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THE ARCHITECTS' JOURNAL & Architectural Engineer

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FROM AN ARCHITECT'S NOTEBOOK.

YORK MINSTER.

To-night the rising moon, as she gleams through drifting clouds, will pour her silver rays upon that great eastern window, at once the largest and the most beautiful in existence, and all the Bible stories told there in such exquisite hues will glow with heavenly lustre on the vista of chancel and nave. And when the morning comes, the first beams of the rising sun will stream through the great casement and illuminethe figures of the saints and archbishops . . . and touch with blessing the marble effigies of the dead: and we who walk there, refreshed and comforted, shall feel that the cathedral is indeed the gateway to heaven.

WILLIAM WINTER.

9 Queen Anne's Gate, Westminster.

The Church of Saint Gregory, Venice : The Cloister

The Church of Saint Gregory, Venice, is Late Renaissance work. Its architect is unknown.

THE

ARCHITECTS' JOURNAL

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Steel Houses

THE charge is sometimes made against the architectural profession that it is reactionary; that it always opposes innovations and new building methods without giving these due consideration. To the superficial observer this may appear so, the reason being that to the lay mind building appears such a simple business, particularly small house and cottage building, and it is this class of building which we have in mind at the moment. The layman understands little or nothing of the reactions and behaviour of different materials. The actions of limes and cements, the movement of timber; shrinkage, expansion, the action of weather and smoke, these are matters outside his scope, and the difference between a chicken-house and a cottage is for him one of degree rather than of kind.

The architect, however, knows better. He knows that tradition in building is chiefly the result of common sense and experience, and cannot lightly be thrown over for any proposition that is put forward.

The housing situation to-day, however, is so desperate that no suggestion or project should be condemned until it has been thoroughly examined. So alive are we to this fact that we decided impartially to examine the claims of the "all-steel house" with a view to ascertaining whether the erection of these, on a large scale, was in the interests of the community as a whole. For this, after all, is the main consideration. That the all-steel house might fulfil a need under certain circumstances few will doubt, but can it be advocated indiscriminately? Should the nation spend capital and energy in developing the steel-house trade? Should it be instructed to regard the steel house as a solution to its difficulties?

The result of our inquiries will be found on another page. It will there be seen that our conclusions regarding the steel house are not favourable. We have examined the matter from various aspects. Is the steel house cheaper to erect than a brick house? Here we were fortunate in obtaining figures of a brick house in actual process of erection to-day; a house on which trade union rates are being paid, and the plan of which is very similar to the plan of one of the steel houses. The brick house is considerably cheaper. Next we endeavoured to compare the upkeep costs of the two types. Here, with regard to the steel house, we are to some extent working on assumptions, since the steel house has not been put to the test of time, but it would certainly appear that the maintenance costs of the steel house are much higher than those of the brick house. The next thing which concerns the investor is the length of life of his house, and the steel house manufacturers do not claim the same length of life for a steel house as experience has taught us to expect of a well-built brick house. From the point of view of finance, therefore, everything would seem to be against the steel house. But finance should not be the only test, although we must admit it is one of the most important. Will the steel house be more comfortable? Will it make a superior home to one built in brick? We think not. The materials and method of construction are such that the building is likely to be as unpleasantly cold in winter as it will be unpleasantly hot in summer. Finally, will the steel house be more beautiful than the brick? We know that to many lay minds this is become an altogether irrelevant consideration. With this point of view we can never bring ourselves to agree. Beauty, like health, is a direct commercial asset; or perhaps we should say that beauty, since it promotes health, is a commercial asset. But if the steel house is not beautiful to-day, when it is newly erected, may be it will become so under the gentle ministrations of time. Many a brick cottage does not look at its best when it is just erected, but as the years flow over it the bricks and tiles mellow, and the whole seems to become one with Nature and to merge into the landscape. Will some such change as this perhaps come over the steel house? We think not, for if the house be not regularly painted it will surely rust, and rusty iron sheets are scarcely things of beauty.

Nevertheless, desperate ills require desperate remedies. Houses must be built. Granting that brick houses are cheaper in first cost and cheaper in maintenance; granted that they are more durable, more comfortable, and even more beautiful, if the bricks are not available we must needs turn to some substitute material, and why not steel? We have steel ships, and so why not steel houses? If England were a country rich in steel and lacking any other material—lacking in clay, cement, gravel, timber—then, indeed, we should be well advised, maybe, to build millions of steel houses. But England is not such a country. On the contrary, it is a country exceedingly rich in brick-making materials, but one in which the economic arrangements have become strained and disjointed, so that this national and best-of-all building unit is not made in sufficiently large numbers, neither are there a sufficient number of trained persons able to handle it. Thus the country is in the odd position of having a great many men out of employment while more bricks are wanted and more men wanted to lay them.

Would it not then be better to put all our efforts, to exercise all our ingenuity in organizing our resources so that we may make more bricks and train more men to lay them? And our Government, too: instead of encouraging steel houses by offering monetary assistance to certain local authorities willing to erect an experimental house, would it not better serve the interests of the country if it did all in its power to stimulate and encourage true and economic building methods, on national and common-sense lines, and with the national common-sense material, admittedly the best material in the world for the purpose?

Posterity may have harsh words with which to describe a generation which went out of its way to cover the countryside with monotonous steel houses when the very ground on which they stand is rich with millions of tons of unexploited brick-making earth, and posterity will surely be justified.

Town Planning in Rural England

Professor Abercrombie's admirable letter to "The Times" on the above subject draws attention to a problem of pressing urgency—namely, the regulation of normal residential development. He points out that there are two methods of residential growth: (1) The ribbon unrolled along the roadside, and (2) the radiation emanating from a central nucleus. "The additions to existing towns and villages are examples of the latter method; the former is only too visible as the new method which is being unconsciously adopted through the whole of England as a result of the new motor-omnibus services and use of private motor-cars." Professor Abercrombie foresees the time when this green and pleasant land of ours will only be glimpsed from our country roads and lanes through an almost continuous hedge of bungalows and houses. It is a very imminent prospect. In the home counties, along the main roads, it is already largely realized, and unless restrictive action is promptly taken the blight will creep into the very heart of the country. The only remedy is to encourage the development of garden cities, such as Letchworth and Welwyn, and thus direct inevitable growth around a central nucleus—"grouped communities with their centres of neighbourhood life," as Professor Abercrombie calls them. The alternative is the ultimate blotting out of rural England.

A Lost Opportunity

The price of civic incompetence is constantly being shown in the heavy cost of street widenings and "improvement" schemes. Our municipal masters, the country over, all seem to suffer from a complete lack of civic imagination and common foresight. Improvements that would never have become necessary if the right thing had been done at the beginning are an everyday occurrence, involving great cost and inconvenience to the community. Take the case of the approach and forecourt to Victoria Station. The whole thing is as badly laid out as it possibly could be. It is doubtful whether any directing intelligence was ever occupied with it; it seems just to have happened. The Wilton Road approach is a model of "how not to do it." To get to the station the pedestrian has to pass through a chaos of taxicabs, motor-cars, and omnibuses, extermination threatening at every step he takes; the vehicular approach is a bottle-neck, entirely inadequate for the great volume of traffic that has to pass through it; while as to appearance, it has never been thought of. For an important metropolitan terminus the forecourt of Victoria is hopelessly ineffective in every respect. One may guess how it strikes the foreign visitor who looks upon London for the first time. However, there it is, without any possibility of real improvement, for the enclosing property is too expensive to acquire even if it were possible to do so—and one has to think twice when it is a question of removing underground railway stations. Piecemeal improvements may from time to time be effected—such as the recently proposed widening of the Wilton Road approach to 80 ft. (at an estimated cost of £67,000 !), but the opportunity for an effective architectural lay-out seems to have been lost for ever. If only we profited by experience; but do we ?

Architecture and Literature

In an ingeniously reasoned article in "T.P.'s and Cassell's Weekly," Mr. Hesketh Pearson makes out that architecture has a dominating influence over literature; that writers are more or less at the mercy of the buildings in and amid which they work. "Consider," he says, "the dignity, refinement, and air of breeding about all the architecture of the time of Queen Anne. Can one question that it produced Addison, Steele, and Pope ? Then think of Dean Swift, who was a contemporary of Pope's. Where did he cultivate that violent outlook ? Obviously in Dublin, where the streets even to-day shock the eye. The ponderous style of Johnson faithfully reflects the ponderous style of Georgian mansions. Dickens and Thackeray were literally inoculated by, respectively, the City and Mayfair." It is an ingenious theory, which holds only a certain amount of water; for example, all the literary men of the eighteenth century are not such heavy stylists as Johnson. And how often did Johnson resort to the "ponderous mansions ?" Was he not much more frequently to be found in the joyous taverns of Fleet Street ? Yet these same taverns completely failed to impart anything of their gaiety to his literary style. Environment may have a great influence over the development of character, but it is not necessarily a dominating influence. Men may and do rise above it. Also what is depressing to one may be inspiring to another. However, this is no argument for the perpetuation of poor architecture. Let architecture flourish, and with it let Mr. Hesketh Pearson's vision of a fine urban literature be realized.

All-Metal Architecture

The Selfridge wholesale building, which we illustrate in this week's issue, is a good example of a new type of architecture which is now making an appearance—that is, all-metal architecture. It is the logical outcome of steel-frame construction, and promises extremely interesting developments. Steel architecture has come to stay, even though it may not entirely or even largely supersede conventional modes of building. It began some years ago with the introduction of steel casements; then it extended its field of usefulness to the entire structural infilling of window spaces. The Selfridge Store was one of the earliest buildings to show such an application of metalwork, and shortly afterwards we had Mr. Verity's Regent House and the Polytechnic in Regent Street, with somewhat similar treatments. In these buildings, and in many others since, the architectural framework is stone, but the rest of the façade is metal, often treated with excellent decorative effect. Now we have got to the point where complete façades are carried out in metal. In the case of the Selfridge wholesale building the metal is cast-iron, painted a very convincing bronze colour. Æsthetically this building gives complete satisfaction. It has the appearance of a structural whole. The mind, as well as the eye, is satisfied. How often is this so in the case of a steel-framed building encased with stone ? We yet may see whole streets of metal architecture; for, as the sociologists assure us, it is a characteristic expression of our advanced mining civilization. But though we confess to finding distinct merits in the metal façades of commercial buildings, we are by no means reconciled to the steel house. That is another story.

The Problem of a Gaol

What can be done with a disused gaol ? That is Edinburgh's problem. The Calton Prison, built like a mediæval fortress, out of respect for the Castle (by newly arrived visitors it has been often mistaken for the Castle), is one of Edinburgh's most prominent architectural features. Now that it no longer serves to confine the wrongdoer it is to be sold, and the citizens are apprehensive lest unsightly modern business premises should arise in its place and mar the beauty of "Athens of the North." Some ingenious person, obviously a wag, has suggested that the prison should be turned into a hostel for single men and women, thus reversing the application of a popular, though, of course, altogether libellous symbolism. Such schemes are unworthy of Edinburgh. Let the citizens take their courage in their hands and demolish the gaol, for, though called by another name, it can never lose its unpleasant associations. We cannot believe that Scottish architects are incapable of designing buildings that will do no violence to this wonderful site; on the contrary, we have every confidence that they could do much to enhance it, for the gaol is really sham fortalice architecture, and far from being in itself a thing of beauty. The opportunity now presented for carrying on the magnificent work begun by Elliott in Waterloo Place ought not to be let pass.

Architectural Publicity

FROM time to time we hear the complaint from architects that they know of no steps which they may legitimately take in order to bring their services to the notice of the layman. This difficulty is by no means limited to our country, and in order to indicate methods of dealing with the problem the Chicago Chapter of the American Institute of Architects has recently issued a leaflet, from which the following paragraph is quoted: "The public is occasionally aware, for a moment, of an attractive building. Immediately its attention is distracted from the structure to the bank that financed it, the realtor who negotiated it, the person or firm that owns it, and the concern that occupies it, the contractor who builds it, the plumber, the decorator, and everybody concerned except the architect who conceived its form, arranged its intricate parts and functions, and became responsible for its beauty, its safety, the integrity of its execution. . . . Even battles are won or lost by generals, and the personalities causing defeat or victory are studied. Where is the long list of buildings and their dates and authors and their effect on the progress of civilization? Are the houses we live in and the buildings we see and move about in of no importance to the expanding human souls in our public schools and colleges? Are the training and integrity of the architect and the education and environment that enabled him to produce the most useful, most wonderful, most enduring objects of all civilization of no interest, no moment to the generations that must reproduce and improve? . . . The architect must come out of his unwarranted seclusion and do his part in forming favourable public opinion for his works and kindred arts."

There are various methods of encouraging a wider interest in architecture, and all architects can help in this useful work, and thus take legitimate, if indirect, steps "in order to bring their services to the notice of the layman."

Legitimate propaganda work in the interests of architecture would appear to be divisible into five main categories:

1. Lectures on architecture suitable for the general public.
2. Exhibitions of architectural photographs, models, and drawings.
3. The publication of articles in the non-technical Press.
4. The issuing of such a journal as "The Architectural Review," which, while catering mainly for architects, is undoubtedly purchased by numerous laymen, and seen by a far larger number in libraries, etc.
5. The introduction of architecture into the curricula of our public schools and colleges.

Much work has already been done in this country in a number of the methods mentioned. The R.I.B.A. has held a number of particularly interesting exhibitions in recent years, and has arranged for numerous lectures to be given by expert lecturers to public audiences. The Architecture Club, with its valuable exhibition of fine photographs of modern work, and its other less direct, but equally useful, propagandist methods, has also done particularly valuable work. From time to time we hear of useful efforts in this direction being carried out in the provinces by the allied societies, who can frequently arrange for their lectures to be open to the general public, and less frequently, perhaps, for an exhibition of architectural drawings and photographs. The various schools of architecture throughout the country are clearly doing valuable work in bringing architecture to the notice of the public in various ways, and it is more often than not that the articles on architecture which appear in the non-technical papers are the work of one or other of the heads of our schools. A certain amount is already being done in the direction of interesting our young people in the primary and secondary schools in the great art of architecture. From time to time reports are received of special lectures on this subject being given to the scholars, or of the latter visiting the local school of architecture to see an exhibition of architectural drawings or to hear a lecture. The universities have in many cases accepted architecture as a subject worthy of their support and of the award of degrees, and have also to some slight extent—as, for example, Mr. W. G. Newton's lectures at Oxford—encouraged the idea that architecture is even worth considering as a part of a liberal education. Such are the facts, though it is difficult to write some of them without conveying a suggestion of sarcasm. The Quennells' book on the "History of Everyday Things in England" has been an eye-opener to many a "school marm," indicating, as it does, the great interest, importance, and beauty of the furniture, buildings, etc., which have been produced by our predecessors. Though much has been done, vastly more remains to be done in a number of the directions suggested, but the influence of the publicity work already achieved is making itself felt in an encouraging manner.

"Still," says the average architect, "even if I agreed with you entirely, and I must admit there is much to be said for your arguments, what is there that *I* can do?"

And that is, of course, the crux of the whole problem. The average architect would doubtless be the first to admit that he could not lecture to a public audience, write articles on architecture for the non-technical Press, or organize an exhibition. Nor could he teach architecture to a class of elementary school children or lecture on it to a number of candidates for the degree of B.A. with honours in ancient history. Still there remains much that he can do to help in the good work, once he makes up his mind that it *is* good work. He can help to create an atmosphere in which it is possible to carry out successfully some of the publicity schemes mentioned. If, for instance, a proposal to do such work is made at a meeting of the R.I.B.A., or of one of its allied societies, he can at least vote in favour of it. He can also avoid, and as an average architect he would avoid, being the well-known wet-blanket who says: "What is the use of public lectures?" or the unfortunate individual who replies that they are mainly to advertise the lecturer and the chairman. When the meeting or the exhibition is arranged he can attend it, and far more than that, he can bring with him some friends who are not architects.

When he sees in his morning paper an article on architecture, he can at least say to his friends: "I am glad to see that my old friend So-and-so has another effort in the paper to-day," instead of "Why is that fellow So-and-so always writing to the papers? Pity he hasn't a better job!" Perhaps he is a member of a Rotary club; if so, he can easily suggest that one or other of our lecturers on architecture be asked to speak at one of the meetings. He is sure to be a member of some non-architectural organization, which would be all the better for a talk on some aspect or other of our art; then let him suggest it to the committee.

Each of these acts is in itself small and almost negligible in effect, but if all our architects were enthusiastic supporters of reasonable publicity, the cumulative effect would be enormous. Public meetings held in support of architectural ideals would be well attended and enthusiastic; exhibitions of architectural drawings, photographs, and models would be successful to an extent which would astonish the most optimistic of organizers, editors of morning papers would clamour for more articles on the Mistress Art, the public would be interested in architecture, the names of architects would be better known than those of painters, and nearly as well known as those of pugilists and footballers, and in the course of time it would be the normal thing to ask an architect to undertake the work he has been trained to do. Thus we see there are steps which every architect may legitimately take in order to bring his services to the notice of the layman.

W. S. P.

Steel versus Brick

By Our Special Commissioner

DURING the past six years the attitude of the nation towards the question of housing has undergone an immense change for the worse. When the Ministry of Health (then the Local Government Board) inaugurated its housing programme under Dr. Addison, enthusiasm ran high. The technical staffs, recruited for the most part from the ranks of young, technical men just released from the Services, were keen, eager, and willing to give their utmost. Local authorities, too, were fired by the new ideals and new standards in housing which were emanating from headquarters, so that it really did seem that a new era in small house building was about to begin; a new era in which sound, simple, healthy, convenient, attractive houses were to be built; healthy and attractive not only individually, but also collectively. Alas! the promise of the dawn was never fulfilled.

The Situation To-day

In order to understand the situation to-day some brief recapitulation of past events is necessary. As the Addison scheme progressed, the demand for houses greatly exceeding the supply caused prices to soar, a procedure accentuated by the prolonged coal strike of 1920. The politicians became frightened and decided to jettison the whole enterprise. The demand suddenly dropped, and, of course, prices dropped too. In this descent, however, there was a moment when supply approximately balanced demand, and reasonable tenders were being obtained in the neighbourhood of £400 to £500. Had a wise policy been then pursued and healthy tendering fostered, it is possible that cottage building in brick and other accepted materials would have proceeded in ever-increasing volume, supply and demand keeping pace and governing each other. To-day, one of the largest Peterborough brickworks is being reorganized to quadruple its output during the next two years. Had there been, in these earlier days, confidence in a steady, continuous building programme such developments might then have taken place in many directions.

At that time, however, the Government were bent upon instituting a fixed subsidy scheme, a scheme that is entirely wrong in principle if only because the cost and value of two houses having precisely the same accommodation varies from place to place. Thus individuals in different localities benefit in various degrees by the fixed subsidy, their one aim being to build as cheaply as possible.

Now this aim to build cheaply is in itself a wise one; but it is relative, and first cost is not always the test. To buy a pair of boots for ten shillings which last for six months, when for fifteen shillings might be bought a pair that last for a year, is not cheapness. Yet energy is continually being expended to-day to devise means of building ten-shilling-six-month houses.

The English Tradition

A few months ago it really seemed as if the Government were on the eve of an amicable settlement with the building interests; to-day the whole situation is jeopardized by the advent of the steel house, which, as we shall presently see, is certainly not worth joining issue. Had confidence and goodwill been established between the Government and the building trade employers and building operatives, a foundation might have been laid for a lasting peace and an advance along the lines of "payment by results, with proper safeguards against sweating." Unfortunately, enthusiasm for the steel house has been artificially engendered to the infinite harm of sound, sane building on traditional lines; to the harm, in fact, of the nation. Outside the architectural profession and the building trade the

TYPICAL BRICK COTTAGES.

Photo : Topical.

THE BRAITHWAITE TYPE OF HOUSE.

Photo : Daily Mail.

THE WEIR HOUSE.

steel house is as yet regarded as a heaven-sent solution to the housing shortage. Meanwhile the best traditions of English cottage building are being violated. Fortunately, however, it is doubtful if anything can ultimately replace the traditional English brick cottage, which is the best, both structurally and architecturally, in the world.

"Alternative" Methods

A study of the so-called "alternative methods" of building will show that there is, for the most part, nothing new in any of them but a substitution of some material for the brickwork of the walls. But it is generally accepted that the cost of walling does not represent more than 20 to 25 per cent. of the whole cost. Thus if a saving of 5 per cent. could be proved (and generally no saving can be proved) the amount saved would be 5 per cent. on 25 per cent., or £5 on a £400 house—surely an unwise economy if the house is in any respect, viz., from the point of view of beauty, comfort, healthiness, durability, or cost of upkeep, markedly inferior. Now there are roughly three groups of "alternative methods": timber-framed, concrete, and steel. They are here ranged in their order of architectural adaptability. Timber can be made to conform to any design. Concrete is less flexible, because of the greater size of the unit, if of block construction, and the difficulty of shuttering if of monolithic construction. Steel, however, is a rigid material which, if it can be defended at all as a building material for cottages, can only be successful if used on a standardized house evolved by its makers, utterly regardless of position, environment, and personal tastes.

The Braithwaite Steel House and the Brick House Compared

Let us now examine the steel house. We shall find that even this much-boomed article is not new. Many thousands of men lived in iron huts during the war, and there are, unfortunately, many corrugated iron cottages about the country. In the new steel house the sheets are slightly thicker, and they are not corrugated. But what of the cost? In assessing this there are three considerations, first, the initial cost; second, the upkeep cost; and, third, the length of life. We will take two types of steel houses and compare them with a brick house. A pair of non-parlour Braithwaite "all-steel" houses can be supplied for £950, exclusive of foundations, drainage, fencing, gates, and paths. With these data it is possible to make a comparison with a brick house of almost identical design now in course of erection, and for which the accepted tender, in January, was £442, inclusive of those items omitted from the steel quotation. The overall measurement of the brick house is about 10 ft. less than that of the Braithwaite house, but as the containing walls of the Braithwaite house are less than the 11 in. cavity walls of the brick house the internal superficial area of the Braithwaite house is 35 ft. super more than the brick house. In the following figures, therefore, a pro rata sum has been added for this 35 sq. ft., and this is actually more than the extra floor space would cost as doors, windows, fireplace, staircase, fittings, etc., remain unchanged. The comparison is as follows:—

Brick House.

Tender price as built, including foundations, drains, paths, fencing, containing 853 F.S. within containing walls	£442
Pro rata addition of 35 F.S., to give same accommodation as Braithwaite House ..	18
	£460

Braithwaite House.

Price per house as quoted half £950	£475
Add for foundations	15
Add for drains	5
Add for fencing, gate, and paths	15
	£510

The brick house is one of a scheme of about 200 houses, the labour is at T.U. rates, and the price for common bricks is 75s. per 1,000.

The Weir Type and the Brick House Compared

Let us take another type of steel house, the Weir house. The main differences between the Braithwaite and the Weir types are that the Braithwaite has a steel roof, the Weir a foreign tile roof; the Braithwaite sheets have their edges turned in to form flanges that are bolted together; the Weir sheets are flat and have cover strips. The Weir house is provided with foundations, but appears, from the illustration, to have no surface concrete. In the Weir house there is a sheet of felt between the external and internal linings.

The following is a cost comparison between the same brick house and a Weir bungalow of the Cathcart type:—

Brick House.

Brick house 853 F.S. within containing walls	£442
Pro rata reduction of 177 S.F. to give the same area as the Weir house	91
	£351

Weir House (Cathcart Type).

Price per house as quoted	£390
Add for transport, say	25
Surface concrete	10
Drains	5
Fencing, gates, and paths	15
	£445

The above tables, reduced to rates per foot super within the containing walls, are as follows: Braithwaite, 11s. 6d. per F.S.; Weir, 13s. 2d. per F.S.; brick house, 10s. 4½d. per F.S.

The Question of Maintenance

So much for the first cost. We have now to consider the question of maintenance. As these particular houses have not been subjected to the test of endurance and maintenance we are obliged to use our judgment in the computation of figures. In certain respects, however, it would seem inevitable that the upkeep cost of the steel houses will be extremely high.

The internal linings of the steel houses are one or other of the patent "boards" nailed to wood studding or asbestos sheets, leaving a 6-in. air-space between the internal and external linings. If any of the internal sheeting is damaged (and the asbestos sheets are extremely brittle, so that damage is almost inevitable, especially where there are children), the whole sheet must be replaced, whereas damage to plastered walls is a local matter, easily remedied without disturbance to the surrounding work. All these boards and sheets in the steel house must be covered at their joints with fillets of wood, and to keep the cost down these must be as light as possible. Mischievous children might easily prise these strips off, and certain classes of tenant might even use them as firewood. These strips must be disturbed whenever a new board has to be replaced, and their presence increases the periodical bill for painting or staining.

Condensation

As has been stated, the external sheets of the Braithwaite house have their edges turned inwards forming stiffening flanges. These sheets form the main structure for walls and roof. A sort of dummy chimney breast is formed with the steel sheets. It is claimed that the warm air from the backs of the coal or gas fires circulates around all the cavities, including the roof space, and prevents condensation. As, however, to have more than one fire is

an extremely rare occurrence, it is fairly certain that the spare heat will be quite inadequate to prevent condensation on the inside of the steel sheets. Moreover, if there ever be sufficient heat to evaporate the moisture locally it will recondense elsewhere where the surfaces are colder. It may therefore with some justification be assumed that the inner surfaces of the sheets will be generally damp, and such dampness will hasten the rusting of the sheets on their inner sides where they cannot be examined. As to the external painting, the steel sheets should certainly be painted frequently, the precise frequency varying perhaps with the locality. In the case of the Braithwaite house the roof also is included. If the painting were done regularly and at short intervals it could scarcely cost less than £3 per house per annum. Whereas a brick house is not likely to require repointing more frequently than once in twenty years. As to the internal maintenance, the cost of this is more difficult to arrive at, but £1 per annum may be regarded as a low figure to represent the extra over that necessary in a brick house, due to the replacement of damaged linings and cover strips and extra painting to the latter. The maintenance of a steel house may therefore tentatively be placed at about £4 per annum over and above that of a brick house. Capitalized, this represents a sum of £80, say, in the case of the Braithwaite house, and £20 for the Weir house, making their real cost not £510 and £445, but £590 and £515.

The Steel House's Probable Life

The life of the steel house can only be assumed. Well-built brick houses are good for two hundred years or more. He would indeed be an optimist who would predict a similar age for the steel house. Indeed, in the opinion of many their short lives is their redeeming asset, so that those who are young may hope to outlive the spoliation of the country which they will effect. Let us, however, give them forty to fifty years. A heavy sinking fund will appear on the annual balance sheet, and the annual depreciation will vary with the two types from about £10 to £12 15s., according to whether we take the life at forty or fifty years.

Finally, we have to consider the house from the point of view of beauty and comfort. There are those who think that since beauty has no commercial value it should be ignored. Such an attitude is profoundly wrong. Other things being equal the prosperity of a country is to a large extent dependent upon the health and happiness of its inhabitants. To such health and happiness the presence of beauty as an integral part of daily life is an important contributive factor. As to comfort one of the first essentials is the maintenance of an equable temperature within the house, for this purpose a material which is partially absorbent and a bad conductor of heat is the most efficient. Some years ago a report was published by the Building Materials Research Committee which contained the result of certain experiments. These showed that the most efficient insulator for cottage building was a 10-in. hollow wall composed outside of 4-in. ballast concrete, and inside of 4-in. coke breeze having a 2-in. cavity. A 11-in. brick cavity-wall proved to be slightly inferior in this respect. Steel is not porous, and is, of course, an extremely efficient heat conductor. The claim for the Weir house is that its capacity to resist change of temperature lies midway between a 9-in. and 4½-in. solid brick wall plastered—an extremely generous claim, we should be inclined to think.

To-morrow's Slums

Yet, despite all these disadvantages, there are those who reiterate that nevertheless a steel house is better than no house; better than many an existing slum. But these arguments will not bear close investigation. A steel house congeries of to-day is a scrap-iron slum of to-morrow. It is almost certain that the necessary funds will not be expended to keep the houses in repair, and they will at once begin to deteriorate. So soon as this happens the property will depreciate, the class of tenant become lower and lower, sub-letting and overcrowding will begin, and a new slum will come into being. It is not difficult to picture the squalid dereliction. As the sheets become loose they will bang and rattle in the wind, as the inner linings become broken the cavities will be filled with refuse and afford a rich breeding-place for germs and vermin; and amongst this rusty wreckage a population will shiver in winter and sweat in summer. If, however, no other building material were available we might still be compelled to face the prospects of steel cottages, but we must never lose sight of the fact that this material is suggested in a country phenomenally rich in brick earth, and it is hard to believe that it is in the interests of the nation to transport sheets of steel from, perhaps, as far north as Scotland to distant parts, rather than make bricks in various localities out of the rich earth. Neither can we think that it is beyond the wit of the nation so to organize its resources.

Politicians know very little about the technical side of building; if, however, they wish to assist in the erection of houses in adequate numbers they will be well advised to endeavour to restore rational and national building methods rather than offer sums to local authorities to build specimen houses in a material which is neither cheap, beautiful, nor suitable for the purpose.

"The Limes," Brampton, Huntingdon

WILLIAM A. LEA, Architect

"THE Limes" is situated in the village of Brampton, two miles south of Huntingdon. The house was originally rectangular, with drawing-room, dining-room, kitchen, and three bedrooms over. The kitchen was enlarged, taking in for the purpose the original small hall. The dining-room was converted into a hall, the front door being removed some feet to the right to form the present entrance. The original drawing-room remains, but it has been considerably enlarged, a back passage having been taken in for the purpose. A kitchen with offices, and two bedrooms and a dressing-room over were added, also an engine-house for lighting, heating, and pumping purposes. The modern range and fireplaces were removed and the chimney corners reconstructed.

All the existing old materials were re-used wherever possible, and the new roofs were covered with old hand-made tiles. The whole of the interior painted work to the ground floor is black, and the walls are distempered cream throughout, except those of the drawing-room, which are covered with a paper of grey shade.

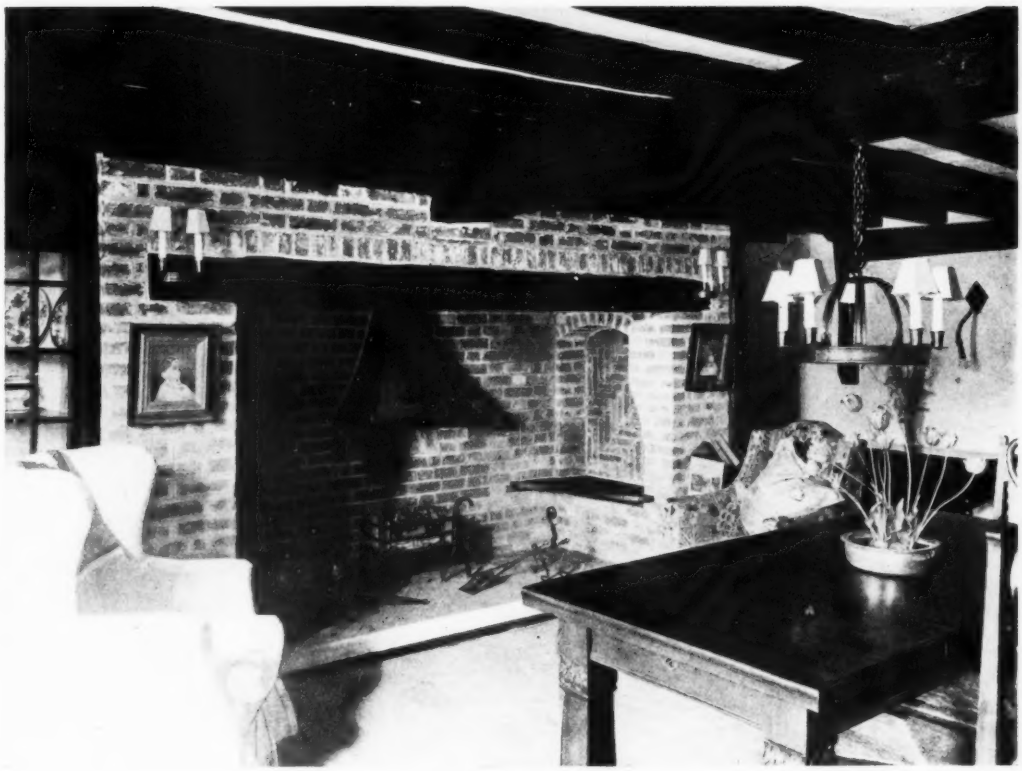
The walls of the original portion of the house are of stud and plaster—with brick gable ends—with old roughcast finish. The new walls are of 9-in. key-faced bricks, the exterior being finished in roughcast, and the whole tinted cream. The ceilings to the open hearths were in reinforced concrete, and the reduced flues were constructed on top.

The contractors were Messrs. M. J. Allen and Son, of Brampton, Huntingdon.

THE "ADDITION," FROM THE GARDEN.

PLANS.

"THE LIMES," BRAMPTON, HUNTINGDON. WILLIAM A. LEA, ARCHITECT.



THE DINING ROOM.

THE DRAWING-ROOM.

"THE LIMES," BRAMPTON, HUNTINGDON. WILLIAM A. LEA, ARCHITECT.

The Selfridge Wholesale Building, Oxford Street

G. THRALE JELL, A.R.I.B.A., Architect

MESSRS. SELFRIDGE & CO., LTD., have lately taken over for their wholesale department a new building almost opposite their famous Store. This building in its own way is no less remarkable than the great columnar Store itself. In fact, it has a marked affinity to it, inasmuch as it displays the use of metal for street façades on a comprehensive scale.

The Selfridge Store was one of the first buildings in London to introduce the use of metal infilling for the window openings of street frontages. Since the Store startled all London in 1909 with the scale and simplicity of its treatment, the use of metal for elevations has greatly increased. With the Selfridge Wholesale Building, now illustrated, we have reached the point where metal is used for almost entire façades.

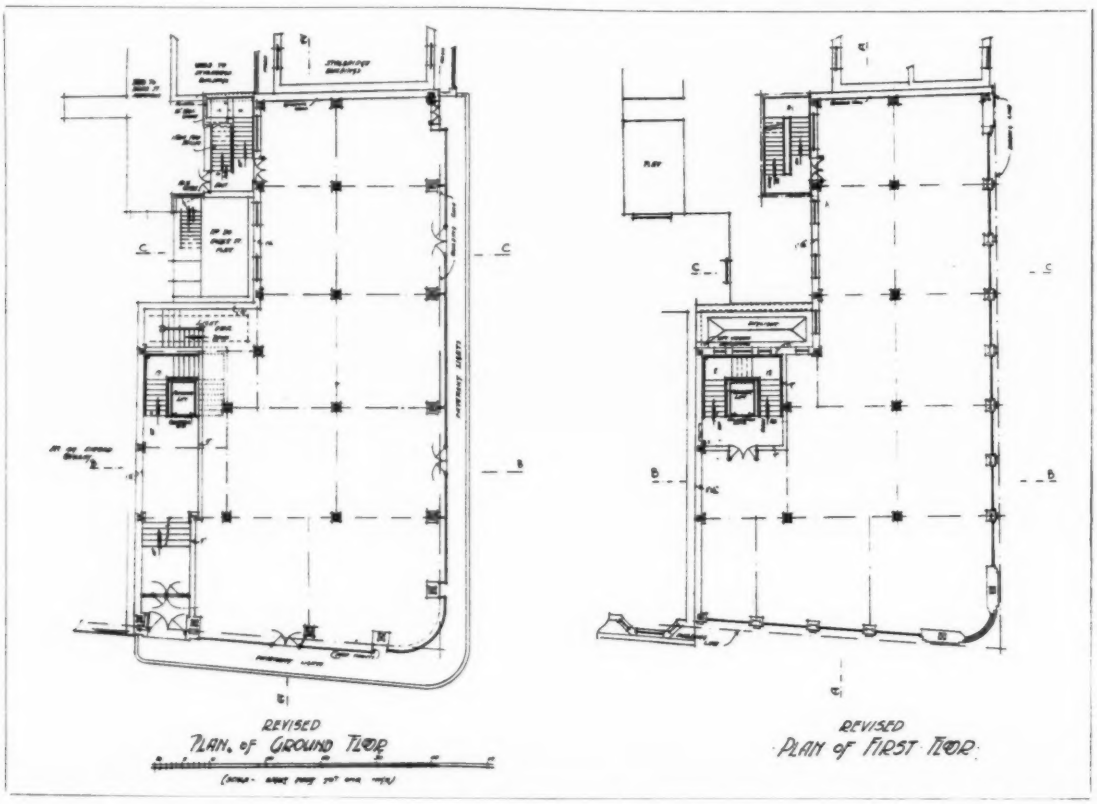
Elevations tend to become more simple in conception and less ambitious in the materials in which they are interpreted. The elevations of the Selfridge Wholesale Building, for example, are designed as big frames with a simple metal infilling. In other words, the whole façades become what they ought to be in a distinctively shopping centre—that is, shop fronts.

The building is a steel-frame structure, and the elevations are carried out in cast-iron, painted bronze colour, with excellent effect. A special point about the building is that it has no chimney stacks; the entire building is heated by electricity in order to eliminate smoke.

It should be pointed out that the ground-floor shop fronts were not designed by Mr. Thrale Jell—they were put in by Selfridge & Co.

The general contractors were Huntingdon & Co., and the main sub-contractors were as follows: The Columbian Fireproofing Co., Ltd. (patent floor); Dorman Long & Co., Ltd. (steelwork); John Blaikie and Sons, Ltd. (warming, hot water, etc.); Duncan Watson & Co. (electrical work).

STREET ELEVATION.



Current Architecture. 269.—The New Selfridge Wholesale Building, Oxford Street, London

G. Thrale Jell, A.R.I.B.A., Architect

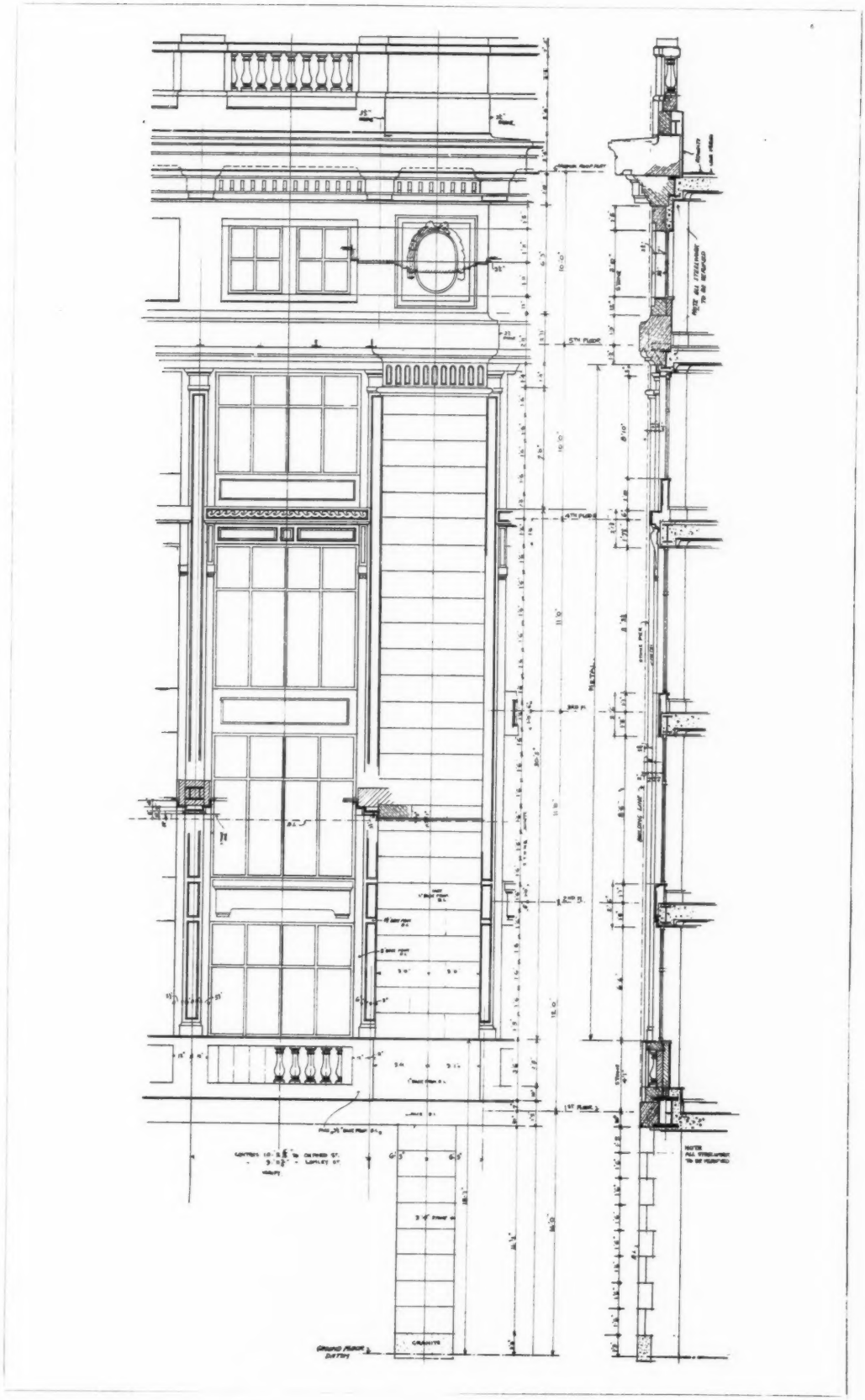
Messrs. Selfridge's Wholesale Department Building is on a site opposite their main Store in Oxford Street. The building is a steel-frame structure, and the elevations are carried out in cast-iron, painted bronze colour.

Current Architecture. 270.—Messrs. Selfridge's New Wholesale Building, Oxford Street, London

Current Architecture. 270.—Messrs. Selfridge's New Wholesale Building, Oxford Street, London

G. Thrale Jell, A.R.I.B.A., Architect

This perspective sketch of Messrs. Selfridge's Wholesale Department shows the building as it will be when completed.



THE NEW WHOLESALE BUILDING IN OXFORD STREET, LONDON, FOR MESSRS. SELFRIDGES.
G. THRALE JELL, A.R.I.B.A., ARCHITECT.

Book Reviews

The Preservation of St. Paul's and Other Famous Buildings.

Mr. Harvey's book deals mainly with the condition of St. Paul's Cathedral, and is very well worth reading by those who are interested either in this particular subject or in the preservation of other old buildings. The book is written clearly, briefly, and altogether excellently; the illustrations are capital, and the printing, etc., all that can be desired.

The conclusions arrived at by the writer differ considerably from those of the official Commission, and some of the suggestions put forward are perhaps rather drastic, but they are all the more interesting for this reason. It is, however, to be regretted that the reports of the Commission should be dismissed by the writer in such an off-hand manner as is the case in the appendix. The Commission is composed of men selected either for their special knowledge of St. Paul's, or for their experience in constructing large buildings, and their considered opinion deserves at any rate great respect. It is, for instance, hardly fair to produce as an argument against their judgment that they are improving their methods, for example, by introducing reinforcements, while the work is in progress. However, it is obviously not the writer's intention to belittle the work of others; the book is an honest attempt to contribute to the good work of preservation.

The essential point of the writer's argument is that the defects in St. Paul's are largely due to the concentration of the loads upon the internal angles of the eight great piers under the dome, and in order to rectify this he suggests the construction of a new cone from the clerestory sill of the dome down to the extrados of the twelve supporting arches, thus transferring a part of the load to the external angles of the eight piers and to the four "bastions." He suggests at the same time the construction of strongly reinforced discharging arches above the vaulting, spanning from bastion to bastion. No doubt the difficulties of threading such a construction through the roofs of St. Paul's Cathedral would be extremely formidable, and it must be remembered that such a process would greatly increase the weight to be carried, though it might have the compensating advantage of distributing the loads more evenly than is now the case. But the Commissioners have expressed their view that any attempt to disturb or to revise the existing conditions of equilibrium would involve fresh and unknown risks, and in the face of this considered statement it is not likely that any heroic experiments of the kind suggested will be tried.

A less drastic suggestion is also put forward by the writer, namely, that strong reinforced girders should be formed at various levels in the walls of the four great avenues of the Cathedral, and this would no doubt be a most beneficial measure. Similar girders have been used freely in the repair and strengthening of other important old buildings, and Mr. Harvey refers to some of these in his book.

With regard to the vexed question of grouting the piers, the Commissioners have deliberately adopted this method of repair as involving less risk than reconstruction. It should be recognized that had the piers been originally built of solid masonry, the loads which Mr. Harvey points out are now mainly concentrated on the inner faces would have become distributed over the whole area of the piers at a comparatively high level. If by grouting under pressure the piers can be converted into a sufficiently solid mass to enable the core to take its fair share of the load, it would hardly seem justifiable to undertake any more radical measures in view of the opinion of the Commissioners that such measures would involve fresh and unknown risks. One cannot lay down a definite rule to fit all cases; decisions must be made by those responsible, and we may feel sure that at St. Paul's there has been no lack of careful consideration on the part of the authorities. The decision to reinforce each borehole in the piers may be welcomed. Such reinforcement acts in the manner of the spiral hooping of a concrete column, and should increase the compressive strength of the whole mass. Mr. Harvey appears to have much faith in steel reinforcement, but probably the St. Paul's authorities will use a metal which is rustless, and in that case the adhesion of the metal to the concrete or grout would probably be effected by mechanical means such as the use of hooked and twisted bars.

As Mr. Harvey himself points out, the repair of an old building demands constant watchfulness. Fresh difficulties constantly arise, and the art of the repairer is to tackle each problem on the spot, keeping in mind the importance of a consistent result at the end of the undertaking.

CHARLES A. NICHOLSON.

"The Preservation of St. Paul's and other Famous Buildings." By William Harvey. Price 10s. 6d. net. The Architectural Press, 9 Queen Anne's Gate, Westminster, S.W.1.

Steel Frame Buildings.

This volume differs from the majority of books on steel structural design in a manner that should recommend it to architects. Instead of the usual practice of introducing diagrammatic sketches where necessary to illustrate theory, Mr. Waldram has selected a number of working drawings of large typical structural members in steelwork taken from actual practice, and his descriptive text shows in detail, without mathematics, how such members should be designed.

The examples chosen include girders, stanchions, a grillage foundation, and a mansard roof.

Although the number of examples chosen is strictly limited, it should be pointed out that they have been selected so judiciously that the book covers the general field of steelwork design for ordinary buildings, and in addition it deals with a number of minor problems, the solutions of which are not readily found elsewhere.

The large plates (14 × 10 in.) of working drawings are an outstanding feature, the details being wholly in accordance with a steel contractor's drawing office practice. There are also a number of illustrations in the text.

The matter is thoroughly sound and up-to-date, while Mr. Waldram has the art of writing so clearly and succinctly that his work can be picked up and understood at a moment's notice, on reference being made to it for elucidation of any particular point.

The volume includes a number of most useful tables in connection with the properties of the revised British standard sections, and one of the appendices is a description of a novel method, devised by the author, for calculating the deflection of beams due to unsymmetrical loadings, a problem which hitherto has been practically insoluble by ordinary formulæ.

W. B. S.

"Structural Design in Steel Frame Buildings." By Percy J. Waldram. Price 12s. 6d. net. B. T. Batsford, Ltd., 94 High Holborn, London.

Publications Received

"Exhibitions and the Arts of Display." By Sir Lawrence Weaver, K.B.E., F.S.A., Hon.A.R.I.B.A. Price 30s. net. "Country Life," 20 Tavistock Street, Covent Garden, W.C.2.

"Swedish Architecture of the Twentieth Century." By Hakon Ahlberg, with a Preface by F. R. Yerbury. Price £4 14s. 6d. Edition de Luxe, £7 7s. Ernest Benn, Ltd., 8 Bouverie Street, London, E.C.4.

"Laxton's and Lockwood's Builders' Price Book, 1925." Edited and revised throughout by W. E. Davis, F.S.I., with a chapter of legal notes and memoranda by A. J. David, B.A., LL.M. (Cantab.), K.C., and T. J. Kelly, Barrister-at-Law. Price 7s. 6d. net (postage 9d.). Kelly's Directories, Ltd., 186 Strand, W.C.2.

"Diana," Bronze Niche Figure from Shipley Hall, Derbyshire

F. Derwent Wood, R.A., Sculptor.

"Ceres," Bronze Niche Figure from Shipley Hall, Derbyshire

F. Derwent Wood, R.A., Sculptor.

Architectural Societies—8

The Northern A.A. : An Historical Sketch

By JOSEPH OSWALD, F.R.I.B.A., a Past President

THE Northern Architectural Association was founded in 1858 by twenty-seven architects practising in Newcastle, Sunderland, Durham, Darlington, North Shields, South Shields, and Alnwick, who met to protest against a flagrant instance of unfair conditions sought to be imposed in connection with a local competition (for a Mechanics' Institute at South Shields). These gentlemen embraced the opportunity of forming themselves into a society to promote union amongst its members, the elevation of the profession, uniformity of practice, and the general advancement of the art and science of architecture.

At the date mentioned a few similar provincial societies existed, but some of them have changed their names since, whereas the N.A.A. has preserved its title and identity continuously throughout its career. So it is both in fact and name one of the senior provincial societies now allied with the R.I.B.A.

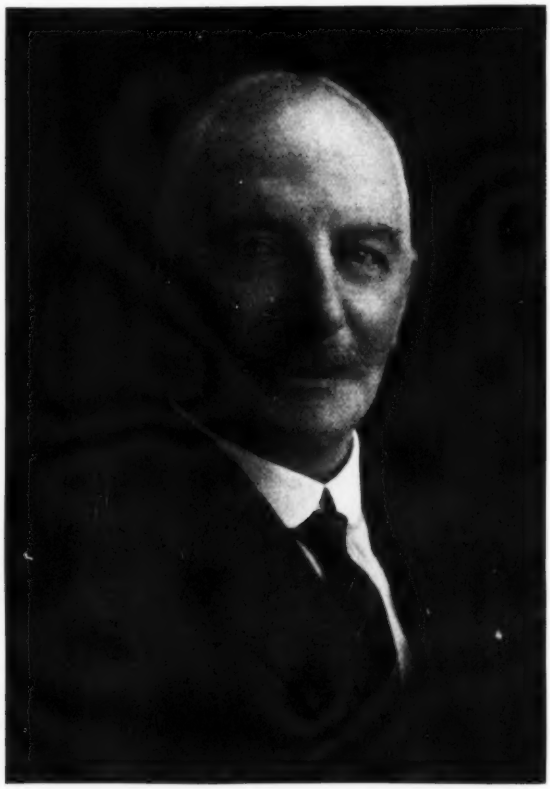
The first president was John Dobson, an architect of much more than merely local fame, whose works in the North of England were numerous and distinguished. He held office until his death in 1865, aged seventy-seven. In the inaugural address written by Dobson and read at the first formal meeting of the Association on April 19, 1859, he gave some interesting particulars of his apprenticeship, completed in 1809, and of his early career as the first exclusively professional architect in Newcastle. All his predecessors had more or less associated themselves with the actual business of a builder. At the time referred to, Mr. Dobson in Northumberland, and Mr. Ignatius Bonomi in Durham, were the only really professional architects between York and Edinburgh. Mr. Bonomi also acted as county surveyor for Durham. He died in 1869. He was an honorary member of the N.A.A., elected July 19, 1859, on the same day as Richard Grainger, the creator of modern Newcastle, who died in 1861. These two gentlemen were the first to be elected honorary members of the N.A.A. Those so honoured have not been numerous (Sir George Gilbert Scott was one). In recent years they have generally been elected from among ordinary members retired from practice or who have left Newcastle.

THE LATE JOHN DOBSON, FIRST PRESIDENT.

The first secretary of the N.A.A. was Thomas Oliver, who held the office from 1858 to 1876, with the exception of two years (1870–1), during the first of which he was president. He was president again in the years 1877–9. In 1877 he was presented with a gold watch in testimony of his services as secretary. He resumed office as such for a short time in 1883–4. After an interval of non-membership, commencing in 1885, he was elected an honorary member in 1895 in recognition of the services he had rendered to the Association in its early days. He died in 1902 in his seventy-eighth year.

At first the meetings of the N.A.A. were held quarterly, and at them some excellent papers were read. The first was on "English Architecture in the latter half of the Twelfth Century," by Mr. Thomas Austin, who succeeded to Dobson's practice. Mr. Austin was the first treasurer of the Association. Unfortunately, he had to leave England for Australia in 1864 on account of ill-health, and died at sea in 1867 (aged forty-five) on a voyage back to this country. "Notes on Continental Architecture" was the title of the second paper read before the Association. The author was Mr. Archibald M. Dunn, who enjoyed a large practice in Roman Catholic circles, and lived to the ripe age of eighty-four. At the time of his death, which took place at Bournemouth, where the last years of his life were spent, on January 17, 1917, he was the penultimate survivor of the founders of the Association, the last being Mr. Edward R. Robson, who died at Blackheath only two days later, aged eighty-one. The latter's connection with the Association was severed early, when, in 1859, he left Durham for Liverpool, and ultimately London, but Mr. Dunn's membership continued to the close of his life. He was president in 1896. He had been called to that position more than once before, but had always previously declined the honour. Mr. Robert James Johnson, in 1861 read before the Association, "Notes on Early French Architecture," to which he was at that time much attracted, and in 1864 published his well-known book on the subject. He was partner with Mr. Thomas Austin, and after the death of the latter, whose name was retained in the style of the firm, Mr. Johnson carried on an extensive practice for some years alone, and afterwards took into partnership his pupil Mr. William Searle Hicks. This combination continued until 1882. After having been associated in practice with two other gentlemen, Mr. Johnson died in 1892 at the age of sixty, after removal from Newcastle and some years of ill-health.

Mr. Austin, Mr. Dunn, and Mr. Johnson were all original members of the Association. Besides the papers contributed by them and mentioned above, there were others read in those early days on very practical topics, such as "The Evils of our Present Practice and the Best Way to Remedy Them," on "The Duties of Architects," and "The Momentous Sanitary Question." These were all printed in the "Proceedings" of the Association, which, unfortunately, ceased to be published after 1862. In those early days, too, annual excursions were made to places of interest in the neighbourhood. These pleasant and profitable outings have been continued to the present time with comparatively few intermissions.



MR. W. T. JONES, F.S.A., F.R.I.B.A., PRESIDENT.

As early as 1860 the N.A.A. interested itself in the scheme for architectural examinations proposed to be established by the R.I.B.A., and since 1862 the Architects' Benevolent Society has continuously received the support of the N.A.A.

The proposal to form an alliance of the various similar societies then existing in the kingdom emanated from the N.A.A. as far back as 1860. It drafted the scheme upon the lines of which the Architectural Alliance, as it was called, was subsequently established and maintained for many years. It consisted of nine societies : one in London, two in Scotland, and six in England. The Architectural Alliance, it is true, in name exists no longer, but its place is more than filled by that wider alliance which has been established between the R.I.B.A. and various architectural societies throughout Great Britain, Ireland, and the Dominions.

The N.A.A. was, it is believed, the first (for it did so in 1861) to formulate a scale of professional charges, which, with modifications, is still in its general lines the recognized scale of the profession.

The N.A.A. was also from its outset active in offering suggestions to the promoters of competitions, now the general policy of the R.I.B.A. The result has been the amelioration, at least, of many evils.

The N.A.A., ever watchful in the interests of practising architects, has had frequently to exert itself to prevent assistants in the offices of municipal and district surveyors undertaking private work, and also has frequently protested against such surveyors themselves acting as the architects for important public buildings erected for the authorities of which they were officials. The bye-laws of local authorities have, when opportunities arose, received attention and criticism from the Association.

The enthusiasm of youth having tended to decline in the lapse of years, the Association showed some signs of languishing, but in 1884, on the appointment of Mr. Frank West Rich as secretary, new energy was infused into its affairs. About the same time a paper was read before it entitled "Suggestions for making the Association more generally useful." Many of these suggestions were accepted *con amore* by the members as desirable innovations. Amongst them were the more frequent holding of meetings, indoors during winter and outdoors during summer; the encouragement of students by the offer of prizes for studies of old work, etc.; the formation of a library; and the acquisition of a more convenient place of meeting than had hitherto been available. Up to that time the indoor meetings had taken place in the keep of the castle, by the kind permission of the Newcastle Society of Antiquaries, and a good many years were yet to elapse before a change of *venue* became feasible. Then the Association migrated from one rendezvous to another, until, as will be subsequently related, the premises were acquired that the Association now owns and occupies. A revision of the rules of the Association obviously became necessary, and was effected in 1885. In later years further revisions of the rules took place to meet the growing requirements of the Association in 1894, 1911, and 1921. Among the results of the re-animation of the Association were a steady increase in the number of members, and in the attendance at meetings, and an augmented interest in all its doings. Thenceforward the annual addresses of successive presidents were printed and circulated, as also the annual reports of the Association.

In or about 1887 a bill for the registration of architects was introduced into Parliament, and the Association cordially supported it, regretting that the R.I.B.A. did not initiate the movement for it. Notwithstanding this, and perhaps to some extent on account of it, the Association entered into alliance with the R.I.B.A. in April, 1889, being among the first of the provincial societies to do so, and the president, Mr. E. J. Hanson, was elected on the R.I.B.A. Council. He reported the surprise of his colleagues on that Council when he presented a very outspoken resolution, passed by the N.A.A., in favour of registration, and condemning the lukewarm attitude of the R.I.B.A. towards it. In its report, dated March, 1891, the N.A.A. deplored the action of the R.I.B.A. in opposing the progress of the movement towards registration, though the difference of opinion between the two bodies did not interfere with their friendly relationships.

In 1893 Mr. Rich retired from office as secretary after holding it for nine years, and was presented with a silver rose-bowl as a tangible memento of the esteem in which he was held by the members. He was followed in the office of secretary by Mr. Arthur B. Plummer, who proved a worthy and energetic successor. Throughout the fourteen years he held the secretaryship he exerted himself largely towards the encouragement of students and the advancement of their education. In this he was cordially assisted by Mr. William Glover, who was destined to become the most conspicuous benefactor to the Association. This gentleman had been elected a member in 1881, and took an active interest in the affairs of the Association, with the result that he attained the presidential chair in 1899 and held it for two years. He left Newcastle at the end of 1901 in order to reside in the south of England, whence he came. In 1897 Mr. Glover had presented the presidential badge, and from time to time many other gifts, including substantial donations of money towards the library and students' prize funds, etc. In 1903 and 1904 Mr. Glover presented £2,000 of Consols. It was due to this munificence that the Association was able in 1905 to purchase the premises, No. 6 Higham Place, Newcastle, for its permanent abode, besides establishing for the benefit of the younger members the Glover travelling studentship and medal. When he died on January 23, 1912, aged eighty-two, it was found that he had made bequests to the Association totalling, ultimately, probably from £3,000 to £4,000 in Consols (partly subject to an existing life interest) in trust to apply the income therefrom for educational purposes in connection with architecture, or between such education and benevolence. Mr. Glover also left large benefactions to the Archi-

tects' Benevolent Society, associating these with the name of the N.A.A.

In October, 1905, the R.I.B.A. paid an official visit to Newcastle on the invitation of the N.A.A., Mr. J. T. Cackett being its president at the time. The proceedings extended over three days.

In 1907 Mr. Plummer retired from the secretaryship and was elected president. In 1908 a chiming clock and silver salver were presented to him in testimony of his long and arduous work as secretary. Mr. C. S. Errington succeeded Mr. Plummer as secretary, and the Association was again fortunate in securing an able and energetic official in that capacity.

On February 22, 1909, the Association commemorated the fiftieth anniversary of its foundation by a dinner at which about seventy sat down, including two of the founders, Mr. F. R. N. Haswell and Mr. E. R. Robson. Mr G. T. Brown, the president of the N.A.A., occupied the chair.

In 1913 Mr. Errington retired from the secretaryship after six years' service, and was presented with an antique Sheraton bureau as a testimonial. He was succeeded by Mr. H. L. Hicks, whose hope of following in the steps of his predecessors was frustrated by the outbreak of war in 1914.

This put a stop to practically all the ordinary operations of the Association, although the president, during its continuance (Mr. R. Burns Dick), addressed the members at one meeting in each year, and at the beginning of 1915 issued a printed appeal in lieu of a presidential address calling upon members to rally round him and resume the work of the Association at the commencement of a new era. During the war, at least 85 members, associates, and students, served in various military and naval capacities. Of these, the following lost their lives: J. B. Cubey, G. E. Hunter, A. E. Lowes, P. G. Graham, I. Henderson, G. P. Boyd, W. R. Isherwood, A. W. Wilkinson, T. J. Waller, and W. N. J. Moscrop.

Following the termination of the war Mr. Dick was succeeded by Mr. Errington as president, and Mr. Hicks was succeeded by Mr. G. T. Brown as secretary. (Mr. Brown had been president in 1908–9.) These gentlemen and the subsequent president, Mr. T. R. Milburn, did wonders in resuscitating the Association. To the deep grief of all who knew him, Mr. Brown died in December, 1922, aged fifty-six. The eighth secretary of the Association, he was the first to die whilst holding the office.

Mention has already been made of the Association's approbation, as far back as 1860, of the R.I.B.A.'s scheme for architectural examinations. These having been established, in the course of years one of them was held for the first time in Newcastle under the management of the N.A.A., in 1893, succeeded by others in 1899, 1904, 1907, 1910, and 1911.

The N.A.A. always advocated that the Durham College of Science, now named the Armstrong College, in Newcastle-upon-Tyne, should make arrangements to supplement the partial education that architects' pupils receive in the office of their principals, and various schemes in this direction were suggested from time to time, culminating, in 1922–3, in the foundation of a school of architecture (with a degree and diploma course) at the College, which is part of the University of Durham. The N.A.A. has afforded financial assistance thereto by contributing £500, derived partly from accumulated surplus income arising out of the Glover educational fund and partly from subscriptions by individual members; in addition the college is to receive £50 per annum out of the income of the Glover fund. Lectures given before the Association during the last winter session have been delivered at the Armstrong College and thrown open to the public.

In order to keep more in touch with the smaller towns within its province the Association, from 1895 onwards, appointed honorary local secretaries resident in such towns, their duty being to report to the Council of the N.A.A. any local professional matters appearing to require the intervention of the Association. First steps in this direction were taken in 1894, when two meetings were held in Sunderland to bring the claims and advantages of the Association before the architects practising there. This was carrying out one of the proposals made ten years before for making the Association more generally useful.

Further and wider developments have just taken place, by which branches of the Association have been formed for Tees-side (in 1922), and for Cumberland (in 1923). The first-named comprises the two Hartlepools, Stockton, Darlington, Middlesbrough, and their surrounding districts, also Bishop Auckland. The first chairman is Mr. J. A. Lofthouse, of Middlesbrough, and the first hon. sec. Mr. A. Harrison, of Stockton. The Cumberland branch covers the whole of that county. Mr. G. D. Oliver is the first chairman, and it is interesting to note that he is the son of the first hon. sec. of the N.A.A. The chairmen of both branches have seats on the Council of the provincial presidents, which meets quarterly at the R.I.B.A., a body of great use in co-ordinating the opinions and actions of provincial societies.

The Association library could scarcely be held to exist in 1886 when the first librarian (Mr. W. H. Knowles) was appointed, but under his care and that of his successors, Mr. H. C. Charlewood (1895–1906), the late Mr. James Bruce (1907–1918), and the present librarian, Mr. F. N. Weightman, it has prospered and become a very important asset of the Association.

A "Students' Sketching Club" in connection with the Association was founded in 1890, and carried on with varying degrees of enthusiasm and success for twenty-four years, until the outbreak of war in 1914. One of the club's prominent features was a long series of annual social gatherings (exhibitions, conversaziones, and smoking-concerts) held from 1891 onwards. Other clubs for conducting students' classes were also formed. Since the war the functions of these have become merged in the "N.A.A. Club." This organization deals largely with the social side of professional life, collaborates with the Association itself in

MR. GEORGE H. GRAY, A.R.I.B.A., HON. SECRETARY.

arranging programmes of indoor and outdoor meetings, etc., and in advising and encouraging the younger men in the pursuit of their studies, relieving, in these ways, the officials of the parent Association from a great deal of what may be termed "internal" work, and thus leaving them more at liberty to devote closer attention to professional subjects arising in regions of possibly wider importance.

At the present time, the Association's affairs are in the hands of a Council of experienced members (headed by the president for the time being, Mr. W. T. Jones, F.R.I.B.A., F.S.A., and including Mr. G. H. Gray, A.R.I.B.A., as honorary secretary), whose assiduity and judgment may be relied on to uphold and pass on unimpaired, to those destined to follow us, the admirable purposes and standards set up by our predecessors sixty-six years ago.

Following is a list of the officers and Council :—

President.
Jones, W. T., F.S.A., F.R.I.B.A.

Vice-President.
Reavell, G., O.B.E., F.R.I.B.A.

Honorary Treasurer.
Cackett, J. T., J.P., F.R.I.B.A.

Honorary Librarian.
Weightman, F. N., M.A., Licentiate R.I.B.A.

Honorary Secretary.
Gray, Geo. H., A.R.I.B.A.

Assistant Honorary Secretary.
Checkley, James F. H.

Members of Council.
Hays, J. W., A.R.I.B.A.
Tasker, A. K., F.R.I.B.A.
Taylor, L. W.
Boyd, J. Z., M.S.A.
Milburn, W. Jnr., A.R.I.B.A.

Associate Members of Council.
Brown, G. Talbot, A.R.I.B.A.
Child, F. A., A.R.I.B.A.
Mackellar, R. N., A.R.I.B.A.

TEES-SIDE BRANCH.

Chairman.
Burton, C. F.

Vice-Chairman.
Richardson, T. W. T.

Hon. Sec. and Treasurer.
Harrison, A.

Committee.
Bell, G. J.
Cayley, C.
Clayton, J., P.A.S.I.
Kitching, R. R., F.S.Arch.
Lofthouse, J. A. E., F.R.I.B.A.
Lister, A.

CUMBERLAND BRANCH.

Chairman.
Oliver, G. D.

Hon. Sec. and Treasurer.
Ayris, H. E.

Members.
Oldfield, H.
Rigg, R. Moreton.
Scott, T. Taylor.
Martindale, J. H.
Slack, J.

The past presidents and past hon. secretaries are as follows :—

Past Presidents.

*Dobson, John	1859–65	*Hanson, Ed. J.	1888–89
*Green, John	1866	*Hicks, W. S.	1890–91
*Moore, Thos.	1867	*Morton, J. H.	1892–93
*Green, John	1868	Oswald, J.	1894–95
*Watson, John E.	1869	*Dunn, A. M.	1896
*Oliver, Thos.	1870	Rich, F. W.	1897–98
*Wilson, F. R.	1871	*Glover, Wm.	1899–1900
*Thompson, M.	1872–74	*Caws, Frank	1901–02
*Johnstone, J.	1875	*Taylor, J. W.	1903–04
*Prosser, Thos.	1876	Cackett, J. T.	1905–06
*Oliver, Thos.	1877–79	Plummer, A. B.	1907
*Oswald, Sep.	1880	*Brown, G. T.	1908–09
*Tillman, John	1881–82	Charlewood, H. C.	1910–11
Rich, F. W.	1883	Milburn, Wm.	1912–13
*Dunn, W. H.	1884–85	Dick, Burns R.	1914–18
*Hoskins, Geo. G.	1886–87	Errington, C. S.	1919–20
		Milburn, T. R.	1921–22

Past Honorary Secretaries.

*Oliver, Thos.	1859–69	Rich, F. W.	1884–93
*Charlton, F.	1870–71	Plummer, A. B.	1893–1907
*Oliver, Thos.	1872–76	Errington, C. S.	1907–13
*Dunn, W. H.	1876–83	Hicks, H. L.	1913–18
*Oliver, Thos.	1883	*Brown, Geo. T.	1918–22

* Those marked with an asterisk are deceased.

A Carved Chimneypiece Panel

This chimneypiece panel was designed and executed by Mr. Eric Aumonier for Mr. Ralph H. Smith, medical book publisher. The carving is decorated with a quiet harmony of colour.

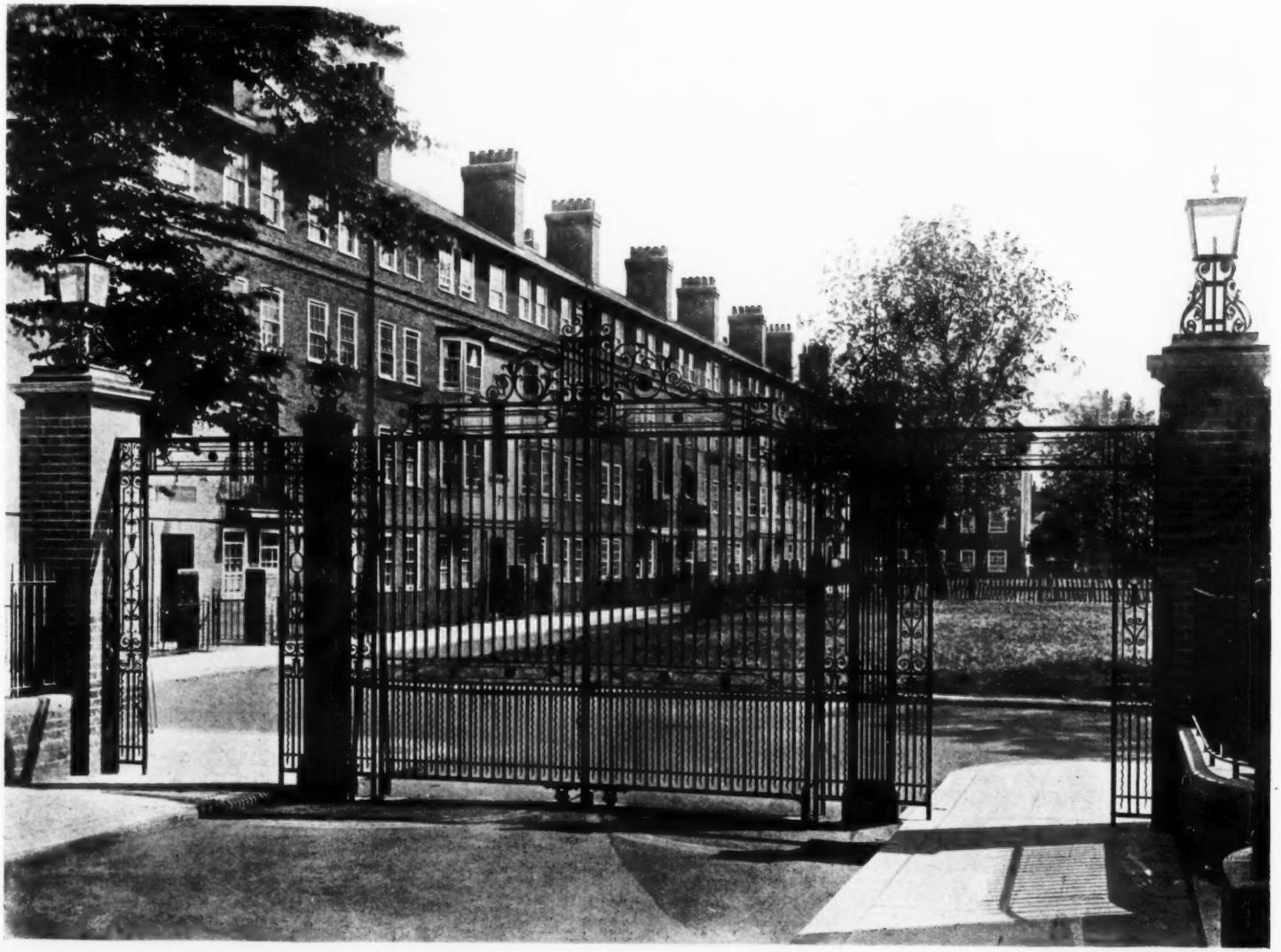
The symbolism expresses the Tree of Knowledge, while the Emblem of Æsculapius is shown destroying the Dragon of Ignorance. The open book denotes the value of the printed word, without which all knowledge and wisdom "would sink in night." Other emblems introduced are Chemistry, Science, and the Lamp of Learning.

DESIGNED BY ERIC AUMONIER.

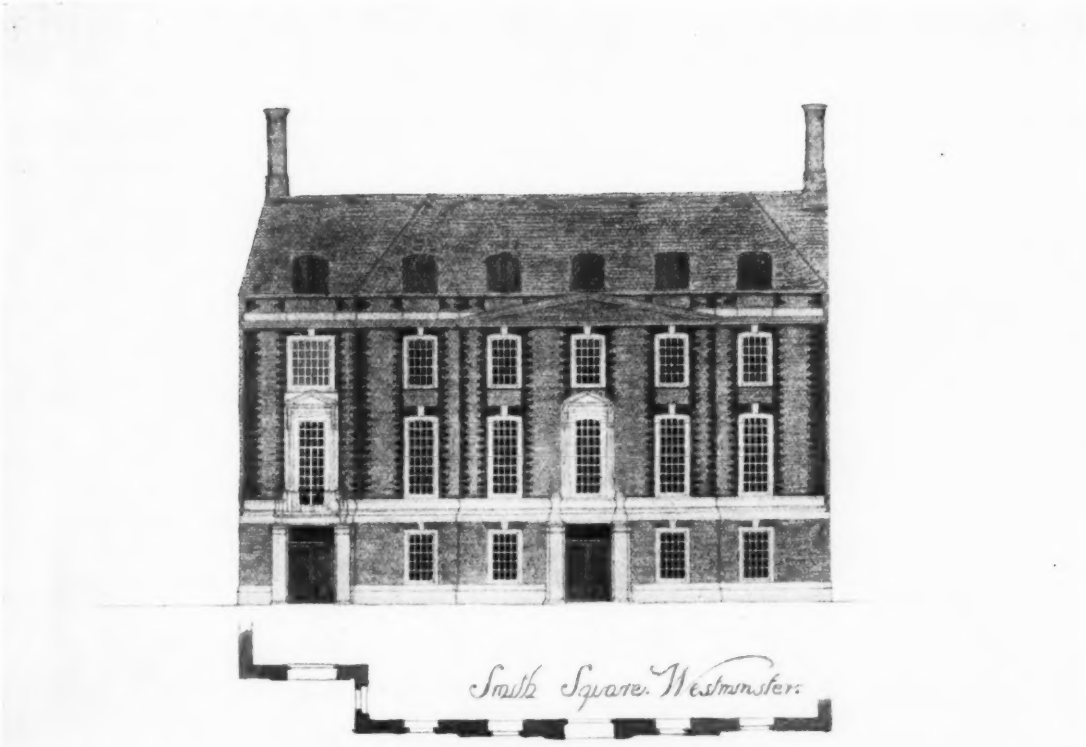
Details of Craftsmanship. 32.—A Pair of Wrought Iron Entrance Gates for

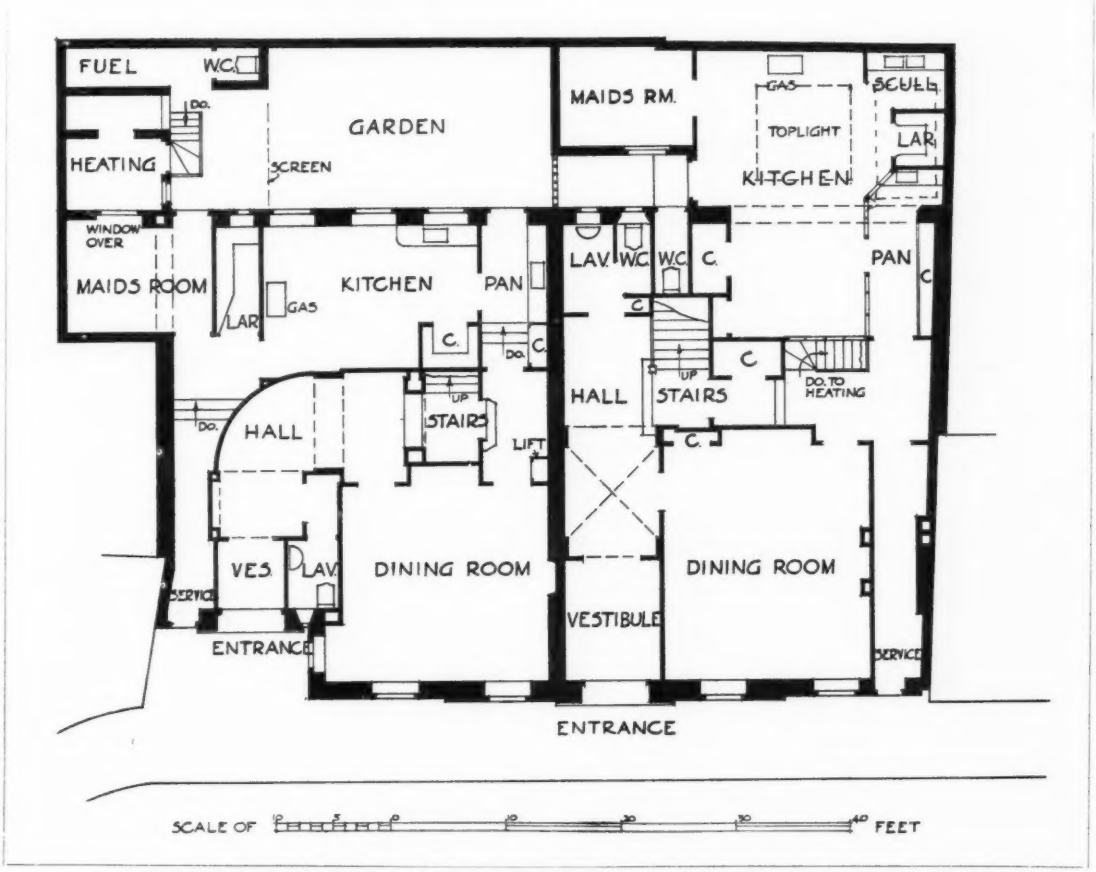
Details of Craftsmanship. 32.—A Pair of Wrought Iron Entrance Gates for His Majesty's Office of Works

C. J. Mole, F.R.I.B.A., Architect



These entrance gates are a feature of a housing scheme at Bethnal Green recently completed by H.M. Office of Works.





A PAIR OF HOUSES: SMITH SQUARE, WESTMINSTER. OLIVER HILL, A.R.I.B.A., ARCHITECT.

Each of this pair of non-basement houses contains four sitting-rooms, eight bedrooms, and three bathrooms. The street façades are faced with two-inch bricks—reds for the quoins, and Dutch bricks for the fillings. The roofs are covered with plain red tiles.

A New Garage and Workshop at Halifax

SCOTT and BAGNALL, Architects

THIS building has been erected on the main road from Halifax to Huddersfield. It comprises a modern garage and workshop, known as Smith's Garage, and it has been built for Councillor Edgar Smith, of the Halifax Motor Company, Ltd. The building has a frontage of approximately 76 ft. to a busy main road, and one of approximately 64 ft. to the side street. There are two stories to these two frontages, and three stories to the other side and the back elevation. The building is built of reinforced concrete (with plain round bar) and has been so designed to obtain the maximum of daylight to the interior.

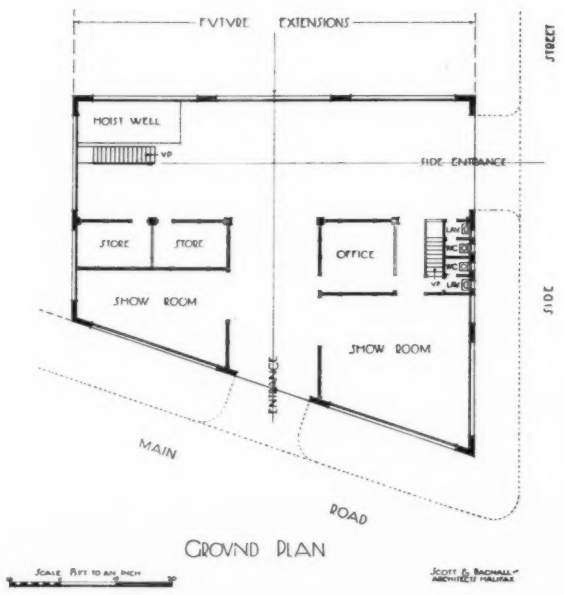
The building consists of three floors, comprising basement, ground floor, and first floor, served by a hoist. The principal elevation is to a main road approximately 30 ft. above the original ground level, and to overcome this difference in levels the piers were carried down to a depth of 35 ft.

During erection, the columns, both rectangular and winged, after emerging from the ground, were supported by shaped clamps above the ground-floor level. The latter were anchored to the floors as erected. Provision for this was made by the systematic insertion of metal sleeves through the concrete of the floors as belting anchorage for the stays, thereby securing good alignment to the building generally. For the shafting, machinery, partitions, etc., provision was made in all beams, and specified position in the floors for bolting down by metal sleeves running through the concrete. These were placed in position during erection. In some instances a novel belt-holder was introduced. This took the form of a metal holder which securely holds a nut in position, into which bolts may be screwed. By placing these at regular distances in the beams a secure erection was obtained for the shafting without any boring or cutting into the concrete.

Upon completion of the building the floors were tested by the Halifax Corporation with a load of 33 tons 12 cwt. over an area measuring 24 ft. by 7 ft., the deflection amounting to $\frac{3}{32}$ in., returning to normal on removal of load. These floors were constructed to take a weight of 2 cwt. per foot super (tested to 4 cwt. per foot).

The general contractors were Messrs. George Greenwood and Son, Ltd., of Halifax and London, and the sub-contractors were as follows: Val de Travers Asphalt Paving Co., Ltd. (flat roofings); Henry Hope and Sons, Ltd., Birmingham (casements and casement fittings); Mr. John Holdsworth, Halifax (plumbing and sanitary work, heating and ventilating); the late Mr. James Haley, Halifax (electric wiring and electric light fixtures).

The elevations were finished with "Medusa" white cement, made by Fandusky Cement Co., U.S.A., agents, Messrs. G. and T. Earle, Ltd., Hull.



GROUND PLAN

A PERSPECTIVE VIEW.

Enquiries Answered

Enquiries from readers on points of architectural, constructional, and legal interest, etc., are cordially invited. They will be dealt with by a staff of experts, whose services are specially retained for this purpose. If desired, answers will be sent direct through the post. In no case is any charge made for this service. Whenever diagrams accompany an enquiry, they should be clearly drawn and lettered and inked in.

NOISE FROM MOTOR.

"J." writes: "The occupants of the room C (shown on the accompanying plan) complain of the noise from the motor B, which drives the electric lift A. The room and the motor are on the ground floor of a building which was erected about thirty years ago, and underneath the floor are cellars. The floor to which the motor is fixed is of steel and concrete, with a cement finish, and that of the room C is of concrete, with wood boarding fixed on battens. The separating walls are of brick. Please tell me how to stop the noise of the motor penetrating to the room C."

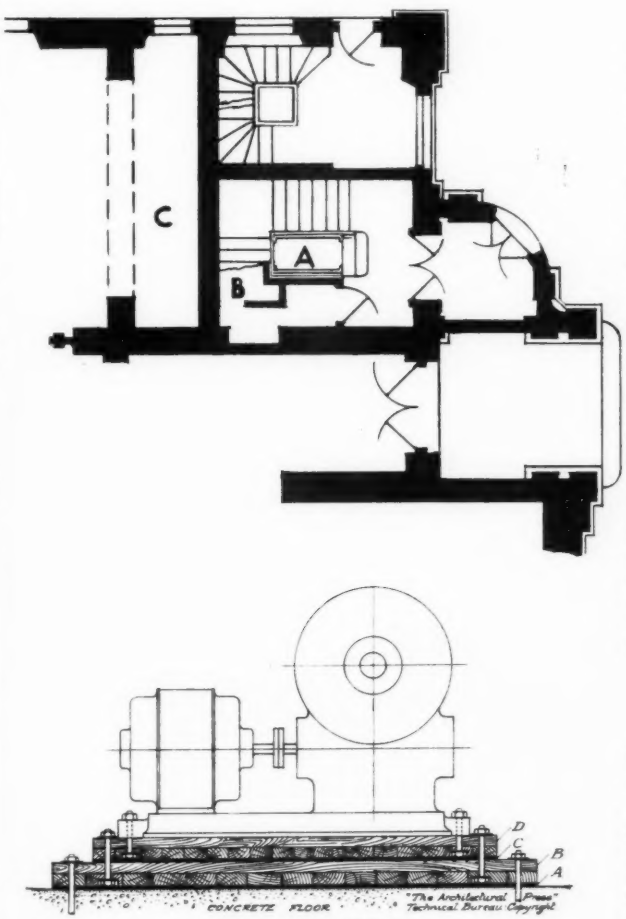
—Vibration of a reinforced concrete structure from machinery mounted upon it is a not uncommon trouble. In the case mentioned by "J," the only certain cure is to remove the motor and lift engine to a foundation in the basement, but as this is apparently impossible under the circumstances, other means must be adopted. While it is out of the question to predict an absolute cure with the motor in its present position, the annoyance can be appreciably reduced by the provision of an elastic foundation.

The accompanying diagram shows a suggested form for this. The motor and winch gear are presumably mounted on one cast-iron bed. This should be lifted and a sheet A of thick close felt, ¾ in. or 1 in. thick, laid on the floor, which should be floated over with a cement rendering to give a flat surface if necessary. On this felt a double layer of crossed deals, B, should be laid. The size of these deals depends to some extent on the size of the machine, probably 9 × 2 in. would be suitable. These should be well bolted together and to the floor. A second sheet of felt, C, and another layer of timber, D, should then be applied, and the machine bolted to the top layer of timber. The two layers of timber can then be bolted together with the felt C between them.

In this way there will be no bolts or other metallic connection between the machine and the floor, and the elastic nature of the wood and felt will absorb all but very heavy vibrations. While the precise degree of improvement cannot be forecast, the alteration is not a costly one, and the benefit will probably be worth the cost in any case.

It is assumed that none of the noise complained of is due to any portion of the mechanism being out of balance. This is unlikely to occur, but it might be as well to have the higher-speeded rotative parts examined if any irregularity in the running is noticeable. A further refinement would be to enclose the mechanism in a sound-proof chamber consisting of double walls lagged with cork or slag wool, but this will probably not be necessary when the elastic foundation is in place. Should such a chamber be erected care must be taken to see that the motor is efficiently ventilated.

H. C.



NOISE FROM MOTOR.
See Answer to "J."

CEILINGS OF CONCRETE FLATS.

"Reader" writes: "What is a good method of constructing ceilings under concrete flat roofs? The flat roof I have in mind is of concrete reinforced with rods, and is over an important room. Is there likely to be trouble by condensation? Where expense is not a primary consideration, what is the best method of overcoming any such defect? Would a false ceiling to the concrete beams, etc., overcome the trouble?"

—You need not have much fear that condensation will spoil your ceiling. The term is often loosely applied, as will be readily understood when careful thought is given to the matter. When we breathe on a cold mirror, the warm moisture in the breath gives up its heat on striking the cold surface and becomes water. This, of course, is common knowledge to us all. Steam from a kettle will make a cold body such as a piece of iron wet, and only when this condition is met, namely, when water in the form of vapour impinges on a cold surface, do we get condensation, and this condition rarely occurs in buildings. It sometimes occurs in factories where the atmosphere is warm and moist, and where the roof is of such construction that it readily conducts away the heat from the inside. For instance, if there is a large proportion of glazing in the roof and the outside temperature is low, it would be possible for the moisture of the air inside, if hot, to condense on the underside of the glass. If the ceiling of the room forms a flat roof and is in a district where it is very cold in winter, a false ceiling would have the effect of insulating the underside of the ceiling, and would therefore prevent to a large extent the conduction of the heat of the room away, and would ensure safety from the trouble our correspondent fears. But we consider the risk very slight, and a good lime and hair plaster would absorb the moisture, if any, from the atmosphere.

R.

CLEANING BRICKWORK.

"V." writes: "Please tell me how to clean the face of existing brickwork in order to restore it to its original condition."

—The answer depends considerably on the nature and extent of the brickwork, and whether ordinary dirt and grime are in question, or stains arising from other causes. A large building would be worth while tackling with the steam-brush apparatus—a small area might be scrubbed with several changes of water and soft soap or weak spirits of salt, followed by plentiful rinsing with clean water. Avoid stains, colouring matters, or rubbing down with soft brick.

E.

Law Reports

Claim for Architect's Fees

Younghusband v. *Ward.*

King's Bench Division. Before Mr. Justice Roche.

This was an action by Mr. Richard Younghusband, an architect and surveyor, of St. James's Street, S.W., against Mr. John A. Ward, of Sutton, Surrey, to recover the sum of £180, being 1½ per cent. for partial services, R.I.B.A. scale, on £12,000.

Mr. Hawke, K.C., appeared for the plaintiff, and Mr. Doughty, K.C., for the defendant.

Mr. Hawke said the plaintiff prepared pencil drawings for the proposed erection of twelve flats, and three shops with offices above, on a semi-circular piece of land at the junction of Clarence Road, Robin Hood Lane, and Collingwood Road, Sutton, of 240,000 cubic feet, plaintiff estimating the cost at £12,000. The plaintiff's largest work was the super-cinema at Sutton, costing £176,000.

Mr. Doughty contended that the plaintiff had not been authorized to produce the plans, and that those which were forthcoming were useless.

Mr. Hawke said when the plaintiff communicated with the local council he found that they were considering the purchase of the land from the defendant for £400, and all work was stopped. Defendant, when he asked for the rough pencil sketches, said he did not contemplate doing anything for a year or two.

Plaintiff gave evidence, and said he was a Licentiate of the Incorporated Faculty of Arts.

His lordship: A very distinguished body, of which Lord Leverhulme is president.

Mr. Wm. Woodward, architect and surveyor, and Mr. H. Crickmay (Messrs. Crickmay and Sons, architects), gave evidence for plaintiff.

Defendant gave evidence, and stated that he gave £350 for the land. He thought of erecting an office for himself, and suggested that plaintiff should give him a rough sketch of the office he desired to erect, and how to use the odds and ends of the land. No scheme was suggested, and nothing was said as to the cost of any buildings to be put on the land. Defendant declared that he never saw any drawings.

Cross-examined: With regard to the land, he changed his mind as to his user of it, and sold it. He omitted to tell the plaintiff this. The proposal to erect shops and flats was never mentioned by him to the plaintiff.

Mr. H. Gilbert, architect, of Finsbury Square, gave evidence for the defendant.

His lordship, in giving judgment, said that he accepted the defendant's evidence in the main. Plaintiff was asked for a rough pencil sketch. In his lordship's view the claim put forward was utterly out of proportion to that merited by the case. The sum of fifteen guineas had been paid into court as sufficient to cover the cost of all plaintiff had done. He thought that sum nearer the mark than the amount claimed. He awarded the plaintiff twenty-five guineas on a quantum meruit. If people would enter into contracts without stipulating the cost, they must expect to have to pay perhaps more than they would have had to pay if they made a bargain as to costs.

Right to Remove a Door—Injunction and Damages Claimed

Young v. *Mainzer.*

King's Bench Division. Before Mr. Justice Greer.

This action involved an interesting point relating to the rights of a landlord over demised premises. The plaintiff, Mrs. E. N. Young, who occupied a flat over business premises at 18 Berners Street, London, claimed an injunction and damages against her landlord, Mr. Mainzer, on the ground that he had removed a certain glass door, which she alleged was the front door to her flat.

The defendant denied that he had been guilty of any act which justified the plaintiff seeking the relief she asked for.

His lordship, in giving judgment, said the question he had to decide depended upon what was meant by the lease which the plaintiff held. The defendant, it appeared, removed the door in August, 1923, and this left the plaintiff without protection against persons who liked to walk into her flat. This caused her annoyance, and she had to go away for two days and had a temporary door fitted. When the lease was entered into in October, 1922, the rest of the premises were let as business premises, and this part was the only part let as a residential flat. It was approached through a glass door on the third floor. Inside this door was a small space leading to steps up to an intermediate floor between the third and fourth floors. Beyond the steps was an opening to the right and further steps to plaintiff's suite of rooms. If the glass door on the third floor was not the door of the entrance to the flat there was no door to the flat at all, and if the defendant was right the plaintiff merely took a number of rooms which were approached through a hall which had no outer door. The flat had previously been let as a flat, when the glass door was under the control of the tenant. Plaintiff's lease was not for merely temporary occupation, but was for fourteen years. It was clear from it that it related to a flat which contained a lavatory to which the landlord stipulated that women employed on the building might have access. While "the flat on the fourth floor" was the description in the lease, this reservation showed that it extended technically beyond the fourth floor. The lease also said the landlord agreed that the tenant after March 25, 1924, might set back the front door to the flat such a distance as would be sufficient to place outside the flat an existing doorway to adjoining showrooms. The tenant might also place padlocks and chains on the door at the upper termination of the lift journey. Mr. R. Smith, for the defendant, said that showed the passage to the lift was not let to her or she would not have required permission to padlock the door. His lordship found that there was let to plaintiff all the premises behind the glass door, with the rooms accessory to the fourth-floor rooms, and the plaintiff had been, in fact, allowed by the defendant to treat the whole of these premises as hers. She put furniture and pictures in the hall, and decorated it. This intention the lease carried out, and the removal of the door was a trespass and a very high-handed action which, though in fact it did not tend to great inconvenience, because the lady replaced the door by a temporary one, which was afterwards removed, was a high-handed action which might have led to very grave inconvenience to the plaintiff. For this, his lordship awarded the tenant £50 damages against the landlord, and £2 nominally for failure to fulfil his contract to keep clean the passages and lift. He would not grant an injunction, as he felt his decision would prevent the recurrence of such an act. He gave the plaintiff costs on the High Court scale.

A stay of execution was granted subject to the payment of the damages into court in fourteen days.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Sir K. Wood informed Mr. Livingstone that up to March 1 last the number of houses completed in England and Wales under the Housing Acts of 1923 and 1924 was: 1923 Act, 64,249; 1924 Act, 1,285; total, 65,534. Considerable numbers of houses were being erected without State subsidy. During the twelve months ending September 30 last the total number of houses completed with and without subsidy was approximately 110,000, and the Minister of Health would expect this number to be exceeded during the current twelve months if present conditions continued. In the opinion of the Minister the present rate of construction was providing for the normal increase of population, and also making progress in overtaking arrears.

Mr. Locker-Lampson informed Mr. Day that the numbers of houses erected by the Office of Works on behalf of local authorities were: 1920–21, 232; 1921–22, 1,770; 1922–23, 2,654; 1923–24, 566; from April 1, 1924, to December 31, 1924, 92.

Replying to Mr. Groves, Sir K. Wood said that the amounts of housing subsidies paid by the Chancellor of the Exchequer were:—

	£		£
1919–20	20,455	1922–23	9,649,073
1920–21	3,097,301	1923–24	7,857,555
1921–22	9,109,366	1924–25	8,650,000

Sir K. Wood informed Lady Astor that the representative of the Ministry of Health on the Building Research Board was Mr. Raymond Unwin. The work of the Building Research Board was being extended to include research into all aspects of the housing problem susceptible to scientific treatment, such as the examination of new materials and methods of construction, and the possibility of economizing in the use of

present materials. Additions to the staff of the Building Research Station were being made, and a building at Watford had been acquired and was being equipped at a capital cost of about £12,000. The additional maintenance charges involved would be of the order of £15,000 per annum.

Lady Astor asked what amount of subsidy and what period of loans was being granted to the pair of Nissen houses now erected at Yeovil, in Somerset, and whether the Minister proposed to encourage this form of steel-frame house elsewhere ?

Sir K. Wood said that this experimental pair of Nissen houses had, subject to compliance with the conditions of the Housing Act, 1924, been recognized as eligible for the Exchequer grant of £9 per annum for forty years, and a loan had been sanctioned for a period of sixty years. The Minister was prepared, subject to certain minor modifications, to authorize the erection of houses of this type.

Sir K. Wood further informed Lady Astor that during the year ended December 31, 1923 (the last year for which figures were available), notices requiring repairs, etc., under the Housing Acts were served in respect of 25,277 houses. During this year thirty-seven appeals were received by the department, five appeals were formally dismissed, three allowed, and four allowed in part. The remainder were not proceeded with.

Sir K. Wood informed Mr. Shaw that the British Empire Exhibition authorities were arranging for a display of various new methods of house construction, and it was understood that several methods in which steel construction was employed would be represented.

Societies and Institutions

R.I.B.A. Council Meeting.

Following are notes from the minutes of the last meeting of the Council of the R.I.B.A. :—

School of Architecture, Sydney.—The Council, on the recommendation of the Board of Architectural Education, decided to recognize for exemption from the R.I.B.A. Intermediate and Final Examinations, with the exception of the portion relating to Professional Practice and subject to certain other conditions, the following architectural school: The School of Architecture, The University of Sydney.

R.I.B.A. Examinations.—It was decided to add to the Examiners in Professional Practice the name of Mr. John Keppie, A.R.S.A., as a Scottish representative, so as to facilitate the taking of this examination by the Scottish candidates.

Registration of Probationers.—It was decided that a headmaster's certificate should not be accepted in place of one of the recognized examinations after October 1, 1927. After this date, except in very special cases, no person will, therefore, be registered as a Probationer unless that person has passed one of the recognized examinations in the required subjects.

Wages Slips on Tenders.—On the recommendation of the Architects' and Builders' Consultation Board it was decided to continue for a further twelve months from March 25, 1925, the arrangement made in 1924 between the R.I.B.A. and the National Federation of Building Trades' Employers, regarding the placing on tenders of a slip providing for adjustments to be made in the event of a rise or fall in wages.

Standardization of Building Materials.—Mr. Percival M. Fraser, F.R.I.B.A., was nominated to represent the R.I.B.A. upon a sectional committee appointed by the British Engineering Standards Association to deal with the question of the Standardization of Building Materials.

International Town-Planning Federation, New York.—It was decided to invite Mr. A. Beresford Pite to act as the official representative of the R.I.B.A. at this conference.

Housing in Holland.—It was decided to invite Mr. T. Alwyn Lloyd to act as the R.I.B.A. representative upon a visit to Holland arranged by the National Housing and Town-Planning Council for the purpose of studying housing conditions in various Dutch centres.

Transfer to Retired Fellowship.—Mr. Maurice B. Adams, who was elected an Associate of the R.I.B.A. in 1876 and a Fellow in 1886, was transferred to the list of Retired Fellows.

Reinstatement.—Mr. Wray W. Wheston was reinstated as Licentiate.

The Northern Architectural Association.

At the annual general meeting of the Association the following officers and council were elected for the ensuing session :—

President.
G. Reavell, O.B.E., F.R.I.B.A.

Vice-Presidents.
A. K. Tasker, F.R.I.B.A.
J. A. E. Lofthouse, F.R.I.B.A.
J. H. Martindale, F.S.A.

Honorary Treasurer.
J. T. Cackett, J.P., F.R.I.B.A.

Honorary Librarian.
F. N. Weightman, M.A., L.R.I.B.A.

Honorary Secretary.
Geo. H. Gray, A.R.I.B.A.

Assistant Hon. Secretary.
J. F. H. Checkley.

Members of Council.
J. W. Boyd, M.S.A.
J. W. Hays, F.R.I.B.A.
W. E. Fenwicke.
H. L. Hicks, A.R.I.B.A.
L. W. Taylor.

Associate Members of Council.
S. Brinton.
G. Talbot Brown, A.R.I.B.A.
R. N. MacKellar, A.R.I.B.A.

The annual report for the sixty-sixth session, approved by the meeting, states that while an increase in membership is noted with pleasure it is felt that there are still some architects, more particularly in the remote parts of the province, who are not yet connected with the Association, and the council appeal to all members to assist in enrolling into the Association anyone with whom they are acquainted who is not yet a member. The Royal Institute have accepted the invitation of the council to hold the British Architects' Conference in that district in 1925. The meetings will be held at Newcastle and Durham, with headquarters at the Old Assembly Rooms, Newcastle, and detailed arrangements by the Executive Committee and a series of sub-committees are now well forward. The conference will be held from July 8 to 11.

Attention is drawn to the decision of the council that after July 1, 1925, they do not propose to admit students into the Association until they have been registered as Probationers, R.I.B.A. It is felt that all members before taking pupils into their offices should insist that prospective pupils are registered as probationers, or at any rate have reached such a standard of general education as will enable them to be so registered.

The Architectural Association Annual Ball.

A May-Day revel will be held in the galleries of the R.I.B.A. at 9 Conduit Street, W., on Friday, May 1. There will be dancing and revelling from 9.30 p.m. to 5 a.m. to the music of the Spiders Band. Tickets, including refreshments, price £1 1s., to be obtained from Mr. F. R. Yerbury, The Architectural Association, 34–35 Bedford Square, W.C.1, and Mr. E. J. Haynes, R.I.B.A., 9 Conduit Street, W.

The Devon and Exeter Architectural Society.

The annual meeting of the Devon and Exeter Architectural Society was held at Exeter, under the chairmanship of Mr. J. L. Fouracre, F.R.I.B.A. (Plymouth), the president. The proposed new rules for the Society were adopted. These rules have been under consideration for some considerable time. They are based on those of the South Wales Institute of Architects, which were originally forwarded by the R.I.B.A. Allied Societies' Conference, with the recommendation that they should be adopted by allied societies. The rules are to take effect from the annual meeting of next year, when the name of the Society will be changed to the Devon and Cornwall Architectural Society. Mr. R. N. Jessop, of Exeter, was elected an Associate Member of the Society, and the transfer of Mr. C. C. Jackson from Associateship to Associate Membership was approved. The prizes awarded in connection with the Measured Drawing Competition of the Society were presented to Mr. F. S. Stilwell (Plymouth), who obtained first place, and to Mr. P. O. G. Wakeham (Plymouth). The retiring president then delivered his address.

Mr. J. L. Fouracre, F.R.I.B.A., was re-elected president for the ensuing year, and the following officers and Council were elected to fill the vacancies of those retiring.

Vice-Presidents.
E. F. Hooper, Licentiate R.I.B.A. (Exeter).
H. Victor Prigg, A.M.I.C.E. (Plymouth).

Members of Council.
L. F. Tonar, Licentiate R.I.B.A. (Exeter).
F. A. Verco, A.R.I.B.A. (Plymouth).
R. M. Challice (Exeter).

Associate Member of Council.
D. W. Cooper (Exeter).

Hon. Treasurer.
Samuel Dobell (Exeter).

Hon. Auditor.
L. F. Tonar, Licentiate R.I.B.A. (Exeter).

Hon. Librarian.
W. J. M. Thomasson, A.R.I.B.A. (Exeter).

Hon. Secretary.
J. Challice, A.R.I.B.A. (Exeter).

A collection on behalf of the Exeter Cathedral Fund taken at the close of the meeting amounted to the sum of £8 2s.

Mr. J. L. Fouracre, F.R.I.B.A., in his address, spoke of the educational facilities for students, particularly in relation to the difficulties encountered in the West. Naturally, he said, the facilities in the larger centres like Plymouth and Exeter were superior to those of the smaller towns, but still they left much to be desired. As the society's representative on the allied societies' conference, he believed the proposals of the Board of Architecture would benefit students to a remarkable extent when they matured. Meanwhile it seemed to be the imperative duty of the society to recognize immediately the following facts :—

The educational facilities for our young members in the district are very scanty.

The great distance from London is a further handicap.

With a few notable exceptions, Devon and Cornwall are remarkably deficient in first-class old work suitable for close study and measuring. Plymouth, in particular, is singularly unfortunate in her lack of really good relics of the great building eras.

Students, with all the will in the world to work and strengthen themselves in their own time, need guidance and direction, or the probability is that their efforts will be misdirected.

He suggested the formation of architectural education committees within the society at Exeter and Plymouth, whose duty it would be to advise and assist students in their studies and preparation for the R.I.B.A. examinations. These committees could examine and report on the work of correspondence schools, which provided a definite curriculum, and, though not ideal, was helpful.

The handicap of distance from the capital and from the best work in the profession could be overcome by the use of lantern slides. He had succeeded in getting a resolution passed by the conference for the formation of a large and comprehensive set of slides of important buildings, both ancient and modern, to be used by the various allied societies, and he intended to suggest that as important buildings were erected slides illustrating them be added to the collection.

The South Wales Institute of Architects.

At the last annual meeting of the South Wales Institute of Architects the following officers and Council were elected for the ensuing year :—

President.
C. F. Ward, F.R.I.B.A.

Vice-Presidents.
Percy Thomas, O.B.E., F.R.I.B.A.
C. S. Thomas, F.R.I.B.A.

Hon. Treasurer.
H. Teather, F.R.I.B.A.

Hon. Auditor.
E. H. Fawckner, F.R.I.B.A.

Hon. Librarian.
C. H. Kempthorne, Licentiate R I.B.A.

Hon. Secretary.
Ivor P. Jones.

MEMBERS OF COUNCIL.

Central Branch.
A. G. Edwards, Licentiate R.I.B.A.
W. S. Purchon, M.A., A.R.I.B.A.
T. Alwyn Lloyd, F.R.I.B.A.
J. Williamson, A.R.I.B.A.
J. B. Wride.
F. H. Heaven, A.R.I.B.A.
G. H. Griffiths.
R. H. Winder, M.A., A.R.I.B.A.
J. A. Hallam.

Western Branch.
J. Herbert Jones, F.R.I.B.A.
H. C. Portsmouth, F.R.I.B.A.
Edwin Smith, A.R.I.B.A.
Sidney R. Crocker, Licentiate R.I.B.A.
G. R. H. Rogers.
O. S. Portsmouth, A.R.I.B.A.

Eastern Branch.
R. Fisher.
H. Jones, Licentiate R.I.B.A.
W. Rosser, F.R.I.B.A.
F. Swash, F.R.I.B.A.

Associates' Representatives.
T. E. Llewellyn and R. E. M. Coombes, Central Branch.
Geo. L. Crocker, Western Branch.
J. E. Lenton, Eastern Branch.

The Romance of Lead in Industry.

"The Romance of Lead in Industry" was the subject of a lecture delivered by Mr. E. Holden, A.I.Struct.E., head of the Building Trades Department of the Gloucester Technical Schools, at the Municipal Technical School. Speaking of what might be termed the Cinderella of metals, he showed that lead was one of the oldest of metals with which mankind had been associated, and it was also one of the oldest metals in point of geologic time. In view of the fact that white lead dust was one of the most dangerous forms of lead so far as lead-poisoning was concerned, the lecturer dealt with its manufacture and uses at some length. The modern white lead still remained without a competitor under conditions which brought about the failure of all the substances put into competition with it. It was not solely due to prejudice that the painter still clung to its use. Extensive studies of lead poisoning in factories, said Mr. Holden, had clearly demonstrated that inhalation of dust was the serious channel of infection.

On the question of the prohibition of the use of white lead, the lecturer suggested that the words "prohibition" and "compulsion" were not pleasant to the native temperament of the Englishman, and so, providing the users of lead would exercise common hygienic principles regarding personal cleanliness and foods, it would be quite unnecessary to give the matter of "prohibition" serious thought.

Up to the present there had not been any substitute for white lead in paints which equalled the character and qualities of that material. The Joint Industrial Council had prepared a set of working regulations for painters engaged in the use of lead compounds which prohibited the dry rubbing down of lead paints and specified the provision of washing facilities. The dry method could be replaced by a damp method, in which no dust was created. The surface to be rubbed down was damped with a sponge, then rubbed with waterproof sandpaper, the powdered lead paint being removed from the surface with a wetted sponge. This process had been tested by many expert master and operative painters, and its practicability and efficiency values generally accepted. It was confidently held by those who had made a special study of the problem of lead hygiene in the painter's occupation that observation of the proposed regulations would remove from the painter's crafts the serious risk of lead poisoning to which he was now exposed.

The Northern Polytechnic

The annual speech night of the Department of Architecture, Surveying, and Building was held under the presidency of Mr. R. L. Roberts, M.A., chairman of the governing body and of the general purposes committee. Mr. T. P. Bennett, F.R.I.B.A., head of the department, gave a résumé of the activities of the department during the session, and Mr. Maurice E. Webb, F.R.I.B.A., gave a criticism of the work of the architectural students.

In the handicraft competitions held at the Building Trades Exhibition at Olympia in April, 1924, students of the Northern Polytechnic secured the following awards :—

Plumbing	Second Prize and two Diplomas.
Brickwork	First, Second, and Third Prizes.
Painted Ornament	Second, and Third Prizes, and three Diplomas.
Plain Painting	Second and two Third Prizes and three Diplomas.
Carpentry	First, Second, and Third Prizes, and three Diplomas.
Joinery	First and Second Prizes, and one Diploma.
Masonry	One Diploma.

This makes a total of twenty-seven awards, which was a greater achievement than that of any other individual school in the country, the money prizes amounting to £38.

During the year successes were obtained in the examinations held by the following bodies : The R.I.B.A., "The Plumbing Trades' Journal" competitions, the Institute of Builders, the City and Guilds of London Institute, the Auctioneers' Institute, and the Surveyors' Institution.

In the annual competition held by the National Painters' and Decorators' Joint Education Committee of England and Wales, the Northern Polytechnic secured the following awards :

Preliminary Class.
Geometrical Drawing.—Third Prize and Diploma.

Class III.
Plant Form.—First Prize and Diploma.
Stencilled Lunette.—First and Second Prizes and Diploma.
Ornamental Painting.—Third Prize and Diploma.

Class IV.
Colour Combing and Scumbling.—First Prize and Diploma.
Writing.—Third Prize and Diploma.

Special Class.
Best Work of any Journeyman.—Secured by L. G. Taylor, and awarded a Diploma.

Certificates.
Preliminary Class, 46.
Class I, 14.
Class II, 9.
Class III, 19.
Class IV, 6.

Coming Events

Friday, April 17.

Royal Sanitary Institute, The Town Hall, Torquay. Sessional Meeting. Discussions on the necessity for a new Public Health Act, Town Planning and Housing Scheme at Torquay, Maternal Mortality and the Spa Treatments at the Medical Baths, Torquay. Chair to be taken by H. D. Searles-Wood, F.R.I.B.A. 8 p.m.

The London Society, 18 John Street, Adelphi, W.C.2. "Impressions of London from the Air." By Mr. Maurice E. Webb, D.S.O. 5 p.m.

Saturday, April 18.

Royal Sanitary Institute, The Medical Baths, Torquay. "Impressions of London from the Air." By Mr. Maurice E. Webb, D.S.O. 10.15 a.m.

London Society. Visit to the Sorting Office at the G.P.O., followed by a visit to the remains of the Roman wall in the yard of the Circulation Office, Giltspur Street.

The Week's News

Housing at Stoke-on-Trent.

The Stoke-on-Trent Corporation are to build 700 houses.

The Repair of Stratford Parish Church.

Stratford Parish Church is to be repaired at a cost of £4,000.

More Houses for Yeovil.

Six hundred houses are to be built by the Yeovil Corporation.

Housing at Foleshill.

At Foleshill 134 houses are to be erected.

Housing at Finedon.

The Finedon Urban District Council are considering a proposal to erect sixty houses.

Preston's New Housing Scheme.

The Preston Corporation are considering a scheme for the erection of 200 houses.

New Works for Glamorganshire.

New tinplate works are to be erected at Briton Ferry, Glamorganshire, at a cost of £20,000.

The Doncaster Infirmary Scheme.

The Ministry of Health have approved the proposed extension to the Workhouse Infirmary.

Proposed Improvements at Doncaster.

The improvements proposed by the Doncaster Corporation at Elmfield Park include a paddling pool and a bandstand.

Housing at Redcar.

The Redcar Corporation are applying for a loan of £45,000 for the erection of houses.

Improvements at Catterick Bridge Aerodrome.

Catterick Bridge aerodrome is to be rebuilt at an estimated cost of £150,000.

Street Paving in London.

It is proposed to spend £33,024 on street paving in the City of London during the current municipal year.

Housing at Colchester.

The Colchester Corporation are asking for a loan of £43,050 for housing purposes.

Housing at Melton Mowbray.

The Melton Mowbray Urban District Council have decided to erect twenty houses.

Housing at Lexden and Winstree.

The Lexden and Winstree Rural District Council propose to erect sixty houses.

North Staffordshire Infirmary Extensions.

The King and Queen are to visit the Potteries to lay the foundation stone of North Staffs Infirmary extensions.

Lancaster Water Supply.

The Lancaster Corporation have decided to spend £20,000 on a new filtration plant.

More Houses for Lewisham.

The Lewisham Borough Council are considering building 150 houses on vacant ground near Lee Station.

Change of Address.

Mr. T. Cecil Howitt, A.R.I.B.A., has moved to Western Buildings, 58 and 59 Long Row, Nottingham. Telephone : 6202.

A Town-planning Scheme for Loughborough.

A town-planning scheme is to be prepared by the Loughborough Corporation and the Loughborough Rural District Council.

More Houses for Yeadon.

The sanction of the Ministry of Health has been received by the Yeadon Urban District Council to the erection of seventy houses on the Hawthorn Crescent site.

A New Harbour for Funchal.

A new harbour, estimated to cost £1,500,000, is to be built at Funchal, Madeira, to the plans of Sir Murdoch Macdonald, of Westminster, civil engineer.

Aldershot's New Houses.

The Aldershot Corporation have decided that 500 houses must be built by August next year. Of these, 116 are completed, and fifty are being built by direct labour.

A Super Cinema for Glasgow.

Accommodation for 2,400 persons will be provided in the new super-cinema to be erected in Castle Street, Townhead, Glasgow.

A New Hospital for South Shields.

Plans are being prepared of an infectious diseases hospital to be erected at South Shields. The cost is estimated at £200,000.

Open-air School for Healey.

The architects for the proposed open-air school at Healey are Messrs. W. Hanstock and Son, Batley. The new school will accommodate 255 girls, and will cost £13,926.

More Houses for Horsforth.

The Horsforth Urban District Council have applied to the Ministry of Health for sanction to grant the subsidy under the Housing Act, 1924, for a further 100 houses.

Liverpool's New Housing Chief.

Mr. Lancelot H. Keay, chief housing assistant in the City Engineers' department at Birmingham, has been selected as the new chief of the Liverpool Housing Department.

New Houses at Islington.

The London County Council are being recommended to buy for £12,000 Hornsey Rise Training College, Islington, for the erection of block dwellings for 1,000 persons.

New Streets for Hull.

A plan for seven new streets on the site of the old polo ground near Chanterlands Avenue has been approved by the Hull Corporation Works Committee.

Birmingham University Extensions.

Specifications and quantities are being prepared for the extensions of the buildings of the University of Birmingham at Edgbaston. It is hoped to complete the extensions by the end of next year. Sir Aston Webb is the architect.

Housing at Pontefract.

The Pontefract Corporation, who have already provided nearly 500 workmen's dwellings, have approved the lay-out plan for fifty-six more (twenty-two parlour and thirty-four non-parlour) in Halfpenny Lane.

More Houses for Thorne.

The Thorne Rural District Council have passed plans for the erection of 250 houses at Thorne Moorends colliery village. Thorne colliery owners, it is understood, wish to build 1,800 houses within four years.

New Municipal Buildings for Bristol.

The Bristol City Council have decided to appoint a committee with instructions to proceed with a scheme for erecting new municipal buildings. It was stated that during the last five years £57,000 had been spent on corporation offices, which, being located in different parts, were costly and inconvenient.

Bath Abbey Repairs.

As suggested by Sir Charles Nicholson, it has been decided that the work of repairing the roof at Bath Abbey shall be undertaken in sections. The first section to receive attention will be that of the south aisle and nave. The estimated cost of the total repair work is £2,000.

Ministry of Health Appointments.

The Minister of Health has appointed Mr. H. W. S. Francis, O.B.E., assistant secretary, Ministry of Health, to the post of receiver of the Metropolitan Common Poor Fund, consequent on the appointment of Sir Aubrey Symonds, K.C.B., as secretary to the Board of Education.

A Bridge at Banff, Canada.

Mr. Frank W. Simon, F.R.I.B.A., asks us to state that Mr. S. Bylander solved the engineering problems involved in the erection of the bridge at Banff, Canada, illustrated in our issue for April 1. Mr. Bylander was also responsible for the reinforced concrete work.

A New Primitive Methodist Church for Seahouses.

A Primitive Methodist church is to be erected at Seahouses from the designs of Messrs. Mauchlin and Weightman, of Newcastle-upon-Tyne, architects. Sir Walter Runciman has given £1,000 towards the cost, and has promised another £1,000 if it is required.

More Houses for Bradford.

Plans for the erection by private builders of nearly 100 new houses in various districts of Bradford were approved by the Street Improvement and Buildings Committee. The largest scheme involved is at Idle, where fifty-six of the houses will be erected.

A New Housing Scheme for Manchester.

Manchester is to acquire a new housing estate. It contains twelve acres, and lies north of Wheler Street, east of Edge Lane, and west of a plot of land fronting to Sandywell Street. Eventually its cost will be £80,050. The Housing Committee have decided to erect concrete houses on the land.

Cheshire Cottage Homes Extension.

Extension schemes to cost several thousand pounds are to be carried out at Styal (Cheshire) Cottage Houses. Additional houses are to be erected to accommodate 400 or 500 children, and both the present schools are to be extended and a new gallery is to be erected in the church.

London-Brighton Motor Road.

The Brighton Corporation have passed a resolution in favour of the proposed new motor road from London to Brighton. The Corporation reserve their right to criticize and deal with details when the matter comes before Parliament, and make it clear that their approval does not extend to the financial proposals of any promoting company.

Additions to St. Thomas's Hospital.

A scheme for additions to St. Thomas's Hospital costing £58,000 has been sanctioned by Mr. Justice Romer in the Chancery Division. It is proposed to build, on a piece of land in Lambeth Palace Road, opposite the hospital, additional accommodation for students and staff. The upper floors will be used for them, and on the lower floor it is proposed to provide accommodation for a club in connection with the hospital medical school.

The Approach to Victoria Station.

The Improvements Committee, reporting to the London County Council, state that an opportunity has arisen, owing to re-development proposals, of acquiring property needed for the widening to 80 ft. of the approach to Victoria Station and the continuation of the widening to about 60 ft. of Wilton Road, Westminster. The cost of acquisition of the property is estimated at £67,000. The Westminster City Council have agreed to contribute one-sixth, not exceeding £11,166, of the net cost, and application for a grant will be made to the Ministry of Transport. The Committee recommend approval of the expenditure named.

A Venetian Marionette Theatre of the Eighteenth Century.

The Victoria and Albert Museum has recently acquired an Italian marionette theatre of the first half of the eighteenth century, brought from a palace in Venice. This has now been erected in Room No. 5 of the Woodwork Galleries. The theatre is an imposing structure of architectural design, 13 ft. high, carved, painted and gilt, with an armorial shield, festoons and other ornament. Two scenes can be shown, one, the interior of a salon with figures dressed in the costume of the period and appropriate furniture; the other scene shows a view of St. Mark's Square, with figures from the Italian comedy. The faces of the marionettes are carved with great skill and expression, and the costumes, many of which are richly embroidered, are extremely varied and elaborate.

New Acquisitions at the National Gallery.

Three interesting additions have just been made to the collection at Trafalgar Square. Mr. F. D. Lycett-Green has presented through the National Art Collections Fund a portrait in pastel of Mme. Legrue, by J. B. Perronneau, *c.* 1757. The portrait of Samuel Cousins, the engraver, by Frank Holl, which attracted so much attention when recently exhibited at Burlington House, will be found in the adjoining Room No. XXII. It is a gift from Mrs. Frank Holl. The trustees have also acquired by purchase a predella panel by Lorenzo Monaco, representing scenes in the life of St. Benedict, including the rescue of St. Placidus by St. Maurus, and the episode of the miraculous storm which occurred when St. Benedict was visiting his sister St. Scholastica. The panel has been placed in Room I.

Town Planning in Lancashire.

A movement for the co-ordination of town-planning schemes on a regional basis in the South-west Lancashire area was originated at a conference of representatives of local authorities held at Liverpool. The conference, which was convened by the western section of the Roads Improvement Association, was unanimously in favour of the formation of a joint town-planning committee, and a deputation was appointed to seek the co-operation of the Liverpool City Council. Mr. G. L. Pepler, chief town-planning inspector of the Ministry of Health, pointed to the progress which had been made by voluntary combinations of groups of local authorities in the Manchester district, Doncaster, West Middlesex, North Tyneside, East Kent, and other parts of the country in the co-operative planning of regions that comprised a natural economic or geographical unit faced with similar or inter-related problems of development.

List of Competitions Open

Date of Delivery.	COMPETITION.
April 27	Lay-out of Jackey Bakers Farm, Ramsgate. A portion of the land will be used for a Recreation Ground, another portion for Allotments, and the remainder for an Elementary School with Playground and Playing-field near. The Corporation are offering as a prize £100. Apply, with deposit of £1 1s., to Mr. A. Blasdale Clarke, Town Clerk, Albion House, Ramsgate.
***May 1**	**The United Grand Lodge of England invite designs for rebuilding the Freemasons' Hall in Great Queen Street, Kingsway, London.**
***May 15**	**Technical College for the Middlesbrough Education Committee. Assessor, Mr. Percy Thomas, F.R.I.B.A. Premiums £200, £100, and £50.**
May 31	The best and most economical system of shuttering or equivalent suitable for use in connection with poured or *in situ* cottages. First prize £250; £250 may be awarded in additional prizes. Methods which are already in use or for which patent rights had been applied for before January 1 will not be considered. Apply Mr. H. H. George, Ministry of Health, Whitehall, S.W.1, not later than May 24.
June 11	National Commemorative War Monument, to cost one hundred thousand dollars, for the Government of Canada. Apply Office of the Secretary, Department of Public Works, Hunter Buildings, Ottawa. A few copies of the conditions, together with declaration forms, can be obtained from the R.I.B.A.
***June 30**	**Lay-out of open spaces and fortifications between Valletta and Floriana and those encircling Floriana. Premiums £1,000 and £500. An indemnity of £100 will be awarded to three other designs showing conspicuous merit. Assessors, Mr. E. P. Warren, F.S.A., and Professor Patrick Abercrombie, A.R.I.B.A.**
July 1	An extension building adjacent to the Shirehouse, Norwich, for the Norfolk County Council. Premiums £150, £100, and £50. Assessor, Mr. Godfrey Pinkerton, F.R.I.B.A., on the whole of the designs submitted, and to make the award. Apply Mr. H. C. Davies, Clerk of the Council, The Shirehouse, Norwich.
Sept. 1	High bridge over Copenhagen Harbour. Three prizes to the value of Kroner 35,000. Apply City Engineer's Office, Town Hall, Copenhagen. Deposit of Kroner 100 (returnable).
Dec. 31	**The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.**
No date	New Secondary School in Perth Road, Dundee. For the Education Authority. The Competition is limited to architects in practice in Scotland and carrying on business on their own account. Application for the conditions of the competition and instructions had to be made to Mr. John E. Williams, Executive Officer, Education Offices, Dundee, not later than February 18. Mr. J. A. Carfrae, Licentiate R.I.B.A., is later than February 18. Mr. J. A. Carfrae, Licentiate R.I.B.A., is the Assessor.
No date	Proposed Presbyterian Church at Cheam, Surrey. In the first instance rough sketches only will be required and therefrom the committee will select the architects to be paid for the preparation of more finished drawings. Apply Mr. George Tweddle, Jr., Secretary to the Building Committee, "Southdown," Burdon Road, Cheam, Surrey.

* Date of application passed.

Preservation of St. Paul's

The greater part of St. Paul's Cathedral has passed into the hands of the expert advisers and craftsmen who, from now on, will be engaged in securing the threatened stability of the fabric. No ceremony marked what may be regarded as a temporary transference of authority over the structure from the clergy to those who are charged with the responsibility of carrying through the work of preservation. There was an informal meeting under the dome between Canon Alexander and Colonel Sankey, the resident engineer, with whom was Mr. B. H. Broadbent : and into this one might read an informal surrender of the ecclesiastical use of the area now closed to the public until it can again be opened for services.

There is to be no delay in proceeding with the work. All the chairs had been removed from under the dome, the high altar with its furnishings had been transferred to the nave, and silence rested on deserted, unlit choir stalls.

It is understood that the first works to be undertaken will be the taking down of the organ and choir stalls to lay bare the two eastern piers, which have not yet been examined. It may be that all the piers are not affected to the same extent. Five separate contractors were originally concerned in their erection, and some may have built better than the others. There is undoubtedly a difference in the degrees of settlement between the different piers. Colonel Sankey's first attention is likely to be given to the taking of a fresh series of levelling observations, plumbing, and other measurements recommended by the representative committee for the preservation of the Cathedral. To facilitate an accurate system of levelling nearly two hundred gunmetal sockets, specially designed to take hardened-steel plugs for supporting levelling staves, have been inserted in appropriate positions in the masonry of the building. These are so small and so unobtrusively placed that they escape notice until they are pointed out.

Another immediate duty of Colonel Sankey will be to design the steel and timber jackets which are to be used temporarily to strengthen the piers during the process of grouting. It cannot yet be stated in what order the piers will be treated, nor how many men will eventually be employed on the work.

A Sixtyfold Symposium on Building

"Knowledge comes, but wisdom lingers." Five years ago "The Times" newspaper issued a special Housing and Building Supplement, and a similar supplement, published on the 7th instant, finds us but little nearer to a satisfactory solution of what has long been the most urgent problem of modern times. The sixty contributors to the new supplement do but little more than demonstrate the extreme complexity and the baffling character of the problem. Not that the experts will admit the difficulty to be as formidable as it appears to the confused mind of a despairing public. So hard it is to disentangle the subject from untoward and intrusive influences, political and otherwise controversial, that a clear and unprejudiced restatement of the whole case in the lay Press had become highly desirable. To what extent "The Times" Supplement contributors have succeeded in producing clear guidance on so intricate a subject, each of its readers must judge independently. If, collectively, that large band of well-informed and competent writers have not succeeded in reducing chaos to order, that result was inevitable. Each writer with knowledge of some special phase of the question—whether of labour or materials, various systems of building or different methods of production, of industrial economics, matters of finance, or—what it is good to find prominent—architectural treatment. Nor is archæological interest ignored. It is the great merit of the supplement that it draws attention to building and architecture, not merely as a question of the hour—the wearisome housing question—but as a subject of many-sided and absorbing interest. The supplement is well illustrated with portraits and views.

Importance of Regional Town-Planning

Mr. Neville Chamberlain (Minister for Health), who attended a conference of Hertfordshire County Council and the local authorities of the county in London, to consider the question of town-planning, said, in all our big cities we found ourselves compelled to spend large sums of money in undoing the building mistakes made by those who went before. He had heard it said that they in Birmingham had spent many thousands of pounds in making streets, and yet they had not a decent street in Birmingham to-day.

In town-planning, he urged, there should be a well-thought-out scheme embarked on while there was yet time—a statutory scheme which would, in the long run, save the local authority a great deal of money in the future. He did not, at the same time, wish to under-rate the value of the æsthetic point of view. They did not desire to see the delightful places of England desecrated by unregulated buildings. Town-planning could not be confined to small areas. They had to make sure that the town-planning was co-ordinated over adjacent areas. The late Marquis of Salisbury advised his fellow-countrymen to study maps. He thought that advice was as applicable to town-planning as to high imperial policy. One authority could destroy the purpose of an adjoining authority. They, therefore, came to the idea of regional town-planning, which had been making so much progress that now there were upwards of thirty town-planning committees in existence, including, he believed, over four hundred local authorities. He suggested that Hertfordshire should prepare a regional scheme to cover the whole area of the county. Such a scheme would lay down the lines and the widths of the principal roads in the county and provide for the general character of future development. Hertfordshire had it in its power to initiate a movement which would have far-reaching influence as an example to other counties.

There was general agreement with Mr. Chamberlain's suggestion, and speakers expressed the intention of all the local authorities in the county doing all they could to pull together.

St. Paul's Bridge and Bethlem Hospital

At a meeting of the London County Council, held last week, in reply to Mr. J. D. Gilbert, who asked the present position with regard to St. Paul's Bridge, Mr. E. L. Meinertzhagen said that further deliberation on the scheme had been deferred by the City Corporation pending the report of the London and Home Counties Traffic Advisory Committee, to whom it had been referred by the Ministry of Transport. He was informed that the St. Paul's Cathedral repairs would have no effect on the proposed approach from the east of the cathedral.

Mr. Meinertzhagen added that the Improvements (Bridges) sub-Committee had instructed the officers to report on Sir Reginald Blomfield's scheme for a bridge between Waterloo and Charing Cross Bridges, together with other schemes for a bridge at Charing Cross.

Replying to Mr. J. D. Gilbert, who raised the question of the acquisition of the whole or part of Bethlem Hospital and its grounds for the purposes of a park for South London, Dame Beatrice Lyall said that inquiries were being made. It would be some time before the existing buildings could be vacated, and sympathetic attention would be given to the suggestion.

Research on Metals

The progress and future of the British Non-Ferrous Metals Research Association (71 Temple Row, Birmingham) was reviewed before an influential gathering at its annual meeting held at the Savoy Hotel, London. A new period of development was inaugurated and an announcement made of further substantial financial support from the Government Department of Scientific and Industrial Research, contingent on an annual expenditure of £16,000 and certain other conditions, tending to make the Association self-supporting at the end of the next five years.

Mr. Thos. Bolton (chairman) appealed for the fellowship and co-operation of all concerned with metals, from the mine to the ultimate application in engineering and other services. The success of the work of the Association was already proved, but it was destined to provide far-reaching benefit to industry and the country if the whole industrial chain could be linked together in the prosecution of this research enterprise.

Sir Robert Horne, M.P., congratulated the Association on its rapid development, and on the proof that it is working on the right lines, afforded by the report of an independent committee of experts and the provision of further Government financial support; for as an old Chancellor of the Exchequer he knew how difficult it was to provide funds for any cause at the present time. Our industries are now confronted with a situation of difficulty, such as has never been presented to this country before in the course of her long history. Scientific investigation achieves the result of cheaper production, and cheaper and better materials are urgently required to enable our great engineering industry to compete in the markets of the world.

Trade and Craft

Roofing at Lydd.

The War Office have utilized 200 squares of "Poilite" russet-brown diagonal tiling for Lydd Camp. "Poilite" tiles are made of Bell's asbestos cement by Messrs. Bell's Poilite and Everite Co., Ltd., of London. They are claimed to be light and durable, and to be unaffected by weather or corrosives.

Medical Men and Gas Heating.

It is an interesting fact that the highest consumption of smokeless gaseous fuel per acre in any residential district is in the Harley Street area, which is occupied by leading physicians and surgeons, and that to-day the great majority of the London hospitals are large consumers of gas for heating and other purposes. Some of them have two hundred or more gas-heating stoves within their walls. Westminster Hospital, which was recently enlarged and remodelled, has almost this number in use, as is shown in the current issue (No. 132) of "A Thousand and One Uses for Gas," which is illustrated by numerous views of its wards, kitchens, nurses' quarters, and so forth. Copies of this illustrated publication can be obtained free of charge on application to the secretary, The British Commercial Gas Association, 28 Grosvenor Gardens, S.W.1.

The Beauty of the Bathroom.

No other part of the house possesses the charm peculiar to the ideally equipped bathroom, but many bathrooms are the reverse of ideal because little thought has been given to their equipment, decoration, harmony, and general comfort. While the first requisite of a bathroom is hygiene, utility, and comfort, there is also abundant scope for beauty and harmony in its decorative treatment, as is shown in the new booklet entitled "The Beauty of the Bathroom," which has just been issued by Messrs. Mellowes & Co., Ltd., of 26 Victoria Street, Westminster, S.W.1. In wall treatment alone a wide range of material is available which may be skilfully employed in the production of interesting and effective results from an æsthetic standpoint. The firm contend that real satisfaction is derived from having beautiful things which fully meet the needs of use, and the modern bathroom should be beautiful (apart from its usefulness) and have originality which is not a copy of some other place. A Mellowes bathroom equipped with an "Enclosed" or "Empire" bath and "standard plumbing fixtures" is claimed to be an outstanding feature that lifts a house above the commonplace and gives to it that touch of distinction and character which is the test of good taste and refinement. Illustrations and particulars are given of the many types of baths of the company, each of which has its own special advantages. Plans are also included, showing the various positions in which the baths may be fixed.

Willcox-Fiske Greases and Lubricants.

Messrs. W. H. Willcox & Co., Ltd., of 38 Southwark Street, London, S.E.1, have sent us a copy of a new folder which has just been issued, dealing with Willcox-Fiske greases and lubricants. These are the result of long research by experts in grease lubrication, and are manufactured from the best petroleum base.

Over a century's experience in lubrication problems has, it is claimed, enabled these experts to produce just the right consistencies and other features necessary to secure perfect results on different classes of machinery. The specialities of the firm cover the requirements of industrial manufacturing plants, also railroad, marine, and mining equipment. Among the many specialities of the company is "Lubrigear," which is claimed to be "a pure mineral product containing no artificial 'filling' matter, scientifically manufactured from highest grade cylinder oil base, thoroughly tested and guaranteed to afford complete and correct lubrication of transmission gear-boxes, back axles, and differentials of all makes of motor vehicles in all seasons. Every particle is lubricant. It will not drip or run in hot weather, neither will it harden during cold weather—ease in shifting gears is assured even during freezing weather. Every particle of 'Lubrigear' stays in the gear-box, doing its job until it is used up. It leaves no deposit behind, thus eliminating the necessity of gear-box cleaning. It requires no mixing with oil or grease, and will not 'track' or 'channel.' It has the correct adhesive and lubricative properties to enable it to adhere to the teeth of the gears at all times, and protect them with a coating of unctuous, pressure-resisting lubricant so effectively that its clinging and filming qualities enable it to get around and between the parts to be lubricated, and its body to act as a cushion between surfaces upon any sudden impact."

The Commission on Ancient Monuments

The eighth interim report of the Royal Commission on the Ancient and Historical Monuments and Constructions of England has been issued. The report has reference to Westminster Abbey, and it states that owing to the pre-eminence of the Abbey as a monument of Imperial as well as of national importance, the Commissioners had deemed it fitting to devote a complete volume to the description and illustrations of the structure and its contents, as well as of the buildings within its precincts. "The Commissioners express regret that owing to loss of staff after the Great War and non-replacement under Treasury ruling, and, *a fortiori*, to the refusal to entertain any immediate prospect of its expansion, it has not been possible to go forward with the pre-war intention of the Commission to train and place senior investigators in charge of separate counties or divisions of counties, with competent staffs under them, to report the results of their inquiries to a central office in London for final editing and publication."