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contents

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

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address. glossary of abbreviations of Government Departments and Societies and Committees

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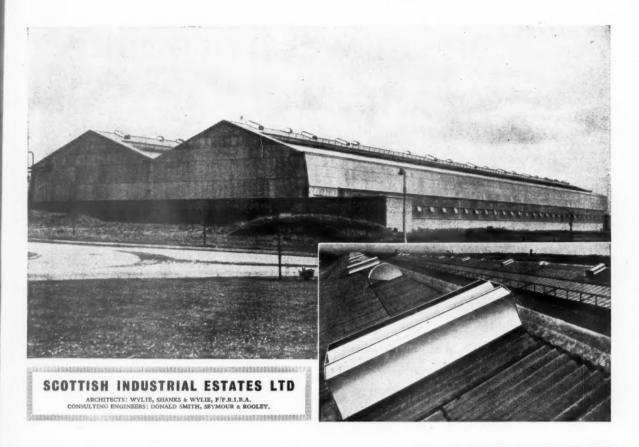
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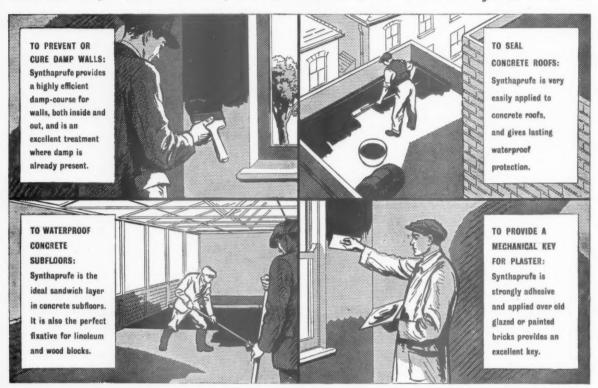
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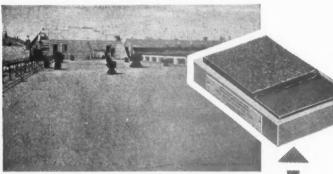
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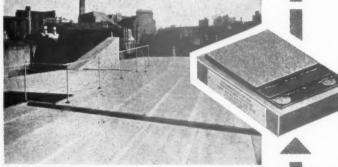
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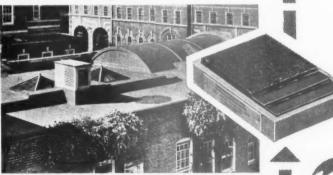
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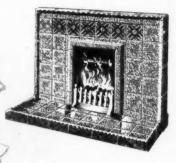
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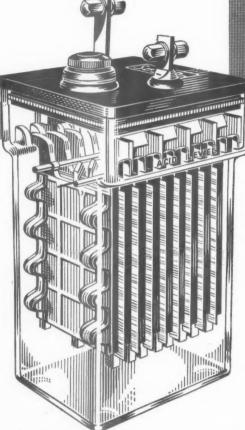
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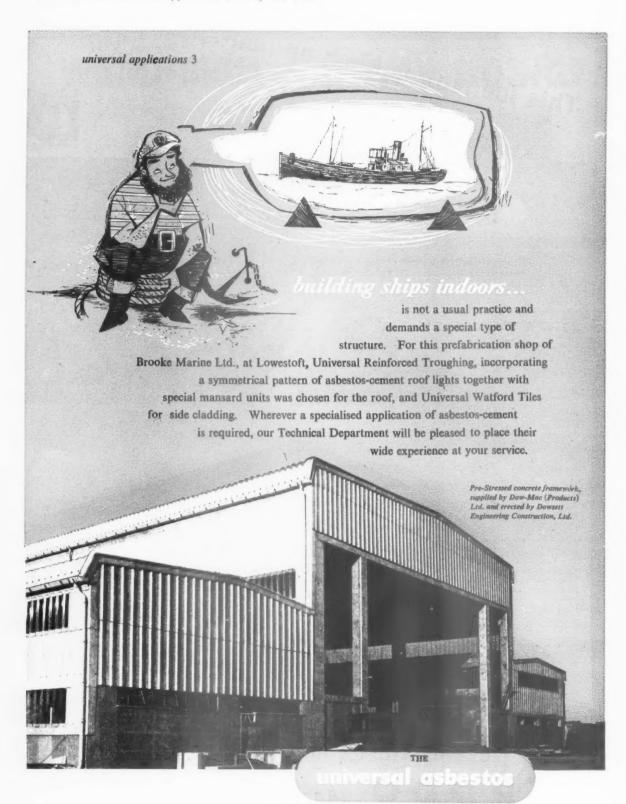
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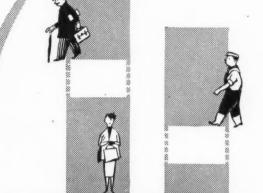
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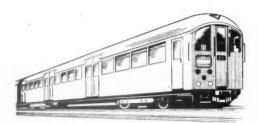
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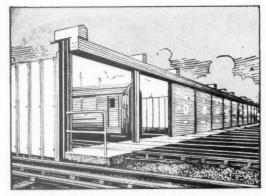
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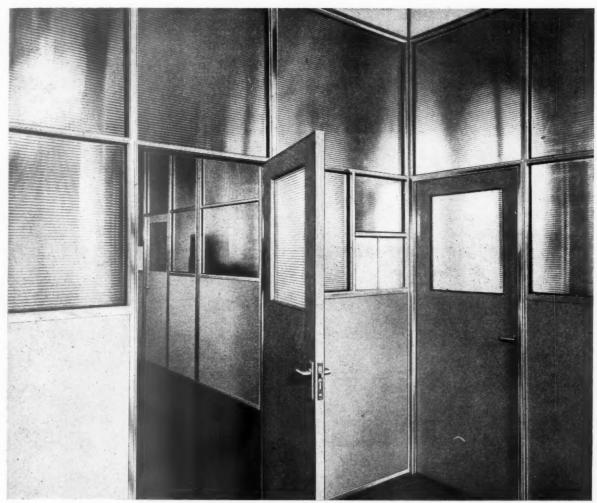
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WOOD'S GOOD-MAKE IT LAST!

'PENTA'

PRESERVES TIMBER-

OLD AND NEW!



The Royal Oak Inn, Barington, Cambs, after reconstruction, showing timbers treated with Monsanto Permasan.

Photograph by courtesy of Flowers Breweries Ltd., and Bertram Smith, L.R.I.B.A. (Architect) Gt. Shelford, Cambs.

Monsanto Penta is the most powerful wood preservative in commercial use. It protects against dry rot, powder-post beetles, furniture beetles, long-horned beetles and termites.

Penta is easy to apply. High penetration power enables most construction timbers to be treated by the simple cold bath method. Brush treatment will arrest attack by dry rot and insects and will prevent re-infestation of treated surfaces.

Clean, unstained and odourless, penta-treated wood can be painted or puttied. It requires no special drying and its excellent natural properties are unchanged.

PENTA is produced by MONSANTO in these forms

MONSANTO PENTA Pentachlorophenol (technical) for solution with oil; chemically stable, involatile, virtually insoluble in water; the most versatile wood preservative.

PERMASAN* Monsanto's own oil solution of pentachlorophenol, ready for application.

SANTOBRITE* Sodium salt of pentachlorophenol, water soluble; for sapstain control in newly-converted timber and for treatment of mould growth on walls before redecoration.

(*Registered Trade Marks)

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Cold-bath method of applying pentachlorophenol.

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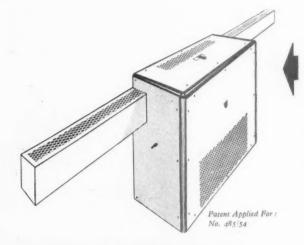
In association with: Monsanto Chemicals Company, St. Louis, U.S.A. Monsanto Chemicals (Australia) Ltd., Melbourne. Monsanto Canada Ltd., Montreal. Monsanto Chemicals of India Ltd., Bombay. Representatives in the world's principal cities.

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We can give you the conditions you are looking for; you can select from our range of Air Treatment equipment units that will create just whatever atmosphere you may require—where and when it is needed.

The Biddle range of Air Treatment equipment covers Heating, Cooling, Ventilating, Dehumidifying and Humidifying, and in each case models are available for industrial, domestic, commercial, medical or marine applications.





The Biddle "Wideflo" forced convection heater, offsets down-draughts and cold spots, often caused by large modern window schemes. The extended side ducts ensure a very wide distribution of warm air, and are available in lengths from between 6 to 10 feet (each side of the cabinet). The unit, which can be supplied with the ducts fitted in any horizontal position, between the one shown, down to skirting board level—is for use on steam or hot water systems.

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clean-is specified for efficient and economical roof lining.

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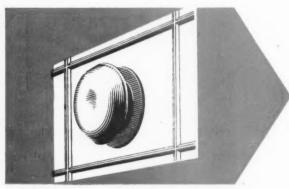
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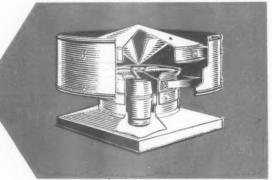
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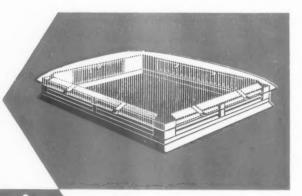
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Stairtreads Stairtreads Stairtreads

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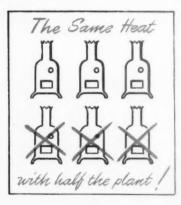
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230v AC	3.7	22.2	550VA

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Multi-plate boiling top—either a 24" x 16" boiling plate for stock pot or two 16" x 12" for large stewpans, or four 12" x 8" for smaller stewpans. Also two 8" x 6" for simpler stewpans. for simmering large pots.

6" clear hob space between boiling plates, and at each end

Special Creda finish hard-wearing, easy to clean vitreous enamel

Special under-hob structure isolates wiring from any spilt liquids. Full-sized crown (re-movable without lifting hob) collects spillage

Even oven heat-side and bottom elements give constant heat and a fully general purpose oven

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Full size roast pan — very rigid; and no joins to harbour

Full sealed oven - raised edge on door frame cuts into special door gasket - an adjustable door ventilator dissipates excess steam

2 stage oven thermostat-rapid heating, low maintenance consumption

Oven-door thermometers fitted if required

Control panel - fully illuminated, serviced from the front

Door handle—no insula-tion needed — the all-metal handle always remains cool

Base of oven has strap to give flat contact with floor. Adjusting bolts in

Doors open 150°. Robust stop prevents damage

Troublefree door seal remains unaffected by movement in transit and on site. Doors can be replaced without special labour to 'bed' door

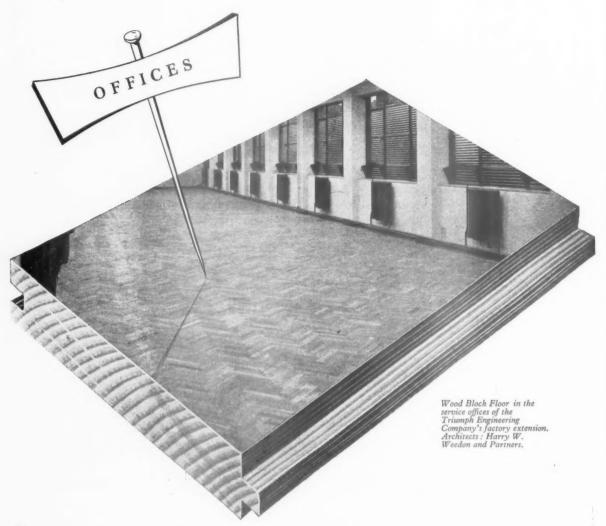
(CPQ() A HEAVY DUTY COOKING EQUIPMENT

and note! more than 3,000 items of Creda cooking apparatus have been supplied to School Feeding Centres during the past four years



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TD 64

copying

To claim that copying costs come down with AZOFLEX is a bold statement — but one that happens to be very true. AZOFLEX photo-printing machines and materials provide the ideal means of producing inexpensive, highquality facsimiles of drawn, typed or printed originals of all kinds - single or double-sided, translucent or opaque. Many important industrial, commercial and professional organizations have already proved the economy and effectiveness of the AZOFLEX process.

costs

The simplicity and cheapness of AZOFLEX are quite startling. With the Model 42/63 Mark II Combine startling. With the Model 42/63 Mark II Combine Printing and Developing Machine illustrated here, for example, one unskilled operator need only feed originals and copying material into the machine in order to produce a steady output of finished prints, dried, flat and ready for trimming and collating. Exposing, developing and print delivery are completely synchronized.

For descriptive literature about AZOFLEX machines and materials, please apply to Ilford Limited, Azoflex Department AZ3U, 104 High Holborn, London, W.C.1 (Telephone: HOLborn 3401). Demonstrations of the Azoflex process can be seen at this address and also, by appointment, at Ilford Limited, 22 Lloyd Street, Manchester 2 (Telephone: Deansgate 4233) and in other principal cities.

come

With the AZOFLEX method, money is saved because not only does it eliminate the need for specialist operators, but neither darkroom accommodation nor water and drainage services are required, and the materials themselves are inexpensive. AZOFLEX also cuts costs by speeding up output and by giving copies of greatly improved quality even from poor originals

down

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Backed by all the photographic experience and skill of Ilford Limited, AZOFLEX materials are produced in the world's most up-to-date diazo coating plant and are remarkable for their long shelf life, intense line and resistance to inding

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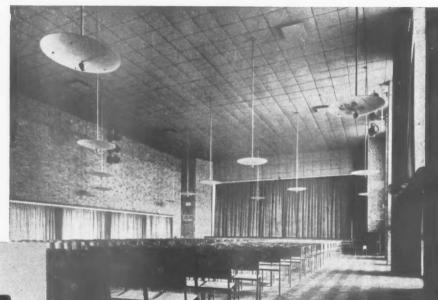
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With the "Veelap" system we supply lay-outs for approval, after which the boards are cut to size and the edges processed with Veelap. The boards are then numbered on the back to conform to plan and sent to site—in other words, a prefabricated sheet using dry technique finish. "Veelap" Insulating Board

"Veelap" Insulating Board may be nailed, using "Metco" Sheradised Gimp Pins, or P.K. screwed, or bonded to joists and/or battens. The "lap" takes up any movement of the boards when in place.



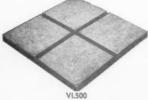
The "Veelap" system is now used in conjunction with our Metal fixing methods of suspended ceilings and walls (concealed fixing).

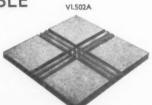
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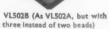
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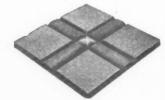
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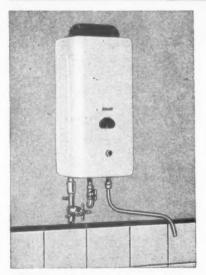
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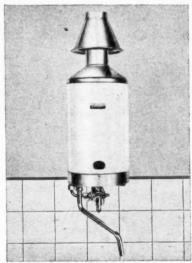
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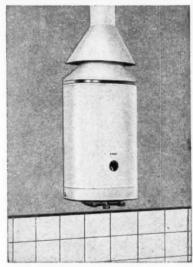
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- have single bank heat exchangers with widely-spaced fins to keep the flueways clear;
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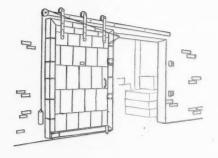
EWART M210. A multipoint water heater which will supply instant and endless hot water in bathroom, kitchen, cloakroom, etc.

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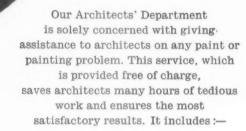
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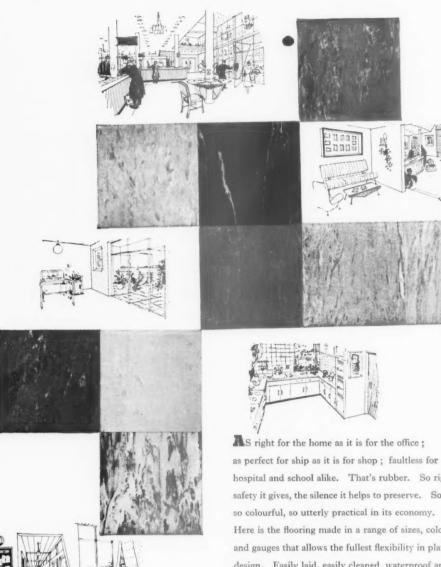
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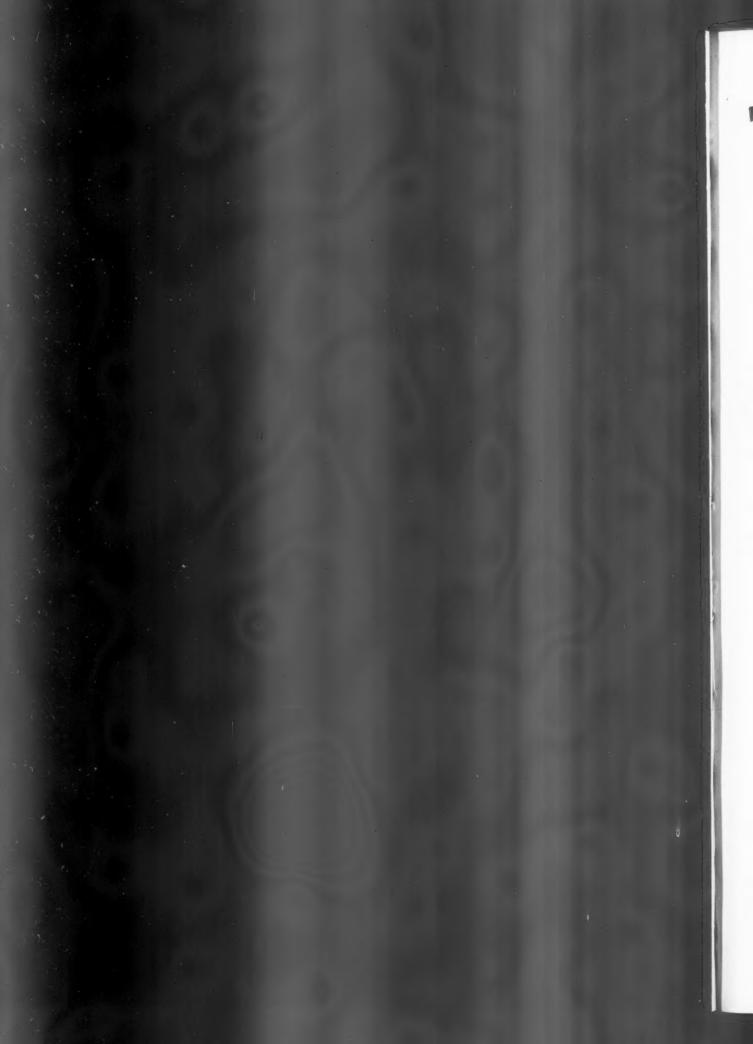


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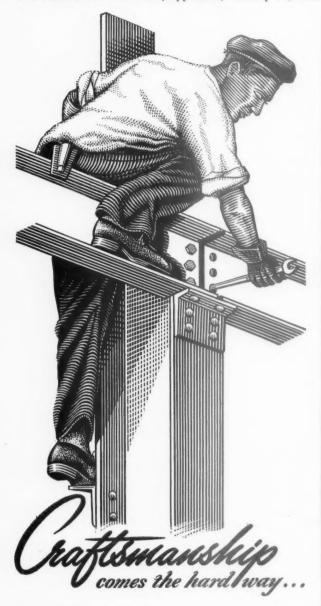
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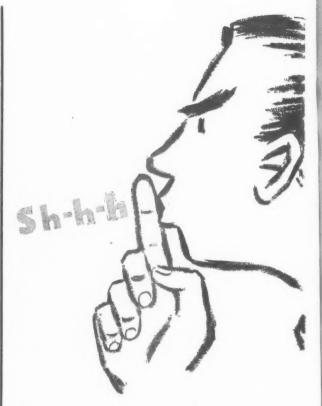
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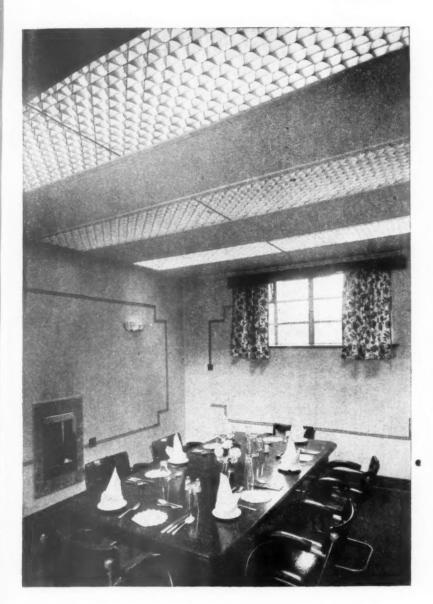
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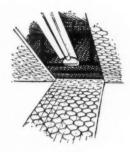
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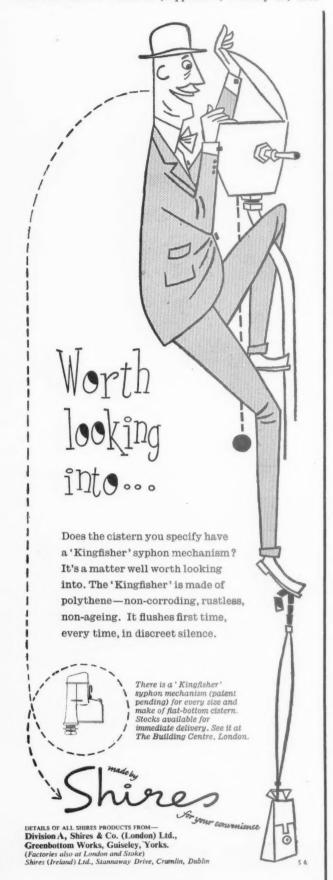
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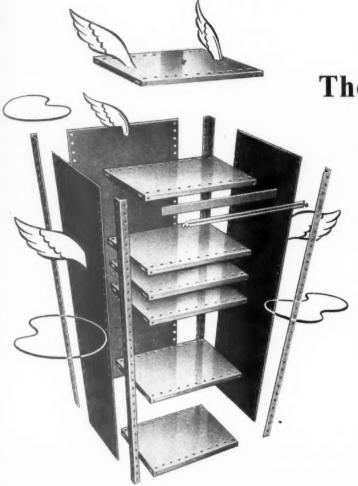
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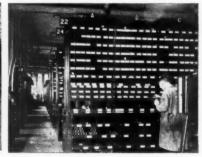
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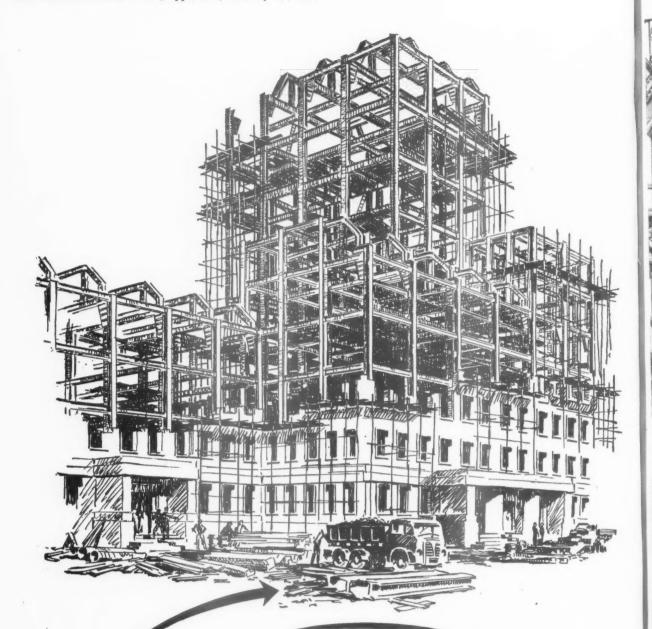




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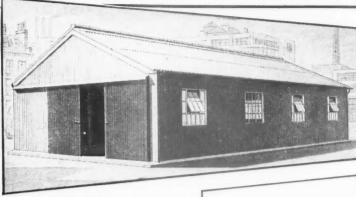
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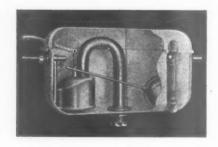


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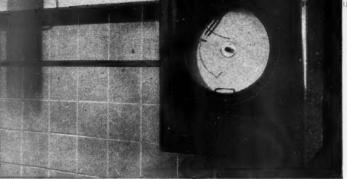


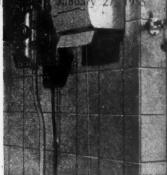
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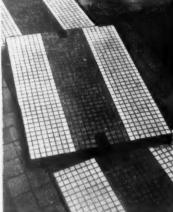






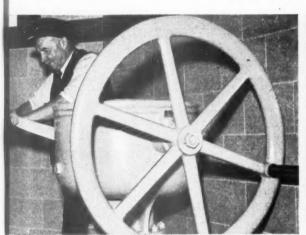
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This advertisement is one of a series featuring Canadian Douglas Fir, Spruce, Red Pine, White Pine and Pacific Coast Hemlock.

TIM 4



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This illustration shows one of the four eleven-storey blocks of THE ACKROYDON ESTATE FLATS which are fitted with CRITTALL STANDARD METAL WINDOWS POSITIVELY RUSTPROOFED by the hot-dip galvanizing process. Dr. J. L. Martin F.R.I.B.A. Architect to the London County Council.

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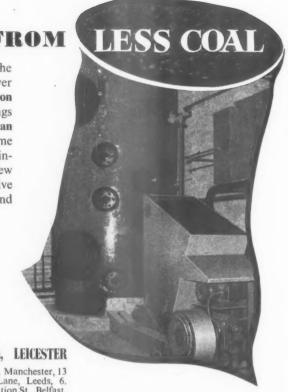
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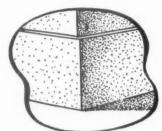


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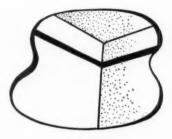
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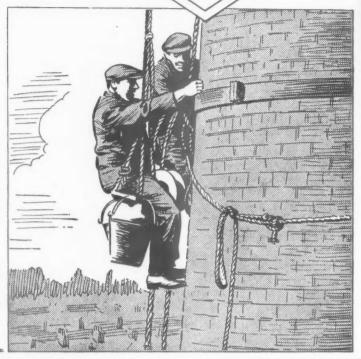
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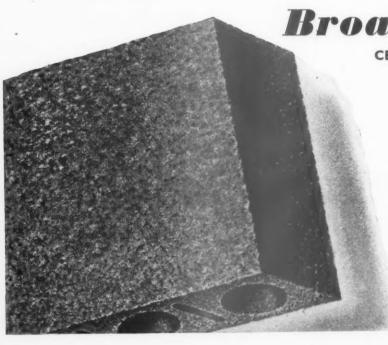
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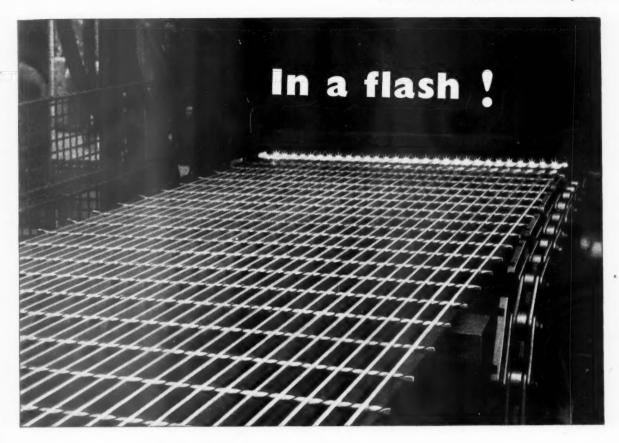
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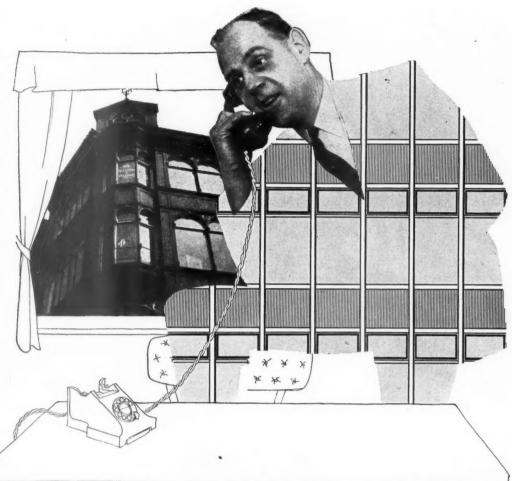
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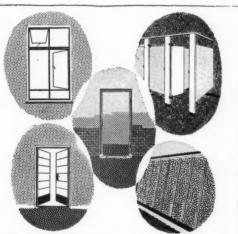
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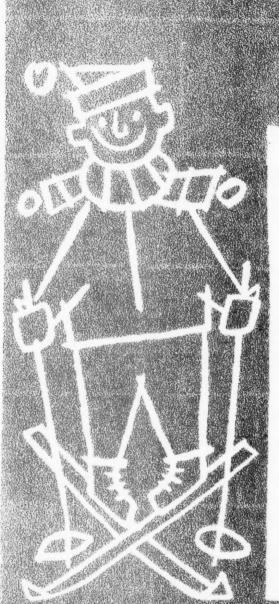
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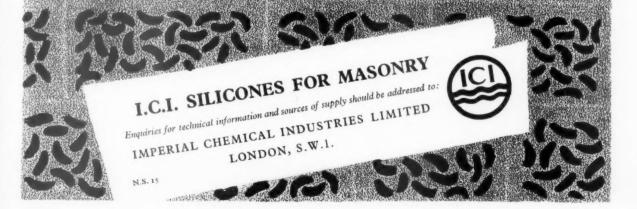
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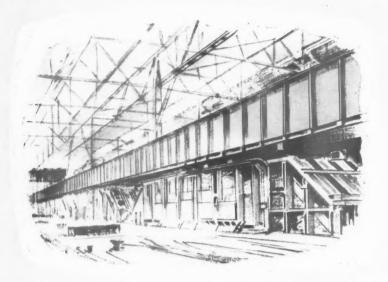
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TRAFFORD PARK MANCHESTER 17 THE ARCHITECTS' JOURNAL for January 27, 1955

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It is independent of other trades, and is a dry construction, light for its strength and therefore permitting economies in the foundations.

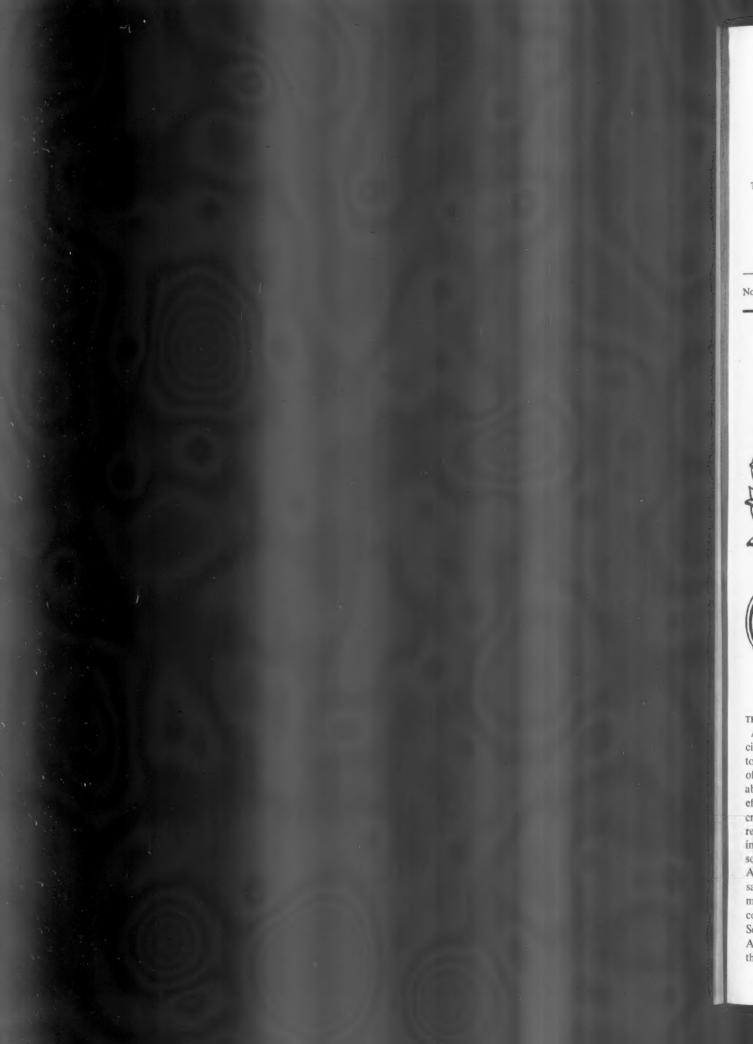
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THE LONDON ASSOCIATION

ASTRAGAL, who is occasionally criticized for making too many references to the AA, is often amazed to learn of the misapprehensions that exist about the organization, which is-in effect-the London Association. The criticisms are usually made because the reader (ex-Liverpool or Bartlett) imagines that I am referring to the school which the AA runs-not to the Association, which gives several thousand London and home counties members the service of lectures, dinners, conferences, and so on which the Allied Societies give to their members. But the AA gets no grant from the RIBA, as the Allied Societies do.

The topic of the AA occurs so often in this column just because it is such a very live organization as an Association, and because its school adds spice by being so unpredictable. It is odd to find architects imagining that the AA is only a society for old boys of the school or that there is an entrance fee to be paid. (The annual subscription, which it is now suggested should be increased from 3 to 4 guineas, must make the AA one of the cheapest clubs in town.)

At this moment the AA and its school are going through an unusual phase of bashful integration. An informal meeting last week produced, it appears, clear evidence not only of the potential value to both of student-member contact but also evidence of the pace the AA school still sets educationally, not withstanding achievements at Birmingham and elsewhere.

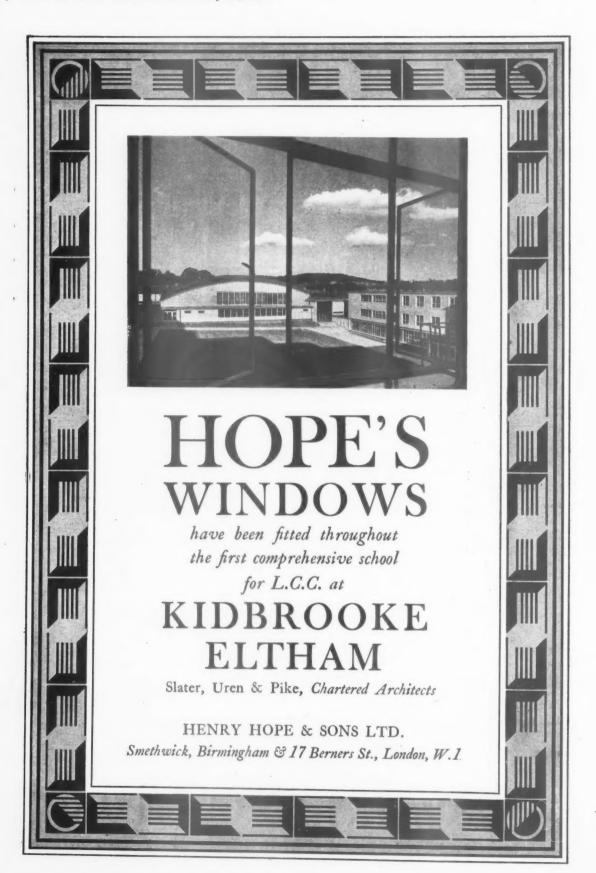
For instance, there is a large programme of office adoption for students in holidays, there is collaboration in design with, and the execution of design by, building schools. The public architect-whose viewpoint has been so long ignored-is represented on the staff. There is collaboration in design programmes with students of heating, ventilating and other consultant professions, and for history theses there is an advisory panel of a score of architectural historians. With post-graduate research and student-member study groups being planned to tie up with building and architectural research outside the AA, the innumerable advantages of such an organization of students and architects in the heart of things in London are remarkable. Let us

hope it serves as a challenge rather than as discouragement to similar societies and schools in the provinces.

PEACOCKS, PACKETS AND PLASTIC

Not certain whether packaging was a craft, an art, or a science, ASTRAGAL went open-minded to see it exhibited at Olympia, and came away openmouthed, having seen everything from a drag-line in a plastic coccoon to a three horse-power Benz of pre-Genevieve vintage-not to mention two live peacocks, aspirins climbing a spiral ramp of their own volition, and a fork-lift truck with power-steering and pedal propulsion. The acreage of ingenuity, smartness, inventiveness and logical breakdown of work-processes to be seen at this show make it vet another exhibition that puts the building-trade to shame.

The design of packets seems to be a vanishing art-though whether this is because transparent wrappers make exterior art-work unnecessary, or because the universal dullness of English package design forced manufacturers to invent the transparent wrapper, it is difficult to say. The only containers that really pleased ASTRAGAL'S eye were the beautiful functional-tradition pots and jars on the stoneware manufacturers' stand, and the forceful functional - technological oil drums, steel beer-barrels, paint pails and so on displayed by Metal Containers, Ltd.a mass of bold profiles in reds, royal blues, yelping yellows, ripe browns, and the rest of these marvellous colours which industry always seems to have on tap, but architects rarely. Otherwise it was transparent packets all the way.



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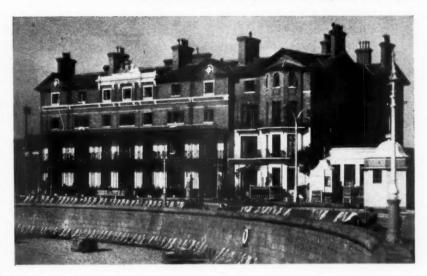
BACON AND BRETT

There are transparent packets at the ICA as well, with screaming cardinals in them, at the retrospective exhibition of that post-war phenomenon, Francis One of the evening papers Bacon. called this show "a new chamber of horrors," which is presumably the sort of response Mr. Bacon wanted his paintings to produce, but ASTRAGAL begins to wonder if the whole thing isn't becoming rather outmoded. When the six-foot canvases with their bottomless black backgrounds and expensive old-masterish frames first began to be seen around London, they certainly popped the eye and raised the hair, but a room-full of them simply looks like a hall of ancestor-portraits in the home of a family that prides itself on its black sheep, because it has nothing else to be proud of. Still, the exhibition will give the socialistrealist critics something else to moan about, and will confirm their suspicions about the ICA. This body is an easy target for carping at-if one can carp at targets-but on the whole it does an excellent job on its shoe-string.

More to your taste, perhaps, is an exhibition of paintings at the Adams Gallery, by architect Lionel Brett. ASTRAGAL found these conspicuously domestic pictures soothing and elegant. Mr. Brett is at his best when he has an architectural subject. Particularly good are two paintings of the Festival of Britain Exhibition under construction. How many other architects, one wonders, get West-End showings for their non-architectural activities?

GROPIUS UNRAVELLED

Before we leave the ICA too far behind let me get back to it and report -belatedly-that the Institute's discussion on Gropius was a lively and a distinguished affair. Leslie Martin was the perfect self-effacing chairman of the discussion, which was largely about Giedion's recent book on Gropius; Max Fry spoke of the impact which Gropius made upon English Architects in the early thirties; and Professor Pevsner gently rebuked Professor Giedion-as one historian to another -for leaving out some of the Master's less orderly conceptions, and spoke of the standing of the early buildings in the international development of the Modern Movement.





Some time ago ASTRAGAL published the top picture of a distinguished looking Victorian seaside hotel, The Royal, at Lowestoft, and criticised the town for permitting the hotel's ironwork to be shaved off. An elevation which was published at the same time gave an inadequate idea of what the architect (R. O. Bond, of Norwich) proposed to do to the facade, and ASTRAGAL thought it only fair that readers should be shown the completed work.

From the other side of the platform John McHale delivered a scholarly little piece on the origins and ultimate fate of Bauhaus educational ideas, and Reyner Banham did some skittish, but provocative, thin-ice work on the subject of Group practice and anonymity.

ASTRAGAL, for one, will turn to Giedion's book with renewed interest, now he knows that it should contain traces of humility and certainty (Max Fry), suppressed expressionism (Pevsner), pre-occupation with method (McHale), and an Un-American (according to Reyner Banham) inclination to Group-Think.

FAIR COMMENT

Group-thinking is something which ASTRAGAL tries to avoid, and he considers himself lucky to be outside the thundering herd of journalists who all have to chase the same hare—if herds do chase hares. It will, therefore, come as a surprise to you to find this column paying regard to Mr. Eisenhower's recent economic policy statement. But this statement did contain something which can be dealt with here without any eyebrows being raised—that is the ever-vexed question of representation at International Fairs and Exhibitions. In the middle of the fairly heated correspondence in The Times, which now



What the town would look like if our transport engineers followed the taste of our architects. (From Krokodil).

Volte Facade

There is probably no truth in the rumour that the author of this joke, which is given a whole page (in colour) in the Russian humorous magazine, <code>Krokodil</code>, is now on holiday in Siberia. This jibe at the Stalin wedding-cake style of architecture is, in fact, in line with Party policy, which recently did what <code>ASTRAGAL</code> has described as a "volte facade." It all began at a building conference, when the President of the academy of architecture was rudely interrupted by the First Secretary of the Party, Nikita Krushev. "Is it," Mr. Krushev asked, "quite impossible

to think in terms of what a building costs?" He was supported by an architect, Mr. Gradov, who—with official sanction—had hard things to say about "old-fashioned architectural methods." It is said that since Krokodil so neatly followed the new Party line, the chuckles over the simmering samovar have been drowned by the steady flick-flick of young Russian thumbs against bound volumes of the Architectural Review. There is nothing to add to this heartening story apart from a request, which ASTRAGAL reinforces opposite, that Mr. Punch will please copy.

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involves the MARS Group, the President has announced that his country is taking part in eleven trade fairs before the end of June, 1955, and has recorded the fact that at Bangkok in December, when the Americans decided to have a go at this fair business, their exhibit won first prize.

There is, of course, a British Trade Fair programme, but it does not include such jamborees at the rate of two a month; nor does it include such exhibitions as the Triennale in Milan, or any other show where goods may not be sold directly off the stand. Within the British definition that sort of thing is not a trade fair, but there is no guarantee that the US Department of Commerce is as narrow-minded as the Foreign Office and the Board of Trade. The mind boggles at the thought of General Motors presenting Motorama in a Skidmore glass-house at the next Triennale, but it has now entered the realms of possibility, and where will the gallant individualists who have kept up British participation be then, poor things?

MR. PUNCH. PLEASE COPY

As the hawk-eved readers of this equally hawk-eyed column will already know, the Soviet Party line on architecture is changing. This week we publish a full-page cartoon from the Russian magazine, Krokodil. And the caption underneath this cartoon (on the opposite page) includes a request to Mr. Punch to "please copy." For although Mr. Punch has shown an increasing interest in architecture in recent times, he has not dealt properly with the new national style, Insipid Georgian, which is cluttering up our cities—particularly the City of London. Our office blocks-unlike Russia's wedding-cake buildingsare, of course, dismally unfunny, and no artist would get much of a kick out of emphasizing their characteristics. Indeed when we compare them with those of the familiar Soviet style, we can almost envy the Russians: they have remained for so long at one extreme that their conversion will surely take them right over to the other one. Still, we should be grateful to Mr. Punch if he tried to laugh us out of our Portland-stone strait-jackets and our windows which go, in the well-chosen words of Sir Hugh Casson, "Bang, bang, bang, bang."

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The Editors

THE NATION'S CHEAP PROFESSION

S IR David Eccles, when opening Hertfordshire's hundredth post-war school, said that he admired Herts schools for two reasons: firstly because the county was practising the doctrine of team work in the building industry, and secondly, because the schools were fulfilling "both the requirements of style and of function." The team work referred to by Sir David includes, of course, the client. Hertfordshire has been fortunate in its architects—from chief to junior—but it has also been fortunate in its freedom from bureaucratic muddle: its educationists and committees have given their architects a free hand and have not tried to do their job for them.

The fame of these schools amongst architects is international, so it is encouraging to find that they are also appreciated by one of the most discerning of our politicians. (The Minister's speech, and a picture of the hundredth school appear

on pages 127 and 128).

It is to be hoped that these schools are also appreciated by the British public, because the nation has, with these schools, obtained a bargain. The structural systems evolved, and the related part-prefabricated systems now being developed at the MOE are unique. No other nation, not even the much-vaunted Americans and Russians have evolved "Meccano" systems of building of such cheapness, speediness of erection, variety, flexibility and architectural quality.

When British endeavours in other design fields-in aeroplane and car design, for instance—so often fail, it should be of some small comfort to the architectural profession, and even the nation, that one triumph in design still remains supreme. Supreme, and, of course, quite cheaply obtained. fordshire's hundred schools, which were the forerunner of this triumph, cost £12 million. The structural systems were and are being-evolved by a small band of qualified assistant architects, in the county office, with three-figure incomes led by a handful with salaries of about £1,000. chief architect administrator—policy maker and his deputies get more). In other industries responsibility for a large capital expenditure would not devolve on lowly-paid executives. The nation has acquired a bargain, and the creators of it, knowing now that their professional body feels powerless to help them get a more reasonable remuneration, can comfort themselves with the fact that they, like some other research workers, and some other assistant-architects, wear a modest martyr's crown.

The hundredth post-war Hertfordshire school—referred to above—will be the first building to be illustrated and described in the JOURNAL (on February 24) in a new and more useful method of presentation. Information about buildings chosen for publication in this new format will be neatly tabulated, and emphasis will be given to costs and to special constructional and planning problems.













The Journal here presents the first article by the Guest Editors (Costs) for 1955 (above, left to right: N. Stanley Farrow, a builder; Cleeve Barr, an architect; James Nisbet, a quantity surveyor; Ivan Tomlin, an estimator; E. F. L. Brech, a management consultant). We believe that their subject represents the most important problem now facing architects. In the thirties the architect based his claim upon a style which fitted modern needs. This battle is now, in essence, decided, but its outcome has revealed the further need for the architect to control the building technique which underlies style. This he cannot do unless he understands the economy of building.

THE COST OF BUILDING:

THE OFFICE BUILDING

In this first article, we tell the story of the building of an office block. It is not a real building, and although perhaps slightly caricatured, the facts of its story and the figures of its costs could all be true. So far as one building ever can be typical—our story is intended to illustrate and represent current practice, serving thus as a statement of the cost problem in building today. Some kind of statement of a problem must precede its more detailed examination, and we have chosen this method rather than a more abstract one, partly because it remains close to "real life" and partly because it shows the participants—client, architect, quantity surveyor and contractor in their working relationships. Our purpose is to outline a problem which is shared by all—not to apportion blame. The characters are: AUBREY BASILDON-JONES, an up-to-date architect in his late thirties, competent though not

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brilliant; HERBERT GROSS, a company director representing the clients, a manufacturing company which has occupied converted houses, but now has acquired a site for the new office building; BILL PRICE, a quantity surveyor, respected member of his profession although still youthful; SIDNEY BOXALL, a director of a building firm of long family tradition with a reputation for sound traditional work. Our characters are of course fictitious and, we hope, convincing. The drawings are by Kenneth Browne.

We enter the story, not from its real beginning but from the moment when the cost problem first makes itself evident. That is, when the tenders are opened.

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MID-APRIL: Basildon-Jones and Mr. Gross are met to open the six envelopes in the presence of the other directors of the company. Uppermost in Basildon-Jones's mind is the approximate estimate, which was £48,000 and about which more will be said later on. The tender form has a space for the figure and the contract time to be filled in. In anxious atmosphere these are read out:

Smith	£57,000	12 months.
Robinson	£60,000	9 months.
Brown	£60,500	to be agreed.
Roberts	£57,620	to be agreed.
Green	£63,800	to be agreed.
Boxall	£55,050	10 months.

Gross breaks the silence with the suggestion that all these amounts were more than the £50,000 limit originally discussed. At the questioning looks all round, Basildon-Jones sets out to explain that the higher figures were perhaps from contractors who were not really wanting the job because they were too busy. In the case of Green (a personal friend of Mr. Gross) he says that his experience is almost wholly in house building, and he therefore priced high because he was unfamiliar with this type of job. Basildon-Jones is, however, a little disquieted that the lowest tender is nearly 10 per cent. above his original estimate and finds some difficulty in saying anything about it, for he thought he had got a bit extra in hand to cover. He recollects that there had been an increase of 1d. an hour in wages, and that materials might be rising and that his p.c's were perhaps on the generous side. So with an appearance of confidence that he does not feel, he suggests that suitable reductions can be made and reminds the gathering that his original cube estimate was stated at the time to be approximate only-which by now is abundantly clear.

Discussion next turns upon ways of reducing the cost and becomes a flood of suggestion and counter-suggestion. The

directors seem to expect Basildon-Jones to be able to say there and then what their ideas would mean in pounds, shillings and pence, but he is quick to point out that this calls for a good deal of work on the part of Bill Price, the quantity surveyor. "And I wish now," he thinks to himself, "I had brought him along to this meeting." Notes are made, however, and a general notion of possible amendments survives for Basildon-Jones to take back to his office and work out. A telephone call to Bill Price elicits answers as vague as those he gave the Directors.

COMMENT: The significant points so far are quite obvious. Firstly, the tenders do not agree with Basildon-Jones's estimate; secondly, the tenders vary a good deal from each other; thirdly, Basildon-Jones seems to have considered cost only in terms of an overall figure in which, be it noted, he and Price have little confidence. It is a bit unreasonable of the directors to expect cost figures for their suggestions then and there, but their demands do serve to show that this aspect of the project is the one most neglected.

Perhaps the best way to throw more light on these points is to trace the story that leads up to tender-opening day; we shall then be better able to see how they have come about.

MID-SEPTEMBER IN THE PREVIOUS YEAR: Having acquired a site sometime previously, Mr. Gross, on behalf of his company, looks round for an architect. He has prepared a rough outline of the accommodation needed and with this he approaches Basildon-Jones who has been recommended as progressive and dependable.

The first meetings are mainly occupied with the drawing-up of a schedule of accommodation, visits to the site and the growth of cordial relations between Mr. Gross and Basildon-Jones; except on one point—time. Mr. Gross at first asks that work should start in about two months—the site was very expensive, he says, and is standing idle—but Basildon-Jones, not wishing to risk the goodwill so far established, finally compromises on mid-February as a tentative date although he would have liked a month more.

EARLY OCTOBER: With a site survey pinned to his



Aubrey Basildon-Jones, architect

board, Basildon-Jones begins to "explore the possibilities." He has suggested that a sketch design should be ready soon after mid-November, but is full of confidence bred by the encouraging thought of such a nice new job on his books. There is even a touch of idealism in the way he looks pensively through back numbers of the Architectural Review.

MID-OCTOBER: By this time a good deal of tracing paper has flowed under the benches and in general terms the floor plans and elevations have emerged (especially the elevations). In the process some anomalies and inconsistencies in the schedule of accommodation have come to light, and when Mr. Gross telephones for the sixth time to enquire progress, Basildon-Jones mentions these. There follow one or two meetings to sort them out at which (as Basildon-Jones had feared) Mr. Gross asks for other, more considerable changes—mainly additional small offices and another strong room. Indeed, it became clear that the original brief given to the architect was not so careful or so thorough an assessment of the company's needs as might have been wished.

Mr. Gross also enquires about the heating system proposed. Basildon-Jones had assumed solid fuel and



Herbert Gross, client

radiators as a well-tried method, but Mr. Gross presses the claims of oil-firing and ceiling-panels which he had seen on a recent visit to the States. Basildon-Jones thinks this likely to prove expensive, but cannot say how expensive. In any case he has much yet to do on his space-planning problems.

COMMENT: We must here criticize the company for not calling in their architect sooner. If he had been appointed when they first decided to build new premises there might have been less need for the site to remain idle and unproductive so long. More than this, the chances of drawing up a thoroughly investigated account of the company's needs would have been far better. As it is, poor Basildon-Jones's problem is now time, as we shall see.

EARLY NOVEMBER: The most gifted draughtsman in the office has, at last, finished the sketch design drawings, which include a perspective from a suitably dramatic viewpoint in the main street. Meanwhile the senior assistant has cubed the building from a rate given in a price book, checked by a telephone call to Bill Price the quantity surveyor, and has arrived at a figure of £47,800, which includes an assumption for the basement and site works, "plus a bit to cover."

COMMENT: We appreciate that Basildon-Jones is having the dickens of a rush in preparing his design, but he should have called in Bill Price much sooner and given more attention to the cost problem than merely to cube it out. The building is, after all, a financial investment, as well as a space-planning problem. The intricacies of its economy require surely no less control than its architectonic values. Of this, more later.

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This last stage has been rather hectic, for Mr. Gross now telephones every day to know when he can fix a board meeting. A date is at last agreed, the meeting assembles and Basildon-Jones takes the floor to expound his proposals. Everyone listens. Admiration is expressed for his drawings and, with a few doubters, for the appearance of the building. Basildon-Jones feels a certain pride but presently there come questions on points of detail: "Would it be possible for the Board Room to be at the front and not at the back?"; "How much would it cost to install a lift?": "There seems to be rather a lot of cloakroom accommodation; how much money would be saved by reducing this?"; "The main entrance does not seem important enough; couldn't it be made (the speaker hesitates) more prominent?" A serious-faced member rises to make a doubting reference to some new schools he has seen and to enquire about maintenance costs. "Is it the practice," he asks, "for architects to make any assessment of these, and if so, what would they be on this building?" Such is the general tone of the meeting. The questioning and discussion go on until tea is brought in and it is to be noted that while, on matters of planning or design, Basildon-Jones holds his own, on matters of cost or construction he is inclined to be non-committal. He cannot, he says, give answers here and now, and the directors concede that this is only reasonable: an architect's job is planning and design—cost is a matter for a quantity surveyor, whose appointment, incidentally, is on the agenda for this meeting.

This and other questions having been dealt with, Basildon-Jones emerges from what he feels has been a not unsuccessful ordeal. There are more amendments to his scheme than



" . . . sketch designs include a perspective from a suitably dramatic viewpoint . . . "

he had expected, and much investigation to be done to answer the directors' queries, but they did like the design. "Construction," he says to himself, as he arrives at his office, "is what I must concentrate on now."

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EARLY DECEMBER: A revised sketch design has now been prepared (less elaborately drawn than the first one) and approved by Mr. Gross—to whom executive authority has been delegated. The directors' amendments have brought about a net increase in the cube so the approximate estimate now comes to just over £48,000—a figure that the company accept.

The mid-February starting date being now out of the question, Mr. Gross presses for March, suggesting that they might get the building at least partly occupied by the following Christmas. Basildon-Jones laughs him out of this one but promises to crack on with the working drawings. His first move concerns the specialist work and in this he is rather undecided. Is it better to go to consultants or to specialist contractors? Both ways have their advantages but to save time he goes for the latter. Bill Price is appointed as quantity surveyor and although he, at first, asks for two months to prepare the bill, he finally agrees to six weeks.

EARLY JANUARY: The atmosphere in the office is not now so leisurely as it was in November last. The design stage having passed, the building is now the concern more of Basildon-Jones's assistants than of Basildon-Jones himself. The first hitch appears when the steelwork sub-contractors come up with the suggestion that the spacing of the frame and the column sizes could with advantage be amended—

because of the steel stock position. Working drawings are not too far advanced, so the proposal is accepted, although it means some wasted work on the external cladding panels and windows—with which Basildon-Jones had been particularly pleased. It is not long after this that the estimate comes in from the heating contractors and is found to be higher than Bill Price had expected. Discussion with the heating people reveal that, for the system specified, the duct positions shown were particularly awkward and it would ease matters if they could be moved. This entails some partition re-arrangement but Basildon-Jones, now anxious not to exceed the £48,000, agrees and on this basis the half-completed working drawings are revised.

Meanwhile Bill Price continues to take off from such drawings as are available—mainly advance copies of eighth scales. Rather than cause delay by waiting for the ½-in. details, he makes assumptions.

MID-FEBRUARY: They are now a month behind-hand, and Mr. Gross is becoming importunate in his demands for some show of progress. "I am waiting," says Basildon-Jones, "for Bill Price," which is not quite the whole truth, for Price has yet to receive back his filled-in questionnaire on fittings and finishes—to complete his bill. The smaller-scale drawings are very nearly complete when the finished bill—somewhat rich in provisional sums and overmeasuring—finally arrives.

EARLY MARCH: With the tender documents marshalled, a list of six contractors is agreed by Mr. Gross, Basildon-Jones and Price; one of the names—Green—being put



Bill Price, quantity surveyor

forward by Mr. Gross, whose friend he is. Time being now very short, fourteen days are to be allowed for tendering. Thus one morning six fat envelopes drop without warning through the letter plates of six contractors. Meanwhile the town-planning consent which had caused Basildon-Jones some trouble, at last came through.

COMMENT: We think that it would be fair to assume that neither Basildon-Jones nor Price are wholly satisfied with what has been achieved so far, for there are certain obvious faults: Price should have been appointed earlier so that his experience could have been brought to bear on the critical issue of the approximate estimate. Likewise, if the specialist contractors had been on the scene at sketch design stage, less time would have been wasted on the working drawings.

But the faults in the process go a little deeper than this. We have seen that the cube estimate was to get Basildon-Jones into trouble later on, for it is too much a hit-or-miss method to be used for so important a purpose, particularly for this class of building. It seems to us that when the distribution of space and the disposition of structural elements is being planned, there should be some corresponding attention given to the distribution of costs in the building. As things stand, all we have is what quantity surveyors wryly call a "guestimate" of total cost. This criticism of ours obviously begs



Sidney Boxall, builder

many questions; questions which will occupy us a good deal in later articles. For the moment we must leave them, but before we allow the story to continue there are two other items which call for comment.

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When Bill Price suggests (rightly) that the heating estimate is high he is judging by his experience of prices in other jobs. A great deal of sub-contracted work is not normally measured by a q.s. and thus the breakdown of costs is not known—except perhaps to the sub-contractor himself. Thus architects and quantity surveyors are really in the dark as to the economy of sub-contracted work; they are illequipped to design so that it may be most fruitfully employed in the context of a complete building.

The second item concerns Mr. Gross's question about the heating system and the director who asked, portentously, about the maintenance costs. Both these relate to the problem of the relationship between capital and running costs, a problem which has not figured very prominently in Basildon-Jones's work so far. Poor Basildon-Jones has been working at pressure to achieve what has been done, but if the economy of the building became an important and recognized part of its preparation, this kind of question would have to be included.

We now take up the story in a less familiar context, namely that of the contractors' offices.

The bills have been received and the accompanying letter hurriedly scanned for the sending-in date, which is fourteen days hence. It is now mid-March and the estimating staffs are all heavily committed.

The story is staged mainly in Boxall's office, since he is the contractor eventually to be selected, but first we must look in at the higher tenderers. Basildon-Jones was right when he suggested that some of these men priced high because they were too busy to want the job, but only partly right. Brown had not worked for Basildon-Jones before and through past experience was rather wary of unknown architects. He had lost money on jobs where the architects had been unable to make decisions and stick to them, or had kept him waiting for drawings, or had contested variation claims on principle. He was now a cautious man, and priced high to cover eventualities. One other high tenderer (Robinson) was not familiar with the area where the office building was sited, and being uncertain of obtaining local labour, also priced high. A third (Green) had tendered only because he was a friend of Mr. Gross and did not want to offend, although his regular work was house-building.

MID-MARCH: Back now in Boxall's office we find the estimator first looking quickly through the bill to get some idea of the job. Later on, when he was less pressed for time he began to go through it page by page extracting as he went those items that would be sub-contracted. He noted also the provisional sums and those items, the meaning of which was not clear to him. Of the latter there were rather a lot, indeed the bill as a whole did not inspire confidence in a harassed estimator. "I wonder," he says to himself, "what the drawings will be like?"

In the intervals between interruptions, he manages to get to the end of the bill, and, armed with his notes begins to set going enquiries for his sub-contract quotations. For speed he telephones some of them but at the words "... by next Tuesday if you can make it please..." he gets some doubtful answers. It is becoming clear that he would not get very keen prices.

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"These architects . . .!" he began, putting on his coat to visit that gentleman, but before he could finish, a telephone call summoned him to another site, to a bonusing scheme crisis. By the time he manages to get round to Basildon-Jones's office the fourteen days are nearly up. He is shown into the drawing office where the eighth scales and details are fished out for him. The answers to his queries are not all to be found—the assistants do not seem to appreciate an estimator's problems—and some of the provisional sums remain unspecific. He is just beginning to get the hang of the job when another contractor's estimator turns up and he is asked-"Will you be very long?"

Back in the office next day, he finishes his pricing. There is no time to ponder very long over his rates, so that many of his prices are based on previous jobs or out of his head. As for consideration of the way in which they could tackle the job if they got it—this was now out of the question. In any case it was an ideal about which Boxall himself was sceptical. "Of all the building work that we tender for," he would say, "we're lucky if we get 10 per cent. of it; so why waste time planning how you will do it?" Some of the sub-contract quotations have now come in; the remainder, since it is Friday night, will have to be assumed. The visit to the site has been rather frustrating, for the previous owner is still in occupation, has not been warned of possible visits, and is a little hostile to the idea of digging holes without some written warrant. As a precaution the estimator prices foundations fairly fully, including for planking and strutting to trenches in case there was bad ground. This also will boost the value of the first certificate.

COMMENT: Boxall has arrived thus at a figure of £55,050, and his, as we have seen, is the lowest tender. This is the price of the office building, but clearly it does not represent the most economic cost. This is evident in the instances where

the actual work to be done-the building operations-have not been adequately visualized. The foundations are a case in point. If trial holes had been dug, a fairly reliable prediction of what was necessary to support the building could have been made and priced. As it is, the worst eventuality has been allowed for, nor is it likely that the other tenderers have assumed the same conditions, so the tenders are not truly competitive.

A number of the provisional and p.c. sums have left Boxall's estimator in the dark as to what will be required, so again he must make assumptions which may not prove to be correct. but he cannot assume too generously for he wants to keep his total figure as low as possible. His own sub-contract quotations do not represent the keenest prices possible, for the sub-contractors' estimators are as rushed as he is. It is not only the time shortage that causes the trouble, but the lack of warning that the bills are coming.

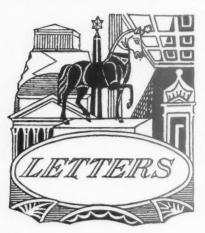
The more serious consequence of the hurry, however, is that Boxall's staff are unable to consider the office block as a building problem—are unable to assess the relative merits of ways in which it might be tackled. This question of the actual building operations is vital to the cost problem. indeed we have already implied that it should have received more attention when the block was being designed. But for the moment let us suppose that there had been more time for Boxall to picture how the building might be tackled, and that the bill before him had been better prepared. Even so, he is poorly equipped to see the building project in three dimensions, for, except for his brief look at the drawings in Basildon-Jones's office, he has only the measured quantities of material and labour. We sympathize with Boxall's scepticism about time spent in considering methods, but it is unfortunate that this, which should be the key thing in tendering, receives so little attention.

With our next article we shall take up the story at the point where we began it—Basildon-Jones returning to his office from the board meeting at which the tenders have been opened.

(To be continued next week.)



... not now so leisurely as it was in November last."



" 48 London Architects" 34 Members of the County Architect's Dept., Derby David 7. Dupree, A.R.I.B.A.

An Architects' Union

SIR,—The mountain has laboured, and brought forth a mouse. After more than a year of thought, the RIBA Council has a year of thought, the KIBA Counter has reached four decisions, of which the first three leave us precisely where we were at the start. The Institute will not sponsor a new organization; it will not give its support to any one existing organization; and it advises members to join whatever existing organization seems appropriate to their job which advice is no more helpful to the many assistants in local government, who know how hard it is to make their tiny professional voices heard in Nalgo, than it professional voices heard in Nalgo, than it is to those in private practice, who cannot even find an appropriate organization. The fourth decision, therefore, is the only positive one:— "The Royal Institute will proceed actively to explore alternative means of attaining the agreed objectives," etc. But have not decisions of this type quite justifiably provided the basis for many of the boariest old iokes about hureaucray? hoariest old jokes about bureaucracy

We have waited impatiently for the Council's decisions since the questionnaire results were published last May. And here we are, still waiting for some real decisions, while the Council "actively explores." What less could it do?

The questionnaire revealed that at least 6,000 members were in favour of a new organization, if it was set up and sponsored by the RIBA. Presumably these 6,000 would be equally in favour of an existing organiza-tion if it were supported by the RIBA. We, who were among them, felt that if the RIBA would give material as well as moral support to such an organization, this would be one way of getting more for our £4 4s. annual subscription. We believe that there annual subscription. We believe that there is a widespread feeling among members in salaried employment that they are not getting their money's worth; and the complacent defence of the status quo in the Council's letter of January 4, which blandly ignores the many sensible points made in the summarized report of the Salaried Members Committee sent out with the questionnaire, will not have changed this feeling.

That report made it perfectly clear that the proper representation of members and students in salaried employment, for the purposes of negotiations on conditions of service and salaries, requires an organization registered as a Trade Union. It stated that the RIBA's constitution as a learned body prevented it from doing this job properly. If the Council accepts this conclusion

(and it has not openly rejected it) but deems it unwise for fairly convincing reasons to form a new TU organization, then it should clearly give a lead to its members by sup-porting one that exists. With this aim in view the Council ap-

proached the ABT as being the most likely "tool for the job." But "because there appeared to be little prospect of the ABT achieving in the future any more substantial recognition in the established machinery than it has achieved in the past 25 years "—and for no other stated reason—the Council is not prepared to back the ABT or recom-mend its members to join it, even though its "requirements as to exclusive membership could possibly be met in the course of time" by the ABT.

Surely RIBA support would itself do more than anything else to cancel out the Council's one and only reason for not giving that support—by greatly strengthening the ABT's claim to recognition as the appropriate representative body of the profession for all negotiating purposes? And if one guinea out of the four went from the RIBA to the ABT for any RIBA member who joined the ABT, we should indeed be getting something more for that formidable four guineas.

"48 LONDON ARCHITECTS"

SIR,—With reference to the circular letter on the subject of a Union for salaried architects which the RIBA Council has circulated to its members, we should like to make the following comments:

(1) The Council's interpretation of the results of the ballot is completely unreasonable. No promoter of a ballot is entitled to make any inference about the views of those who abstain from voting. Therefore there is a clear and unequivocal majority in favour of forming a new negotiating body to represent the interests of salaried architects.

(2) It may be presumed that those who voted in favour of the proposal would join an association of salaried architects, if it were formed. In addition to these, there are regis-tered architects who are not members of the RIBA, and some of these could also be expected to join. It is clear that the initial membership of the new organization would be by no means as insignificant as the report implies. Furthermore, any lack of experience during the early days of the new organization would be more than offset by the enthusiasm that would be engendered by the birth of the first negotiating body devoted solely to the interests of architects

(3) We disagree most profoundly with the suggestion that our interests will be best served by our being members of a "multiorganization appropriate to our particular field of employment. Most of us are, and have been for some years, members of one such organization or another, and have found that they do not do anything to en-hance the status of the architec:ural profession (and in fact they cannot be expected

(4) Finally we are of the opinion that a new organization is urgently required to raise the standing of salaried architects, and we feel sure that such a result would at the same time add to the dignity and authority of the RIBA, as well as to that of the architectural profession as a whole.

34 MEMBERS OF THE COUNTY ARCHITECT'S DEPARTMENT.

Derby.

Scholarships

-Your comment on the organization of the Victory Scholarship appears to be hardly in accordance with attacks you have made at other times on the competition system in general and, furthermore, is

rather less practical and realistic.

The suggestion that approximately a dozen students should, on the basis of an esquisse design prepared in a single day's frenzy, carry on to prepare constructional drawings

and details of mechanical and other services in excess of the present requirements, with an incentive of no more than £150 for one of them and with no chance of eventual building, is really asking too much of any student who already, under the present system, devotes a minimum of three months in solitary labour.

To extend his responsibilities beyond this

would, far from increasing realism, have the reverse effect and confront the unfor-tunate twelve with a problem of a size and complexity before which most qualified complexity before which most qualified architects of wide and long experience would blench without the assistance of technical consultants

In short, for the RIBA to accept your proposal would be far more than the small step you suggest. Without accompanying reorganization of the regulations, it would in fact turn the whole competition into a farce. If constructional and services details are necessary in order that the jury shall not have the wool pulled over their eyes by able presentation, then at least allow the student the same facilities that

a practising architect enjoys.

At present the whole programme is unrealistic, the esquisse the most unrealistic part of all—need it be? The subject is hypothetical—must it be? Two other necessary reforms are that the criticisms are for most part inadequate and that the unfortunate eleven receive no compensation for their efforts save the honour of having been finalists. This may be enough for them, or, it may not. That is for them to decide, but should the RIBA assume that that is enough?

I agree that if realism is really so important reforms are necessary, but not in the direction you propose.

Alternatively, let's leave it substantially as

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London.

Brittle Fracture Problems in Steel Contruction. Talk by G. M. Boyd. At the struction. Talk by G. M. Boyd. At the ISE, 11, Upper Belgrave Street, S.W.1. 5.55 p.m. January 27

p.m. English Church Treasures. Exhibition in the Great Rooms of Messrs. Christie's, 8, King Street. St. James's, S.W.I. Admission 2s. 6d (after 5.0 p.m. 1s. 6d.). Weekdays 10.30 a.m.—6.30 p.m. Sundays 2.30 p.m.—5.30 p.m. UNTIL JANUARY 30 Management of Housing Estates. Talk by Forum, 28, King Street, W.C.2. 6.30 p.m.
JANUARY 31

President's Address to Students and Presentation of prizes. Criticism by Raymond Erith of work submitted for Prizes and Studentships. At the RIBA, 66, Portland Place, W.1. 6 p.m. FEBRUARY 1

Exhibition of Prize Drawings. At the RIBA, 66, Portland Place. Monday to At the Fridays 10 a.m.-7 p.m. Saturdays 10 a.m. -5 p.m. UNTIL FEBRUARY 1

English Artists in Rome in the 18th Century. Lecture by Brinsley Ford. At the Courtauld Institute, 20, Portman Square, W.1. 5.30 p.m. February 1

The Task before the Building Industry.
Government film at the BC, 26, Store Street. W.C.1. 12.45 p.m. FEBRUARY 2

Italy: an Appreciation of Post-war Architecture and Engineering Development. Talk by Bryan Westwood, Joseph Emberton and Felix Samuely. At the AA, 34, Bedford Square, W.C.1. 8 p.m. FEBRUARY 2

"Open Forum—Improvements and Conversions." J. E. Beddoe, of the MOHLG, and Felix Walter, F.R.I.B.A. Chairman: Lady Pepler, member of the LCC. At the HC, 13, Suffolk Street, S.W.1. 6 p.m.

FEBRUARY 8

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I. DUPREE

Steel Cond. At the 5.W.1. 5.55 JANUARY 27 hibition in Christie's, 1. Admis-d.). Week-Sundays ANUARY 30 . Talk by

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Ionday to ys 10 a.m. EBRUARY 1 the 18th rd. At the in Square, EBRUARY 1 Industry. tore Street,

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EBRUARY 8



LMBA

"Think better of Architects," says Minister of Works

Nigel Birch, the Minister of Works, warned builders at the annual luncheon of the LMBA—held at the Park Lane Hotel, on January 18—that they were in danger of being priced out of the market by rising costs. Team-work, he told his audience, was essential. And he recommended (amid laughter and applause) that builders should spend five minutes a week thinking better spend five minutes a week thinking better of architects.

of architects.

In his retiring presidential address, R. S.

Williams recommended builders and architects to plan and to work hard (and honestly) for prosperity. The building industry, he said, was far from being decadent, as some people believed; it was in the van of industrial progress.

New Officers include JOURNAL'S Guest Editor

The LMBA president for 1955 is L. J. Holloway, of Holloway Bros. Vice-presidents are Noel Stanley Farrow (one of the Journal's Guest Editors), of Howard Farrow, and K. C. F. Foster, of Charles S. Foster & Son. D. E. Woodbine Parish, of Holliday & Greenwood, has been re-elected

MOE

Sir David Eccles says: " Architects should Lead Building Team"

When Sir David Eccles, the Minister of Education, spoke at the opening of Hertfordshire's hundredth post-war school—the Ravenscroft Secondary Modern School, Barnet—he said that when he was at the Ministry of Works he often encouraged his architects to look at what Hertfordshire architects were doing.

architects to look at what Hertfordshire architects were doing.

"Why," he said, "did the Ministry of Works admire the new Hertfordshire schools? The first answer is that your county council was practising the doctrine of teamwork which we were trying to put across the whole of the building industry, and your example was invaluable in my exhortations.

"I had found the building industry made

"I had found the building industry made up of too many separate components who had an annoying habit of using each other as alibis for anything that went wrong. The obvious remedy was to pull the team together, to get them round the table and plan carefully before going on to the site, and to make quite sure who was in charge of the operation. I had no doubt that the architect was the man to lead the team, and I struggled away trying to get all kinds of building owners to have confidence in their architects both as artists and as the heads architects both as artists and as the heads of a group of surveyors and builders all intent on putting up a good building in the shortest possible time.

"The second reason why we admired you was that you were creating a modern style of architecture, and a generation which can produce its own style in building is a generation which will get into the history books. Let me say a word about a satisfactory architectural style. It must reflect the ideals and the acts of the age. Our own times are distinguished from those of Queen Anne or Queen Victoria in many ways, but none of more significance than universal suffrage and full employment. We take for granted that everyone is politically equal and that everyone is in work. and that everyone is in work. These revolutionary changes have great consequences for education and new school buildings must express them if we are to claim for them a satisfactory style of architecture.

"By this I mean that when one sees a new school one ought to say: 'This is the sort of building where every child is going to get equality of opportunity according to his or her ability. It is also the sort of school where boys and girls will get an education of the kind that will fit them to play their part in raising the national standard of life.' "A new school would not pass this test if it were so luxurious and costly that it could not possibly set the standard for others. Equally it would fail if it were so ugly and on the cheap that it held no promise of a fuller life for teachers and children. In your 100 schools you seem to me to have fulfilled both the requirements of style and of function.

"A hundred schools costing upwards of £12 million famous for their artistic merits, their efficient and economic use of modern methods and materials, their successful ful-

methods and materials, their successful ful-filment of their educational purposes—this indeed ranks as a national achievement.

"How did you contrive to be both business-like and beautiful? It is a very rare com-bination. You must have a very good education committee and a very genial finance

committee. Your Director of Education and his officers must be skilful, good tempered and, for the sake of the cause, they must have overcome whatever natural dislike they felt for publicity. All of them have contributed essentially to the businesslike methods you have employed.

methods you have employed.

But what of these without Mr. Aslin?
Here was the rarest of your team, an archi-

"But what of these without Mr. Aslin? Here was the rarest of your team, an architect of exceptional talent; you would agree that the honour which his profession has conferred on him is a just tribute to himself and to the Local Authority which placed such confidence in him; and I do not forget all those who have worked under Mr. Aslin in the Architects' Department.

"Certain politicians of both parties have persuaded the public to judge achievement in the field of house-building by the number of new houses completed each year, but I am glad to say that no one has obscured the importance of quality in the building of new schools. By the brave fresh beauty of your new primary schools you have already achieved an international reputation. Many foreign architectural journals have carried articles on your work giving much praise to its originality and efficiency. You are not, I am sure, so unworldly as to expect other authorities to shout your praises from their county and town halls, but they watch what you are doing, your enthusiasm is catching, and very good work is being done in many areas.

"Looking to the future, the keynote is expansion. The government believe that in twenty-five years we can double the standard of life in this country. That means a massive and continuing investment in education. It is quite within our powers.

HONOURS LIST

Two more Architects

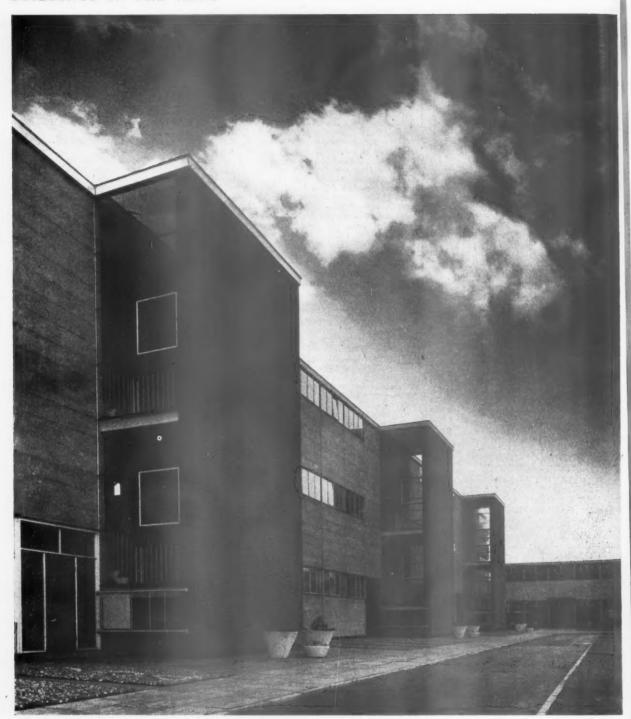
Two architects who were mentioned in the New Year honours list were omitted from the list published in the JOURNAL on January 6. They are J. M. Fraser, A.R.I.B.A., who was awarded the C.B.E., and F. Charles Swan, M.C., a vice-president of

the RIBA, who was awarded the O.B.E.
B. A. Williams, the founder of Williams
& Williams Ltd., was also awarded the



R. D. Russell, a professor at the Royal College of Art, designed this new cocktail bar for Grosvenor House, Park Lane, London. A blond aspen ceiling gives contrast to the rosewood lined walls. The seats are covered with yellow and dull-red hides, and the carpet is two shades of grey. An air-conditioning plant keeps the air at a regular temperature and humidity, and removes the smoke from the atmosphere.

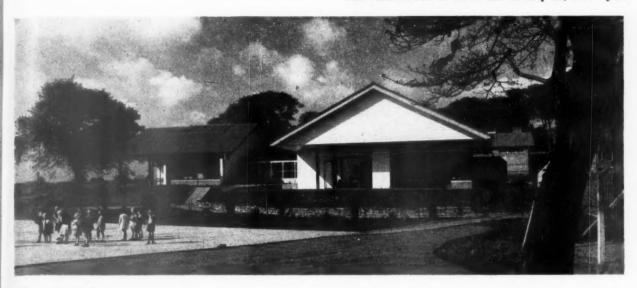
BUILDINGS IN THE NEWS



The des

Secondary School at Barnet

The Ravenscroft Secondary School in Barnet Lane, Barnet, the hundredth Hertfordshire post-war school, was opened by the Minister of Education, Sir David Eccles, last week. The architects responsible for the design and erection of the school were C. H. Aslin, County Architect, K. C. Evans, architect-in-charge, and W. G. Apps, assistant architect. The school, which is a four-form entry school for 600 pupils, has a three-storey classroom wing, seen in the photograph above, a two-storey wing containing staff room, library, etc., on the right, and a single-storey workshop block. The school will be the first building to be published in a new and more useful Format. (See page 119.)



County Primary School at Bolton

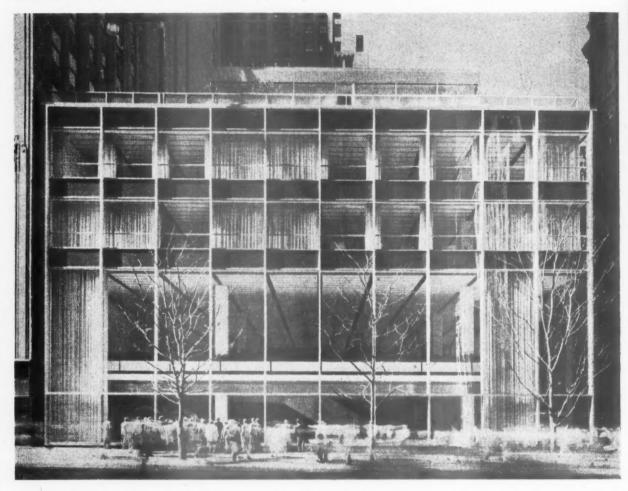
The High Lawn County Primary School, Sharples, Bolton, was designed under the direction of the Borough Engineer and Surveyor, Denis M. Mc Kellen, the architect-in-charge was Bernard Claydon and the chief assistant architect, John D. Foy. The photograph above shows one of the double classroom units and below is a view of the assembly hall. The dining room can be

seen beyond. The school, which is a 2-form entry infants' school, provides three separate classroom units linked to a centrally placed assembly hall by utility rooms, lavatories and cloak spaces. Each unit forms a self-contained living space for some 80 children of approximately the same age group, and each of the classrooms can be divided by a sliding-folding partition. The general contractors were R. J. Tyson Ltd.



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FOREIGN BUILDINGS IN THE NEWS



Non-Reflecting Glass Walls in New York Bank

It is said that the glass walls of this bank in New York are the first glass walls that can really be seen through. The architects, Skidmore, Owings and Merrill have made their curtain walls invisible by using an old window-display trick on a large scale.

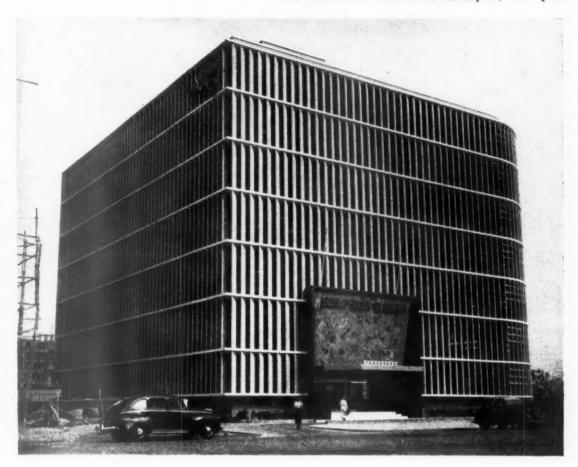
They have thrown so much light down from the ceilings that it beats the natural light outside and prevents the surface of the glass from reflecting. Construction: interior structural columns hold up floor slabs, from which the exterior glass wall hangs in tension. (From Architectural Forum, December, 1954.)



Headquarters for Architects

A headquarters for the Ontario Association of Architects was opened recently in Toronto. The building '(above and right) was put up to the prize-winning design—in a competition organized by the Association—of John B. Parkin Associates, of Toronto. (From Architectural Record, December, 1954.)





Office Building in Bombay

The photograph above shows the new Standard-Vacuum office building in Bombay, India. The consultant architect was Chauncey W. Riley of New York, who carried out the sun studies and the design of the louvres, which form the cladding to the facades as seen above. The site architect responsible for the execution of the work was John A. Ritchie, of Bombay. The main entrance, seen in the illustration, is framed by black granite (quarried in Bangalore) and has four large glass swing doors.



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Government Building in Calcutta

The West Bengal Government's Supplementary Secretariat (left) was recently completed at a cost of approximately £800,000 at the junction of Hastings Street and Strand Road, Calcutta. The building, which is 195 ft. high and has 13 storeys, was designed by the Senior Assistant Government Architect in the Works and Buildings Department. The east, south and west facades of the building are provided with 5-in. wide vertical brick fins and 4-in. thick horizontal reinforced-concrete louvres, which have the effect of preventing the direct rays of the sun from penetrating to the interior.

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SECONDARY SCHOOL

at TATTERSHALL, LINCOLNSHIRE

designed by DENIS CLARKE HALL

chief assistant architect, H. S. SCORER

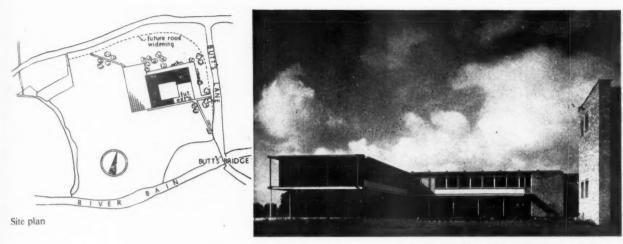
assistant architect-in-charge, A. R. H. RUTH

quantity surveyors, DAVIS, BELFIELD and EVEREST

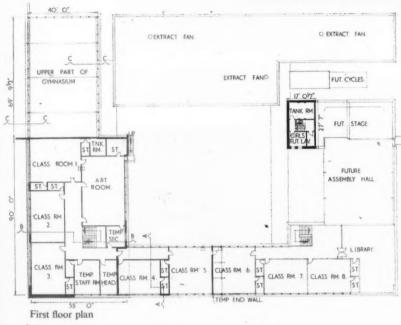
The Bartree secondary school for the County of Lincoln, Parts of Lindsey, was designed to be built in stages, giving accommodation finally for a three-form entry school for 450 pupils. The first stage, now completed, is illustrated here. It provides for 300 pupils. Certain parts of the accommodation will be re-sited during further stages of building.

From the south.





Above, view from the north-east across the area that will later be occupied by the assembly hall. On the left are the temporary end walls faced with boarding.



ST. KITCHEN.

ST. KITCHEN.

ST. KITCHEN.

ST. ST. KITCHEN.

ST. ST. FURL STORE

UNDER

ST. CYMASIUM

DINING ROOM

HOUSECRAFT RM.

ST. CYMASIUM

FUT. ASSEMBLY

HALL

BOYS CRES.

BOYS CRES.

BOYS CRES.

BOYS CRES.

BOYS CRES.

TEMP. END WALL.

STAFF M. ST. MED SEC HEAD STAFF

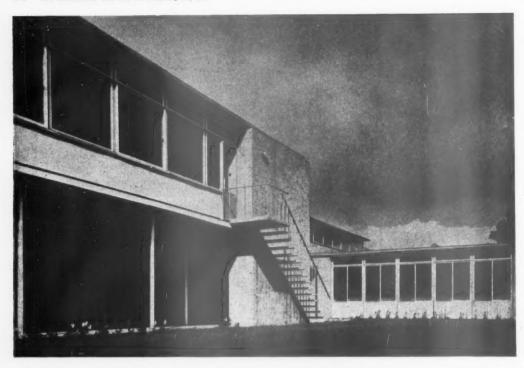
ROOM.

TEMP. END WALL.

Ground floor plan [Scale: $\frac{1}{18}$ " = 1'0"] Sections are illustrated on the following pages. Phase 2 of the building is shown in outline at the east corner of the school

to be he first accom-

the south.



Left, the west corner of the courtyard. On the left are the first floor windows of the art room. Below left, the covered way on the south-west side of the courtyard. In the background is the dining room block. Below right, staircase at the south corner of the courtyard. On the right, door leading to the ground floor cloakroom.

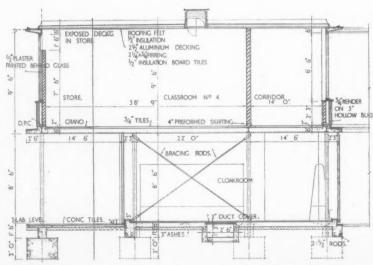




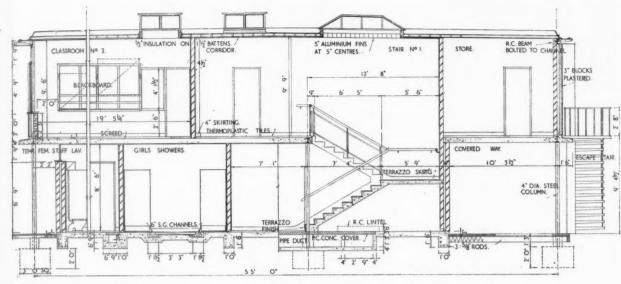
SECONDARY SCHOOL

at TATTERSHALL, LINCOLNSHIRE designed by DENIS CLARKE HALL

SITE.—The site is practically flat and has an underlay of gravel to the rich, fertile top soil. The school, when completed, will surround a central courtyard. This will allow the additional accommodation to be added from the end of the wings of the building which form stage one. This means that additional classroom accommodation will extend from the west wing along the south side of the court or, alternatively, should the assembly hall be required next, it will be added to the north wing along the east side of the court.



Section A-A [Scale: laphi'' = l' 0'] The vertical line on the left indicates the break in the section line



Section B-B [Scale: 4" = 1' 0"]

corner of

On the irst floor art room.
c covered outh-west yard. In is the

block.

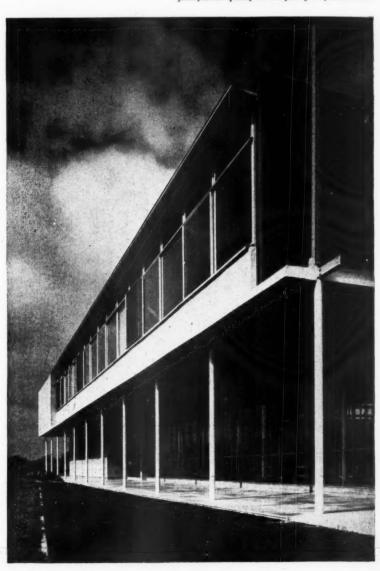
the right,
to the

Below, the south-east facade. On the ground floor, cloak space; on the first floor, classrooms.

PLAN.-Lavatories and cloakrooms are placed on the gound floor, and classrooms on the first floor, of the two-storey block. The roof of the gymnasium, two-storey block, and later the assembly hall, will be one level. The isolated tower near the boiler chimney incorporates the water storage tanks, lavatories and additional small rooms which will eventually be used as dressing rooms with direct access from the stage, which will be over the existing boiler house roof. The accommodation in the single-storey north wing, practical rooms, a laboratory and kitchen, all require separate direct access to the service road. There is also a tractor bay, for practical demonstration, as agricultural instruction is on the school's syllabus. The south wing at present provides two classrooms over cloak space. The future extension eastwards will provide classrooms and a library on the first floor, and cloak space and staff rooms on the ground floor.

CONSTRUCTION.—The construction consists of steel columns and 9-in. load-bearing brick walls, supporting the roofs and the first floor, which is of in situ reinforced concrete slabs. Roofs generally are of aluminium decking supported on steel joists at 10-ft, centres.

FINISHES.—The external treatment of the walls



ak in









Above left, the ground floor cloakroom. The boat-shaped air extractor in the ceiling and the dining room servery (left and above) were illustrated as Working Details in the JOURNAL for November 4, 1954. Top, typical first floor classroom. Below it is the dining room.

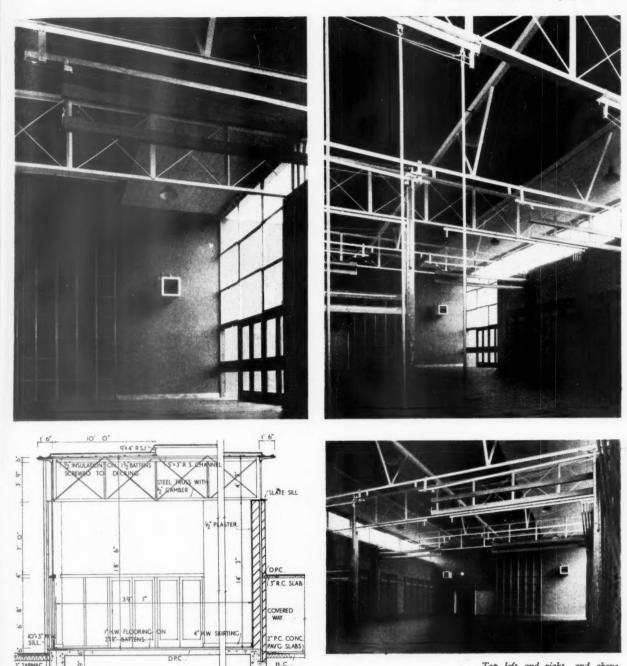


SECONDARY SCHOOL at TATTERSHALL, LINCOLNSHIRE designed by DENIS CLARKE HALL

where extensions are to be made is designed to convey the temporary nature of the wall and make alterations easy to carry out. Vertical timber boarding and toothed brickwork are used at these positions. Roofs are covered with roofing felt with a finish of spar chippings. Floor finishes include concrete tiles and terrazzo on internal and external corridors, thermoplastic tiles in classrooms and wood blocks in

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Top left and right, and above, views of the gymnasium, looking towards the south-east end wall.

specialist rooms. Walls throughout are finished with emulsion paint. Originally it was planned to have a free-standing circular concrete chimney, but this was subsequently changed to a brick chimney, which will be incorporated in the structure of the stage, at the request of the town planning committee.

The school forms part of the 1951-52 programme,

when the MOE nett cost per place limit in force was

Section C-C [Stale : \ " = 1' 0"]

£270. The total cost on tender of building and site works was £60,661 (for stage one), which is £249 per place. There are 72 sq. ft. per place. The date of tender was March 3, 1952. Work was begun in August, 1952, and stage one, including the two extra classrooms, was completed in April, 1954. The general contractors were Barber & Sons. For sub-contractors see page 144.

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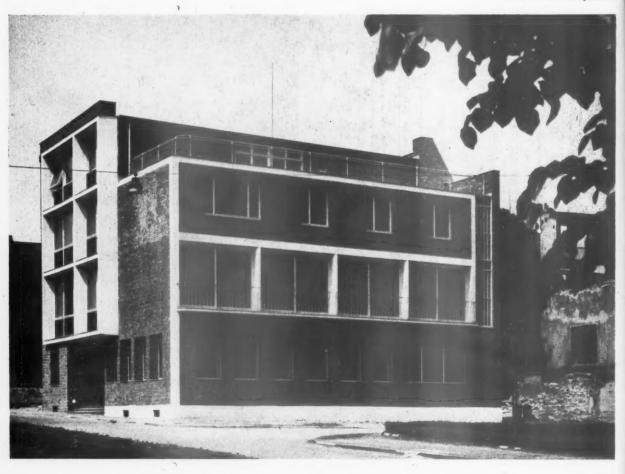
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HOUSE

in KUNIBERTSKLOSTERGASSE, COLOGNE, GERMANY designed by KARL BAND

This house, built by an architect for his own occupation, is in the old quarter of Cologne, on the east bank of the river Rhine. Because the site is near the mediaeval church of St. Kunibert, to the south of the house, the architect reduced the height from four to three storeys on the east elevation. In designing the house, the architect wished to show that modern architecture can successfully blend with historic buildings.

The south and east facades.



he east to the evation. blend t facades.



STANCHION IN ASSEMBLY HALL: SCHOOL AT STEVENAGE NEW TOWN

C. H Astin, Architect to the Hertfordshire County Council

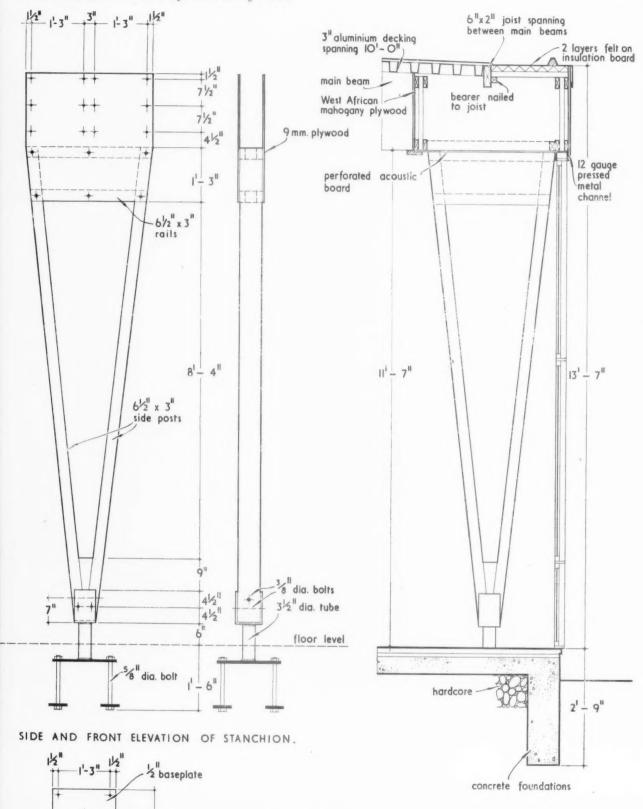


The form of the stanchion is chiefly determined by the need to provide a connection with the beams strong enough to overcome wind pressure. The timber used is red meranti. One plywood gusset plate is glued to the stanchion in the shop and the other is glued on the site after fitting the beam in position.

WORKING DETAIL

STANCHION IN ASSEMBLY HALL: SCHOOL AT STEVENAGE NEW TOWN

C. H. Aslin, Architect to the Hertfordshire County Council



PLAN OF STANCHION BASE. scale 1 = 1 -0"

1-6"

VERTICAL SECTION SHOWING STANCHION AND BEAM DETAILS. scale $\frac{1}{2}$ = $\frac{1}{1}$ - 0

3

felt on board

C. B Ratcliffe, architect

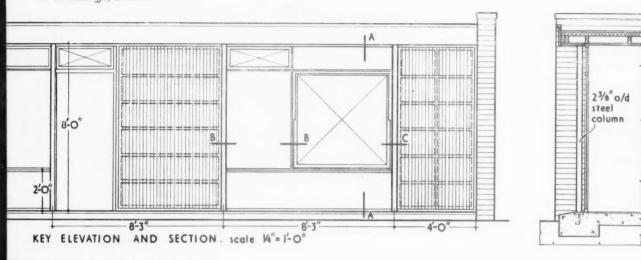


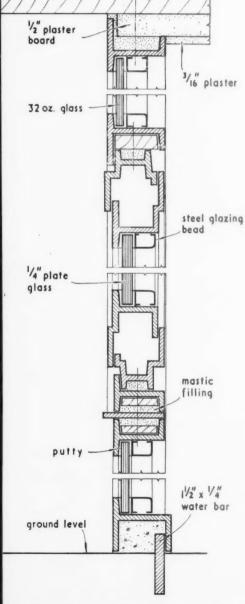
The windows are fabricated of medium universal sections, hot-dip galranised with spring steel metal beads. The columns, which are of 23 in. hollow steel tube with welded caps and bases, are 1 in. clear of the mullions to ullow for painting.

WORKING DETAIL

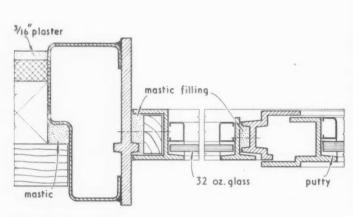
GLAZED WALL: HOUSE AT CHORLEY WOOD, HERTS.

C. B. Ratcliffe, architect

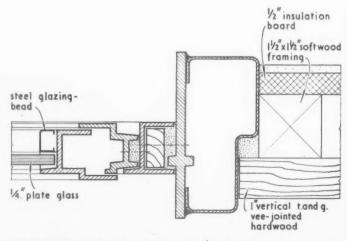








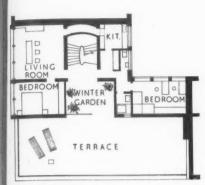
HORIZONTAL SECTION B-B.



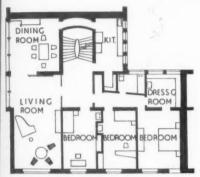
HORIZONTAL SECTION AT C scale 1/2 full size



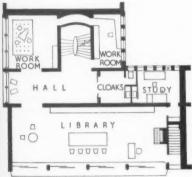
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Third floor plan



Second floor plan



First floor plan

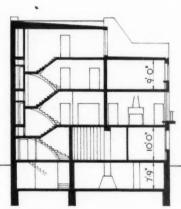


Ground floor plan

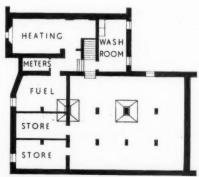


Above, the house from the northeast. In the background is the historic church of St. Kunibert. This facade of the house faces the Rhine.

PLAN.—One side of the house overlooked the Rhine and this influenced the arrangement of rooms, the size of windows on different elevations and the position of the roof terrace at third floor level. The house is also used for the architects' work and large



Section A-A



Basement plan







Above, the library on the first floor. The large sliding windows overlook the Rhine. Extreme left, ground floor studio showing staircase to the library. Left, looking up the main staircase.

HOUSE
at COLOGNE, GERMANY
designed by KARL BAND

airy rooms were required for studios. The library is used for lantern lectures and there is a chemical laboratory (shown as a workroom on plan) at the north-west corner of the first floor for the owner's wife, who is a minerologist.

CONSTRUCTION and FINISHES.—The construction is partly of reinforced concrete and partly of brick load-bearing walls. The flat roofs which are constructed of reinforced concrete, have glass wool insulation. Floor finishes include parquet, linoleum and cork mosaic. Windows are wood-framed, with four pairs of sliding windows in the library and double-glazed, centre-hung casements used elsewhere. Doors are mostly glazed. Interior decoration is simple; most walls are plastered internally with fair-faced brickwork in places.

SERVICES.—Heating is by hot water radiators and electrical heating tubes and there is an open fireplace in the library. There are gas points in the kitchen and laboratory and also air extractors. The house was completed in 12 months and the cost was approximately 3s. Iod. per cub. ft.

TECHNICAL SECTION

One of the interesting features of the new Modular Catalogue*, the first sheets of which have been issued to members by the Modular Society, is the system of classification. This sets out to classify everything to do with building under nine main headings. Of these, two relate to general properties, two to materials, a group of three relates to "Forms," "Assemblies" and "Functional components" respectively, one is described as "Land, Built-up areas. Complete structures" and one is devoted to instruments and tools. These main heads each contain nine sub-heads, each of which carries a two-figure number. Each product is classified by a selection of these numbers which thus serve to pinpoint its salient characteristics. classification differs therefore from, say, that used in the AJ Library of Information Sheets in that it does not determine the order in which Sheets are to be filed, but leaves it to the user of the sheets to file them under the sub-heads which interest him most. The weakness of the classification, as at present set out, is that too many properties are gathered under the same number, with the result that the number carries such a wide variety of alternative meanings that it does not tell you very much about the product. Thus, to quote two sub-heads at random, 22 refers to "Lime. Plaster. Chalk. Mortar, Cement, Concrete" and 42 to "Rods. Bars. Battens, Laths. Scantlings. Baulks. Planks. 'Shaped' Sections. Extrusions. Beading. Mouldings." Headings such as these seem too compendious for successful filing.

* The Brisch Classification, Copyright Reserved by E. G. Brisch and Partners.

This week's special article

10 DESIGN: BUILDING TYPES the rehabilitation of rural schools: 2

The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant Information Centre items. Further and earlier information can be found by referring to the index published free each year.

In his first article on the rehabilitation of rural schools (AJ, January 6) Cecil Handisyde described the administrative background of his subject. This week the same author discusses the main issues affecting design.

As the Ministry is to get rid of "all age" schools, it seems probable that secondary education for children in rural areas will be provided mainly in new buildings situated to cover fairly wide regions. The main object of rehabilitation therefore is to equip existing rural schools for the infants and junior children who will remain behind in them.

THE SITE

The first thing that may show up on an inspection of many village and small town schools is that the site area and also the

area of playing fields are below standard and moreover that additional land is not available immediately adjoining the existing site. The acquisition of additional land would be the responsibility of the Local Authority and they should be consulted at an early stage if the site is much below standard. To proceed with plans for alterations to buildings without making sure that the site is acceptable to the authorities can easily lead to a waste of effort and an unnecessary account for fees to the clients. It does seem, however, that to insist on complete compliance with the regulations should be con-

first floor, arge sliding soverlook the Extreme round floor the library, oking up the aircase.

the library

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fireplace e kitchen he house sidered unnecessary in some cases for, although the site itself may be in a built-up part of a village, so often very easy access to the country makes playing field and even playground requirements much less necessary than in schools sited in large towns.

CLASSROOM SIZES

The Regulations are clear on accommodation in the buildings. Within certain overall limitations a degree of flexibility is allowed in the arrangement of teaching space." Teaching space." of course, means classrooms and assembly hall, if there is one. It will be found, however, that a minimum classroom size is laid down but that this minimum size varies according to the type of school (see Table I). There is perhaps a tendency to standardize too much on the size of classrooms, sometimes because of ease of planning or construction. In all schools there is probably some advantage to teachers if classrooms of varied sizes are available, but this seems especially desirable in the smaller village schools where class numbers are apt to vary rather widely. Of course the full 520 sq. ft. should be provided in cases where there are likely to be classes of full size and it must always be remembered that reduction in size of some rooms does not result in reduction of total area to be provided as the overall teaching space must still add up to the Regulation requirements.

In existing buildings it is not unusual to find rooms below 400 sq. ft. in use as classrooms. Often they are overcrowded but sometimes it is clear that the school is almost certain to have at least one class of very small numbers for which a room a little under size would be quite adequate. In such cases a relaxation of the Regulations might be asked for under Section 7 of the 1946 Act. Sometimes old classrooms have stepped floors which must be removed and quite often storage space is almost entirely absent.

Perhaps the most common problems which are met in altering old buildings are the provision of good lighting, heating and sanitation, and some notes on these subjects are given below.

HEATING

Heating in the old buildings is often by open fire or closed stove. Both are unsatisfactory as they need too much attention. Open fires are also a totally inadequate method of distributing heat across a classroom and are also a potential danger. Closed stoves are less objectionable but even they need more attention than is convenient and can be unsatisfactory if not properly attended to. Some form of central heating should be installed. This can be either by radiators or, perhaps, by warm air heating—

the latter seems to have some advantages in schools because of its extreme flexibility. Electric heating is very unlikely to provide an economic result.

an economic result.

Whatever system of heating is used, the apparatus should be given the minimum possible amount of work to do. Very many of the old schools have high ceilings and quite often very high open roofs. These add enormously to the heating load, both because of poor insulation and because of the large volume of air to be heated. Open roofs should almost always be closed in with ceilings and in some cases it may be worth while considering lowering the existing ceilings. It is also worth providing some good heat insulation immediately above any suspended ceiling. A light-weight material such as glass wool or slag wool is excellent and adds very little weight to an existing ceiling.

One difficulty about inserting or lowering ceilings is that sometimes existing windows are tall and narrow with the heads above the level at which a ceiling might reasonably be put. The insertion of a ceiling may, therefore, cause both lighting and æsthetic problems.

A point connected with heating is the need for adequate clothes-drying arrangements if children come from considerable distances. Special drying cupboards are often too small to be of very much use and a better method seems to be to provide adequate heat under or near to the normal clothes hanging spaces. Care must be taken that in doing this shoe lockers are not over-heated and also that there is good natural ventilation to the cloakroom space.

It may also be necessary to alter windows or at least the opening lights of windows in order to get adequate ventilation throughout the school. Existing windows frequently consist to a large extent of fixed glass.

LIGHTING

Existing buildings usually have tall windows set fairly far apart in thick walls and often with very high cills. These in themselves do not always provide either enough light or good quality seeing conditions. When extensions are added it is often found that they tend to come just where they will cut out valuable light.

cut out valuable light.
There is not space in an article of this kind to discuss in detail the requirements for good lighting, but BRS Digest No. 70 (October, 1954) describes the essentials very clearly, even though it deals in rather more detail with artificial lighting than with day-

Whether existing windows will provide the required amount of light may need check-

ing. A 2 per cent. daylight factor is called for in schools. The BRS protractors are useful for quickly assessing the amount of light obtained directly from the sky, but they do not allow for the value of reflection from walls, etc. Methods for calculating the total light were described in the AJ on Aug. 5 and Sept. 16, 1954, but often it would be reasonable to assume 50 or even 100 per cent. more than the figure obtained from an examination with the BRS protractors provided decorations are light in colour. Equally important, however, is the quality of the light provided. In the older type of building the thick walls help in one way by providing reveals which act almost like louvres in preventing sky glare, but the wall area between windows is apt to be very dark and therefore to be in heavy contrast with the windows, and this produces a sensation of glare. Similarly, if windows have rather heavy stone mullions

having very light colour decorations on the unlighted areas of wall or window. If there is insufficient light either because of insufficient existing window area or because some windows will be obscured by new buildings or by lowered ceilings, a good deal can often be done by reducing cill heights from the commonly-found four or five-foot level to somewhere about two foot six inches and, quite often, by reglazing in sheet glass in place of existing leaded lights which are so common in the old buildings and which in any case are often in a very dilapidated condition.

The value of reflected light has already been mentioned. Good decoration will

or wood members they show up as dark against the light and create discomfort. Both these troubles can be reduced by

The value of reflected light has already been mentioned. Good decoration will often in itself give very great improvement to the lighting conditions as well as providing a more cheerful building in general. The Ministry of Education Building Bulletin No. 9 gives most useful advice about the choice of colour for schools.

Existing artificial lighting in old schools is almost always hopeless. Two points per classroom is quite a common standard and these are often in the form of exposed bulbs.

To get adequate light without glare it is essential to have lighting points in classrooms at fairly close centres and with fittings which give a low cut off angle. The number of fittings required will depend upon the type of fitting and the mounting height, but usually, at least four and usually six points are required in a classroom with an additional special light for the blackboard.* This will almost certainly involve re-wiring any existing buildings. Tungsten lighting appears to solve all ordinary school problems better than fluorescent lighting.

In providing decoration which will assist the lighting, ceilings and upper walls should be kept very light in colour but should not be finished with a glossy surface as this causes specular reflections. Lower parts of walls can be rather darker if desired, but the old fashioned dark dado is to be deprecated. It is very doubtful whether its alleged ability to "hide the dirt" is a good thing and experience shows that children can be persuaded to re-act well to bright clean-looking surfaces. If the wall up to dado height can be finished in a material reasonably light in colour but washable the best of both worlds is obtained. Often, of course, some of the lower walling is covered with lockers and pin-up boards.

Chalkboards are somewhat of a problem. A strong contrast between a blackboard and a light wall surround is not good. Coloured boards have been tried with some

*The Regulations lay down limits for the surface brightness of fittings in relation to the angle of vision and also specify that some of the light must be thrown up to the ceiling in order to reduce excessive glare due to contrast between the fitting and the ceiling.

TABLE I Sizes of Classrooms

							Conditions applicable		
Minimum total teaching area			Minimum size of room			Number of rooms	Number of pupils		
1,000 sq. ft. 1,500 sq. ft. 2,400 sq. ft.				400 sq. ft.			1 2 3	25 50 75	
3,120 sq. ft. 3,600 sq. ft.				480 sq. ft.	••		4 .	100	
3,000 34. 11.	• •	• •	• •					Note: if any pupils are over 8 years old a hall is also required.	
2,760 sq. ft. 3,880 sq. ft.			• • • • • • • • • • • • • • • • • • • •	520 sq. ft.			3 4	120 160	
4,700 sq. ft.	••	• •					and in all schools of over 5 classes.	Note: if any pupils are over 8 years old a hall is also required.	



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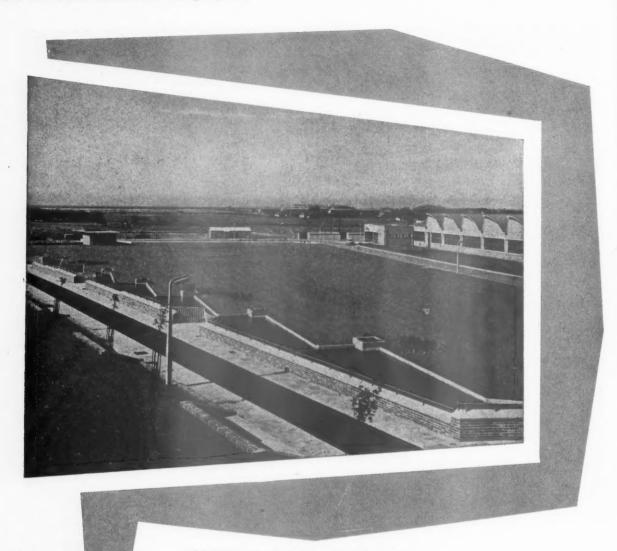
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C. J. Wilkinson Esq., Staff Architect, Cadbury Bros. Ltd. G. A. Jellicoe Esq., Landscape Consultant. & General Contractors: J. Gerrard & Sons Ltd., Swinton, Manchester.

AT the new factory for Messrs. Cadbury Bros. Ltd., in Moreton, Wallasey, 'PUDLO' Brand Powder was used in the reinforced concrete walls and floor of an ornamental waterway. It was also used in the reinforced concrete weirs which were placed 44 feet apart to form a series of waterfalls. This waterway is decorated with Flower Boxes and Lily Ponds. The composition of the waterproofed concrete was:—1\frac{3}{2} parts washed and screened River Mersey sharp sand. 3\frac{1}{2} parts of \frac{3}{4}" to \frac{3}{16}" graded double washed and screened crushed gravel, reinforced with B.R.C. fabric. 5 lbs. of 'PUDLO' Brand Powder to each 100 lbs. of cement.



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success though care should be taken to make sure that a painted board will behave well if in colour. Experience shows that at least some makes of "blackboard" paint do not last satisfactorily in a maroon colour. Again the Ministry of Education Building Bulletin No. 9 has useful advice about "chalkboards." On electrical services generally it is important in the first survey to look at the the existing system. The main cable and switchboard may be insufficient to take an extra load and wiring generally is sometimes very old and unsatisfactory. If in any doubt about the installation it is a wise precaution to get an electrician to give a report.

SANITATION

Usually a water supply is available but quite often a main drain is not. A further article in this series will deal in detail with methods of sewage disposal for schools where sewers are not available. Water supply to sinks is required in some or all classrooms.

Where new toilets have to be provided in an existing school, the solution immediately obvious is to build them on as an extension. While this may sometimes be the best thing, there is something to be said for converting for this use part of the existing building which may not be suitable, or easily made adequate, for classrooms. Sometimes this may mean providing a new floor or floor finish for the lavatory area, as an existing suspended wood floor is not very suitable for this part of a school. The amount of toilet accommodation is laid down in the Regula-

tions and seems very reasonable. It is unlikely that any reductions on this would be acceptable.

Detail points which have been noticed about lavatories are: inadequate space for towel hanging, inadequate space for mirrors, channel wastes under a range of basins of insufficient depth to prevent overflowing, floors around the basin area not having proper falls to dry off quickly after "high jinks" at the basins have flooded the floor. Toilet rolls need to be carefully chosen. Those easily removed are apt to disappear in some districts, but those which can only be refilled after the roll has been completely emptied, and then only by tearing the cardboard cylinder, are a curse to the staff. A type which has an end locking device is preferable. Even more than usual care should be taken to guard against frost damage to cisterns and all plumbing, as quick repairs may not be easily organized in rural districts.

CONSTRUCTION AND CONTRACT

Many of these jobs are situated in country districts and in any case are often too small to attract the larger firms of contractors. Small local firms can usually be found and, although they may sometimes be a little slow, they have the advantage of having to "live with the job" after it is completed. The use of such firms implies certain limitations on the choice of materials and type of construction. Construction should be kept simple though not necessarily entirely traditional. Specialist firms of sub-contractors should be avoided as far as pos-

sible, as it is bound to be expensive to get them to a distant site for a small quantity of work and also because it is difficult to get the specialist just when he is required and therefore to avoid hold up of the main contractor.

The general atmosphere of this type of job is one of personal contact with a good deal less formality than is necessary on larger works. This, properly handled, is all to the good. Architects' visits may not be very frequent and there will not be a clerk of works. This means that very full but very clear drawings are needed, and the most useful type of specification is one which omits all jargon and says precisely what is intended in simple language. On some jobs there is a good deal in favour of writing a specification in terms of building operations, i.e., foundations, walls, floors, roof, etc., rather than in the more usual form of separate trades. If it is well done, this type of description can be easier for the foreman to follow. Where alterations to an existing building occur, they can usually be well described if taken room by room.

Although possibly not very attractive at first sight, it will often be found that alterations and additions to these small schools is most rewarding. The architect has a chance to meet the people working in the school and there is a very real pleasure to be had from showing just how much can be done to up-grade an apparently unpromising old building. Even just the removal of some old and ugly furniture and a carefully designed lively new colour scheme can make one the head teacher's best friend.

INFORMATION CENTRE

4.80 planning : urban and rural TREES

Trees in Towns. By R. J. Morling (London Estates Gazette Ltd. 1954.)

This little book starts with two chapters describing in a rather elementary way trees and the way they grow. There follows a short chapter on trees for industrial localities which deals with atmospheric pollution and its effects. The most useful parts of the book are perhaps those in which the general law relating to trees is reviewed and in which the situation on preservation is described. This latter section explains the restrictions on lopping and felling which may exist either under the Town and Country Planning Acts or the Forestry The intricacies of these are well explained and make the book a useful reference in this respect. The actual guidance given to anyone wishing to choose trees for town conditions is rather disappointing in its brevity-so much so that the title of the book hardly appears to be justified.

8.41 surveying and specification SURVEYING FOR STUDENTS

Surveying and Levelling for Students. By Bernard H. Knight, D.SC., PH.D. (London), M.I.C.E., M.I.STRUCT.E., F.R.I.C.S.—(Published by Contractor's Record Ltd.—Price 18s.)

A book of some 150 pages, primarily for the student but sufficiently advanced to be used as a reference book by Architects, Structural Engineers, Building and Quantity Surveyors, Builders and Clerks-of-Works.

The book deals with chain surveying, traverse surveying, elementary levelling, contouring, triangulation surveys, tacheometric surveying and curve ranging. Both field and office work are dealt with, and the practises which are likely to lead to inaccuracies and the methods of overcoming normal difficulties are clearly explained.

The diagrams and illustrations are good and by adopting a clear and concise style and by avoiding unnecessary references to instruments and methods seldom encountered in this country, Mr. Knight has succeeded in writing a distinctly fresh and readable book, although the topic is by no means novel.

9.49 design: general ESCAPE REGULATIONS, LCC

Means of Escape in case of Fire. (LCC Code of Practice.) (LCC or Staples Press Ltd., 1954. 6d.)

A revised Code which supersedes all previous LCC publications concerning safety and escape in case of fire. Covers requirements of London Building Act, Factories Act, Public Health (London) Act and the LCC (Celluloid) Act and the Council's Theatre Regulations. It is a sensible document which makes some very complicated requirements reasonably clear. It takes advantage of modern investigation and research into this aspect of building and includes changes which ease the architect's problems and should reduce costs on some types of building. Certain relaxations particularly affect high point-block flats.

An essential document to any office doing work in London.

10.119 design: building types TEACHERS' VIEWS

Schools and School Buildings. (Combined English Universities Conservative Association, 1954. 6d.)

Clearly a work of labour prepared by enthusiastic teachers, this little report attempts to set down some of the views of school staff about the drawbacks to modern school buildings. Although it does not appear to be more than a rather random collection of individual opinions-some of which are quite obviously based upon insufficient knowledge of the subjects discussed-it is nevertheless a good thing for architects to read. It will show them what they are up against and, in one or two cases, may suggest that the latest popular trend in school design at least leaves something to be desired. It is a pity that the same kind of comment could not be made from a more convincing survey. If that could be done, the opinions would carry more weight.

10.120 design: building types HOUSE PLANNING

The House and Housework. R. G. Bateson, K. Jean Noble and J. J. Attenburrow (RIBA Journal, Dec., 1954).

Results of BRS investigation into the daily tasks of the housewife. Although not a complete study, the information already obtained gives what is probably a fair picture of the tasks of an average housewife in a typical "Council" house. Tables show the amount of time spent in each room, the amount of time spent at sink, cooker, etc.,

(Continued on page 145)



Meet Mr. and Mrs. Fothergill

They're expecting Mr. Frewin at any moment: through the ceiling. Mr. Frewin is an elephant who lives in the flat above. You can tell he's an elephant by the way he puts his feet down. You couldn't if the floor were insulated with Fibreglass. Fibreglass absorbs impact sound like a sponge -a fact of absorbing interest to those who try to work in offices and relax in flats. So for peace sake, Mr. Architect, float all your flat and office floors on this everlasting, ever-efficient insulation.



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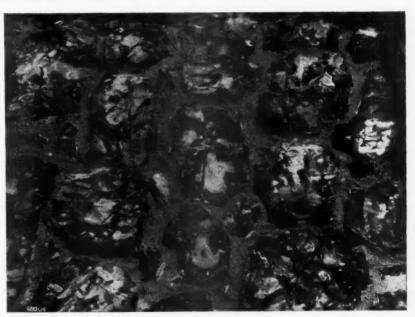
FIBREGLASS LIMITED, RAVENHEAD, ST. HELENS, LANCS. (ST. HELENS 4224) FACTORIES AT ST. HELENS, LANCS. AND POSSILPARK, GLASGOW. The Architects' Journal for January 27, 1955

RE-POINTING OF FLINTWORK BY MACHINE

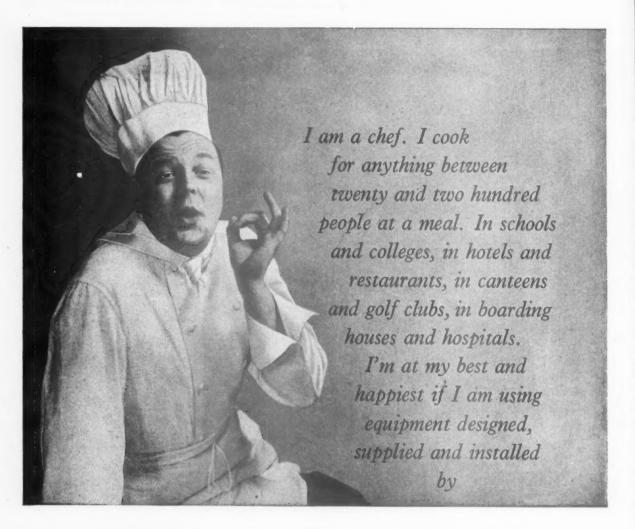


We illustrate on this page a technique which is being used by Walker Symondson Ltd. for the re-pointing of the flintwork on the tower of St. Martin's Church, Ruislip. The joints had become deeply eroded through decomposition of the mortar. The contractors attempted to re-point by using the traditional trowel and hawk but found this method unsatisfactory, both because it gave no guarantee that the bottoms of the cavities were solidly filled and because it was impossible to avoid overfilling the front faces of the joints and thus covering too great an area of the flint and spoiling the appearance of the walls. The contractors then used a new German machine for pointing brickwork (top). The joints

were first washed out with a fine jet from a hose and the mortar (six parts washed Leighton sand riddled through a &-in. sieve: 1\frac{1}{2} parts lime: \frac{1}{2} part cement with liquid plasticizer added) was



injected into the joints. While still green the mortar joints were stippled flat with a brush (above). Architects for the restoration are Gordon Jackson and Partners.



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and time occupied in a whole range of tasks. Information about traffic routes and door opening is interesting, but the old myth about the miles a housewife walks per day seems to be exploded—after all, in a 980 sq. ft. house you cannot walk all that far however it is arranged! From breakfast time to the evening meal completion the average woman apparently spends 75 per cent. of her time in the kitchen. Clearly it is up to architects to spend a good deal of their time making kitchens attractive.

11.39 materials: general BRITISH STANDARDS

Building Materials & Components for Housing. Addendum No. 1, 1954, to BS Handbook No. 3, 1953 Edition. (British Standards Institution. 6s.)

The BS Handbook No. 3 should by now be known and used in all offices. This Addendum brings it up to date to August 1, 1954. The Addendum contains summaries of seven new British Standards together with 12 summaries of British Standards which have been revised since the issue of the Handbook. Amendments to a further nine of the summaries in the Handbook are included, as tear-out gummed slips, to cover minor changes.

13.122 materials: timber PLYWOOD STRENGTH

The Strength Properties of Plywood. FPR Bulletin No. 33 Part 2. Effect of the Geometry of Construction. (HMSO 1954. 2s.) Plywoods can now be made which are practically indestructible by delamination. Increasing quantities are being used for such things as box and web types of girder, panel floors and walls, ships' planking and concrete shuttering.

So many thicknesses and different forms of construction are employed that it is impossible to test them all. Yet there is an increasing demand for data on their mechanical properties. The Bulletin contains the results of an investigation at the Forest Products Research Laboratory to provide suitable equations for calculating the bending; tension, compression and shear strengths of any plywood construction.

of any plywood construction.

All the tests were carried out on gaboon. From the results, equations were formulated which can be used in practice for calculations on constructions of any other species

of wood.

14.73 materials: concrete IMPROVED CONCRETE

Cement Economy and Improved Concrete. (Architect & Building News, Dec. 16, 1954.) A note on Ministry of Works' experience with specification of concrete by performance rather than by mix. It appears to result in cement economy and at the same time a better product. In the course of experiments some power tools were used. The Power Float, originally designed for laying granolithic paving, can also be used on concrete slab. A Vibrating Roller has also been found very successful on slabs. The various advantages of using vibration in concrete are briefly mentioned.

This is a useful note which points the way to a relatively easy method of up-grading the quality of concrete without increasing costs.

14.74 materials: concrete CONCRETE ROADS

The Structural Design of Concrete Roads. F. N. Sparks. (Magazine of Concrete Research, Sept., 1954. Available as reprint.)

Reviews present knowledge on concrete road design and in doing so it explains simply and clearly the factors which should determine sub-concrete preparation, the thickness of concrete, amount and placing of reinforcement and provision of joints. Tables give a clear guide to the needs for varying types of traffic and varying sub-soil conditions. Exceptionally useful is the description of where to put expansion or contraction joints and how to detail them. This latter point is one which often receives insufficient attention.

Useful to architects for designing light traffic roads as well as to the highway engineer.

22.73 sound: insulation-acoustics

TWENTY-FIFTH ANNIVERSARY CELEBRATION ISSUE—1

The Journal of the Acoustical Society of America. (Vol. 26, No. 5. Sept., 1954.)
This issue contains three articles of some

This issue contains three articles of some interest to architects. These are, "Definition and diffusion in Rooms" by E. Meyer, in which research work on the correlation of the geometrical and mathematical approaches to acoustic design is described. The aim of achieving some form of "figure of merit" for acoustical properties is discussed, but the author admits that it is perhaps a little too early to reduce these speculations to a manageable theory. In a Review of Architectural Acoustics during the Past Twenty-Five Years," V. O. Knudsen points out that there has been an unmistakable trend towards shorter reverberation times. He attributes this to the increasing "popularity" of absorbent treatments and to the increasing use of sound amplifying equipment which, on the one hand reduces the need for some reverberation to build up an otherwise inadequate sound level and on the other demands fairly dead conditions to avoid confusion due to the multiplication of sound sources and echoes.

L. L. Beranek has a useful article on "Sound Systems for Large Auditoriums" which very fully describes the technique of design for sound reinforcement. It contains a review of the methods adopted in the United Nations Plenary hall and a number of other large buildings, and particularly emphasizes the use of directional type loudspeakers, including the column or "line source" type first used here in St. Paul's Cathedral.

23.204 heating and ventilation ELECTRIC WATER HEATERS

Thermal Storage Water Heaters. (Electrical Review, Oct. 22, 1954.)

Tabulated list of appliances with name, type, capacity, loading, finish and prices, with and without purchase tax. A useful reference.

24.181 lighting POLYTHENE CABLES

Polythene-Insulated Cables Sheathed with P.V.C. for Electric Power and Lighting up to

250 Volts. BS 1557:1954 (British Standards Institution 5s. 0d.).

A revised standard. Reduces insulation and sheath thickness and now includes quality requirements and tests for the P.V.C.

27.14 furniture: fittings IRONMONGERY

Builders' Hardware for Housing. BS 1331. 1954. (British Standards Institution. 6s.) Revised Standard covers general domestic ironmongery other than hinges, bolts and locks. It gives overall sizes, usually the minimum weight and the size of fixing screw and bolt. It is not intended to fix design.

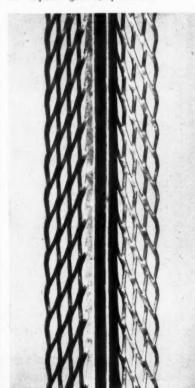
THE INDUSTRY

From the Industry this week Brian Grant reports on mesh beads for plaster beading, a new fire detection system, a flue gas heater, a booklet on aluminium in building, new light fittings, and synthetic resins.

PLASTER BEADING

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warn the vent leak Dim by 2 wall can be used to provide a division between different types of plaster finish of the kind which may be specified in bathrooms or schools and hospitals. This bead can also be used to form a skirting in rooms with concrete floors, the finish being brought up to the underside of the nose and the wall plaster down to the top. The two finishes may be made flush or a projection may be left. The second bead is a picture rail, having a slot in which picture hooks may be inserted. When necessary the slot can be papered over and the paper pierced where hooks are to be used. The third design is a casing bead (square or round nosed) for architraves of all kinds.

All beads are in galvanized steel and are produced in various lengths up to 10 ft. (The Expanded Metal Co. Ltd., Burwood House, Caxton Street, London, S.W.1.)

FIRE DETECTION SYSTEMS

A very rapid fire detection system which is known on the Continent and America under the trade name of Cerberus, is now being marketed here under the name of Minerva. The earliest types of automatic fire alarm were based on heat sensitive elements, which provide a simple and reliable system, but with the disadvantage that the fire has often reached an advanced stage before the heat is enough to set off the alarm. Photo-electric cells have also been used to detect smoke, but the Minerva system uses radio active materials. The principle is based on the fact that alpha particles are continuously emitted by the radio active material used. The material is contained in a small chamber open to the air in the room, and having a voltage applied across its ends. The alpha particles emitted allow a minute current to pass, but a small amount of smoke will absorb the particles and produce a change in the current which is registered by a relay valve and the alarm is operated. The detector is a small cylindrical unit about 6 in. long and 3 in. diameter. It contains the radio-active material and the relay valve, and is placed wherever it is needed, as often as not on the lines of a sprinkler system, each detector taking care of up to 50 sq. yds. of floor area.

The detectors are all connected to a monitoring unit which continuously checks each circuit for faults and also registers any alarm signal by bell or any other method, including automatic alarms at the fire station. The control unit works off the normal electricity supply, consuming a negligible amount of current, and an emergency unit is provided which takes over automatically if the mains supply should fail. Wiring is simple, and is normally paid for by the user; detectors and the signal equipment can be hired at a low annual fee, including inspection. (The Minerva Detector Co. Ltd., Red Lion Street, Richmond, Surrey.)

BALANCED FLUE GAS HEATER

A new balanced flue gas heater, the Sapphire, has recently been introduced by William Sugg. The balanced flue principle has already been used both for water and space heaters, and has the advantage that the products of combustion are returned through the wall via a combined air inlet and flue outlet. Room air is drawn into the base of the heater by convection and passes over the hot combustion chamber, thus giving a constant circulation of warmed air. There is a pilot jet for lighting the main burner and a safety device for preventing gas from the main supply from leaking into the heater when it is not in use. Dimensions of the heater are 34 in. high by 26 $\frac{1}{2}$ in. wide and the projection from the wall is $7\frac{1}{4}$ in. The balanced flue has the

same cross section as the standard brick, so that installation is simple, while the terminal projects only 2 in. from the wall face. The heater will provide comfortable conditions in rooms of up to 1,600 cub. ft. at a gas cost which is claimed to be as low as 2d. an hour. (William Sugg & Co. Ltd., Vincent Works, Regency Street, London, S.W.1.)

ALUMINIUM FOR ROOFING

A new publication from Northern Aluminium deals very objectively with the durability of aluminium in building. Tests carried out in America show that in nearly all types of environment the corrosion pattern is much the same, any corrosion normally taking place during the first 1½ or 2 years of exposure, after which corrosion very nearly stops, or, at worst, continues at a very reduced rate. On the basis of these tests it is claimed that the alloy NS 3 (BS 1470) should have a minimum life of over 100 years in rural conditions, and over 50 in severe coastal or industrial areas. A note of caution is necessary, however, with "industrial" areas, which may vary to a very considerable extent, as fumes from manufacturing processes may cause considerable damage to the underside of the roof. A fair number of case histories now exist in this country, but it would be a safe rule to consult the manufacturers before roofing factories where the internal atmosphere may be suspect. The booklet concludes with a series of useful hints on fixing and on contact between aluminium and other building materials, some of which, notably copper and damp cement, should be studiously avoided. Copies of the booklet from Northern Aluminium Co. Ltd., Banbury, Oxon.

LIGHT FITTINGS

The GEC has recently introduced a range of some 50 new designs of light fittings, most of which are very reasonable in price. It would, of course, be ridiculous to pretend that all the designs are equally good, but it is fair to say that most architects will be able to find something in this wide range of pendants and wall fittings to meet their requirements. The GEC has always catered for the widest market, but since the war they have tried one or two experiments in the contemporary idiom and now seem to have decided that it is worth while. Congratulations to them and to designer Beverley Pick. (The General Electric Co. Ltd., Magnet House, Kingsway, London, W.C.2.)

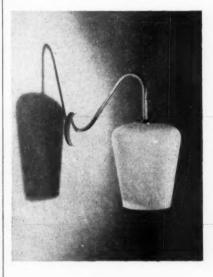
SYNTHETIC RESINS FOR BUILDING

The monthly technical notes published by Aero Research have been referred to on several occasions in these notes and it is worth drawing attention to the October and November, 1954, issues. These describe a whole series of very interesting glued timber trusses, mainly in the north of England which have been designed by D. W. Cooper, a structural engineer who has been carrying out research work at Kings College, Durham. Aerolite 300, an urea-formaldehyde glue used with a separately applied hardener, appears to provide a far more efficient joint than most timber connectors, and chapter and verse are given for a number of jobs, from a boathouse, 16 ft. 6 in, span with trusses entirely glued, to laminated components for Llandaff Cathedral roof trusses (50 ft. span). The 18 boathouse trusses cost £140 against an estimated figure for £300 in steel. Architects will find these two issues very well worth reading. Copies from Aero Research Ltd., Duxford, Cambridge.



A Minerva fire detector.

Two wall bracket light fittings from the new G.E.C.





Readers requiring up-to-date information on building products and services may complete and post this form to the Architects' Journal 9, 11 and 13, Queen Anne's Gate, S.W.1

ENQUIRY FORM

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27.1.55

Buildings Illustrated

Gartree Secondary School at Tattershall, Lincolnshire (Pages 132-137) for the Education Committee, Lincolnshire—Parts of Lindsey County Council. Director of Education: F. J. Birkbeck, M.A. Architect: Denis Clarke Hall, F.R.I.B.A.; Chief Assistant Architect: H. S. Scorer, A.R.I.B.A.; Assistant Architect-in-charge: A. R. H. Ruth, A.R.I.B.A.; Quantity Surveyors: Davis, Belfield & Everest; General Contractor: Barber & Sons; Sub-contractors: asphalt, Asphaltic (London) Ltd.; structural steel, Robert Stephenson Ltd.; special roofings, William Briggs & Sons; partitions, Holoplast Ltd.; woodblock flooring, S. Bennett & Sons Ltd.; patent flooring, Semtex Ltd. (tiles), Marriott & Price (concrete tiles), and Jaconello Ltd. (in situ terrazzo); central heating, kitchen extract fan, Norris Warming Co. Ltd.; cooker, C. & G. Wright (Boston) Ltd.; gas (Calor) G. & A. Blackburn; electric wiring, Henry Carr Ltd.; electric light fixtures, Troughton & Young Ltd., Hailwood & Ackroyd Ltd., S.L.R. Electric, Walsall Conduits Ltd., and Benjamin Electric Ltd.; sanitary fittings, Broad & Co. Ltd.; ironmongery and door furniture, A. J. Binns & Co. Ltd.; metal windows, The Crittall Manufacturing Co. Ltd.; metalwork, Fencing (Shepperton) Ltd. (fencing), Parker, Winder & Achurch Ltd. (cycle racks); slate name panel, Sculptured Memorials: terrazzo, Marriott & Price Ltd.; blinds, Tidmarsh & Sons; furniture, Geo. Hammer & Co. Ltd.; grass for playing fields, G. C. Stones & Son Ltd.; school fittings, Comyn Ching & Co. (London) Ltd., (kitlockers), Mountford Bros. (cloakroom fittings), H. Hunt & Sons (gym. equipment), Wilson & Garden Ltd. (blackboards).

Announcements

PROFESSIONAL
Mr. Ernest W. Haysom, F.R.I.B.A., has resigned his appointment as Regional Archi-

tect with the Ministry of Housing and Local Government to begin private practice in Solihull. Pending the completion of office accommodation in March, he is practising at Overdale, 168, Station Road, Knowle, Warwickshire, where he will be pleased to receive trade catalogues.

Mr. Theo. H. Birks, F.R.I.B.A., having commenced practice at 38, Portland Place, W.I, would be pleased to receive trade catalogues, etc. Telephone: Langham 8847.

Mr. S. V. W. McCready, A.R.I.B.A., M.R.I.A.I., has moved from 8, Market Square, to 18, Market Street, Lisburn, Northern Ireland. Telephone: Lisburn 2263.

Mr. A. T. Lambert, M.I.H.V.E., A.M.I.MECH.E., Consulting Engineer, has relinquished his appointment as Heating and Ventilating Consultant to the North Thames Gas Board to continue in private practice at South Riding, St. Paul's Road, Dorking, Surrey, Telephone: Dorking 3840. He will be pleased to receive trade catalogues, etc., at the above address,

Messrs. Robert G. Clark, Architect and Surveyor, Kingston-upon-Hull, have opened a branch office at Westbourne Chambers, Bishopton Lane, Stockton-on-Tees, and will be glad to receive trade catalogues, etc.

TRADE

Messrs. Venning & Ellis have changed their address to National Provincial Bank Building, Trehawke House, Liskeard, Cornwall.

After the sudden death of Mr. F. Malcolm Bond, Mr. Charles Argent, managing director of Val de Travers Asphalte Ltd., has been elected chairman of the Natural Asphalte Mine-Owners and Manufacturers' Council.

Messrs. Honeywell-Brown Ltd. have opened a new office at 119/121, Albert Road, Middlesbrough, under the supervision of Mr. T. Halstead.



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In both cases, the instruction is given by experts, with plenty of practical demonstrations. Direct enquiries on the scope of these training courses should be made to the C.U.C. at the address below—or to any of the C.U.C. Information Centres which appear on the right.

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Cambridge

24 St. Andrew's Street (Cambridge 55274)

Cardiff 9 Castle Street (Cardiff 28266)

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341 Bath Street, C.2 (Douglas 8294)

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(Leeds 3-4371/2) 99 Albion Street

London The Building Centre, 26 Store Street, W.C.1

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(Blackfriars 2852) 257 Deansgate

Newcastle upon Tyne (Newcastle 21666)

Nottingham 4 and 6 St. Peter's Gate (Nottingham 47000)

Important C.U.C. Publications

- " List of Recommended Domestic Solid-Fuel Appliances "
- "Warmer Homes with Solid Fuel"
- "Make your House Cosier in Winter" (Insulation booklet)
- "Fuel Stores for Houses and Flats"
- "Architectural Design Data" (Fuel hand-ling and storage for larger buildings)
- complimentary copy of any of the above will be sent on request.

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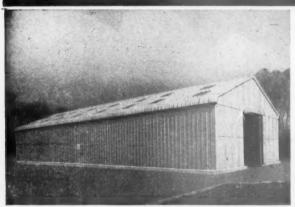
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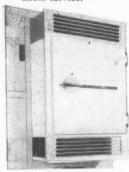
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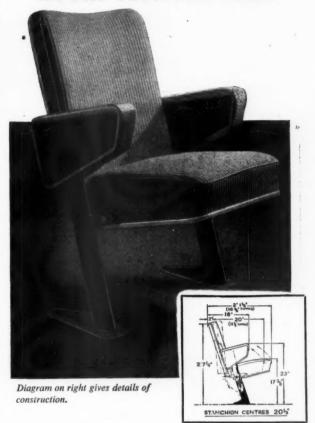
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The designer, Mr. Robin Day, F.S.I.A., A.R.C.A., who acted as consultant to Mr. R. H. Matthew, C.B.E., A.R.I.B.A., Architect to London County Council, worked in the closest co-operation with the technical staff of Cox.

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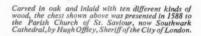
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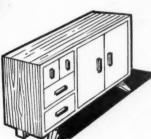
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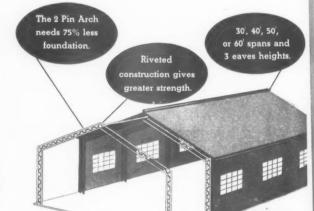
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by W. Fisher Cassie and J. H. Napper. Foreword by W. A. Allen. THE SECOND of a series of 3 books on building construction published at the recommendation of the Text and Reference Books Committee of the R.I.B.A. The authors do not attempt to give the formulae and methods of analysis and design used by the structural engineer; rather, they provide the architect and student with mental pictures of how structures behave. 81 ins. by 51 ins. 268 pages, over 150 illustrations. 30s. net, postage 8d.

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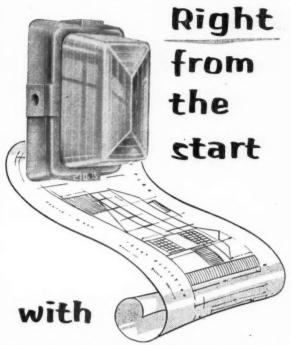
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Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's

paper.
Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcements

25s. per inch: each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduted Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-69 inclusive unless he or she or the employment secrepted from the provisions of the Notification of Vacancies Order, 1952.

OFFICE OF THE RECEIVER FOR THE METROPOLITAN POLICE DISTRICT. Applications are invited for unestablished appointments as LEADING ARCHITECTURAL ASSISTANTS in the Architect and Surveyor's Department. The work is concerned with the design and construction of police dwellings and buildings, and candidates will be required to work in the Westminster area.

Rates of Pay* (Men).—£665 × £20—£725 × £25—£780.

Rates of Pay* (Men).—E005 X 220—2125 A 220—2780.

Women.—£580 X £20—£640 X £25—£665.

The scales quoted are subject to an increase of approximately 3 per cent., while a 45½-hour week is being worked and also to the addition of a Pay Supplement of £25 or £30 per annum, according to the point reached on the scale.

Conditioned hours.—44 per week.

Annual Leave.—24 days.

Application forms from the Chief Architect, Architect and Surveyor's Department, New Scotland Yard, London, S.W.1, marking the envelope "Architectural Assistants."

6005

COUNTY BOROUGH OF BLACKPOOL.

COUNTY BOROUGH OF BLACKPOOL. Applications (by 5th February) are invited for following posts in Borough Surveyor's Depart-

ment:—
SENIOR ENGINEERING ASSISTANT.
A.P.T. V (£750-£900).
ENGINEERING ASSISTANT, A.P.T. III

(£600-£725). ARCHITECTURAL ASSISTANT, A.P.T. II

(£560-£640).
Application forms and particulars obtainable from the Borough Surveyor (Arthur Hamilton, B.Sc.), P.O. Box 17, Municipal Buildings, Black-R.Sc.), P.O. Box 17, Municipal ...
B.Sc.), P.O. Box 17, Municipal ...
B.Sc.), P.O. Box 17, Municipal ...
TREVOR T. JONES,
Town Glerk.
8177

GOVERNMENT OF QATAR—PERSIAN GULF.
ARCHITECT.—Applications invited from Fellows and Associates of the Royal Institute of British Architects, with not less than five years practical experience after qualifying, for post of GOVERNMENT ARCHITECT.
DUTIES.—To design and supervise Government projects under direction of State Engineer.
Terms & Conditions of Service.—Contracts for from 2 to 5 years according to wish of candidate, terminable at any time by three months notice in writing by either party. Pay in scale, Rs. 1,850 × Rs. 75–Rs. 2,000 × Rs. 100—Rs. 3,000 an Arabic month, approximately equivalent to £1,665 × 867 10s.—£1,800 × 290—£2,700 a Gregorian year, according to experience and qualifications. Free furnished accommodation, water, fuel, light. Married accommodation and family passages provided for wife and children up to 4 persons, including the successful applicant. Leave earned at rate of 2 months in each year of service. All calculations for pay and leave according to the Arabic calendar in force in Qualify and termination of contract, and leave passages where applicable, provided in accordance with regulations. Free medical treatment by State Medical Service. Other terms and conditions of service and note on local conditions in Quar will be sent to applicants who seem likely to qualify for this appointment.

appointment.

Applications should be made in writing to:

C. TENNANT SONS & COMPANY, LTD.,

4. COPPHALL AVENUE,

LONDON, E.C.2.

accompanied by full personal particulars, including details of education, qualifications, experience, religion, past employment and copies of certificates and testimonials where applicable.

Please send all papers in duplicate.

8103

send all papers in duplicate.

NORTHUMBERLAND COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.
Applications are invited for the appointment of a PLANNING ASSISTANT (ARCHITEC-TURAL), at a salary within the National Joint Council, Grades A.P.T., I-III (£500-£725). Applicants should possess the Final or Intermediate qualification of the R.I.B.A., and the grading and salary of the successful candidate will depend upon qualifications and experience.
Applications on forms obtainable from the undersigned should be completed and returned not later than the 12th February, 1955.

J. B. ROSS, A.R.I.C.S..
County Planning Officer.

WELWYN GARDEN CITY AND HATFIELD DEVELOPMENT CORPORATIONS.

APPOINTMENT OF QUANTITY SURVEYING ASSISTANT.

Applications are invited for the appointment of QUANTITY SURVEYING ASSISTANT at a commencing salary of £500 per annum with increments in accordance with satisfactory service.

Applicants should be experienced in working up and measuring on site and capable of taking off under supervision.

The appointment is superannable and terminable by one month's notice on either side. The successful applicant will be assisted in obtaining housing accommodation if required.

Applications, in the candidate's own handwriting, giving age, details of present and particularly with the names of three persons to whom reference may be made, should be addressed to the General Manager, 4, Wigmores South, Welwyn Garden City, Herts, and be received by 3rd February, 1985.

City, Herts, and be received by 3rd February, 1985.

8141

EAST BARNET URBAN DISTRICT COUNCIL.
ENGINEER AND SURVEYOR'S
DEPARTMENT
Applications are invited for the following permanent appointments:

(i) ASSISTANT ENGINEER. A.P.T., Grade III (£600×£22—£725 per annum, plus London weighting).

(ii) ASSISTANT ARCHITECT. A.P.T., Grade III (£600×£22—£725 per annum, plus London weighting).
The Council will be unable to provide housing accommodation.
Forms of Application and Conditions of Appointment may be obtained from the Engineer and Surveyor, Town Hall, Station Road, New Barnet, Hertfordshire. Completed application forms must be returned by not later than Saturday, 19th February, 1955.

8242
COUNTY BOROUGH OF GREAT YARMOUTH

be returned by not later than Saturday, 19th February, 1955.

COUNTY BOROUGH OF GREAT YARMOUTH EDUCATION COMMITTEE.

SCHOOLS ARCHITECTS DEPARTMENT. Applications are invited from Associate Members of the R.I.B.A. to fill the vacancy for a SENIOR ASSISTANT ARCHITECT, within A.P.T.. Grade IV (Amended) (£675 to £825).

Candidates should have a knowledge of modern school design and construction.

The appointment is superannuable and subject to the National Conditions of Service, and the appointment will be terminable by one month's notice on either side.

HOUSING ACCOMMODATION will be made available if required.

Canvassing will be deemed a disqualification, and candidates must disclose any relationship to any member or holder of any senior office under the Council. Candidates who fail to do so will be disqualified or, if appointed, llable to dismissal without notice.

Applications, stating age, qualifications, experience, and giving details of present and past appointments, together with the names of two referees, should reach the Schools Architect, 22, Euston Road, Great Yarmouth, by the 12th February, 1955.

D. G. FARROW,

Chief Education Officer.

ruary, 1955.

D. G. FARROW,
Chief Education Officer.
22, Euston Road, Great Yarmouth.

8243

COUNTY COUNCIL OF DURHAM.
COUNTY PLANNING DEPARTMENT.
Applications are invited for the following

COUNTY FLABRANCE
Applications are invited for the following appointments:—

(a) PLANNING ASSISTANT, for work mainly in connection with Town Maps, Grade IV, A.P.T., E675-E285. Applicants must be A.M.T.P.I.

(b) PLANNING ASSISTANT, Grade III. A.P.T., E600-E725. Applicants must be either A.M.T.P.I. or A.R.I.B.A., with considerable experience of housine layouts.

(c) DRAUGHTSMAN (male or female). Miscellaneous, Grade III. £395-£460.

(The commencing salary in each case will be at the minimum.)

Posts superanuable and subject to medical examination. Canvassing will disqualify. Apply, with full particulars and names of two referees, to the County Planning Officer. 10. Church Street, Darham, by Wednesday. 9th February, 1955.

J. K. HOPE, Clerk of the County Council. Shire Hall, Durham.

Shire Hall, Durham. 3228

BOROUGH OF WILLESDEN.
Appointment of ARCHITECTURAL ASSISTANTS:—Grade A.P.T., IV (£675-£825) per annum), Grade A.P.T., III (£600-£725) per annum), plus London weighting.
Applications are invited for the above appointments on the permanent staff of the Borough Engineer and Surveyor's Department from suitably experienced persons, preference being given to Associates of the Royal Institute of British Architects or who hold an equivalent qualification.
The commencing salary in each case will be fixed in accordance with the qualifications and experience of the successful candidates.
The Council is unable to assist with housing. Full details and forms of application may be obtained from the Borough Engineer and Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6, and should be returned to the undersigned not later than 10 a.m. on Monday, 14th February, 1955.

Town Hall, Dyne Road, Kilburn, N.W.6

Town Hall, Dyne Road, Kilburn, N.W.6.

January, 1955.

GOVERNMENT OF UGANDA.
ASSISTANT TOWN PLANNER, TOWN
PLANNING DEPARTMENT.
Duties include collection of data for planning
surveys and assisting Government Town Planner
in preparation of planning schemes for towns in
the Protectorate. The officer selected will be
stationed in Kampala. He will be required to
visit various towns at regular intervals and attend
meetings in connection with town planning
affairs.

visit various towns at regular intervals and attend meetings in connection with town planning affairs.

Appointment is on contract for 30-36 months in the range £1,074 to £1,620 per annum, according to experience. Gratuity at rate of 13½ per cent. of salary on satisfactory completion of contract, 10 per cent. cost-of-living allowance also payable. Free passages provided, either up to four tourist class air passages or up to three adult sea passages, for the officer, his wife and dependent children. Furnished quarters, if available, are provided at reasonable rent. Leave is granted at rate of 6 days for each month of resident service. Candidates, between the ages of 25 and 35, should be Associate Members of the Town Planning Institute. Additional professional qualifications in Engineering, Architecture or Surveying will be an advantage.

Apply in writing to the Director of Recruitment, Colonial Office, Great Smith Street, S.W.1. giving briefly age, qualifications and experience, and quoting reference No. BCD 62/9/01.

CITY OF WINCHESTER.

CHIEF ASSISTANT ARCHITECT.

Applications are invited from qualified Architects for the appointment of Chief Assistant Architect in the City Engineer's Department, at a salary at a point within new Grade IV of the A.P.T. Division of the National Scales, i.e., £675, rising by annual increments of £30 to £225.

Candidates should be Corporate Members of the Royal Institute of British Architects, and have had previous experience in the design and preparation of plans and details for houses on Municipal Housing Estates, including the supervision of work under contract. The work envisaged will include infilling in redevelopment areas in addition to normal housing estate work.

The appointment is a permanent one, terminable on either side by a month's notice in writing, and the successful candidate will be directly responsible to the City Engineer, Consideration will be given to the provision of housing accommodation.

Applications, stating age, present salary, present and previous app

dation.

Applications, stating age, present salary, present and previous appointments, details of training and experience, together with names and addresses of three referees, should reach the undersigned not later than Friday, 4th February,

R. H. McCALL, Town Clerk.

R. H. McCALL,
Town Clerk.

18th January, 1955.

HERTFORDSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following:—
(a) CHIEF QUANTITY SURVEYOR,
(b) CHIEF ASSISTANT QUANTITY SURVEYORS VII, £900—£1,100.
(c) SENIOR ASSISTANT QUANTITY SURVEYORS, VII, £900—£1,100.
(d) ASSISTANT QUANTITY SURVEYORS, VII, £900—£1,200.
(d) ASSISTANT QUANTITY SURVEYORS, VII, £900—£725.
Previous Local Government avariance and

2600—E725.

Previous Local Government experience not essential. Applicants must-give full particulars of qualifications; training; experience; and state clearly which post is applied for, and persons appointed will be expected to take up their duties on 1st April, 1955.

Applications, with the names of two referees, to County Architect. County Hall, Hertford, Herts. not later than 12th February, 1955.

County Architect, County Hall, Hertford, Herts not later than 12th February, 1955.

CIVIL ENGINEERS FOB DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES, AUSTRALIA.

Applications are invited from graduates for undergraduates in their final year) in Civil Engineering of a recognised British University for appointment to the staff of Department of Main Roads. New South Wales, the State Road Authority for construction of roads and bridges of a popointment applicants may be engaged at the Department's Head Office, Sydney, on the design of re-inforced concrete and steel bridges or on main road construction and maintenance either in the metropolitan area or the country.

Commencing salary according to qualifications and experience will be within the range £4955 to £41,170 per annum, with annual progression subject to technical competence, to £41,379 per annum. Appointees will be eligible to contribute to the State Superannuation Fund after six months. Single fare up to a maximum of £160 sterling will be paid to selected applicants, subject to three years' service guarantee bond. Appointment will be subject to satisfactory medical examination, and preference will be given to applicants not more than 30 years of age.

Applications should be made on forms obtainable from the Agent-General for New South Wales, 56, Strand. London, W.C.2.

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT.

Vacancies for ARCHITECTS. Grade III (up to 2992 10s.). and ARCHITECTURAL ASSISTANTS (up to £739 10s.), in Schools, Housing, and General Divisions.

Particulars and application forms from Architect (AR/EK/A/2), County Hall, S.E.1. (1058) 2205

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ASSISTAN cants must be experience ably in new Salary sca London wei above mining conditions. ARCHITE Applicants

ARCHITE Applicants amination of technical as scale: £444 London wei £525, plus certain condition Apply, gi and experie Secretary, Hospital B 5th Februar

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SOUTH-FHOSPITAL ASSISTAN' at least £91 Details from Street, W.J.

CRAWLE require an Salary sca perienced i Contribut Applicatio

Application (Vacancy), able by 7t BOROUG AN CHIEF A.P.T., IV ENGINE

II (£560-£6 ENGINE (£500-£580).

The Chel tions for ticulars of Borough E partment, date: 8th

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BRITISH STANDARDS INSTITUTION
(Office 10).

ARCHITECT is required by the British Standards Institution for about 18 months to assist in the modular co-ordination studies, particularly in the preparation of a European report. Applicants must have an A.R.L.B.A. or equivalent qualification and considerable practical experience of recent building methods. Salary: £800 to £1,000, dependent on experience. Apply in writing to Establishment Officer, B.S.I., 2. Park Street, W.I.

ISLE OF ELV COUNTY CONNEY

W.I. ISLE OF ELY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointments on the Staff of the County Architect.

Applications are invited for the County Architect:—

(a) SENIOR QUANTITY SURVEYOR. Within New Grade, A.P.T., V. £750-£900 (in control of Quantity Section).

(b) PRINCIPAL ASSISTANT ENGINEER. Within New Grade, A.P.T., IV, £675-£252 (in control of Heating and Electrical Engineering).

(c) ASSISTANT ENGINEER. (HEATING). Within New Grade, A.P.T., II, £560-£440.

(d) 2ND ASSISTANT QUANTITY SURVEYOR. New Grade, A.P.T., III, £600-£725.

(e) FOUR JUNIOR ARCHITECTURAL ASSISTANTS, Misc., I/II/III, £320-£460.

(This is a busy office, with excellent and varied experience available). All the above posts are permanent, subject to the National Joint Council Scheme of Conditions of Service, the Local Government Superannuation Act, and to a medical examination. Intending applicants are to apply for forms for the posts in which they are interested to the County Architect, County Hall, March, to whom they are to be returned not later than Saturday, 1256.

R. F. G. THURLOW,
Clerk of the County Council.
County Hall, March.
NORTH-WEST METROPOLITAN REGIONAL

R. F. G. THURLOW.

County Hall, March.

County Hall, March.

County Hall, March.

County Hall, March.

REGIONAL

HOSPITAL BOARD.

ASSISTANT ARCHITECT required.

Applicants must be Associated Members of R.I.B.A. and be experienced in design and construction, preferably in new hospitals and associated buildings.

Salary scale: 2600×225 (7)×230 (3)—2865, plus Commencing salary above minimum may be paid subject to certain conditions. Revised scale under negotiation.

ARCHITECTURAL ASSISTANT required.

APPLICANT MUST APPLICATION OF APPLICATION CONTROL OF APPLICATION.

COMMENCIAL OF APPLICATION CONTROL OF APPLICATION C

Apply, giving age, qualifications (with dates) and experience, with names of two referees, to Secretary, North-West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, by 5th February.

SURREY COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments:

Applications are invited for the following appointments:—

SENIOR PLANNING ASSISTANT, on A.P.T., Grade V (new Grades) (Headquarters Staff at Kingston). Experience in Development Plans (Town Maps).

ASSISTANT PLANNING OPFICER, on A.P.T., Grade II (new Grades) (South-East Area Planning Staff at Reigate). Local Government planning experience desirable.

Applications, with full particulars of age, qualifications, present and past appointments and experience, and names of two referees, must reach the Clerk, Surrey County Council, County Hall, Kingston-upon-Thames, not later than 12th February, 1955.

ruary, 1985.

8234

SOUTH-EAST METROPOLITAN REGIONAL

ROSPITAL BOARD Vacancy for SENIOR
ASSISTANT ARCHITECT. Salary rising from
at least 2915. Applications by 14th February, 1985.

Details from Regional Architect, 10, Hallam
Street, W.1.

Details from Regional Architect, 8232
Street, W.1.

CRAWLEY DEVELOPMENT CORPORATION require an ASSISTANT ARCHITECT, Grade IV. Salary scale 2715-2960 p.a. Qualified, and experienced in design, construction and planning. Contributory superannuation.

Application forms from Chief Architect (Yacancy). Broadfield, Crawley, Sussex, returnable by 7th February.

C. A. C. TURNER, Chief Executive. 8230

BOROUGH OF CHELMSFORD.
BOROUGH ENGINEER. SURVEYOR
ARCHITECT'S DEPARTMENT
CHIEF ASSISTANT ARCHITECT,
F.T., IV, (£675-£825).
ENGINEERING ASSISTANT, Grade
A.P.T.,
I (£650-£641).

II (£500-2007).
ENGINEERING ASSISTANT,
(£500-£500).

(Revised Scales.)
The Chelmsford Borough Council invite applications for the above appointments, further particulars of which can be obtained from the Borongh Engineer, Surveyor and Architect's Department, Municipal Offices, Chelmsford. Closing date: 8th February, 1955.

B. A. FRANCIS,

Town Clerk.
8225

CARMARTHENSHIRE COUNTY COUNCIL.
Applications are invited for the following appointments in the County Architect's Depart-

appointments in the County Architect's Department:—

(a) ASSISTANT QUANTITY SURVEYOR,
A.P.T., Grade II (£560-£640).

(b) TEMPORARY LAND SURVEYOR (£640).

(c) TEMPORARY JUNIOR ARCHITECTURAL ASSISTANT, within A.P.T., Grade I
(£500-£580), according to experience.
Applicants for (b) should be capable of surveying building sites, plotting surveys, and preparing
drainage schemes for schools, etc.
Applications, stating age, qualifications, experience, present and previous appointments, should
be sent to W. T. Lloyd, A.R.I.B.A., County Architect, County Hall, Carmarthen, not later than
7th February, 1955.

W. S. THOMAS.

W. S. THOMAS, Clerk of the Council.

W. S. THOMAS,

Clerk of the Council.

County Hall, Carmarthen.

BOROUGH OF STOCKTON-ON-TEES.

BOROUGH ARCHITECTS DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL

ASSISTANT

Applications are invited for the above position, at a salary commencing at £600 per annum, on A.P.T., Grade II (£560-£640), of the National Scale of Salaries.

Preference will be given to candidates who have passed the Intermediate Examination of the R.I.B.A.

Forms of Application may be obtained from the Borough Architect, 28, The Square, Stockton-on-Tees, and should be returned to the undersigned not later than Saturday, the 5th February, 1955.

JOHN B. HAWORTH,

Barclays Bank Chambers, Stockton-on-Tees.

17th January, 1955.

COUNTY BOROUGH OF READING. Applications are invited for the appointment of THREE ARCHITECTURAL ASSISTANTS, in Grade A.P.T., I (£500-£580), commencing salary according to qualifications and experience.

Two posts are permanent within the establishment and one post temporary for a minimum of two years. Appointment subject to candidates having passed the R.I.B.A. Intermediate Examination or equivalent and had experience in Architect's office. Application forms, to be returned not later than Wednesday, 9th February, obtainable from Borough Architect, Town Hall, Reading.

CITY OF PLYMOUTH.

Reading.

CITY OF PLYMOUTH.

CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments, which are subject to the Conditions of Service of the National Joint Council for Local Authorities, Administrative, Professional, Technical and Clerical Services; the Local Government Superannuation Acts, 1937 to 1953; a satisfactory medical examination and one month's notice on either side for termination.

TWO PRINCIPAL ASSISTANT ARCHITECTS, Grade A.P.T., VI (£825 to £1,000), commencing at £930.

One of the appointments will be for work in connection with the new Town Hall Scheme, and candidates with a contemporary outlook on design are invited to apply. The other appointment will be for a person with experience on educational work and capable of taking charge of the Education Section of the Department.

Applicants must be Registered Architects, and preference will be given to Members of the R.I.B.A.

Applicants must not be over 40 years of age, but this condition may be releved in the reaso of

preference will be given to Members of the R.I.B.A.

Applicants must not be over 40 years of age, but this condition may be relaxed in the case of a person up to 45 years of age employed by another Local Authority.

Applications on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials and/or names of persons to whom reference may be made, should be received at my office not later than the 5th February, 1955.

THE CORPORATION WILL MAKE HOUSING ACCOMMODATION AVAILABLE TO THE SUCCESSFUL MARRIED CANDIDATES, IF REQUIRED.

H. J. W. STIRLING, A.R.I.B.A.,

City Architect.

Seymour Road, Plymouth.

Seymour Road, Plymouth.

PADDINGTON BOROUGH COUNCIL
require QUANTITY SURVEYOR'S ASSISTANT,
A.P.T., I (£530-£610 inclusive) (£10 p.a. less if
under age 26). Candidates should have experience in preparation of estimates, taking-off,
working up, abstracting, billing, site measurement, and working up to final account stage.
Inter. R.I.C.S. or equivalent preferred. Write
age, experience, qualifications, names of three
referees, to the undersigned by 12th February, 1955
(quoting A.200).

W. H. BENTLEY.

(quoting A.200).

W. H. BENTLEY,

W. H. BENTLEY,

Town Hall. Paddington Green, W.2.

A R C H I T E C T U R A L ASSISTANTS and

DRAUGHTSMEN urgently required in Architects'

Department (Head Office). Appointments on a

permanent basis, with good prospects for applicants with initiative and having sound practical

experience and knowledge. Salaries ranging from

5500 to £800 per annum, according to experience
and ability. Write, giving brief particulars of

qualifications and experience, to Chief Architect,

George Wimpey & Co., Ltd., 27, Hammersmith

Grove, London, W.6. (Envelopes to be marked

"Staff Vacancies.")

THE QUEEN'S UNIVERSITY OF BELFAST.

ASSISTANT BUILDINGS OFFICER.
Applications are invited for the post of Assistant Buildings Officer at The Queen's University of Belfast. Applicants should have a sound knowledge of building construction and the maintenance of property and should be able to prepare working drawings, details and specifications. Salary range £500 × £25 to £700 plus F.S.S.U. benefits.

Applications stating age, qualifications and experience and giving the names of two referees should be lodged before 5th February with the Buildings Officer from whom any further particulars may be obtained.

G. R. COWIE, M.A., LL.B., Secretary.

BOROUGH OF SOLHULL.

(a) LANDSCAPE ARCHITECT (within Grade A.P.T. V. £750 × £30—£900).

(b) QUANTITY SURVEYOR (within Grade A.P.T. V. £750 × £30—£925).

Applications are invited for the above appointments in the Borough Engineer & Surveyor's Department, 90, Station Road, Solihull.

Applicants for appointment (a) should be suitably qualified and should preferably have had experience in the layout and development of parks, playing fields and public open spaces.

Applicants for appointment (b) should be Associates of the Royal Institute of Chartered Surveyors, and should preferably have had experience of the Royal Institute of Chartered Surveyors, and should preferably have had experience with other Local Authorities.

The appointments will be subject to the provisions of the Local Government Superanuation Act, 1953, to the terms of the National Scheme of Conditions of Service and to one month's notice on either side.

In appropriate cases the Council will endeavour to assist in the provision of housing accommodation.

Applications, giving full details as to age, present position and salary, qualifications and experience, together with the names and addresses

dation.

Applications, giving full details as to age, present position and salary, qualifications and experience, together with the names and addresses of two referees, should be delivered to the Borough Engineer and Surveyor at the above address not later than Tuesday, February 15th, 1955.

W. MAURICE MELL, Town Clerk. 8295 Town Clerk. 8295

CORPORATION OF THE CITY OF

ABERDEEN.

TOWN PLANNING DEPARTMENT.

Applications are invited for the following

Applications

Option:

(a) SENIOR TECHNICAL ASSISTANT—salary
scale £767—£982 (from 1st June, 1985 : £790—£915).

(b) PLANNING ASSISTANT—salary scale
£502—£697 (from 1st June, 1985 : £515—£715).

Placing in accordance with qualifications and

Placing in accordance where the experience.

Further particulars may be obtained from the Director of Town Planning, 5, Bon-Accord Crescent. Aberdeen, by whom applications should be received on or before 14th February, 1955.

J. C. REINIE,

Town Clerk.

Town House, Aberdeen.

Aberdeen.

BOROUGH OF CHATHAM.

APPOINTMENT OF TWO ASSISTANT
ARCHITECTS.

Applications are invited for the above appointments at salaries in accordance with the New A.P.T. Grade III (commencing at £625 per annum and rising to a maximum yet to be determined by the National Joint Council) of the National Scales of Salaries.

The persons appointed are required for the redevelopment of central areas, and other works offering considerable scope.

Housing Accommodation will be made available if required.

Applications with copies of two testimonials or the names and addresses of two referees should be delivered to the Borough Engineer and Surveyor, Town Hall, Chatham, by Friday, 11th February, 1955.

The appointments will be subject to the National Scheme of Conditions of Service; to the provisions of the Local Government Superannuation Acts and the candidates satisfactorily passing a medical examination. The appointments will be terminable by one month's notice on either side.

BOROUGH OF BURY ST. EDMUNDS.

BOROUGH OF BURY ST. EDMUNDS.
APPOINTMENT OF JUNIOR ARCHITECTURAL ASSISTANT.
Applications are invited for the above appointment on A.P.T., Grade 1, of the new N.J.C. Conditions of Service. Salary £500-£580. Good experience for right type of applicant. Post is superannuable, subject to medical examination. Applicants should be probationers of the R.I.B.A., preferably with not less than 2 years' experience. Applications to the undersigned not later than noon, 12th February, 1955, stating age, present and past appointments, and full details of experience.

NORMAN C. GOLDSMITH.
Borough Engineer and Surveyor.
January, 1955.

EASTERN ELECTRICITY BOARD.
ASSISTANT ARCHITECT—AREA
HEADQUARTERS.
Applications are invited for the appointment of
Assistant Architect in the Architect's Section at
Area Headquarters, Wherstead, Ipswich.
The work is principally concerned with the design and construction of offices, showrooms, stores,
workshops and garages.
The salary will be that for a Third Assistant
Engineer in accordance with the Agreement of
the National Joint Board for the Electricity
Supply Industry on Class AX/DX, Grade 4, 2750-425 to 4875×275 to 4950. The commencing point
within the range 4750-2875 will depend upon
qualifications and experience. Future salary and
conditions of service will be in accordance with
agreements made from time to time by the appropriate negotiating bodies.

The successful candidate will be required to
contribute to a superannuation scheme, and may
be required to undergo a medical examination.
Applications, by letter endorsed "Assistant
Architect," and giving the names of two referees,
should be submitted to the Chief Engineer,
Eastern Electricity Board, P.O. Box 40,
Wherstead, Ipswich, Suffolk, within 14 days of
the appearance of this advertisement.

8277
COUNTY BOROUGH OF WEST HAM.
BOROUGH ARCHITECT AND PLANNING

COUNTY BOROUGH OF WEST HAM
BOROUGH ARCHITECT AND PLANNING
OFFICER'S DEPARTMENT.
Applications invited from men of imagination
and initiative for the following established

Apprentions military for the following established posts:

(a) TWO SENIOR ASSISTANT ARCHITECTS.

New A.P.T., Grade IV, £675×£30-£825 p.a.

(b) ASSISTANT ARCHITECT. New A.P.T.,

Grade III, £600×£25-£725 p.a.

(c) ARCHITECTURAL ASSISTANT. £540×
£20-£600 (salary subject to review).

(d) TWO SENIOR ASSISTANTS.

(e) SENIOR ASSISTANTS.

(e) SENIOR ASSISTANTS.

(e) SENIOR ASSISTANTS.

(e) SENIOR ASSISTANT (PLANNING). New A.P.T., Grade IV, £675×£30-£825 p.a., and qualified, as under:

(a) A.R.I.B.A., capable of controlling large Contracts.

Contracts.

(b) A.R.I.B.A. or Registered Architect, and able to supervise Contracts.

(c) R.I.B.A. Intermediate Exam. standard, with

(c) R.I.B.A. Intermediate Exam. Stanuard, with office experience.
(d) A.M.T.P.I. and other qualification an advantage. Experience in Planning Administration, Development Plan Work, etc. (e) A.M.T.P.I.

Salaries subject to addition of London allowance.
Application forms (returnable by 15th February, 1985) from Thomas E. North, O.B.E., F.B.I.B.A., Dist.T.P., Borough Architect and Planning Officer, 70, West Ham Lane, Stratford, E.15. 8275

Omer, 70, West Ham Lane, Stratford, E.15. 8275

NORFOLK COUNTY COUNCIL.
ASSISTANT QUANTITY SURVEYOR required: salary A.P.T. Grade III (1600-125-1725)
per annum; experience of taking off and working up, checking final accounts, essential; N.J.C. Service Conditions; post pensionable; medical examination. Applications stating age, experience, qualifications, training, present appointment and salary, and giving names of three referees, to County Architect, 27, Thorpe Road, Norwich, by 11th February.

8290

BOROUGH OF STOCKTON-ON-TEES.
BOROUGH ARCHITECT'S DEPARTMENT.
APPOINTMENT OF ARCHITECTURAL
ASSISTANT.
Applications are invited for the above position at
a salary commencing at £675 per annum on
A.P.T. Grade III (£600-£725) of the National
Scale of Salaries.
Candidates should have negred the Nicola Fig. 1

A.F.T. Grade 111 (AND 2028)

Scale of Salaries.

Candidates should have passed the Final Examination of the R.I.B.A.

Forms of Application may be obtained from the Borough Architect, 28. The Square, Stockton-on-Tees, and should be returned to the undersigned not later than Saturday, the 5th February, 1956.

Housing accommodation will, if necessary, be made available to the successful applicant.

JOHN B. HAWORTH,

Town Clerk.

Barclays Bank Chambers, Stockton-on-Tees. 17th January, 1955.

Stockton-on-Tees.
17th January, 1955.

BASILDON DEVELOPMENT CORPORATION
ESTATES DEPARTMENT.
APPOINTMENT OF ASSISTANT BUILDING
SURVEYOR.

Applications are invited for the established and superannuable post of Assistant Building Surveyor on the staff of the Chief Estates Officer (Mr. John H. West, F.R.I.C.S.).
Candidates should have passed the Final or Intermediate Examination (Building Sub-Division) of the R.I.C.S. or hold an equivalent qualification, and must be experienced in building surveying, and be capable of preparing drawings, reports and specifications for maintenance and repair work, and minor adaptation works to all classes of buildings. Salary will be within the range of £550 to £610 per annum, point of entry being determined by qualifications and experience.
Housing accommodation will be made available on rent in approved circumstances.
Applications, stating age, education, qualifications, present and previous appointments with salaries, experience in precise terms, and giving the names of two referees, should reach the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, by the 14th February, 1955.

NATIONAL COAL BOARD—NORTH-EASTERN
Applications are invited for the appointment of
ARCHITECTURAL ASSISTANT, Grade 2, on
the staff of the Divisional Chief Architect at
Denaby Main, near Doncaster.
Applicants should have passed the Intermediate
Examination of the Royal Institute of British
Architects, have had some subsequent practical
experience, should be able to prepare sketch plans
and working drawings under supervision, and have
a sound knowledge of building construction. The
salary, within the scale of £440×£20 to £540, will
depend on the qualifications and experience of
the successful applicant.
Application forms may be obtained from the
Divisional Chief Architects, National Coal Board,
Architects' Branch, Denaby Main, near Doncaster.
E822
COUNTY BOROUGH OF OLDHAM.

Architects' Branch, Denaby Main, near Doncaster.

8282

COUNTY BOROUGH OF OLDHAM.

APPOINTMENT OF ARCHITECTURAL

ASSISTANT.

Applications are invited for the position of ARCHITECTURAL ASSISTANT in my office at a salary within the Grade £600—£725 per annum. Applicants should be Registered Architects, and housing accommodation will be provided if necessary. The appointment is subject to the Superannuation Acts, and the successful candidate will have to pass a medical examination.

Applications endorsed "Architectural Assistant." and accompanied by copies of two recent testimonials, must be delivered to me not later than Monday, 1st February, 1955.

A. L. HOBSON,

Borough Engineer & Surveyor.

75. Union Street, Oldham.

Oldham.

Oldham.

CITY OF NOTTINGHAM.

ASSISTANT PLANNING OFFICER, GRADE

A.P.T., IV (£675-2825).

Applications are invited for the above position in the City Engineer's Department.

Applicants should be Associate Members of the Town Planning Institute, and have had good experience in the office of a Planning Officer to a City or large Borough.

Commencing Salary will depend on experience.

Applications on forms to be obtained from E. M. Finch, Esq., O.B.E., M.I.C.E., M.T.P.I., City Engineer and Surveyor, Guidhall. Nottingham Returnable by 19th February, 1955. 6265

ham Returnable by 19th February, 1985. 8263

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

ARCHITECT'S DEPARTMENT.

ARCHITECT'S DEPARTMENT.

Design, Reconstruction Areas, Detailed Planning, and Development Control. Grade III's salary up to £892 108., and PLANNING ASSISTANTS up to £739 108. Particulars and application forms, returnable by 22nd February, 1955, from Architect (AB/EK/TPB/2), The County Hall, S.E.I. (1642)

ARCHITECTURAL ASSISTANTS required for drawing offices in London, Edinburgh and various provincial offices, including Aldermaston, Borks; Harwell, Berks; Nancekuke, Cornwall; Ranskill, Notts; and Bishopton, Renfrew.

Candidates must have had at least three years' architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. Islandard.

London salary £442—6605 va.

standard.

London salary £442—£695 per annum. Rates elsewhere slightly less. Starting pay according to age and experience. Prospects of promotion and

where sugnity less. Starting pay according to age and experience. Prospects of promotion and establishment.

State age, full details of training and experience and office desired, to E. Bedford, Esq., C.V.O., A.R.I B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(F), Abell House, John Islip Street, London, S.W.1.

(a) SENIOR ASSISTANT ARCHITECT-£750-

(b) ASSISTANT ARCHITECT—£625—£675.
Applicants for (a) must be registered architects, have good experience in design and construction of modern buildings, capable of carrying through projects from inception to completion and able to take charge of group, (b) be registered architects experienced in preparation of working drawings from sketches and taking charge of smaller contracts. Apply by 11th February on form obtainable from County Architect (E), 123, London Road, Leicester.

ARGYLL COUNTY COUNCIL.
Applications are invited for the post of CHIEF
ASSISTANT ARCHITECT in the County Architect's Department: Salary Scale A.P.T. VII-VIII
(£790-£915 per annum). The post is superannuable

able.

Applicants must be members of the Royal Institute of British Architects and should have had experience in the design, construction and execution of works of housing schemes, schools and buildings of a public character, and in the care and maintenance of such schemes and buildings

ings.

Further particulars as to terms and conditions of appointment and service can be obtained from the County Architect, County Offices, Duncon, with whom applications, accompanied by copies of not more than two recent testimonials and giving the names of two persons prepared to act as referees, should be lodged on or before February 7th.

A. D. JACKSON, County Clerk

PADDINGTON BOROUGH COUNCIL require ARCHITECTURAL ASSISTANT, A.P. II (£590-£670 inclusive). Candidates should har lnter. R.I.B.A., and be used to preparing working and detail drawings; be good draughtame and been engaged on and interested in the becontemporary architecture. Write age, qualifications, experience, present and past appointment and names and addresses of three referees, to the undersigned by 12th February, 1955 (quotin A.201).

W. H. BENTLEY

Town Hall, Paddington Green, W.2.

BOROUGH OF OSSETT.

APPOINTMENT OF ARCHITECTURAL
ASSISTANT.

(Amended Advertisement.)

Applications are invited for the above appointment at a salary in accordance with present Grada P.T. IV. Candidates should hold a recognise architectural qualification and be experienced in local authority housing work.

The appointment will be subject to National Conditions of Service, the Local Government Superannuation Act, medical examination, and commonth's notice on either side.

Housing accommodation will be made available to the successful applicant if required.

Applications, including the names of tweeferees and declaring any relationship between the applicant and any member or senior office of the Council are to be received by me not late than Thursday, 17th February, 1955.

Canvassing in any form will disqualify.

Town Clerk.

Town Hall,
Ossett.

Town Hall, Ossett.

19th January, 1955

METROPOLITAN BOROUGH OF BATTERSEA ARCHITEGTURAL DRAUGHTSMEN.

Applications are invited for the appointment of two ARCHITECTURAL DRAUGHTSMEN

Salary £500 × £20-£580 per annum, plus London Weighting (A.P.T. Grade I). L.G. Sapa Act. Application forms from Borough Engineer. Town Hall, S.W.11. Closing date, 14th February.

Tenders Invited

Tenders Invited
6 fines or under, 12s. 6d.; each additional line, 2s. COUNTY BOROUGH OF DONCASTER. BOROUGH ARCHITECT'S DEPARTMENT. CONTRACT No. 512.

PHASES 1 AND 2 OF THE PROPOSED TECHNICAL COLLEGE FOR FURTHER EDUCATION.

The County Borough Council invites building contractors who are willing to tender for the above (approximate value of this Contract is £200,000) to submit their names, with particulars of contracts of a similar nature or magnitude recently undertaken, to the Borough Architect, 15, Scuth Parade, Doncaster, not later than Saturday, the 29th January, 1955.

From the names submitted a panel of contractors will be chosen who will subsequently be provided with the Bills of Quantities and Form of Tender on payment of a deposit of five guineas which will be refunded on receipt of a bona fide tender.

The elesing date for tenders will be Wednesday.

which will be leadered tenders will be Wednesday, the 2nd March, 1955, and the Council does not bind itself to accept the lowest or any tender.

H. R. WORMALD,
Town Clerk.

1. Priory Place,

7th January, 1955.

Architectural Appointments Vacant

4 lines or under, 7s. 6d.: each additional line, 2s.

The engagement of persons answering these
advertisements must be made through a Local
Office of the Ministry of Labour or a Scheduled
Employment Agency if the applicant is a man
aged 18-64 inclusive or a woman aged 18-69
inclusive unless he or she or the employment is
excepted from the provisions of the Notification
of Vacancies Order, 1952.

REQUIRED for Architects' office ('entral
London area., young qualified ASSISTANTS
interested in design and construction. Write, stating experience and salary required. Rax 2325.

RICLS. Final Standard) with at least two
years' practical experience required by City firm
of Chartered Surveyors & Architects. 3925.

ARCHITECTURAL ASSISTANT, intermediate
a principal in a large general practice in the
Home Counties. The appointment will offer opportunity for works in all stages of architecture and
in the administration of a private practice. Enthusiasm and ability essential. Box 5063.

SENIOR ASSISTANT ARCHITECTS required
with experience of work on commercial and
industrial buildings. Salaries up to 2915 per
annum for suitably qualified applicants.

ASSISTANT ARCHITECTS also required, capatle of preparing working drawings and details
from preliminary sketches. Salaries up to 274
per annum.

Applications stating age, experience, qualifications and salary required to G. S. Hay, A.R.I.B.A.
Chief Architect, Co-operative Wholesale Society
Ltd., 1, Balloon Street. Manchester. Architectural Appointments Vacant

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ARCHITECTURAL DRAUGHTSMEN required Applicants should have completed at least one year's office experience. Apply in writing, stating age, training and experience to: Hiord Limited, Romford, Essex.

ASSISTANTS required Manchester District—one qualified or of final standard, one intermediate thandard. State salary required. Box 4858.

EXPERIENCED Senior and also Intermediate to Final standard ASSISTANTS required. Applicants to have knowledge of commercial work, including offices and stores, etc. London experience is essential. Box 4890.

ARCHITECTURAL ASSISTANT: Intermediate to Final standard assistants. Intermediate work; arge-scale contracts. Watson, Johnson, Biokes, Victoria Square, Birmingham. 4895.

ASSISTANT required in busy practice in West End, in early twenties, about Intermediate parameter. Box 5992.

ARCHITECTURAL STAFF, all grades wanted, dinteresting and varied work of contemporary character, light and airy offices. Apply J. Seymour Harris & Partners, 4, Greenfield Crescent, Edgbaston, Birmingham, 15. 6086.

RUNALD WARD & PARTNERS required Seymour Harris & Partners, 4, Greenfield Crescent, Edgbaston, Birmingham, 15. 6086.

RUNALD WARD & PARTNERS require Seymour Harris & Partners, 4, Greenfield Crescent, Edgbaston, Birmingham, 15. 6086.

RUNALD WARD & PARTNERS require Seymour Belgravia 3361.

EXPERIENCED REINFORCED CONCRETE DESIGNERS and ARCHITECTURAL ASSISTANT, Apply 28, Chesham Piace, Belgrave Square, S.W.I. of telephone Belgravia 3361.

SENIOR ARCHITECTURAL ASSISTANT, Seymour Witing, stating age, experience and Salary required, to Howell, Freeman & Batten, 17, Biagrave Street, Reading.

SENIOR ARCHITECTURAL ASSISTANT, School-trained with at least two years' experience, for industrial projects: contemporary outlook, Five-day week. Apply by telephone or letter for interview. Clifford ree & Gaic, F/F.R.I.B.A, 45, Frederick Road, Birmingham, 15. Edgbaston 3076.

nterview. Clinford Yee & Gale, F.F.E.B.B.A., 80, 767-8. Tenderick Road, Birmingham, 15. Edgbaston 876.

CEUL Howitt & Partners, Architects, 86. Andrew's House, Mansheld R.ad, Notting-All Road, Please apply in Writing, giving full details and stating salary required.

THE Buildings and Services Division of THE MITTAL BOX CO. require a DRAUGHTSMAN for work on the Development and Design of New Factories and Extensions to existing Buildings. Must have a good knowledge of building construction, and preferably some experience on structural design. Write, giving full details of experience, to Ref. BS/19, Personnel Services Division, The Metal Box Co., Ltd., The Langham, London, W.L. 8233.

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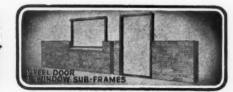
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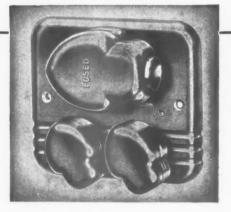


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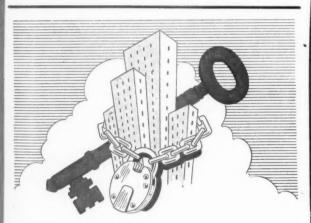


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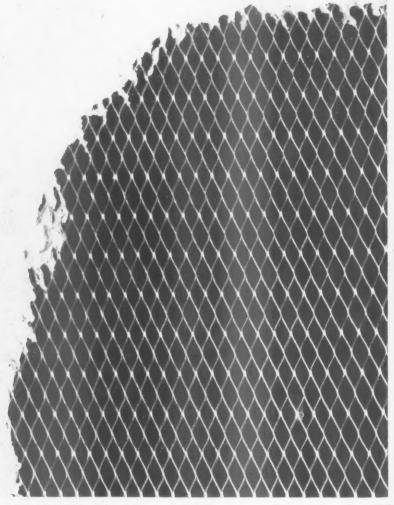
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