THE ARCHITECTS' JOURNAL

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REGISTERED AS A NEWSPAPER

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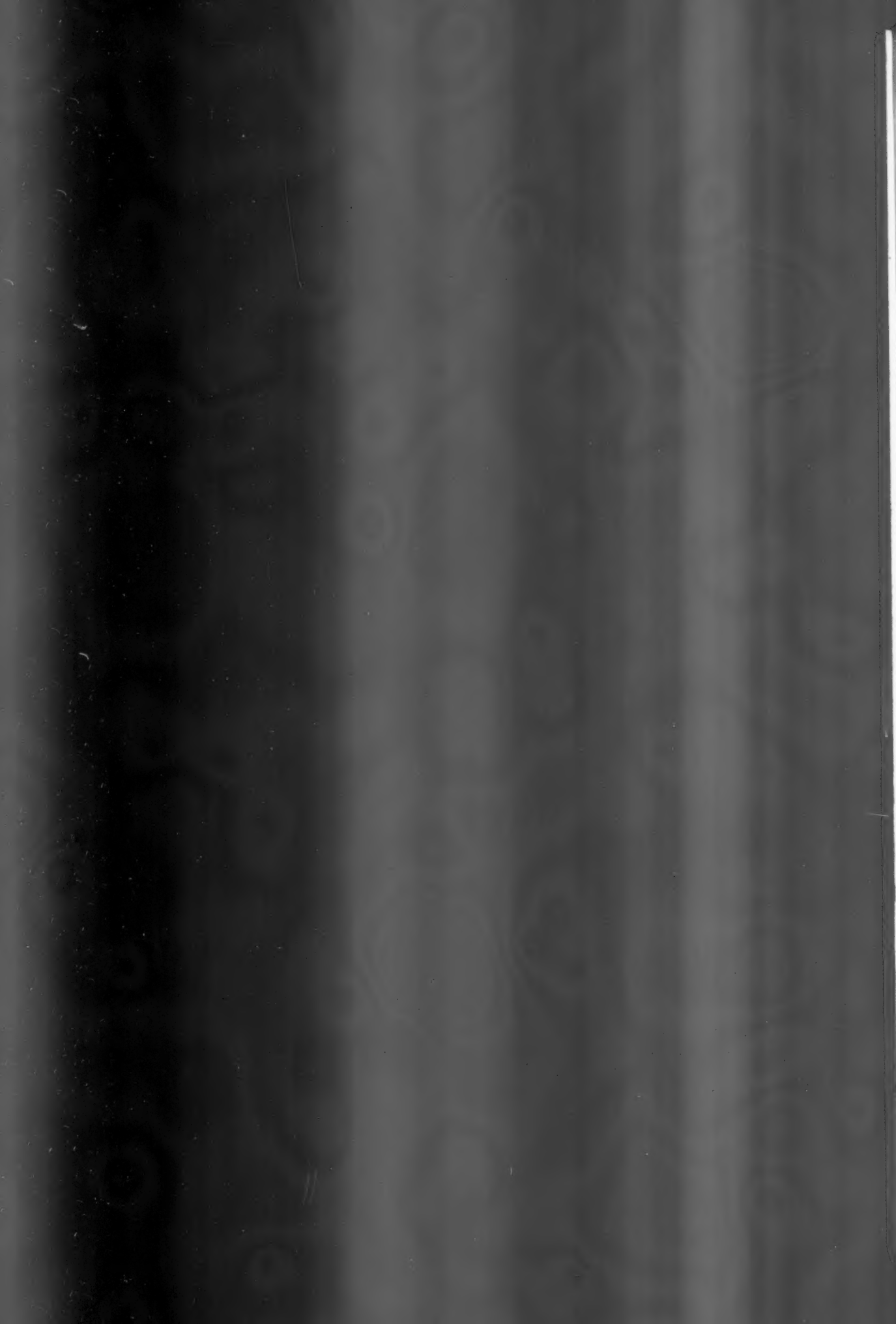
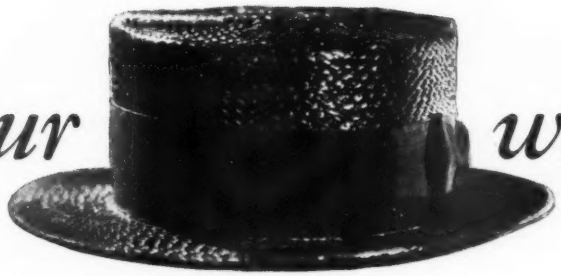


We've got something under our  *which will make everybody pull their*  *up*

When war ends, our serving men and women will expect to get houses with the same dispatch that gave them equipment. They can get them if we use the knowledge which has accumulated during their absence. Houses can be speedily built, and they can be more scientifically constructed than those we used to live in. It is all a question of adding new materials and new methods to the old—*in the right way*. We have made Speed Building a special line of research, and we may have some exciting revelations to make. Meanwhile, we are always happy to co-operate with other firms interested in post-war building research.

SPEED BUILDING IS ON THE WAY

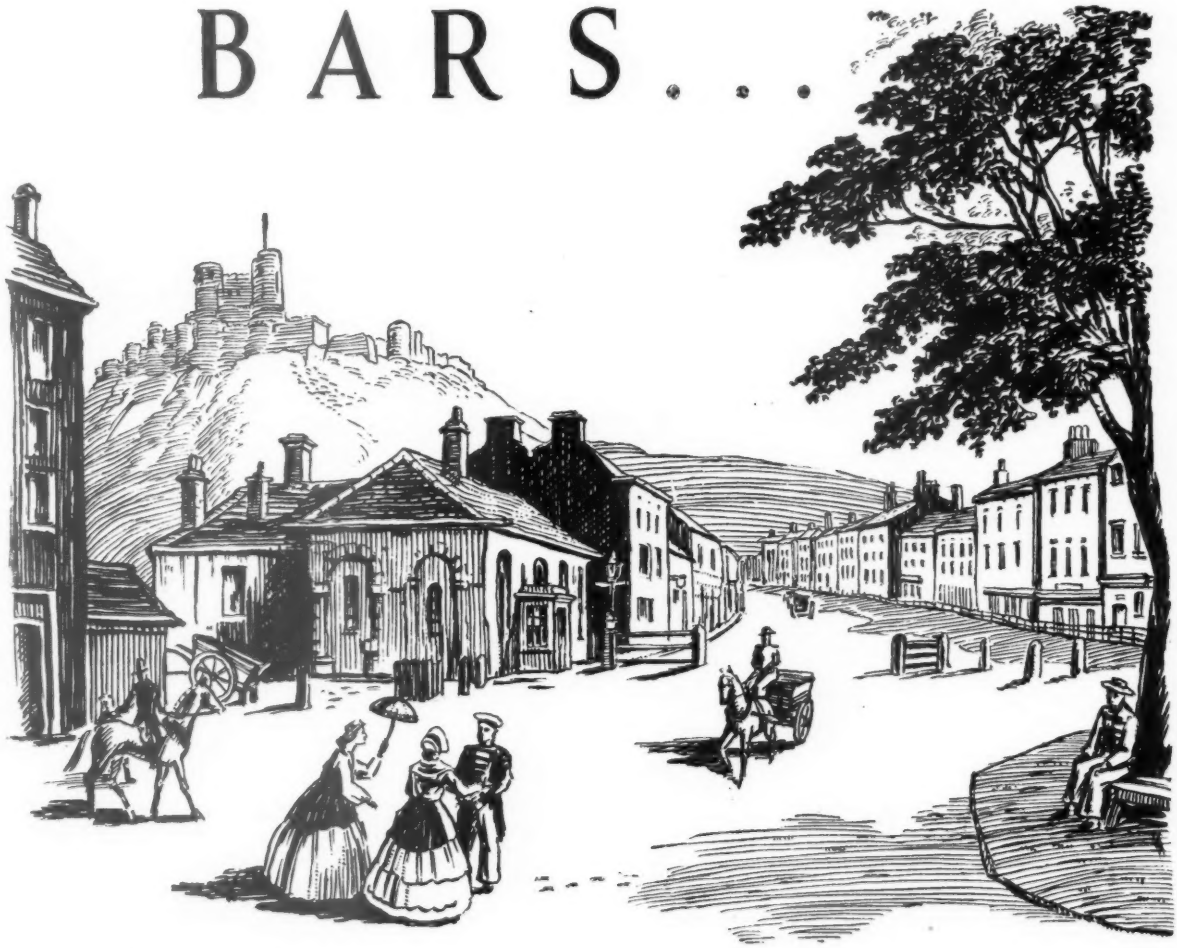
GYPROC PRODUCTS LIMITED

A

Alphabetical Index to Advertisers

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational Legal Notices, Miscellaneous, Property and Land Sales—*see* pages xxviii and xxx.

BARS . . .



The Charlton Toll-Gate, Dover

This well-known toll gate barred the main road to Canterbury and London, holding up the traffic which passed that point to and from the Continent. It was abolished in 1855.

'STRIBAR'

• HOT ROLLED • STEEL BARS

The Bars of old England survive as picturesque reminders of leisured days. In these more strenuous times, the word denotes in particular the 'Stribar' service in hot rolled steel-bars to help production in the general engineering trades, for rivets, nuts and bolts, springs and all general purposes.

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S.70

THIS . . . SISALKRAFT

ADJECTIVE, the name of an attribute, added to the name of a thing to describe the thing more fully. — *Oxford Dictionary.*

PERFECT	SUPREME	DURABLE	USEFUL
Superlative	Best	Stable	Serviceable
Superfine	Paramount	Enduring	Beneficial
Excellent	Pre-eminent	Hard-wearing	Valuable
Inimitable	Foremost	Lasting	Profitable

Our mother tongue has a rich heritage of adjectives ; but were all employed which would suitably define the merits of Sisalkraft, there would be still more to say. To choose an " omnibus " adjective comprehensively to describe Sisalkraft is a task that would have taxed a Gibbon or a Macaulay—because Sisalkraft has a variety of uses, and it is unique in character and construction. There is no other building paper on the market which adequately can compare with it.

For a rough-and-ready description, let it be said that this unparagoned Sisalkraft is good for almost any job you are likely to be called upon to handle. It is unparalleled as a lining to hutments and other wooden structures—as a sarking under tiled or slate roofs—as an underlay to parquet and hardwood floors—for curing concrete—for partitions and for temporary repairs to bombed roofs, walls and windows—for any kind of membrane insulation—and many other jobs where either temporary or permanent protection is required.

It has an interior reinforcement of crossed sisal fibres closely placed. These are embedded in two layers of pure bitumen, with which each of the cover sheets is also generously coated, and the whole is combined under pressure. The resulting sheet is of great strength and is completely waterproof and air-tight. It is light in weight, pliable, clean and odourless, and is therefore easy to handle.

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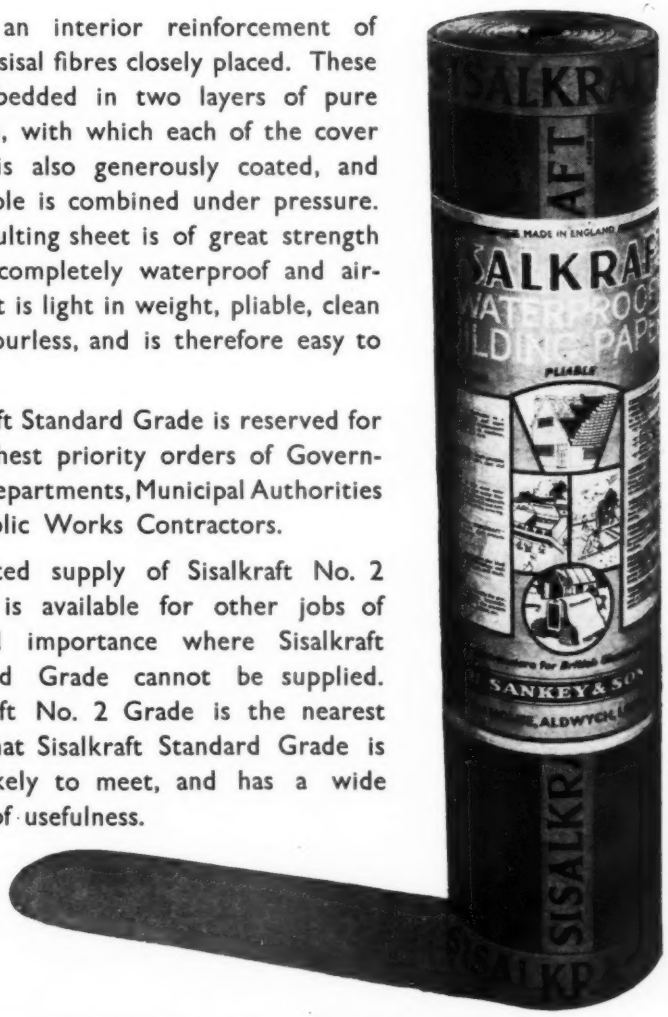

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FOR APPLYING ANY TYPE OF BOARD TO CEILING & WALLS

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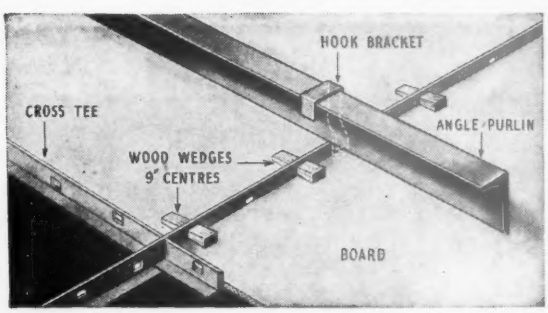
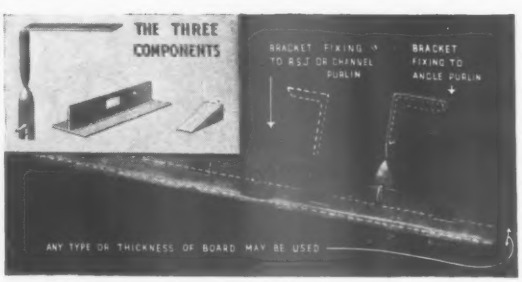
Escalator Tunnel at St. John's Wood Underground Station. Architect: S. A. Heaps.





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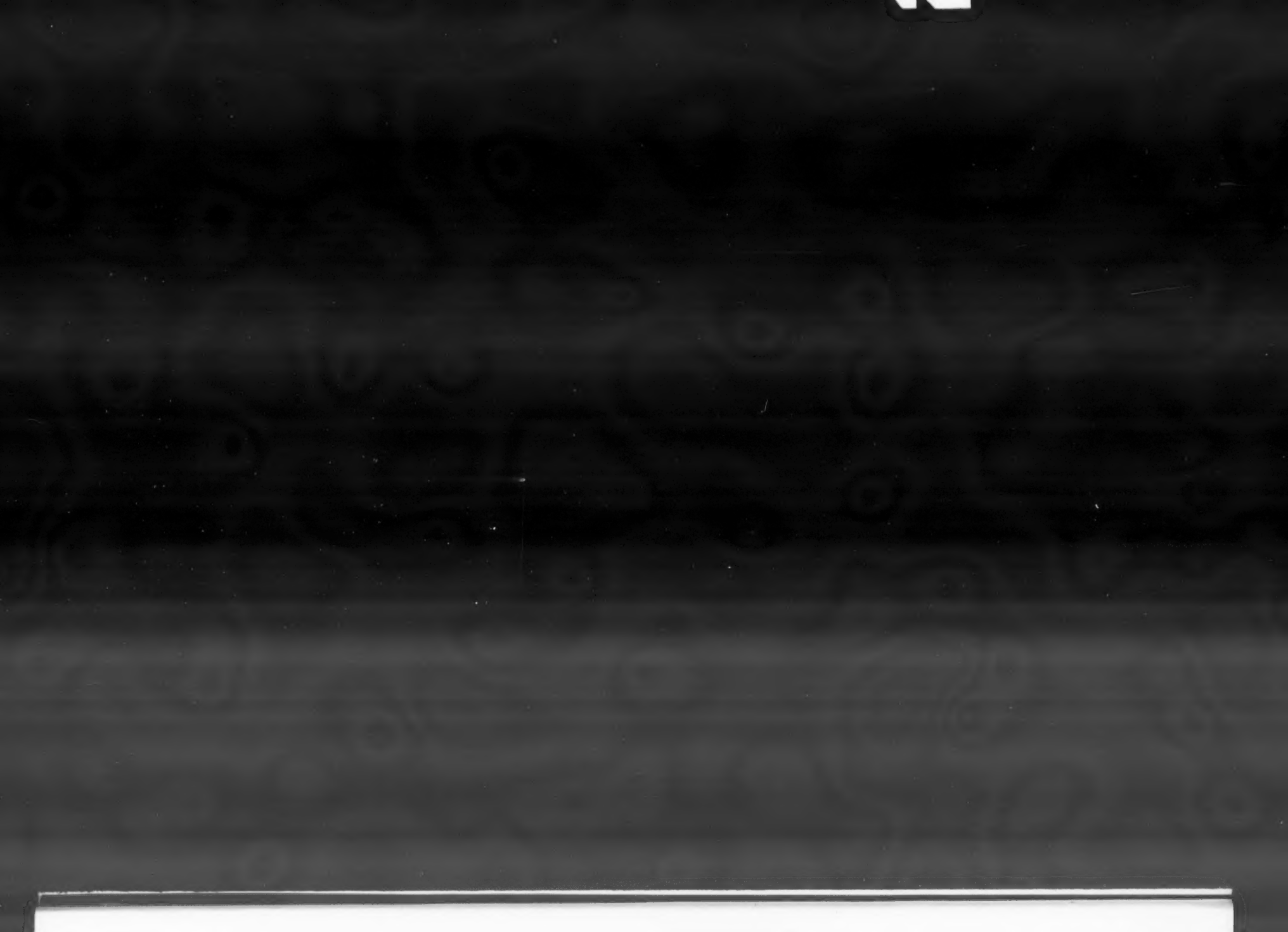
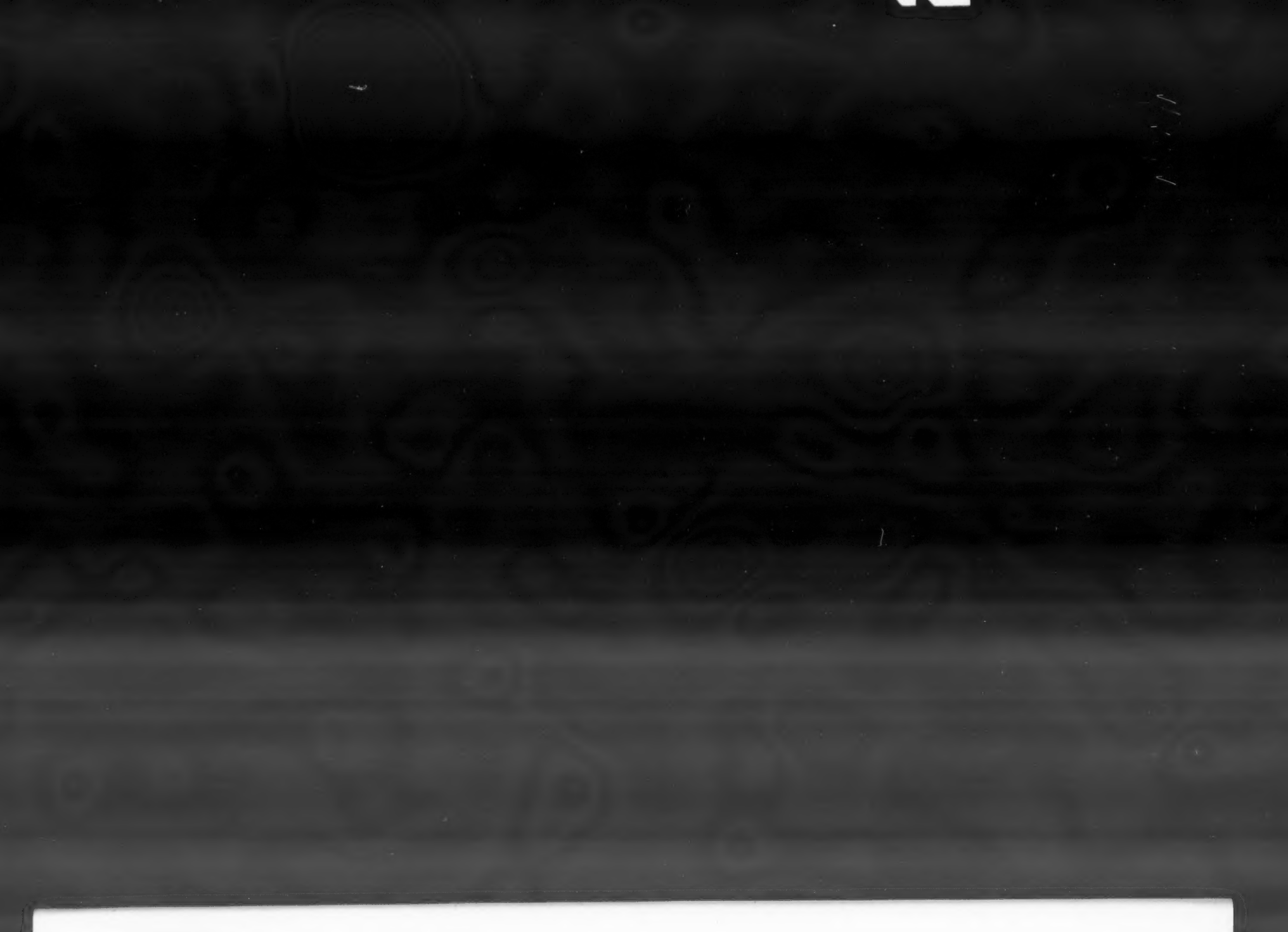
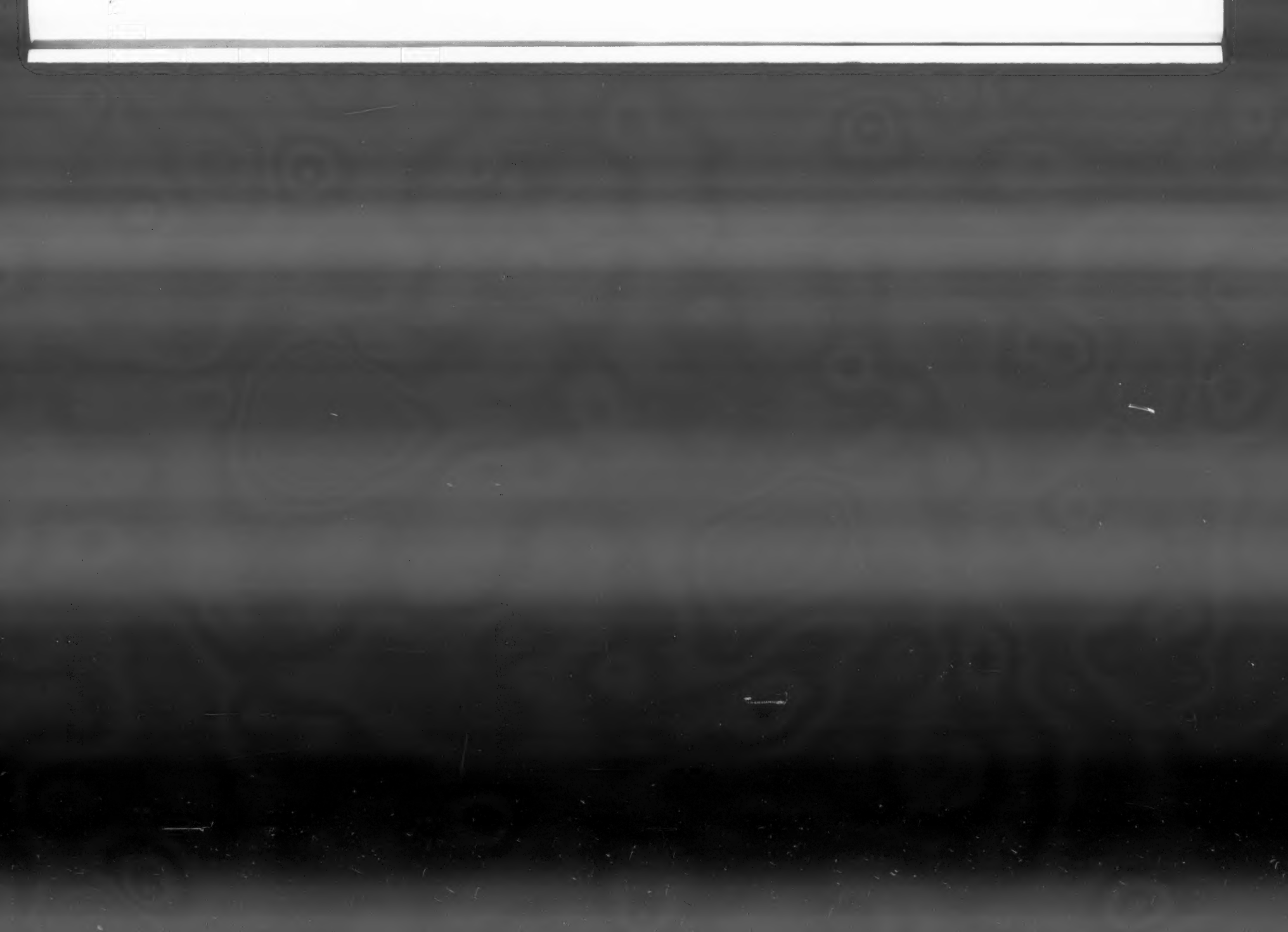
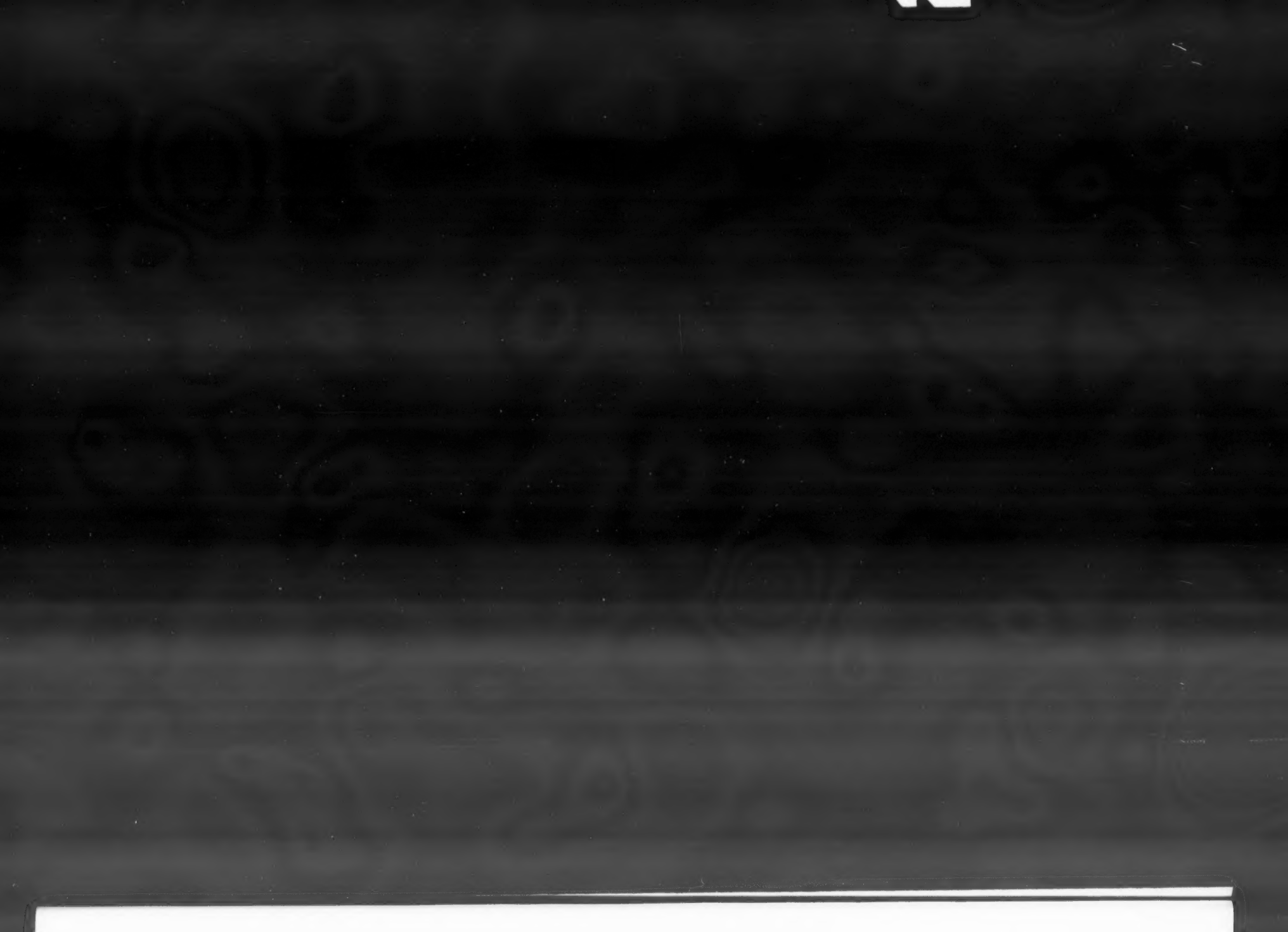
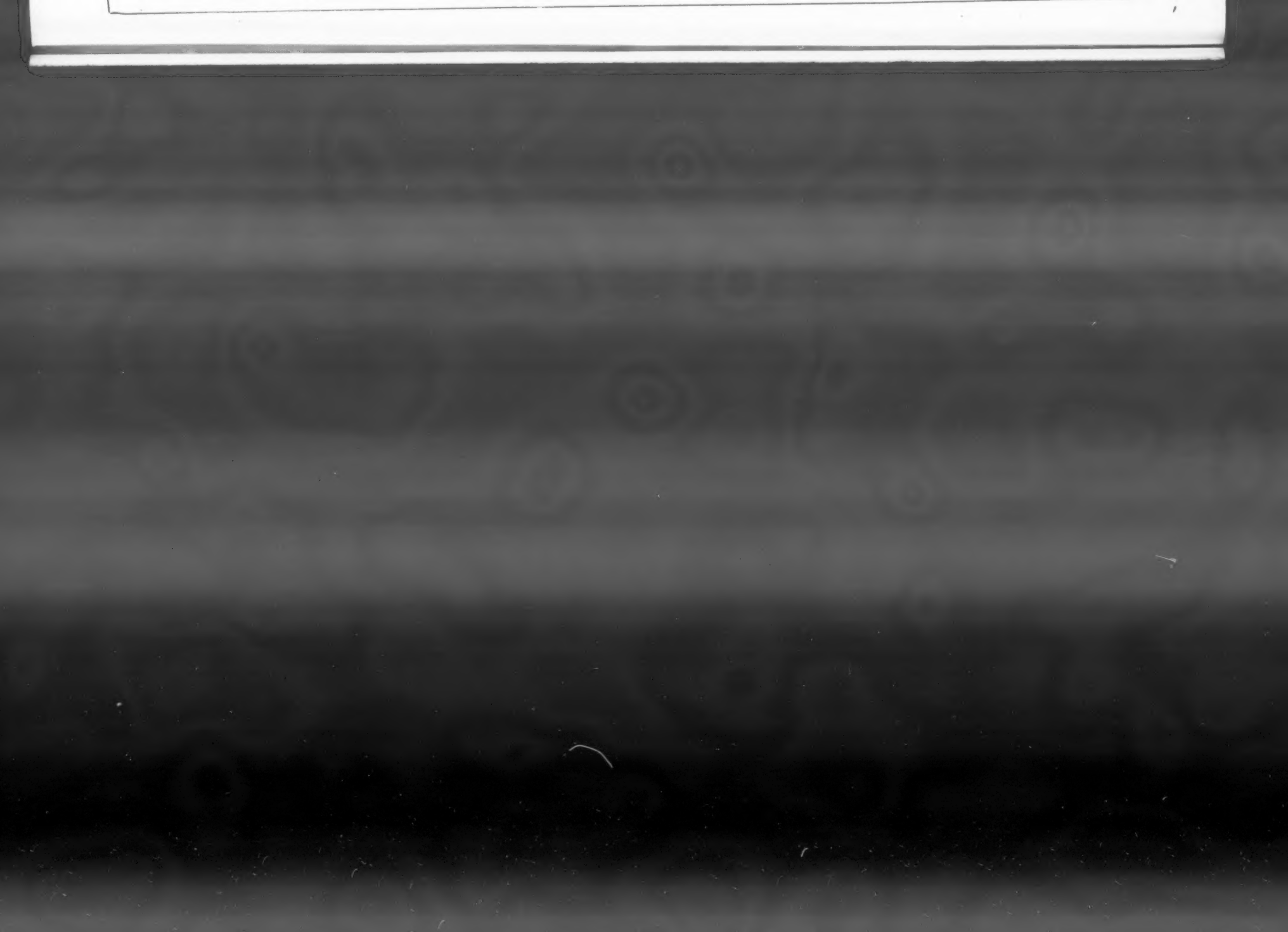
TAS/AN/40.



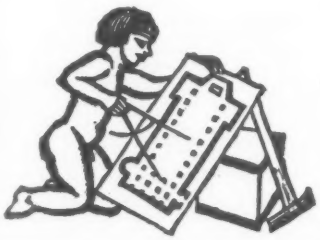








In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents now cannot supply the* JOURNAL *except to a "firm order." Subscription rates: by post in the U.K. and Canada, £1. 3s. 10d. per annum; abroad, £1. 8s. 6d. Special combined rate for* ARCHITECTS' JOURNAL *and* ARCHITECTURAL REVIEW *in the U.K. and Canada, £2. 6s.; abroad, £2. 10s. Single copies, 6d.; post free, 8d. Special numbers are included in subscription; single copies, 1s.; post free, 1s. 3d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 12s. 6d. each; carriage 1s. extra. Goods advertised in the* JOURNAL, *and made of raw materials now in short supply, are not necessarily available for export.*



Journal Abbreviations

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974.
ABT	Association of Building Technicians. 113, High Holborn, W.C.1.	Holborn 1024-5.
APRR	Association for Planning and Regional Reconstruction. 32, Gordon Square, W.C.1.	Euston 2158-9.
ARCUK	Architects' Registration Council. 68, Portland Place, W.C.1	Welbeck 7938.
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128.
BINC	Building Industries National Council. 110, Bickenhall Mansions, W.1.	Welbeck 3335.
BCG	British Commercial Gas. 1, Grosvenor Place, S.W.1.	Sloane 4554.
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434.
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140.
BPVM	British Paint and Varnish Manufacturers. Waldegrave Road, Teddington.	Molesey 1063.
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246.
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073.
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CDA	Copper Development Association. Grand Buildings, Trafalgar Square, W.C.2.	Abbey 2677.
CMC	Cement Marketing Company, Coombe Hill, Kingston, Surrey.	Kingston 2140.
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280.
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322.
DOT	Department of Overseas Trade. Dolphin Square, S.W.1.	Victoria 4477.
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2.	Whitehall 2415.
FGLMB	Federation of Greater London Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041.
GG	Georgian Group. 55, Great Ormond Street, W.C.1.	Holborn 2646.
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881.
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158.
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215.
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172.
ISPH	Industrial & Scientific Provision of Housing. 3, Albemarle Street, W.1.	Regent 4782.
LIDC	Lead Industries Development Council. Rex House, King William Street, E.C.4.	Mansion House 2855.
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767.
MARS	Modern Architectural Research Society. 8, Clarges Street, W.1.	Grosvenor 2652.
MICE	Member of the Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577.
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300.
MOI	Ministry of Information. Malet Street, W.C.1.	Euston 4321.
MOLNS	Ministry of Labour and National Service. St. James' Square, S.W.1.	Whitehall 6200.
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.2.	Gerrard 6933.
MOTCP	Ministry of Town and Country Planning. Lambeth Bridge House, S.E.1.	Reliance 7611, Ex: 1519.
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611.
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041.
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770.
NT	National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1.	Sloane 5808.
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245.
PWB	Post War Building, Directorate of. Ministry of Works and Planning, Lambeth Bridge House, S.E.1.	Reliance 7611.
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936.
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 6927.
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1	Holborn 2646.
TCPA	Town and Country Planning Association. 13, Suffolk Street, S.W.1.	Whitehall 2881.
WLA	Wrought Light Alloys Development Association. Union Chambers, 63, Temple Row, Birmingham, 2.	Midland 0721.
ZDA	Zinc Development Association. 15, Turl Street, Oxford.	Oxford 47988.

NEWS

THURSDAY, MARCH 11, 1943
No. 2511. VOL. 97

Though no feature in The Journal *is without value for someone, there are often good reasons why certain news calls for special emphasis.* The Journal's *starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.*

★ *means spare a second for this it will probably be worth it.*

★★ *means important news, for reasons which may or may not be obvious.*

Any feature marked with more than two stars is very big building news indeed.

At the Paper in Battledress exhibition, held in London, visitors saw two girls making DEMOLITION CARTONS FROM WASTE PAPER. These are used for blowing up buildings, bridges and other enemy strong points, and each girl's output averaged fifteen cartons an hour. Old newspapers, bundles of old letters and cheque stubbs, old novels and out-of-date reference books are used to make the cartons. It is important to remember that 100,000 tons of waste paper must be found to feed the war factories.

Questioned about additional canteen facilities for Government staffs in the City of London, Mr. George Hicks, Parliamentary Secretary to MOW, replies in a written Parliamentary answer that it is proposed to set up in Gracechurch Street a new CANTEEN CAPABLE OF SERVING A THOUSAND lunches daily. The existing canteen in City Gate House will be enlarged to enable 200 more lunches a day to be served, and further facilities, elsewhere in the Finsbury Square area, will be provided.

from AN ARCHITECT'S *Commonplace Book*

SOCIAL REGENERATION.—[*Extract from* Sir Edwin Lutyens, *by his son, Robert Lutyens* (Constable.)] I could never hope to convince father that an architect's first duty should be to become the prophet of social regeneration. And doubtless, from his point of view, I am wrong. He is convinced that the ancient ways were admirable and sufficient. Improvements in the technique of construction, if he has had perforce to use them, he nevertheless regards as completely superfluous. Secondary education, mechanized industry, mass production, organized recreation, the so-called amenities all these he would throw into the discard without thought or hesitation. He has what amounts to a temperamental inability to see any hope or worth or beauty in a new world which lies ready, so some think, for our remaking. But, that being so, he has forfeited the right to guide the younger men of his profession, the explorers of the future, who have turned their steps to an uncharted hinterland, unaided by his vast experience. Or he may be right: he is about so many things! Of this I cannot judge. I stand uncertainly between the two, applauding the spirit without seeking the company of the adventurous.

★

Local authorities are to be ready to start work, at short notice, on A £3,260,000 BRIDGE over the Mackintosh Rock, near the Firth of Forth Bridge.

In recognition of his long service to the building industry, LMBA HAS ELECTED MR. ERNEST J. BROWN, formerly their director, an Honorary Member of the Association.

Mr. Ernest J. Brown has held practically all the offices open to a master builder, among them the Presidency of the LMBA, the NFBTE and the Institute of Builders.

Mr. H. C. Harland, President of LMBA, has just received news that his son, Lieut. Wilfred Scott Harland, of the Corps of Indian Engineers, has been AWARDED A MENTION IN DESPATCHES in recognition of gallant and distinguished services in Iraq, Syria and Persia during the period April 1941, to February 1942.

Before joining H.M. Forces in 1939, Lieut. Harland, who is a fully qualified chartered surveyor, was a member of the staff of Messrs. Young & Brown, F.S.I., quantity surveyors. He was in the Territorial R.E. before the outbreak of war, and was sent to India in March, 1940.

The views of more than 3,000 working HOUSEWIVES ON POST-WAR HOUSES have been placed before MOH Committee on the Design of Dwellings.

The memorandum prepared by the standing joint committee of Working Women's Organizations states that every family dwelling should have sufficient accommodation to provide a social centre for the family and to afford privacy for its members when they want it. A minimum of two sitting-rooms and three bedrooms for a family house is generally accepted, and there is insistence on a hot water system, a minimum size of living room of 12 ft. by 15 ft., adequate cupboard and storage accommodation, sound-proof walls, and a suction method of refuse disposal. Women in the country as well as town are almost unanimous in wanting electricity. The planning of the house, the working equipment and its arrangement, materials, finishes, and fittings should all be designed to save unnecessary toil.

NFBTE and the Institute of Builders have set up a Joint Educational Committee to consider the question of EDUCATION FOR THE YOUNG BUILDER particularly in the higher ranks.

The National Federation is represented by the President, Mr. F. Leslie Wallis, J.P., Messrs. Thomas Howarth, O.B.E., J.P. and J. G. Gray and Major Leslie Shingleton: and the Institute by Mr. E. T. Holloway, the President, and Messrs. R. Arthur Costain, R. L. Roberts and W. H. Forsdike. Mr. P. J. Spencer, Secretary of the Institute, is Secretary to the Committee.

★

MOH is asking local authorities to begin to formulate plans to make a QUICK START ON HOUSING for the working classes, immediately conditions permit, whether during or after the war.

Local authorities, MOH state, should make arrangements to enable them to start on a one-year's building work as soon as they are authorized to do so. The first step is to decide on suitable sites likely to fit in with future plans of development and free from objections on planning and agricultural grounds. The authorities are to consider taking other preliminary steps besides the acquisition of land such as the preparation of the general layout of the houses. The interim recommendations of the Sub-Committees of the MOH Central Housing Committee, now considering design and planning of post-war dwellings, are to be transmitted by the Ministry to the local authorities. It is anticipated that private enterprise will play an important part in the total building programme.

Many thousands of contributors to the RED CROSS PENNY-A-WEEK FUND have doubled their weekly contribution. Total contributions throughout the country have now reached the impressive figure of £75,000 a week.

This increase of more than £15,000 a week since the beginning of the year is the result of appeals issued recently by TUC and British Employers' Confederation to their members throughout the country. Mrs. Churchill's announcement that until further notice one-quarter of all Penny-a-Week Fund contributions is to be devoted to aid to Russia has also played a large part in raising contributions to the present record level. The fund is now providing approximately one-half of all Red Cross and St. John revenue.

On January 21, following the adoption of a Holidays with Pay Scheme and a National Scheme of Apprenticeship, the National Joint Council for the Building Industry heard evidence on applications from trade unions for alterations to Rules on night gangs, lodging allowance, EXTRA PAYMENTS FOR RISK or discomfort, tool allowance for plumbers and adjustments of the special travelling allowance in Birmingham.

Upon these matters the Council has now made decisions. Several proposals were not accepted: others are the subject of further treatment by Committees. New extra payment provisions are for men continuously handling dry cement in certain specified conditions and for "men working on planks at a height of 20 ft. or more, resting upon ladder cripples attached to two ladders." These provisions start as from April 2. If a list can be agreed of tools required to be provided by plumbers, and subject to observance of that requirement by the plumber concerned, an allowance of 2d. per day will be payable to plumbers and domestic engineers (as from a date to be published later) in respect of the provision and upkeep of tools. The most important matter to which attention was given was the application of the Building Operatives' Federation for increasing the basic wage rates generally by 3d. per hour and placing the wages of labourers on a basis of 80 per cent. of the craftsmen's rates. The evidence given to the Council was analysed

Utility Furniture v. *Digging for Victory*

Government Ministers are ultimately responsible for all the omissions and commissions of their particular departments. Mr. Hugh Dalton (left), President of the Board of Trade, is responsible for Utility Furniture and now the catalogue to illustrate it—a drab, uninspired production unworthy even of the most unenlightened manufacturer. Mr. Brendan Bracken (right), Minister of Information, is responsible for the *Dig for Victory* exhibition produced for the Ministry of Agriculture—first-class showmanship, gay, stimulating and effective propaganda. This JOURNAL, expressing as it does a section of public opinion especially concerned with design has a clear duty to weigh the product of one public department with another and to remind the reader what Ministers are responsible for what action. Only thus can responsible persons be brought before the tribunal of public opinion. *Astragal* refers to the matter this week and a special feature on page 174 deals with the *Dig for Victory* exhibition.

by its Emergency Committee and discussed further by a full session of the Council. The resulting decision, now ratified by all the parties, is that a wage-increase of one penny per hour for craftsmen and three-farthings per hour for labourers will take effect from April 2. This will bring the Grade A standard rate to 22½ per cent. above the pre-war level.

★

MOH, the Secretary of State for Scotland and MOW have set up an Inter-departmental Committee TO EXAMINE NEW METHODS OF HOUSE CONSTRUCTION. The terms of reference are :—to consider materials and methods of construction suitable for the building of houses and flats having regard to efficiency, economy and speed of erection and to make recommendations for post-war practice in the light of all relevant findings of the Study Committees co-ordinated by the Directorate of PWP. The Committee includes members of the Housing Advisory Committees of MOH and the Department of Health for Scotland, members of the Central Council of MOW, and officials of the three Departments and the Department of Scientific and Industrial Research. The Chairman of the Committee is Sir George Burt, who is Chairman of the Building Research Board, a member of the MOH Central Housing Advisory Committee and of MOW Central Council. As a first step the Inter-departmental Committee is now reviewing the results of experience with various alternative methods of house building already tried. They will also examine new proposals that may be submitted. The Committee will therefore be prepared to consider proposals from any source for alternative methods of construction relating to the whole or parts of a house. The assessment of both inter-war alternative methods and new proposals will be made under the following main headings :—(i) Stability ; (ii) Resistance to moisture penetration ; (iii) Thermal insulation ; (iv) Sound insulation ; (v) Fire resistance ; (vi) Durability ; (vii) Vermin infestation ; (viii) Initial cost ; (ix) Cost of maintenance ; (x) Speed of erection ; (xi) Appearance ; (xii) Appeal to Housing Authorities. Proposals should, therefore, be accompanied, where possible, by any information that can be supplied under these headings. For this purpose the normal pre-war house may be taken as a convenient standard. In connection with points (viii) and (x) the Committee has had data prepared on the basis of plans for typical pre-war houses and flats, and where new proposals cover a substantial part of the cost of dwellings, it would be useful to have them based on similar plans. Copies may be obtained from the Secretary, Inter-departmental Committee on House Construction, Ministry of Health, Caxton House West, Tothill Street, S.W.1. It is agreed that, without practical demonstration on a scale large enough to ensure the most economic application, it is difficult to assess the costs of some possible new methods of construction especially where prefabrication takes the place to a greater or lesser extent of site erection. In such cases, it is suggested that the costs should be based on a unit of 100 houses subdivided into factory costs and site erection costs, the latter being stated in man hours per unit of construction as far as may be possible. Any data concerning the relief given to any of the normal building trade operations both in labour and materials by the proposal would be useful. Cost data should be based on 1939 normal standards.

LMBA has made a gift of £500 to the BUILDERS' BENEVOLENT INSTITUTION. The gift is a contribution towards the depleted revenue and increasing calls on the Institution.

Mr. A. G. Tomkins, general secretary of the National Amalgamated Furnishing Trades Association, has been appointed a member of the Advisory Committee on UTILITY FURNITURE, by the President of BOT.

MOW has collected preliminary information with a view to preparing plans for REBUILDING THE HOUSE OF COMMONS and starting the work when times are opportune. M.Ps. will be consulted when final plans are made and all suggestions by M.Ps. will be borne in mind.—*Mr. Attlee in the House of Commons.*

At a meeting of over 2,000 people, held in Lincoln's Inn Fields, London, it was announced that a fund is being raised to erect a NEW MEMORIAL TO LENIN. The meeting was held to protest against the desecration of the Lenin memorial in Holford Square, Finsbury.

Sir Stephen Tallents is to become DIRECTOR OF PUBLIC RELATIONS, MOTCP. Sir Stephen, who is 58, went to the BBC in 1935 as Director of Public Relations and in 1940 was appointed Controller of Overseas Services.

MOW in conjunction with MOH hopes to MAKE SOME 40,000 HOUSES HABITABLE by November next said Mr. George Hicks, Parliamentary Secretary to MOW, in the House of Commons. The scheme has been evolved with the co-operation of local authorities and the building industry.

TRAINING TO BUILD

TWO vitally important documents have just been published by His Majesty's Stationery Office. (1) *Report on Training for the Building Industry,* prepared by the Education Committee of the Central Council of MOWP (now MOW) and (2) a White Paper on *Training for the Building Industry*, based on this Report and presented to Parliament by MOLNS and MOW at the end of last month.* It is encouraging to all in the building industry and, in fact, to the whole country to know that the Government has so rapidly and readily accepted the recommendations of the Report and that it intends to take definite, radical and practical means to prepare the industry for the large and responsible share it will have in the national welfare after the war. The White Paper forms a new Charter for the building industry and is a guarantee that the Government intends to take its first considerable step to implement post-war reconstruction. Here is a brief survey of the 56 pages of the Report, with significant extracts.

Chapter 1 deals with the essentials of the post-war problem. A diagram compares housing development and the recruitment of workers into the building industry, together with comparative curves showing the number of houses built by local authorities and by private enterprise, for the period 1919 to 1939. This shows that the flow of entrants into the industry rose steadily throughout the period whereas the curve of employed workers runs by contrast on an unsteady course. The diagram also shows that after the last war 15 years passed before the industry was able to produce 300,000 houses a year. The major effect of the Committee's Report will be to reach this scale in two or three years.

"The facts quoted at least indicate that there should be a building programme with assured continuity of policy over a considerable number of years and regulation of the numbers of new entrants into the industry planned to match the needs of that programme. A rapid expansion must be planned now so that it may take place under careful direction. This expansion involves two main problems, namely, that of special training to meet the most immediately pressing demands, and that of the normal recruitment, education and training of workers in the building industry, including both apprenticeship and technical education."

The actual numbers to which the industry must be expanded will depend, of course, upon the building plan which is ultimately agreed. The Committee considers, however, that the lowest justifiable estimate of expansion for the building and civil engineering industries is 1,750,000 workers within the first three years of the post-war period.

"Of this number it is anticipated that 1,400,000 should be building trade workers, and this will necessitate a force of at least 700,000 craftsmen. There will be a deficiency of approximately 275,000 skilled craftsmen even when all service men are demobilised. We therefore make proposals for the training in each half-year over a period of two-and-a-half to three years after the end of hostilities of 50,000 men who would be capable of developing into skilled craftsmen."

A vital part of the document, which covers surprisingly few lines of the Report, is that dealing with continuity of employment.

*Obtainable from H.M. Stationery Office for 1s. 0d. and 1d. respectively. They were discussed last week in a special article in the *Journal*.

"The most important condition, from which indeed all others are derived, is the whole-hearted goodwill and co-operation of the organised industry. It would be unreasonable to expect such positive co-operation if the industry is still to carry the heavy load of unemployment which has too long disfigured its history. The adoption of a long-term programme of construction is the key to the whole problem. The first guarantee of the success of our proposals is the issue of the most authoritative possible pronouncement to the effect that such a programme is in fact intended ; and that, in the event of any threat of a general economic depression building activity will be not diminished, but deliberately stimulated in order to offset any possible fall in employment. Such a declaration should, we suggest, cover a period of 20 years' activity, on a scale sufficient to keep 1,250,000 building workers employed. We expect that the needs of the immediate post-war period will make it possible for there to be a building programme prepared to cover at least ten years after the end of hostilities, and thereafter there should always be an actual building programme for a period of at least five years ahead.

"It may further be worth consideration whether the administration of the long-term programme ought not to be entrusted to some authority less severely restricted by the exigencies of annual budgeting than Parliament or the local authorities. Proposals have been put before us for the establishment of a Building Corporation or Board, with powers which would enable it to undertake the planning and financing of constructional projects over a number of years.

"In the past, the building industry has suffered not only from unemployment in the ordinary sense, but also from the special form of discontinuous employment known as wet time. During the war the building workers have experienced, at least on public contracts, the benefit of a guaranteed week. Such continuity of employment ought, in our judgment, to be maintained after the war, and should indeed become a regular term in contracts of building employment. The success of (such a) guarantee is dependent upon its compulsory application by law to the whole industry."

The rest of the Report deals with proposals for training in apprenticeship and technical education. It also reviews existing methods of training and suggests how these could be adapted to fit in with the new proposals. The most important recommendation is that for the immediate establishment of a *Building Apprenticeship and Training Council* composed of representatives of all authoritative bodies associated with the industry and of interested Government Departments.

The White Paper accepts this Report in principle. It makes clear that training must take two forms; one for the short term period immediately after the war; the other for the long term period for the building programme which may cover from 20 to 30 years. A *Building Industry Advisory Panel* presided over by MOLNS will deal with all relevant labour questions arising on the building programme. Under the Panel will be a *Special Training Committee*. It will be concerned with the short term programme. *The Apprenticeship and Training Council* will be presided over by an independent Chairman appointed by MOW, and will be concerned mainly with the long term programme.

Both the Report and the White Paper indicate the inevitable dominance of large-scale planning over the haphazard laisser-faire of private enterprise, and as such they are to be welcomed. Nevertheless, this training scheme is only part of a larger plan which has yet to come. A *plan for planning* is still needed and this necessitates (1) a Governmental body recruited direct from the building industry itself having full directive and co-ordinating powers and (2) a clear cut objective whose main concern is not merely to ensure employment for the sake of employment but to rebuild the country for the personal advantage and pleasure of every individual living therein as efficiently and as beautifully as possible.

The Architects' Journal
War Address : 45, The Avenue, Cheam, Surrey
Telephone : Vigilant 0087-9

NOTES & TOPICS

OFFICIAL DESIGN

Many still believe the myth that a design of any kind, from that of posters to police stations, from teacups to town-planning, which is the product of an official or public body, must inevitably be hideous at the worst, or dull and impersonal at the best. They forget that all organizations are composed of individuals, among whom someone is responsible for the designs produced. Behind the designs of the LPTB stations and posters was Frank Pick ; behind the Government war-time hostels was Holford and his picked men ; behind the MOI Fuel Saving Exhibition at Dorland Hall was Misha Black. A tradition of decent official design is being formed, whose good influence on post-war rebuilding may be enormous.

★

Utility Furniture was therefore all the more disappointing in its regression from this adolescent tradition. But worse has followed in the design of something, which is in itself perhaps not vastly important, but which is, nevertheless, a symptom of a disease which may develop unless treated with a salubrious severity. The Board of Trade has produced a catalogue of Utility Furniture appalling in its lay-out and design. Even the furniture it depicts does not deserve a treatment so cheap and nasty.

★

The only excuses those on the Advisory Committee on Utility Furniture could offer for permitting

this catalogue to appear would be that (1) they were not responsible for the production of the catalogue, and (2) they were, in any case, not consulted. In which case, I would ask, what is an advisory committee for? The design of both the furniture and the catalogue is the more surprising in that the Committee includes such figures as Charles Tennyson, Elizabeth Denby, John Gloag and Gordon Russell. The President of BOT, Mr. Hugh Dalton, writes an introduction to the catalogue, so presumably he, at least, must have seen page proofs. I am amazed that this unpleasant piece of printing, carried out in the worst commercial taste, should have passed his censorship.

★

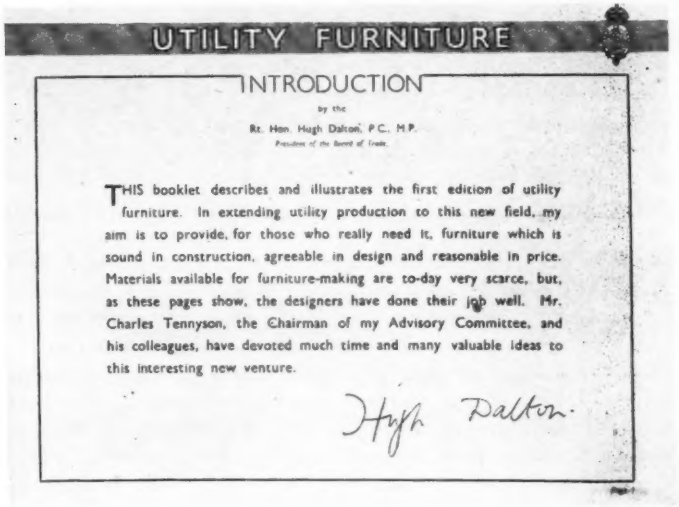
After this kidney punch one's hopes for official design revive considerably at the Ministry of Agriculture's travelling *Dig for Victory* Exhibition, whose aim is to help gardeners to get better results. Honour is due to Mr. Milner Gray of MOI Exhibitions Division who produced it, and to the collaborating architects and designers.

A JOB FOR MOTCP

During the second reading of the Minister of Town and Country Planning Bill in the Upper House, last month, Lord Beaverbrook expressed a widely held opinion. "Surely the time for considering the development of land after the war, is when the war is over," he said. "By bringing forward these issues now, we are simply taking our eye off the ball." I venture humbly but categorically (as they say in Parliament) to disagree with the noble Lord. There is no sense in hitting a ball at all unless you are clear as to where you want it to go (and where you want it *not* to go).

★

There appears to be little hope at present that MOTCP when formed will take any dynamic action in post-war planning. For planning involves politics; politics involve economics; both involve controversy, and that, at all costs, rightly or wrongly, the Government wishes to avoid. The Achilles' Heel in this country's armour remains its lack of a clear objective, and hence of a powerful propaganda weapon with which to


UTILITY FURNITURE

INTRODUCTION

by the

Rt. Hon. Hugh Dalton, P.C., M.P.

President of the Board of Trade.

THIS booklet describes and illustrates the first edition of utility furniture. In extending utility production to this new field, my aim is to provide, for those who really need it, furniture which is sound in construction, agreeable in design and reasonable in price. Materials available for furniture-making are to-day very scarce, but, as these pages show, the designers have done their job well. Mr. Charles Tennyson, the Chairman of my Advisory Committee, and his colleagues, have devoted much time and many valuable ideas to this interesting new venture.

Hugh Dalton.


UTILITY FURNITURE

LIVING ROOM

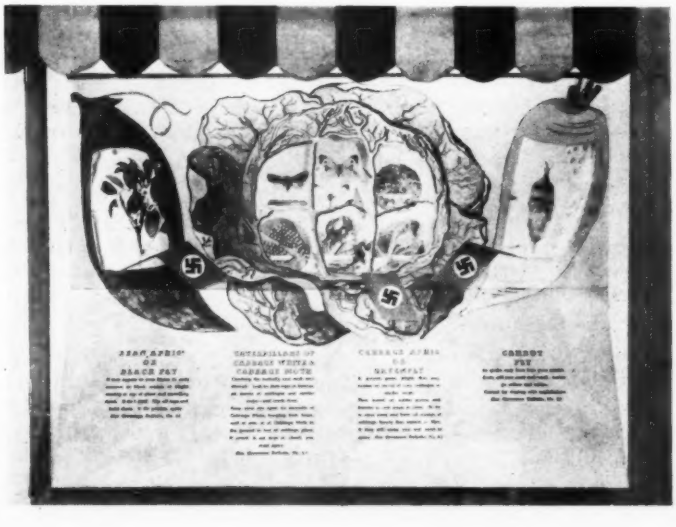
DINING CHAIR

DINING CHAIR

DINING TABLE:

SIDEBOARD:

Compare the two illustrations above of pages reproduced from the Utility Furniture Catalogue with that below of one of the bays at MOA's Dig for Victory *travelling exhibition. Both come from Government Departments, but the design of the one is worse than indifferent, and of the other excellent. Official bodies have no excuse, commercial or otherwise, for producing shoddy designs. If MOA can give us good design such as the* Dig for Victory *exhibition, so can any other Ministry or Board. The MOA exhibition receives fuller attention on page* 174.



inspire our own people while undermining the enemy morale. Men do not fight with arms alone, but with something that is more powerful than any tank, plane or gun—an Idea. The Idea for which we fight should be a Britain rebuilt nearer to the heart's desire.

★

One of the first jobs of the new Ministry should be to open a wide propaganda campaign to place before the people a vivid picture of what the Britain we are fighting for could be like in this technical age of vast potential abundance. By means of radio, press, cinema and exhibitions as good as those which have already been produced by MOI, MOTCP could not only raise the apathy of the public to planning, but could also stimulate the whole country to a far more intense war effort.

★

THE WHITE PAPER

Presumably the short-term training proposed by the new White Paper will be in traditional building methods. The first phase, at least, of rebuilding would not therefore be on revolutionary, prefabricated lines or make full use of the new materials such as plastics, light metals and building boards.

★

This raises an important problem. Technical developments in building are likely to be extremely rapid after the war, when the new skill and knowledge obtained in production for war are concentrated on production for peace. Is it sound policy to begin rebuilding by traditional methods? Will not traditional training be largely a waste of time? Will it not lead to a lack of unity in the rebuilt Britain of the nineteen seventies? Moreover, will not shoddy work be produced by the proposed new army of half-trained craftsmen let loose with trowel, tenon-saw and chisel?

★

The new methods and materials should be used as soon as possible, not only because of their intrinsic merits, but also because of (1) the possibility of making building parts under cover in factories, thus solving the wet-time trouble, (2) making full use of semi-skilled and unskilled workers where they can't go far wrong, and (3) building those badly needed homes in the quickest possible way.

★

Do we *want* in any case to erect buildings of traditional construction during the short-term period immediately following the war? What we need is purely temporary mass-produced building to last, say, from ten to twenty years, during the period of adjustment while a long-term plan is being worked out and while the new building techniques are being developed. Jerry-building, you say. But what's in a name? The temporary buildings could be perfectly efficient for immediate needs. They could be pleasant to look at, gay with bright colours and decoration, and be quite honestly just temporary structures.

★

At present planning remains ineffectual, and questions such as those raised above remain unanswered, because no central planning authority with full powers to co-ordinate and act yet exists. The JOURNAL has repeatedly called for such an authority. Without it confusion will continue to reign. Nevertheless, the White Paper is a very great step forward.

DESIGN AND MASS PRODUCTION

Mr. H. G. Strauss took time off last week from MOW to address the DIA on *Design and Mass Production* at the first of a series of lunch-time meetings. A very distinguished audience heard Mr. Strauss at his most exuberant. He described most of the products of British industry in unequivocal terms, reserving his strongest words for carpets, but none-the-less he stressed that, if we, as a nation, produced some of the worst, we also found a way of producing a few of the best.

★

Mr. Strauss acknowledged his debt to certain writers. He put Lewis Mumford very high, but confessed his inability to read an author who takes ten pages to say what could be put in one. Clearly Antony Bertram is more to Mr. Strauss' taste. He was also warm in recommending Mr. Pevsner's Report on Industrial Art in Britain, which hasn't had justice done to it.

ASTRAGAL

LETTERS

H. Greenland

F. G. Yorath, L.R.I.B.A.
(Wood, Goldstraw and Yorath)

David Pope

Hard Plaster

SIR,—In your issue for February 18 Mr. N. C. Stoneham proffers severe criticism of hard plaster walls. We can well sympathise with his observations except on one point.

To say that "forty minutes hard work with the Rawlplug drill and a hammer and the shelf is up" is a gross exaggeration of the time necessary to make a Rawlplug fixture.

Advertisements of ours which emphatically disprove Mr. Stoneham's time for a simple fixing of a shelf and the enclosed pulls* give an indication of the time taken for a fixing to a very hard concrete floor where the holes required are much larger and deeper.

The job shown was, in fact, taken from an aircraft factory being completed at the time this country was not too happy about aircraft output, yet with the aid of our devices man hours were cut considerably to say nothing of plant in operation immediately the job was tightened down.

We are always pleased when the name Rawlplug finds its way into correspondents' observations but in fairness to "truth in advertising" we should like to see the criticism of hard plaster confined to the plaster and not to the Rawlplug method of making firm fixtures in the material.

London. H. GREENLAND.

* The pulls of the advertisement referred to show photographs of a 60 ton press,. The rate fixer, it is stated, allowed 4½ hours for fixing the press to the floor, but with Rawlbolts it was done in 22½ minutes.—ED. A.J.

Architects' Pupils

SIR,—We have felt for a considerable number of years that the present arrangement with regard to articled pupils is unsatisfactory and should be amended.

There is much to be said for the articled pupil system, but it has its disadvantages in just the same way as the University system has various disadvantages. The disadvantages of the articled pupil system are that in many cases the firms who choose

to take articled pupils are those who are most unsuited to do so, they have little variety of work.

The disadvantages of the University or Architectural School are that in most cases the pupil has little opportunity of practical experience. People have come to us from such schools, after having completed their five years' course and having fully qualified, only for us to find out their inability to tackle some comparatively simple jobs.

Is the desirable course, bearing both these views in mind, to have some scheme which would give the student the best advantages of both systems ?

Our own views are that we should take pupils here at the age of 16 and that we should be under no obligation to retain them after twelve months if they are not suited for the particular job, and that we should not receive any premium from them. This would give us freedom of choice in the people we desire to have as pupils. At the end of twelve months if a pupil was satisfactory we should pay him a small salary commensurate with his services for a further two years, and at the age of 19 he should proceed to the University for a two-year course, but returning to our office for holiday periods, with the exception of the usual summer holiday.

This means that the pupil at the end of that time would have the benefit of general practice, plus school training, and the expense to the parents would be the cost of the university fees and the maintenance of the pupil there during the weeks that he was in college.

There should, however, be some return to the architect who takes on the pupil and who puts up with having him for intermittent periods as, for example, when he is at the University. We therefore suggest that the pupil should bind himself to remain with the architect for a period of twelve months after leaving the University, providing always of course that he is paid a decent salary for his services. This would probably mean that by the time he was 22 the pupil would be fully qualified, would be earning a reasonable salary, and would be on the high road to a successful career.

We do feel that the present system of qualifying people at the University is wrong, and that in any event even people who are trained through the Universities should have to serve a year or so in practice before they obtain their full qualification.

As this matter will be of considerable importance in the post-war world, we are most anxious to have the views of other architects on this important matter.

Stoke-on-Trent. F. G. YORATH

Build Model Towns

SIR,—Would it not be possible to form *now* one, or preferably two, non-profit making companies, to prepare plans immediately for the construction of new towns embodying the latest planning theories ? Supposing the MARS group sponsored one of these companies and the Town and Country Planning Association the other and each company concentrated on producing one model town. You would then get two small towns, planned by experts, and each demonstrating different approaches to the same problem.

These towns when built would serve as invaluable examples for the vast mass of building that must follow. The new MOTCP might, for this very reason, give considerable assistance to these first new towns, both in the matter of the selection and acquisition of the sites, and in priorities of labour and materials. Detailed plans could be prepared and approved before the end of the war, and every effort should be made to finish the actual building as soon as humanly possible, so that they might exercise the maximum amount of influence on our vast post-war building programmes.

West Moors, Dorset. DAVID POPE

The following special article deals with the conference arranged by ASW (Association of Scientific Workers) held at Caxton Hall, Westminster, on January 30 and 31 of this year. Of particular interest are the diagrams accompanying the article, which were prepared for the ASW by Mr. Ernö Goldfinger. These show the connections in the UK, USSR and USA of administration, industry and scientific institutions. The article concerns architects because they are beginning to realize the growing need for comprehensive organized planning and direct co-operation between not only scientists but all technicians, whether scientists, engineers or architects.

The Planning of SCIENCE

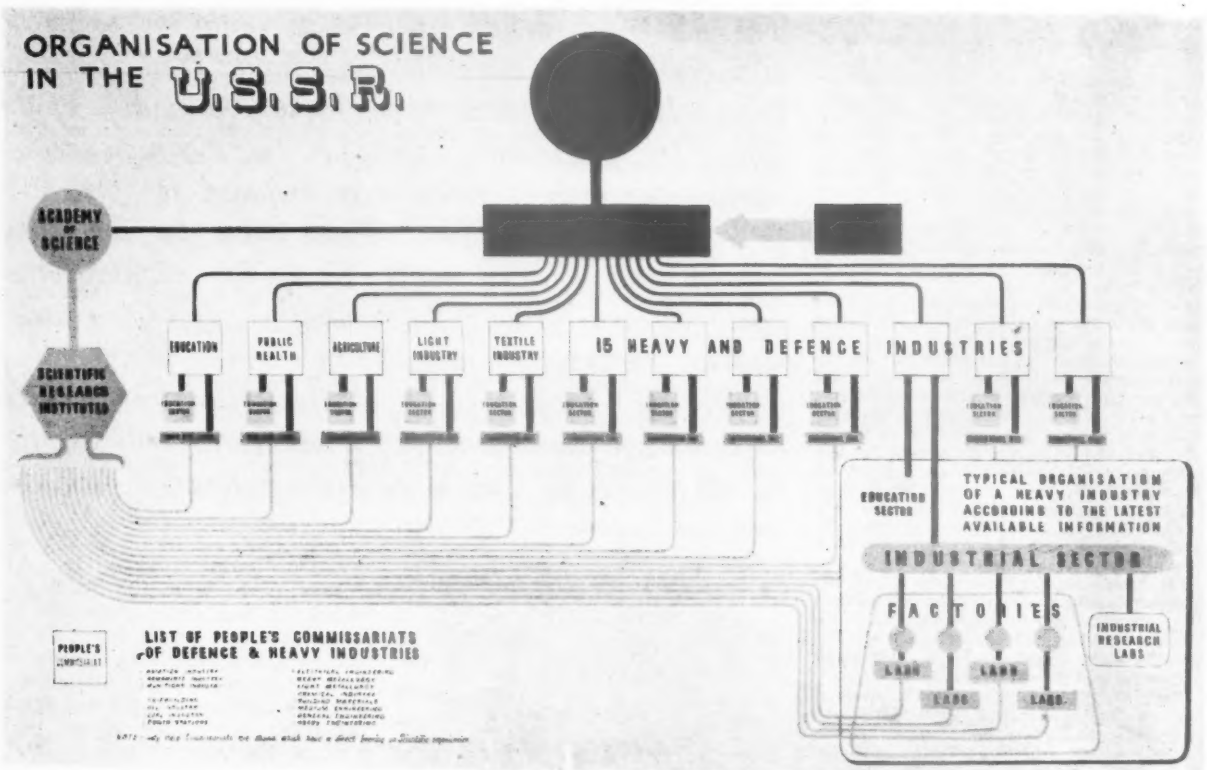
[*BY OUR TECHNICAL CORRESPONDENT*]

The significance of this conference from the architect's point of view lies in the similarity of the relationship of the scientist to his industries and the architect to building. Both are, or should be, the conductors of their industrial orchestras. For both it is essential to grasp the human and social significance of their work, apart from mastering the special field of their activities. Both the architect and the scientist are regarded by the public at large as a sort of expensive luxury which one has to put up with from the point of view of prestige, but which is really superfluous ; the general attitude being that when we want a solution of a given problem we can call on the scientist (or the architect as the case may be) to solve it. Unfortunately things don't work quite like that. It is those who know how and if a problem can be solved, who can assist in formulating the requirements. In the words of Sir Philip Joubert, " Scientists may have to elucidate the position by advising on the need itself as well as the requirements." Needs arise dialectically if solutions are forthcoming and vice versa.

The ASW corresponds in the scientific world roughly to ABT (former AASTA) in the building industry. It is a trade union and it is remarkable to what an extent the war has awakened the consciousness and need for organization of the scientists, when we consider that the membership has risen from 1,200 at the beginning of the war to over 10,000 at present. As a trade union the aims of ASW are not merely concerned with the economic conditions of its members, but (like ABT) in the words of the " Short history of the Association . . .", "It adheres to its fundamental policy of seeking to ensure that science shall be used to the best advantage for the good of the community. . . . To ensure this the Association is pressing for recognition for the need for, and the right of, scientists and technicians to participate fully in the work of the Joint Production Committees which have been set up in the engineering industry and in the Royal Ordnance Factories. We are pleased to note that Sir Stafford Cripps has publicly proclaimed his agreement with this view. The Association seeks to imbue its members and all sections of scientific workers with an understanding of the vital part science now plays in society, and the responsibility that thereby falls on the scientist. It also endeavours to spread among the general public some appreciation of what is happening to their way of life by reason of the progress of science. . . . The Association hopes that this conference will be an important contribution towards the full mobilization of science and scientists for the speediest winning of the war, and for engendering a rational approach to the problems of peace."

The conference was held in three sessions.

The first session dealt with the general problem of an administrative and working interconnection of State, Industry and Scientific Establishments,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ACADEMY OF SCIENCE
SCIENTIFIC RESEARCH INSTITUTES
EDUCATION
PUBLIC HEALTH
AGRICULTURE
LIGHT INDUSTRY
TEXTILE INDUSTRY
15 HEAVY AND DEFENCE INDUSTRIES
EDUCATION SECTOR
TYPICAL ORGANISATION OF A HEAVY INDUSTRY ACCORDING TO THE LATEST AVAILABLE INFORMATION
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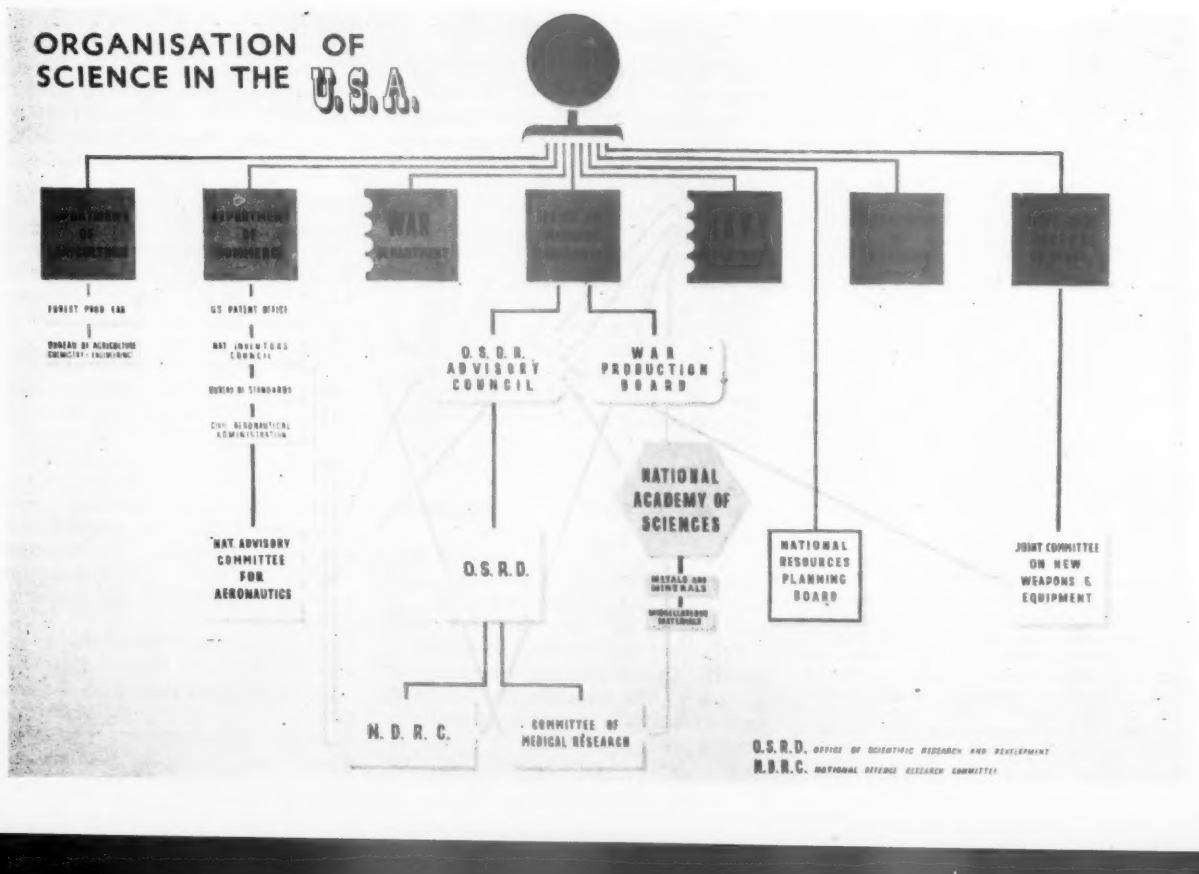
ORGANISATION OF SCIENCE IN THE U.S.A.
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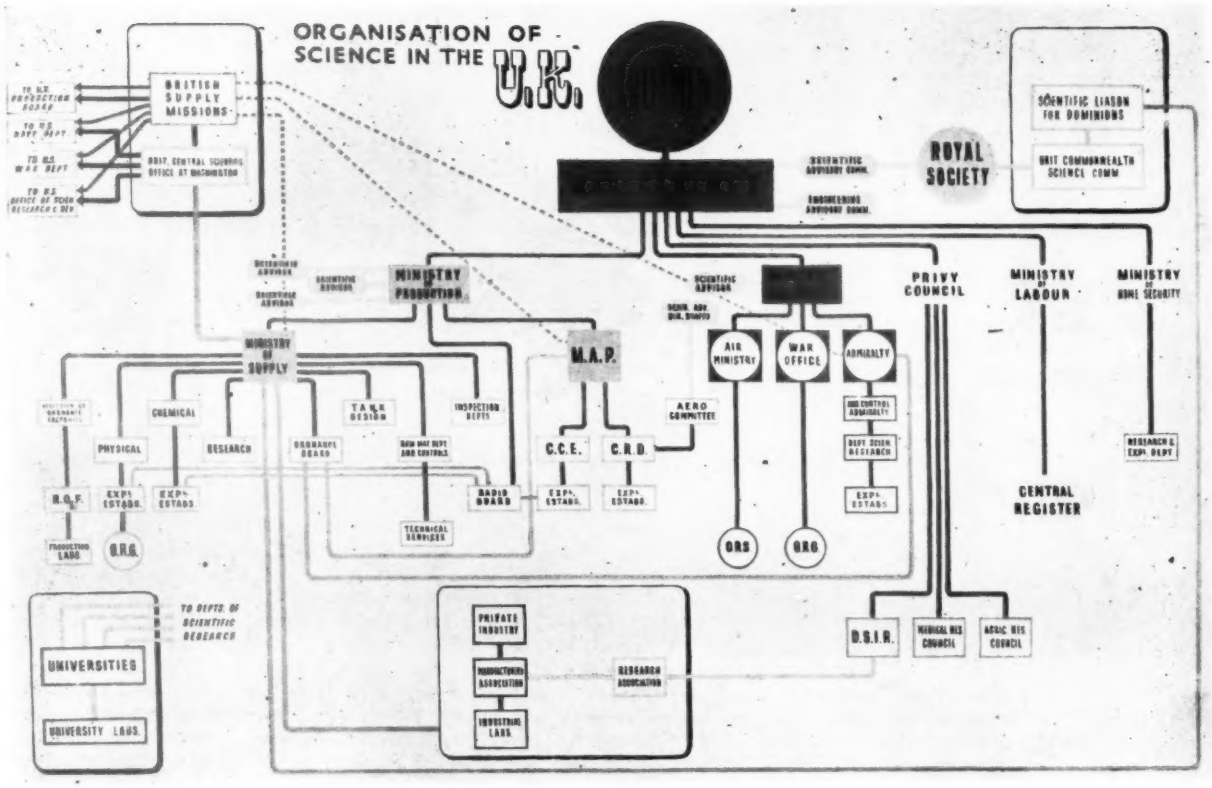
NAT INVENTORS COUNCIL
BUREAU OF STANDARDS
CIVIL AERONAUTICAL ADMINISTRATION
NAT ADVISORY COMMITTEE FOR AERONAUTICS
O.S.R.D. ADVISORY COUNCIL
WAR PRODUCTION BOARD
NATIONAL ACADEMY OF SCIENCES
METALS AND MINERALS
O.S.R.D.
NATIONAL RESOURCES PLANNING BOARD
JOINT COMMITTEE ON NEW WEAPONS & EQUIPMENT
N. D. R. C.
COMMITTEE OF MEDICAL RESEARCH
O.S.R.D. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT
N.D.R.C. NATIONAL DEFENCE RESEARCH COMMITTEE



under the title of The Central Direction of Science. The speakers at this session were: Sir Stafford Cripps, who described the organization of science during the war in Great Britain; Sir Alfred Egerton, on the U.S.A.; and Dr. D. Shoenberg, the working of science in the U.S.S.R. Mr. E. D. Swan put forward the views of the ASW with regard to present and future requirements to make scientific work more efficient. Sir Philip Joubert dwelt on the importance of science for the RAF and the collaboration between this service and its scientific advisers. Sir Robert Watson-Watt, the inventor of radiolocation and president of the Association, was in the chair. He read a telegram of greeting from the Academy of Science of the Soviet Union and a gramophone record of the exchange of greetings across the Atlantic between Sir Robert and his American counterpart was played. Dr. D. McClean, member of the Parliamentary and Scientific Committee, explained the working of the Academy.

The second session was on Local Organization, the co-operation between management, workshop and the scientific staff of particular industries. Mr. T. Halse was in the chair. Amongst the many speakers were Mr. Ben Smith, national organizer of the Association, who put the point of view of the ASW in this matter, and Colonel Devereux, managing director of High Duty Alloys (a firm employing over 600 research workers), who explained his attitude to the Joint Production Committees. He insisted on the need for liaison between management, works executives and scientific workers, expressing the opinion that the management itself should have scientific experience and not be merely Stockbroker Nominees. He also said that he believed in collective research within the industry and insisted on more financial backing on the part of industry for national research laboratories. He suggested that if only half per cent. of the profits of an industry were devoted to national research, this would put enormous funds at the disposal of these institutes which would be amply repaid by the results.

The title of the third session was Determining the Future. Professor S. Chapman was in the chair. Professor Blackett spoke on some of the problems of the post-war period. "The re-education of a large number of younger scientists at an undergraduate and research student level. . . . The future scope and status of the now largely inflated Government research establishments; the technical re-equipment of university research laboratories with apparatus and workshop facilities; the encouragement of close relationship between Government research laboratories, industrial research and the universities; the place that the scientific societies should play in this relationship; the opening up of scientific relations with other countries; the organization of scientific assistance to liberated countries to help them to restart scientific life, e.g. by supply of equipment, interchange of research students, organization of international scientific conferences."

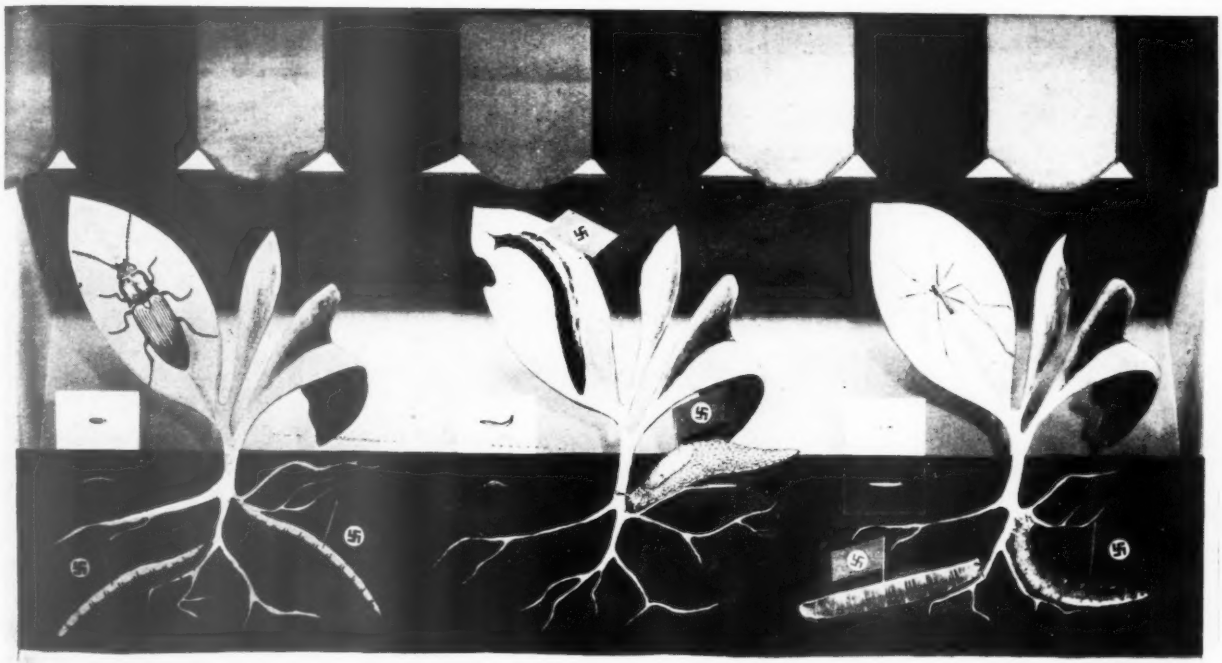
Professor Levy spoke on the Basis of Scientific Planning. "... Those who object to planning may appear to desire no social objective—on the contrary, they desire what emerges out of an unplanned economy. To-day that would mean the supremacy of fascism. *Freedom for scientific enquiry* may be a catch phrase that confuses and finally sabotages. All the great scientific masters have been compelled to handle the problems of their day with, broadly speaking, the scientific equipment of their day. Within these requirements they felt free. Freedom is found by overcoming restrictions not by ignoring them. . . . In this country those who agitate for the freedom of science as a thing in itself are socially ignorant, obstruct advance, and play into the hands of reaction."

The three diagrams reproduced show diagrammatically the administrative and working connections in the UK, the USSR and the USA of administration, industry and scientific institutions.

D I G

For VICTORY EXHIBITION

This year MOA is aiming to obtain better results from existing allotment plots rather than to increase their number. This decision is the result of reports from various parts of the country from which the Ministry estimates that production does not exceed, and may be a good deal less than, fifty per cent. of the amount that can be obtained. It is evident that this fact must be continuously hammered home if the standard of gardening, with a consequent increase in the standard of productivity, is to be raised. The latest method adopted to drive this home is an educational exhibition—copies of which will tour the country—designed for MOA by MOI with two main objects, first: to teach the allotment public how to dig; and secondly, to stress the need to dig. Designed in a gay mood, with colouring suggestive of an agricultural market-town fair the dry instructional data is enlivened by good-humoured decorations. Each exhibition consists of twelve standard bays dealing with digging, sowing, planting, thinning, seed saving, friends and foes of the garden, harvesting and storing, preserving, composts, park superintendent's stand, local school exhibit and local library exhibit. In addition there are a central MOA kiosk and bookstall, a platform for speakers, incorporating a demonstration earth box, two tables for local allotment produce, a model allotment, a background screen pointing out the need for increased productivity by the moral of decreased food imports and two small displays dealing with backyard poultry. Each bay is a unit in itself, and can be built either against the walls, or free-standing in the centre of the hall. The showcases are detachable and the sides of the standard bays fold in, forming a flat unit for easy transportation. Fluorescent lighting is used throughout. The exhibition occupies a minimum area of 2,100 sq. ft. (60 ft. by 35 ft.) and allows for expansion, with local material, to an area of approximately 6,000 sq. ft. It has been designed and produced under the direction of Milner Gray, R.D.I. (MOI Exhibitions Division). The collaborating architects and designers were: constructional design, B. Katz, Dipl. Ing. Arch.: presentation design, F. H. K. Henrion: drawings and decorations, Pearl Falconer, Lewitt and Him and David Langdon: script, Mrs. M. E. Neale in collaboration with MOA.



WIREWORMS

When digging, kill every one you find. They're tough, so make sure by knocking them in two or crushing them with a stone on spade.

The earlier you dig, the more the birds can help you—they like wireworms.

You can catch lots in traps of old potato or split sprout stalks. Bury traps few inches down in spring. Mark spot with stick. Inspect every few days.

SLUGS

They like rubbish heaps in untidy gardens.

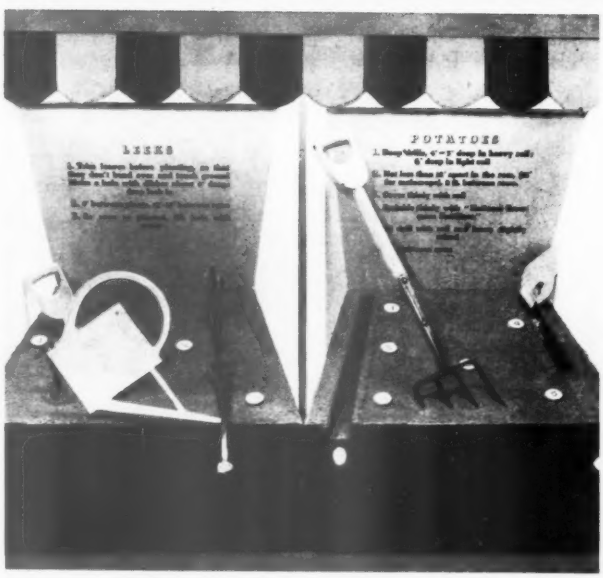
Traps of cut potato or cabbage leaves set in damp places will collect them for you.

Or you can use metaldehyde bait—little heaps of "meta" and tea leaves sheltered from rain and birds by a roof like this:

LEATHERJACKETS

They will become Daddy Longlegs if you let them—so don't leave them to eat roots and stems of your crops.

Look out for them when digging: search for them in soil near wilted plants. Put every one you find on something hard and crush it. They're tough.



The function of this feature is to record all developments in building technics throughout the world as reflected in technical publications, papers read before learned societies, official statements, reports of research institutions and building experiments. Lack of scientific data is a handicap both to the technician and to the planner. The ***information centre*** *attempts to remedy this deficiency and to keep all busy men, whether fighting or working, abreast of current developments in building technique. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal. The views expressed are disinterested and objective. The Editors of the Information Centre would be very glad to receive information on all technical developments from any source, including contractors and manufacturers.*

Physical

PLANNING

1091 **Local Government**

NALGO : INTERIM REPORT ON THE REFORM OF LOCAL GOVERNMENT STRUCTURE. *Pamphlet prepared by NALGO Reconstruction Committee, January,* 1943. Work of an independent committee of the National Association of Local Government Officers appointed in 1941.

The Committee has considered the subject from the point of view of practical administration, disregarding all departmental, sectional or local authority interests which might run counter to reform on the most efficient basis.

1. Local government in England and Wales is administered by 1,530 authorities of six types : 83 County Boroughs, from 20,000 to over 1,000,000 population, median 150,000 ; 62 County Councils, from 15,000 to over 1,000,000, population, median 150,000 ; 309 non-County Boroughs, from under 5,000 to 200,000 population, median 35,000 ; 601 Urban Districts, from under 5,000 to 200,000 population, median 7,500 ; 475 Rural Districts, from under 5,000 to 90,000 population, median 7,500.

2. A rural district containing 80,000 people and an urban district of 190,000 exist side by side with a county borough of 26,000 and a non-county borough of 918.

3. Of the 1,530 local authorities nearly two-thirds serve populations fewer than 20,000.

4. The principal defects in the system are :

(*a*) The high proportion of small authorities possessing inadequate population and financial resources for the provision of services of the standard required to-day.
(*b*) Public apathy towards local government.
(*c*) Inadequate means of co-operation between authorities.
(*d*) Unsuitable administrative boundaries.
(*e*) Overlapping and duplication resulting from the division of services between authorities outside the county boroughs.
(*f*) Unequal standards of service.
(*g*) Undue influence of local vested interests.
(*h*) Complexity of structure.

5. Highways and libraries afford typical examples. The responsibility for highways is shared between the Ministry of Transport and county, county borough, non-county borough, urban and rural district councils. No fewer than 54 towns possess both municipal and county libraries, each with a duplicate stock of books ; many other districts are without a library at all because the populations within each do not justify one, though jointly they would do so.

6. Wartime experience demonstrates that local government is faced with two alternatives : either it must drastically amend its structure to enable it to achieve co-ordination, equality of standard, and speedy decision and execution over wide areas ; or it must submit to a much greater degree of direct Government control, even to the cession of its most important services to the central State machine.

7. The most suitable unit for the administration of local government appears to be the county borough.

8. NALGO recommends therefore that the ultimate objective of local government reform be the division of the whole of England and Wales into a number of directly elected local authorities—All Purpose Authorities—with similar powers to County Boroughs.

9. These authorities should each have a population of about 250,000. Many would fall below or above this standard but, except in densely populated urban areas and in sparsely populated rural areas, the population should not exceed 500,000 or fall below 100,000.

10. The Government should appoint a permanent Boundary Commission to delimitate these boundaries, and to make recommendations from time to time for their alteration.

HEATING
and ventilation

1092 ★ **Insulation**

A.C. Pallot : SOME ASPECTS OF INSULATION. THERMAL INSULATION AT MEDIUM TEMPERATURES. *Cantor Lecture published in Journal of the Royal Society of Arts, February* 5, 1943, *p.* 122. Medium temperature insulation. Pipe insulation and structure insulation. Theory and practical application. Many graphs and figures included. Economics of pipe insulation discussed.

Part I. The subject of insulation is a very wide one and the lecture deals only with the temperature range from 100°F. to 400°F. This covers all normal heating, ventilation, hot-water supply and power installations where steam pressures do not exceed 200 lb. per sq. in.

The primary factor regulating the heat flow through insulation is its thermal conductivity. This is usually denoted by k, and is defined as the amount of heat in British Thermal Units (B.Th.U.) flowing in one hour across a slab of material 1 sq. ft. in area and 1 in. in thickness when the temperature of the two opposite faces differs by 1°F. Some average values of k are given.

Heat, having flowed through a slab of insulating material, must be transmitted from the surface exposed to air and surroundings at a different temperature, by means of radiation and convection. The heat transmitted by radiation depends on the temperature difference between the surface and the surroundings and on a factor *e* which varies with the nature of the surface. For highly polished metal surfaces the value of *e* may be less than 0·05, but

for the majority of non-metallic surfaces *e* approximates to 0·9. Paint, unless it has a metallic base, makes no appreciable difference to the value of *e* for a surface.

Heat transmitted by convection varies with the shape of the body losing heat and the temperature difference between the surface and the air. It is increased by any air movement additional to that created by natural convection currents.

The separate evaluation of convection and radiation loss from a surface is cumbrous and may be avoided by the use of a surface coefficient combining their effects. Such a coefficient is an approximation only. Its value will depend on the same factors as govern radiation and convection. A chart is given showing values of the coefficient under various conditions.

Tables are given of calculated results to be expected from applying insulation of varying thicknesses to pipes of 1 in., 3 in. and 6 in. bore. If the heat loss from the bare pipe be taken as 100 per cent., that from the insulated pipes is from 14 per cent. to 35 per cent. The decreased saving per cubic inch of material as the thickness of insulation increases is well brought out and points quite clearly to the existence of an economic thickness for any particular case.

Materials in common use as insulators are asbestos, magnesia, glass, silk and slag wool. A short description of each of them is given together with tables of their thermal conductivities. From these tables glass silk is the best insulator followed by slag wool, magnesia and asbestos in that order. Thermal conductivity depends on temperature and density so that the order of merit may not be the same in all cases. In particular, slag wool tends to pack with consequent increase in density and thermal conductivity, and decrease in value as an insulator.

Desirable thicknesses of insulation may be determined on a basis of saving a definite proportion of the bare pipe loss or the true economic thickness may be calculated. Curves and equations are given by which the calculations for the first case may be made. This method is not generally satisfactory since the desirable saving of heat will vary with conditions.

Exact calculation of true economic thicknesses is complicated. It may be impracticable owing to the impossibility of forecasting temperature conditions. and the variations of conductivity. The factors involved in such a calculation are internal and external temperatures, cost of heat lost, hours of operation per annum, annual charges on capital cost of installation and characteristics of the insulation. Equations are developed which, with the aid of curves, included in the lecture, enable the appropriate calculations to be made. Using glass silk under conditions stated and allowing five years as the life of the insulation, the economic thickness ranges from 0·4 in. on a 1 in. pipe at 100°F. to 2¾ in. on a 12 in. pipe at 400°F.

Part I concludes with some consideration of insulation under present emergency conditions. Hair felt, corrugated paper and straw are suggested for pipes, the need for protection from damp being emphasised. For cylinders and tanks, hair felt, corrugated paper, old carpet and sawdust may be used.

Part II. Insulation of structures in the case of thin fabrics is doubly valuable. It not only reduces heat losses directly but reduces the necessity for a high air temperature to counteract the negative radiation to cold walls.

In an ordinary office building the heat transmission through walls and roof amounts to 30 per cent. of the total heat transmission indicating that the possible economies to be achieved by structural insulation are limited in such buildings. A particularly valuable field is single-storey buildings with roofs of corrugated asbestos or similar materials ; the heat loss in these cases can be enormous.

Heat loss calculations employ thermal transmittances which may be defined as the quantity of heat in B.Th.U. per hour transmitted through one square foot of construction when the temperature of the inner and outer air differs by 1°F. The inverse of this quantity is known as thermal resistance and is usually denoted by R.

A slab of material having a thermal conductivity k and thickness L will transmit k/L B.Th.U. per hour when the temperature difference between the faces is 1°F. Surface coefficient has been previously described. Its reciprocal is termed surface resistance. If the surface resistance of the internal surface be denoted by R_i and that of the external surface by R_o, then the overall resistance R of a composite wall may be evaluated by the equation

$$R = R_i + R_o + \frac{L_1}{k_1} + \frac{L_2}{k_2} + \ldots$$

Where L_1, L_2 are the thicknesses in inches of the individual components of the structure and k_1, k_2 the conductivities of the respective materials. Tables are given of R_i and R_o for various surfaces, of R for a few typical constructions, and of resistivity (i.e. 1/k) for some structural insulating materials.

Some typical calculations are made and show that 1 in. of wood wool cement added to a 6 in. concrete wall halves its heat transmission while a ½ in. fibre board lining to a corrugated asbestos cement roof reduces heat transmission to about one-fifth of the unlined value.

Materials suitable for structural insulation are described briefly and some notes on their properties included. The materials are wall boards, wood wool cement, cork, asbestos, rigid board, including asbestos cement, aluminium paper and blanket insulations.

The important economies to be achieved by insulation are demonstrated by the results of calculations for a factory having a roof area of 10,000 sq. ft. These show a saving in first cost of the heating installation of £600 and in annual running cost of £190. The cost of the insulation would be about £500, so that a very substantial return on the capital outlay is obtained.

Comfort conditions in a warmed room depend on air temperature and movement and on the surface temperatures of the walls, ceiling, etc. A graph shows how the air temperature, and consequently heat losses, may be reduced when surrounding surfaces are warm. Interior insulation gives these warm surfaces and also greatly reduces the heating up period thus achieving further economy.

Among the additional advantages of structural insulation are reduction of condensation on interior surfaces, decreased pattern staining on ceilings, and the minimising of expansion with concrete roofs.

QUESTIONS and answers

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential ; and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to : THE ARCHITECTS' JOURNAL, 45, *The Avenue, Cheam, Surrey*

1093 Condensation Paint

Q *I have trouble with condensation on the underside of concrete roofs of Air Raid Shelters and similar buildings. Is there any preparation which can be painted on to the underside of such roofs or on the inside of walls to reduce such condensation* ?

A There are such anti-condensation cement paints as Ellicem (The Adamite Co., Manfield House, Strand, London, W.C.1) and Snowcem (The Cement Marketing Co., Club House, Coombe Hill, Kingston-on-Thames, Surrey), and also paints containing granulated cork such as are made by Thos. Parsons, 315, Oxford Street, London, W.1. and The Fairfield Paint Co., White Horse Lane, London, E.1. The latter would be unsuitable in situations likely to receive rough usage.

In general, apart from increasing ventilation, the main feature to look to is the insulation of walls and roof so that they are not chilled by the outside air and more readily take on the temperature of the inside air, as it is the

contact of warm and humid air with cold surfaces which causes condensation. Absorbent materials such as acoustic plasters and lime plaster with crushed foamed slag in lieu of sand, help materially, but are probably too expensive for the job in question.

Anti-condensation paints are by no means useless but they cannot be relied upon to cure severe cases of condensation unless used in conjunction with increased ventilation and insulation.

1094 Patent Roofs

Q *Can you tell me :—*
1. *The name and address of the firm responsible for the Diagrid system* ?
2. *The names and addresses of firms specialising in patented systems of roof trusses in both concrete and steel in connection with single-storey buildings* ?

A The firm responsible for the Diagrid system is Diagrid Structures, 6, Collingham Gardens, London, S.W.5, who will forward you full particulars. As you are interested in patent forms of roof construction we would also draw your attention to the system named Lamella, full particulars of which can be obtained from Horseley Bridge & Thos. Piggott, Tipton, Staffs.

Steel trusses are, of course, frequently used in connection with single-storey buildings such as huts, etc., but they usually consist of normal sections and there is nothing very special about the design. The only patent steel trusses we know of for this type of job are the welded tubular trusses fabricated by Scaffolding (Great Britain), 77, Easton Street, High Wycombe, Bucks. A considerable amount of data has been and is still being published periodically in the JOURNAL, but particulars can also be obtained from the firm direct.

We give below a list of three firms manufacturing concrete roof trusses :—

Girling Ferro Concrete, Great West Road, Feltham, Middlesex.

Marley Tile, London Road, Riverhead.

Stent Precast Concrete, 1, Victoria Street, London, S.W.1.

1095 Stains on Terrazzo

Q *What are the best means of removing stains (paint, rust from water heater, rings made by fire buckets, etc.) from terrazzo flooring? Floors are in good condition, but appearance is spoiled. It is difficult to arrange for re-polishing and the stains are unaffected by ordinary scrubbing.*

A It may be possible to clean off some of the stains with steel wool used with a scouring powder, but we consider from your description that most of the stains will have to be rubbed with a wet carborundum stone of medium hardness. Any firm of floor cleaners or polishers conversant with terrazzo work would undertake the cleaning for you.

SOCIETIES AND INSTITUTIONS

Speeches and lectures delivered before societies, as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economise space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the contents page. Except where inverted commas are used, the reports are summaries and not verbatim.

ABT

Westminster Branch

March 2, at Livingstone Hall, St. James's Park, S.W.1. Meeting and discussion on *New Building Techniques (Prefabrication, Plastics and Rationalisation) and the Building Trade Unions.* Speakers : Jack Ryan ; Ernö Goldfinger ; Charles Madge ; T. W. Kennedy ; J. Atkinson. Chairman : Miss J. Blanco-White.

Jack Ryan : Prefabrification, plastics and rationalisation raise important issues for the trade unions. The new techniques will have to be used to cope with the great post-war rebuilding programme ; the old methods will not be sufficient. For what objectives are the new techniques to be used and what action are trade unions to take regarding them ? We want guaranteed conditions for the workers, especially a guaranteed working week. We must eliminate the idea that building is purely speculative. The employer must no longer alone have general control and power to decide such matters as design and methods of construction. The workers themselves must plan and criticize production. The existing Joint Production Committees must be maintained after the war.

Crafts will undergo change and will probably become simplified. Craftsmen should therefore have the opportunity of developing more than one craft. Opportunities for advance through training should be available to every class of worker in the building industry.

The industry is likely to become a State enterprise working for social needs and not private profits. A wider control must be introduced.

E. Goldfinger : The whole issue is, who will benefit by technical improvements—the shareholders or the consumers ? If the latter, then improvements are to be welcomed.

Prefabrication in itself is not something new. Bricks are prefabricated units and have been produced for thousands of years. Nevertheless, the scale of prefabrication has changed quantitatively and the size of prefabricated units is increasing. Prefabrication is likely to take two forms : (1) the building of large units for small dwellings in factories which can be erected dry on the site in a very short time ; (2) the use of actual building sites, e.g., large devastated areas, as factory sites, where building plant such as prefabricating moulds for reinforced concrete units, travelling cranes, cement mixers, etc., are erected on the actual building site itself.

A current idea is that prefabricated houses should only be temporary, designed to last for about 30 years. Is this not just jerry-building ? It is in line with buying a new car every year, a habit encouraged by motor manufacturers to stimulate sales. This is an unsound attitude.

I have tried to debunk specialization in crafts for years. The capability of a craftsman in one branch of building does not exclude his capability in two or more branches. Operatives should be able to take up any trade ; for instance, there is no reason why a bricklayer should not take up architecture. If an operative has a wide knowledge of all building methods, he will be able to enjoy his work as much as the craftsman of the past.

T. W. Kennedy : A second industrial revolution is now occurring, especially in the aircraft and shipbuilding industries. The war has swept away the frustrating forces of vested interests in technical development. We must control this new industrial revolution so that we do not get the come-back of the squalor and filth of the first industrial revolution, in which we are still wallowing.

Modern architectural thought in pre-war days was expressed mainly in books, and though its vision was well thought out, it was not widely put into practice. With the development of plastics and prefabrication techniques, and also of the new light metals and new developments of timber, this vision must become a reality.

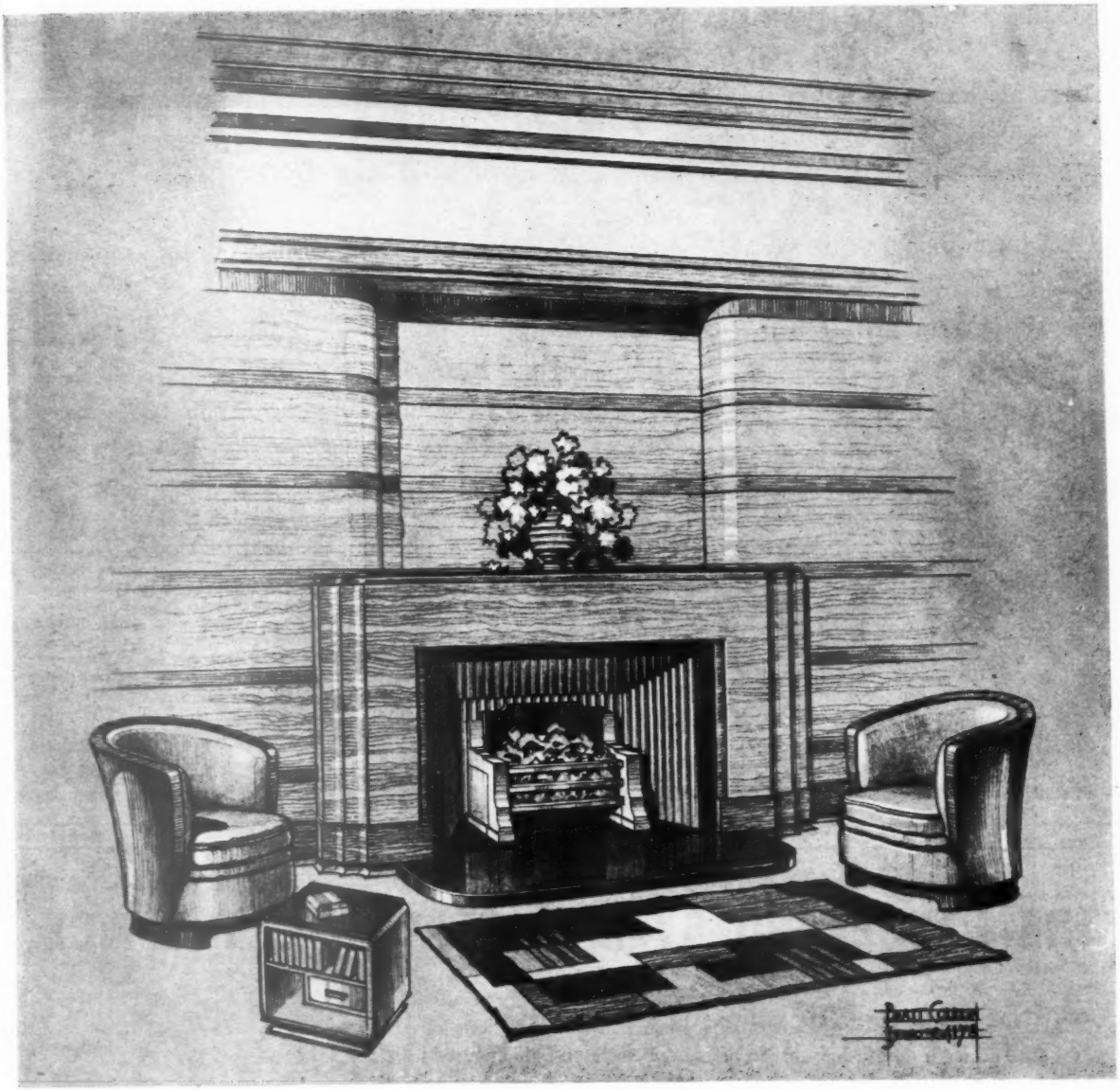
The plastics industry has been distressed by the fantasies often believed about the possibilities of plastics and it has set aside funds to debunk this nonsense. Nevertheless, it is a good sign that we are having these æsthetic visions.

The great significance of plastics is that we can now create new materials from scratch, and we are not now dependent on the old natural materials such as stone, wood, and clay. We can now state the problem first and consciously design the material required. The greatest advances in plastics will probably be unspectacular ; for instance, woodwork has been revolutionized by plastics in the resin-bonded ply-wood. This looks like the old kind of ply-wood ; nevertheless, the implications of this new material are immense especially in the freedom it gives in moulding and shaping. Plastics will vitally affect the electricity industry. A competitor to cement as a binder is approaching in plastic emulsions.

A few basic problems now stand in the way of the development of plastics. No plastic has yet been developed which will stand up to continued hot water. Therefore we cannot yet use plastics for baths or basins. Again, transparent plastics cannot yet take the place of glass, as none is yet proof against abrasion. However, hardening techniques are developing and the next four years will probably see the solution of such major problems.

If the plastics industry is properly organized, plastics will come in with a flood if unhampered by phoney price levels. Cost should not prohibit the use of plastics, for the raw materials are plentiful. This is where politics come in. Meanwhile, technicians must continue to experiment with objective integrity.

If plastics are available in plenty to architects, the results may be chaotic. Architects should



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no longer be artistic playboys. They must make more use of facilities, such as those provided by BRS, whose activities I hope will expand greatly. A new kind of education is needed in the architectural schools.

AA

Sir R. Acland

February 23, at AA, Bedford Square, W.C.1. Ordinary General Meeting and Lecture on *The Political Implications of Planning*, by Sir Richard Acland, M.P.

Planning is not the specialized function of a particularly trained clique of technicians. Planning is going to be the basic way of life of the whole community.

We are at the very end—at the complete breakdown—of the existing system. Everywhere the same thing. The same human nightmare. Men idle, resources unused, human needs unsatisfied. And no answer. It's a threadbare epigram now, but finding ourselves faced with the problem of poverty in the midst of plenty, we solved it the only possible way by abolishing plenty. The present Alice in Wonderland frustration with which the world is confronted has not been caused by some maladjustment in the processes of balance sheet thought. It has been caused *by* balance sheet thought.

Then how do we propose to think? We propose to think like a soldier in command of a campaign. He has an objective. We survey the total human needs of mankind (or of that part of it with which we are dealing); we assess the potentialities of all the resources, material and human, which are at our disposal; and we lay our plans in such manner as to mobilize the whole of the resources in relation to the whole of the needs. This is your Planning.

By what criteria and in relation to what standards do we assess these human needs? I answer quite bluntly that I do not know. We will wrongly build more bacon factories when the true needs of humanity would have been better served by building more schools. That's just too bad. But at least we won't build the Dorchester before we clear the slums.

Planning is the work for the whole community; and in this work all men and women of any special technical ability, be they architects, doctors, teachers, scientists, sociologists, engineers, parsons, chemists, agriculturists, or even politicians, will have to play their special parts within the co-ordinated team. The planners' ways of thought, the co-ordinators' ways of thought, will have to become autonomous.

It is definitely not enough to say, "We will build you nice houses and plan you lovely cities." *It is part of your business, as architects, as planners, as co-ordinators, to tell the world what is the shape of the community which will make it possible for your plans to be executed.*

BOURNVILLE TRUST

Film pre-view

February 23, at Gaumont British Theatre, Wardour Street, W.1. Preview of *When We Build Again*, a film based on the book of the same title issued by the Bournville Village Trust. Mr. Paul S. Cadbury introduced the film.

P. S. Cadbury: It is clear that we shall only be able to replan this country if there is a definite demand on the part of the public for a comprehensive programme. Two things are necessary:—

1. To ascertain the facts and make plans that are based on fact and not on prejudice.
2. To educate and interest public opinion in the need for drastic action.

This film is built on the basis of research, carried out since 1935 by the Bournville Village Trust, into the conditions of living and working in Birmingham. The result of this research has been published in the book *When We Build Again*. Although this publication has run into four editions, it is clear that it can only reach a very small number of people. A film, on the other hand, has an almost universal appeal; and so we had this film made in the hope of interesting a very much larger public.

Film: This follows the book very closely in its essentials. It does not, in any way, claim to show a panacea for the many conflicting problems confronting the planner, but sets out to show some of the existing evils and to suggest how some of these might be remedied. Prominence is given to the urgent need for rebuilding in many of our big cities; and suggestions are made for the creation of small satellite towns to take the city's overflow.

A new idea is that of "flatted" factories. Such buildings, five or six storeys high, could re-house existing light industries in less than half the present acreage. Emphasis is given to the additional advantages such as better working accommodation, canteens, rest-rooms, etc. It is, in fact, a commendable adaptation of the modern block of flats to industrial purposes.

The film shows us something of the high pressure under which we live in modern cities. We see the tangled and squalid confusion of streets and houses, shops and factories, that has grown up since the Industrial Revolution. We are introduced to workers living in the heart of one great city under conditions that are little short of primitive. In the Central Wards we see houses and factories jostling for elbow room.

When we are well outside the city, in the suburbs, we find space and sunlight, gardens and parklands. Many of the municipal estates show the advance in layout and design made during recent years. Yet all these houses—some of them most attractive—are too far from the city. These suburban estates mean long and expensive journeys to work. Civic life can scarcely exist for those who live only on the fringe of the town's activities, and the sprawling suburbs not only spoil the country but take it farther and farther away from those who live in the centre of the city.

When We Build Again recognizes that the centres of our big cities must be rebuilt and made into places of beauty and dignity. We catch a glimpse, too, of a Garden City which typifies so many of the requirements of healthy living. Among the high-lights of the film is the model of a new town designed by Thomas Sharp. (See JOURNAL for February 4, 1943.)

From the film, When We Build Again. *The Jewellery Quarter of Birmingham now contains a warren of squalid, cramped and inconvenient factories of the small traditional Birmingham type. Above is an impression of this quarter rebuilt of 5-storey* flatted factories, *which would contain the same accommodation in the same area as at present. A Welfare Centre is in the middle.*

RIBA

Cable from Moscow

A cablegram has just been received by the RIBA from Professor D. E. Arkin of Moscow, an Honorary Corresponding Member of the RIBA. A suitable reply is being sent from the RIBA. In issuing the cablegram to the Press the RIBA state: "We shall do everything in our power to continue the collaboration with the architects of Russia which we have been able to effect by means of our contacts with the Russian Architectural Societies and our Honorary Corresponding Members in that country." Here is the text of the cablegram from Moscow:

Journal,
Royal Institute of British Architects,
66, Portland Place, London.

Like many Russian architects I have long

been desirous of exchanging with you and staff of RIBA Journal certain views on our war-time work and learning opinions on Anglo-Russian co-operation in our particular field.

Architecture first among Muses said to be silenced when guns speak. That was usually case in former wars. But during this war Russian architecture has continued to live intensive creative life. Not only are architects working in Red Army as military engineers, camouflage experts and commanders of engineer troops: they're also carrying on many-sided defence work in rear.

Dismantling, transferring and reassembling of immense number of works and factories far into country's interior—Siberia, Urals, Central Asia—was one of the biggest economic and strategic war-time undertakings and had to be done in shortest possible time. Industrial population needed new dwellings, schools, hospitals, dining rooms, nurseries. Best building forces of country undertook work and many new settlements sprang into being in various parts of Urals, Eastern Siberia, Central Asia Republics.

Main idea was to manage without transportation of materials because transport was needed for army freight arms and ammunition. Local available materials had to be utilized.

In addition to mass-construction work in East, architects are preparing for restoration of liberated cities and villages ruined by German occupation army. Special groups are engaged on plans for these in Moscow Academy of Architecture. New towns, hundreds of collective farm villages will be built anew on their ashes. Vast and responsible indeed is task confronting Russian architects—to raise upon heroic ruins of Stalingrad new city wherein joy and comfort of living will be best memorial to those who laid down their lives fighting for it.

Soviet architects intend to make extensive use of their British colleagues' experience and are following work of Royal Institute very attentively in military construction, town planning and reconstruction. I think that many of our tasks and problems will be identical with those facing our British comrades.

In this connection I would like, as Historian of Architecture, to point out that relations between architects of both countries have traditions dating back to 18th and 17th Centuries.

Russian architects place very high England's finest examples of classic architecture and particularly achievements of great British builders in designs for dwelling-houses and settlement planning. For their part Soviet architects have accumulated during last two decades wealth of experience in town planning and reconstruction. I think that regular exchange of opinions and knowledge gained by experience would prove extremely useful.

German invaders have barbarously destroyed number of most precious architectural monuments—monasteries in Novy Jerusalem and Istra, palaces built by famous 18th Century architect, Matvei Kazakov, in town of Kalinin, ancient temples at Novgorod and Chernigov. They took away wonderful fountains from Peterhof and ruined palace.

Many great edifices did Hitlerites wantonly damage and destroy in England—innumerable London churches designed by Christopher Wren; Guildhall; Holland House; and other classic examples of English architecture. Both Soviet and British architects are and will be engaged on restoration work for some time to come.

Soviet Architects' Union has been in close touch with Royal Institute and with other British architectural associations for many years now and connections are being extended and deepened. Open meetings of Soviet architects will shortly be held in Moscow on subject of Contemporary Architecture in Great Britain. Some time ago I had honour of reading paper on Classic and Contemporary Architecture in England to crowded auditorium in Moscow Architects' Club. Many other measures have been planned for acquainting Russian public with styles of English architecture. We would be glad to acquaint British architects with best examples of Russian architecture, past and present. Yours sincerely, Professor D. ARKIN (Honorary Corresponding Member, Royal Institute British Architects).

BIRKBECK COLLEGE

G. M. Davies

February 17, at Breams Buildings, Chancery Lane. Public lecture on *London's Water Supply—Past, Present and Future*, by G. M. Davies, M.SC., F.G.S.

Roman London stretched from the Tower to Ludgate Hill, and occupied two low bluffs divided by the valley of the Walbrook. Rain falling on the gravel to the northward issued as clear springs along the valleys of the Walbrook and the Fleet.

The Saxons, too, chose gravel sites, with easy water supply. Some of the springs, "wells," in the gravels are commemorated in place names such as Bridewell, Clerkenwell and Shacklewell. As debris accumulated, burying the Roman streets under ten to twenty feet of made ground, pumps were erected over the springs to make the water still available. A slight chalybeate flavour was sufficient to turn a spring into a spa, frequented by all fashionable London for a time and then deserted, as at Bagnigge Wells, Sadler's Wells and Islington Spa.

But the gravel water became contaminated and insufficient for a growing population, and in the thirteenth century the conduit system was introduced for bringing water in pipes of lead or hollowed elm trunks from rural areas such as the Tybourne valley at Marylebone and the Westbourne valley at Paddington. In the sixteenth century water was brought from springs thrown out at the base of the Bagshot Sand at Hampstead, where three of London's lost streams had their source, the Holebourne or Fleet, the Tybourne, and the Westbourne (Kilburn or Bayswater). The New River, completed in 1613, brought water from strong springs in the Chalk at Amwell and Chadwell in the Lea valley to Islington. Water wheels placed under two of the arches of Old London Bridge pumped Thames water up to a water tower from which it was distributed about the City.

Water supply limited the growth of London to the gravel areas down to the nineteenth century, when cast-iron pipes came into use for supplying the London Clay country.

Many local water companies were formed in the eighteenth and nineteenth centuries, most of them supplying water from the tidal Thames between London Bridge and Hammersmith. Typhoid and cholera epidemics were frequent, and even after the use of tidal water was prohibited, in 1856, the supply was far from pure. Then in 1903 these small companies were acquired by the Metropolitan Water Board. The Board in normal times has to supply about 290 million gallons a day, of which over 80 per cent. comes from the rivers Thames and Lea, and the rest from wells in the chalk.

Continuous pumping has removed more water from the chalk below London than has percolated into the area from the chalk exposed in the Chiltern Hills and the North Downs, and the water level has been falling for more than a century. Although the fall has been arrested under wartime conditions, that is only a temporary phase due to cessation of pumping in many private wells, and the fall will begin again as London returns to normal.

Yet the great underground reservoir of the chalk continues to overflow at the margin. There are strong springs at the junction of chalk and eocene beds, as at Hertford and Ware in the north, Ewell and Waddon in the south. Indeed the series of close-spaced village settlements that marks this junction line between Guildford and Croydon is a clear instance of the influence of water supply on population.

It has been proposed to pass flood water from the Thames or Lea, after filtration, into dumb wells from which it can percolate into the chalk and help to maintain the water level below London. A greater use of river water may be necessary, with more costly reservoirs. Or, if the population in and around London continues to increase, it may be necessary to bring water from the Welsh valleys in pipes, or preferably a network of pipes analogous to the electricity grid, not serving London only. Indeed a National Water Board might bring as many benefits as did the Metropolitan Water Board forty years ago.

TCPA

W. S. Cameron

March 4, at YWCA, Great Russell Street, W.C.1. Lecture on *The Professional Planner*, by Col. W. S. Cameron, President of TPI. Fifth lecture in the series: *Rebuilding Britain*. Chairman: The Rev. James Barr, M.P.

Claims have been put forward recently by different professions with regard to Planning. The architect has contended that he is the only one who has any qualification for planning or has been trained in logical planning. The engineer also has put forward claims that his work and training eminently fit him to take charge of planning work.

Planning—national, regional and local—is such a vast subject, affecting so many different interests, that expert knowledge is required at one time or another in all of the following subjects: Agriculture, Architecture, Administration of Public Utilities, Engineering, Forestry and Afforestation, Geology, Geography, Landscape Architecture, Local Government, Mining and Surface Working of Minerals, Surveying and Valuation, Social Administration, Social Economics, Transport—by road, rail and air—and Traffic.

Fortunately, however, it is not necessary for the professional planner to be an expert in all these subjects, though he must be sufficiently acquainted with all of them to understand when, where and how they are related to the planning he is undertaking. He must be able to consult with the specialists in any one of these subjects, and be sufficiently well acquainted with the subject to avail himself of their advice.

In the past, if we go back to very early times, we find that specialisation of the architect and the engineer had not then evolved. The cleavage between the two professions took place some 100 years ago, when the academic architects became primarily engrossed in styles early in the 19th century. It is clear that the people who were responsible for town planning in the past were those having a knowledge of architecture and engineering, and it is just this combined knowledge which is most helpful to the professional planner.

All planning should be preceded by preliminary studies of physical, social and economic conditions.

The Town Planning Institute has always realised the necessity for the training of the professional planner since its formation in 1914, and recently it has given thought to a more comprehensive training of the planner for the future. Planning as a profession is now coming to the front by process of evolution, and we in this country must see that its status is raised so that there will be a highly trained body ready to deal with the great work ahead.

The formation of the new Ministry of

Planning must mean that town and country planning will be recognised as one of the most important services in national and local government, and that, on the technical side, it should only be entrusted to qualified planners.

BSIB

E. C. Willats

February 25, at the Science Museum, Kensington. Paper on *The Classification of Maps and Plans for Territorial Planning*, by E. C. Willats, D.SC. (Econ.), at a meeting of BSIB (British Society for International Bibliography), 20, Victoria Street, S.W.1.

It is probable that there are but few librarians with any pretensions to having a comprehensive set of maps giving rise to serious problems of classification. However, there is an increasing demand for maps, for which planning is partly responsible.

In general, a planner is likely to ask for a very comprehensive series of maps, for he will wish to have available information concerning the resources of the country in which he is interested, how they are used at the present time, and, perhaps, something of past conditions as indicative of trends of change, and he will be interested in potentialities, to indicate possible future uses. He will need the data on which to base decisions on conflicting claims to the employment of resources and guidance on the possible effects of one kind of development or another.

He will therefore seek information, if he is logical, under various headings. As regards the land itself, he will want maps concerning relief, geology, soils and climate. Land or surface use is a wide subject, embracing agriculture, types of farming, land utilization, land classification, types of grassland, forestry and other subjects. Mineral resources, in exploitation and in reserve, are most important. So are maps of industry in its various subdivisions, while transport and public services —railways, roads, waterways, electricity, water and gas—are but some subjects in another class.

Recreational areas and open spaces, reserved and potential, assessment of landscape for such purposes, are all likely to be asked for. The people whom he serves form the subject of another group of maps, for they are the planner's clients, the claimants for "Lebensraum" in the land whose ordered future he endeavours to prepare and, always, the labour pool for the industry whose distribution he hopes to arrange.

An adequate classification of maps will serve planners just as well as those others who seek knowledge from maps.

In the Maps Office of MOTCP we are compiling maps on various scales relating to all forms of land use and classification. The British Museum houses the largest collection of maps in the world, and has a comprehensive system of indexing which will lead to the immediate identification and location of maps.

BSI

Wood Wool Slabs

BSI announces the publication of a new British Standard for Wood Wool Building Slab (B.S. 1105-1943). The properties of the building slabs covered by this Specification are being investigated at present by BRS in co-operation with the Wood Wool Building Slab Manufacturers' Association. The complete results of this investigation are not yet available, but to meet present needs it has been considered desirable to provide a War Emergency Specification on the basis of such data as have so far been obtained.

Three classes are described in the Specification. The following are suggestions as to the uses for which these three classes are intended:

Normal quality slabs.—This is the material most used for general purposes especially where thermal insulation is a consideration. In appropriate thickness it is intended for walls, partitions and ceilings and permanent shuttering.

Special quality slabs.—This is a material of higher strength than the normal quality and is intended more particularly for roof or floor construction or for permanent shuttering. It may also be used for the other purposes indicated for the normal quality slab.

Reinforced slabs.—These slabs are reinforced longitudinally with light timber battens, and are intended particularly for use in roof construction. Copies of this specification may be obtained from BSI, 28, Victoria Street, Westminster, S.W.1, price 1s. net, post free.

DIARY

Saturday, March 13.—At RIBA Rebuilding Britain Exhibition, National Gallery. 2.30 p.m. "Mapping What Is, and Planning What Might Be." By Professor Eva Taylor, F.R.G.S.

Tuesday, March 16.—At Housing Centre, 1.15 p.m. "Retail Distribution and Town Planning." By Miss K. Liepman.

Wednesday, March 17.—At RIBA, 6 p.m. "Communications." By Sir Charles Bressey, C.B., C.B.E.

At CSI, 5.30 p.m. "Schedule Contracts: Are These in the Best Interests of the Building Industry?" By E. C. Harris.

Thursday, March 18.—TCPA, 1.15 p.m. "Industry and Planning." By H. W. Healy, M.I.MECH.E.

TPI, at Caxton Hall, Caxton Street, S.W.1. "Planning for Reconstruction; The Data Required." By Professor Patrick Abercrombie, M.A., F.R.I.B.A.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey, and should reach there by first post on Monday morning for inclusion in the following week's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey.

Public and Official Announcements

Six lines or under, 8s.; each additional line, 1s.

The Incorporated Association of Architects and Surveyors maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: **75 Eaton Place, London, S.W.1. Tel.: Sloane 5615** 991

MONTGOMERY COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an Architectural Assistant (Male or Female), in the County Architect's Department. The appointment is a temporary one for the duration of the War. The salary is £250 per annum, plus War Bonus (at present £13 per annum).

Application stating age, training and experience, together with copies of three recent testimonials and endorsed "Architectural Assistant" should reach the undersigned not later than March 18th, 1943.

G. R. D. HARRISON,
Clerk to the Council.
871

Architectural Appointments Vacant

Advertisements from Architects requiring Assistants or Draughtsmen, and from Assistants and Draughtsmen seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice. Other "Appointments Vacant" and "Wanted" will be found under later headings, and are subject to the charges given under each heading.

Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.

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YOUNG VIENNESE ARCHITECT seeks employment as Assistant in London Area. Five years experience, Diplomas (Technical College and Academy of Arts), First Part RIBA Final—18 months with local authority. Box 61.

Classified Advertisements continued on page xxx.

YOUTH (under 17), matriculated and at present taking a course of architecture at the Regent Street Polytechnic, seeks a progressive position in an architect's office. London area. Has knowledge of draughtsmanship. Box 63.

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ARCHITECT, experienced in carrying through works complete, requires position as Manager, London area. Box 67.

SENIOR ARCHITECT (51), qualified and with good general and housing experience, wants post in South Midlands (Oxon, Bucks or Worcs). L.A. or private architect only; no contractors or factories. Box 68.

YOUTH (17), seeks progressive post in Architect's office; good education and has matriculated; is preparing for R.I.B.A. Inter. Some knowledge of design, construction and draughtsmanship. Folio of work for inspection. London or S.E. England area preferred. Box 69.

CHARTERED ARCHITECT, A.R.I.B.A., T.P.I. Final Exam. (age 25), exempt from military service, six years' experience all types of work, including schools, clinics, factories, offices, A.R.P. reconstruction, etc., requires responsible position, London or N.W., Home Counties. Salary about £400 p.a. Box 70.

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