is very successful in its tidiness, and in the way in which the shelves receive preferential daylight, with views out through the

Interior of main lending area



windows, which all come down to floor level. This is a very satisfactory piece of integrated design, which has also largely determined the shape of the building. In order to light the main hall and the reference section, sloping glazing has been used down both sides. This is double-glazed to reduce the heat load, one sheet being non-actinic to prevent overheating in summer. Since all this glazing is fixed, there are four extract fans in the roof.

The children's section is under the reference balcony, so as to produce a smaller-scale environment, with stock and staff rooms on either side. Rising out of this, and near to the issue desk to facilitate control, is a straight flight of stairs to the reference section. This first-floor area is well furnished, with fitted carpeting helping to produce a suitable low noise level. The building has been well detailed to provide a high standard of accommodation in a simple and direct way. It admirably reflects the current aim in library design to provide an amenity which is evident to the passer-by and attractive to the casual user, and at the same time to offer the librarians considerable flexibility in the way in which it is used.

One additional virtue of the internal planning, which the architects set themselves as one of the design aims, is the large central space normally used for reading, which can be readily adapted for other purposes such as exhibitions, lectures and meetings. The building is thus practical evidence of one way in which multiple use can be achieved in local authority building, a matter which often deserves more attention than it at present receives, particularly in small towns and rural areas, usually because of the fragmentation of effort which results from the separate responsibilities of different departments.

CLIENT'S REQUIREMENTS

A public lending library with sections for adults', children's and reference books. The adults' section to have shelving for 10,000 books and an issue desk to act as control point from which all parts of the building can be supervised. The children's section to have shelving for 1,000 books. The reference section also to have shelving for 1,000 books and tables and chairs for readers.

Also needed were a librarian's office close to the issue desk, a work-room with shelving for 1,000 books used by the travelling library van and a staff-room with lavatories for male and female staff. Staff to consist of a librarian and three assistants.

SITE

The area of the site is 0.4 of an acre. It is a narrow triangular plot to the west of Trevarna House which is scheduled for development as the St. Austell Civic Centre. To the south is the deep cutting of the main line railway with a public footpath running along the boundary: to the north is the main road and footpath. The site has a slight fall to the south-west and is surrounded by high privet hedges and shrubs. There is also a line of mature elm trees along the north boundary.

PLANNING

The building is sited close alongside the eastern boundary in order to use the maximum depth of the site. Orientation for sun is east-west to obtain a reasonable amount of direct sunlight and to take advantage of the best aspects-the library's own site and the adjoining site to the east which, when developed, will present a pleasant view of park and buildings. The south end of the building is solid to cut off noise from the railway.

The first consideration concerning the library itself is that the three public spaces are open in character and not divided from each other by visual barriers. Thus the main library space 16 ft. o in. high opens directly to the reference library situated on a gallery to the north and over the children's library. To the north and south of the latter lie the ancillary rooms, one storey high. This one-storey section continues the whole length of the building, forming side aisles which are partly the main entrance recess and partly alcoves (containing bookshelves) to the main hall. The shape of the building arises directly out of these decisions. The main entrance is set back from the west facade to form a covered porch where prams can be parked.

SUMMARY

Ground floor area: 3,000 sq. ft.

Total floor area: 3,500 sq. ft.

Type of contract: Fixed price RIBA with quantities. Tender date: March 1959.

Work began: May 1959. Work finished: June 1960.

Tender price of foundation, superstructure, installation and

finishes including drainage to collecting manhole:

£13,862 os. od.

Tender price of external works and ancillary buildings including drainage beyond collecting manhole: £1,386 os. od.

Total: £15,248 os. od.

COST ANALYSIS

Based on tender. (AJ revised elemental breakdown in use from November 10, 1960.)

	Cost per		
	sq. ft.		
	s d		
minaries and insurances	2 23		

1 5

8 2

2] per cent of remainder of contract.

Contingencies Work below lowest floor finish

11-in. granite load-bearing walls plus 4-in. blockwork making 16-in. wall in strip concrete. Toe beam of concrete under aluminium windows. Concrete pad foundations for steel frame. Strip foundations to partition walls of blockwork.

STRUCTURAL ELEMENTS

5 8

Steel frame and main roof supported on steel portals spanning 24-ft. and at 8-ft. centres, side aisle roofs supported by 4 in. × 13 in. rolled steel joists spanning from portals to 2 in. × 2 in. square tube columns.

Upper floors 7!

12 in. 5 in. rolled steel joists spanning 24 ft. between portal uprights. Hardboard (for carpeting) on 6 in. x I in. boarding on 7 in. x 2 in. timber joists at 16-in. centres: 63 sq. yds, 40s. od. per. sq. yd.

8 31

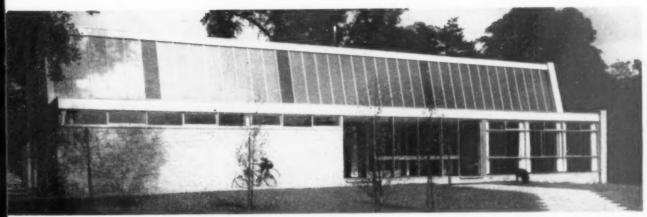
5 in. x 2 in. joists at 2-ft. centres spanning between steel. 11-in. mineral wool insulation, 11-in. lightweight concrete slabs, 3-layer felt roofing finished with Cornish granite chips: 339 sq. yds., 86s. od. per sq. yd.

73 ft. run of 4-in. galvanised steel water tubing fixed vertically internally as rainwater pipe.

Double glazed patent glazing with aluminium bars, one sheet 1-in. cast glass and one sheet 1-in. cast heatabsorbing glass to cut down glare, and thus avoid need for blinds, and to prevent books fading: 145 sq. yds., 90s. od. per sq. yd.

91

One 9 ft. 6 in. high × 3 ft. 6 in. wide. Makoré hardwood strings, treads and risers, solid aluminium balusters, Makoré hardwood handrail. Treads finished with carpet, hardwood cellulosed polished.





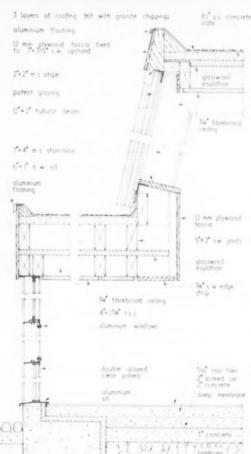


Top, west side of library, seen across the site

Centre, doors provide a secondary entrance to the children's section, these are not currently in use

Bottom, sloping upper-level double glazing, one sheet of which is non-actinic

Right, detail section through wall clerestorey [Scale: 1" - 1' 0"]



External walls

11-in. solid granite roughly squared random rubble free from drill marks and stains, 3 coats liquid waterproofing and 4-in. block inner skin: 118 sq. yds., 133s. od. per sq. yd.

Precast concrete sills and coping.

Timber wall at north end 6 in. x 1 in. lapped natural finish cedar boarding, 6 in. × 2 in. studs, 11-in. mineral wool insulation: 25 sq. yds., 60s. per sq. yd.

Windows and external doors

Patent aluminium sills, mullions, transomes and jambs. Top hung opening fanlights and horizontal sliding windows. All windows double glazed with hermetically sealed units. Ironmongery also supplied complete.

Two pairs double doors, one single, aluminium in aluminium frames with wired glass double glazed units: 1,344 sq. ft., 35s. od. per sq. ft.

4-in. concrete blockwork: 66 sq. yds., 14s. 3d. per sq. yd.

Internal doors

1]-in. Makoré faced flush door hardwood lipped and clear cellulose finish, solid Makoré hardwood linings and architraves: 216 sq. ft., 10s. od. per sq. ft.

Ironmongery

Generally SAA lever handles with mortice locks, SAA steel washered bronze butts, kicking plates, dictator checks, hat and coat hooks.

Total of structural elements: 39s 0d

FINISHES AND FITTINGS

Wall finishes

Gable ends: 2-in, framing fixed to blockwork or studs, 11-in. mineral wool insulation and 1-in. tongued and grooved open rebated Parane pine vertical boarding, 15-in. solid wall finished with 1-in. battens: 80 sq. yds., 50s. od. per sq. yd. 1-in. expanded polystyrene insulation and plywood panelling with open joint. Panelling veneered and polished in the librarian's room, painted in others: 42 sq. yds., 35s. od. per sq. yd.

Internal partitions: one coat sand/cement render: 130 sq. yds., 5s. od. per sq. yd.

Floor finishes

9 in. × 9 in. × 4.5 mm. linoleum tiles on 2-in. screed on 2-in. concrete on three coats of liquid waterproofing material: 400 sq. yds., 44s. od. per sq. yd.

Entrance: 2-in. concrete paving slabs. Gallery: carpet: 64 sq. yds., 120s. od. per sq. yd.

Ceiling finishes

I-in. white finished insulation board, fixed with open joint: 334 sq. yds., 15s. od. per sq. yd. Entrance lobby: 1-in. external quality plywood in 4 ft. by 4 ft. panels and open front: 21 sq. yds., 30s. od. per sq. yd.

Decorations

All steelwork matt black oil paint. Ceilings and walls white emulsion paint. All hardwood treated with clear cellulose polish.

13 7

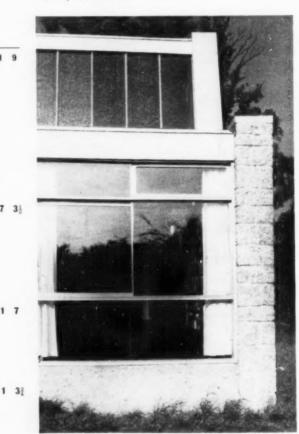
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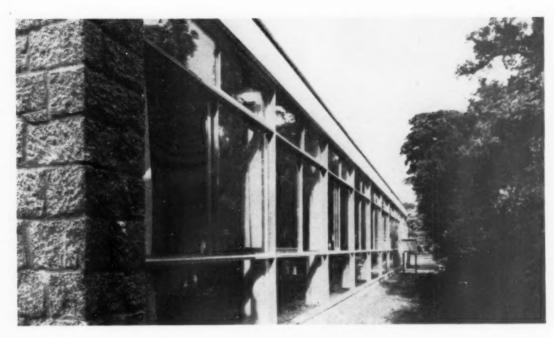
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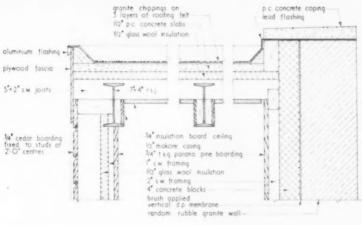


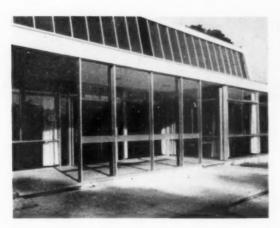
Corner detail of clerestorey windows and fascia

Detail of west elevation









Top, east side of building which is set close to the site boundary

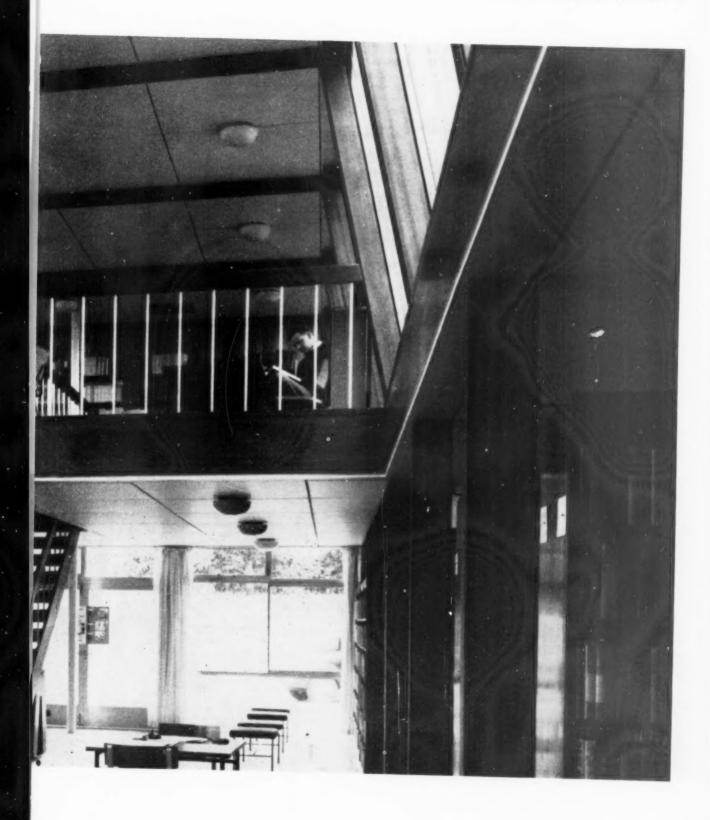
Centre, detail at top of end walls [Scale: [" == 1' 0"]

Bottom, main entrance is protected by being set back from the face of the building, with glazing immediately in front of the doors



Reference section on first floor, directly above children's library





Fittings	
Type	No. of each type
Workroom bench	1
Island bookshelves	8
Trolleys	2
Issue desk	1
Card index cabinet	1
Wall bookshelves and bearers	7
Desk	I
Sink cupboard	I
White curtains with silent track	k

Total of finishes and fittings: 18s 10 d

SERVICES

Sanitary fittings	
Type	No. of each type
Stainless steel sink and drainer 18 in. × 16 in. white glazed	1
fireclay basins	1
White glazed fireclay w.c.s	2

Waste, soil and overflow pipes

Copper painted wastes to socket of 4-in. drain. Two 1½-in. brass S traps.

One 1½-in. brass S trap.

5-ft. run ¼-in. overflow.

5-ft. run 1½-in. wastes.

3-ft. run 1½-in. wastes.

Cold water services

½-in. copper pipe to sink, basins, electric storage water heater and w.c.s. 24-ft. run of ½-in. main in trench 2-ft. deep. including water meter pit. No. of draw-off points: 4. Includes builder's work.

Hot water services

3-gallon electric water heater for sink.
5-gallon electric water heater to serve lavatory basins.
Draw-off points: 3.

Heating services

Includes builder's work.

Electrically heated ground floor cables laid in 2-in. screed.

Gallery heated with 4 night storage heaters.

Heat load: 181,000 B.t.u.s per hour Includes builder's work

Ventilation and electrical services

Two 18-in. electric fans.
Two 12-in. electric fans.
Wiring: p.v.c. insulated cables in conduits.
Three multiple pendant tungsten fittings.
Four surface tungsten fittings under aisles and gallery.
Three flush lights, tungsten in porch.
No. of power points: 5.

Drainage

6 11

51

4 91

4-in. BSS salt glazed stoneware in trench average 1-ft. 6-in. deep and two manholes for drainage. 4-in. seconds glazed stoneware to soakaways for rainwater.

Total of services: 9s 5 d

External works

Concrete slab paving forming lay-by in road.

Pebble and tarmacadam paving.

Cultivation and seeding of site, shrub planting, felling trees, cleaning up Cornish hedges and refacing with granite.

Forming openings in hedges. 50-ft. run drain in public pavement.

1 01

7 11

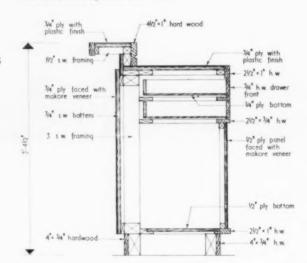
Total cost per sq. ft. of floor area:

£13,862 (net cost, excluding external works)

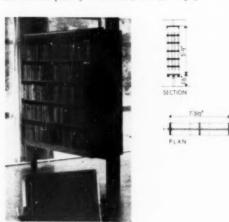
3,500 sq. ft. (measured inside external walls)

79 13

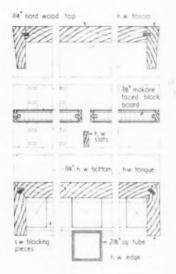
Cross section through issue desk [Scale: 1" - 1' 0"]



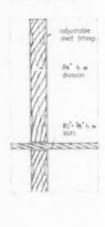
General view of bookstand Section and plan of bookstand [Scale: 1/6" = 1'20"]



Details of bookstand [Scale: 4th full size] Cross section



Plan at division



Central reading area. This can be used also for exhibitions, lectures and public meetings.



COST COMMENT

Tender date

This analysis makes an interesting comparison with earlier examples in the series, built at Beaconsfield (July 25, 1957) and Westcliffe (January 26, 1961), particularly because the client's requirements in each case are very similar.

Group of Elements	Beaconsfield	Westcliffe	St. Austell
-------------------	--------------	------------	-------------

Preliminaries work			
below ground floor			
level	9s. 6d.	6s. 31d.	11s. 10ld.
Structure	33s. 21d.	26s. 4d.	39s. od.
Finishes and fittings	22s. 4\d.	22s. 5d.	18s. 11d.
Services	12s. 9½d.	19s. 1½d.	9s. 51d.

Total net cost per sq. ft. 77s. 10½d. 74s. 11d. 79s. 21d. Floor area in sq. ft. 3,024 4,365 3,500 Oct. 1955

Nov. 1958 Mar. 1959

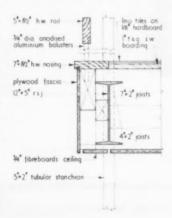
The Westcliffe library has the lowest cost for structure largely because, in comparison with the bigger bulk of the other two, it does not exceed 8 ft. 6 in. in ceiling height except for a small, slightly raised area of roof over the lending area. There are also distinct differences in the costs of windows and external walling, between Beaconsfield, 11s. 91d.; Westcliffe, 9s. 3d., and St. Austell, 18s. 7d. The higher cost at St. Austell is doubtless due to the choice of aluminium windows, plus a considerable use of double glazing. On the other hand the cost of services for the Cornish building is lower than the other two. The difference in this group of elements is largely explained by the fact that Westcliffe has low-pressure hot water heating, which has cost roughly four shillings more than the electrical installations in the other two (although this may well be offset by cheaper running costs).

Perhaps more important is the fact that electrics for the St. Austell library are only 2s. 5d. in comparison with over 6s, for both the others. This probably results almost entirely from the fact that filament bulbs have been used at St. Austell instead of fluorescent lamps both at Westcliffe and Beaconsfield. Bearing in mind the general rise in prices, and that the architects in Cornwall have decided to provide a low-maintenance building by the use of aluminium windows, the resultant total figure, only slightly higher than the other two, is very creditable.

CONTRACTORS

General contractors: Selleck Nicholls & Co. Ltd. Subcontractors and suppliers-Electrical: South Western Electricity Board. Steelwork: Blight & White Ltd. Linoleum tiles: Limmer & Trinidad Lake Asphalt Co. Ltd. Fitted furniture: Woodberry Bros. & Haines Ltd. Loose furniture: Hille of London Ltd. Curtains and carpets: Preston Johns. Metal windows: S. Warner & Son Ltd. Sanitary fittings: Adamsez Ltd. Roofing: Ruberoid Co. Ltd.

Detail at edge of first floor [Scale: 1" = 1' 0"]

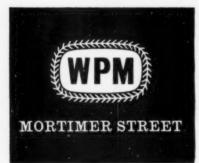


Reference section





Drawing by Walter Hoyle



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architectural education

The Architects' Journal for August 16, 1961 247

editorial

From their inception, these supplements have dealt in the following terms: The first; to introduce the views of the people who came together to found the series (Opinion).

The second; to examine the "raw material" out of which architects are to be made (Calibre of the Sixth Former).

The third; to explore means of processing that material (Teaching and Learning).

From this basis, further avenues are to be explored:-

first year foundation courses

Developing from the paper on the Sixth Former, further contributions are in preparation dealing with the students' first year in a school of architecture. The intention is to publish side by side several accounts of such courses operated by different schools. While these will necessarily be very condensed, it is hoped that some demonstration of the intent behind each course, and the means employed to implement these intentions, will further the critical analysis of current

structures, history, etc.

Specific aspects of architectural education such as the teaching of Structures, History, "Human Engineering," Communication, etc., are being studied by individuals and groups for later presentation. The editors would welcome offers of material on these lines.

Following the abbreviated expressions of opinion in the first issue, from which at least two trends can be discerned, more detailed submissions are being prepared by original contributors representative of these differing points of view. The article in this issue, "The Two Trends," serves as an introduction to this series by throwing two of the apparent approaches into sharp

In a monthly publication of this nature, restrictions on the space available impose problems of content and continuity over and above the importance and urgency of the many problems facing teachers of architecture. On one hand, it is important to report on worth-while work already being done in the schools, while on the other hand it is necessary to look ahead and discuss where we are going and how we might get there. A just balance between these two cannot always be achieved in each supplement.

The response to these supplements, apart from that forthcoming from the original panel, has been very poor. Whilst several reasons for this can be given, such as the introduction of the series at the busy end-of-session period in the schools, coupled perhaps with doubts about the good intentions of the panel, it does seem deplorable that more teachers are not apparently interested in taking advantage of what are the first regular facilities for communication between teachers of archi-

A meeting was held between contiental members of the IUA Architectural Education Committee and members of the panel of this supplement. This is reported elsewhere in this issue. There is a good chance of fruitful contacts and interchanges arising out of this meeting.

BASA conference, York

These conferences have been so successful in the past that it is hoped that as many teachers as possible will be able to attend this one, particularly in view of the relevance of the theme to presentday problems.

The theme is "The Basis for Design," and the three main papers are to be given by:

Dr. Dennis Chapman, sociologist, Liverpool University: "People." Henry Swain: "Building for People." Prof. Llewelyn Davies and John

Weeks: " Education for Building." Discussion group leaders will include: Percy Johnson-Marshall

Andrew Derbyshire

Hugh Morris Maurice Goldring

Justin Blanco-White Dr. M. L. J. Abercrombie

Peter Cowan

Subjects for discussion will be:

- The Client '
- "The Client Element in the Schools"
- " Information "
- " Information into Buildings "
- " Research."

Those interested should write to: BASA Secretary, Building Centre, Store Street, London, wc1.

panel meetings

The last panel meeting was attended

E. J. W. Curtis, Northern Polytechnic Anthony Goss, Birmingham Brian Hitchcox, Bournemouth David Maney, Sweden John Simms, Northern Polytechnic

Stuart Sutcliffe, Cheltenham. The next panel meeting will be at 6 p.m.,

Friday, August 25, 1961, North Committee Room, RIBA.

teaching and learning

We have been asked to make the connection between Ian Michael's paper, published in the last supplement, and the teaching of architects.

Perhaps the most effective way of doing this is to point out some of the differences between higher education in general, and the specific problems which attach to architecture.

First of all, the newly admitted student of architecture will have had no connection with teachers who have themselves undergone an architectural training. While in physics, chemistry or history, the sixth form student will have been taught by someone who has had a university education in these subjects and who will be able to impart something of the type of educational process to expect, it is most unlikely that an architectural student will have been taught at school by anyone with the least idea of what a course in architecture implies. This means that the student, in addition to making the usual adjustments in the transition from school to further education, will also have to reorientate himself towards a very ill-defined professional goal. Dr. M. J. Abercrombie has explored this situation more fully, with particular application to medical students.*

Another difference between the education of an architect and that of other students occurs in studio teaching which still forms the bulk of our course. The student architect has a place in the studio which he may regard as his own for the whole year. This is an extremely promising aspect, but it is one that we do not exploit nearly enough at present. Other disciplines do not have this advantage. There is no special bench for the science student, and no special place in the lecture theatre. Certain medical schools in America are seeking to establish such an arrangement for their pre-clinical students by providing them with a particular laboratory space: it will be interesting to see the results of this experiment.

The encounter between student and

teacher in the studio is the most potent element in our teaching, and we feel that much of the failure of architectural education is due to a lack of appreciation of the possibilities which arise from this.

Broadly speaking, there are three basic forms of education. *First*, scholastic instruction, where education is limited to the transmission of the traditional body of knowledge.

Second, apprenticeship, in which the importance lies in the unique personality of the master, and the subordination of the pupil to his will.

Third, Socratic education, in which teacher and student stand on the same level.

University education, by its nature, leans towards the Socratic method, although it is by far the hardest discipline for teacher and pupil.

However, in architecture the educational tradition has of late become that of apprenticeship (even to the extent of secondhand apprenticeship, based on the reading of a revered master's works, and a stylistic copying—surely as base a system as that of the Medieval Schoolmen in copying Aristotle and Galen). Such apprenticeship is surely only worthy where the master is a man of genius, and even then it can be limiting, since the student is at best a lesser reproduction in the master's image.

In the studio, either in group or individual work, we should seek by discussion, and, in particular, by listening, to develop the student's own personality.

Another powerful situation, unique to architecture, is the jury or criticism. Unfortunately, while potentially corresponding to the Seminar situation described by Mr. Michael, these are rarely handled properly. A limit to the size of the group involved, as suggested by the findings of studios in group dynamics, might be a first step towards improving this aspect.

Do we place too much emphasis on doing and not enough on thinking? Do we spend too little time in formal discussion and essay writing, and too much on "design"? How far is the Bauhaus tradition of craft-orientated training for designers valid for our present society?

These and other questions arise in any consideration of teaching *methods* in architectural education. But the fundamental question—what is architectural education *for*—remains neglected for want of determination on the part of thoughtful people.

"The best lack all conviction, while the worst are full of passionate intensity."—
W. B. Yeats.

PETER COWAN NEWTON WATSON

sixth congress of the IUA

An informal meeting was held at the RIBA on July 4 between delegates of the IUA Architectural Education Committee and members of the AJ Educational Supplement Panel, with representatives of BASA as observers. The purpose of the meeting was to get to know teachers from abroad and to discuss some of the problems in architectural education which are prevalent not only in the United Kingdom, but also in other countries.

Professor R. Gardner-Medwin, the United Kingdom delegate and rapporteur to the IUA Architectural Education Committee, was unfortunately committed to another IUA meeting. In his absence the discussion was opened by Bruce Martin, who was kind enough to act as chairman. The discussions were held in English, French and German.

The meeting commenced with several of the delegates of the IUA Architectural Education Committee outlining the systems of architectural education in

the countries from which they came. The contributions of Charles Edouard Geisendorf (Switzerland) and Professor Edgar Wedepohl (West Berlin) were of considerable interest. Perhaps the most impressive fact arising from Professor Wedepohl's statement was that students are now being trained to work in any of the six Common Market countries and that students from these countries are accordingly accepted in the West German schools. He also mentioned that under the German system there was still a tendency for the student to go to a school to study under a particular teacher rather than for a specific course of training.

Carlos Ramos (Portugal) gave some useful information on the work of the IUA Architectural Education Committee and spoke of two projects which received the support of members of the Panel—the possibility of forming national sections of the IUA Architectural Education Committee and of holding an

international summer-school working conference on architectural education in 1962.

The main part of the discussion was devoted to the problem of being able to exchange information on architectural education internationally and also of making it possible to exchange teachers. Jan Zachwatowicz (Poland) pointed out the dangers of exchanging statistical information alone. This could lead to false interpretations of the value of a course if, for example, value judgments were made only on the basis of an analysis of the hours devoted to a subject.

It was proposed that the question of teaching methods should also be considered. Maurice Goldring thought that as the theme of the Sixth Congress of the IUA was "New Techniques and Materials—their Impact on Architecture," attention should be drawn to how architects can be adequately trained for participation in an industrialised build-

[•] M. J. Abercrombie "The Anatomy of

ing process. Peter Cowan differed from this view, saying that there were more important factors for consideration at the moment, e.g., the need for accurately determining user requirements. Jan Zachwatowicz suggested that the most one could do at present would be to explore the need for a general methodology in teaching architecture.

During the meeting the opportunity was taken of going round the BASA exhibition of the work of British schools which was being held at the RIBA. This helped to demonstrate some of the matters discussed and gave the delegates of the IUA Architectural Education Committee a much clearer idea of the character of architectural education in this country. It also enabled both the visitors and members of the Panel to discuss their individual attitudes and to get to know each other more closely. It is hoped to follow up the main points of the discussion:

- The need for an international exchange of information on architectural education through a central agency.
- The need for an international exchange of teachers on an organised basis.
- The need for establishing a general methodology of teaching in architectural education.
- The value of forming national sections of the IUA Architectural Education Committee.
- The value of arranging an IUA Summer-School Working Conference on Architectural Education in 1962.

MAURICE GOLDRING

the two trends

Two distinct trends are to be observed in current thought on architectural education. There are those who believe in freedom, others who see salvation only through discipline. The one approach is alive, considers the wellbeing of the building user, the building designer—and even the student. The other, heartlessly sterile, stresses coldheaded intellectual detachment.

Buildings are closely related to human needs, both emotional and physical, and architecture is indeed the process of "devising the best human environment in any given situation." *When this outlook is ignored, confusion is inevitable. Discipline, in the sense of strict instruction and rigorous training, is incompatible with responsibility and initiative.

The generally prevailing formal and academic approach, basically disciplinarian in character, is unrelated to any natural educational growth. The result is two appalling failures in the practice of architecture—on the one hand, that of expression; on the other, of integration. Such is the split between education and practice that these two failures seldom seem to be recognised for the tragedies they really are.

failure of expression

The majority of students, once having left school and entered an office, are overcome by apathy—very understandably so after the treatment most of them have undergone. And yet our schools ought to be capable of producing men with the capacity to change our environment wholesale for the better. It is important to realise that all architects end up in positions of

" Assessment" in first supplement on Education, At 18.5.62. extreme responsibility. Their abilities and decisions affect many people directly for years to come, and indirectly impinge on thousands more. Seen in this context, the gap between the "bright" student and the "dull" one is not so great. Both are ultimately responsible for designing similar quantities of building work.

Under the present educational system, what happens to all those ideas (many of them radical, fresh and inspiring) created in schools of architecture? The truth is inescapable. There is an enormous discrepancy between the standards of a school, and the standards of architecture produced by those who have gone out into practice. We have housing estates that are lifeless and humdrum, hospitals and mental homes that only help to reinforce the patient's sense of ill-health. . . . And for much of all this, the architect is responsible. To blame legal and local government machinery, clients and committees, is often a poor excuse for an emotional failure on the part of the architect.

Even the most abject committee may be stirred by a little display of enthusiasm, should the architect feel his proposals to be fundamentally sound. Unfortunately, although the potential is usually present, the designer has difficulty in letting ideas out of his head. There is often an overwhelming fear of authority which cramps any show of originality of approach. There is much talk, but very little action. Any real work capacity (the ability to get something done) is paralysed.

In such a situation, foundations have been too insecure. In the school of architecture as we have it, various aspects of architecture are divorced from a natural work process, and also,

by J. H. Chadwick

all too often, divorced from sympathy and humanity. If the architect does not have human needs firmly to heart, together with the means of putting the solution to those needs into practice, then the failure of expression will remain. We can only express ourselves forcibly over the issues we feel to be fundamentally sound.

failure of integration

Even for the detailing of a small part of the construction of a building, a wide-vision understanding is necessary for any happy solution to a problem. Architects need to be grounded in reality—of other people's needs, of construction and organization. Only with familiarity with all the various aspects of work can design be tackled with any real confidence.

However, the structure of education only increases any schizoid tendencies the student might have initially. We need to begin with the foundations, literally. With the organisation obtaining at present, there is constant change between abstract and concrete, willynilly, all the time. Construction drawings are interspersed with sketch designs. Worse, buildings are often designed before the student is in any position to put his ideas into constructional practice. And every design is produced before the student is able to cope with the administration necessary to put it into effect.

The student is rarely left to grow in a natural kind of way. Design is a process entailing constant searching, sifting, rejecting and accepting. If the school syllabus is not organised on a basis of growth and integration, the student, on becoming qualified, will all too often take the easiest way out, concentrating

on one facet of architecture at the expense of overall planning. Others, feeling architecture to be some form of "higher" expression, will desperately strive after a dry "originality" unrooted in reality.

a basic solution

These points indicate the need for a complete re-orientation of educational development. There is a natural approach involved in any work situation. Before being able to search out information, one needs to be thoroughly conversant with methods of research, and similarly with all aspects of the problem. Anything else leads to frustration and superficiality.

The first two or three years of archi-

tectural education should be regarded as a basic research period. Emphasis should be on technical information, discussion groups, criticism, drawing techniques and the like. Only after all this initial familiarisation with all the various aspects of architectural problems should design be thought of. Subjects would be chosen by the student for their relevance and interest. Rigid timetables would be unnecessary-the student's methods of tackling his problems would be the important thing. One design, worked out from all angles, is far more valuable than a superficial dabble at different building types.

Working drawings could be those actually produced while the student is in an office, for the practical completion of some job. Nothing is more absurd than such drawings devised in a vacuum, without any hope of materialisation—in this kind of situation, the student cannot possibly bring the same energy to bear on the abstract problem as he could with a real one.

Work in the office should be combined with work at the school, thus rendering less abrupt the change from school to office. At present, the newly qualified architect spends two or three years groping in the dark after entering practice. One important criticism of this approach is that there could be no indication of design ability in the first several years. This is true, after a fashion, but only causes alarm when design is thought of as some heaven-sent gift. Excluding the fact that for the genius it may be so, a proper coverage of groundwork at the beginning would ensure reasonable design later.

the two trends

Hurrah for every voice raised in favour of free, alive architectural education!

When the AJ (the first to herald this "new approach" I believe) published my article of that title on November 22, 1956, there seemed little hope of any rapid progress. However, thanks to the excellence of some heads of schools of architecture and the initiative of BASA. 5½ years later, important practical experience has been gathered in what seemed to many an impractical ideal in 1956. The BASA exhibition, recently held at the RIBA, showed that science and architecture are integrated from the first year in one or two schools even today; that in some places schemes are studied in proper and integrated detail; that there are signs that mechanisation may yet take command under the auspices of the architect; that in some schools the individual tendencies and capacities of students are allowed proper development even now, according to the BASA recommendations of the 1960 Oxford conference; that standard inefficient lecture courses have been changed into better ways of learning. Thus it is possible to discuss J. H. Chadwick's "basic solution" with a background of actual practical experience in these new methods of architectural education.

I feel there is danger in some of his proposals. "Two or three years" spent as a "basic research period" only after which is design "thought of," spells to me a new schism when his intention is surely to integrate. A youngster, come to study architecture, does want to find out. But he also has an urge to create from the start. A course based on Chadwick's ideas would thwart this urge for two or three years. What is more, the best research is done

if it is in the service of the creative urge. The all important judgments, in relating research to the task it is to fulfil, are a capacity accrued from continual practice. Most important of all, to thwart the student's desire to design is to rob him of that enthusiasm which is the driving force of all education. Surely the best system is that which allows him who fits Chadwick's schema to work according to it, but leaves the others to work out their own innumerable salvations.

A further point appertains to his use of the concept of research. It is highly debatable, to put it mildly, whether current scientific methods and research methods in many fields most relevant to architects are efficient, and adequate for present needs. Thus, it is not so simple to sit down and become "thoroughly conversant with methods of research" as if it was arithmetic. In fact, it seems to me, that there lies great danger in architecture taking science, as it stands so ineffective in many fields, as the aid to design dealing with aspects of human life. It would be disastrous. And the best guard against this is the continual testing of the worth of research by its use for design. When L. L. Whyte begins his magnificent book The Next Development in Man* with "Thought is born of failure" he puts in a nutshell why a student does better research if he is allowed to go through the design process and experience the failure which begets thought, and triggers off the rethinking. The architect is in an excellent position to influence not only the products of mechanisation for the better, but also the methods of scientific research themselves. As the expert applying findings, he can spot the weaknesses

comments by Paul Ritter

which relate back to hypothesis and method.

This leads straight to Chadwick's fault by omission, a universal one in education at this moment: the personal philosophy, ethics, motivating principles and sense of values of each student should be aided by the school, and developed in discussion. The Culture of Cities† is still as valid a starting point today as in the thirties. The bio-technic era, with health-orientated science and law, is within the grasp of the young. They could feel this passionately in terms of their own involvement.

On a different level I would query Chadwick's idea of the production of working drawings for an actual job while in an office. It can be much more frustrating to produce bad drawings in a bad office for a bad building and a bad contractor (to make the point extreme), than to study properly, in all its elements, a building designed by the student himself, even though it may not be built. This does not appear absurd to students. It is done with efficiency, enthusiasm, and joy. Chadwick is right, of course, to condemn the usual type of school working drawings: these are frequently unpalatable and perniciously misleading draughtsmanship

To sum up, I would say that the basic point of free and alive education is that the dictatorial syllabus is replaced, but I am concerned that J. H. Chadwick seems to beckon us to leap from the frying pan into the fire.

^{*} Cresset Press, London 1944, (a must for all teachers)

t by Lewis Mumford, Secker & Warburg, London, 1938.

working detail

SHOPFRONT: OFFICE IN LEEDS

Ardin and Brookes and Partners, architects

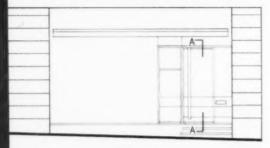


This neat example of shopfitting, using stainless steel and teak, combines door and showcase and leaves the main window uncluttered.

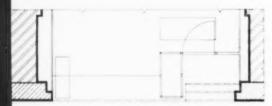
working detail

SHOPFRONT: OFFICE IN LEEDS

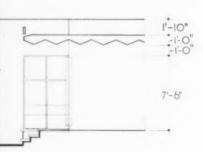
Ardin and Brookes and Partners, architects



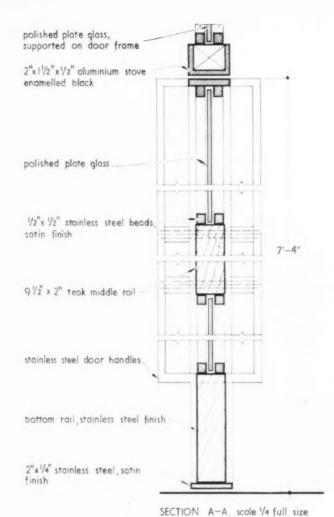
ELEVATION. scale 1/8" = 1'-0"

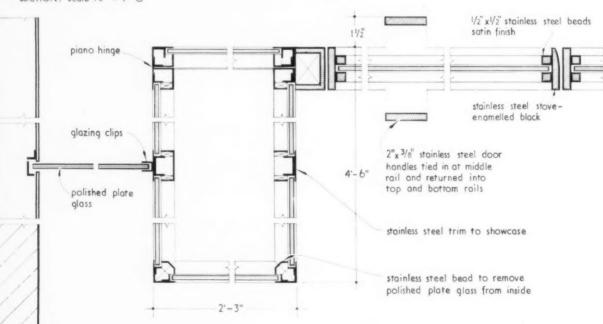


PLAN. scale 1/8" = 1'-0"



SECTION. scale 1/8" = 1'-0"

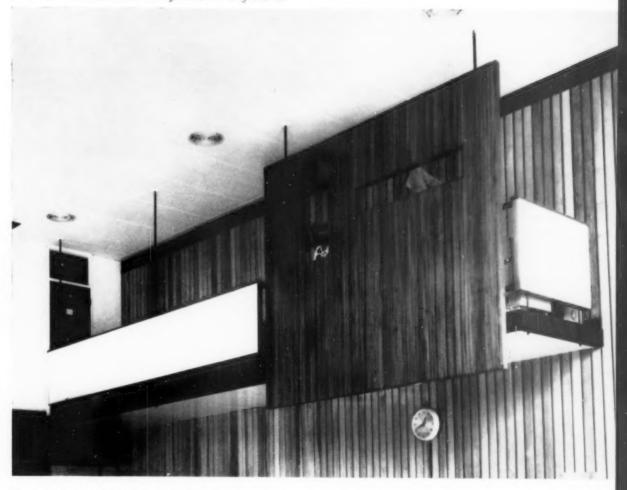




PLAN OF SHOWCASE, scale 1/4 full size

working detail

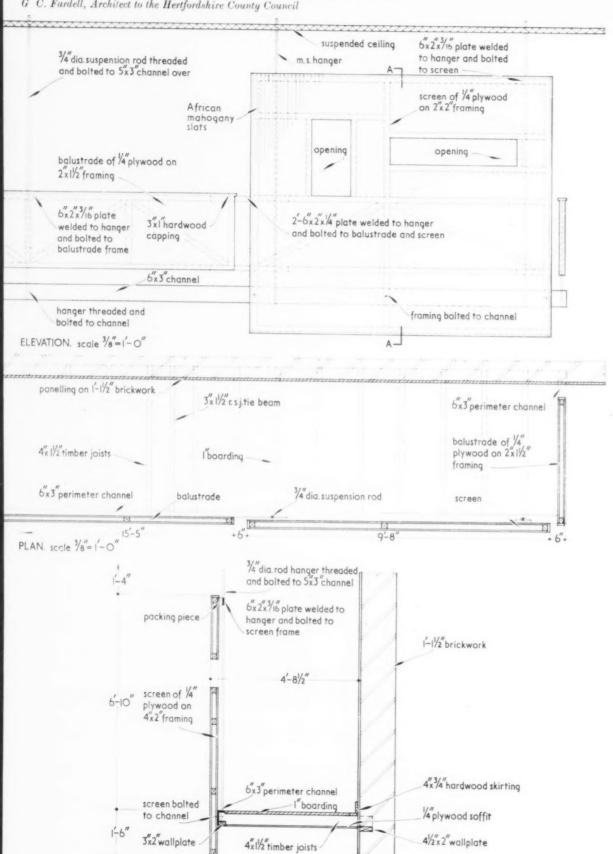
PROJECTION BALCONY: COLLEGE IN ST. ALBANS, HERTFORDSHIRE G. C. Fardell, Architect to the Hertfordshire County Council



This timber-framed balcony is covered with 4-in, painted plywood and the front of the screen, which shields the projectors, is covered with applied slats of African mahogany. The balcony is supported by four steel rods from a 5 in, by 3 in, channel above.

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Announcements

PROFESSIONAL

The Alice Davis Hitchcock Medallion, presented by the Society of Architectural Historians of Great Britain for outstanding contributions to the literature of architectural history, has this year been awarded to Kerry Downes of the Barber Institute of Fine Arts for his book Hawksmoor, published by Zwemmer in 1959.

James Crabtree & Associates have taken on, as an associate, C. Guest, MA(cantab), ARIBA, AADIP.

S. Lazarus & Partners, chartered quantity surveyors, have taken into partnership Edward Lazarus, ARICS.

Norman Roberts, ARIBA, has been appointed borough architect/housing director for the borough of Ellesmere Port, Cheshire.

The new address of Michael & Sheila Gooch, A/ARIBA, chartered architects, is 2. Tombland Alley, Norwich, Norfolk, NOR. 07.P (telephone Norwich 27506).

Erdi & Rabson, architects and surveyors, have moved their offices to 14-15, Queen-hithe, EC4 (telephone Central 9881).

H. Burgess, LRIBA, and J. Rowlands, ARIBA, have entered into partnership and are practising at 31, Monument Hill, Weybridge, Surrey, under the style of Burgess & Rowlands.

Sydney Bolland, Barch, ARIBA, Richard O'Mahony, Barch, Julian Velarde, Neil Sharrocks, AFS, have formed a partnership under the title of The F. X. Velarde Partnership.

TRADE

The Merchant Adventurers Ltd. have appointed Michael Sillett, Dipmies, as sales manager for the United Kingdom.

Evode Ltd. have moved their London office to 450-452, Edgware Road, London, w2 (telephone Ambassador 2425).

Griffin & George Exhibitions are being held in the Welsh College of Advanced Technology, Cathays Park, Cardiff, from September 12 to September 14 inclusive, and at the Chorlton Town Hall, Cavendish Street, Manchester, from September 18 to September 21 inclusive.

The architect's department of The Demolition and Construction Co. Ltd. have moved their offices to Second Floor. 3, St. James's Square. London, swl (telephone Trafalgar

7833). They are reorganising their information library according to sfB classification and would be pleased to receive trade literature to A4 size only.

R. H. Stewart has joined Thomas Potterton Ltd. as special projects manager.

F. French, sales manager of Medway Buildings & Supplies Ltd., of Rochester, Kent, has been appointed to the board of directors of Allardyce Palmer Ltd., advertising agents.

Jack Pottinger has been appointed sales manager of Taylor Woodrow (Arcon) Ltd. and will take charge of their new home marketing scheme.

CORRECTIONS

We regret a misprint on page 168 of AJ 2.8.61 in the assessor's report on the Westminster Housing Competition: the name of one of the competitors was given as Downes instead of Davies and the names of his collaborators were omitted. The sentence should have read: "That by D. C. Davies, Alfred George and Frederick Webb is beautiful, very polished and very expensive."

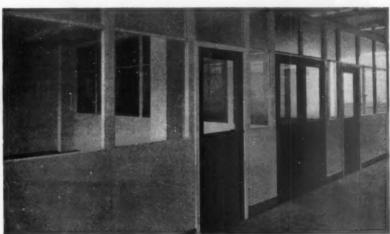
In the leader on the St. Paul's Precinct (AJ 9.8.61) the name of the firm carrying out the new scheme should have been Trehearne & Norman Preston & Partners.



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New Cornwall county hall



The model of the proposed new county hall for Cornwall, designed by the county architect's department, which will be sited on the western outskirts of Truro. Designed around a 200 ft. by 150 ft. court, with accommodation for 447, it is estimated to cost £811,000. Construction: reinforced concrete frame on a 30-ft. grid. Finishes: local exposed aggregate for mullions;

polished Delabole slate for panels below windows. The offices are planned on a 5-ft. grid. Consultants: structure, Felix J. Samuely & Partners; heating and ventilating, L. J. Fowler; electrical, Hoare, Lea & Partners; acoustics, Hope Bagenal; architectural and landscaping adviser: G. A. Jellicoe.





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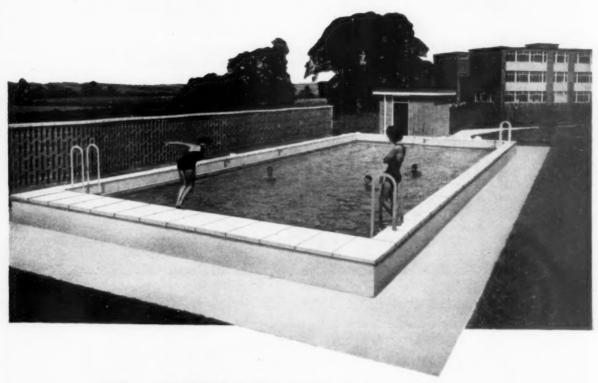
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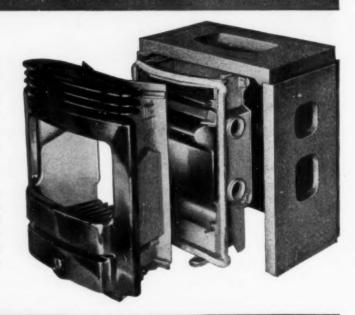
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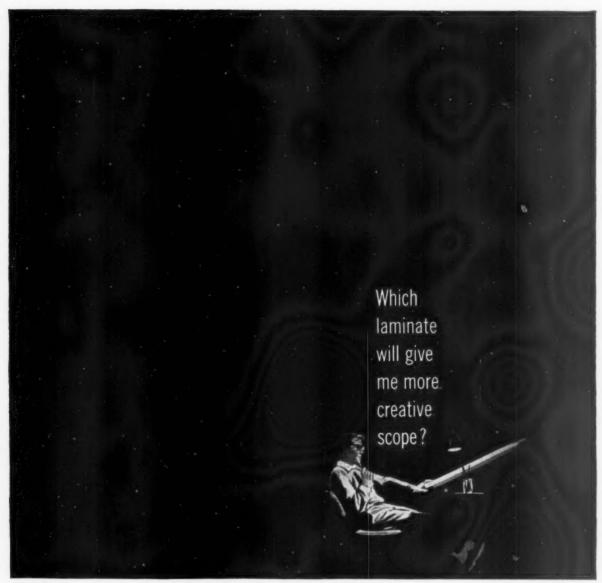
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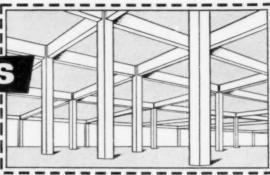
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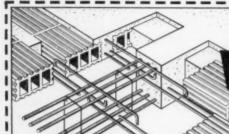
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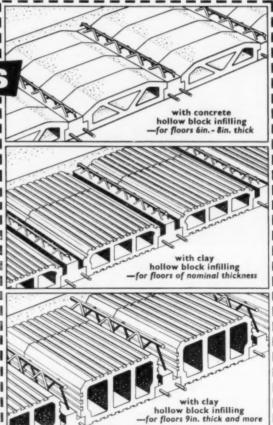
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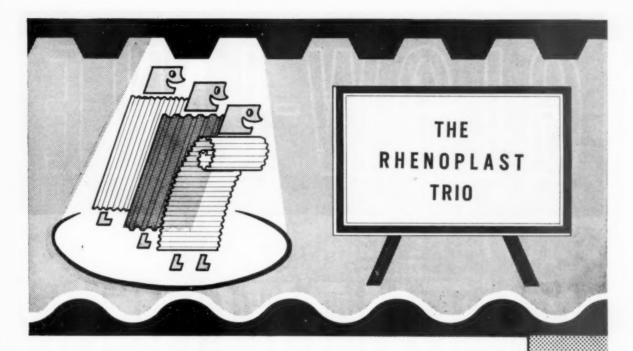




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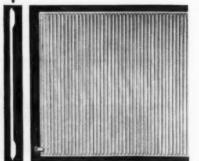
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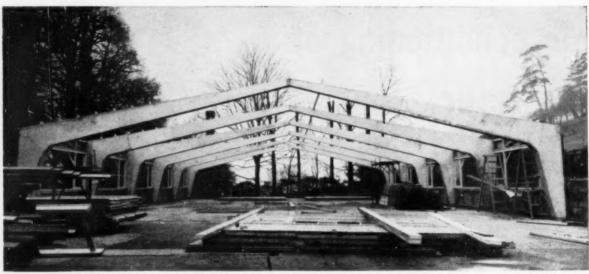
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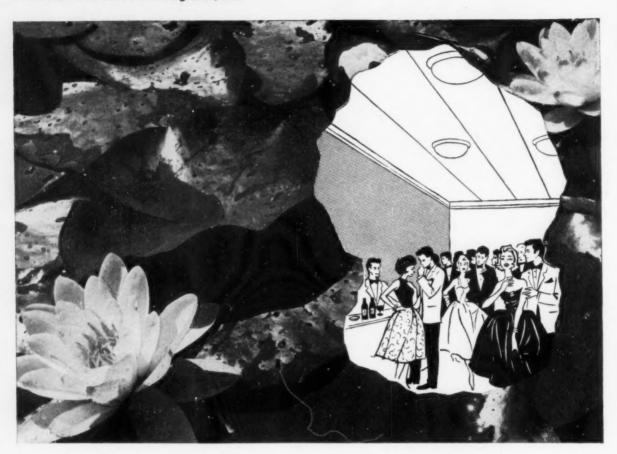
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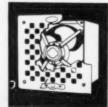
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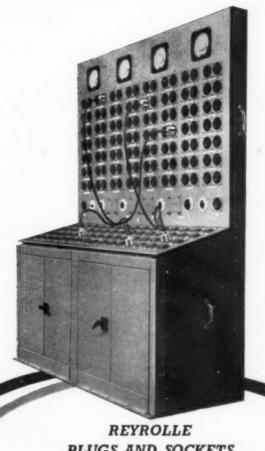


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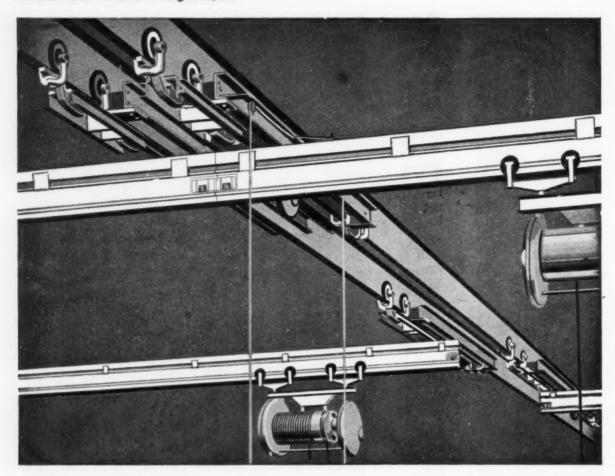
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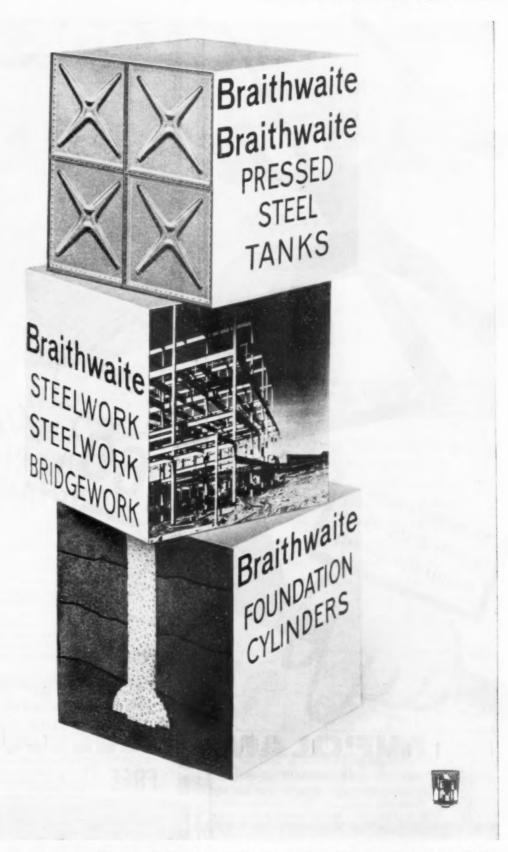
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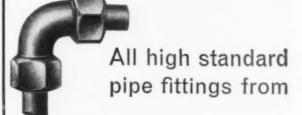
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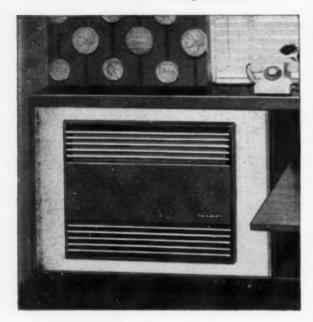
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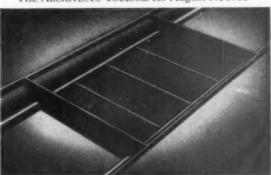
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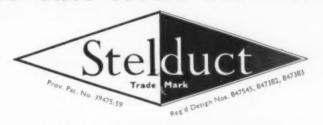
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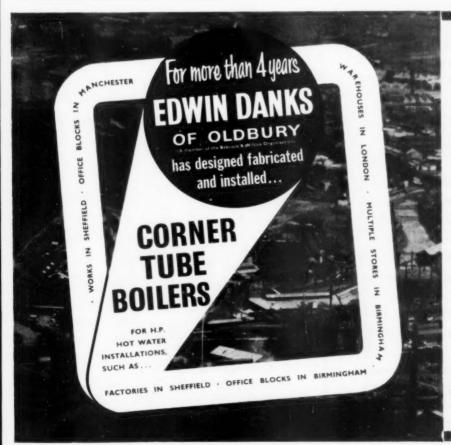


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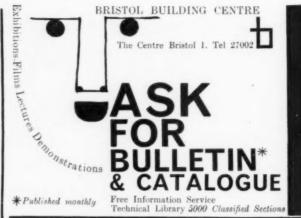


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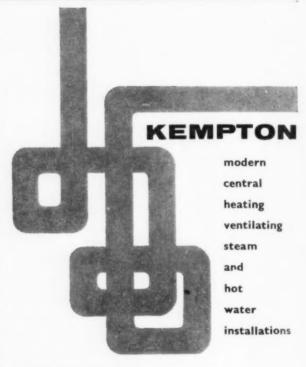
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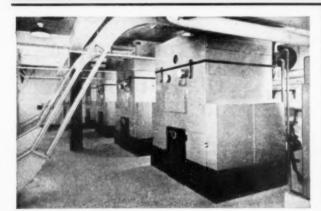


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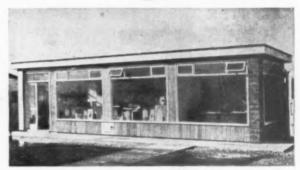
The installation at Hobart House, the Headquarters of the National Coal Board, consists of four Trianco fully automatic magazine type self-feeding boilers having a capacity of 2,000,000 B.t.u.s./Hr. each. These carry the full winter heating load and also supply the domestic hot water. For summer use only a self-feeding Trianco boiler is installed for providing the hot water supply, with a capacity of 500,000 B.t.u.s./Hr. All boilers are operative at an efficiency in the region of 80% and are capable of running for long periods without attention. The fuel used is anthracite grains, but the boilers could equally burn gas coke or hard co.ce.



Write for special leaflet describing the Hobart House installation and details of the complete list of Trianco Bollers which range from 50,000 to 2,000,000 B.t.u.s. (Solid Fuel) and from 100,000 to 3,000,000 B.t.u.s. (Oil Fired)

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Whether you require a showroom, a site office, or a building
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your requirements with a
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vast range or with a design
exactly to your specification.
This PEEL'S prefabricated
building in modern style is used
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an illustration from

Playgrounds and Recreation Spaces

Introduction by Alfred Ledermann and Alfred Trächsel, Translated by Ernst Priefert. Size 83 by 111 in. 176 pages with 302 halftones and 83 line illustrations. 63s. net, postage 2s. 0d.



It is now recognised by planners and local authorities that imaginativelydesigned children's playgrounds and adult recreation spaces should be regarded as an essential amenity for all urban areas of any size, whether new or old; but so far very few really successful examples have appeared in the British Isles, and children in towns and cities continue, at their peril, to play their games in streets

and on roads. On the Continent, in Scandinavia and in the U.S., however, the subject is being tackled with the seriousness and care that it deserves. and there are many interesting and successful solutions to be seen.

This book, after short introductory essays written by two of Europe's leading playground designers, consists of photographs and plans of a great variety of interesting examples taken from many countries. Each of the schemes illustrated is accompanied by a short explanatory text. together with notes on constructional Examples shown range details. from the smallest and most inexpensive to large schemes covering many acres, and they contain a wide variety of ingenious ideas, constructions and equipment for play and recreation.

THE ARCHITECTURAL PRESS, 9-13 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1

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.. the latest in the comprehensive range of Marley
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a high standard of quality.
The concrete posts, wall
panels and rafters are reinforced with steel rods,
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HAMPSHIRE COUNTY COUNCIL

APPOINTMENT OF **ARCHITECTS**

The County Architect (H. Benson Ansell) is seeking the following additional pensionable staff for the current major building programme:-

Principal Assistant Architect, Scale C

Senior Assistant Architects (3), Scale A/B (£1,480-£1,670)

Assistant Architects (3), A.P.T. IV/V (£1,140-£1,480)

Some of these posts will include development work in connection with a newly-formed Consortium (S.C.O.L.A.) for school building which offers scope for men with drive, initiative and design ability, who are interested in research and development work and the application of original thought to design and con-struction. Candidates for these posts should mark their application forms "SCOLA".

Candidates must be fully qualified and possess experi-ence commensurate with the grade of post for which they are applying. Separation allowance and assistance with removal expenses in approved cases. week. Canteen facilities. Five-day

Application forms, returnable by 5th September, from the Clerk of the County Council, The Castle, Winchester.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advertisement Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and must reach there by first post Friday morning for inclusion in the following Wednesday's paper, Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

given above.

AR-MAIL SERVICE available on request.

In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail each week. The cost of this special service to Overseas subscribers will be Es. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

Public and Official Announcements

36s. per inch; each additional line 3s.

AIR MINISTRY require SENIOR WORKERS
UP in Quantities Division in London. Salary, which is dependent on age, qual, and exp. ranges from £1,043 to £1,288 (max.) on annual incremental basis. Five-day week with three weeks three days paid leave a year initially. Some promotion and pension prospects. Guals. Applicants, who must be natural born British subjects, should hold O.N.C. or C. & G. (Quantities) or equiv. and be fully competent to work up entire bills of quantities. Financial assistance and time off allowed for recognised courses of study leading to higher quals. Forms from Manager (PE 519), Ministry of Labour, Professional & Executive Register. Atlantic House, Farringdon Street, London, E.C.4. Candidates selected will normally be laterviewed in London and certain expenses reimbursed. Only applicants selected for interview will be advised. S8144

QUANTITY SURVEYORS—OVERSEAS
AIR MINISTRY require chartered Quantity Surveyors for service initially in overseas areas on fours of 2 or 3 years' duration according to location.

Basic salary according to age and experience (ranging from £961 at 25 to £1,298 at 34 or over to £1,470 max.). An increase of £95 p.a. (within max, of scale) after 2 years' satisfactory service subject to corporate membership of R.I.C.S. being held. In addition Tax Free foreign service allowance varying according to location, marital status, etc., e.g. total emoluments at Cyprus vary at age 25 from £1,286 to £1,736 (single man) and £1,646—£2,561 for married man.

Kit allowances and free passages for self, and family when accommodation arranged. Free medical and education arrangements. Five-day week, paid annual leave initially four weeks and two days.

Completion of tour to be followed by duties in U.K. with opportunities for further tours overseas. Appointments are non-pensionable but there are good promotion and pension prospects.

Application forms and full particulars from Ministry of Labour, Technical and Scienti

ADMINISTRATIVE COUNTY OF LEICESTER (4) PRINCIPAL ASSISTANT ARCHITECT, 21.410-21.565.
(b) CHIEF ASSISTANT ARCHITECTS, 21.310-21.566.

(c) SENIOR ASSISTANT ARCHITECTS, £1,140-

(c) SENIOR ASSISTANT ARCHITECTS, £1.140—£1.310.

(d) ARCHITECTURAL ASSISTANT, £315—£1.140 (according to qualifications).

Candidates for (a) must be members of the B.I.B.A., have had sound experience and be capable of acting as Group Leaders on an extensive programme of education buildings. Candidates for (b) must be members of the R.I.B.A., have had considerable office experience and be capable of taking charge of contracts from inception to completion. For (c), should be members of the R.I.B.A., have had office experience and be capable of taking charge of small contracts. For (d), should have Intermediate or Final qualifications of the R.I.B.A. and he canable of exceptions working drawings. Lodeing allowance and removal expenses may be said to a married man. Apply of form obtainable from County Architect, 123. London Road. Leicester. TC7478

Architect, 123. London Road. Leicester. TC7478

METROPOLITAN ROROUGH OF
RERMONDSEY

BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT
ASSISTANT ARCHITECT

Applications are invited from persons under 51
years of age on 28th August, 1961. for the permanent appointment of Assistant Architect,
Grade A.P.T. III-IV (2960—21.310) plus 245 London weighting, commencing salary according to
experience. Applicants must have passed Final
R.I.B.A. examination and should have experience
in multi-storey dwellings.
Applications, on forms to be obtained from the
undersigned, to be submitted by 28th August,
1961.

J. S. LAMBERT, Town Clerk.

Municipal Offices, Spa Road, S.E.16

RADNORSHIRE COUNTY COUNCIL
APPOINTMENT OF
CHIEF ARCHITECTURAL ASSISTANT
Applications are invited for the following permanent appointment on the established staff of the County Architect's Department:
CHIEF ARCHITECTURAL ASSISTANT. Salary Grade A.P.T. IV (£1,140-£1,310 p.a.).
The Council have a varied and interesting building programme on hand including new schools, police houses and old people's homes.
The appointment will be subject to the National Scheme of Conditions of Service; to the Local Government Superannuation Acts and to termination by one month's notice in writing by either party.

party.

A lodging allowance, proportion of approved removal expenses and rail fare home every three weeks for a limited period will be paid to a married man appointed to this post.

Applications stating age, qualifications and experience with the names and addresses of two persons to whom reference may be made must be received by the undersigned not later than the 22nd August, 1961.

County Hall, Llandrindod Wells, Radnorshire.

Radnorshire.

Radnorshire.

METROPOLITAN BOROUGH OF

CAMBERWELL

APPOINTMENT OF ARCHITECTS IN

BOROUGH ARCHITECTS DEPARTMENT

The Borough Architect, having an interesting
programme of housing and public buildings, and
a senior staff producing good contemporary work
requires Assistants from good Schools of Architecture to back them up.

Newly elected Associates may expect a salary
starting at £1,005 per annum and more for those
with several years' experience; those who lack
only the Professional Practice examination would
commence at £840 to £555 per annum.

To arrange an interview write to Town Clerk,
Town Hall. S.E.5.

Town Hall, S.E.5.

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECTS DEPARTMENT
ARCHITECTURAL ASSISTANTS
(within the salary range £645—£960 according to
experience and ability)
Applications are invited from Architectural
Assistants for appointments to the permanent
staff of the County Architect's Department, which
is engaged on a large and varied programme of
major projects.
Applicants should have attained at least Intermediate R.I.B.A. standard and, within this stage
of qualification, have a reasonably varied experience.
Application forms and details of appointment
obtainable from the County Architect, P.O. Box
256, County Hall, Preston, should be returned by
25th August, 1361.

BOROUGH OF MALDEN AND COOMBE

25th August, 1961.

BOROUGH OF MALDEN AND COOMBE APPOINTMENT OF JUNIOR ARCHITECTURAL ASSISTANT Applications are invited for the above appointment from persons who have passed the R.I.B.A. Intermediate examination, or its equivalent. The salary will be in accordance with Grade A.P.T. II (£215-£260 per annum, plus London weighting)

ing).
Application on forms to be obtained from John Apse, A.M.I.C.E., Borough Engineer and Surveyor, Municipal Offices, New Malden, Surrey, should be returned by not later than 4th September, 1961.

HAROLD E. BARRETT.

HAROLD E. BARRETT. Town Clerk.

Municipal Offices. New Malden, Surrey.

Surrey.

LANCASHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT

ASSISTANT ARCHITECT'S. A.P.T. IV (£1,140—

£1.310). (Starting salary according to experience.)

Applications are invited from qualified Architects of initiative, keen on design and modern constructural methods, to work on a large and varied

ural methods, to work on a large and varied rogramme.

If appointed, applicants will be able to claim disturbance allowance up to a maximum of £125, facility offered by the County Council to cover he expenses of removal and other associated out.

costs.

Application forms and details of appointment obtainable from the County Architect, P.O. Box 26. County Hall, Preston, returnable by the 25th August. 1961.

26. County Hall, Preston, returnable by the 25th August. 1961.

LANCASHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT SENIOR ASSITANT ARCHITECTS (N.J.C. Scale "B." £1,505—£1,570)

Addications are invited from experienced Architects for posts on the permanent staff. The County Council has a large and extremely varied building programme, and posts will be filled by men of initiative, imagination and a flair for sensitive design.

Applicants are expected to be Registered Architects, as well as Associates of the Royal Institute of British Architects and, if appointed, will be able to claim a disturbance allowance up to a maximum of £125, a facility offered by the County Council to cover the expenses of removal and other associated costs.

Application forms and conditions of appointment are obtainable from the County Architect, P.O. Box 26. County Hall, Preston, returnable by the 25th August, 1961.

NORTH RIDING COUNTY COUNCIL Opportunities for applicants of initiative at drive, and who appreciate a five-day week in go working conditions, for dealing with a vari-programme of work for all Committees of to

ncil. osition within the salary range shown below be given according to ability and qualifica-

ASSISTANT ARCHITECTS. Grade A.P.T. IV/V. ±1,140-±1,480. Must have passed the Final Examination of the R.I.B.A. ARCHITECTURAL ASSISTANTS. Grade A.P.T. III, £960-±1,140. Must have passed Part I of the Final Examination of the R.I.B.A.

R.I.B.A.

(c) ARCHITECTURAL ASSISTANTS. Grade
A.P.T. II. £815—£960. Must have passed the
Intermediate Examination of the R.I.B.A.
Application forms may be obtained from the
County Architect, R. Allport Williams, M.B.E.,
B.Arch. F.R.I.B.A., County Hall, Northallerton,
Completed forms should be returned to the Clerk
of the County Council, County Hall, Northallerton,
by the 25th August, 1961.

S8836

of the County Council, County Hall, Northalierton, by the 25th August, 1961.

METROPOLITAN POLICE
ARCHITECT AND SURVEYOR'S
DEPARTMENT
Applications are invited for the following positions in connection with the design and erection of Police Stations, Single Men's Hostels, Police Housing and Magistrates' Courts and schemes for major alterations to various Police buildings within the Metropolitan Police District.
ASSISTANT ARCHITECTS
Salary: £991 per annum at age 25, rising by annual increments to £1,499 per annum (Maximum salary on entry £1,318 per annum at age 34 or over.)

over.)
Qualifications: Must be registered Architects.
LEADING ARCHITECTURAL ASSISTANTS
Salary: £1,048 per annum rising by annual increments to £1,220 per annum.
Qualifications: Intermediate R.I.B.A., H.N.C.

qualifications: Intermediate R.I.B.A., H.S.Q. or equivalent.

ARCHITECTURAL ASSISTANTS

Salary: £658 per annum at age 21 rising by annual increments to £1,048 per annum. (Maximum salary on entry £950 per annum at age 28 or over.)

Qualifications: O.N.C., Intermediate R.I.B.A.

Qualifications: O.N.U., Intermediate or equivalent.

J. INNES ELLIOTT, B.Arch., F.R.I.B.A.,

Chief Architect & Surveyor.

Applications, giving details of training and experience, to: Chief Clerk, Architect and Surveyor's Department, Office of the Receiver for the Metropolitan Police District, Tintagel House, Albert Embankment, S.E.I.

S886

S886

Albert Embankment, S.E.I. Sosses
SWADLINCOTE URBAN DISTRICT COUNCIL
ENGINEER AND SURVEYOR'S DEPARTMENT
Applications are invited for the post of ARCHITECTURAL ASSISTANT, Grade A.P.T. II, £815£960. Applicants must have passed the Intermediate R.I.B.A. examination or its equivalent
and had good architectural experience. Five-day

week.

Applications stating age, present position and salary, previous positions, qualifications and full details of experience, together with the names and addresses of two referees should reach me not later than the 5th September, 1951.

Housing accommodation will be considered.
The appointment will be subject to the National Conditions of Service, to the Local Government Superannuation Acts and to one month's notice in writing on either side.

Canvassing will disqualify.

C. D. HULL.

C. D. HULL. Clerk of the Council

BOROUGH OF NUNEATON
ASSISTANT ARCHITECT
Applications are invited from suitably qualified persons for this position. Salary A.P.T. III/IV, 1960—21,310 according to qualifications. Housing accommodation will be made available if necessary.
The post provides scope and opportunity for a varied experience as the Borough Council has a large building programme including houses, flats, swimming baths, schools and other public buildings.

Further details and forms of application which must be returned not later than the 2nd September, 1961, may be obtained from me.

A. A. CRABTREE,

Town Clerk.

Council House, Nuneaton. August, 1961.

August, 1961.

ROYAL BOROUGH OF KINGSTON-UPONTHAMES

APPOINTMENT OF PLANNING ASSISTANT
A.P.T. GRADE III

(£960—£1,140 per annum plus London weighting)
Apolications are invited for the above-mentioned
appointment.
There is considerable development in Kingston
and as the Borough Council has widely delegated
powers from the Surrey County Council the Job
offers scope and interesting experience.
The Council will give assistance towards the
rovision of housing accommodation, if required,
Details and application forms from Borough
Surveyor, Guildhall, Kingston-upon-Thames, and
returnable by 29th August, 1961.
L. V. POWELL.
Town Clerk.

Guildhall. Kingston-upon-Thames.

ARCHITECTS

SENIOR ARCHITECTS
ASSISTANT ARCHITECTS
ARCHITECTURAL DRAUGHTSMEN

CRUDENS Architects' Departments in Musselburgh and Glasgow have vacancies for assistants with ability, initiative and a progressive outlook for interesting and varied work on large scale projects requiring a high standard of design.

Salaries will be commensurate with qualifications, experience and ability. Staff Pension Fund. Applications, which will be treated in strictest confidence, should be made to:

G. BOWIE, D.A. (Edin.)
A.R.I.B.A., A.R.I.A.S.
Chief Architect,
Crudens Limited,
M U S S E L B U R G H,
S C O T L A N D.

Telephone: MUS 2244.



TAYLOR WOODROW HOMES LIMITED

require an

Architectural Assistant

up to Intermediate standard, capable of handling contracts from start to completion in a department working on varied housing development, including large estates; town development and private houses. This post offers opportunity for appreciable individual responsibility and experience in one or more of the above would be an advantage.

Interviews can be arranged at any time with travelling expenses paid.

Write in first instance to:

Chief Architect.

Taylor Woodrow Homes Ltd.,

Western House, Western Avenue, Ealing, W.5

SITUATIONS VACANT

The Aglite Division of the Butterley Company Limited, Butterley Hall, Ripley, Derby, require two young technical sales representatives.

These are challenging jobs in a new industry calling for the ability to acquire technical knowledge quickly and retain it. Aglite is used for reinforced and prestressed concrete, as well as the more traditional uses for lightweight aggregate.

The successful applicants will be required to live locally. They will be in their mid-twenties and will have had some years' training for, and experience in, one of the professions or industry connected with building or civil engineering.

They will be expected to sell to Architects, Consulting Engineers, and industrial users, and advise in drawing up specifications. They will also be required to make site and works visits to advise on mixing and placing techniques.

Salaries will be in the £850 to £950 range, depending upon age and experience; a contributory pension scheme is in operation; a company car will be provided.

Write, giving brief details of age, education, experience and present salary to The Commercial Manager—marking the envelope "Confidential".



—the specialist designers and builders of modern industrial buildings are increasing their staff of

Qualified Architects

and Assistants

IN WARWICKSHIRE . KENT . ESSEX

ABILITY AND ENTERPRISE
OF PARAMOUNT IMPORTANCE

Superannuation and substantial bonus schemes in operation

EXCELLENT PROSPECTS

in rapidly expanding organisation

Replies, in confidence, to General Manager

ATCOST (FACTORIES) LTD., YORK HOUSE,

TUNBRIDGE WELLS, KENT

Advance with

ATCOST

GLENROTHES DEVELOPMENT
CORPORATION
SENIOR ARCHITECT required for a variety
of work including the DESIGN OF INDUSTRIAL, SHOPPING and COMMERCIAL BUILDINGS. This post offers excellent opportunities
for an architect with wide experience, imagina-

on and enthusiasm. SALARY up to £1,670 per annum according to

experience.
HOUSE to rent available.
Applications to Secretary and Legal Adviser,
Glenrothes Development Corporation, Glenrothes,
3956

Applications to Secretary and Legal Adviser, Glenrothes Development Corporation, Glenrothes, Fife.

METROPOLITAN BOROUGH OF BATTERSEA Applications are invited for the following permanent appointments:

(1) ASSISTANT BUILDING SURVEYOR, A.P.T. Orade II (2950-21,140).

(2) ASSISTANT BUILDING SURVEYOR, A.P.T. Grade II (2952-2950).

(3) JUNIOR ASSISTANT BUILDING SURVEYOR, A.P.T. Grade II (2952-2950).

(4) JUNIOR ASSISTANT BUILDING SURVEYOR, General Division (2250-2780).

London weighting is payable in addition—240 per annum (at age 25 and over) for grades below A.P.T. III and 445 per annum for A.P.T. III.

Commencing salaries will be according to qualifications and experience. Local Government experience is not essential.

Preference will be given to applicants for posts (1) and (2) who are taking examinations of the Royal Institution of Chartered Surveyors (Building Sub-division).

Posts (3) and (4) are for office juniors and offer an opportunity for training as building surveyor and quantity surveyor respectively.

The appointments are subject to the Local Government Superannuation Acts, 1937-1955.

Further particulars and application forms are obtainable from the Borough Engineer and Surveyor, Town Hall, Battersea, S.W.11.

Closing date 21st August, 1961.

C.M. W. S. FREEMAN,

Town Clerk, 88826.

ASSISTANT CHIEF PLANNING OFFICER
Applications are invited for this important post from persons attracted to the concention of this compact, high density, urban development. Applicants must hold the qualifications of A.R.I.B.A. and A.M.T.P.I.

The successful applicant will be responsible, under the general direction of the Chief Architect and Planning Officer, for all aspects of the planning of the new town, and will work very closely with his colleagues concerned with the other professional and technical aspects of this project.

Salary on Grade A.P.T. X (£1,865—£2,120) with placing according to experience.

Superannuation, subject to medical examination. Assistance with housing where appropriate.

Application forms, which may be obtained from the General Manager, Cumbernauld House, Cumbernauld, Glasgow, should be returned completed not later than Wednesday, 30th August, 1961.

S8853

BOROUGH OF REDCAR
BOROUGH ENGINEER'S DEPARTMENT
APPOINTMENT OF SENIOR
APPOINTMENT OF SENIOR
APPOINTMENT OF SENIOR
Applications are invited for the appointment of
Senior Architectural Assistant from persons qualified by examination for Associateship of the
Royal Institute of British Architects.
Bedcar is a progressive and developing seaside
borough within easy reach of the Yorkshire Cleveland Hills.

Redcar is a progressive and developing seaside borough within easy reach of the Yorkshire Cleveland Hills.

Housing accommodation will be made available and the Council will consider the payment of removal expenses and travelling expenses of the successful candidate and his family.

Applications on forms obtainable from me are to be submitted to me on or before Thursday, 31st August, 1961.

HUGH CALDWELL

HUGH CALDWELL. Town Clerk. Municipal Buildings.

EDINBURGH CORPORATION
DEPARTMENT OF THE CITY ARCHITECT
ASSISTANT ARCHITECTS qualified by examination. Salary — Professional Assistants Scale, 2830—£1,435 per annum, with placing according to

2830—21,435 per annum, with placing according to experience.
ARCHITECTURAL ASSISTANTS, unqualified, with some experience. Salary scale—Executive Division Grades I—IV. £640—£925, with placing for suitable applicants.
Applications, giving age, full details of qualifications and experience and the names of two referees as to character, to the City Architect, City Chambers, Edinburgh, I., by 9th September, 1961, marked "Staff—Confidential."

1961, marked "Staff—Confidential."

COUNTY BOROUGH OF WEST HAM
GROUP ARCHITECT
J.N.C. Grade "B" £1.485-£1.670 and Car
This vacant post calls for a man of experience.
drive, and initiative, to assist in an expanded
programme now being undertaken by the Borough
Architect and Planning Officer.
Applications, with details of qualifications and
experience (together with names of two referees)
to be addressed to Thomas E. North, O.B.E.,
F.R.I.B.A. Dist, T.P., M.T.P.I., 70 West Ham
Lane, Stratford, E.15.

BOROUGH OF PORT TALBOT

ENGINEER & SURVEYOR'S DEPARTMENT
Appointment of SENIOR TOWN PLANNING
& DEVELOPMENT ASSISTANT, A.P.T. IV
(£1,40-£1,510 per annum).
Applications for invited in the above position
in the brough Engineer & Surveyor's Department from Planning Institute or who hold an
equivalent qualification and who have had experience in the office of a Local Planning
Authority. Experience of Central Area Development would be an advantage.
The successful applicant will be required to
take charge of the Town Planning Section of the
Department which is responsible in addition for
Byelaw and Improvement Grant applications.
Applications, stating age, present position and
details of experience, together with the dames and
addresses of two referees, to be received by me
not later than Monday, 4th September, 1961.
W. KING DAVIES,
Municipal Buildings,
Deet Talbet

Municipal Buildings,
Port Taibot.

4th August, 1961.

BOROUGH OF WALTHAMSTOW
BOROUGH ARCHITECT'S DEPARTMENT
Waithamstow is a municipal borough within
the County of Essex, population 108,788, rateable
value £1,788,707. It is a progressive authority and
there is a large programme of interesting architectural and redevelopment schemes to be undertaken.

Applications are invited for the undermentioned
vacancy on the permanent staff of the Borough
Architect.

ONE SENIOR ASSISTANT ARCHITECT,
Grade A.P.T. IV (£1,185-£1,355 inclusive
of London weighting).

Applications for the post must be professionally
qualified and have had extensive experience.
Housing accommodation will be made available
if required, or alternatively the Council will
make a 100 per cent. advance for house purchase
within the Borough or in adjoining Boroughs.

Application forms, obtainable from the Borough
Architect (F. G. Southgate, A.R.I.B.A.,
A.M.T.P.I., M.I.Mun.E.), Town Hall, Waithamstow, London, Elf, must be returned to the
undersigned by noon on Friday, 1st September,
1961.

G. A. BLAKELEY,
Town Clerk.

G. A. BLAKELEY, Town Clerk

Town Hall, Town Clerk.
Walthamstow, E.17,
4th August, 1961. 8949
CITY OF SHEFFIELD
APPOINTMENT OF
(a) ASSISTANT CITY ARCHITECT (Central

(a) ASSISTANT CITY ARCHITECT (Central Area).

(b) ASSISTANT CITY ARCHITECT (Education and General).

Salary: J.N.C. Scale "E." £1,860-£2,120.

At exceptional opportunity occurs for two able and enthusiastic architects to take up these positions and carry the redevelopment of Sheffield a stage further.

In the Central Area Section the major tasks are (a) the design of the new Civic Centre, comprising Town Hall extensions, Law Courts, Police Buildings and Arts Centre and (b) the redevelopment of the Sheaf Valley.

Applicants for this nost should either possess a town planning qualification or have a basic town planning approach to building design.

In the Education and General Section there is a continuing programme of major educational buildings, including Training Colleges, Residential Hostels, District Colleges, Secondary Schools, and interesting work for all other Committees except Housing. The person appointed for this post should have a special interest in modern building techniques, materials and programming and should be keen to accept the challenge for greater building productivity.

Full details of the appointments together with forms of application may be obtained from the City Architect. Mr. J. L. Womersley, and completed applications must be sent to the undersigned not later than 11th September 1961.

Town Hall, Sheffield. 1. S8948

Sheffield. 1.

METROPOLITAN BOROUGH OF ISLINGTON BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT
Applications are invited from persons not more than 50 years of age for the following appointments:

ARCHITECTURAL STAFF (Permanent)
(a) Two SENIOR ARCHITECTURAL ASSISTANTS, A.P.T. V. (21.310-21.480 p.a.).
(b) Three ARCHITECTURAL ASSISTANTS, A.P.T. III (£960-£1.140 p.a.).
All plus London weighting.
Applicants for:
(a) should be Associate Members of the R.I.D.A. with wide experience including multi-storey housing;

ing;
(b) should have passed the Intermediate examin ation of the R.I.B.A. and be suitably experi-

(b) should have passed the internation of the R.I.B.A, and be suitably experienced.

Apolication forms, returnable by first post on Monday, 11th September, 1961, obtainable from the Borough Engineer and Surveyor, Town Hall, Upper Street, N.1.

H. DIXON CLARK. H. DIXON CLARK, Town Clerk.

ROYAL BURGH OF INVERNESS

APPOINTMENT OF BURGH ARCHITECT
AND TOWN PLANNING OFFICER
Applications are invited for the appointment of Burgh Architect and Town Planning Officer at a salary commencing at £1,705 per annum and rising by four annual increments of £70 to a maximum of £1,985 per annum, and a lump sum car allowance will be paid. Applicants should have experience of programmes for Municipal House Building, Housing, Planning of Layouts and Town Planning, Industrial Estate Development, etc. The appointment will be whole time and is superannuable, and the successful candidate will be required to pass a medical examination.
Applicants must be registered Architects and Members of the Royal Institute of British Architects and must be either Members or Associate Members of the Town Planning Institute.

tate.

Applications stating age, experience and qualifications and accompanied by copies of three recent testimonials, must be lodged with the undersigned by 4th September, 1961.

J. CAMERON.

Town Clerk.

Inverness, 7th August, 1961. METROPOLITAN BOROUGH OF ISLINGTON
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT
Applications are invited from persons not more
than 50 years of age for the following appointments.

Applications
than 50 years of age for the teaching states of the teaching staff (Permanent)
ENGINEERING STAFF (Permanent)
Two SURVEYING/TECHNICAL ASSISTANTS
A.P.T. III (#960-£1,140 p.a.) plus London
weighting hould have the Intermediate examin-

A.P.T. It (2900-21,190 p.a.) pius London weighting.
Applicants should have the Intermediate examination of the Municipal Engineers or Chartered Surveyors or other appropriate qualifications, and preference will be given to applicants with a sound knowledge of the Town and Country Planning Acts and London Building Acts.
Application forms, returnable by first post on Monday, 11th September, 1961, obtainable from the Borough Engineer and Surveyor, Town Hall, Upper Street, N.I.

H. DIXON, CLARK.

H. DIXON CLARK. Town Clerk

STAFFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
YACANCIES
ASSISTANT ARCHITECTS, £1,340-£1,340,
£1,440-£1,330,
ASSISTANT QUANTITY SURVEYORS
£1,440-£1,310,
ASSISTANT QUANTITY SURVEYORS
£1,440-£1,310,
The Architect's Department is a busy and expanding office, dealing with a wide variety of projects, including Fire Stations, Colleges, Schools, Police Stations, Offices, Ambulance
Stations, Clinics, Libraries, etc.
Good working conditions, assistance with removal expenses, etc. There is a scheme for loans to employees wishing to purchase their own houses.

ss.

rus of application from P. Woodcock,
I R.A., County Architect, Green Hall, LichRoad, Stafford,
Road, Stafford,
T. H. EVANS,

Clerk of the County Council Forms of F.R.I.B.A., field Road.

BOROUGH OF RAWTENSTALL

(AMENDED ADVERTISEMENT)
APPOINTMENT OF CHIEF ARCHITECT
Applications are invited for the above permanent appointment at a salary within A.P.T. V (£1,310-£1,480 per annum). Applicants should be members of the R.I.B.A.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service and the termination by one month's motice by either side. Housing accommodation will be available.

available. Applications incuding names and addresses of two referees should reach the undersigned not later than Monday, the 28th August. 1961. Canvassing will disqualify. Any relationship to members of senior officers of the Council must be disclosed. disclosed

COLIN CAMPBELL,

Town Hall. Rawtenstall. Rossendale, Lancs.

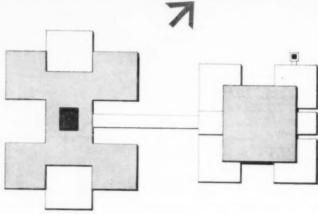
Kosemadie,
Lanes.

CITY AND COUNTY OF NORWICH
CITY ARCHITECT'S DEPARTMENT
An opportunity to work on Urban Renewal in
one of England's liveliest offices.
Applications are invited for the following
appointments:

(a) QUALIFIED
ASSISTANT ARCHITECT.
salary to be fixed in accordance with experience within A.P.T. IV.V (£1140-£1,480).

(b) ARCHITECTURAL ASSISTANT with Intermediate R.I.B.A. examination. Grade A.P.T.
II (£815-£960).
(c) TEMPORARY ARCHITECTURAL ASSISTANT, within A.P.T. IIIII, according to
outlifications and experience.
Appointments (a) and (b) are permanent and
housing accommodation can be made available in
evaluable for appointment (a).
Application forms, obtainable from David Percival. City Architect, City Hall, Norwich, NOR
01A, must be returned by 30th August, 1961. 8901





LONDON COUNTY COUNCIL

ELFRIDA RATHBONE SCHOOL · Camberwell

This special school for 180 educationally sub-normal children is to be built on the site of a late 19th century school totally destroyed during the war. Set in an area shortly to be re-developed with L.C.C. housing, the site is featureless and almost flat. As the southern half is to be acquired later, the main building complex had to be restricted to that part of the site already in the Council's possession.

Children come from a wide area. Those of primary school age are brought by school bus. Attendance is for the whole of the school life from five to sixteen years old. All classes are mixed and none exceeds twenty children. Great stress is laid on practical subjects and academic knowledge is imparted as far as possible through practical instruction.

The main teaching block contains classrooms and practical rooms on two floors. The admission class for the younger children is organised like a nursery class in an ordinary school. Children move into the senior classes between the ages of 11+ and 12+. The age of transfer depends on various factors such as mental age, social development and attainments. This has specialised rooms for housecraft and needlework and a small workshop mainly for woodwork and metalwork on the ground floor, and for art and pottery with large studio-like windows on the first floor linking the upper and lower schools. The assembly hall block also of two storeys has the assembly hall/gymnasium on the upper floor over a central dining space to seat the entire school in two sittings, with kitchen, library, changing rooms, staff and medical inspection rooms and heating chamber in the flanking corner pavilions.

Large paved outdoor teaching areas adjoin ground floor classrooms and further practical accommodation, in the form of a greenhouse adjacent to children's garden plots, is provided. Simple site treatment includes extensive tree planting and the formation of an artificial mound.

Straightforward construction with few applied finishes has made it possible to include with the cost limit laid down a dining area which can be used for school activities before and after the mid-day meal. Load-bearing brick walls are externally of a whitish-grey flint brick and internally of common brickwork mainly fair finished and decorated with emulsion paint. The ground floor is solid; first floor and roofs are reinforced concrete slabs with beams. The assembly hall roof of timber joists and woodwool slabs is supported by reinforced concrete beams. All roofs are finished with chippings on asphalt on screed. The board shuttered soffit of the concrete slabs forms the ceilings to the rooms below. Windows are aluminium patent glazing with galvanised mild steel opening lights.

Careful cost planning has been done from the earliest stages of the job. The estimated gross cost is £74,450 (net £56,700) making a foot super cost of approximately 79s. 6d.

If you are interested in working for the L.C.C. write now for application form and further particulars to Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/2192/8), County Half, London, S.E.1.

Architect to the L.C.C.

Deputy Architect
Schools Architect

Assistant Schools Architect
Assistant Senior Architect

Chief Engineer

Chief Officer of the Parks Department

Planning Officer Principal Quantity Surveyor Senior Structural Engineer

Heating Consultants

Hubert Bennett, F.R.I.B.A.

F. G. West, F.R.I.B.A.

Michael Powell, B.A.(Cantab.), A.R.I.B.A., A.A.Dipl.

Peter Jones, A.R.I.B.A. A. E. Miller, F.R.I.B.A.

F. J. Bancroft, A.R.I.B.A.

J. Rawlinson, C.B.E., M.Eng., M.I.C.E., M.I.Mech.E.

L. A. Huddart, F.I.L.A., F. Inst. P.A.

L. W. Lane, A.R.I.C.S., M.T.P.I.

M. F. Rice, F.R.I.C.S.

J. W. Humphreys, M.I.C.E., M.I.Struct.E., M.S.C.E. (Fn.)

Laurence Oliver, M.I.H.V.E.



LANCASHIRE COUNTY COUNCIL PLANNING DEPARTMENT
PLANNING DEPARTMENT
PLANNING ASSISTANT required at LIVERPOOL, A.P.T. I to A.P.T. IV (£645-£1,310), commencing and maximum salary according to qualifications and experience. Candidates should have an appropriate University degree and/or be studying for or possess a recognised qualification in town planning, architecture, surveying or engineering.

Disturbance allowances and removal expent to a maximum of £125 may be granted approved cases.

to a maximum of \$1.00 may or approved cases.
Applications giving age, qualifications, present appointment, experience, etc., and two referees to the County Planning Officer (8), East Cliff County Offices, Preston, by the 22nd August, 1961.

BOROUGH OF WANSTEAD AND WOODFORD ARCHITECTURAL ASSISTANT, A.P.T. I.11 (2645 to 4596 plus London weighting) Applicants should have passed the Intermediate examination of the R.I.B.A. and local government experience an advantage. Starting salary in accordance with experience of the successful applicant.

applicant.

Forms obtainable from and to be returned to
L. S. Jeffery, Borough Engineer, Municipal
Offices, Woodford, E.18, by 25th August, 1961.

8096

STAFFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ARSISTANT HEATING ENGINEER
Grade A.P.T. IV (c.1,140—c1,310)
Applications are invited for the above post from
Associate Members of the Institution of Heating
and Ventilating Enganeers. The Offices are modern
and well equipped and the Department has a
large and varied programme of interesting work.
Five-day week, assistance with removal expenses
etc. The Council has a scheme for loans to
employees wishing to purchase their own houses.
Forms of application from P. Woodcock,
F.R.I.B.A. County Architect, Green Hall, Lich
field Road, Stafford.
Closing date 30th August, 1961.
Clerk of the County Council.
8959

ARCHITECT (Grade II) required in construction division of L.C.C. Parks Dept., salary £1,250 £1,500, starting point according to experience. Opnortunity for inferesting work in collaboration with landscape architects.

Apply to Chief Officer, L.C.C. Parks Dept. (AIJ/2921/8), County Hall, London, S.E.1 (WAT 5000 ext. 8076).

AIR MINISTRY WORKS ORGANISATION requires QUANTITY SURVEYING ASSISTANTS Grade III at RA.F. and Ministry of Aviation stations throughout the United Kingdom. The work includes abstracting and billing, site measurement and preparation of estimates.

Salary, which is dependent upon age, qualifications and experience, ranges from £749 (age 23) to £988 National Rate imax.) in Grade III. There are pension prospects and also opportunities of advancement to numerous posts in the higher grades, viz.

Technical Grade II. £988 -£1,288 1.25 posts.
Technical Grade II. £988 -£1,288 1.25 posts.
Technical Grade I. £1,288-£1,588 42 posts.
Technical Grade I. £1,288-£1,602 8 posts.
Technical Grade I. £1,588-£1,602 8 posts.
Technical Grade II. £980 p.a. are payable in addition to a higher salary. Financial assistance and time off allowed for recognised courses of study leading to higher qualifications. Fiveday week with 18 days paid leave a year initially.

Applicants who must be natural born British subjects, must hold O.N.C. (Building or Building Quantity Surveyor or Building Contractor. Knowledge of W.D. Schedule an advantage. Forms from Manager (P.E.2), Ministry of Labour. Professional and Executive Register. Atlantic House, Farringdom Street, London, E.C.4. Candidates selected will be interviewed in Air Ministry. London and certain expenses reimbursed. Only applicants selected for interview will be advised.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE OFFICE OF THE COUNTY ARCHITECT Applications are invited for the appointment of BUILDING SURVEYOR at the Wakefield Divisional Office.

Salary grade A.P.T. III, 1996—11.40 per annum. Applicants should possess a sound knowledge of building construction and be capable of dealing with maintenance works and adaptations to buildings of various types.

Five-day week operated.
The commencing salary will be fixed at a point within the scale commensurate with qualifications and experience.

Applications to be submitted by the first post on Tuesday, 29th August, 1961, on forms to be obtained from and returned to the undersigned.

A. W. GLOVER, F. R.I.B.A...

Bishopgarth.

Bishopgarth, Westfield Road, Wakefield.

QUANTITY SURVEYING ASSISTANTS required by

ADMIRALTY
WAR OFFICE
AIR MINISTRY
WORKS
Posts in London Provinces and overseas.
Salaries in London for candidates with suitable experience range from £752 p.a. at age 21 to £1,188 p.a. Write for particulars of vacancies in each Department, and forms, to Ministry of Labour, Technical and Scientific Register, (Room 403), 28, King Street, London, S.W.1. 8917

MINISTRY OF EDUCATION requires for its London, S.W.1.

MINISTRY OF EDUCATION requires for its London headquarters TERRI-TORIAL ARCHITECTS with experience in design of school buildings, and preferably age 35 or over Duties include design consultation with Education Authorities, advisory work within Ministry and collaboration with Development Group Starting salary normally at minimum of scale 51,516-62,015. Posts unestablished but possibility of permanent, pensionable appointments later. Five-day week of 42 hours, annual leave rising from 25 to 30 working days. Further details of the posts and application forms from Ministry of Labour, Technical and Scientific Register (K., 26, King Street, London, S.W.1. Please quote J.116/1A.

ASSISTANT OUANTITY SURVEYORS

Piease quote J.115/1A.

ASSISTANT QUANTITY SURVEYORS
required by
ADMIRALTY
WAR OFFICE
AIR MINISTRY OF EDUCATION
ADMIRALTY
MINISTRY OF WORKS
Posts in London, Provinces and overseas. London salaries for suitably qualified and experienced men up to £1412 n.a. Prospects of promotion and nensionable status. Write for particulars of vacancies in each Department and forms, quoting J.Q.S. to Ministry of Labour, Technical and Scientific Register (Room 403), 28, King Street, London, S.W.L.

A vacancy exists for an ASSISTANT ARCHITECT in the Office of the Architect, British Railways, Eastern Region. Applicants should be qualified (A.R.I.B.A.) and have a lively approach to the design of buildings coupled with a sound knowledge of their construction. The office encourages Assistants to take responsibility at every stage of a project. Salary range (1,070-€1,145 per anum. Application should be made in writing to the Architect, Chief Civil Engineer's Office, King's Cross Station, London, N.1.

The Elementary Principles of Reinforced Concrete Design W. H. ELGAR, MA., MENG.

The author of this book is a civil engineer and a chartered surveyor who, for some years, has been a lecturer at Cambridge University. His purpose in writing this book is to provide an introduction to the subject of reinforced concrete design which will be suitable for students of architecture or building surveying. He has therefore dealt with the subject almost entirely in its relationship to buildings, and frequent reference is made to the Codes of Practice which govern the use of reinforced concrete in this field of design. In his preface the author writes, 'It is hoped to show that the design of the structural elements of a building is not merely a matter of substituting the right dimensions in the "right formula", but that it involves judgement and a sense of the right

use of materials, which raises it to the status of an art with its own logic and philosophy. For this reason the load factor method of design and the basic principles of prestressing are discussed in general outline.' Fully worked out examples of the design of structures are not included, for they are considered to be beyond the intended scope of the book and likely to prove confusing and discouraging to the student reader. The calculations which have been included are those which it is considered necessary to the explanations of the principles of design.

Size $8\frac{3}{4} \times 5\frac{5}{8}$ ins. 112 pages with 56 diagrams. 18s. 6d. net, postage 11d.

The Architectural Press, 9-13 Queen Anne's Gate, London S.W.1

Truscon require a Publicity Officer

This is a permanent staff appointment to control a vital sector of the Company's general marketing effort, which is largely directed towards bringing its products and services to the notice of the architectural profession. The holder will not be responsible for the determination of policy, but will be encouraged to make contributions in this direction. The expenditure for which he will be responsible is subject to budgetary control, but he will be consulted on and will take part in the formulation of such budgets.

Duties: Editing, design and production of technical literature of a high standard covering the full range of the products and services of the Company, including Truscon Reference Sheets and the Truscon Review. Design and production, in consultation with the Company's advertising agents, of advertisements for the architectural and trade press. Arranging photographic coverage of the Company's activities for publicity purposes. Liaison with appropriate technical bodies and with the architectural press. Origination and publication of press releases. Design of the Company's stands at Trade Exhibitions. All other matters concerning publicity.

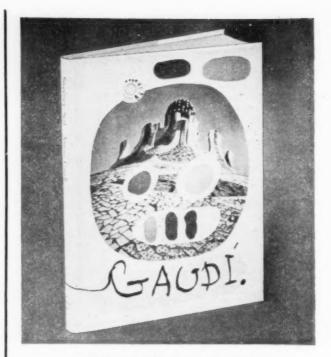
Age: 25-35.

Salary: £1,000-£1,500 according to age and experience. Experience and Ability: Essentially, a wide knowledge of the building industry, and of building details (including some years on the drawing board in an Architect's office), together with an enthusiasm for good design in its widest sense, and an ability to write clear and concise English. Preferably (but not essentially, as the existing arrangements for these matters are already well established) knowledge of print and reproduction processes, print-buying, typography and photography.

Conditions of Employment: There is a profit-sharing scheme for staff, holidays are good, as is the contributory pension scheme which provides free life assurance and dependents' benefits.

Prospects: This is *not* a dead-end post. The successful applicant who proves himself capable will be encouraged to develop in whatever direction his talents may lead him; this in addition to the possibilities which always exist for widening the scope of the position as presently specified. An average performance would justify regular salary increases, and the *above*-average performance which is sought would make the increases bigger.

Please write to the Secretary, Truscon House, Lower Marsh, London, S.E.1, for an application form which will be returned together with two specimens of recent issues of our literature.



ANTONI GAUDI

by Josep Lluis Sert & James J. Sweeney

In recent years there has arisen a widespread interest in the work of the great Spanish architect Antoni Gaudi. For too long Gaudi was regarded merely as an eccentric, an outsider: the true importance of the contribution he made to architecture was misunderstood; and art historians failed to allocate to him his rightful place in the historical development of the Modern Movement.

Writing with detachment and without prejudice, the authors trace Gaudi's life and work from his days as a student to his death in 1926. The picture which emerges is that of a wholly sincere architect-builder who lived only for his chosen work; one who quickly freed himself from the then accepted imitative styles to build in accordance with his own personal and highly original principles. The authors lay stress on Gaudi's constant reference to nature, his preoccupation with structural principles, his habit of making models which showed him exactly what loads and stresses his buildings would have to bear. A dramatic collection of photographs in monochrome and colour, together with many detail drawings, show that Gaudi's work richly deserves the attention it is now receiving.

Size 11½ × 8½ ins. 184 pages. 184 half-tone illustrations, 13 in full colour. 73s. 6d. net. Postage 2s.



THE ARCHITECTURAL PRESS

9-13 Queen Anne's Gate, London, S.W.1

BOROUGH OF SCUNTHORPE

BOROUGH OF SCUNTHORPE
(Population—67,000; Area—7,395 acres;
R.—2,565,541)
APPOINTMENT OF
ASSISTANT QUANTITY SURVEYOR
Grade A.P.T. 11 (£815—2960 per annum)
Applications are invited for the above appointment for which the commercing salary will be fixed on the grade according to qualifications and experience.
Applicants should be experienced in site measurement, interim valuations, final accounts and taking-off with a minimum of supervision.
Housing accommodation available, if required, approved removal expenses reimbursed in full; five-day working week.
Applications, stating age, details of present and past appointments, training, qualifications and experience, together with names of two persons to whom reference may be made, should be sent to F. J. Bowyer, Esq., Borough Engineer and Surveyor, Borough Surveyor's Department, Laneham Street, Scunthorpe, on or before 28th August, 1961.

SURREY COUNTY COUNCIL

SURREY COUNTY COUNCIL

Applications invited for appointment of ASSIS-TANT ARCHITECTS on Grade IV (£1,140-£1,310 p.a. plus £45 p.a. London allowance).

Must be A.R.I.B.A. and have had experience in preparation of drawings and specifications, and be capable of assuming responsibility for medium to large scale contracts.

Full details, present salary and three copy testimonials, preferably one from present employer, to County Architect, County Hall, Kingston, as soon as possible.

S8833

TOWN PLANNING ASSISTANT, A.P.T. IV
(£1.185-£1.355 inclusive) with recognised town
planning qualification. Experience necessary.
Full particulars and application form from:
Borough Surveyor, Town Hall, Ealing, W.5.
Closing date: 21st August, 1961.
E. J. COPE BROWN,
Town Clerk.
88854

SHROPSHIRE
There are vacancies for SENIOR ASSISTANT
ARCHITECTS in the County Architect's Department. Salary grade up to 4.530 p.a. N.J.C.
Conditions. Five-day week. A disturbance allowance or weekly separation allowance will be payable to a married man taking up the appointment.
Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl.,
A.R.I.B.A., A.M.T.P.I., County Architect, Column
House, London Road, Shrewsbury. 88678

COUNTY BOROUGH OF BOLTON
APPOINTMENT OF DEPUTY BOROUGH
ARCHITECT
Applications are invited for this appointment at a salary of £1,743 6s. 8d.—£1,993 6s. 8d. Terms and conditions, together with forms of application, may be obtained from the undersigned. Completed forms must be returned by 25th August, 1961.

PHILIP S. RENNISON.

PHILIP S. RENNISON.

Town Clerk

Applications are invited for an ARCHITECT in the Engineer and Surveyor's Department.

Candidates must be members of the R.I.B.A. and have suitable experience in the development of Council housing and other Council properties. The commencing salary will be fixed within the scale Grade A.P.T. IV (£1,140-£1,310 p.a.) according to qualifications and experience. The successful applicant will work directly under the Engineer and Surveyor.

The appointment will be subject to one month's notice on either side; to the provisions of the Local Government Superannuation Acts; to National Conditions of Service and to satisfactory medical examination.

The Council is prepared to consider, if necessary, the provision of housing accommodation.

Applications, giving the names of two referees, should reach the undersigned not later than first post on the 1st September, 1961.

A. B. GLASSPOOL.

Clerk of the Council.

Anlaby House, Anlaby, E. Yorkshire.

E. Yorkshire. 8871

COUNTY BOROUGH OF SOUTHAMPTON Applications are invited for the following appointments:—

(a) ASSISTANT ARCHITECT, Grade A.P.T. V (£1,310/£1,480), for duties in connection with an extensive and varied programme of housing development including multi-storey flats. Applicants must hold the qualification A.R.I.B.A. with wide experience in the design and administration of major building works.

(b) ASSISTANT ARCHITECT. Grade A.P.T. III/IV (£960/£1,310), for duties in connection with housing estate development. Applicants must have passed Parts I and II of the R.I.B.A. Final Examination. Commencing salary according to experience and qualifications.

The appointment is subject to N.J.C. conditions of service.

Housing accommodation available in approved cases and approval removal expenses reimbursable up to a maximum of £50.

Application forms from the Borough Engineer and Surveyor. Civic Centre, Southampton, returnable by Monday, 4th September, 1961. 8873

COUNTY COUNCIL OF THE WEST RIDING
OF YORKSHIRE
OFFICE OF THE COUNTY ARCHITECT
Applications are invited for the following
appointments. The commencing salary will be
fixed at a point within the scale commensurate
with qualifications and experience. Five-day
week operated.

fixed at a point within the work of the dualifications and experience. Five-day week operated.

**SENIOR ASSISTANT AND ASSISTANT QUANTITY SURVEYORS

A.P.T. V. Salary range: £1,140-£1,310.

Applicants for grades A.P.T. V and A.P.T. IV should have had experience in the preparation of Bills of Quantities, measuring for and adjustment of Boal accounts. Preference will be given to Associate Members of the Royal Institution of Chartered Surveyors.

JUNIOR QUANTITY SURVEYING ASSISTANT A.P.T. I. Salary range: £45-£315.

JUNIOR ARCHITECTURAL ASSISTANTS

A.P.T. I. Solary range: £45-£315.

Bishopgarth, Westfield Road, Wakefield.

Westfield Road.
Wakefield.

BOROUGH OF BASINGSTOKE
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the post of
ARCHITECTURAL ASSISTANT in the Architect's Department, where there is a variety of
interesting work. Candidates should have reasonable training and experience (including housing).
Salary A.P.T. I within the range £645-£815
per annum, according to experience. N.J.C.
conditions. Post pensionable. Assistance with
housing and removal expenses. Five-day week.
Details, giving qualifications, experience, etc.,
and names and addresses of two referees, to be
sent to the Borough Architect, Eric Alimond,
Dipl.Arch... A.R.I.B.A., Municipal Buildings,
Basingstoke, Hants., by 51st August, 1961.
R. PURVIS,
Town Clerk.
S8881

ARCHITECTS required by the National Coal Board in Edinburgh. Salary within the scale 1900 to 21,250 per annum. Applicants must be associate members of the R.J.B.A. (or. if not yet qualified, may be appointed in the first place as Architectural Assistants in a salary scale 1655 to 1935, or if exceptionally experienced, to (1,000). Applications, stating age, education, qualifications, experience, present post and salary, to Staff Department, National Coal Board, 3, Eglinton Crescent, Edinburgh, 12. 8872

to Staff Department, National Coal Board, S. Eglinton Crescent, Edinburgh, 12.

COVENTRY CORPORATION require SENIOR ASSISTANT HEATING & VENTILATING ENGINEER GRADE "A" (21,350-41,565) ence, to be responsible for design and contract supervision of heating, ventilating, air conditioning and other building services in a varied and interesting building programme, including Central Swimming Baths, Schools, College of Technology, Central Library, Law Courts, Residential College. "Bus Station, and Multi-storey Dwellings. Associate membership Inst, H. & V.E. essential.

Housing accommodation may be available. Interest free removal expenses loan up to £50.

Application forms from City Engineer, Council House, Coventry. Returnable by 21st August, 1961.

WEST SUFFOLK COUNTY COUNCIL
Applications are invited for the post of SENIOR
ASSISTANT ARCHITECT within Grade "A"
(£1,320-£1,365) Appointment subject to National
Conditions of Service; two months' notice on
either side; travelling allowance at casual user
rate; schemes for payment of removal expenses
and housing separation allowances in operation.
Application forms obtainable from the County
Architect, 13, Westgate Street, Bury St. Edmunds,
to be returned as soon as possible.

WELLINGTON, ONEW ZELIAND, CITY

wellington (New Zealand) CITY
CORPORATION
OF CHIEF PLANNING OFFICER
Applications are invited for the position of
Chief Planning Officer in the Town Planning
Branch of the City Engineer's Department at a
commencing salary which will be fixed at a point
within the range £1,945 to £2,245, according to
qualifications and experience.
Applicants should be associate members of the
Town Planning Institute and hold one other
professional qualification in Engineering. Surveying or Architecture. Consideration would be given
to applicants holding other recognised qualifications.

ing or Actions.

In applicants holding other recognised quantitions.

Six to ten years' experience in planning is desirable and this experience should preferably have been in either City Planning or implementation of Planning Schemes.

Copies of Conditions of Appointment may be seen at the office of this newspaper or will be airmailed upon application to the undersigned.

Applications to be contained in envelopes endorsed "Application for Chief Planning Officer," and addressed to the City Engineer, P.O. Box 2199. Wellington. New Zealand, close at 5 p.m. on Wednesday, the 18th October, 1961.

F. B. C. JEFFREYS,

City Engineer. 8962

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
Applications are invited for the following
appointments on the permanent staff. The
Quantity Surveying Division of the Department
undertakes work in all stages, from Cost Flanning to Final Accounts, and the programme is
both interesting and varied.
(a) SENJOR ASSISTANT QUANTITY SURVEYOR—A.P.T. IV (£1,140—£1,310).
Applicants should be Chartered Quantity Surveyors and the person appointed will be a
senior member of a team of Surveyors.
(b) QUANTITY SURVEYING ASSISTANT—
A.P.T. II (£315—£950).
Applicants should have passed the Intermediate
Examination of the R.I.C.S.
(c) QUANTITY SURVEYING ASSISTANT—
A.P.T. I (£645—£815).
Applicants should have passed the First
Examination of the R.I.C.S.
Application forms are obtainable from the
County Architect, P.O. Box 26. County Hall,
Preston, and should be returned by the 18th
September, 1961.

LINDSEY (LINCOLNSHIRE) COUNTY

September, 1961.

Biggs (LINDSEY (LINCOLNSHIRE) COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
North Lincolnshire is developing rapidly and the work in the Department is growing correspondingly and is of a most interesting nature. Lincoln and District offer pleasant living conditions, reasonable priced houses, good schools, proximity to the coast, and open country with two conditions, reasonable priced houses, good schools, proximity to the coast, and open country with two conditions, and the problems.

A PT 5 Salary 2566-21.140 ARCHITECTER 1. ASSISTANT. Experienced man required as middle member of a team.

B. APT. 1. 2545-2815 JUNIOR studying for R.I.B.A qualification.
C. General Grade at 21 years of age £420-£520 DRAIGHTSMAN with knowledge of building construction.

DRAUGHTSMAN with knowledge of building construction.

D. A.P.T. 2 6315—4960 ASSISTANT QUANTITY SURVEYOR able to abstract and take off for small works.

E. A.P.T. 2 6315—6960 BUILDING INSPECTOR, good practical knowledge and draughtsmanship for minor schemes of alterations and maintenance.

Commencing salary within the grade dependent upon qualifications and experience. Five-day week. Post Entry Training Assistance for study. N.J.C. Conditions of Service. Carvassing will disqualify and candidates must disclose in writing whether to their knowledge they are related to any Member of Senior Officer of the Council.

Applications stating post applied for, giving age, qualifications, experience, present post and salary and names of two referees to be sent to A. Ronald Clark. A.R.I.B.A., A.M.T.P.I., County Architect, County Offices, Lincoln, not later than 2nd September, 1961.

BOROUGH OF CHESTERFIELD

BOROUGH OF CHESTERFIELD
Applications are invited for the following appointments in the Borough Engineer's Department (C Bond, F.R.I.B.A., Chief Architect). The commencing salaries will depend on qualifications and experience:—
(a) SENIOR ARCHITECT, A.P.T. IV/V (£1,140)

(a) SENIOR ARCHITECT, A.P.T. IV/V (£1,140 — £1,480).

(b) ASSISTANT ARCHITECT, A.P.T. I/II/III (£9645—£1,140).

(c) ARCHITECTURAL DRAUGHTSMAN, Misc. Grade V (£685—£760).

(d) ASSISTANT QUANTITY SURVEYOR, A. Car allowance is payable for posts (a) and (b) and housing accommodation will be provided if required for posts (a), (b) and (c). A five-day week is in operation.

A substantial programme of capital works is envisaged which includes a swimming bath, high-ways depot, library and multi-storey flats. Chesterfield, which has a population of about 70,000, is situated bordering the Peak District National Park.

Applications stating age, qualifications, training and experience, appointments held with dates and salaries, naming two referees, to the Borough Engineer, Town Hall, Chesterfield, not later than Monday, 28th August, 1961.

RICHARD CLEGG.

BRITISH OVERSEAS AIRWAYS CORPORATION

CORPORATION
have vacancies for
QUALIFIED ARCHITECTS
with their Properties and
Services Branch at London
Airport.
Appointments are immediately available for
young enthusiastic Architects who wish to work
with a progressive, expanding organisation on
varied work at home and overseas.
Salary range £1,048 to £1.47 10s. per annum.
A contemporary outlook towards design and the
ability to handle both large and small projects
will be required. The successful applicants should
be prepared to spend short periods abroad with
appropriate allowances.
Application forms will be sent to suitable candidates who should apply in the first instance giving
brief detail for.
The Recruitment Manager,
London Airport,

B.O.A.C., London Airport, Hounslow, Middlesex.

MANCHESTER CORPORATION

ENGINEERS & PLANNERS

Grades JNC 'B' (£1420/£1670) and APT V (£1310/£1480)

Engineering appointments offer experience in an extensive programme of design and construction work including highway improvements, new major roads and bridges, main drainage, airport extensions and new roads and sewers on housing sites.

The Planning appointments offer practical experience in comprehensive redevelopment schemes in central areas and in large scale new residential development projects.

Applicants must be appropriately qualified.

Housing Accommodation and Removal Expenses

Applications giving details of age, qualifications, and experience, together with the names of three referees, to the

City Surveyor, Town Hall, Manchester, 2

CORPORATION OF LONDON

Applications are invited from Associate Members of the R.I.B.A. for the appointment of ASSISTANT TO THE SITE ARCHITECT on a large building project for 12 months duration, at a salary of £1,420 p.a.

Candidates should have had good general experience in the preparation of working details and of contract works and must be expeditious draughtsmen.

Applications stating age, appointments held and experience, together with names of two referees, to be sent to The City Engineer, Guildhall, London, E.C.2, by 21st August.

Architecture USA by Ian McCallum

SINCE 1950 AMERICA, a land of opportunity and a land of achievement, has attained a dominant place in world architecture. But it has remained largely unknown territory for want of a book that sets out to map the whole field.



Arcintecture USA remedies this omission by surveying the field in breadth and depth, studying not only the major architects in America today, but also their antecedents—the great pioneers and the social and historical developments that have carried their ideas to fruition. Here, in close enough juxtaposition to make comparisons possible and influences clear, are H. H. Richardson and Louis Suiiivan and Frank Lloyd Wright, the pioneers of the Middle West; Greene and Greene and William Maybeck, pioneers of the West Coast; Raymond Schindler, Richard Neutra, Gropius, Breuer, Mies van der Rohe, the Europeans who have made an heroic contribution to US architecture; Edward Stone, Philip Johnson, Charles Eames, Buckminster Fuller, Paul Rudolph and others who have helped to make modern American.

In Architecture USA, Ian McCallum has combined firsthand experience with extensive research to draw a group portrait of the most stimulating assembly of architectural minds in the world today.

Size $11\frac{1}{4} \times 8\frac{\pi}{4}$ ins., 216 pages, with 474 halftones and 90 line illustrations and a bibliography. 63s. net, postage 1s. 9d.

THE ARCHITECTURAL PRESS, 9-13 Queen Anne's Gate, SW1

Published in usa by reinhold publishing corporation, New York; and in australia and new zealand by horwitz publications, Syd.iey.

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
A vacancy exists in a newly formed group in
the County Architect's Department for a qualified
and enthusiastic ASSISTANT ARCHITECT with
a dominant interest in organisation and manage

a dominant interest in organisation and management processes.

The appointment will be within the salary scale
A.P.T. V (£1,310-£1,480) and application forms
may be obtained from the County Architect, P.O.
Box 26, County Hall, Preston, to be returned not
later than the 1st September, 1961.

A vacancy exists for a JUNIOR in the Office of the Architect, British Railways, Eastern Region. Applicants should have reached an educational standard for entry into the profession and the person appointed will be allowed the facilities of one day off per week to attend one of the Polytechnics. Saiary according to age. Five-day week. Applications should be made in writing to the Architect, Chief Civil Engineer's Office, King's Cross Station, London, N.1. 8879

ARCHITECT

Office, King's Cross Station, London, N. 8879

ARCHITECT
LANDS AND WORKS DEPARTMENT
GIBRALTAR
Duties: The design and execution of building
projects such as school buildings, housing (including multi-storey buildings), and public offices, and
re-development and slum clearance projects.
Qualifications: Candidates should be associate
members of the Royal Institute of British Architects with sound knowledge of design and con-

tects with sound knowledge of design and construction.

Terms of Appointment: On contract for one tour of three years with salary, according to experience and military service, in scale £990 to £1,729 and with gratuity of £25—£37 los, for each completed period of three months' service. Free family passages. Rented quarters if available. Generous leave. Local rates of income tax. Apply to Director of Recruitment, Department of Technical Co-operation, Carlton House Terrace, London, S.W.1, quoting BCD 112/18/02/E.2 and stating full names, age, qualifications and experience.

8905

SOUTH EASTERN ELECTRICITY BOARD

SOUTH EASTERN ELECTRICITY BOARD Applications are invited for the following appointments in the Surveyor's section at Area Board Headquarters, Hove, Sussex:

ASSISTANT ARCHITECT Salary £1,250 × £35-£1,355 under N.J.C., Grade 7. Applicants should be registered architects with experience in the preparation of schemes including showrooms, offices, stores and garages. Preference to applicants who are associates of the R.I.B.A. or I.A.A.S. Superannuable.

RCHITECTURAL ASSISTANT Salary £1,020 × £30-£1,140 under N.J.C., Grade 5. Applicants should have experience in the preparation of working and detail drawings for offices, stores, workshops, garages and showrooms. Preference will be given to those persons who are at intermediate level of an appropriate professional body. Superince and propriate professional body. Superince and propriate professional body. Superince in carrying out building and land surveys and be competent at levelling and in the use of a theodolite. The person appointed will be required to be a nead draughtsman and have the ability to prepare working and detail drawings for offices, stores, workshops, garages and showrooms. Preference will be given to those persons who are at intermediate level of an appropriate professional body.

Applications, quoting AJ and naming two

will be given to the mediate level of an appropriate mediate level of an appropriate body. Applications, quoting AJ and naming two referees and indicating which post applied for to Surveyor, Seeboard, 10 Queen's Gardens, Hove 3. Sussex, by 28th August, 1961.

GEORGE WRAY. Secretary. 8913

STAFFORDSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT VACANCIES ARCHITECTURAL ASSISTANTS, £815-£960 Intermediate R.I.B.A. required. ARCHITECTURAL DRAUGHTSMEN, £555-£625. Four years' experience in a similar capacity is required.

ARCHITECTURAL Processing a similar capacity four years' experience in a similar capacity four years' experience in a similar capacity frame with removal expenses, generous Post Entry Training Scheme etc. The Council has a scheme for loans to employees wishing to purchase their own houses.

Forms of application from P. Woodcock, F.R.I.B.A. County Architect, Green Hall, Lichfield Road, Stafford.

Closing date 30th August, 1961.

T. H. EVANS.

Clerk of the County Council.

8958

LANCASHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT
ASSISTANT ARCHITECTS, A.P.T. V (£1,310—
£1,480). (Starting salary according to experience.)
Applications are invited from qualified Architects of initiative, keen on design and modern constructural methods, to work on a large and

varied programme.

If appointed, applicants will be able to claim a disturbance allowance up to a maximum of £125, a facility offered by the County Council to over the expenses of removal and other associated

costs.

Application forms and details of appointment obtainable from the County Architect. P.O. Box 26, County Hall, Preston, returnable by the 25th August, 1961.

Competition

Competition

36s. per inch, each additional line 3s.

CITY OF JOHANNESBURG
REPUBLIC OF SOUTH AFRICA
ARCHITECTURAL COMPETITION
INITIAL GRUUP OF BUILDINGS AND
SITE LAYOUT. CIVIC CENTRE
The City Council of Johannesburg invites architects registered in South Africa and architects whose qualifications entitle them to registration, on application, in South Africa, to submit designs in two parts in competition for:—

(a) A new Municipal Office Block, City Council Suite and Public Reception Halls, comprising Part I of the Competition.

and (b) A Site Layout of the whole of the Civic Centre site, comprising Part II of the Competition.

The cost of the Group of Buildings in Part I is provisionally estimated to be R4,000,000-00 (£2,000,000).

Intending competitors are requested to the contractions and the competition are requested to the first many and the competition are requested to the competitions.

The cost of the Group of Buildings in Part I is provisionally estimated to be R4,000,000-00 (£2,000,000).

Intending competitors are requested to send their names and, if registered in South Africa, their registration numbers or, if not so registered, details of the qualifications which entitle* them to registration in South Africa, to the Promoter at the address stated below by 6th October, 1961. Such applicants for the right to compete shall agree to have their applications submitted to the Institute of South African Architects, whose decision in the matter of eligibility to compete shall be final and binding. Applications for the right to compete may be accepted after the abovementioned date, and will be similarly submitted for decision to the Institute of South African Architects. Intending competitors whose applications for the right to compete are approved, will immediately thereafter he sent the Competition Documents, in which the Full Conditions of Competition are set out.

An application for the right to compete must be accompanied by a deposit of R10-00 (£5), (cheques or money orders made payable to "The City Tressurer") which deposit will be returned to the applicant if his application is successful, on, if his application is successful, on the receipt by the Promoter of a bona fied design, or, if his application becaments and he has received the Competition Documents not less than four weeks before the closing date for despatch or handing in of designs.

to compete, on the return of the process of the form weeks before the closing date for despatch or handing in of designs.

Closing date for the despatch or handing in of designs is provisionally Friday, 8th June.

remiums of R3,000-00 (£1,500); R2,500-00 (£5). R2,000-00 (£1,000); and R1,500-00 (£750) offered by the Promoter for Part I of the Premiums

Competition, prizes to the total value of R4,000-00 (22,000) are affered by the Promoter for Fari II of the Competition.

The Board of Assessors for the Competition is

for Part II of the Competition.

The Board of Assessors for the Competition is as follows:—
Chairman—Mr. B. L. Loffell, City Engineer of Johannesburg.
Professor Sir William Holford, Architect and Town Planner, London.
Professor John Fassler, Architect and Town Planner, Johannesburg.
Mr. John Cowin, Architect, Johannesburg.
Mr. Norman Hanson, Architect, Johannesburg.
All communications in connection with the Competition are to be addressed to:—
The Town Clerk.
P.O. Box 1049.
JOHANNESBURG.
South Africa.
OR
In the case of documents to be handed in:
Room 418.
Lity Hall.
JOHANNESBURG.
Envelope to be marked: "Competition for New Civic Centre."
Requirements for Registration as an Architect in South Africa:
Applicants for registration must have passed the Final Examination for the Degree or Diploma or Certificate in Architecture of the Universities of the Witwatersrand, Cane Town, Pretoria, Natal or the Orange Free State: or the Final Examination of the Royal Institute of British Architects, or an examination recognized by the R.I.B.A. as equivalent to and exempting therefrom.

PUBLIC NOTICE

36s. per inch: each additional line 3s

UNIVERSITY OF MANCHESTER

THE NEXT SESSION COMMENCES ON TUESDAY, 10th OCTOBER, 1961.

Architectural Appointments Vacant

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra

A RCHITECTURAL ASSISTANTS required by J. Douglass Mathews & Partners. Salary range £700 to £1,000. Group system operated, giving opportunity for taking part in all aspects of work. Graded salary system. Annual honuses, described by the salary system. Annual honuses, applications to 3. Ebury Street, London, S. W. 1. TC6627

A RCHITECTS with busy practice in Brighton require ASSISTANTS with practical ex-perience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc.

ARCHITECTS in Watford, London and Glasgow require ASSISTANTS of Intermediate/Final R.I.B.A. standard for work on interesting commercial and industrial projects. Salary range: £800-£1,250. Quarterly bonus scheme. Noncontributory pension scheme. Apply Box TC8120 EXPERIENCED ASSISTANTS required in busy office with interesting and varied practice. Five-day week—Pension Scheme. Reply giving full particulars of experience, age, and salary required to: Godman & Kay, FF R.I.B.A. "Milnwood." 13, North Parade, Horsham, Sussex. "Milnwood." 13, North Parade, Horsham, Sussex.

A RCHITECTURAL ASSISTANT. Man or experience required for interesting country practice. L. H. Bond and R. W. Read, 44, Castlegate, Grantham TC'881.

LANCHESTER & LODGE urgently require
ARCHITECTURAL ASSISTANTS of all
grades. Work includes hospitals, laboratories,
universities, offices, housing, etc. Write full particulars or ring for interview: 10, Woburn
square, W.C.L. MUS 6845-7. TC7246

Loggie additional qualified STAFF for a variety
of new work including housing, schools, industrial and churches. Enthusiasm and initiative
important. Five-day week. Write giving full
details to 9/11, Richmond Buildings, Dean Street,
London, W.1. TC7051

details to 9/11, Richmond Dubling.

TC7051

A FEW vacancies still left for experienced and confident ARCHITECTS to fill positions of responsibility in a growing and varied practice with industrial and commercial work throughout the southern half of the country. Applicants must have initiative as well as architectural ability to carry through contracts up to £100,000, working directly with Principals but with minimum supervision. Apply in writing to Thomas Mitchell & Partners, 20 Bedford Square, London, W.C.L.

TC7443

TC7445

RANDING young office requires Intermediate Standard ASSISTANTS with talent
for interior design and co-ordination of
mechanical services. Good salary and prospects
for the right men. Galberg & Weal, 15, Cleveland Square, Bayswater, W.2. AMB. 3056, Sayas

TAUNTON Architect has vacancies for competent ASSISTANTS of R.I.B.A. Intermediate standard. Salary up to £990 p.a. according to ability. Please write to John G. Pearce. Architect, Castle Moat Chambers, Bath Place, Taunton, or telephone 81791 for appointment. S8855

ERNO GOLDFINGER requires several qualified ASSISTANTS with at least two years' experience to take part in a growing programme of interesting work which includes large office buildings, central developments, Local Authority housing, schools and private houses. Good salaries and scope for men with sound knowledge of construction. Phone HVDe Park 5657. TC8328

NORTH & PARTNERS, Chartered Architects, Maidenhead, have vacancies for Senior and Intermediate ARCHITECTTIRAL, ASSIS-

NORTH & PARTNERS, Chartered Architects,
Maidenhead, have vacancies for Senior
and Intermediate ARCHITECTURAL ASSISTANTS, Varied practice offers interesting scope
to applicants with ability. Five-day weekpension scheme, etc. Apply in writing, giving
details of experience, salary range expected, and
any other relevant information. TC3455

RYAN & NORMAN WESTWOOD require
ASSISTANT ARCHITECTS, Salaries un to
£1,200. Apply to 21 Suffolk Street, S. W.I., Trafalgar
1106, or 5 Balfour Road, Weybridge, Survey, 5085.

TC36600

E1.000 / £2,000 p.a. will be paid to experienced competent ARCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box TC9360.

2850-21,600 ARCHITECTURAL ASSISTANTS required. Long term prospects. Non-contributory pension and life assurance schemes. Five-day week. Telephone or write: Ronald Ward & Partners. 29. Chesham Place, S.W.I. Belgravia 3361.

S.W.I. Belgravia 3361

ARCHITECTS' ASSISTANT required, up to Intermediate standard, to work on large and interesting projects. Salary within range 2600—2800 Applicants must be good draughtsmen, with sound knowledge of detailing. Please write giving full particulars of experience, age, etc., to: F. W. Beech & E. Curnow Cooke, F. I.R.I.B.A., 15. Dix's Field, Exeter. TC8706

VOLVERHAMPTON. Norma & Dawbarn require an ASSISTANT in their Midlanda Office. This position could afford useful experience of small and medium size jobs in a young but expanding office, with possibility of later transfer to London Office or overseas if desired. Minimum two years' office experience required if qualified, four years' if Intermediate. Excellent working conditions, five-day week, three weeks' leave, I.V's, etc. Write or phone 7 Portland Place, London, W.1 (Langham 8011), or Heantun House, Salop Street, Wolverhampton (Tel. 27387).

INTERMEDIATE standard ASSISTANT needed by small progressive office for work on wide range of jobs. Offices in pleasant surroundings. 35-hour week ending daily at 4.30. Phone Riley & Glanfield at CHAncery 7328 or write to 6, Ray-mond Buildings, Gray's Inn. W.C.1. TC8624

mond Buildings, Gray's Inn, W.C.1.

ARCHITECTS

Work on interesting major schemes, able to take initiative and responsibility. Bonus, Pension and Life Assurance Schemes. Salary according to experience and ability, Pive-day week. Full particulars to Hadfield Cawkwell & Davidson, 17, Broomgrove Road, Sheffield, 10.

88701

SIR GILES SCOTT, SON & PARTNER require
ARCHITECTURAL ASSISTANT, qualified
or unqualified, with practical experience.
Interesting and varied practice, Salary up to
£1,000 plus luncheon vouchers. Write to 9, Gray's
Inn Square, London, W.C.L.

HOWARD V. LOBB & PARTNERS require
ASSISTANT ARCHITECTS, Salaries would
be between £750 and £1,250 per annum. Please
write to 20, Gower Street, W.C.L.

TC7789

TEEDS Building Company Architect require

write to 20, Gower Street, W.C.I. TC7789

LEDS Building Company Architect requires
ASSISTANT ARCHITECT for design and
detailing of full programme of housing, flats,
etc. Design ability important. Salary by
arrangement. Apply J. Waddington (Builders)
Ltd., 2, Alma Road, Leeds, 6.

ASSISTANTS required for varied practice—
Final standard, Guildford Office, Intermediate standard, Kingston Office, Barber,
Bundy & Greenfield, 5, Apple Market, Kingstonupon-Thames.

K EEN EXPERIENCED ASSISTANT required to share work with Senior Partner. Experient prospects and good salary with share of profits on work completed. Box 8861.

profits on work completed. Box S8651.

A RCHITECTURAL ASSISTANT required in Chief Architect's Office of a large multiple retail firm with offices in London. Should have sound knowledge of building construction and an interest in planning. Good salary, Five-day week. Staff Dining Room. Superannuation Scheme. Write giving details of age, experience and salary required. Box S8767.

A RCHITECT requires ASSISTANTS of Final and Intermediate standard for expanding practice. Write stating age, experience and salary required. J. D. Coxon, A.R.I.B.A., 14, Grey Street, Newcastle upon Tyne. Telephone 24746.

BITCHARDSON & McLAUGHLAN. 13, Mans-field Street, London, W.1, Langham 594, require ASSISTANTS in London or Watford, Enthusiasm and ability essential but need not be qualified. Salary and Luncheon Vouchers. Please write or telephone for an appointment. 88751

Write or telephone for an appointment. S8751

JERSEY, C.I. Busy practice needs ASSISTANTS of integrity. From Intermediate standard to experienced qualified men. Numerous jobs include private houses, blocks of flats, shops and hotels—often for exacting clients. Overwork offset by low taxation, sunny climate, surfing, yachting, etc.: the charming Brittany coast only 20 minutes away! Please write immediately giving full particulars to Box S8748.

A SSISTANT ARCHITECTS A SSISTANT ARCHITECTS
with Site experience, initiative and
design ability, required as GROUP
LEADERS immediately. Salary according
to experience. Qualification, although advantageous, not essential if other qualities
are present.
Raymond Spratley & Partners,
9, Hertford Street Park Lane, W.1.
GROsvenor 1532.

COVELL MATTHEWS & PARTNERS have vacancies for two Junior ARCHITECTURAL ASSISTANTS to work on central area projects. Five-day week. Salary £850 to £1,050. Please telephone REGent 3651.

A RCHITECT, with minimum five years' office experience, competent in design and administration of contracts. required for well-paid position of responsibility in London office. Apply Box TC8815.

DESLIE MÄRTIN and Colin St. John Wilson Le require JUNIOR ASSISTANT to work in heir office near Cambridge. State training, exercince, etc. Box TC8746.

Perience. etc. Box TC8746.

A RCHITECTURAL ASSISTANTS of all grades, particularly Intermediate standard, required on varied and interesting projects. High salaries will be paid in accordance with skill or experience of applicant. Lewis Solomon, Kaye & Partners. City 8811.

CAPABLE ASSISTANT, with ability and experience, to deal with work from sketch plan to final account stages, offered senior position with good salary in London head office of well-established firm. Apply Box TC8816.

A RCHITECTURAL ASSISTANTS.—Fairbrother Hall & Hedges, Edinburgh, require ARCHITECTURAL ASSISTANTS for interesting work. Current projects include secondary and primary schools, industrial laboratories, factories, local authority housing and flats.

Pleasant working conditions, pension scheme. Good salaries offered.

Apply: 27. Ratland Square, Edinburgh. 1. Telephone: FOU. 1251.

HARRY S. FAIRHURST & SON

require an able qualified

A RCHITECT
with experience at a basic salary of up to £1,500

There is also a vacancy for a qualified ASSISTANT ARCHITECT and for an ARCHITECTURAL ASSISTANT.

Varied and interesting projects are in han including urban redevelopment and specialise scientific buildings.

Apply in writing, giving details of educati and experience, to 55, Brown Street, Manchest

J. M. AUSTIN-SMITH AND PARTNERS

FULLY QUALIFIED ASSISTANTS

WITH minimum of four years' experience to run large contracts where design ability and forceful personality will be an asset. Apply giving all relevant information either by telephone or writing for an immediate interview. Holidays honoured. 29, Sackville Street, London, W.I. REGent 6183.

ERDI AND RABSON

INTERMEDIATE to FINAL ASSISTANTS mainly for Hotel, Motel and Public House works, capable of handling job from sketch design to final

Salary range £800—£1,200, excellent working conditions, 5 day week.
Telephone Cen. 9881.

14-15 Queenhithe, E.C.4.

88955

A RCHITECTS interested in rebuilding and altering public houses are invited to apply to fill vacancies for assistants of senior and intermediate standards in the London Architect's office of a well-known brewery company. Applicants should be capable of taking charge of schemes from initial survey to settlement of builders' accounts. Pension scheme. Write with particulars of age, experience, salary required to Box 83952.

NAPTON DEANE have vacancies for ARCHITECTURAL ASSISTANTS in all rades. Congenial conditions, interesting work igh salaries and opportunities for advancement (Ctoria 0053.

TADY ASSISTANT required in Kensington office with shorthand typing ability. Interesting general practice and exhibitions. Box

PANK OF LONDON & SOUTH AMERICA LIMITED. ARCHITECTURAL ASSISTANT (male) required for Premises. Department in London with possibility of trips to South America. Salary in range 41.500 to 42.000 p.a. according to qualifications. Apply by letter in the first instance to the Staff Manager. 40/66, Queen Victoria Street, E.C.4.

qualifications. Apply by letter in the first instance to the Staff Manager. 40/66, Queen Victoria Street. E.C.4.

ARCHITECTS AND ASSISTANTS interested in large industrial and technical buildings in this country or flats and offices in Nigeria are invited to Join Phillip Cranswick. AR.I.B.A. AM.T.P.I., at 36. Sackville Street, London, W.I. Holidays honoured.

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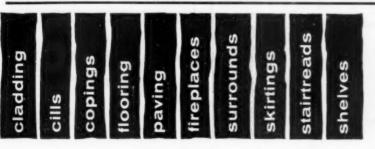
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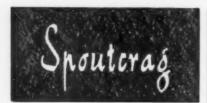
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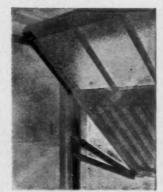
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Brochure from: ERNEST BATLEY LT

63g, Colledge Road, Holbrooks, Coventry

Tel: 87253



Interior of private garage, showing heavy-duty electrical operating unit for Glydover door, radio controlled from car.

Effortless by hand smooth by power.

Only a touch and the Glydover Garage Door rises effortlessly open, glides smoothly shut. Power operated, it exemplifies luxurious efficiency. Architects will find in Glydover a combination of good, functional design and all-weather durability.



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THE ARCHITECTS' JOURNAL for August 16, 1961

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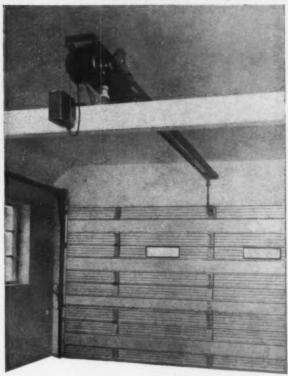
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Ferguson House Marylebone

Five storey office block Architect: Clifford Culpin, O.B.E, F.R.I.B.A, M.T.P.I

The sculptured panel at Ferguson House, Marylebone Road. by Estcourt J. Clack, F.R.B.S. depicts Charles Dickens with characters from some of his novels



In April of last year work was completed on Ferguson House on the site formerly occupied by Devonshire Terrace, the one time home of Charles Dickens.

The new office block comprises five storeys and basement and contains nearly 47,000 sq. ft. of office space with a staff restaurant and a car park for 24 vehicles at the rear. The frame is of reinforced concrete and the upper storeys are faced externally in London stock brickwork.

At ground level there are facings of Empire stone and rough-axed granite panels below the windows. The interior of the building, which is heated by a low-pressure radiator system from gas-fired boilers housed on the roof, has exceptionally clean lines. There are no beam projections and all services have been grouped in concealed centralised

The building was erected for the Laing Development Company Limited by John Laing Construction Limited.

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