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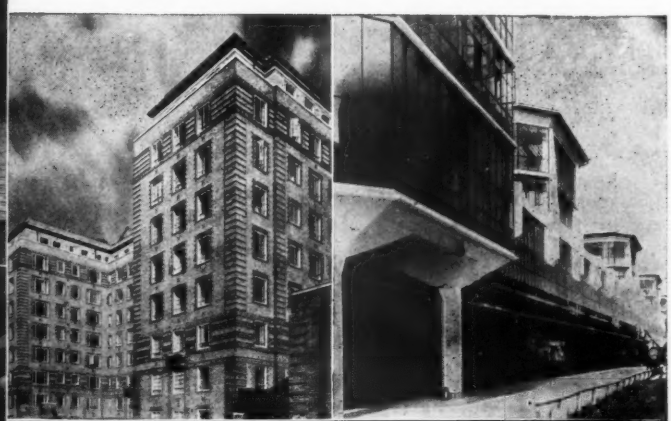

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THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 45 THE AVENUE, CHEAM, SURREY

*

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

THURSDAY, JULY 10, 1941. NUMBER 2424 : VOLUME 94

PRINCIPAL CONTENTS

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

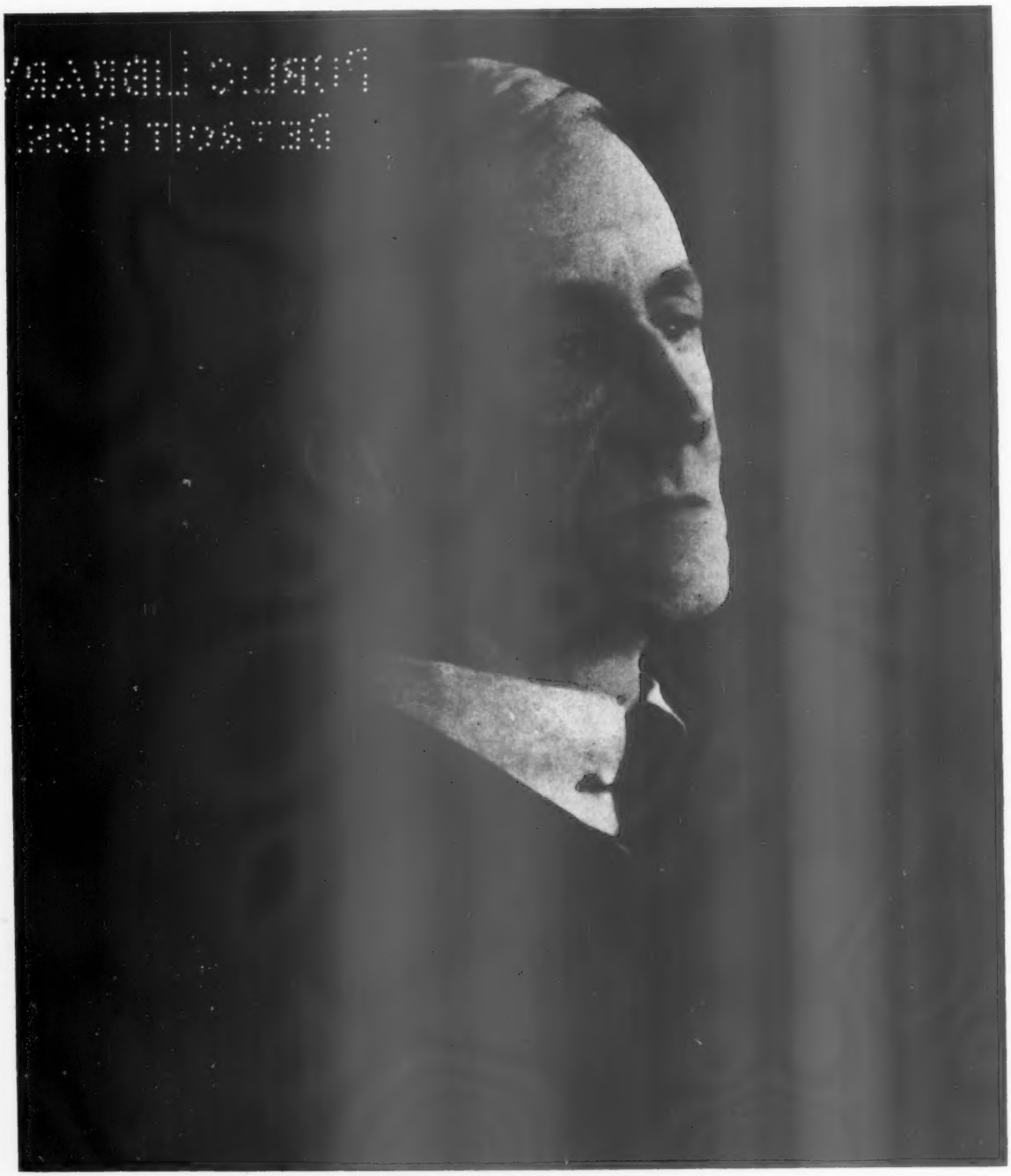
To obtain your copy of the JOURNAL *you must therefore either place a definite order with your newsagent or send a subscription order to the Publishers.*

FASHION AND FLASHBACK

Both buildings illustrated on this page were built by the same firm of architects—Otto R. Eggers and Daniel Paul Higgins.

On the left is the Triboro Hospital for Tuberculosis, serving the New York boroughs of Brooklyn, Queens, and the Bronx. Construction is steel framework with two-way system fireproof floors. Outer walls are 12-in. brickwork, 1-in. air space terra-cotta finished internally with firring and plaster. Internal partitions terra-cotta, metal and glass. The design of the building has been dictated throughout by practical considerations connected with the treatment and cure of tuberculosis in a city-owned institution.

Below is the National Gallery of Art, Washington, which was fully illustrated in our issue for June 5th. It was designed by John Russel Pope and completed by his associated architects, Eggers & Higgins. It is the largest marble building in the world. Sixty blocks of marble weighing 40 tons each were quarried from a vein 60 feet below the surface of the ground, to form the shafts of the 32 monolithic columns in the garden court. The total cost of the building was over three and a half million pounds.



MR. HIORNS RETIRES

Mr. Frederick R. Hiorns, Architect to the London County Council and Superintending Architect of Metropolitan Buildings, is to retire on July 13, under the age limit. His successor is Mr. J. H. Forshaw, Deputy Architect to the Council, whose portrait appears on page 21. Mr. Hiorns was for many years a senior member of the architectural staff of the London County Council. He became deputy-chief architect in 1935, and was appointed to his present position in April, 1939. His architectural works for the Council include the S.E. London Technical Institute, the Weights and Measures Office, Euston Road, a considerable number of hospital units and extensions, including the re-building of the North Eastern Hospital at Tottenham and many schemes for working class housing. Also the extension of London County Hall, east of the original building, for which Sir Giles Scott, R.A. acted as consulting architect. A Member of the Departmental Committee on Hospital Standards, 1930-3, Mr. Hiorns has served on a number of committees of the R.I.B.A. and other bodies, including, for many years, the Executive Committee of the Society for the Protection of Ancient Buildings. He is a member of Lord Reith's Consultative Panel, Ministry of Works and Buildings.

He is the author of many essays and papers on architecture and art criticism. Mr. Hiorns is a Medallist for Design, South Kensington; and was a Godwin Bursar and Travelling Student, R.I.B.A. He became an Associate, R.I.B.A. in 1899, and a Fellow in 1921. He was an exhibitor at the Royal Academy, and is a Member of the Roman Society, a Fellow of the Society of Antiquaries, a Member of Art Workers Guild and a Life Fellow of the Royal Society of Arts.

CLYDESIDE RECONSTRUCTION

RECONSTRUCTION on the Clydeside is being undertaken by Mr. Sam Bunton, A.R.I.A.S., on the lines suggested by Mr. O. N. Arup in his book Safe Housing in Wartime. Drawings submitted to the Council for their approval are illustrated on pages 22 & 23. Sites are immediately available for building purposes, but pending the approval of the Ministry of Home Security and the department of Health for Scotland, drawings only illustrate the planning and constructional principles involved, and do not attempt to adapt them to any particular site. The problem of first aid and heavy repairs has already been dealt with. The need for permanent shelter and living accommodation for workers in the badly damaged Clydeside area still remains, and the scheme illustrated has been undertaken in order to provide this in such a way that buildings erected for this purpose can be adapted after the war to help meet the demand that will immediately arise for normal peace-time housing. Lightly constructed hutments outside the danger zone, and bomb-proof shelters inside the danger zone are alternative ways of solving the present problem, but both involve the construction of buildings that have no possible peace-time use. The latter have the additional disadvantage that they will be exceedingly difficult to remove in cases where they are found to occupy important sites in the centres of towns, which may be wanted for other purposes, under town planning schemes that do not yet exist. The great interest of the safe housing scheme lies in the fact that it makes it possible to lay the foundations of a new and better planned Britain now, instead of postponing reconstruction until after the war by which time the problem will have become so urgent that it may be already too late to solve it.

While the slummy centres of our towns are being destroyed safe housing areas can grow up on the outskirts separated from each other by open country (there is a most fortunate correspondence between the requirements of safety in war and amenity in peace) and ready for immediate conversion, by the addition of schools and community centres, into complete neighbourhood units. When the war is finally ended central areas drained to a large extent of both industry and population can be replanned on a grand scale.

This may sound unpractical in view of the gravity of the present situation, but after a moment's consideration it becomes obvious that the severer the struggle, the longer the war, the more necessary it is to reconstruct as we go along. Otherwise there will come a point when we can go on no longer.

The system of construction on which "Safe Housing" is based is monolithic concrete box construction. Walls act as beams capable of carrying heavy loads, instead of themselves requiring to be carried by a supporting framework; the amount of damage that can be caused by a direct hit is thereby limited. Box construction is also capable of resisting horizontal forces to an extraordinary degree. The outer walls are designed in brick because it is a pleasant finishing material, it affords an easy release for blast, in case one of the components in the building receives a direct hit and finally it makes it possible to enlarge the windows without undue difficulty at a later date. The degree of protection afforded is considerably greater than that afforded by the ordinary type of street shelter. From the point of view of comfort comparison is unnecessary.

In an addendum to Safe Housing in Wartime some interesting reflections are made on the probable cost of monolithic concrete and other lighter types of construction. The cost of the carcass of a monolithic concrete building with outer walls of brick is rather less than half the total cost of the completed building.

"If the same accommodation were provided in light one storey huts, the cost of the structure itself would no doubt be reduced. But as one storey huts would be more spread out than the equivalent two storey structures, the surfaces to be insulated and waterproofed and the runs of services would be increased so that all the other items would cost more. For the same reason the cost of roads, drains and other services outside the blocks themselves would also be increased and the annual coal bill would be almost doubled, according to the advice of expert heating firms. When we add to this the fact that extra air raid shelters will have to be provided, it is fairly obvious that all these extra costs would substantially reduce the saving obtained on the first item, and would probably wipe it out altogether."

In cases where temporary accommodation is provided in safe areas, the cost of additional air raid shelters can be omitted but the cost of transporting workers to and from their places of work must be added on in its place.

It is sometimes suggested that light structures are preferable because they can be provided more quickly. A hut can be erected in a day, whereas it may take two or three weeks to complete the carcass of a more substantial building. But there is every reason to suppose that in a large building programme the rate of output would be found to be reversed. The assembly of a hut is only the last stage in its production. The materials from which it is constructed are mostly made in factories employing skilled workmen, and already working to capacity. R. C. construction is begun and completed on the site. Standardized units reduce the need for skilled workmen to a minimum, as shuttering can be reused again and again and steel work delivered already bent. There is no shortage of either bricks, sand or cement, and the quantity of steel needed per person only amounts to one-fifth of that required for an ordinary Morrison shelter. The materials necessary are, moreover, produced in this country.

The Architects' Journal
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NOTES & TOPICS

FIRST ON THE JOB

BY this time nearly all architects will have noticed in their newspaper the advertisement in which the Ministry of Works and Building asks all builders to speed up the building of war factories. "*No work*," the matter-of-fact notice ends, "*is more important.*"

★

The many architects who are working on war buildings may gain added encouragement in their job from this official recognition of builders' importance. But they would not be human if they did not also experience something of the feelings of the Chinese Ambassador at the time of Munich. "The skies are black," His Excellency then remarked, "with the wings of chickens coming home to roost."

★

Builders—You're first on the Job is a good slogan when used non-technically. Architects can remember a technical and calamitous application of the same slogan in the first six months of the war. Then builders *were* the first on the job ; they were the only people on the job—without plans, layouts or surveys.

★

Even now, when architects have been brought in to war building work it is difficult to take this advertisement at its face value.

"NO WORK IS MORE IMPORTANT"

Consider this statement. It means that in the opinion of the competent Ministry no part of the war effort should take precedence over the completion of the war building programme in the shortest possible time.

★

Architects are at present reserved at 35 years of age. A large number of architects under this age (mostly just under) have at long last been given work on war buildings —often on "vital" war buildings. But such men are not reserved, their calling up is merely deferred, and a most extraordinary round-game of appeal and counter-appeal has to be carried on continually to keep them on the all-important job.

It would seem worth while for the Ministry of Works and Buildings to draw the attention of the Ministry of National Service to two points. (1) It has now been proved time and again that a job for which all drawings have been prepared before work begins takes exactly half the time to build of one which is designed as it is built. The largest part of this preparation must be done by architects.

★

(2) The work asked of architects on war buildings usually entails very long hours, unattractive living conditions and requires the ability to fit, without friction, into most curious organizations in which architects may not be the top dogs. It is natural that men under 35 can do these things better than older men. Most of the energetic architects over 35 are already on war work of some kind, and it is next door to impossible to replace a 30-year-old architect with anyone competent to take his place. Too many architects of this age are already in khaki.

CRISIS IN THE MINISTRY OF INFORMATION

Discontent with the Ministry of Information has led to a general discussion of the subject. The 1941 Committee, a body of disinterested intellectuals presided over by Mr. J. B. Priestley (not to be confused with the 1940 council), has taken the opportunity to launch a large-scale attack on the Government's methods of handling—or not handling—propaganda.

★

The 1941 Committee attributes the inadequacy of this branch of our war effort to three main causes. The first two are directly connected with the Ministry of Information itself ; the third is of more general significance.

★

The Ministry of Information is inadequately staffed. "Responsible jobs are entrusted to Civil Servants, ex-ambassadors, junior members of legation staffs and others trained to foreign office and bureaucratic procedure, and therefore able to know little of the art of mass persuasion." This list might be expanded, without overstepping the bounds of probability, to include ex-keepers of ceramics from the British Museum, cataloguers of books and keepers of ancient monuments, or in fact anybody else, however remotely connected with the subject, who happened to possess a university degree, and to be already on the Government payroll when war began. "It would be equally foolish to put a retired Civil Servant in charge of a battleship. Propaganda is a specialised job and it is useless to employ the wrong kind of expert."

★

The Ministry is also organized on the wrong lines. Subdivision is geographical and not according to subject. "There should be a functional division into departments each concerned with one type of publicity (news photographs, films, etc.) for all countries. Obviously there would have to be some sort of geographical subdivisions. The directors of the main divisions should form a committee to work out details of policy. . . . The framing and execution of policy would then be in the same hands."

★

The shortcomings of the Ministry of Information are not entirely its own fault ; its powers are totally inadequate. The Service departments and the Foreign Office continue to have the last word on what news is to be released in their own spheres. And the B.B.C. continues to arrange the European news service, checked only by the censorship.

The 1941 Committee suggests that a capable and energetic Minister of Political Warfare should be immediately appointed and made a full member of the War Cabinet, with full power to eliminate overlapping and fill in gaps, in order to plan propaganda campaigns as part of our war strategy. If this were done, then " Broadcasts, leaflets, and even underground propaganda, although varying conderably according to the media employed and the different groups which they are designed to influence, would have an underlying unity . . . they would be part of an organised plan applying a definite policy.

★

" This last statement, of course, presupposes the existence of a definite policy."

WHERE ARE THEY NOW?

One often hears this question asked nowadays about many prominent Continental architects in the vanguard of the Modern Movement. And usually one can only answer " I wonder? "

★

I am now able to reveal that the most familiar name among them all has managed to escape from Europe. Le Corbusier is safe and sound somewhere in South America. Fernand Leger, the abstract painter, has been expecting him in New York for some time. But Corbusier, who has made several previous visits to Brazil and the Argentine, seems in no hurry to go to U.S.A. As a fervent " Mediterranean " he probably finds far more congenial clients and sites south of the Panama Canal.

★

There are rumours that he is planning a mammoth Salvation Army Hostel for Buenos Aires (certainly no capital needs one so badly) on a scale compared to which his well-known Parisian prototype would be dwarfed into a conservatory. Anyhow, the further evolution of the Corbusier villa is likely to be continued south of the Equator, where climate encourages a still more drastic simplification of the *machine-a-habiter*.

But how he managed to get out of France remains a mystery.

★

Alvar Aalto, famous for both his chair and his devastating personal charm, has been appointed to the Directorship of the Massachusetts Technical Institute in Boston. When last heard of he was still in Finland busy with important Government reconstruction schemes. His Paunis Sanatorium near Turhu is said to have come through the Russian war unscathed, but his Library at Wiborg (in territory now ceded to the U.S.S.R.) was badly damaged in the bombardment of that town. I can imagine the keen and wholly unsentimental interest with which Aalto would examine the resistance of his work to shell fire and aerial bombs. His own house in a suburb of Helsingfors is unlikely to have come off scot free.

★

The alumni of the Massachusetts Technical Institute are to be envied. Any lectures they coax out of Aalto are likely to be of a startlingly unconventional nature.

★

Meanwhile Aalto furniture is already being manufactured in the United States.

ASTRAGAL

NEW ARCHITECT TO THE L.C.C.

Mr. J. H. Forshaw.

Mr. J. H. Forshaw has been appointed Architect to the London County Council and Superintending Architect of Metropolitan Buildings, in succession to Mr. Frederick R. Hiorns, who is due to retire under the age limit.

Mr. Forshaw is 45 years old. He is a Master of Arts and Bachelor of Architecture (Liverpool), and holds a Certificate in Civic Design. He won the 1st Lever Prize for Town Planning (Liverpool University). He is a Fellow of the Royal Institute of British Architects, and also an Associate Member of the Town Planning Institute, and a Fellow of the Institute of Landscape Architects.

After experience in the offices of the late Myddelton Shallcross, Liverpool, Messrs. Chambers and Flagg, New York, Messrs. Harrison and Cox, Birmingham, and Liverpool City Corporation, he was for over 12 years Chief Architect to the Miners' Welfare Committee, Mines Department, which is now the Miners' Welfare Commission.

In this position he was responsible for the development of the architectural work of the Committee, and carried out extensive building programmes for baths and other welfare and recreational buildings throughout the coalfields. He evolved and introduced a large measure of standardized planning and also " accommodation scales " for welfare buildings, particularly pithead baths. With Commander B. T. Coote he visited and reported upon welfare developments in industrial districts of Germany, France and Belgium.

He acted as Consultant to the Lancaster and Morecambe Regional Planning Committee in drawing up the report published for the Joint Town Planning Committee of Local Authorities (Liverpool University Press, 1926).

Since October, 1940, he has been officer-in-charge of the London Rescue Service and Director of the War Debris Survey and Disposal Service for the London Civil Defence Region.

He served in Inns of Court O.T.C. and Royal Engineers in the last war and was Adjutant to the 55th Divisional R.E's., B.E.F., later commanding the Lancashire (Fortress) Royal Engineers, Territorial Army. He was awarded the Military Cross at Ypres in 1917.

NEWS

NEW CONTROLLER OF BUILDING MATERIALS

The Minister of Works has appointed Mr. G. W. Mitchell to be Controller of Building Materials in succession to Mr. Hugh Beaver, now Director General, Works and Buildings. Mr. Mitchell has resigned his Chairmanship and Directorship of Messrs. George Wimpey & Co. Ltd., Public Works Contractors, and other company directorships in order to take up his appointment.

U.S.S.R. ARCHITECTS AND THE R.I.B.A.

The following cablegram has just been received from Moscow by the President of the Royal Institute of British Architects :—

President Royal Institute of British Architects London.

" We send through you friendliest greetings to architects of Britain. We have a common foe, a foe bringing in his wake bestial hatred of human liberty and culture, a foe striving to destroy everything created by human endeavour in our centuries-old history. All progressive forces of the world must rally against this foe. We architects have placed ourselves at disposal of our Government which leads the people to battle against the rapacious aggressor. We are filled with firm assurance of complete and final victory over the mortal enemy. In this historic hour we express our deep friendship for our British colleagues and for the people of Britain."

VICTOR VESNIN, *President*, U.S.S.R. Academy of Architecture.

ALABYAN, *Vice-President*, U.S.S.R. Academy of Architecture ; *Sec.*, Union of Soviet Architects ; *Hon. Corresponding Member*, R.I.B.A.

BORIS YOFAN, *Member*, U.S.S.R. Academy of Architecture.

SERGEI CHARNYSHEV, *Member*, U.S.S.R. Academy of Architecture, Chief Architect of Moscow.

ALEXEI SHCHUSEV, *Member*, U.S.S.R. Academy of Architecture.

ARKIN, *Corresponding Member*, U.S.S.R. Academy of Architecture, *Hon. Corresponding Member*, R.I.B.A.

The following reply has been sent :—

Victor Vesnin, President U.S.S.R. Academy of Architecture, Dmitrovka 24B Moscow.

" Thank you for friendly greetings. We join with you in resolution never to cease fighting until victory over aggressor is assured."

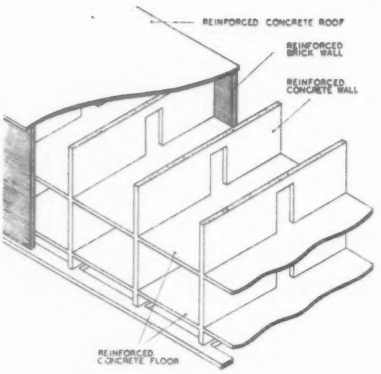
WILLIAM ANSELL, *President*, Royal Institute of British Architects.

A.A. JULY ARRANGEMENTS

July 10-18. Exhibition of Paintings by the late Peter Saxl, A.A. Diploma.

July 25, at 3.30 p.m. The annual prize-day and exhibition of students work, to be opened by Mr. W. H. Ansell, P.R.I.B.A.

The exhibition will remain open until August 15.



This scheme, which has been adopted by the Clydebank local authorities, was developed by Mr. Sam Bunton, Scottish Reconstruction Architect, from ideas originally put forward by Mr. O. N. Arup in his book on wartime housing. The scheme is discussed in our leading article this week.

SHELTERS TODAY—HOMES TOMORROW

DEFERMENT OF MILITARY SERVICE

Representatives of the Royal Institute of British Architects have discussed with representatives of the Ministry of Works and Buildings and the Ministry of Labour and National Service the question of deferment of military service of architects and architectural assistants of military age who are engaged on work of national importance.

It has been agreed that application for deferment should be made to the architectural institute to which the applicant belongs. The application should be made by the employer on form N.S. 100, copies of which can be obtained at any of the local offices of the Ministry of Labour and National Service.

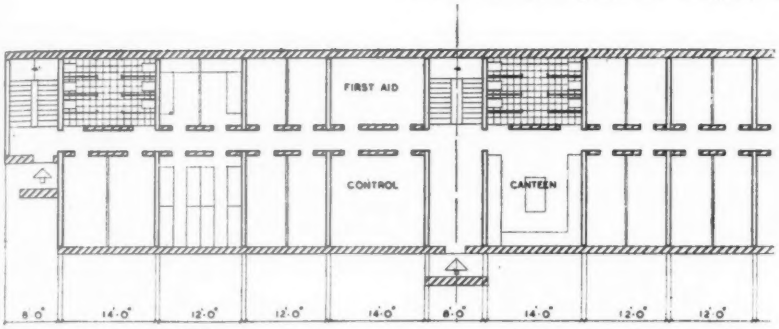
The architectural institute concerned will examine the cases and pass them on with their recommendations to the Ministry of Works and Buildings, who will in due turn report to the Ministry of Labour, with whom the final decision rests.

The Ministry of Works and Buildings have agreed to consult the Architecture and Public Utilities Committee of the Ministry of Labour and National Service on any matters of general principle which may arise.

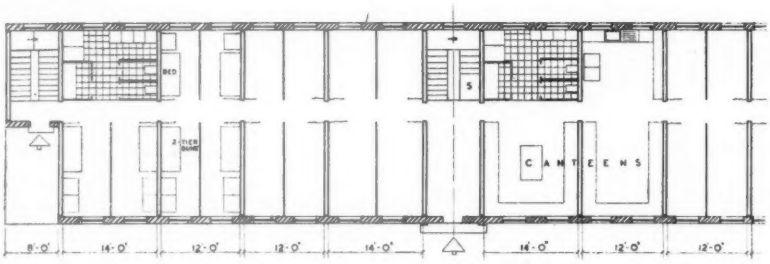
WARWICKSHIRE HOME FOR THE NATION

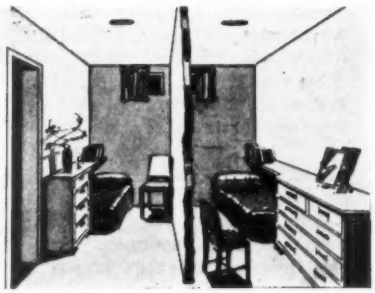
Mr. Graham Baron Ash handed to Sir Edgar Bonham-Carter, on behalf of the National Trust, at Packwood House, Warwickshire, the deeds of Packwood House and estate and securities to the value of more than £30,000. This gift is in memory of Mr. Ash's parents, Alfred James Ash and Emily Hannah Ash, who did much to restore the house.

Packwood House, formerly the home of the Fetherston family, who were members of the Guild of Knowle in 1468, was built as a half-timbered house in the reign of Henry VIII. At the time of Charles II considerable additions and alterations were

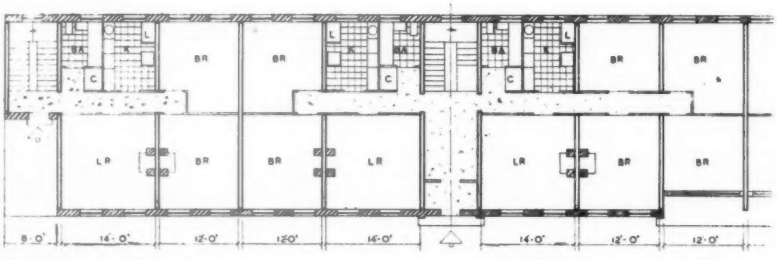


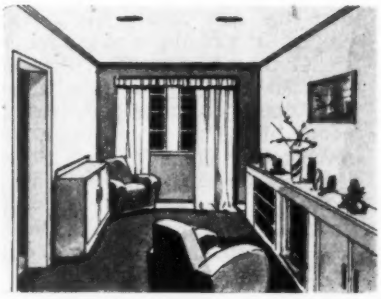
Stage 1 Planned as air raid shelter for immediate use





Stage 2 Adapted as hostel for period of transition





Stage 3 Converted into individual homes for use in peace time

made. Wrought-iron gates give access to a formal Charles II garden with four gazebos, beyond which rounded flights of brick steps lead across an old paved terrace to the famous yew garden. This was laid out about 1650 and is still in perfect condition. The estate, extending to over 100 acres, includes meadows, woodland and a lake.

MORE PLANNERS NEEDED

Lord Reith, Minister of Works and Buildings, in an informal address to the Town Planning Institute in the Caxton Hall, said that we had the definite admission that there should be a central planning authority, that a national policy should be formulated in respect of transport, location of industry, and agriculture, and that some matters should be handled nationally, some regionally and some locally. An inter-departmental committee had already reported unanimously on the functions of the central authority.

He had hoped to be able to discuss with them the report of the Uthwatt Committee and the announced Government policy upon it, but the publication of the report had been delayed. They might be optimistic about the report—they must wait till they saw it—but perhaps they hoped that it would give them further encouragement, and that the committee and the inter-departmental committee would show that action was being taken to prepare for reconstruction. There were not nearly enough planners in the country, and he looked to them to see that a sufficiency was provided.

PROFESSOR ABERCROMBIE ON RECONSTRUCTION

At the sixth annual meeting of the Housing Centre, Professor Patrick Abercrombie presided and delivered an address on reconstruction. He said that the architect tended to try to coerce people into living in the sort of box or component that was best for them. But it was not desirable that human beings should be turned into bees or ants with a very narrow interest in life. One man loved his garden and did not want his children there to spoil it, another man loved his children and did not care if they turned the garden into a wilderness ; a third was bored with having to look after a garden and preferred a motor-car. One person liked pets and wished to have as many animals—and as various—as the law allowed. Another was chiefly interested in music and yet another in books. All such human desires should be echoed in the houses in which human beings lived. Idiosyncrasies should be encouraged.

Among other problems to be studied were those concerning town and country. Should we bring a wedge of country right into the middle of the town, or copy the middle ages in having the town a compact unit from which you walked straight into the country as through a gate in a wall ? Did we want to encourage as many people as possible to have country cottages, so that they could work in the towns and have the country for week ends and, if so, should we have the whole country dotted over or group the cottages into villages ? The fact that people were taking an increasing interest in such questions was one of the best signs of the times.

HAS THE D.I.A. A FUTURE?

By Noel Carrington

IT is a quarter of a century since the Design and Industries Association was founded, and the virtual cessation of its activities in this war gives opportunity to make some sort of revaluation—an attempt to assess its success and its failures, with a view to determining whether as an association, and as a movement, it has a future before it.

It was founded to some extent as an offshoot of the Arts and Crafts Movement which was the creation of William Morris, of his immediate disciples and associates. Most of its original members were craftsmen or interested in crafts as architects or salesmen. Yet its formation was due to a fairly wide recognition that craftsmanship was not conquering the world as Morris hoped, but was forming a little world of its own to which the larger world of commerce paid tribute in flattery and exploitation without coming any nearer in ideals. The D.I.A. accepted machine production and the whole structure of modern society, and there it parted company from the Arts and Crafts movement proper. It took many of its ideas from the Continent where Morris' influence had had wide repercussions and had been developed in relation to contemporary life. Only to that extent was it revolutionary and all through its history it maintained respect for and affiliations with the other Craft movement from which it also continually drew recruits.

It is important to realize these origins, because it explains why there was originally a simple and almost religious faith running through the pamphlets and proceedings of the D.I.A. of 1915, and why its basic philosophy of life was always a little deficient. The "fitness for purpose" slogan, which was the yardstick for so many years, tended to a puritanical attitude, and was only relieved by a certain amount of "joy in workmanship" which derived from other aspects of the Arts and Crafts movement. We need to remember that traditions of Victorian industrial arts were so utterly debased that only the reiteration of some easily understood and easily applied slogan could make itself heard. It was probably a salutary purge, but it was rather like casting out one devil for seven more to enter—in the guise of modernism.

It is worth recalling today how this very small group of men and women—very few of them in positions of commercial importance—effected the revolution they made in manufactures and in public taste. They set out in little exhibitions or booklets to challenge the whole accepted tradition of taste in a trade—such as pottery or textiles—by showing something new which was conceived in the new creed. The result was ridicule and opposition in the first place; but each time the new thing found a small and then increasing public—generally, of course, among younger people—until in some trades the new style became the rule rather than the exception. Most trades were eventually affected, wherever at least there was an element of choice in design and scope for individual taste. The most noticeable revolution was in the domestic arts and in building, probably because so many architects were drawn to the movement.

It is pertinent to emphasize here that the main element in D.I.A. propaganda was not pamphlets or articles, though these were continuously used—but the work of the members themselves in their own profession, trade or shop. It proved that good printing or orderly railway stations were more contagious and effective as propaganda than any amount of lectures or writing about principles. In the early days a new member was expected to show by some means that he or she was able to make a demonstrable contribution to life in this way, but it went without saying that each member did so to the best of his ability. This had important results. One was that it gradually enabled the D.I.A. to complete a picture of the new way of living, so that each new exhibition became more complete in itself. Secondly, it had the effect of forming a loose kind of co-operative society where each member's work helped another's, directly or indirectly, and led to custom which tided many small firms or professional men over their early struggles. Eventually several D.I.A. members prospered—in the sense that their business grew and found recognition—and most of them were ready enough to acknowledge the debt they owed to the Association.

By the nineteen thirties the D.I.A. creed had begun to pass from a small circle and from the writings of critics in professional papers into the general current of national thought. It formed the subject of broadcasts, ministerial speeches and commercial advertising. The membership of the D.I.A. had risen to some 800 and its influence was effective in various professional bodies—especially amongst the architects. It spread its propaganda net more widely and aimed at becoming an influential national body as similar bodies had become abroad. In this it failed. It never either attracted the social backing which hundreds of other societies utilised, nor did it get any large financial resources from business interests. Perhaps there was still something rather too puritan and simple about its aims. By the end of the thirties the D.I.A. had come to a standstill and it is a question whether it was very alive in recent years. The high-water mark of its influence was possibly the Dorland Hall Exhibition in 1933.

If we compare the activities and propaganda of the D.I.A. at the beginning and end of this period, we are struck with a difference in tone. At the beginning, stress was laid on a set of absolute values by which things made were to be judged. The criterion was simply whether they were fit for their purpose. It was assumed that when the public was re-educated to this truth it would pay the maker a fair price and so stress was also laid on honest workmanship. The D.I.A. did not originally set out to prove that good design pays a dividend. It accepted that men work for a return, but it really postulated a concurrent value, and in fact it put this above the profit-motive in emphasis. Even in early days a conflict was often apparent. There were rather bitter wrangles as to who was responsible for the bad being preferred to the good—public, shopkeeper or middleman—but the bulk of the members carried on their work to their own convictions, satisfied if it gave them a living. In later days, after original pioneers of the new style had prospered, others joined the D.I.A. to be in the movement and some frankly to gain what seemed a profitable connection. It became a convention to assume that good design is not only not antagonistic to profits, but that it pays handsomely. In the sense that it generally means economy in labour and material, as well as a high standard of physical efficiency, good design can be fairly said to pay, but that it is a short cut to better profits is, of course, a travesty. Yet the phrase "design pays" began to be used; either to induce business executives to subscribe or to gain the support of Government departments; until too many members saw little further, and the activities of the D.I.A. were largely devoted to proving this thesis for the benefit of members and to swell its own meagre revenue.

One may say that in its twenty-five years of existence it had set out with a mission and it found its gospel accepted eventually far and wide. But just as the business world, after ridiculing Arts and Crafts, discovered a way of imitating the surface accidents and debasing them for profit, so now the business world accepted the D.I.A. creed, but corrupted the D.I.A. itself into an acceptance of the business man's absorption with profits.

D.I.A. leaders now find themselves in a situation where they are forced to question their position and the validity of their claims to be leaders. Architects who accepted the return to simplicity, demand impatiently, "What now?" The designers from the art schools find no satisfactory answer in the D.I.A. slogans. It appears to them sterile, a kind of cul-de-sac for their creative energy. The business men demand new proofs every year that there is money in it and are ready to turn to anything else that promises better profits.

Has the D.I.A. a future that justifies continued effort on the part of its leaders? Or has it merely brought back into current use a truth which should never have been overlooked and thereby served

its one and only purpose? That is posing the question fairly if brutally.

If we believe that the present capitalist organization of an industrial state is radically unsound, from the point of view that it contains within it a disease or lack of balance that is rapidly destroying it—war being the obvious and possibly final symptom—then it is right to look for some corrective to the moral and economic values which dominated society for several generations—at least since the Industrial Revolution and the decay of Christianity. Morris diagnosed the neglect of æsthetic values as the worst disease of his time and he associated this neglect with the other social failings of poverty and crime. His challenge was heroic even if it took the wrong turning. He was, however, fundamentally right in his belief that there must be values which transcend those of profit and one of them is the desire to build a world that is beautiful. He rightly saw that it was useless to limit this creative activity to a few architects or artists, and that everyone must share in the making and get satisfaction in so doing.

If, therefore, the D.I.A., or some body taking over its work, is to serve a serious purpose, it needs the co-operation of thinkers (and poets, perhaps) in the first place, who will, from this starting point of faith, show the way for future developments that are logical and necessary in the present state of civilisation. It will probably prove that, once this simple revaluation has been made, the path will seem very much clearer than it does to anyone trying now to define what might be a useful activity to the D.I.A. as at present constituted. In a sense the D.I.A. would aim at a new order—not through any social revolution, but by changing the direction of men's ambitions and giving outlet to those faculties which have been frustrated or have lain dormant.

N.A.L.G.O. AND REPLANNING

The creation of a National Planning Authority and nationalization of all land are recommended by the National Association of Local Government Officers in a comprehensive memorandum on reconstruction submitted to Lord Reith's Expert Committee on Compensation and Betterment.

Urging that reconstruction must be applied to the country as a whole and not merely to the bombed areas, that it must take into account such questions as the location of industry, transport and shipping facilities, the preservation of agriculture, the building of new towns, limitations on the growth of existing towns, and questions of national defence, and that it must be designed to promote better and more civilized standards of life and work for all, the Association calls for :

Immediate appointment of a national planning authority, responsible only to Parliament, and with wide powers to override local and vested interests. The task of the planning authority would be to prepare a national plan upon which all future building should be based and to control its execution ;

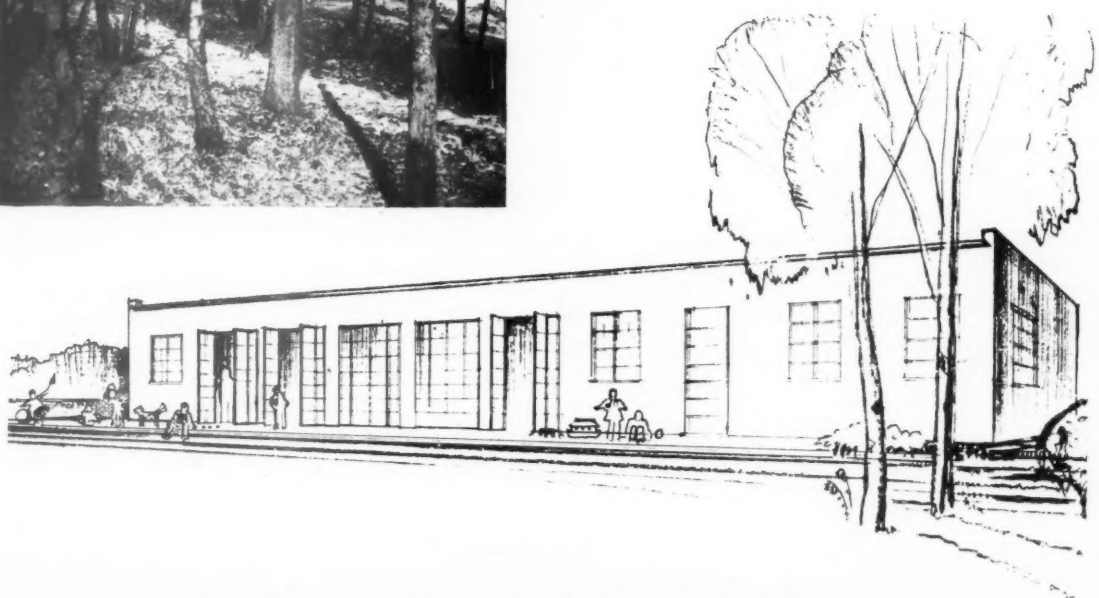
Transfer of all land to the State, in exchange for a Government security, the interest upon which would be met out of the rents and profits of the properties transferred ; and

The State to bear the cost of reconstructing bombed areas and other works of national value, such as arterial roads and national parks.

Pending adoption of these proposals, N.A.L.G.O. suggests that, to prevent the work of reconstruction being prejudiced, property values should be stabilized at the value on March 31, 1939, as determined by the district valuer, and that county and county borough councils should be empowered to acquire compulsorily any land and buildings needed for redevelopment and to prohibit or modify any private rebuilding schemes which would be contrary to their own plans.

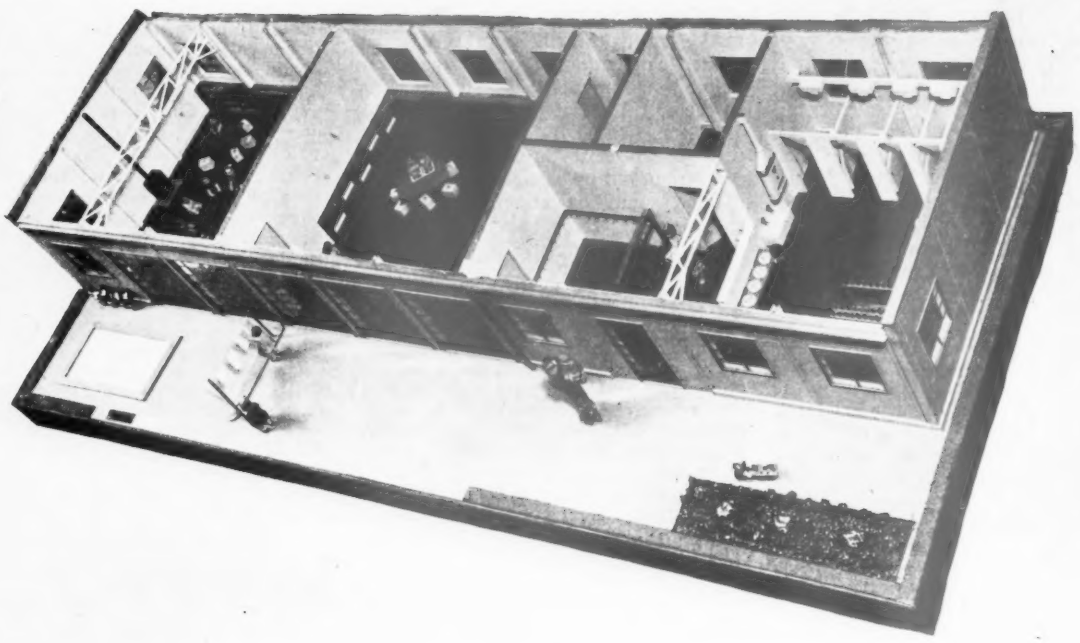
EMERGENCY NURSERY CENTRE AT GUILDFORD

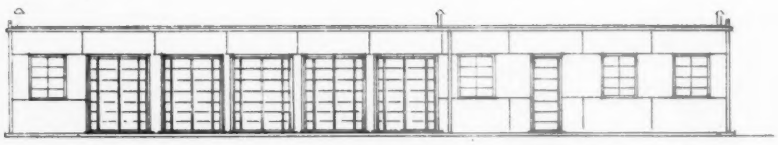
DESIGNED BY MISS J. G. LEDEBOER



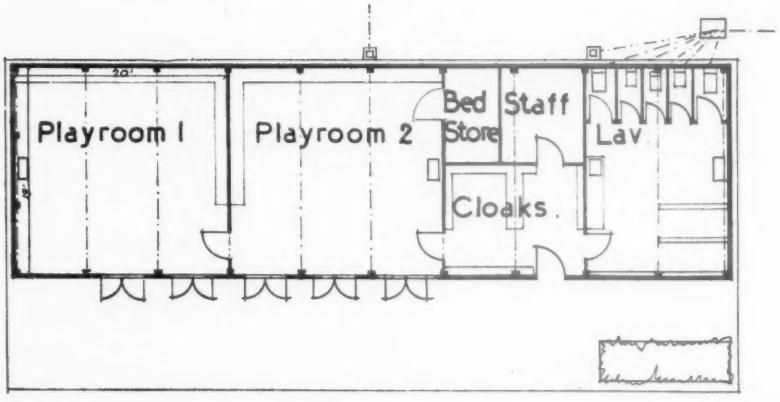
A general view ; and a perspective drawing by the architect

EMERGENCY NURSERY CENTRE AT GUILDFORD





SOUTH ELEVATION



PLAN

GENERAL — The first of two nursery centres to be built by the Guildford Education Committee with the assistance of the American War Relief Society, through the services of the Nursery Schools Association. A kitchen would have been included had the centre not been sited close to a council school where meals are served. The meals are delivered to the centre by an electrically-heated trolley.

CONSTRUCTION—Prefabricated standard unit developed by Gyproc Products. Concrete raft; framework, 5 in. by 5 in. reinforced concrete stanchions with light steel roof trusses; walls and roof covered with factory-made panels of two outer thicknesses of $\frac{3}{8}$ in. Gyproc on a light frame of timber and finished externally with one-ply roofing felt, with the joints caulked with mastic. French windows; floors insulated from cold before linoleum was laid. The general contractors were J. Milton and Sons.

Above, a model of the emergency Nursery centre

BY MISS J. G. LEDEBOER

Above, two views in the playrooms, and the lavatory

SECTION

LETTERS

Technical Schools and Building

SIR,—May I be permitted to point out that when the time comes to rebuild our bombed cities it will be found we have not the requisite number of skilled tradesmen to carry out the work.

Out of this certain questions arise : first, are we to leave the training of the skilled tradesmen to the last moment ? Secondly, what men can we train ? and, thirdly, how can we train these men ?

The answer to the first question is to start immediately some scheme of training to prepare skilled tradesmen to take up this work.

With regard to the second question, we know men are now at a premium, so surely the best we can do is to start and train some of the youths not yet eligible for military service so that at the end of the war we have partly skilled men ready to engage in this work. Many will say how are we to recruit these youths ? May I say that already we have youths in this country who have had, up to the present time, two years' training. I refer to the boys of 14 to 16 years of age who have been and are being trained in the junior technical schools—a training which gives them a general education facilitating entrance to any skilled trade. This brings up the very vexed question of the past, particularly with reference to the provinces. Many employers of skilled tradesmen do not insist on trying to obtain apprentices best fitted for the particular trade they wish to engage them for, but branches of commerce, etc., in the majority of cases, stipulate that boys must have had some form of higher education. Surely this is a step that should be taken in the future by all building employers, to insist that all apprentices engaged by them should be 16 years of age and have had the two years' training in a junior technical school.

This now brings us to the third question ? How can we train the youths intended for this work ? I know this involves many difficulties, but a form of training could be arranged between the Government, Board of Education, and the master builders, whereby boys on completing the two years at the junior technical school would have the chance of continuing at the school or some college, a specialized trade, *e.g.* plumbing, bricklaying, joinery, etc. This in some cities would easily be arranged, as already certain colleges are fitted out for the education in building subjects.

These youths would continue the specialized trades to the age of 18, the Government paying the ordinary apprentice's wage during the period of training. This system could be

arranged on the same lines as trainees are being paid for the engineering industry.

At the age of 18 these youths could be engaged by the building contractors with whom they would finish their apprenticeship.

We must bear in mind that after the last war we had to train men for long periods to enter the building industry; a youth who has had this training of four years should compare very favourably with these trainees, and the cost would be very much less.

Southport. E. W. MONAGHAN.

Alf's Button

SIR,—I am sorry Astragal is irritated about the U.S.S.R. I do not share his doubts about its future, but then I haven't the advantage of information direct from "most of those who have visited Russia."

I am surprised that he thinks Soviet plans show "megalomania in the future tense," because to me they seem to be very sober, practical plans and have a habit of being fulfilled. As such they illustrate admirably the benefits and possibilities of planning. Astragal's comments come strangely from a representative of the architectural profession, especially in a country where we hardly dare to talk of the future and our modest proposals have to be put in the conditional tense, or qualified in various ways, like these quotations from your leader on exhibitions :—

"The true architect should be one of the greatest forces in society, and now or never the profession must rise. . . . The R.I.B.A. should aim at interesting everyone . . . but to be successful it must present a constructive policy . . . It should organize travelling exhibitions . . . there is little doubt that the paper would be released. . . . Perhaps some of the money saved by the cessation of committee meetings might be used . . . they might approach the M.O.I. and perhaps get a small grant from them."

T. BIGWOOD

London

Ten Nails of Architecture

SIR,—Among some State Papers of 1602, I came across this :—

"My Lord, if I were now to beginne the frame of our friendship, I should be curious to fashion it with all the ten nailes that belong to architecture, because in the beginning men are curious to observe minutissima."

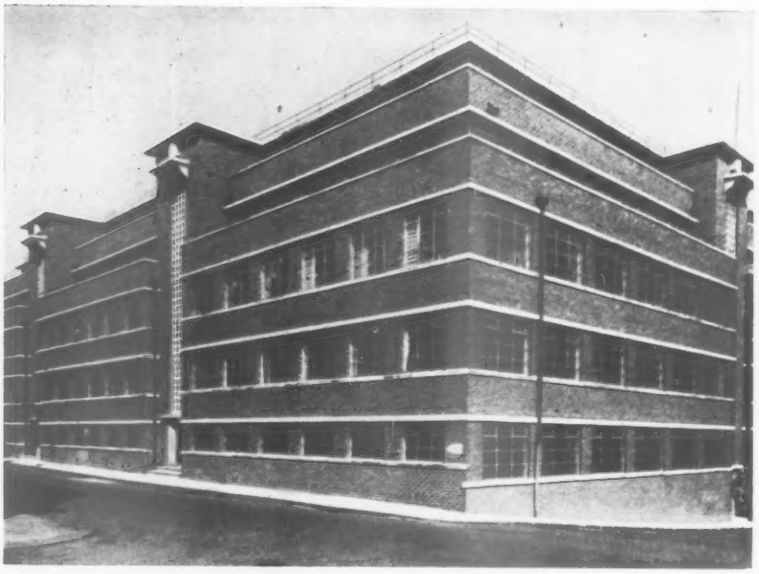
What is the meaning of that phrase? I am aware of Ruskin's "Seven Lamps of Architecture" and Judge Parry's "Seven Lamps of Advocacy" and Lawrence's "Seven Pillars of Wisdom."

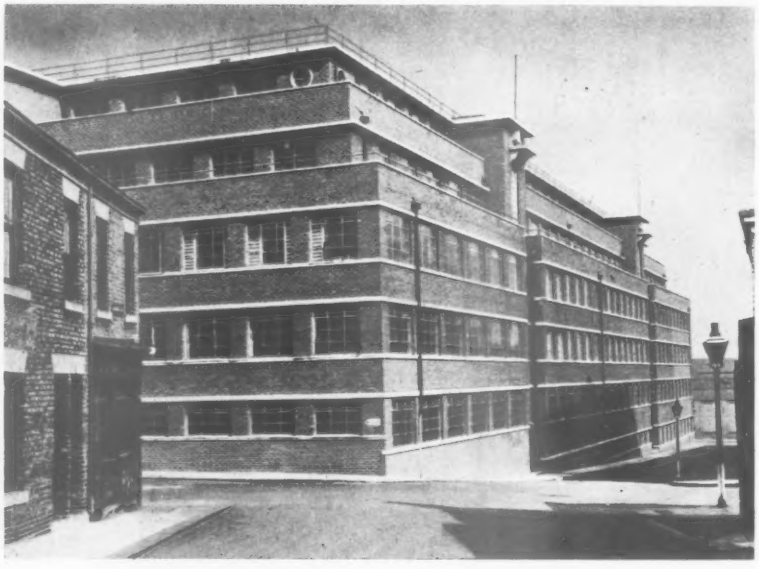
What are the Ten Nails of Architecture? Perhaps some of your readers may enlighten me.

G. B. J. ATHOE

London

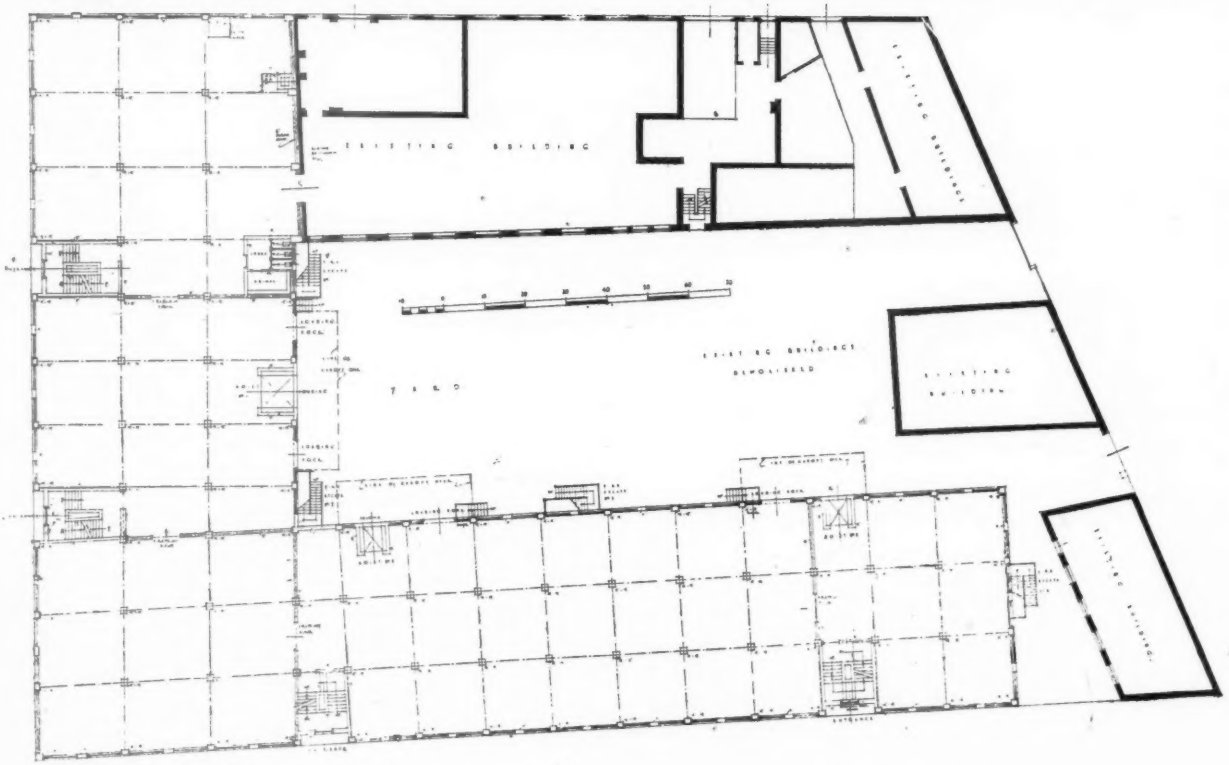
PAINT FACTORY,





DESIGNED BY

NEWCASTLE-UPON-TYNE



GROUND FLOOR PLAN

GENERAL—New buildings for the manufacture of paint, built to replace a miscellaneous collection of old ones, and divided into sections with fire doors on each floor. Yard laid out for one-way traffic ; six loading docks ; five lifts, having a capacity of from one to two tons each. The interior is planned for the use of electric trucks for moving the pans from the mills, a spiral chute from the filling section to the packing and despatch on the floors below and chute electric trucks to move elevated platforms on which cases of paint cans are placed. In the sub-basement is an air-raid shelter to hold 400.

Above, two views of the exterior. Facing page : The exterior and paste paint mill.

T. A. PAGE, SON AND BRADBURY

PAINT FACTORY, NEWCASTLE-UPON-TYNE

CONSTRUCTION—Reinforced concrete frame ; reinforced concrete floors to take a load of 3½ cwt. per ft. super ; foundations, reinforced concrete grillage ; walls, 11 in. cavity ; rustic facings, carried on floor projections forming lintols over windows ; internal walls, 9 in. brickwork ; roof, reinforced concrete slab with built-up three-ply asphalt roofing.

Above, staircase.

BY T. A. PAGE, SON & BRADBURY

IN PARLIAMENT

In the House of Commons, last week, Mr. Denville asked the Parliamentary Secretary to the Ministry of Works and Buildings, whether he would consider giving the planning of new buildings to local architects ; and would he take over incomplete buildings where and when it was possible to use them.

Mr. Hicks said that, in accordance with their policy of making the fullest possible use of building resources, the Minister and he were employing local architects and taking over incomplete buildings whenever appropriate and practicable. They would continue to do so.

Mr. Stokes asked the Parliamentary Secretary to the Ministry of Works and Buildings, whether chartered civil engineers and architects were being used by his department for the purpose of its works programme ; and, if so, how many groups were employed, and how the work was distributed.

Mr. Hicks said that, in addition to the professional staff of the Ministry, firms in private practice, including civil engineers and architects, were being employed on a fee basis in connection with works programmes. Since the outbreak of war upwards of 250 individual firms had been employed and they had been selected with due regard to their capacity and to the district in which the works were situated.

Mr. Stokes : Is the hon. Gentleman aware that there is a great deal of uneasiness in the profession at the way in which this work is being distributed, and there is a feeling that a disproportionate amount of work is being given to two firms who have direct representatives in his Ministry ?

Mr. Hicks : My Ministry is in constant contact with the R.I.B.A. and they have approved the arrangements so far as I am aware.

Mr. Stokes : If I give him my representations on this matter, will he have them properly examined, because it is anything but satisfactory ?

Mr. Hicks said he would.

R.I.B.A. NEW MEMBERS

As Fellows (6).

Daniel, Thomas Llewelyn (Richmond, Surrey).
Haughan, John Holliday (Carlisle).
Lewis, Ernest Wamsley (Weymouth).
Nunn, John Price (Manchester).
Benz, Frederick Charles (Eastbourne).
Crawford, Douglas (Bishop Auckland, Co. Durham).

As Associates (10).

Beecroft, Cecil Ivan (Nottingham School of Architecture) (Sleaford, Lincs.).
Betts, Douglas William (Nottingham School of Architecture) (Nottingham).
Charlton, Percival Robert (University of Liverpool) (Liverpool).
Eyre, Reginald (Nottingham School of Architecture) (Heague, nr. Belper, Derbyshire).
Gatley, Geoffrey Higson (Victoria University, Manchester) (Dringhouses, York.).
Gorst, Henry B. Arch. (University of Liverpool) (Preston, Lancashire).
Holmes, Leonard (Nottingham School of Architecture) (Heague, nr. Belper, Derbyshire).
Leggatt, Richard Walter (Weymouth).
Treadgold, Paul Henry, A.A.DIPL. (Architectural Association) (Elstree, Herts.).
Willis, Graham (University of Sheffield) (Sheffield).

As Licentiates (6).

Crellin, Ewart (Clifton, York.).
Johnson, Frederick Arthur (London).
Kelsey, Alfred Edward (London).
Lambert, Herbert George (Bournemouth).
Reid, Alexander Budge (London).
Robinson, Eustace James McAdam (Sheffield).

ANNOUNCEMENT

The new telephone numbers of Messrs. Lionel H. Fewster & Partners, 31, Dorset House, Gloucester Place, N.W.1, are Welbeck 2908-2909.

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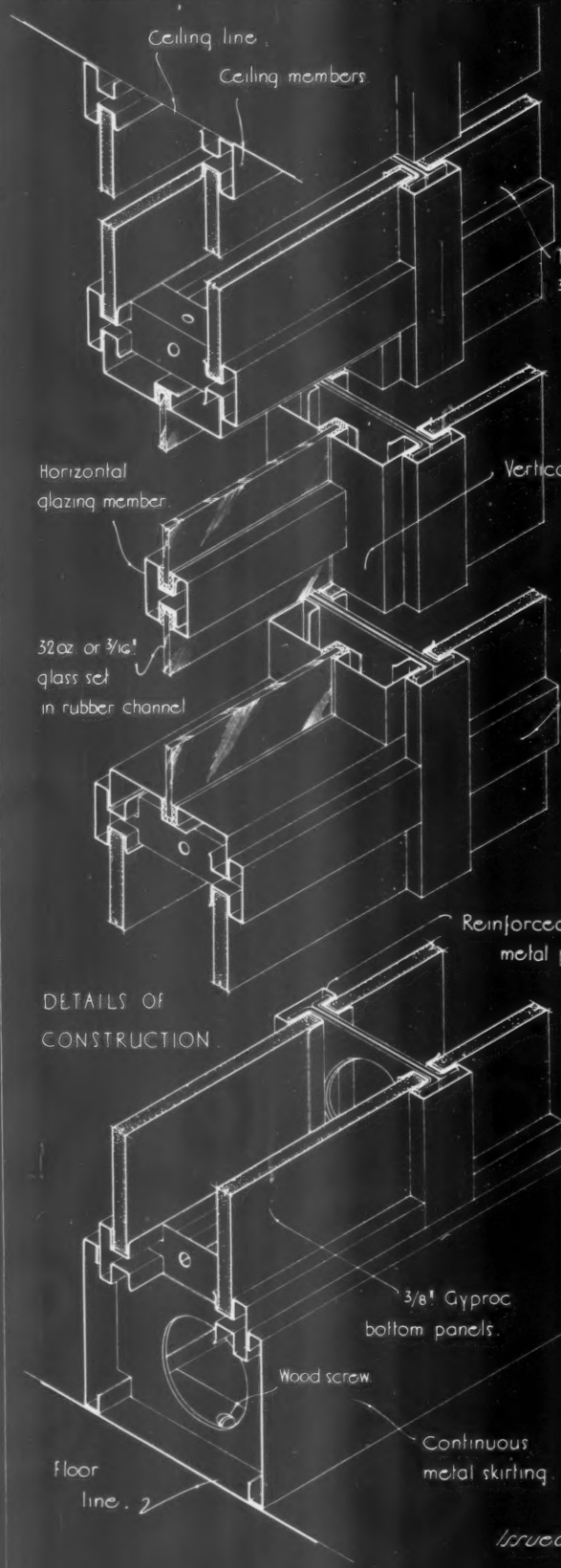
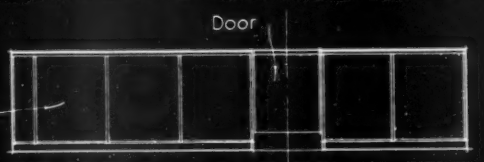
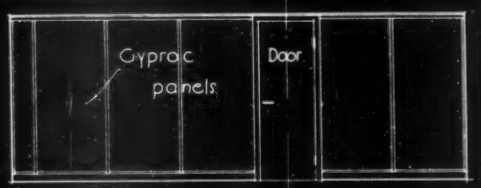
TYPICAL STANDARD CONSTRUCTION AND TYPICAL ELEVATIONS OF GYPSTELLE PARTITIONS.

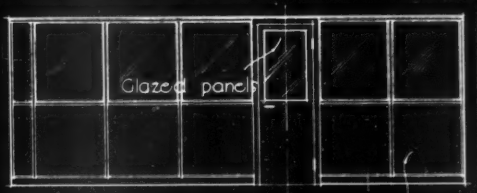




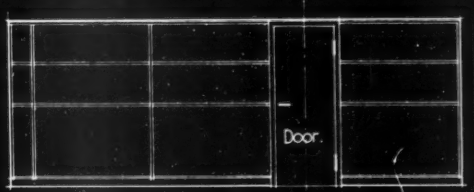
TYPE D.V.42. Approx. height 4' 0"



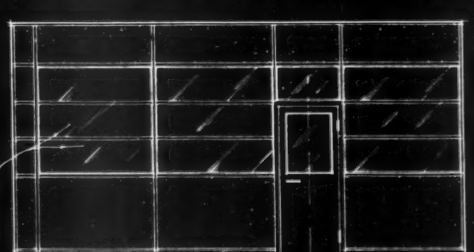
TYPE C.V.S. Approx. height 7' 0"



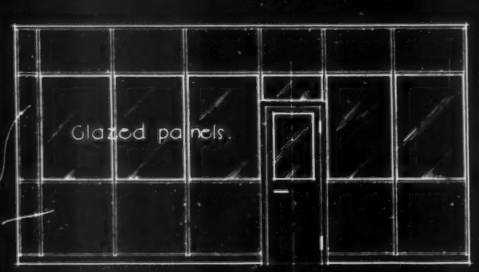
TYPE C.V.G. 36.



TYPE C.H.S. 42.



TYPE G.H. 123. (Typical horizontal construction)



TYPE G.54. (Typical vertical construction).

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PARTITIONS

Product : GYPSTELE Partitions.
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These partitions combine the use of Gyproc fire-resisting plasterboard as panels, with patented, rustproofed metal structural members, panel strips and fittings, forming lightweight structurally strong partitions for sub-dividing large floor areas.

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This system of partitioning can be used without damaging hardwood floors or wall and ceiling surfaces. The filling of small screw holes and decoration is all that is needed after a partition has been moved.

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The resistance to the passage of sound has been carefully considered in the design of these partitions. Metal panels have been avoided and the method of glazing minimises the transmission of sound waves by reducing vibration.

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The simplicity of the unit construction involved allows a very high salvage value, as the materials can be used again after dismantling or moving, even when ceiling heights differ.

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Erection diagrams and estimates are provided by the Company's Engineering Staff.

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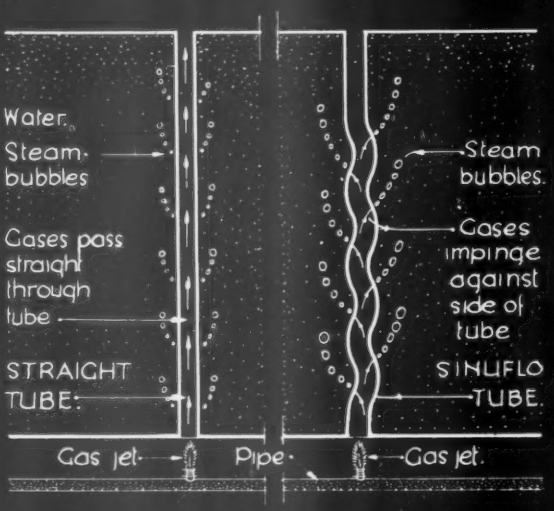


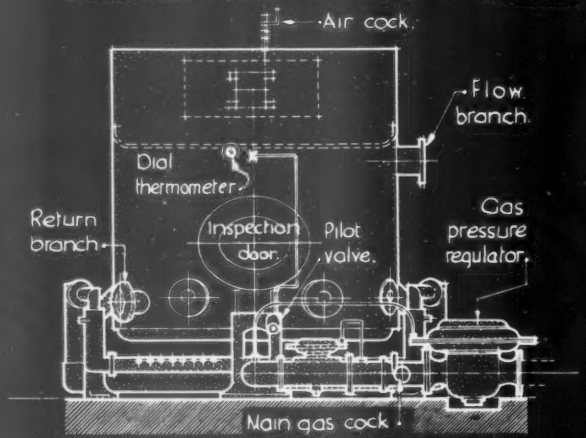
DIAGRAM ILLUSTRATING THE PRINCIPLE OF THE ·SINUFLO· TUBE.

The Sinuflo heating tube is of relatively large diameter compared with its length and is waved as shown in the diagram, in order to obtain the maximum heating power from each unit of gas that is burned.

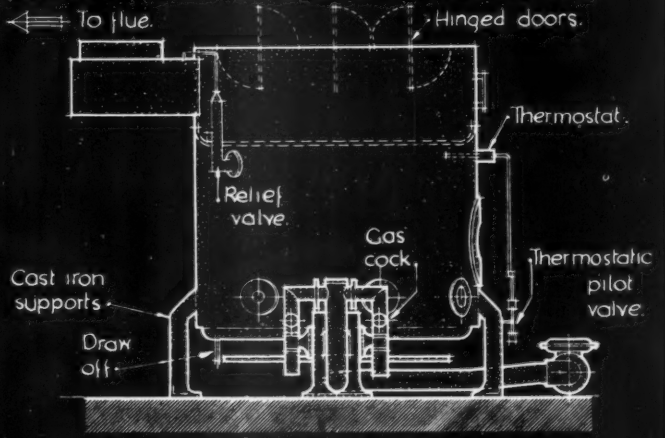
It has been established that it is only the gases coming in contact with the sides of the tube that transmit heat to the water.

In the straight type of tube a large proportion of the gases pass through without making contact, but in the Sinuflo tube the gases impinge against the bends of the tube, & thus transmit the maximum of heat.

DIAGRAMS ILLUSTRATING A TYPICAL COCHRAN-KIRKE ·SINUFLO· GAS-FIRED BOILER.



DIAGRAMMATIC FRONT ELEVATION.



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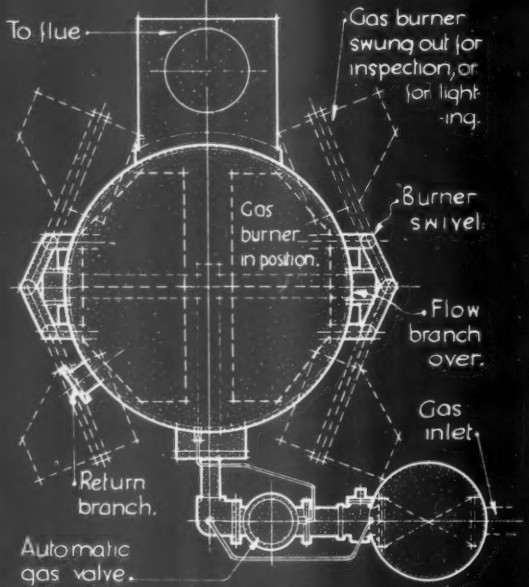

DIAGRAMMATIC PLAN OF BOILER.

OPERATION OF SINUFLO GAS-FIRED BOILERS:

Gas enters through the gas pressure governor to the main gas cock and thence through the automatic gas valve to the burner frame in which the burner nipples are fitted. In the larger sizes of boilers four burner frames are fitted, each with a separate gas cock.

For lighting up and automatic control purposes a bye-pass cock and pipe are fitted, which allow a small flow of gas to enter the burner frame direct from the gas pressure governor. The automatic gas valve shuts down the gas supply when the water temperature rises to the upper limit and opens up again when the temperature falls to the lower limit.

To light up, the burner frame is swung clear of the boiler and the bye-pass cock turned on. When lit up the burner frame is swung into position under the boiler and the nipples are arranged centrally under each tube. The burner nipples are of a patented semi-aerated type and give silent service as well as a low gas consumption when working on bye-pass. There is no possibility of backfire or of explosion.

Information from Cochran and Co., Annan, Ltd.

INFORMATION SHEET: GAS-FIRED HOT-WATER BOILERS

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1.

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET
• 835 •
WATER HEATING

Product : Sinuflo Gas-Fired Boilers.

General :

This Sheet deals with vertical boilers for water heating. Gas is not one of the cheapest forms of fuel, a cost comparison on a purely heat unit basis with coal or coke indicating a ratio of 3 to 1. It possesses certain advantages, however, which lead to lower capital cost, for instance elimination of fuel chutes and bunkers ; and by the economy effected in labour and maintenance charges and the efficiency of the utilization of the gaseous fuel, the ultimate running cost of a heating plant may be cheaper with gas-fired boilers than with any other type.

The Advantages of Gas-fired Boilers :

The chief advantages of gas as a fuel are as follows :—

(a) Flexibility of control. The gas can easily be cut off and started again. Thus no fuel is burned unnecessarily. There is also the minimum time lag between changes in heating requirements and the adjustment of the boiler.

(b) Automatic control. The boiler is self-regulating, the controls being operated by gas from the main and by temperature of the water in the boiler or in the heating system. Alternatively, electrically operated controls can be supplied.

(c) The gas comes direct to the boiler from the main, and no space is needed for fuel stores.

There are no fuel carriage and delivery costs, and the heating plant can be placed where it will be most convenient.

(d) Cleanliness. There are no ashes, cinders, dust or soot.

(e) Labour costs are reduced to a minimum. The automatic controls should be inspected at regular intervals, but continuous supervision is not necessary.

Principle :

The Sinuflo tube is used to obtain the maximum heating power from each unit of gas.

It is much shorter relative to its diameter than is the case with a plain tube, and proceeds in a series of short bends. Only the gases actually coming in contact with the sides of any heating tube transmit their maximum heat to the tube walls, and in a straight tube a large proportion of the gases pass up the middle of the tube and never come in contact with the sides, hence a large proportion of fuel energy is wasted. In the Sinuflo tube, combustion is improved by the turbulence caused by the shape of the tube and, as some of the gases impinge against the tube walls at each bend, thorough mixture of the gases takes place at every recoil thus ensuring that no gas passes straight through the tube without giving up its maximum possible heat output.

Technical Considerations :

(a) Automatic Controls.

These should be understood and be watched to make sure that they are working properly. Gas-operated and electrically operated controls are available, and both have their advantages under particular working conditions.

(b) Price of Gas.

Gas is commonly supplied at special rates for power purposes. The price per therm is usually between 3d. and 6d.

(c) Calorific value of gas.

This is measured in British Thermal Units. An average value for coal gas is from 450—500 B.T.U.'s per cubic foot. A therm is equal to 100,000 B.T.U.'s.

(d) Efficiency.

This is the proportion of the heat input that is used in heating the water from its inlet to outlet temperature and varies with different conditions. In certain conditions 85 per cent. efficiency on the net calorific value of the fuel can be obtained, and a minimum figure of 75 per cent. can be guaranteed.

(e) Gas Pressure.

This should be maintained at a constant level. Standard jets supplied for Cochran-Kirke Sinuflo boilers are suitable for any required pressures, generally about 2½ in. water gauge, and the gas pressure regulator should be set to supply gas at the designed pressure only.

(f) Draught.

It is important that the correct draught should be maintained. The chimney or duct should not increase the draught through the heating tubes, but the burnt gases must be free to get away or combustion will be restricted. Correct draught to the boiler is ensured by a special baffle, or break draught, fitted to the top of the boiler. No induced or forced draught is necessary, hence no fans, etc., are needed.

(g) Air Supply.

A good air supply is essential, but care must be taken that a direct draught does not blow on the burner jets and blow the flames out of position, or sooting and consequent loss of efficiency will occur.

(h) Safety of Operation.

Backfires are impossible as combustion of the gas is completed within the tubes so that no combustion chamber, with the additional liability of explosions, is necessary. Any accidental leakage of gas from the burners passes through the tubes and out of the building.

Care of the Heating Tubes :

The boilers can only work at maximum efficiency if the tubes are clean. Dirty tubes may be caused by the following conditions :—

(1) Air blowing the flames out of position.
(2) Gas jets not central under the tubes.
(3) The draught being restricted and interfering with the escape of the burned gases.

Cleaning :

There is internal access to the larger sizes of Steam and Hot Water Boilers for cleaning both the gas and water sides of the heating surfaces, thus ensuring maximum efficiency.

Steam Heating Boilers :

A range of Cochran-Kirke Sinuflo gas-fired Boilers is available in 18 vertical and horizontal sizes. Their principle is similar to the Water Heaters dealt with in this Information Sheet.

Sinuflo Water Heaters—Standard Sizes :

The following table gives all essential particulars and the Boilers are built for 100 lbs./sq. in. pressure.

VERTICAL OR HORIZONTAL SINUFLO HOT WATER BOILERS

Size No. of Heater.		Size of Boiler.		Output. B.T.U.'s. per Hour.	Flue Outlet. Diameter.	Gas Supply Pipe. Bore.	By-pass for Main Gas Control Valve. Bore.	Gas Consumption.		
Vertical.	Hori-zontal.	Dia.	Height or Length.					Therms per Hour.	With 450 B.T.U. Gas Meter must pass Cu. Ft./Hr.	With 500 B.T.U. Gas Meter must pass Cu. Ft./Hr.
		Ft. Ins.	Ft. Ins.		Ins.	Ins.				
1D	1B	1 6	5 3	136,000	6	1½	¾	1.89	420	378
2D	2B	1 9	5 6	223,000	7	2	1	3.10	690	620
3D	3B	2 0	5 6	276,000	8	2	1	3.84	855	770
4D	4B	2 3	5 9	368,000	9	3	1	5.12	1,140	1,024
5D	5B	2 6	5 9	485,000	11	3	1	6.75	1,550	1,350
6D	6B	2 9	5 9	601,000	12	3	1	8.35	1,860	1,670
7D	7B	3 0	6 0	736,000	13	3	1	10.25	2,280	2,050
8D	8B	4 0	6 3	970,000	15	3	1	13.50	3,000	2,700
9D	9B	4 6	6 3	1,290,000	17	4	1	17.90	3,990	3,590
10D	10B	5 0	6 3	1,615,000	19	4	1	22.40	5,000	4,480
11D	11B	5 6	6 6	2,070,000	21	4	1	28.80	6,390	5,750
12D	12B	6 0	6 9	2,620,000	24	5	1	36.40	8,100	7,280
13D	13B	6 6	7 3	3,050,000	26	5	1	42.40	9,420	8,480
14D	14B	7 0	7 3	3,640,000	28	6	1	50.50	11,200	10,100
15D	15B	7 6	7 6	4,160,000	31	6	1	57.80	12,900	11,560
16D	16B	8 0	7 9	4,650,000	33	6	1	64.50	14,400	12,900
17D	17B	8 6	8 0	5,440,000	35	7	1	75.50	16,800	15,100
18D	18B	9 0	8 0	6,250,000	37	7	1	86.90	19,300	17,400

The ratings given above provide suitable margin for everyday working.

Manufacturers : Cochran & Co., Annan, Ltd.
Head Office and Works : Annan, Scotland.
Telephone : Annan 111-2.

London Office : 34, Victoria Street, S.W.1.
Telephone : Abbey 4441.

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EDINBURGH : 46 Duff Street. *Telephone : Edinburgh 61506.*
MANCHESTER : Ayres Road, Old Trafford. *Telephone : Trafford Park 1725.*
BIRMINGHAM : Northcote Road, Stechford. *Telephone : Stechford 2366.*

TRADE NOTES

Changes at Redfern's Rubber Works

Mr. Wilfred E. Redfern has retired from the chairmanship of Messrs. Redfern's Rubber Works, Ltd., after 41 years at its head. Under his administration and guidance the company has grown from a small rubber heel company to a £240,000 concern producing a wide variety of press-moulded and extruded rubber and ebonite goods. He retains his seat on the Board as Founder and his experienced advice remains at the service of his colleagues in a consultative capacity.

The Board has elected Mr. J. Arthur Redfern to the chairmanship. The Founder's youngest brother, he joined the Company in 1907, and having been associated with the manufacturing side of the business throughout its development, became Works Managing Director in 1924, and Deputy Chairman in 1929. Mr. Thomas H. Redfern, son of the Founder, becomes Deputy Chairman. Since joining the firm in 1918 he has been engaged on the Sales side of the business and succeeded his father as Sales Managing Director in 1933.

Gold Filling Compound

Gold Filling Compound is the subject of a booklet just issued by W. T. Henley's Telegraph Works Co. Ltd. Among the reasons which prompted the introduction of this compound, was the need for a box compound that would overcome the difficulty of filling joint boxes with hot compound in mines, where the source of heat has to be at some safe distance from any danger area. To allow for cooling during transportation this means that ordinary compound is often heated to a temperature in excess of its normal pouring temperature with risk of degradation of the physical properties of the compound. It was primarily for such purposes as these that Henley's Research Laboratories undertook the task of developing this product. The maintenance of electrical services, particularly during hostilities, means effecting repairs rapidly and under extremely difficult conditions, and it is claimed that by the use of Gold Filling Compound an enormous amount of time is saved.

CHANGE OF ADDRESS

Messrs. Sydney Tatchell & Son, Chartered Architects, have moved to Clifford's Inn, Fleet Street, E.C.4. Telephone—Holborn 8434.

Messrs. J. Youdan, Briggs & Partners, Ltd., surveyors and quantity surveyors, have moved to 24 in 81, Dale Street, Liverpool, 2. Telephone—Central 2823.

Messrs. J. E. Bladen & Son, quantity surveyors, have moved to 43, Shrewsbury Drive, Upton, Wirral. Telephone—Upton 527 and 1661.

Lenscrete, Ltd., are now occupying temporary offices at their Works, Arch 66, Queens Circus, Battersea Park, S.W.8.—Telephone Macaulay 4668, where all correspondence should be addressed.

W. T. Henley's Telegraph Works Co. Ltd. have moved their store and office staff to Demby House, Carlton Avenue East, Wembley, Middlesex. Telephone No.: Arnold 5241.

The London office of Messrs. James Gibbons Ltd. is now—The Grand Hotel, Room 305, Southampton Row, W.C.

BRITISH STANDARD FOR GLASS

The preparation of a British Standard for glass and glazing, including definitions and terminology of work on glass, B.S.952, issued by the British Standards Institution, was prepared at the request of the glass manufacturers themselves.

The first section dealing with the definitions is divided into five sections, namely: transparent glasses, translucent glasses, opal glasses, other forms of glass such as wired glass, prismatic glass and lead glass, and miscellaneous glasses such as neutral tinted glass thermolux, non-actinic.

Part 2 covering terminology of work on glass gives a description of typical methods of working, together with diagrams, namely cutting processes, obscuring processes, decorative use of obscuring processes, silvering, gilding, staining painting and firing and bending.

Copies of the specification can be obtained from the British Standards Institution, 28, Victoria Street, London, S.W.1., price 3s. 6d. each (3s. 9d., post free).

RECONSTRUCTION AT OXFORD

The Oxford Preservation Trust is preparing a report on the post-war planning and reconstruction of Oxford and its immediate neighbourhood.

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Small, light, and easily fixed.

Bolts directly into the heating main.

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PRICES

FIFTH WARTIME LIST

EXPLANATORY NOTES

It is hardly necessary to stress the fact that prices are fluctuating a good deal at the present time and that prices given here have to be regarded rather as a reasonable guide than as fixed quotations.

Since the last quarterly issue the rises in price most worthy of note occur in the case of lime, stone, slates, lead and iron rainwater goods and soil pipes.

Rates of Wages rose on June 1st and are now as follows :—

LONDON DISTRICT	*Craftsmen.*	*Labourers.*
Within 12 miles radius	2s. 0d.	1s. 6¾d.
From 12-15 „ „	1s. 11½d.	1s. 6½d.

GRADE CLASSIFICATIONS

	A	A¹	A²	A³	B	B¹	B²	B³	C
Craftsmen..	1s. 10½d.	1s. 10d.	1s. 9½d.	1s. 9d.	1s. 8½d.	1s. 8d.	1s. 7½d.	1s. 7d.	1s. 6½d.
Labourers..	1s. 5¾d.	1s. 5¼d.	1s. 5d.	1s. 4½d.	1s. 4¼d.	1s. 3¾d.	1s. 3½d.	1s. 3d.	1s. 2¾d.

F.S.I.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS AND BELFIELD, Chartered Quantity Surveyors

Prices vary according to quality and the quantity ordered. Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

† All delivered in paper bags (20 to the ton) free and non-returnable.
* Paper bags charged at 6/– extra per ton non-returnable; jute sacks charged at 1/9 each and credited on return at 1/6.

		4 Tons and over	In 80-ton freights F.A.S. Safe Wharf in River Thames, London Area.
*Portland	per ton	49/6	47/–
*"417" Ultra rapid hardening	per ton	65/6	—
*Rapid hardening ...	per ton	55/6	54/6
*Water repellent ...	per ton	79/6	—
Atlas White (1 barrel 376 lbs.)			per barrel — 1 ton upwards
*Colorcrete rapid hardening, buff and red	per ton		79/6
*Colorcrete rapid hardening khaki ...	per ton		79/6
†Colorcrete rapid hardening dark ...	per ton		129/–
†Colorcrete non-rapid hardening ...	per ton		from 175/– to 399/–
†Snowcrete	per ton		205/–

	1–9 cwts.	10–19 cwts.	1 ton and upwards
*Ciment Fondu, delivered Central London area	per cwt.	15/3	14/9	12/9

Aggregate and Sands (Full Loads)

2″ Unscreened ballast	per yard cube	8/6
¾″(Down) Washed, crushed and graded shingle	per yard cube	8/9
⅜″ (Down) Ditto	per yard cube	9/9
2″ Broken brick	per yard cube	12/6
¾″ Ditto	per yard cube	14/–
Washed pan breeze	per yard cube	9/6
Coke breeze 1″ to dust	per yard cube	—
5/16″ Sharp washed sand	per yard cube	12/9
White Silver Sand for white cement (one ton lots)	per ton	—

(For Sands for Bricklaying and Plastering *see* respective trades)

Pavings

Brick hardcore	per yard cube	4/6
Concrete ditto	per yard cube	—
Clean furnace clinker and boiler ashes ...	per yard cube	4/6
Coarse gravel for paths	per yard cube	12/–
Fine ditto	per yard cube	14/6
Clean granite chippings	per ton	29/9

CONCRETOR—(*continued*)

Pavings—continued

Red quarry tiles, 6″ × 6″ × 7/8″	per yard super	7/2
Ditto 6″ × 6″ × 5/8″	per yard super	6/–
Buff ditto 6″ × 6″ × 7/8″	per yard super	7/10
Ditto 6″ × 6″ × 5/8″	per yard super	6/7
Hard red paving bricks, 2″	per 1,000	235/–
Ditto 1½″	per 1,000	190/–

Reinforcement

Home trade maximum basis price for mild steel rods, ⅝″ diameter and upwards, ex mills delivered to station or siding	per ton	£16 19 6
Extras for :—		
9/16″ and ½″ diameter...	per ton	10/–
7/16″ diameter	per ton	15/–
⅜″ diameter	per ton	20/–
5/16″ diameter	per ton	30/–
¼″ diameter	per ton	40/–
3/16″ diameter	per ton	60/–
Lengths of 40 ft. to 45 ft.	per ton	10/–
Lengths of 45 ft. to 50 ft.	per ton	15/–

Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate)	per gallon	21/–
Ditto (for obtaining a bond)	per gallon	13/1½

Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.

BRICKLAYER

Common Bricks

†Rough stocks	per 1,000	59/6
†Third stocks	per 1,000	50/–
†Mild stocks	per 1,000	65/6
Sand limes	per 1,000	67/6
‡Phorpres pressed Flettons	per 1,000	51/9
‡Phorpres keyed Flettons	per 1,000	53/9
Blue Staffordshire wirecuts	per 1,000	220/–
†Lingfield engineering wirecuts	per 1,000	80/–
Firebricks, best Stourbridge 2½″	per 1,000	196/–
Firebricks, best Stourbridge 3″	per 1,000	232/6

Facing and Engineering Bricks

Sand Limes, No. 1	per 1,000	95/–
Sand Limes, No. 2	per 1,000	80/–
‡Phorpres rustic Flettons	per 1,000	71/9

‡ At King's Cross. For delivery in W.C. district add 6/6 per 1,000.
† Price ex works, delivery extra.

BRICKLAYER—(*continued*)

Facing and Engineering Bricks—continued

Midhurst Whites	per 1,000	110/–
†Hard stocks, firsts	per 1,000	85/6
†Hard stocks, seconds	per 1,000	78/6
Sand-faced, hand-made reds	per 1,000 from	120/–
Sand-faced, machine-made reds	per 1,000 from	115/–
Red rubbers (9¾-in.)	per 1,000	—
Uxbridge Flints (white)	per 1,000	80/–
Uxbridge Flints (creams, light greys, etc.) per 1,000	from	110/–
Dunbricks (concrete), multi reds, ex works ...	per 1,000	95/–
Dunbricks (concrete), multi lavender, buffs and golden brown, ex works	per 1,000	95/–
†Southwater engineering No. 1 (first quality red pressed)	per 1,000	125/–
†Southwater engineering No. 2 (second quality red pressed)	per 1,000	105/–
Blue pressed	per 1,000	240/–

† Price ex works, delivery extra.

Limes and Sand

		1-ton lots	6-ton lots
Lime, greystone	per ton	56/–	—
Lime, chalk	per ton	56/–	—
Lime, blue Lias (including paper bags)	per ton	64/–	—
Lime, hydrated (including paper bags)	per ton	64/–	—
Washed pit sand	per yard cube	10/9	

(For cements, *see* "Concretor.")

Hire of jute sacks charged at 1/6 and credited at 1/6. If left, charged at 1/9.

Sundries

Wall ties, self coloured	per cwt.	—
Wall ties, galvanized...	per cwt.	—
D.P.C. slates, size 18″ × 9″	per 100	35/9
D.P.C. slates, size 14″ × 9″	per 100	32/–
D.P.C. slates, size 14″ × 4½″	per 100	12/6
‡Ledkore D.P.C. Grade A	per foot super	6d.
‡Ledkore D.P.C. Grade B	per foot super	7½d.
‡Ledkore D.P.C. Grade C	per foot super	9½d.

‡ Trade discount 5 per cent. and cash discount 5 per cent. Prices include delivery on minimum of £5 orders.

		9″×3″	9″×6″	9″×9″	12″×9″	14″×9″
Earthenware airbricks: Red, blue, vitrified and buff terra cotta ...	each	–/10	1/8	3/–	5/4	8/–

		9″×3″	9″×6″	9″×9″	12″×6″	12″×9″
Black cast iron, School Board pattern airbricks	per doz.	6/–	10/6	15/3	15/3	24/–
Galvanized ditto	per doz.	9/9	18/–	26/9	26/9	49/6
Black hit and miss cast iron ventilators	per doz.	15/–	24/–	33/–	33/–	45/–
Galvanized ditto	per doz.	30/–	48/–	66/–	66/–	90/–

		1′ 0″	1′ 6″	2′ 0″	2′ 6″	3′ 6″	5′ 0″
Buff terra cotta chimney pots	each	3/–	3/8	5/4	6/11	15/10	27/–
Fireclay ...	per ton	55/–					

Wall reinforcement supplied in standard rolls containing 25 yards lin.

2″ wide black japanned ...	per roll	2/5
2″ wide galvanized ...	per roll	—
2½″ wide black japanned ...	per roll	3/–
2½″ wide galvanized ...	per roll	—

Greater widths pro rata 2½″ price carriage paid on orders of £5. Discounts for quantities.

Partitions

		2″	2½″	3″	4″
Breeze ...	per yard super	2/2	2/7	3/2	3/10
Clay tiles	per yard super	2/8	2/11	3/6	3/10
Pumice ...	per yard super	3/6	4/3	5/–	5/6
Plaster ...	per yard super	3/1	3/11	5/–	5/9

Gas Flue Blocks

		Single Flues	Double Flues
Straight blocks...	each	1/3	2/2
Building in set	per set of 3	2/11	5/4
Cover blocks	each	1/7	3/4
Raking blocks 45°	each	3/–	4/3
Raking blocks 60°	each	2/2	3/1
Offset blocks	each	3/8	5/4
Closer blocks	each	1/3	2/2
Closer flashing blocks	each	1/1	1/10
Straight flashing blocks	each	1/1	1/10
Terminal and cap	per set	7/5	12/8
Middle terminal and cap ...	per set	6/11	11/10
End terminal and cap... ...	per set	7/2	12/5
Corbel block	each	5/4	3/6
Gathering block	each	—	10/8

DRAINLAYER

Agricultural Pipes

		2″	3″	4″	6″
Pipes in 12″ lengths ...	per 1,000	72/6	100/–	135/–	235/–

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

		4″	6″	9″
Pipes (2′ lengths)	each	1/8	2/6	4/6
Bends, ordinary	each	2/6	3/9	6/9
Single Junction, 2′ long	each	3/4	5/–	9/–
Yard Gulley, without grating ...	each	6/3	6/10½	11/3
Ordinary round or square Grating, painted	each	–/7½	1/3	2/6
Ordinary round or square Grating, galvanized	each	1/0½	2/1	4/4½
Extra for Inlets, horizontal	each	1/6	1/6	1/6
Extra for Inlets, vertical	each	2/3	2/3	2/3
Intercepting Trap with Stanford Stopper	each	17/6	22/6	37/6
Grease and mud interceptor with bucket for removing silt and grease for 6″, 9″ and 12″ drains, with iron grating, painted	each	20/–		
Ditto, with iron grating galvanized	each	21/10½		

The above prices to be varied by the following percentages for the different qualities given. All subject to 2½ per cent. cash discount.

	British Standard	British Standard Tested
Orders for 2 tons and over	Less 5%	Plus 20%
Orders under 2 tons, 100 pieces upwards	Plus 12½%	Plus 37½%
Orders under 2 tons, less than 100 pieces	Plus 22½%	Plus 47½%

	Best	Seconds
Orders for 2 tons and over	Less 12½%	Subject to 15% off the price of best quality for all sizes
Orders under 2 tons, 100 pieces upwards	Plus 5%	
Orders under 2 tons, less than 100 pieces	Plus 15%	

Cast Iron Drain Pipes and Fittings

Socket and Spigot Pipes :—

Weight (per 9 ft.)	Size	9 fts.	6 fts.	4 fts. each	3 fts. each
1 . 1 . 8	4″ per yard ...	7/7	8/5	13/1	10/–
1 . 1 . 20	4″ per yard ...	7/11	8/7	13/4	10/4
2 . 0 . 6	6″ per yard ...	11/5	13/5	21/5	17/2
4 . 0 . 2	9″ per yard ...	21/–	26/9	45/6	35/–

		2 fts.	18 ins.	12 ins.	9 ins.
1 . 1 . 8	4″ each	8/2	6/11	6/1	5/7
1 . 1 . 20	4″ each	8/3	—	—	—
2 . 0 . 6	6″ each	12/10	—	—	—
4 . 0 . 2	9″ each	—	—	—	—

Tonnage Allowances :—
Orders up to 2 tons nett.
Orders 2 to 4 tons less 2½%
Orders 4 tons or over less 5%

		4″	6″	9″
Bends	each	7/1	14/8	45/2
Single junctions	each	12/5	25/5	78/–
Intercepting traps	each	33/10	56/6	139/–
Gulleys ordinary trapped ...	each	16/5	—	—
Extra for inlet 4″...	each	4/3	—	—
Grease Gulley trap	each	128/7	—	—
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet	each	29/9	52/6	—

Channels in Brown Glazed Ware

		4″	6″	9″
Half round straight channels 24″ long	each	1/3	1/10½	3/4½
Half round straight channels 30″ long	each	—	—	4/2¾
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends ...		1/10½	2/9¾	5/0¾
Ditto, short	each	1/10½	2/9¾	—
Ditto, long	each	3/9	5/7½	10/1½
Three-quarter round branch bends	each	5/–	7/6	—

		6″×4″	9″×6″
Half round taper channels 24″ long	each	3/9	6/9
Half round taper channel bends	each	4/8¼	8/5½

The above prices are subject to the same discounts as those given for "Best" quality salt glazed stoneware pipes.

Manhole Covers, etc.

	Black	Galvanized
24″ × 18″ single seal for foot traffic. (Weight 0.0.3 in lots of 24) ... ... each	14/3	28/6
24″ × 18″ single seal for light car traffic. (Weight 2 cwts. in lots of 24) ... each	40/6	81/–
24″ × 18″ Wood Block pattern. For road traffic. (Weight 3 cwts.) ... ... each	Coated 67/6	

DRAINLAYER—(*continued*)

Manhole Covers, etc.—(continued)

		Fine Cast	Galv.
Cast iron steps, 13½″ long, 6″ wide, 9″ in wall, approximate weight 5½ lbs. each	per dozen	14/9	25/6
Galvanized fresh air inlets with cast brass fronts (L.C.C. pattern)	each	4″ 6/9	6″ 26/6

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.		
Blocks scrappled, random sizes... ...	per foot cube	5/2
Add for blocks to dimension sizes ...	per foot cube	7d. (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long) ...	per foot cube	5/9
Templates with sawn beds, sawn one edge, per foot cube		6/11
Templates with sawn beds, sawn two edges, per foot cube		8/0¾
Prices f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 6-ton loads.)		29/1

Artificial Stone

6″ × 3″ Copings and sills	per foot run	1/8
6″ × 6″ Copings and sills	per foot run	2/7
9″ × 3″ Copings and sills	per foot run	2/2
9″ × 6″ Copings and sills	per foot run	3/8
12″ × 3″ Copings and sills	per foot run	2/7
12″ × 6″ Copings and sills	per foot run	4/2
Cornices according to detail, per foot cube (from)		7/6

SLATER, TILER AND ROOFER

Best Bangor Slates

	£	s.	d.
24″ × 12″ ... ... per 1,000 actual	58	0	0
20″ × 10″ ... ... per 1,000 actual	38	0	0

Prices include for delivery to site in lots of 1,000 and upwards.

Tiles

	£	s.	d.
Hand-made sandfaced 10½″ × 6½″ red roofing tiles per 1,000	7	10	0
Machine-made sandfaced 10½″ × 6½″ red roofing tiles per 1,000	6	10	0
Berkshire rustic pantiles... ... ... per 1,000	30	0	0

Asbestos-cement

†6″ corrugated sheets, grey	per yard super	3/0¾
†Standard 3″ corrugated sheets, grey ...	per yard super	2/9½
Slates (*Manufacture temporarily suspended*) :—		
* 15¾″ × 7⅞″ grey	per 1,000	£6 15 9
* 15¾″ × 15¾″ diagonal, grey ...	per 1,000	£13 11 6
* 15¾″ × 15¾″ diagonal, russet or brindled	per 1,000	£21 19 6
Pantiles (*Manufacture temporarily suspended*).		
* Large russet brown	per 1,000	—

* Prices are for minimum two-ton loads, and are subject to 5% trade discount.

† Do., but 3¾% advance and 5% trade discount.

JOINER

Asbestos-cement and Asbestos Products

5/32″ Semi-compressed flat building sheets, grey per yard super	1/3½
3/16″ Ditto ... ... per yard super	1/4
¼″ Ditto ... ... per yard super	1/11
Prices are for orders of two tons and over and are subject to 10% advance and 5% trade discount.	
¼″ Asbestos wallboard (in sheets 8′ 0″ × 4′ 0″, 10′ 0″ × 4′ 0″ and 12′ 0″ × 4′ 0″) ... per foot super	–/4⅝
3/16″ Ditto ... ... per foot super	–/3¾
3/16″ Asbestos wood (in sheets 8′ 0″ × 4′ 0″) per yard super	2/4
The following asbestos prices are subject to 10 per cent. trade discount :—	
Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ... per yard super	8/–
Ditto, plain white glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) per yard super	9/6
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ... per yard super	8/–

		25–75 yards	150–300 yards	Over 600 yards
¾″ Fireproof plaster board	per yard super	2/5	2/1	1/9
½″ Ditto	per yard super	2/3	1/11	1/7
Joint tape (approx. 250 feet run)	per roll	—	—	1/6
Joint filler	per lb.	—	—	–/4

Sundries

Slaters or sarking felt	per yard run	–/7
Roofing felt	per yard run	–/9¼
Bituminous hair felt	per roll	45/–

All rolls 25 yards long by 32″ wide.

JOINER—(*continued*)

Sundries—(continued)

Black waterproof paper, 5′ wide	per yard run	–/7
Building paper in rolls of 100 yards, 1-ply, 60″ wide (B.I. 120)	per yard run	1/2½
" Cabots " Quilt :—(Ex Works) Twenty roll lots delivered carr. free.		
Double ply ... ... per roll 47/6	per half-roll	27/–
All rolls 28 yards long by 36″ wide. Special terms for quantities.		
Cut steel clasp nails 1″ per cwt. 40/6	4″ per cwt.	31/–
,, ,, floor brads 2″ ,, 31/–	3″ ,,	29/7
Bright oval wire nails 1″ ,, 45/10	4″ ,,	33/1
Galvanized wire staples with slice cut points ... ... 1″ × 12 gauge	per cwt.	55/–
Scotch glue	per cwt.	—

STEEL AND IRONWORKER

Steelwork

	£	s.	d.
Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths per ton	15	10	6

PLASTERER

Plaster and Cement

		1-ton loads	6-ton loads
Sirapite (coarse)	per ton	88/6	82/6
,, (fine)	per ton	87/6	81/6
Victorite No. 1	per ton	102/6	96/–
,, No. 2 or non-sweat	per ton	97/6	91/–
Thistle (browning) ...	per ton	87/6	82/6
Thistle (haired)	per ton	90/–	—
Pink plaster	per ton	83/6	—
White plaster	per ton	93/–	—
Keene's pink	per ton	135/–	—
Keene's white	per ton	140/–	—
Super Carbo	per ton	—	—
Carbo-setting	per ton	—	—

		1 ton upwards £ s. d.
Cullamix No. 2 cream (rendering mixture)	per ton from	7 3 6
,, No. 3 cream ,, ,,	per ton from	7 3 6
Snowcrete mixture ,, ,,	per ton from	6 18 6

Sundries

Sharp washed sand	per yard cube	12/9
Cow hair	per cwt.	42/–
Goat's hair	per cwt.	66/–
Expanded metal lathing, 9′ 0″ × 2′ 0″ ⅜″ mesh × 26 gauge	per sheet	2/9
Wire Slate nails (galvanized) 1¼″ × 15 gauge	per cwt.	66/2
,, ,, ,, (bright wire) ,, ,,	per cwt.	28/7

	Less than 150 yds.	Less than 300 yds.	Over 300 yds.	Over 600 yds.
⅜″ Plaster board per yard super	—	—	—	—
1¼″ Galvanized nails ... per cwt.	—			
Scrim cloth in 100-yard rolls per roll	—			

Wall Tiles

The following prices are subject to 35 per cent. addition :		
Commercial quality.		
Ivory, white, etc., glazed 6″ × 6″ × ⅜″ ...	per yard super	10/1
Angle beads (1½″ wide)	per yard run	1/2¾
,, ,, (1″ ,,)	per yard run	–/10
Rounded edge tiles	per yard run	2/6½
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″	per yard super	14/3
Angle beads (1½″ wide)	per yard run	1/4¾
,, ,, (1″ ,,)	per yard run	–/11¼
Rounded edge tiles	per yard run	2/7
Eggshell gloss enamelled, 6″ × 6″ × ⅜″ ...	per yard super	15/–
Angle beads (1½″ wide)	per yard run	1/7½
,, ,, (1″ ,,)	per yard run	1/0¾
Rounded edge tiles	per yard run	2/8¼
Special rates for quantities		

PLUMBER

Lead

3½ lbs. and upwards milled sheet lead in quantities of 5 cwts. and upwards	per cwt.	35/6
Add if cut to sizes	per cwt.	3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	7/–
Allowance for old lead delivered to merchant	per cwt.	18/–

PLUMBER—(*continued*)

Cast Iron Goods

	Percentage Adjustment on List No. 3100 A.B, 1/2/40
Rainwater Goods (painted or unpainted) ...	*Plus* 7½%
Soil goods (coated or uncoated)	*Plus* 7½%

Mild Steel Rainwater Goods

The following prices are subject to 2½ per cent. trade discount and 22½ per cent. advance.
24 gauge rainwater slip jointed pipes.

		2″	2½″	3″	3½″	4″
Galvanized round pipes with ears	per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears	per 6′ 0″	2/4½	2/9	3/1½	3/7½	4/–
Painted or galvanized short lengths with ears, extra	each	–/6	–/6	–/6	–/6	–/6

18 Gauge gutters.		3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters	per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters ...	per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra	each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 15 per cent. advance and 12½ per cent. trade discount.

Orders over £30 are subject to 17½ per cent. trade discount.

Rainwater pipes.

Prices are for 6′ 0″ lengths, and 10′ 0″ lengths in 2″, 2½″ and 3″ diameters. Short lengths up to 2′ 0″ are charged as one yard. From 2′ 0″ to 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes.

2″	per yard run	1/10
2½″	per yard run	2/0¾
3″	per yard run	2/5¾
3½″	per yard run	2/11¼
4″	per yard run	3/4¾
4½″	per yard run	4/10½
5″	per yard run	5/9¼
6″	per yard run	7/1¾

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

Half round gutters	3″	4″	4½″	5″	6″	8″
per yard run	1/3¾	1/6¾	1/7¾	1/11	2/8	3/3½
Ogee gutters per yard run	—	1/11	2/0¾	2/5¾	3/0¼	3/11¼

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards ...	per cwt.	35/–
Lead soil pipe	per cwt.	38/–
Add if ribbon marked	per cwt.	–/3
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt.	7/–
Plumber's solder	per cwt.	136/–
Tinman's solder	per cwt.	191/–

Drawn lead traps with brass screw eye, 6 lbs.

		1″	1¼″	1½″	2″
S. trap	each	2/3	2/8	3/4	4/9
P. trap	each	2/–	2/2	2/3	3/2
Extra for 3″ deep seal ...	each	–/6	–/6	–/6	–/6

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Tubes.		½″	¾″	1″	1¼″	1½″	2″
Tubes 2 ft. long and over	per ft.	–/5½	–/6¾	–/9¼	1/1	1/4½	1/10
Pieces 12″ to 23½″ long	each	1/1	1/5	1/11	2/8	3/4	4/9
Bends	each	–/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.							
Elbows, square ...	each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round ...	each	1/2	1/5	1/8	2/4	2/10	4/8
Tees	each	1/3	1/7	1/10	2/6	3/1	5/1
Crosses	each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain ...	each	–/4	–/5	–/6	–/8	–/10½	1/3
Sockets, diminished	each	–/6	–/7	–/9	1/–	1/4	2/–
Flanges	each	1/–	1/2	1/4	1/9	2/–	2/9
Caps	each	–/5	–/6	–/8	1/–	1/3	2/–
Plugs	each	–/4	–/5	–/6	–/8	–/10	1/3

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc. (continued)

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts:—

	Tubes	Fittings	Flanges
"Light Weight" ...	51½%	47¼%	51%
"Heavy Weight" ...	44%	39¾%	41%

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge	per lb.	–/11¼
Light gauge copper tube, solid drawn	per lb.	1/3
Copper tube, solid drawn screwing sizes ...	per lb.	1/2½
Copper wire, 10 and 12 gauge	per lb.	1/1
Copper nails, 1″ and up	per lb.	1/1½

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

		In squares not exceeding 2 ft.	4 ft.	6 ft.	Over 6 ft.
18 oz. clear sheet ...	per foot super	—	–/3¼	–/3⅝	–/3⅞
24 oz. ditto ...	per foot super	—	–/4½	–/4⅞	–/5¼
32 oz. ditto ...	per foot super	—	–/6⅞	–/8	–/9
Obscured sheet glass net extra ...		—	–/3	–/3	–/3
⅛″ figured rolled glass, white and cathedral	per foot super	–/7½			
⅛″ ditto, normal tints	per foot super	–/10½			

British or Foreign Polished Plate Glass cut to size

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
1 ft. super ...	per foot super	—	—	—
2 ,, ...	per foot super	1/8	1/11	2/3
3 ,, ...	per foot super	2/3	2/7	3/1
4 ,, ...	per foot super	—	—	—
6 ,, ...	per foot super	3/2	3/5	3/11
12 ,, ...	per foot super	—	—	—
45 ,, ...	per foot super	3/6	4/–	4/11
65 ,, ...	per foot super	—	—	—
90 ,, ...	per foot super	—	—	—
100 ,, ...	per foot super	4/2	5/7	6/–

Plates exceeding 100 ft. super or 160 in. long or 100 in. wide at higher prices.

Special quotations should be obtained for other qualities and thicker substances.

Wired Glass Cut to Sizes

¼″ Rolled or rough cast	per ft. super	10½d.
‡¼-in. Georgian rough cast	per ft. super	11d.

	In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.
‡¼-in. Georgian polished plate per ft. super	2/6	2/8	2/10	3/2
	8 ft.	12 ft.	20 ft.	30 ft
‡¼-in. Georgian polished plate per ft. super	3/8	3/10	4/2	4/6

Supplied in sizes up to 110 in. long and up to 36 in. wide.

‡ For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

PAINTER

White ceiling distemper	per cwt.	14/–
Washable distemper	per cwt.	60/–
Petrifying liquid	per gallon	—
Ready mixed white lead paint (best) 5-cwt. lots, in 14 lb. tins	per cwt.	83/6
White enamel	per gallon	27/6
Stiff white lead, genuine English stack process, 1-ton lots, in 1-cwt. kegs ...	per cwt.	61/9
Driers	per cwt.	42/–
Linseed oil raw (5-gallon drums)	per gallon	—
,, boiled ,, ,, ...	per gallon	—
French polish	per gallon	12/6
Knotting	per gallon	16/–
Oil stain...	per gallon	12/–
Varnish, oak	per gallon	12/6
,, copal	per gallon	17/6
Varnish, flat	per gallon	22/6
Turpentine, genuine American, 5-gallon lots	per gallon	4/–
Creosote, 1-gallon lots...	per gallon	1/9
Putty	per cwt.	14/9
Size	per firkin	4/6
Best quality English gold leaf, 23 carat ...	per book	3/–
Extra thick, ditto	per book	4/–