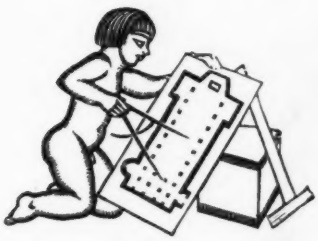
# THE ARCHITECTS' JOURNAL



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CHRISTIAN BARMAN, *Editor*

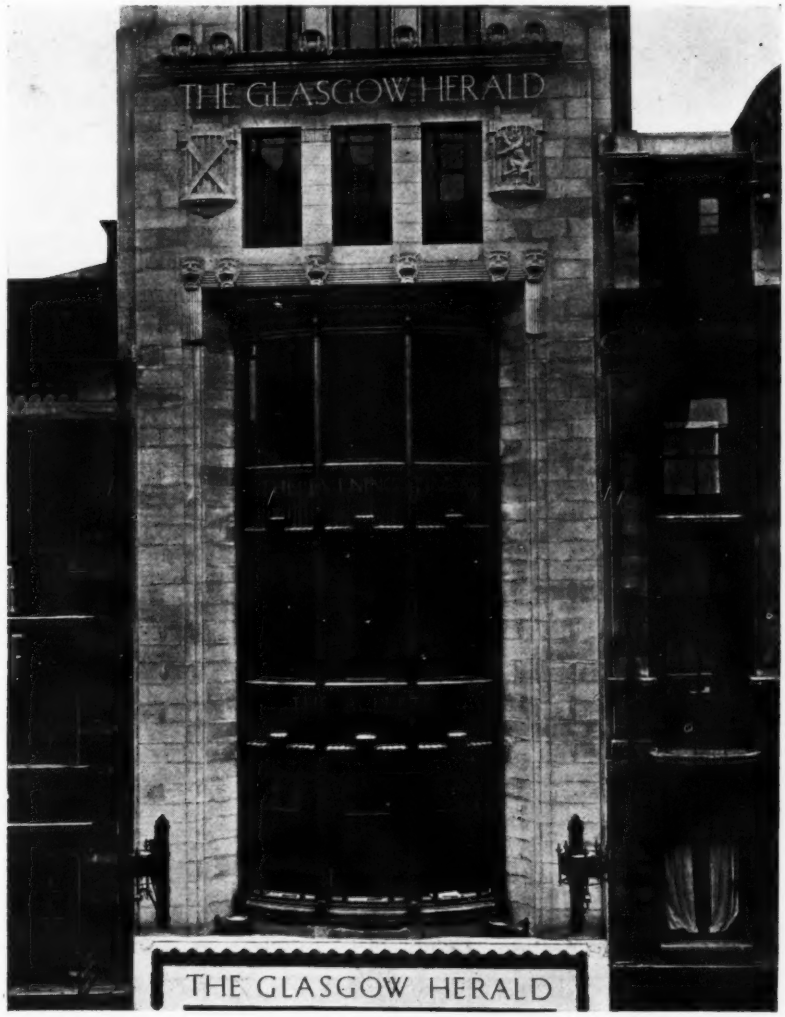
*The Editor will be glad to receive MS. articles, and also illustrations of current architecture in this country and abroad, with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.*

WEDNESDAY, November 2, 1927. NUMBER 1711: VOLUME 66

## PRINCIPAL CONTENTS

Margarine is an interesting addition to the never-ceasing advance in modern methods of hygienic food-production. In no food-product is there so much variation between the different available brands. One may buy margarine which is appetizing and palatable. Some margarines are sold that are much less so. Not only must the margarine be wholesome. To stand at the top it must please the palate. Method of manufacture and constant, watchful care of plant characterize the margarine factories of highest grade. No expense is spared on the equipment of each of the several production departments. The "best available" is a *sine qua non*. In no type of factory is absolute cleanliness of floor and wall surfaces so important and necessary an as et as in a food factory. Not a speck of dirt is allowed in the modern plant of Messrs. Van den Berghs, Limited, margarine manufacturers. Their margarine is famous for its splendid quality; the "Blue Band" Brand being universally recognized as the standard of excellence in the trade. The illustrations on this page are from photographs taken in one of their works at Townmead Road, Fulham. Whether it be a concrete floor under a pile of barrels in a big yard, a tiled floor in one of the packing rooms, or a floor of stone and concrete in one of the technical departments—each bit of floor area throughout the plant is so treated that not a speck of dust or particle of disintegrated concrete comes from it. Cleanliness, dustlessness, universal resistance to all forms of wear and tear are the attributes demanded from their floors by Messrs. Van den Berghs, Limited. Steel trucks or heavy barrels may clatter and bang over the floors—margarine conditions of manufacture are not gentle where floor surfaces are concerned—but those Van den Bergh floors "stay put." Every bit of concrete mortar, whatever its function, that is placed in the Van den Bergh factory has "Colemanoid" added to the gauging water. That is the protecting factor. That insures the dustlessness, the resistance to wear and tear, the permanence and cleanliness of the flooring. Write to me at Regent House, Regent Street, London, W.1, and ask for "Colemanoid Floor Specifications," which tells how simply "Colemanoid" may be employed, and at what little extra cost.

Frederic Coleman




*[A working detail of this bronze bay appears on the following page]*

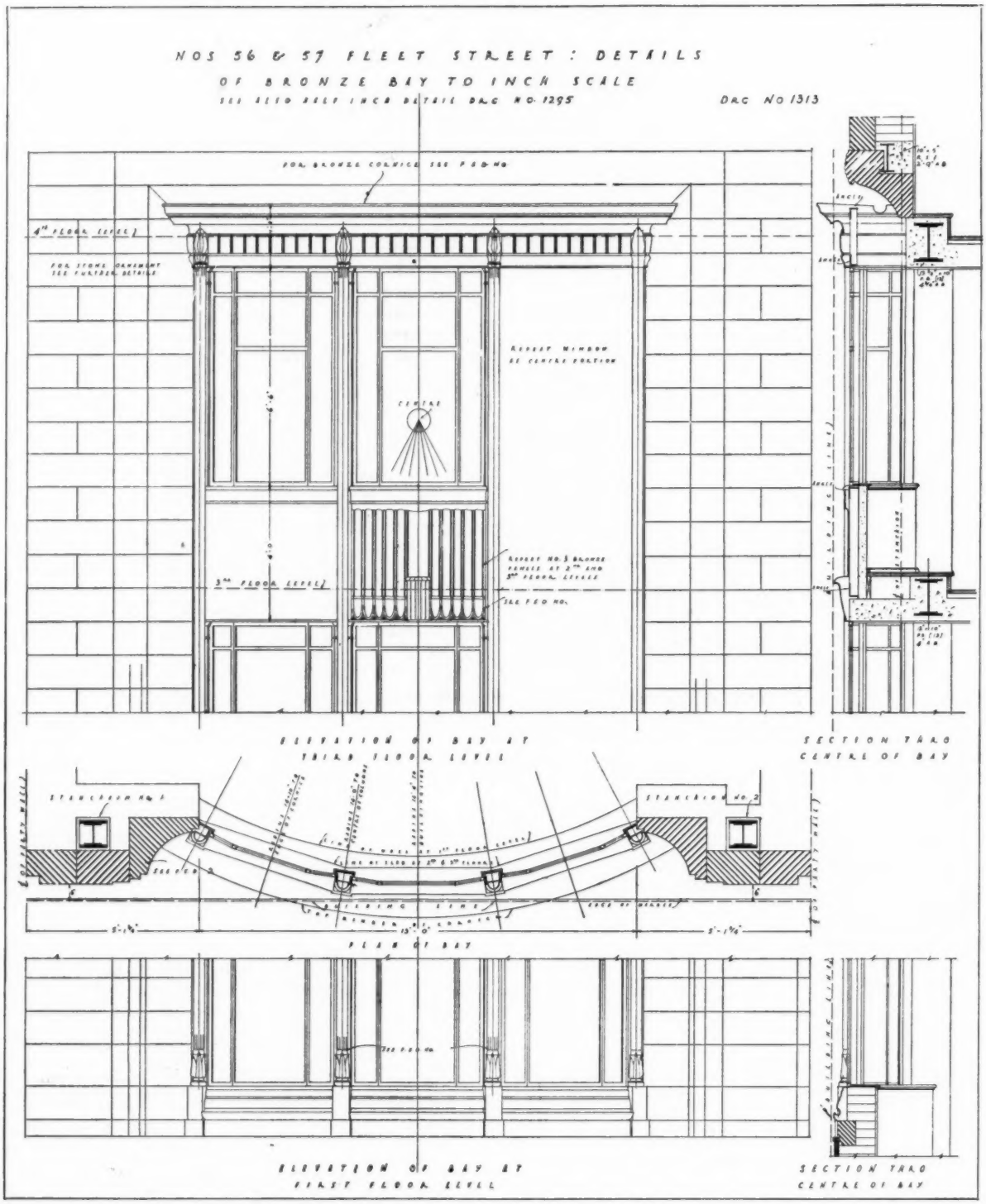
A BRONZE BAY

[ *BY PERCY TUBBS, SON AND DUNCAN* ]

## *THE WEEK'S DETAIL*

[ BY PERCY TUBBS, SON AND DUNCAN ]

*The bay window of the "Glasgow Herald" building links the three principal floors, and is 30 ft. in height. It is entirely of cast bronze with the exception of the three-quarter shafts, which are of tube. Various patinas are used to give variety of colour. The models from which the moulds were made were executed by the sculptor, Mr. C. W. Dyson Smith, and the casting and fixing were done by Messrs. James Gibbons.*




*A photograph of this detail is given on the preceding page.*

THE ARCHITECTS' JOURNAL

*Wednesday, November 2, 1927*

# A GREAT GIFT

THERE must be some who, while rejoicing that owing to the generosity of the late Lord Iveagh, Kenwood estate is to become the property of the nation, cannot restrain a sensation of acute sadness at the passing of an old order which is making the private maintenance of these great houses a matter of impossibility. At such moments every reserve of optimism must be rallied in order that a belief in any sort of continuous progress in the affairs of mankind may be maintained.

Not only is the mansion and its purlieus of seventy-five acres to pass to the L.C.C. in trust for the nation, but the late lord has expressed a wish that the mansion shall, at the expense of his estate, be made into an art gallery, to fill which he has bequeathed a quite unusually fine collection of pictures including works by Reynolds, Gainsborough, Romney, Lawrence, Hoppner, Morland, Raeburn, Turner, Crome, Cuyp, Van Dyck, Rembrandt, and Vermeer. Thus here, on the northern heights of London, will be established a picture gallery comparable in its quiet, secluded, tree-encompassed setting, and in the rare excellence of its contents, to Dulwich Gallery in the south. And should not this great gift as outlined in the will of Lord Iveagh be enough to satisfy all of us?

Yet for our own part we are not wholly satisfied, for we see a quite rare opportunity for achieving something more even than the establishment in beautiful surroundings of a nobly-housed collection of fine pictures.

The history of Kenwood is difficult to disentangle, but there is no doubt that much of the house, as it stands today, was designed by Robert Adam, including the room now known as the Adam room, which Mr. Arthur Bolton describes in his monumental work on the architecture of the brothers Robert and James Adam, as fit to rank " high among the great chambers to be found in England." This room, with its ante-room, was begun by Adam for Lord Mansfield in 1767. Some of the furniture in these rooms and elsewhere was designed by Adam, including a sideboard, settees, console-tables, mirrors; and during successive years a very fine collection of contemporary furniture was got together; a collection which was, unfortunately, dispersed at the death of the late Lord Mansfield. Kenwood was nearly destroyed a few years after its completion, for, during the Gordon Riots, the mob, having completely wrecked Lord Mansfield's Bloomsbury house and all its contents, proceeded to Kenwood to repeat the operation, but in this they were fortunately frustrated. The house has been spared and so, until recently, had the contents. Now the opportunity which we see in this occasion is for something more than the establishment of a picture gallery, it is for the preservation of Kenwood House as it was in its hey-day. Let the pictures be hung as they would have been hung in an inhabited Kenwood, let the money that would have been spent on structural alteration, in converting a private mansion into a public gallery, be spent in acquiring furniture of the period; if possible, of the Mansfield collection, the dispersal of which is so recent that its tracing should present no great difficulties. Incidentally, there will be an opportunity for generosity on the part of present owners to give or to sell at advantageous terms. In this way London would have a museum—we use the word for lack of a better one—comparable with the Musée Plantin-Moretus at Antwerp, or with the Skansen at Stockholm.

The purpose of a museum has been alliteratively stated to be threefold: inspiration, instruction, and investigation, each having its particular kind of visitor, the lay public, the student, and the research worker or investigator, and the difficulty which faces the management of most museums is how to accommodate these diverse interests. Most museums in England, for the greater part, serve in their arrangement the student and investigator rather than the lay public, that is to say, the arrangement is one which assists the student and the research worker rather than one which helps the layman to recreate a vision of past life. The public today, with its vastly developed historical sense, wants more than all else to see how people lived in the past. It wants an intimate picture of daily life and its surroundings which it can correlate with the contemporary literature and other activities.

In the gift of Kenwood we see an opportunity for gratifying this desire. We would have Kenwood restored and preserved as the fine eighteenth-century mansion that it was—we are aware that an anachronism will exist by the hanging therein of pictures by Turner, but we do not regard this as important—through which the public can wander seeing at once the pictures, the furniture, the decoration; passing through the reception rooms, the bedrooms, the kitchens, and service departments. The large number of visitors to the newly-opened King's cellars at Hampton Court is an indication of the popularity of kitchens.

England is certainly lacking in museums of this kind. Something of the sort exists at Hampton Court, but it is too vast, and at Aston Hall, Birmingham, but it is incomplete. We feel strongly that here is an opportunity for making good a very real deficiency; moreover, we do not feel that such a scheme in any way conflicts with the intentions of the late generous donor of Kenwood.

# NEWS AND TOPICS

THE ROME FINAL—COUNTRYSIDE SKETCHES—MODERN COMFORT A THOUSAND YEARS AGO

IN the Rome Final the architects show up very well. They were set a difficult problem, and it is much to their credit that two, at least, presented solutions æsthetically sound. This is a testing-time for the schools: an occasion to be watched closely by those who have the school system of training at heart; not in any partisan spirit of north versus south, Sweden against New York, but rather with a view to analyse the qualities of the work submitted. How much is school? How much student? How much does school clog the wheels and how much oil them, and how well does the Americo-Roman classic tackle the job of relating the Crystal Palace to the Imperial Institute?

* * *

The programme for the architects was to design an Empire centre in a great city, a sort of re-ordered South Kensington translated to a level site on the banks of a river with a bridgehead on the main axis; a site comparable in size with the Place de la Concorde. The buildings comprised (1) a large Empire building with a concert hall to seat 6,000, and two smaller lecture halls; (2) an enormous exhibition hall of 200,000 ft. superficial area; (3) four large buildings for the Dominions; (4) six smaller buildings for the Colonies; (5) a monument. The whole was to be effectively grouped on the site to form a monument to the Empire's greatness and a source of instruction to its humbler citizens.

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The winner, Mr. R. P. Cummings, was alone in opening the site to the river front, and, though the grouping of the smaller buildings might be criticized in detail, they are deployed about a fine "place" that has nothing of meanness in it. What puts him above his fellows is the fact that his great exhibition hall, of a type that we shall be able to see in the concrete when the Horticultural Hall is opened, is at once a background to the Empire building and integral with it. They are both freshly and modernly conceived, with some loss of monumentality, it is true, but without any illogical pretensions to joining a St. Paul's Cathedral and a Crystal Palace in an unholy alliance. The rest of the competitors, with one exception, forgot the exhibition hall altogether when it came to a matter of elevations, treating it as a great backcloth to whatever type of scenery they favoured for the stage, being careful meanwhile not to make too much of the swelling roof. It is a pity that these elevations were not required in the conditions. The winning design showed no signs whatever of Beaux-Arts traditions; no "smart darks" shot in very black with sugar-glozed ink; no messy *parterres* put in during the last mad minute, but rather was the plan sombre, with walls as thick as they are likely to be built today, and no thicker than the elevations would suggest. I regret that another design should so closely resemble his in outlook, and yet receive no prize.

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Mr. H. B. Dyer marshalled his larger buildings in a long composition lying back from the river—a fine thing in itself, but marred by the remaining colonial buildings, which lay scattered in staggered formation along the river bank: one small, one large, one in front, one behind. This makes a most unhappy foreground to a composition scaled to top pitch and culminating in a dome. Finally, if the kernel of the problem lay in combining and grouping refractory elements, then the remaining drawings were not in the race. They varied so much in outlook and in the technique of draughtsmanship that one of them might have been done in the early days of the last century before photography had rendered unnecessary the minute engraving of every detail—a monument of carefully wasted industry. Others employed the full-blown *poché* of a highly-modelled plan and looked like measured drawings of some Renaissance church, and these were dated. Is it *pompier?* Well, *pompier* it is.

* * *

Mr. Raffles Davison is best known as a perspective artist, but his small exhibition of pastel sketches at the Institute Galleries, Conduit Street, reveals his genuine gift for landscape. The exhibition comprises some seventy or eighty sketches of English scenery. Many have a predominant architectural interest, but the majority show some characteristic aspect of our homely countryside. The drawings are slight in character, but handled with sincerity and understanding. Subjects which especially attracted my attention were "Idehurst Farm" (a typical Sussex farmstead); "Woolbridge House" (the scene of Tess's tragic honeymoon); "Road Scene, Buckinghamshire" (a delightful study of wayside trees); "Valley Scene" (quite a dramatic impression of highland landscape); and some delicate studies of Kent and Dorset coast scenery. Many who appreciate the charm of our countryside may be glad of this opportunity of acquiring some example of Mr. Raffles Davison's art.

* * *

Architects and others who have watched with interest the attention to layout and design that distinguishes Welwyn Garden City, will be glad to hear that the city is progressing more rapidly this year than at any previous period of its history. There has been an increase of more than fifty per cent. in the population since October last year. The grant of Urban Powers last April has been fully justified. There has been a reduction of 4d. in the rates, although the novel policy of surfacing roads at the expense of the District Council without making any charge upon frontagers has been continued. At a conference held at Letchworth a few days ago, at which Mr. Montague Harris, President of the Town Planning Institute, and others spoke, special attention was given to the need to attract industries to garden cities. This has become an important financial matter, as the Public Works Loan Board this year declined to sanction a loan of £43,000 to Welwyn on the grounds that it was not in the national interests to provide money for the erection of workers' houses to attract manufacturers, but only to meet approved demands. But in spite of difficulties the industrial development of Welwyn is extending rapidly. The two great factories that can be

seen from the railway are extending their premises, and a number of new industries are being established. The architectural interest of Welwyn lies largely in the skill with which the factories, the new County schools and the permanent buildings of the two banks are all being designed to harmonize. For the latest housing scheme of 102 houses a tender of £320 per house has been obtained.

* * *

In the art of carving lies the true application of sculpture to architecture. Katharine Maltwood, in her show at Kensington, has just demonstrated how an artist of high quality vindicates the principle. She does not carve ornament, but figures in the round and in relief for architectural setting. That is the applied side of her art, the other is its mystic Asiatic spirit which she has imbibed during her protracted travels in the East. Sixteen pieces of sculpture were exhibited, half of which displayed this spirit. "The Priest of Buddha" is an impressive caryatid carved direct in stone without any preparatory model, which is the true and vital system of architectural sculpture. Another head with the same virtues is "Primeval Canada"—its upraised face displays the Indian type. It is colossal, and forms part of the "Primeval Canada Memorial." Carved in alabaster, "The Vision" is a symbolic relief with a number of aspiring figures, and "Samadhi" is an impressive wall figure of Egyptian cast, also in alabaster. A most effective piece of allegory is the "Magna Mater," a massive stone high-relief in an architectural setting. Among the applied architectural pieces are the organ front with, in this case, modelled figures in bronze, impressionistically treated; a font for Tadworth Church, and a "Boy Tickling Trout," lead fountain figure.

*The Vision: alabaster relief. By Katharine Maltwood.*

* * *

A central heating system, pipes for running water, and other accessories of modern comfort have been discovered by antiquaries examining the Castle of Glimmingehus, one of the oldest and most interesting edifices of its kind in Sweden. The interior of this ancient stronghold of Swedish nobility, whose grey granite walls tower above the fertile plain of the province of Skane in the south of Sweden, shows that the knights of old were far from Spartan in their habits. The kitchen, for instance, was found to be equipped with a giant baking-oven, appliances for the supply of running water, drainage pipes in the walls, special receptacle for the tinder-box, and two huge larders. The most remarkable discovery, however, was a central heating installation with long pipes through the walls, conducting the heat from a central heating plant in the kitchen to the various apartments on the upper floors. On the second floor, immediately above the big hearth in the kitchen, a snug and warm "cosy corner" with stone seats had been arranged.

* * *

There are in the same district a number of picturesque old castles, some of which are still inhabited by members of the Swedish nobility and surrounded by the glamour and legend of old. In most other parts of Southern and Central Sweden these historic and stately country seats are still in existence, but in many cases they have been turned into museums, such as, for instance, the Royal Castle of Gripsholm, with its priceless treasures of old paintings and furniture; the Castle of Skokloster, containing what is claimed to be the finest collection of arms in the world, and many others; but Glimmingehus is generally considered to be the oldest and most unique specimen of its kind.

* * *

Architects in London are watching with considerable interest the progress of the experiment that is being tried on the top of Adelaide House, 170 ft. above the Billingsgate Fish Market. Sir John Burnet designed a flat roof on which an eighteen-hole putting-green and a garden have been planted. Many expert gardeners declared that it was impossible for turf or plants to survive on a building that was so much exposed to London's fogs and to the cold east winds that whistle up the Thames estuary. But when I paid a visit to this unique garden last week, the old West Country gardener, who has been in charge from the commencement, showed me with pride violas, marguerites, geraniums, dahlias, gladioli, and even roses still in bloom. Cherries and pears have grown there this year, and a large crop of fruit is expected next year from the seventy fruit trees. Out of the fifty bushes planted, only a lavender bush has failed to survive. One of the beauties of this roof garden are fifteen bronze hand-worked Italian

vases, said to be worth £100 each, bought from Lynford Hall, near Sandringham. The staff in some of the offices in Adelaide House enjoy golf on the roof on most days, and undoubtedly the fame of this garden has done much to help its success. Many Americans are now occupying offices in the building.

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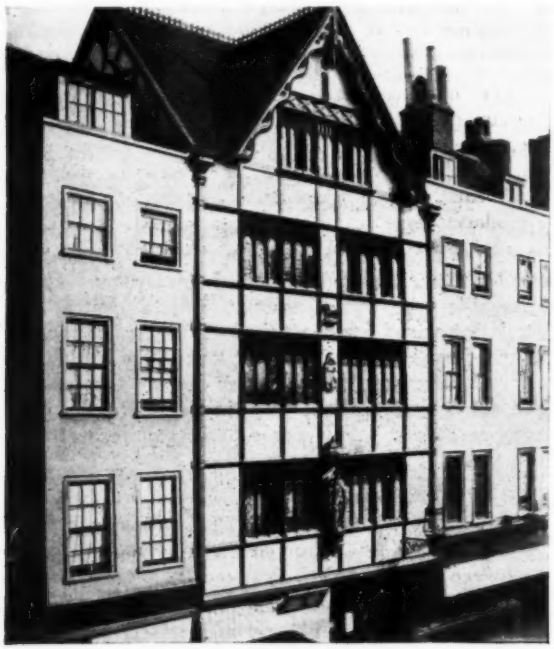
The special interest of this picture from my little photograph book consists in the fact that it represents one of London's most famous landmarks in the original position in which most of us remember it. Those who know it on



*Crosby Hall as it was in Bishopsgate Street.*

its present site in Chelsea, and can see all round it, will hardly recognize it here with only its gabled front facing Bishopsgate Street. Crosby Hall was built by Sir John Crosby somewhere between 1466, when he obtained a lease of the ground—ground, by the way, which is shown, by remains discovered there, once to have been covered by a Roman villa—and 1475, when he died. It is, however, chiefly famous as having later belonged to Sir Thomas More, who held it in 1518 and is here said to have written his *Utopia*. Five years later he leased the place to his friend, Antonio Bonvici, who later transferred it to More's son-in-law, William Roper. It subsequently passed into the possession of the Bond family, and ambassadors from foreign countries were frequently lodged here. At the close of the sixteenth century it was sold to Sir John Spencer; and Lady Pembroke, the subject of Ben Jonson's famous verse, was living here in 1609. Richard III, at an earlier date, had been associated with the place, as everyone knows from Shakespeare's references to it. From such notable inhabitants to the days when it was occupied by a firm of packers and, later still, as a restaurant, is a long cry. One cannot but regret that it should have been wrenched from its original site; but at least a dignified future is assured it, and, appropriately enough, on the old garden of Sir Thomas More, with whom much of its fame is identified.

*From a Disembodied Architect*

Thought I, walking from Bush House, Aldwych, to the junction of the Strand and Fleet Street, "These white buildings and pavements are too brand-new to have any history. Suppose we excavated and discovered the old parish, preserved in the way of ancient sites in the East, which are coming to light under the digger's spade! At once I was stepping down. . . I had a difficult time of it, in the October half-lights, dodging the carts, the stinking fish refuse, the dirt and the rags, the jutting signs and the bulk-shops. In case you have forgotten, these latter are timber-framed stalls, filled with lath and plaster, built in front of the shops. Their overhanging canopies, sunk at the ends to let the rain slip off, provided sleeping accommodation for impecunious or erratic authors. I passed the abandoned shops of hairdressers, fishmongers, purveyors of pills . . . In Butchers' Row the dark-toned, wretched buildings, several stories high, are also of wood and plaster, with overhanging eaves. Was that Guy Fawkes' ghost in silhouette in the low-ceilinged room pierced by a small casement? Runs T. Winter's confession: 'So we met behind St. Clement's, Mr. Catesby, Mr. Percy, Mr. Wright, Mr. Guy Fawkes, and myself.' More noxious grew the alleys and courts. . . Cadgers' Hall, Rogues' Lane. . . I wouldn't for anything go into that rookery of Middle and Lower Serles Place, where counterfeiters of coin eluded justice by a neat contrivance of shaft and well from upper story to cellar; a disappearance through a secret trap in a pulley-drawn basket. No; even though its vagrants and thieves and beggars rotted long ago."

ASTRAGAL

# ÆSTHETICS VERSUS ECONOMICS

[BY SIR JOSIAH STAMP, G.B.E.]

## ii: HUMAN ENJOYMENT

My second economic assertion is that maximum economic good is not synonymous with maximum production unless the production is a balanced one—balanced in accordance with an all-round exercise of human faculties. Man is a more productive economic man if all his faculties are exercised in work and leisure in a balanced way, than if he is entirely one-sided and specialized.

The æsthetic is then an essential element or factor in a balanced economic activity or producer. Here I mean that leisure properly spent in a change of interests, in simple and not always feverish interests, is a tonic to the nervous system. A wider range of interests, as a hobby or holiday, confers elasticity upon the man or upon special activities from which he rests. A focus of interest stimulates interest, and an historic building may often be such a focus. It usually involves some travel and effort, and as a definite object gives a brief stay from aimlessness. The preservation of beautiful areas and natural scenery contributes to such mental rest, and directly to physical fitness, both along psychological as well as physiological lines. This obvious aspect I shall not labour, for we are getting more and more alive to the necessity for open spaces and lungs in our great town development; and while this may act purely through the physical, sheer beauty and natural sublimity are such a reaction to

the ordinary as to operate through the mental and psychological nature of man.

My third economic assertion is that maximum economic production does not lead necessarily to maximum economic satisfaction. Economic welfare depends upon whether the production is of such things, in balance, as give greatest total utility or satisfaction in consumption. Man does not live by bread alone. Production is only a means to an end, and we must look to the end for the economic answer. Enjoyment or "consumption" of the æsthetic products follows the same marginal laws, or considerations, as "consumption" of food, clothing, sport, travel, and speed. It may be latent, and only assert itself as an economic good on being awakened, educated, or fed, like many other economic tastes. We do not secure an optimum economic position by remaining primitive, primeval or unsophisticated in our faculty for appreciation and enjoyment. My third theme, then, is the æsthetic as an ingredient or factor in maximum human enjoyment.

The economic doctrine of margins shows how man applies each unit of *general* power-to-satisfy-wants that he possesses to particular wants or satisfactions, so as to give maximum marginal satisfaction. Having a second pair of boots, a third has less attraction than a second hat, and having power to supply a third hat, a visit to the theatre gives greater pleasure. A continual process of substituting one line of satisfaction for another is automatically and half-unconsciously pursued by individuals. But all progress and civilization have involved not merely the full satisfaction of old or primitive desires, but the development and satisfaction of new. The new ones arise from social emulation, but also by education and cultivation of finer instincts and desires. The supplying of their wants gives a satisfaction keener, fresher, and more varied in proportion, as they belong to the less ordinary sides of our nature. To develop such cravings by culture and then to satisfy them is to maximize economic welfare on the side of consumption of wealth. The man who spends £500 a year in satisfying the first range of wants to the point of satiety, according to the economic doctrine of margins, gets less maximum economic value than he who spends £400 on that range and £100 on another range of natural, if acquired, tastes. Not to be priggish, or to put too fine a point on it, a full and varied life, with elements of sentiment and spirituality, is the highest economic life, because it gives the maximum of satisfaction. The community that refrains from the temptation to devote all its resources to assets productive of money profits or business ends, and devotes part of them to assets productive of other kinds of satisfaction, is economically the richer. Once admit the latter to the title of economic goods, and another issue is clear. If it is an economic duty to *produce* æsthetic wealth of this order, it must be an economic duty also to *preserve* what we have. Ruskin said, "Wherever you go, whatever you do, act more for *preservation* and less for production." He also declared, "It was the duty of all good economists to proclaim continually that our respect for the dead is not really shown by great monuments to them which we build with our hands, but by letting the monuments stand which they built with their own."[1] The act of preservation is often, too, the act of education, and the development of the instinct which shall make the thing preserved more valuable. When Clutton Brock discusses the three elements of the Ultimate Belief, the moral, the intellectual and the æsthetic, he says:

> In education the absolute value of the æsthetic activity should be recognized, and that not merely in relation to works of art, but also in relation to the universe. A boy should be made to understand that when he perceives the beauty of anything, he is exercising an activity of the spirit, whether it be the beauty of nature or the beauty of art. He should be taught that to see beauty is not merely to amuse yourself, but to be aware of a glory of the universe, and that it is an end of life to be aware of this glory.[1]
>
> Our whole civilization suffers both morally and intellectually from the suppression of the æsthetic activity. . . Unless we exercise our æsthetic activity the universe is not glorious to us. Science is a discovery of arid fact, and duty obedience to a set of rules. When Christ told his disciples to consider the lilies of the field, He assumed that they had seen their beauty, that they had exercised their æsthetic activity upon them. If they had not done so, His statement that Solomon in all his glory was not arrayed like one of these, would have been meaningless.

We are only just beginning, in our new era of civilization, to recognize that more and more purely material progress, unless it is progressively aerated by finer appreciations and artistic perceptions, merely means a suffocating mass of commodities. Instead of four objects in place of two, far better to have two that are finer and higher examples of craft. Clutton Brock said, "Our whole society suffers from a lack of values, from a bewildered worldliness that is not even content with itself. Love beauty for its own sake, and you will love it better than luxury, which you only value because it gives you comfort or heightens your importance."

* * *

If I have satisfied you that from three points of view objects of natural and historical interest have an important economic value, I have established that it is short-sighted economic policy not to foster and protect æsthetic values. So when they collide or conflict, and you have to decide between a new street or an ancient house, you are not necessarily putting business against sentiment, but one direct business advantage against another business advantage, less direct, but no less ultimately real. Where the community has charge of both sides of the account, it is a clear duty to weigh these economic alternatives. But more often it is an individual interest that will *gain* the direct material profit, and the community, not the individual, who will *suffer* the indirect material loss thereby. So we get the actual conflict between private economic gain and public economic gain, and not between private economic gain and public sentimentality. It becomes often a high form of socialism for the community to relieve the individual, if necessary, of some of the private loss which communal advantage must involve. The conflict does not become real with movable objects which can be collected in galleries and museums. It is only actual where fixed space is occupied by buildings, beautiful, ancient, or notable, and by natural scenery, which get in the way of some other type of material development, such as wider streets, new suburbs, or a conveniently situated power plant. These may not necessarily satisfy mere private ambition or cupidity, but may be highly important communally.

It is a curious fact that a recognition of the value of such objects of æsthetic value as buildings dawned at the time of their greatest peril through industrial development, but lagged behind. The Gothic revival came in soon after the Industrial Revolution—it blundered through a period of false ideals about restoration, and its spirit was not catholic

[1] *A Joy for Ever: II.*

[1] *The Ultimate Belief*, p. 79.

enough to protect many types of beauty and interest now considered valuable. So far as we can see, a passion for natural beauty is a modern development. Until the naturalist school coeval with the Industrial Revolution —Wordsworth, Byron, Shelley, and so on—poets gave little genuine expression to appreciation of landscape. The literature of earlier times is singularly barren of praise for scenery that we now travel miles to see. Dr. Johnson's famous remark on the majestic aspects of Skye may have been typical of this blindness. Boswell, in his delight, pointed out "an immense mountain, and the doctor sincerely sneered 'an immense protuberance.' He only cared for mountains in books, and even in books he did not care for them much." [1]

But at various times some writer has chronicled his feelings about the disappearance of worthy landmarks. Sir Thomas Browne said: "'Tis time to observe occurrences, and let nothing remarkable escape us: the supinity of elder days hath left so much in silence, or time hath so martyred the records, that the most industrious heads do find no easy work to erect a new Britannia. 'Tis opportune to look back upon old times and contemplate our forefathers. Great examples grow there and are to be fetched from the passed world. Simplicity flies away and inequity comes at long strides upon us. We have enough to do to make up ourselves from present and passed times, and the whole stage of things scarce serveth for our instruction. A complete price of virtue must be made up from the centos of all ages."

Those of us who know and appreciate the Prime Minister's character best, are aware that his love of rural England is not a mere compound of agriculture and farming pursuits or country life and natural beauty, but is touched to emotion with the sentiment of its human records. This is clear in his recent appeal for the Society of Arts movement for the preservation of ancient cottages. "Nothing is more characteristic of England's countryside than the cottage homes which, for century upon century, have sheltered her sturdy sons of toil. Who has not felt a thrill of admiration on catching sight of some old-world village round a bend of the road? The roofs, whether thatched or tiled; the walls, weatherboarded or half-timbered, or of good Cotswold stone—have been built with material ready to the hand of the craftsman, and, painted with the delicate pigments only to be found on the palette of Father Time, have grown amid their surroundings just as naturally as the oaks and elms under whose shade they stand. They are part of our country, part of our inheritance, part of our national life. No other country in the world has anything to compare with them. Ought we not, then, to be proud of them, to protect them—to do everything in our power to save them from decay?"

* * *

The first important result of the work of such a society as this is that it confers upon historic objects prestige and a sense of the precious. The man without knowledge would look upon some monument or Tudor architecture idly, and without any sort of arrested reverence, but seeing from a notice-board that it has been acquired by the National Trust or by the Society for Preservation of Ancient Cottages, or is in charge of the Office of Works, he at once realizes that there are some people in the world, at any rate, who regard this object as precious. This tends to set up the process of attention and, therefore, of education, to which I have referred. He knows that though it means little to him, there must be something in it, because public attention has been practically—and financially—directed to it. Actuality in history is definitely labelled for him, and simple minds will readily yield allegiance or reverence where it is publicly asked for.

In the second place the existence of such societies means that public opinion of competent people likely to take practical interest in these matters is readily mobilized when occasion requires. This is a great advance upon trusting to mere chance as to whether some individual, with public spirit, is able to be influential enough to take action within the time—all too brief—that is often available. The people themselves are inclined to be too busy when we want them. As Sir Thomas Browne said: "We were hunted by the occasion, not catched the opportunity to write of old things, or intrude upon the antiquary. We are coldly drawn into discourses of antiquities, who have scarce time before us to comprehend new things or make out learned novelties." [1]

Something needs to be done even after the treasured object has become a shrine, especially if an aspect of grandeur or dignity or mystery is an essential feature. A visit to Cheddar Gorge after an interval of twenty years shows that the booths and stalls and paraphernalia of large scale charabanc tourism can rob a scene of the very character that makes it famous. The incomparable mystery of Mont St. Michel fortunately just suffices to baffle the awful clutter and huddle of raucous and meretricious bazaardom that endeavours to stifle it. Public habit and opinion *can* be changed, with patience and right teaching; indiscriminate spitting, in this country at any rate, is fast vanishing; a sentiment about rubbish on the countryside is growing; some day, too, a sense of public dignity will surround the scenes of natural beauty and shrines of ancient life—else, could they speak, they might prefer the old-time neglect to the over-vociferous popularity of later days.

I have here dealt almost entirely with preservation rather than the exercise of civic alertness over new production, new works and achievements of credit and beauty. I have done so because it is much easier to arouse public sympathy for doing a new work with credit to a town, than it is to defend some piece of antiquity which stands in the way of a supposed improvement. But we have little enough left and must hasten to protect it. And important work has still to be done in forming judgment on new matters. Professor Lethaby has said: "Except for a hundred or two of buildings, London needs to be rebuilt from end to end. No writer on economics has yet told us what are the limits to expenditure on public arts, whether a beautiful city is an investment or an extravagance. The modern political economy of quantity should be corrected by a political economy of quality."

Before a business project can be effectively launched it has to be controlled by a number of factors, or defer in varying degrees to them. It cannot ride roughshod over the physical conditions of land—contour, existence of streams, climate, customs of decency, ancient rights, trade conventions, even though overriding any one of these might make its way easier and more profitable. But the limitations are recognized and accepted. It is time that public opinion added to the given circumstances to which business development must necessarily accommodate itself, certain standards of external beauty and the preservation of all objects of historic value and monuments of our national life.

[1] *A Summer in Skye*, Alex. Smith, p. 140.

[1] *Hydriotaphia.*

# RECENT WORK AT WELWYN

[BY F. J. OSBORN]

THE word "Housing" ought to be obliterated from the architectural dictionary, and left entirely to the Parliamentary lawyers who presumably invented it. It has destroyed the souls and ruined the fortunes of scores of promising architects. A pernicious distinction has grown up between "Houses," meaning individual residences planned to suit the habits and tastes of normal human beings, and "Housing," meaning a mass product suited to a strange species called the working classes, whose ways and likes are only understood by sanitary inspectors, Ministers of Health, and such. These mysterious working classes are believed to be immovably attached to a certain canonical group of domestic fittings and arrangements. They almost insist on ugliness within, though luckily they do not object to symmetry without, nor to its usual corollaries in the shape of windows in corners, sills 4 ft. high, or bedrooms in which the only place for the wardrobe is also the only place for the bed. They have no objection, it is supposed, to copious displays of cistern and pipes in living-rooms; which is fortunate, because it is the first law of "Housing" that the living-room fire shall all the year round do the cooking and heat the water. "Houses" are planned for economy in working; "Housing" for economy in building. But there are sticking points even in economy. Working classes, students report, will, if given the slightest excuse, dedicate their largest room for Sundays only, dine in the scullery, and sleep with the bedroom windows shut. Consequently, they have to be tricked into better habits by architectural cunning. The living-room must be made a passage-room so that it can't be kept tidy enough to be reserved for the Sabbath. A draught must be induced in every flueless bedroom by means of a hole in the outer wall covered by a grid; which, providentially, working classes are too scrupulous to paste over with brown paper. And the scullery must be small, so that a table, innocent in itself, but apt to lead to a meal, cannot by any means be got into it. In short, while house-designing is properly the art of fitting the technical necessities of building and the tradition of architecture to the requirements of a modern family, "Housing" is a game played according to stereotyped rules, where the client is an irrational creature with one set of prejudices to which the architect must abjectly defer, and another set of prejudices which he must despotically circumvent.

It cannot be claimed that Welwyn Garden City has altogether escaped these vices of "Housing." But it has fought against them. And it has successfully bridged the deep gulf of distinction which all over England separates the two classes of post-war building.

One of the reasons for this is that a majority of the dwellings provided in Welwyn Garden City under the Housing Acts have been built for public utility societies,

*Houses in Broadwater Road, Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. In many cases sheds and trellis have been so placed as to fill up the gaps between the houses and preserve the continuity of design shapes aimed at.*

who, while perforce working within the limits of size and the other regulations of the national scheme, have introduced a wide variety into their internal planning and fittings, their choice of materials, their exterior designs, and their group layouts. Experiments in "labour-saving houses," undertaken in the first instance by societies catering for the middle classes, have influenced the design and equipment even of the smallest houses for the weekly-wage-earners, whose conservatism has been found not to be nearly so deep-rooted as is commonly supposed.

A second reason is that in Welwyn it is not only the council houses that are designed in groups. For all classes of dwellings it has been the rule, to which there have been comparatively few exceptions, for a street, or part of a street, to be given into the hands of one architect and treated as a single unit of design. Beginning with the public utility societies, this principle has been extended to the building of houses for sale, and even to the building of houses to clients' special requirements. The fact that a large proportion of the speculative building in the town has been done by subsidiaries of the Garden City Company has facilitated this; but other builders have in some cases seen the merits of the idea and fallen in with it. A notably harmonious and restful general effect is the outcome of this policy, a result which experience in other streets has shown is quite unattainable where an attempt is made to secure harmony in miscellaneous designs by their submission to an estate architect. The latter system can prevent the entrance of monstrosities and soften the worst clashes of style, and where houses are big enough and far enough apart to be seen as units in themselves it may serve; but a satisfactory street picture it cannot give, however rigorous the control.

The third and a very important factor in bridging the chasm between "Houses" and "Housing" in Welwyn Garden City is the quantity and variety of building done to the designs of the city architects, Messrs. Louis de Soissons and A. W. Kenyon. A number of other architects have been active in both classes of work, and have been responsible for many extremely successful designs, both of individual houses and of groups. But the predominant influence has been that of Messrs. de Soissons and Kenyon, who have carried out three of the four district council housing schemes, much public utility society work, and the greater part of the individual house designing.

Obviously it is the council schemes, and the smaller houses for public utility societies, where everything is cut to the bone and where the clients' instructions have almost the rigour of a penal code, that present the most difficult problem for the architect. Planning by types, and a pretty drastic limitation of the number of types used in each scheme, are fundamental for reasons of economy, and not much latitude is allowed as to the number of rooms or their arrangement. It is probably a fair criticism of the post-war schemes in the country at large, that the internal planning, which is very nearly standardized by the Ministry of Health, is on a much higher average level than the exterior elevations, and that the site planning falls as a rule far below both. The internal planning of Messrs. de Soissons and Kenyon, on this kind of work, is good, clean, straightforward planning, which gives as much useful floor-space as the very exigent dimensions will permit; but it is not in this sphere that they have made their greatest contribution to the subject. It is the handling of the types, the grouping into blocks, the use in various permutations and combinations of carefully-thought-out standardized details, and the variety of arrangement of the blocks in streets and culs-de-sac, that provides the most interesting study.

The furthest development of this art of grouping and site-planning is seen in the schemes of 550 houses recently completed for the Welwyn Public Utility Society, Ltd., and Moat-Wood Houses, Ltd. Here the basic material was a

*Houses in Birdcroft Lane, Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon.*

*Houses in Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Top, Longcroft Lane. Centre and bottom, Birdcroft Lane. These cottages, in a Rural District Council scheme, in Birdcroft and Longcroft Lanes, are face brick and rough plastered, and show the variety obtained in £400 cottages, a large proportion of which are double fronted, and where the effect aimed at was variety of design carried out with three-type houses on straight roads. Trellis porches are used to break up the simplicity of the houses.*

group of seven- or eight-type plans ranging from the non-parlour-two-bedroom house to the parlour-four-bedroom house, some of them being suited to all aspects, and others efficient in one or two aspects only. The construction, dictated by the conditions of the time, was to be in continuous concrete, poured into metal shuttering *in situ*—a method that obviously did not lend itself to architectural frills. The windows and other openings had to be severely standardized owing to the character of the construction. Variation of the elevations by ordinary means would have involved extra cost and was ruled out.

From this unpromising material has been evolved a scheme which not only exhibits endless variety, but is of considerable architectural beauty throughout. It is as far

*Houses in Peartree Lane, Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon.*

*Houses at Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Above, Holwell Road. Below, view across garden in Peartree Lane. The views on this and the facing page show street effects on main roads obtained by the use of occasional breaks in the plain rectangles of blocks of houses, careful study of houses in relation to existing trees, and woods and copses, design of tree-planting and grass verge. The Public Utility Society, for whom the houses have been built, maintains the hedges so that a uniform growth will be obtained. This is an important point in the picture effect aimed at.*

removed from the atmosphere of "Housing," and the unimaginative "staggering" of blocks of four, blocks of six, and pairs, which passes for site-planning in many places, as can well be imagined.

The layout of the roads was first carefully studied so as to make the utmost possible use of all the existing natural features. A Saxon homestead moat was used as one point of departure. The few existing large trees were brought into the planning scheme. A spinney of hornbeam and hawthorn was a factor in deciding on the line of one of the principal roads. These trees were made the junction points for the main roads and the numerous culs-de-sac or "closes" which were characteristic of the plan.

The reasons for the extensive use of "closes" are several. They are economical in roads and public services, they afford quiet from the fast traffic on through roads, and, as has been proved in this case, they can be varied almost infinitely in architectural arrangement and garden layout. In Welwyn Garden City it has become the general practice to treat the whole of the space between the fronts of the houses in culs-de-sac as a common garden, maintained either by the society owning the houses, or by the tenants collectively. Surprising diversity and charm have been achieved in this way, and the cost of upkeep is not excessive

*Houses at Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Above, Goblins Green. Below, Athelstan Walk.*

provided that the planting scheme is considered with an eye on future maintenance.

In the " closes " varied architectural effects are secured: first, by occasionally mixing the types in one block, so as to secure a few return walls and gables; second, by juggling with permutations of standard bay windows (of two or three patterns), which are particularly valuable as they give internal variety, too; third, by the skilful addition of simple porch designs and door hoods; fourth, by the use of elm or tarred weather-boarding to the upper floors of some of the houses; fifth, by colour on the walls and the doors; sixth, by the positioning of the blocks, which is studied in

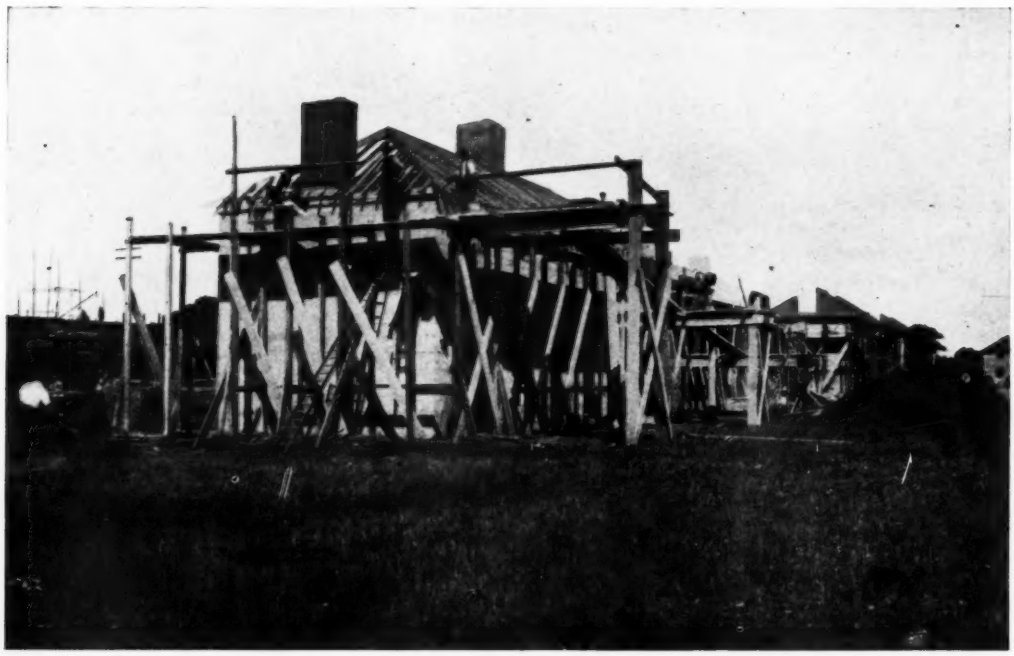
*Houses at Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Above, Edgar's Court. Below, Oak Tree Garth. Views looking into typical " closes " or " culs-de-sac " from the main roads, showing planning with existing trees as dominant or axial features. This is particularly illustrated in the view of Oak Tree Garth. Variety of colour of walling is unfortunately not rendered by photographs. The colours used are : white, grey, deep cream, yellow, pink, green, blue.*

*Houses in Guessens Road, Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Houses at £284 each mentioned in the article. The value of a curved road is shown here: the single rectangular blocks follow and emphasize the curve. Note also the value of grass verges and tree-planting, handled as a part of the scheme by the architects. A single type of trellis porch was used throughout on this scheme, and the light and shade given greatly help to relieve the severity of the plain blocks.*

relation to the site, the layout of the gardens, and the types of houses used.

The use of colour has been much developed in the later schemes, daring experiments having been tried with a much greater measure of success than failure. There is still much to learn in the matter of cement washes and wall colourings, and some machinery of advice and research to supplement the science and the propaganda of manufacturing firms is badly needed. Unaccountable patches still occur to mar the more brilliant efforts, and until the problem of their origin is solved the tendency is to play with lighter tints for safety. A wide range of pleasing and really permanent

*Houses in Edgar's Court, Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Houses at the end of "closes" or "culs-de-sac" showing variety obtained by use of weather-boarding. The Public Utility Society for which the houses are designed will maintain the grass plots and verge, and will plant and maintain flower-beds.*



cement colours is still, so far as Welwyn experience goes, to seek. Several colours are so far a complete success, but a further variety would be used if they were to be had and to be relied on.

An extremely important and usually neglected aspect of group-planning is the arrangement of the paths and out-buildings at the back of the houses. Where economy is not too rampant, the provision in blocks of four houses of a central passage is always to be desired, but even where it exists the planning of the route to the back entrance calls

*Houses at Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon. Above, concrete houses in course of construction showing standardized scaffolding, metal forms, and access gangways. Below, a typical group of three-bedroom two-sitting-room houses of plain rectangular blocks, 8 in. solid concrete walls, metal casements, Courtrai du Nord tiles, and wooden porches. In all, ten types of front-door surrounds or porches were designed for this scheme.*

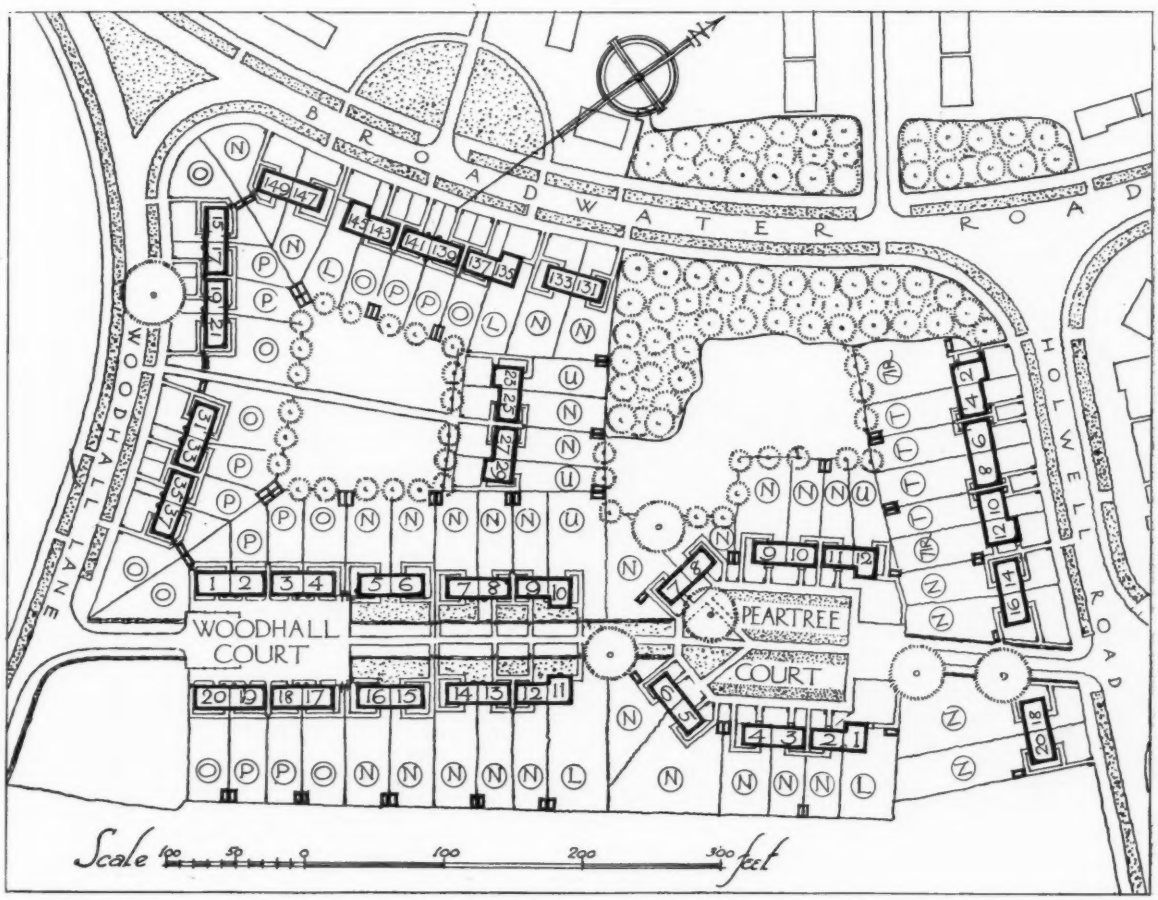
for much knowledge and skill—or in default there is a nasty mess of trodden hedges and a no-man's-land of mud, which depresses many an honest council rent-collector, not to speak of the tenants.

In some of Messrs. de Soissons and Kenyon's Welwyn schemes, the garden sheds, which are always a necessity, are grouped in pairs or in fours under one roof. This looks rather well, but if the sheds are placed at the ends of the gardens, as in some cases they are, they become more conspicuous and perhaps less useful. Sheds in pairs near the houses, if designed with the scheme, can look quite well, and seem to be the best of the alternatives available.

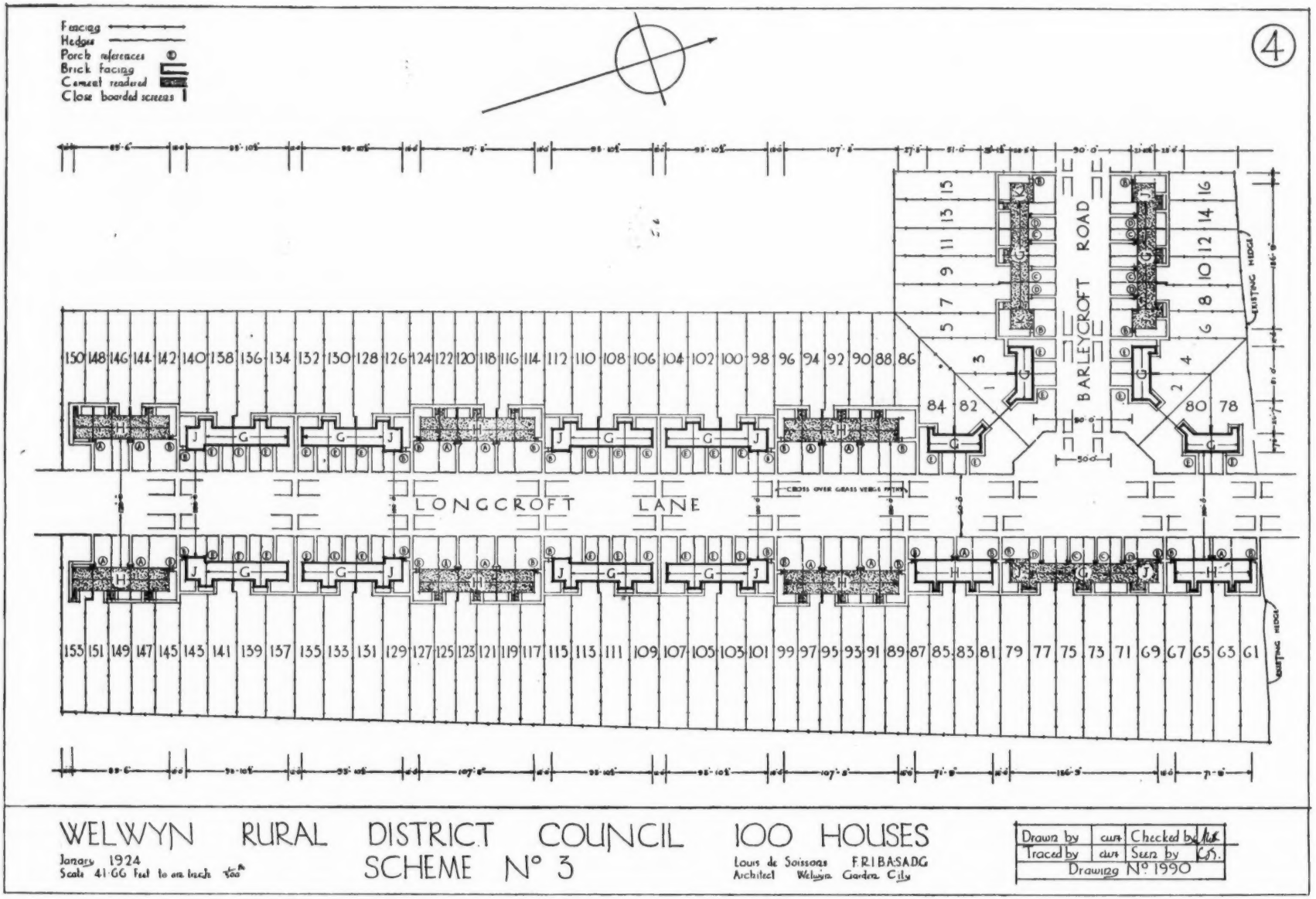
The concrete houses of the public utility society schemes described have cost approximately £500 each. The site-planning expedients which have been so successful in their case can be applied equally well to larger and to smaller houses, as is shown by other groups of houses designed by the same architects in Welwyn Garden City, except that in the case of the very cheapest houses it is usually necessary to keep to straight rectangular blocks, which diminishes the resources of the architect a little. But even with these smaller houses very pleasing effects have been secured with no sacrifice of comfort or economy.

For one of the council schemes, consisting of ninety-three houses, some of which were parlour houses, a contract at £284 per house was obtained in 1923, and the houses, on which only the 1923 subsidy was obtained, are let at 6s. 6d. to 8s. per week without loss to the rates. For the latest scheme of Messrs. de Soissons and Kenyon—a scheme of 102 houses for the Welwyn Public Utility Society—a tender of £310 per house has been obtained (October 1927). As much care has been given to the lay-out and planning of this scheme as to those of the earlier schemes, and it carries into the field of house-building for the weekly-wage-earners the lines of thought developed in producing the more expensive schemes.

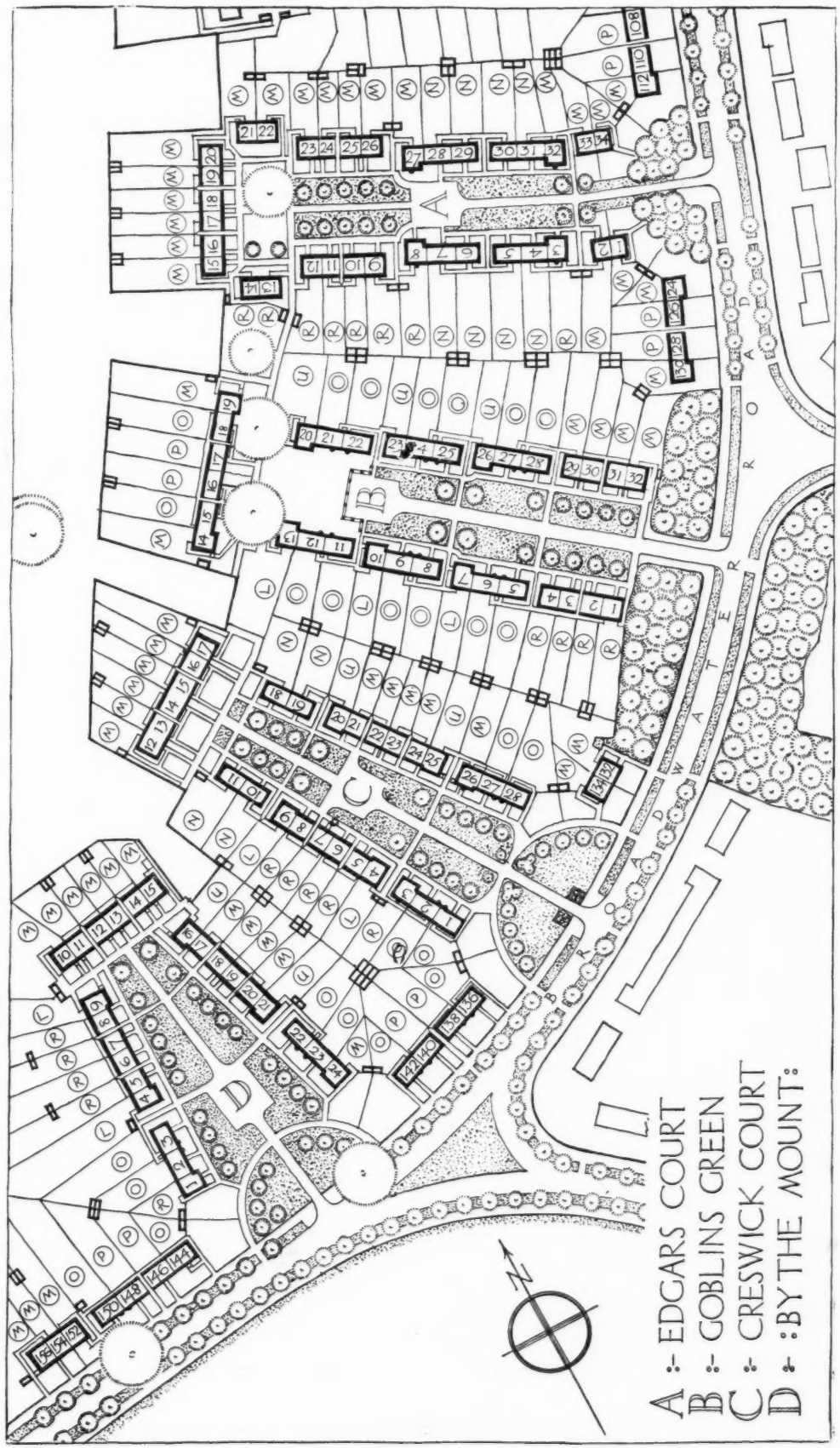
A small house is, of course, a small house, and the difference between small and large is one that cannot be wiped out by the utmost ingenuity of the architect. But the sense of the age is against any emphasis on class distinctions, and therefore against the conspicuous segregation of the working classes and the middle classes (whatever they are, for no one has been able to define either). The introduction of true group architecture into site-planning for schemes under the Housing Acts, and the extension of the idea of street design to the larger houses, not only avoids an unpleasant differentiation which has not even the merit of corresponding with any social fact, but makes a whole town architecturally satisfactory and interesting. The principles and methods that have been applied at Welwyn are worth the attention of architects. They can, of course, like all work of a decided character, be criticized in detail, but they represent a substantial advance in the art of site-planning and architectural grouping.




*The layout of houses in Woodhall Lane, Woodhall Court, Peartree Court, Broadwater Road, and Holwell Road, Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon.*

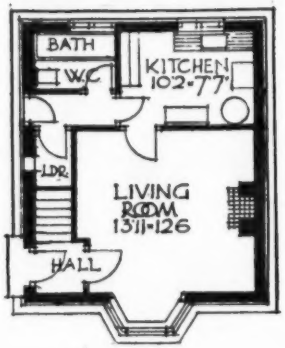



*The layout of one hundred houses for the Welwyn Rural District Council. By Louis de Soissons and Arthur W. Kenyon.*




*The layout of four "closes" of houses in Welwyn Garden City. By Louis de Soissons and Arthur W. Kenyon.*

*The layout of one hundred houses for the Welwyn Rural District Council. By Louis de Soissons and Arthur W. Kenyon.*

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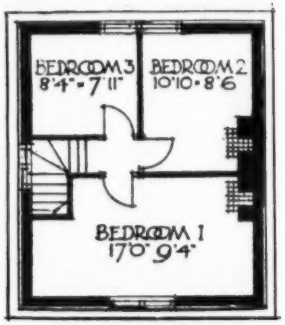


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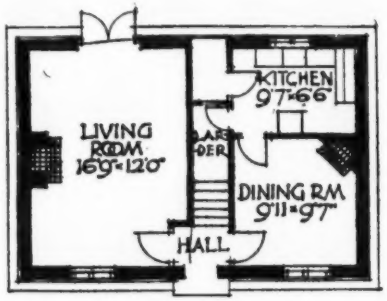


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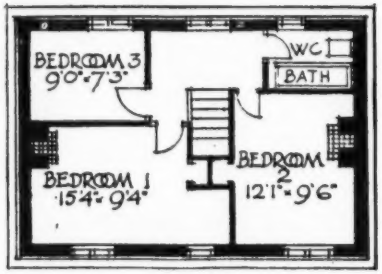


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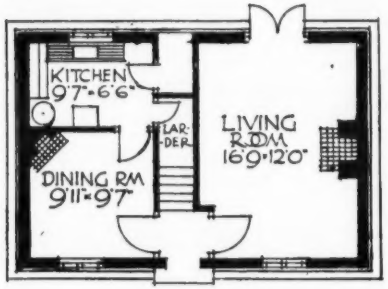


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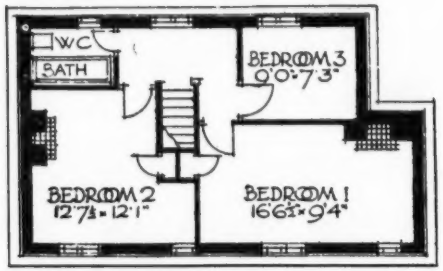


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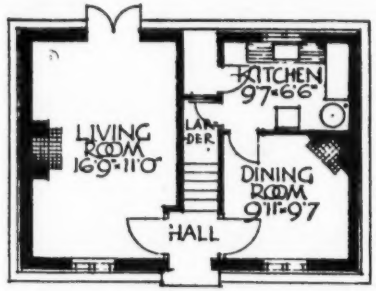


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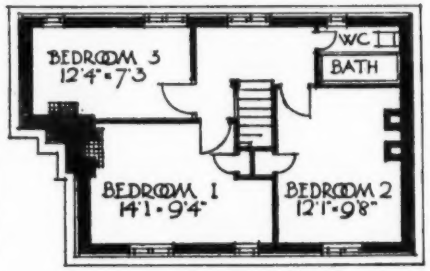


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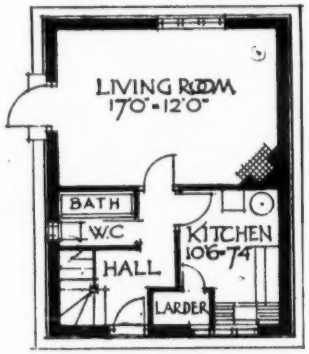


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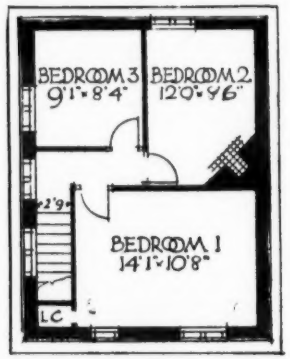


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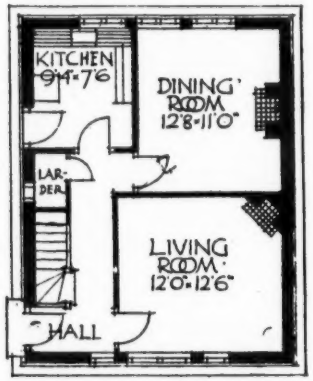


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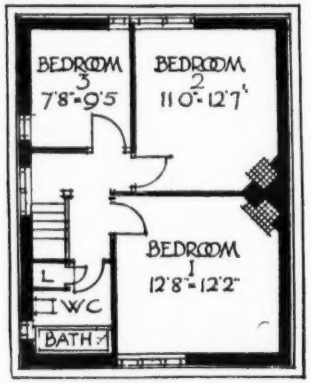


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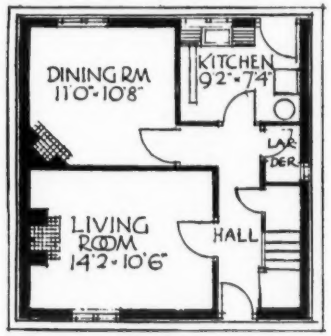
*Houses at Welwyn Garden City for Moat Wood Houses, Ltd. "Type" plans. By Louis de Soissons and Arthur W. Kenyon.*

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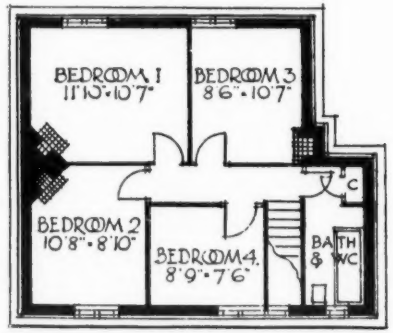


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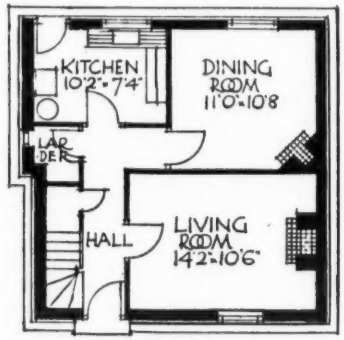


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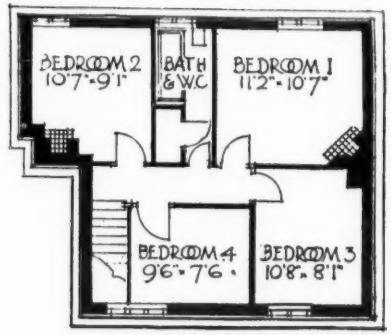


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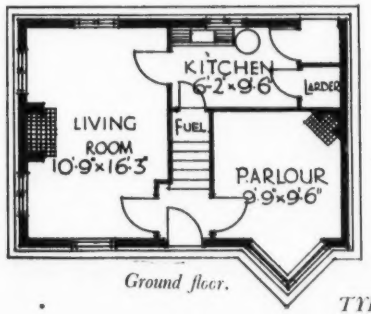


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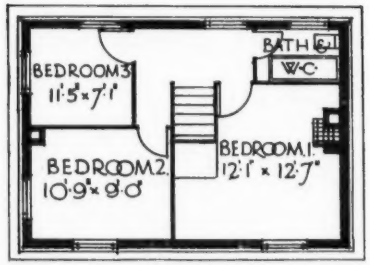


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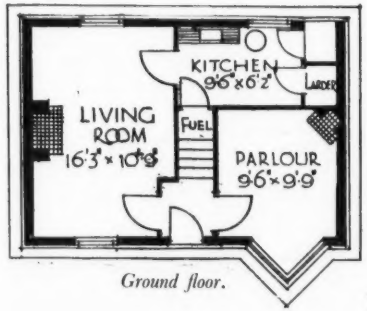


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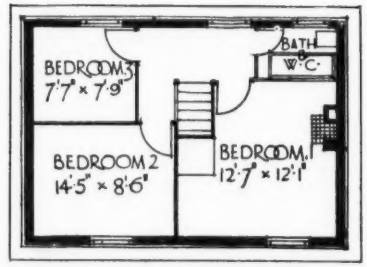


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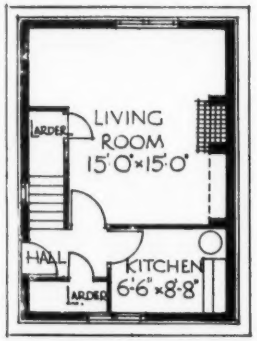


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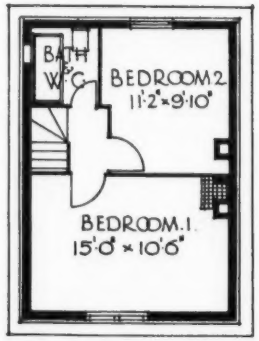


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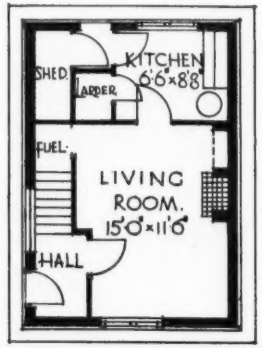


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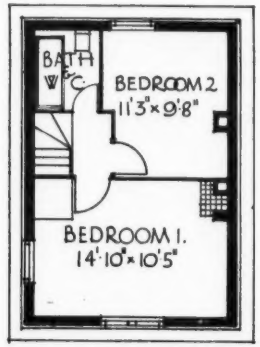


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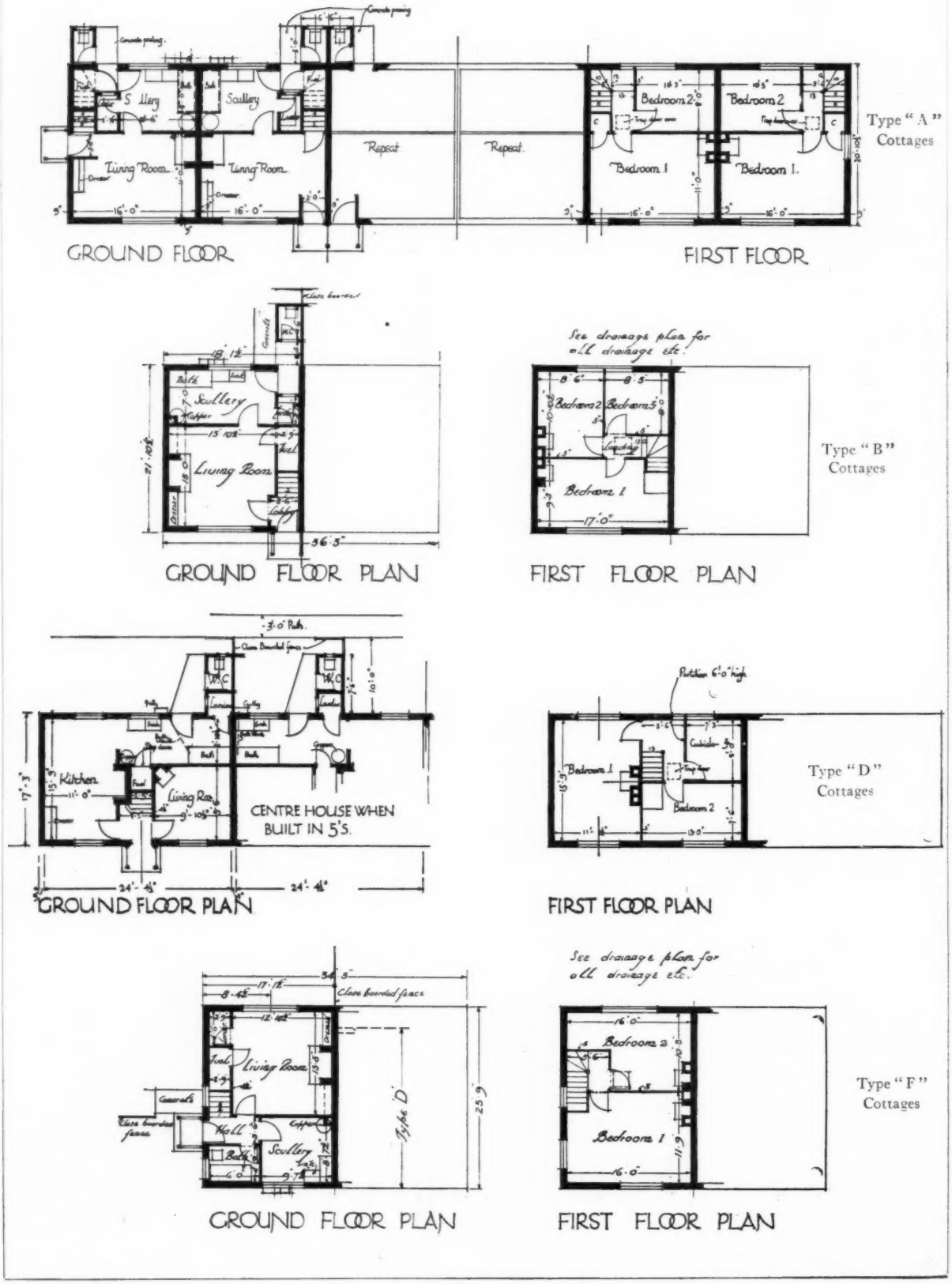


*Cottages at Welwyn for the Rural District Council. "Type" plans. By Louis de Soissons and Arthur W. Kenyon.*

# ELECTRIC WIRING AND LIGHT FITTINGS: i

[ BY W. G. PRINGLE ]

In this series of articles it is proposed to deal briefly and in as non-technical a way as possible with the various systems of electric wiring that are in vogue; the latter portion of the series will deal more particularly with lighting fittings that may judiciously be installed in domestic interiors, Period or otherwise. The notes on wiring are compiled in collaboration with Mr. Gordon Spry, to whom I am additionally indebted for the line drawings reproduced. Complaint may be made that certain points which are notoriously controversial are here treated somewhat dogmatically. There is, however, no desire to dogmatize except in so far as the question of standard of workmanship is concerned, where only the best is countenanced. The main intention is to indicate to the non-technician that certain systems and standards exist, all of which have merits and demerits, and, further, that certain pitfalls exist, which, however, may easily be avoided. It is to be regretted that wiring contractors are often given too free a hand, an arrangement which is considered bad practice and only satisfactory when the contractor is both capable and conscientious and knows fully the house-owner's ultimate requirements. It is hoped that these notes will emphasize the necessity of closer collaboration between the architect, contractor, fittings designer, and client.

In the past, before the introduction of gas and electric light, house planning and building was far less intricate than it is at present. The day of the wax candle and oil lamp is past, and nowadays a complicated system of electric conductors, with their ramifications all over the building, has to be provided for; this is further complicated by the installing of concomitant contrivances such as distribution and sub-distribution boards, fuses, switch boxes, connection boxes, etc. It is to be feared that some architects consider that time is too short adequately to study wiring detail, and so are content to issue a rough specification and to accept the lowest estimate based thereon. In such cases the lowest estimate is often the one not to be accepted, nor need the architect later feel perfectly satisfied after the final insulation test has given an O.K. reading. Concurrently with each of the articles will be published prints of electric lighting fittings, which have been selected (mostly from the collection of Messrs. Bagues, Ltd.) to exemplify points of some interest. The majority of these fittings are either antiques or reproductions from the antique; others are inspired closely or freely from the antique, and the remainder are modern, or, to use a term with a wider significance, " non-Period."

The regulations laid down by the Institution of Electrical Engineers regarding electric wiring systems may well be studied by architects and others for their own protection and that of their clients. There are three systems of protective coverings at present in general use, all of which have advantages and disadvantages. Whichever system may be decided upon it must be borne in mind that considerable latitude devolves upon the wiring contractor unless he is working to a very thorough specification prepared by a consulting engineer.

The highest classes of wiring systems are generally considered to be those enclosed in heavy gauge solid drawn screwed steel tube; this tubing may be either enamelled, galvanized, or treated with a zinc preparation which renders it rustproof, the galvanized and zinc treated tubing being more suitable for damp positions. It is of the utmost importance that bends in the tubing should be easy, and all right-angle bends should be rigorously avoided so as to prevent the possibility of abrasion of the insulation of the conductors when they are being drawn in. It is advisable that the whole system of tubing should be erected before any of the conductors are drawn in, thus ensuring that should any faults occur at some future date the conductors in any particular section upon which the fault occurs may be withdrawn with ease and replace conductors drawn in equally easily. On several occasions it has been known that the conductors have been drawn into the tubing during erection so as to fill the conduits (tubes) to their utmost capacity; obviously this is bad practice, as the conductors are so tightly wedged that it is impossible to withdraw them.

It is advisable that contractors should always be given strict instructions as to the number and sizes of conductors which may be drawn into a conduit of a given diameter. A table showing the sizes of conductors and the diameters of conduits into which they may be drawn is published by the Institution of Electrical Engineers. It is essential that precautions should be taken to ensure that " feed " and " return " conductors are run in the same conduit; this applies in particular to installations which are fed from an alternating current system, otherwise the danger of running feed and return conductors in separate tubes in an a.c. system will result in induced current being set up.

One of the essentials of the hard metallic covering system, i.e. the conduit system, is that the whole of the tubing must be made metallically continuous, such continuity being obtained by the screwed joints, and being further assured by the application of aluminium paint to the joints before they are screwed together. Before proceeding to a description of other forms of hard metallic systems, it should be observed that there are cheaper types of the screwed metal conduit system other than the solid drawn type above described. These consist of brazed tubing and welded tubing, the disadvantage of these two latter types being that when the conduit is bent it is liable to open at the seam. There is another form of the hard metal protective system, viz. the slip-tubing system; this is considerably cheaper than the screwed conduit system, but it has disadvantages which greatly outweigh the lower cost of such an installation. This system consists of lengths of conduit, either brazed or welded (but often merely rolled with open seams), and as the name implies, the conduit is not provided with screwed ends, the lengths being either slipped into each other or butted together. Both these practices are extremely dangerous unless some precaution is taken to ensure metallic continuity between the lengths of tubing. Continuity between lengths of slip or butt-jointed tubing can be made by means of special continuity grips which are manufactured under various trade names (see figure one).

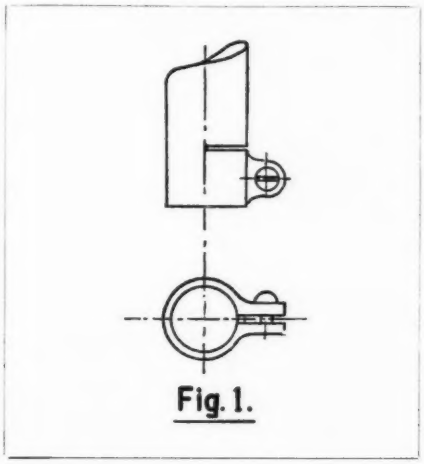

Fig. 1.

The great danger with slip tubing which is not gripped at all points (where lengths of tubing are slipped into each other or butted together) rests in the fact that the system is not metallically continuous, and, therefore, should a leak occur in any of the conductors protected by the tubing the leaking current is not carried to earth; there is even a possibility, should there be a leakage on both poles, of an arc occurring between two ends of conduit. There is a further objection to the non-gripped slip-tubing system, and even sometimes to the gripped system, in that,

through shrinkage of the wooden joists upon which the conduit may be laid, settlement of foundations, or vibration, the ends of the conduit are liable to be forced apart, thus destroying any form of metallic continuity; furthermore, the insulation of the conductors would be liable to abrasion by the sharp edges of the conduits upon which they would necessarily be bearing. There is no doubt that unless a slip-tubing system is made continuous with the grips referred to (figure one) and the installation very carefully supervised it is liable to constitute a source of danger to any building; it may even be considered inferior in many ways to the obsolete system of casing and capping. Since the system of casing and capping may be frequently seen in old houses it might be well to explain it briefly. It may be recognized at a glance by its wooden covering (capping), moulded or otherwise, which varies in width and is usually run up walls and along ceilings, always unsightly and frequently in violent disagreement with the decorations (see figure two). The casing part consists of a simple strip of wood varying in width and thickness, according to the sizes of the conductors run in it; it has grooves of adequate sizes in which the conductors are laid. The capping, as its name implies, merely caps, or covers, the casing and serves to retain the conductors in position.

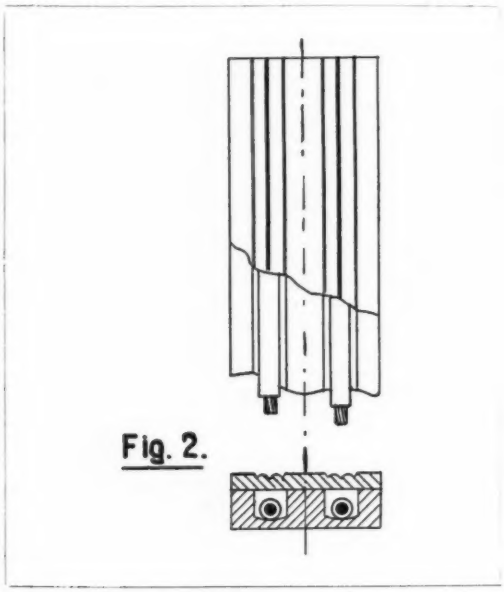

Fig. 2.

Referring again to tubing systems, it is important that draw-boxes of ample size should be fixed wherever bends are required which have an angle of less than 120 deg.; these draw-boxes are made of cast or malleable iron, and have lids which can be firmly screwed on; they are either enamelled, galvanized, or treated with zinc, according to the system of conduits employed. There are two kinds of draw-boxes which may be used according to the varying circumstances—those which are provided with inlets and outlets and those which have to be specially drilled to suit the sizes of the conduits employed in the system. Where a conduit enters a draw-box which has been drilled to receive it, it is essential that the conduit should be provided with a backnut outside the box and a brass or bronze bush inside, or, preferably, with a nut inside the box before the bush is screwed on to the end of the conduit which projects into the box. The reason for fixing bushes on to the ends of the conduit where they enter boxes is to prevent abrasion of the insulation of the conductors when they are drawn into the system (see figure three). Draw-boxes provided with inlets and outlets do not require bushing, as the entrances to and exits from the boxes are rounded to guard against the possibility of abrasion. These remarks with regard to draw-boxes apply equally to screwed and slip conduit systems, except that with the latter system it is only possible to use draw-

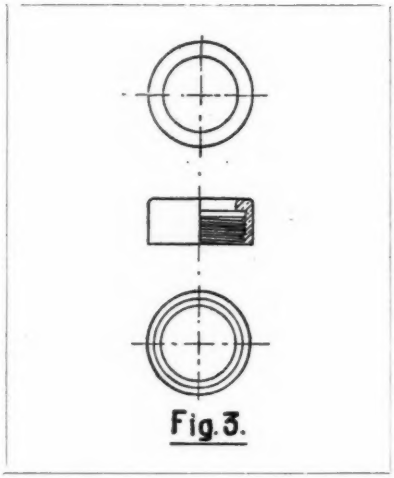

Fig. 3.

boxes of a type which are specially manufactured to suit slip tubing; these require no bushes. It is particularly desirable in all tubing systems that the switches, ceiling roses, wall sockets, etc., should be enclosed in iron boxes which are specially made for this purpose, so that the whole system is metallically continuous to its extreme points. These boxes are made to suit the various sizes of conduit. Where used in conjunction with slip tubing, metallic continuity between the boxes and the tubing should be effected by means of hexagonal grips of the split nut type (see figure four).

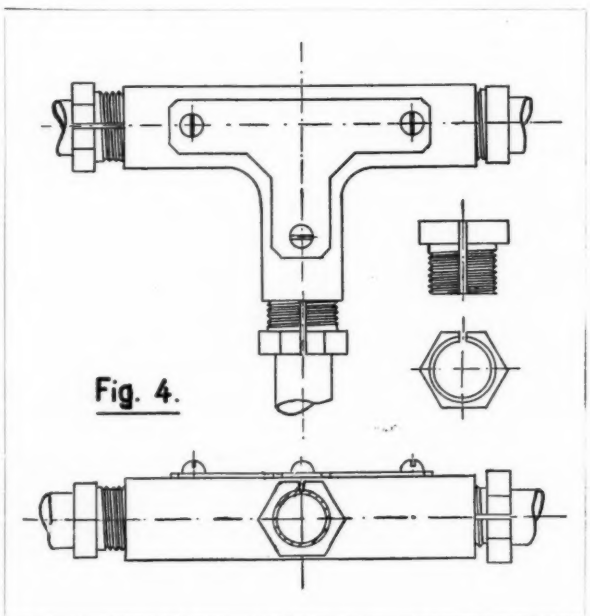

Fig. 4.

All metallic tubing should be earthed and the recognized practice is to connect the system in two or three places, according to the size of the installation, by means of a length of bare stranded copper wire, the size of the wire being governed by the total load of the lamps or other current-consuming apparatus. The connections should preferably be made from the ironclad main switch and fuses or main distribution board to the nearest iron cold-water pipe. The connections between the stranded wire and the water-pipe should be made by means of a special copper earthing clip (see figure five); the connection between the stranded wire and the main switchboard, or the main distribution board, is generally effected by twisting the end of the wire round

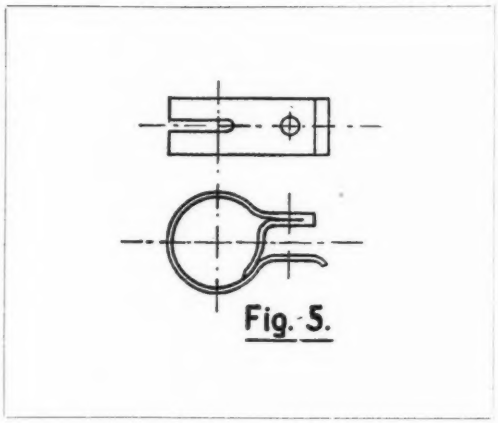

Fig. 5.

one of the fixing bolts, or by soldering it to a lug which, in turn, is connected to the iron case. Stranded wires for earthing purposes are preferable to a single wire owing to there being less risk of mechanical injury and also less possibility of the wire being eaten through by corrosion.

The lead- and copper-sheathed systems are advocated by some experts and have advantages in respect of cost of installation. If it is a question of wiring a house already built, the lead- or copper-sheathed system is sometimes preferred owing to the fact that the cable may be run on the surface without causing undue damage to the decorations. It is obvious that conduit may also be run on the surface, but treated thus it cannot be other than unsightly; for this reason it is not recommended in places of habitation, though suitable, perhaps, for garages and outhouses. Obviously a surface system is less expensive than one which entails running concealed tubing, pulling up floorboards, cutting away and chasing into walls, etc. For conductors which are protected with lead sheathing it is important that commercially pure lead be specified and used, and it is laid down in the rules of the Institution of Electrical Engineers that the lead should be 95 per cent. commercially pure. This is necessary in order to avoid, as far as possible, corrosive and electrolytic action to which lead (particularly low grade lead) is subject in damp positions. There are other types of sheathed conductors, commonly called lead-covered conductors, which in many ways are superior to the pure lead-covered conductors. The sheathing consists of a special alloy which is pliable and yet not liable to sag between the fixings as are pure lead-sheathed conductors.

The use of surface and buried wiring may be combined in lead-covered systems, but where the lead-sheathed conductors are buried they should always be run in heavy gauge steel conduits to avoid mechanical injury from nails driven into walls by professional or amateur picture-hangers. When the lead-covered conductors are so protected it is essential that metallic continuity between the lead sheathing and the conduit should be maintained; this is effected by means of special bonding nipples (see figure six), which are fixed on the incoming and outgoing ends of the lengths of conduit.

It will generally be observed that in lead-covered systems the switches, wall sockets, and ceiling roses are not enclosed in iron boxes, but it is infinitely preferable that they should be. These boxes are of the same type as those previously described for use with the screwed conduit system, and continuity between the lead sheathing of the conductors and the boxes is obtained by means of the special bonding nipples (figure six) for use in connection with this system where the lead-covered conductors are run through lengths of conduit. Mr. Leslie Pyke, M.I.E.E., to whom I am greatly indebted for valuable instruction, has met cases where the lead covering has been eaten away by rats, not because lead itself is a favourite food of rodents, but because they divine in some occult way the presence of grease (used in connection with the insulating material inside the lead sheathing), which appears to be palatable to them.

Another system of wiring, recommended by some and denounced by others, is that known as the "cab-tyre" sheathed system. In this case the insulated conductor is covered by a specially prepared rubber sheath which, like the lead-covered system, is easily and cheaply installed. Cab-tyre wiring is less liable to be damaged by damp or corrosion than the lead-sheathed wiring, and it may be safely be painted or distempered, as also may the lead-sheathed wiring. Neither cab-tyre nor lead-sheathed wiring is subject to internal corrosion through sweating, as is the case sometimes with wiring run in metal conduit, but the disadvantages of cab-tyre wiring are considered by some to outweigh its advantages. Owing to its extreme flexibility it is necessary for a great number of fastenings to be employed, but this trouble may be overcome by using the special supporting wood channels which are manufactured for this purpose. It is more cumbersome than lead-sheathed conductors and, consequently, more unsightly, and where sharp bends are made it is liable to crack, in course of time, on the outer side of the bend. Moreover, it is impossible to form any sort of metallic continuity if required with power-absorbing apparatus unless a separate

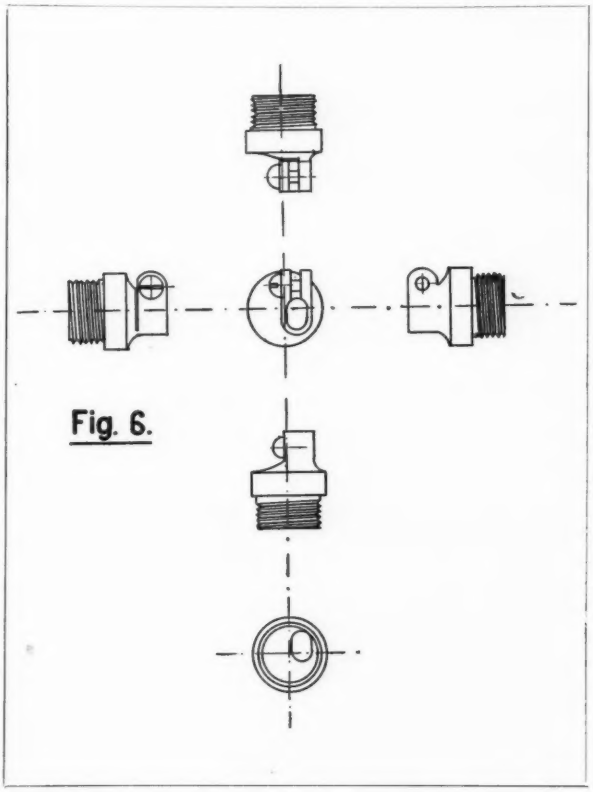

Fig. 6.

wire is run specially for earthing purposes. It is dangerous to run cab-tyre sheathed conductors in plaster walls or behind panelling unless it is protected by metal tubing, for the same reasons as those given in respect of the lead-sheathed wiring, but it is obvious that the conduit protecting such buried cab-tyre sheathed wiring cannot be earthed, as in the case of the lead-sheathed wiring.

A point to be borne in mind when comparing the advantages and disadvantages of the three systems of wiring, i.e. the conduit system, lead-covered system, and cab-tyre sheathed system is that, in the case of fire, the conduit system will resist heat and flames for a considerably longer period than either of the other two systems, and so enables the occupants of a burning building to have the use of the light, at any rate for a short time, whilst making their escape.

[*To be continued*]

# CORRESPONDENCE

## CONCERT HALLS AND ACOUSTICS

*To the Editor of* THE ARCHITECTS' JOURNAL

SIR,—The Albert Hall echo shows that we get the concert halls we deserve. All musically-minded *listeners* know very well that the Albert Hall is acoustically thoroughly bad. But *performers*, if they have the voice to fill it, are naturally so satisfied at that fact that acoustics do not matter. We cannot get true opinions on acoustics from performers, because they are sources of sound; nor yet apparently from conductors. Did we not read in the *Daily News* that Sir Hugh Allen, with Mr. Cochran, spent some time in the Albert Hall looking for that echo without success? And I didn't gather from the newspapers that Chaliapine really minded the acoustics. Everyone knows that Cochran is our greatest showman, and, having discovered that Mozart can now draw all classes of the musical public, he quite naturally selects the greatest operatic star and the largest auditory he can find. Critics who complain of the acoustics are fools to go to the low-level seats where the roof reflections descend a beat late. The excess of the reflected over the direct path on the floor of the Albert Hall is about 200 ft., equivalent to about one-fifth of a second. As you go higher this discrepancy decreases. Also, in spite of the velarium there is a focusing effect from the concave shape of the ceiling, as I showed in a section at the R.I.B.A. in November 1924. At the Grand Opera, Paris, the Scala, Milan, and the Adriana in Rome, the most expensive seats on the floor are also the worst, and the critics and music lovers all mount to the higher galleries. The bad, expensive seats are occupied by rich Americans, who thus help forward European culture. But the British public simply doesn't mind bad acoustics in music. There are two of the very best music-rooms in the world in London—the Queen's Hall and Covent Garden Opera House; both these are continually menaced, while the Albert Hall increases in popularity, and is now to be the home for the Lener Quartette! If every note is repeated twice there is more for one's money. Why should acoustical corrections involving at least several thousands of pounds be embarked upon? The actual harm done by the bad acoustics of the Albert Hall is nothing compared to that done by Street's Law Courts, by the New Bailey, and numbers of large board-rooms and committee-rooms. The important thing is not to repeat the hazards of our fathers and grandfathers, but to change the whole attitude towards design. Any fourth-year student at the A.A. today could design a better *instrument* than the Albert Hall, and Voysey has shown, at Hastings, that he can design deliberately a concert-room as good as Queen's Hall.

HOPE BAGENAL

## TRAFALGAR SQUARE

*To the Editor of* THE ARCHITECTS' JOURNAL

SIR,—Have any of your readers noticed the following peculiar errors in the picture of Trafalgar Square, by G. Moore, dated 1849?

1: Between the lions at the foot of the column are flights of steps.

2: One lion has his head turned sideways and rests his chin on his paw.

3: The fountains are very ornate, and three times as high as today.

4: Groups of sculpture and obelisks line the wall in front of the National Gallery.

As the drawing was made eight years after the square was completed it would be of interest to know if these were inventions of the artist, or if they were ever built and afterwards removed.

In Mr. Beresford Chancellor's *The West End of Yesterday and Today* the drawing is reproduced, but he does not appear to comment anywhere on these peculiarities.

L. E. WILLIAMS

## AN ESSEX SOCIETY OF ARCHITECTS

*To the Editor of* THE ARCHITECTS' JOURNAL

SIR,—May I be allowed to encroach upon a little of your valuable space to bring to the notice of members practising in the

*Trafalgar Square. From a picture by G. Moore, dated 1849.*
*(From "The West End of Yesterday and Today.")*

County of Essex certain decisions which have been made by the Council of the Southend-on-Sea and District Society of Architects.

The Council have at their last meeting agreed in principle to the formation of the Essex Society of Architects, and steps are being taken to convene meetings in the near future at Romford, Chelmsford, and Colchester, with a view to setting up branches with the Southend Society of a federal organization to be known as the Essex Society of Architects.

This body will, it is hoped, be affiliated to the R.I.B.A. The experience of the Southend Society has been that the scheme should prove pre-eminently successful and a very useful purpose served by the adoption of the scheme.

The Southend Society is now completing the first year of its existence, and now possesses a membership roll of nearly sixty members, including hon. members and students. It has held monthly meetings during the year at which lectures have been given by eminent lecturers in the profession. These meetings have been attended with signal success, and the influence of the Society is now being felt in the locality. It has served to bring the members of the profession into closer contact with one another and is universally admitted to have served a good purpose.

The first annual dinner of the Society will be held on December 15 at Southend, and Mr. Walter Tapper, president of the R.I.B.A., has very kindly promised to be present, and it is hoped to make this occasion the first rallying point of the new society.

Should this account reach the notice of any members in Essex who would be willing to support the formation of the Essex Society, would they be good enough to write either to Mr. MacAlister, secretary R.I.B.A., who has very kindly promised every assistance, or to myself at the above address, when I shall be pleased to give them further information.

Yours faithfully,

D. N. MARTIN-KAYE (A.)

Hon. Secretary, Southend-on-Sea and District Society of Architects.

# SOCIETIES AND SCHOOLS

## AMERICAN ARCHITECTS' NEW CODE

The American Institute of Architects has now given its definite approval to a new code of professional practice. This has been prepared by a committee on ethics, appointed by representatives of the fifty-seven chapters of the Institute spread throughout the Unites States of America.

The code which has now been made public by Mr. Medary, Jnr., of Philadelphia (President of the Institute), contains nine canons designed to safeguard the financial, technical, and æsthetic interests entrusted to American architects.

The text of the code is as follows:

"The profession of architecture calls for men of the highest integrity, business capacity, and artistic ability. The architect is entrusted with financial undertakings in which his honesty of purpose must be above suspicion; he acts as professional adviser to his client, and his advice must be absolutely disinterested; he is charged with the exercise of judicial functions as between client and contractors, and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; finally, he is engaged in a profession which carries with it grave responsibility to the public.

"These duties and responsibilities cannot be properly discharged unless his motives, conduct, and ability are such as to command respect and confidence."

The following nine canons of advice make up the code:

"The relation of an architect to his client is one depending upon good faith. An architect will explain the conditional character of estimates made before final drawings and specifications are complete, and will not by careless statements mislead a client as to the probable cost of a building. If the architect guarantees an estimate he becomes legally responsible, and he should not make any guarantee which affects the quality of his advice.

"The contractor depends upon the architect to guard his interests as well as those of the client. An architect will condemn workmanship and materials which are not in conformity with the contract documents, but it is also his duty to give every reasonable aid toward a more complete understanding of these documents so that mistakes may be avoided. He will not call upon a contractor to make good oversights and errors in the contract documents.

"An exchange of information between architects and those who supply and handle building materials is encouraged and commended, but the use of the free engineering service which is offered by manufacturers and jobbers of building materials, appliances and equipment is accompanied by an obligation which may become detrimental to the best interest of the owner.

"The American Institute of Architects has set forth a schedule or guide by which the proper professional charges may be determined. The architect's charges for his professional service shall be made to the client only, and he will not receive commissions, fees, gifts, favours, or any substantial service from a contractor, or from any interested person other than the client. He will not knowingly compete with a fellow-architect on a basis of professional charges.

"An architect in his investments and in his business relations outside of his profession must be free from financial or personal interests which tend to weaken or discredit his standing as an unprejudiced and honest adviser, free to act in his client's best interests.

"An architect will not advertise for the purpose of self-laudatory publicity, but publicity of the standards, aims, and progress of the profession is to be commended. He will not take part or give any assistance in obtaining advertisements or other support toward meeting the expense of any publication illustrating his work.

"An architect may introduce to a possible client the service which he is able to perform, but will not, except under unusual circumstances, offer to continue this service without compensation until it has been approved.

"An architect will not falsely or maliciously injure, directly or indirectly, the professional reputation, prospects, or business of a fellow-architect. He will not attempt to supplant another architect after definite steps have been taken by a client toward his employment; nor will he undertake a commission for which another has been previously employed until he has determined that the original relation has been fairly and properly terminated.

"An architect will take no part in a competition which does not include the provision which experience has found to be necessary if the best interests of the owner and of the architect are to be safeguarded."

## R.I.B.A. MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

The Board of Architectural Education of the Royal Institute of British Architects announce the following awards of R.I.B.A. Maintenance Scholarships in Architecture :

### *The R.I.B.A. Fourth and Fifth Year Maintenance Scholarship*

This Scholarship has been awarded to C. J. Bartlett, of the School of Architecture, the Technical College, Cardiff. The Scholarship is of the value of £100 and is tenable for two years in the fourth and fifth year courses at a School of Architecture recognized by the R.I.B.A., by a student who has already completed satisfactorily a three years' course in a Recognized School.

### *The A.G.B.I. Maintenance Scholarship*

This Scholarship has been awarded to J. F. D. Wylson, of Whitstable, Kent. The Scholarship is intended to enable the

son or daughter of an Architect or Artist to attend an approved course at one of the Schools of Architecture recognized by the R.I.B.A., for the purpose of exemption from its examinations. The Scholarship is £100 in value for one year and is renewable for two further periods of one year each.

Six Scholarships were awarded in July 1926, and five of these have been renewed for the academic year 1927-28. The reports from the schools show that the students are benefiting from the opportunities afforded to them.

The Scholarships supply a need in the architectural profession, and it is hoped in future to be in a position to award Scholarships to a total value of about £1,000 annually. With this object in view, a Capital Fund has been started, which it is hoped to increase materially, and it is also intended to found more Fourth and Fifth Year Scholarships to enable promising students to continue their architectural education for longer periods.

### *R.I.B.A. Silver Medals*

The R.I.B.A. Board of Architectural Education Silver Medal for Recognized Schools is awarded for the best set of drawings submitted. This year the following Schools have sent exhibits:

School of Architecture, the Architectural Association.
School of Architecture, University of Liverpool.
School of Architecture, University of Manchester.
School of Architecture, Robert Gordon's Colleges, Aberdeen.
Glasgow School of Architecture.
School of Architecture, Edinburgh College of Art.
Bartlett School of Architecture, University of London.
School of Architecture, McGill University, Montreal.
Department of Architecture, the Technical College, Cardiff.

### *The Alexander Thomson Travelling Studentship*

The competition for the above studentship is open to students of architecture between the ages of nineteen and twenty-eight years, residing in the United Kingdom and Southern Ireland. Copies of the conditions may be obtained on application to Mr. William MacLean, Secretary, Glasgow Institute of Architects, 21 West George Street, Glasgow, C.2.

## MINIMUM SALARIES

The following notes appear in the current issue of the *Keystone*, the monthly journal of the Association of Architects, Surveyors, and Technical Assistants.

After nearly three years of protracted negotiations we are again able to talk openly of minimum salaries for assistants. We give here the briefest résumé.

A sub-committee of the R.I.B.A. Practice Standing Committee met a sub-committee of the A.A.S.T.A. Executive, and with certain modifications more or less recommended the adoption of the original A.A.S.T.A. proposals. This report was referred by the Practice Committee to the allied societies, who, by a considerable majority, turned it down on the ground that the "standardization" of salaries was not in the best interests of assistants. The matter was fought in the Council of the R.I.B.A., the A.A.S.T.A. members pointing out that *we had not proposed standardization* at any time. As a compromise we were given the opportunity of meeting a sub-committee of the Allied Societies Conference to discuss the question of minimum salaries on a basis of the Institute examinations, it being urged that (*a*) the R.I.B.A. could only make recommendations and not legislate; (*b*) that it could only make such recommendations in so far as its own membership was concerned; (*c*) that a measure of qualification must be equated against a corresponding measure of remuneration. We were by no means convinced that any of these arguments was sound, but for the sake of working in the thin end of the wedge *we surrendered for the time being our major claim and agreed.*

The two sub-committees accordingly met and reached an agreement, by which the Executive Council of the A.A.S.T.A. agreed to stand, and which was put forward to the Allied Societies Conference by its sub-committee as a recommendation. Here it is:

"That the following scale of minimum salaries for architectural assistants be scheduled as reasonable by the R.I.B.A.; that members of the R.I.B.A. be advised to adopt it by the Council; and that the scale be published in the R.I.B.A. Calendar:

"(i) For a junior assistant with not less than four years' training in an architect's office or in a recognized architectural school, or both, who has passed the R.I.B.A. Intermediate Examination, not less than: Class A towns or districts, £3 10s. p.w.; class B towns or districts, £3 5s. p.w.; class C towns or districts, £3 p.w.

These rates do not apply to persons who have had less than twelve months' full-time employment in an architect's office.

"(ii) For an assistant with not less than seven years' training, who is either an Associate or Licentiate R.I.B.A., or has passed the examination qualifying for election as Associate R.I.B.A., not less than: Class A towns or districts, £6 p.w.; class B towns or districts, £5 10s. p.w.; class C towns or districts, £5 p.w.

These rates do not apply to persons who have had less than twelve months' full-time employment in an architect's office.

"A schedule has been prepared showing the division of towns and districts into three classes, 'A,' 'B,' and 'C.' The schedule is based on the official grading published in the *Ministry of Labour Gazette* for wages in the building industry."

This was put to the allied societies, which after a year submitted their various reports, some in favour, some against, some neutral. These were sent by the conference without any recommendation to the Council of the R.I.B.A., which has now by a majority, and that not a large one, *rejected the proposal*, i.e. minimum salaries even on a membership basis.

Now, first of all, let us remember that we have many adherents and good and strong friends in the ranks of the practising architects. To these we owe a debt of gratitude, and trust that we shall have an opportunity of redeeming it. Secondly, that there are a few who, by some confusion of thought, sincerely believe that minimum salaries either are or must become standard salaries. Thirdly, that there are many wobblers; and fourthly, that there are still many who desire to remain able to exploit their junior or less fortunate colleagues.

Now, if the A.A.S.T.A. yielded ground in temporarily accepting the limited basis, it gained very much more than it yielded, because it put forward very definitely a claim for equivalent rights for R.I.B.A. members. Let us not forget that (*a*) there is an R.I.B.A. scale of charges for practising architects; (*b*) that the term "architect" is therein used irrespective of Institute membership and that the Institute is desirous of it being adopted by all outside architects; (*c*) that so far as it possibly can enforce this scale upon its members, it does so; (*d*) that it is a standard scale (except for clause 20) irrespective of the worth of the architect. *Thus, now, the R.I.B.A. Council does defend the rights of its practising members and does protect their interests, and definitely refuses to grant an equivalent measure of protection to those of its members who are still or who must remain in the assistant class. In other words, the R.I.B.A. differentiates between its members.*

It boils down to this, that that majority of the allied societies and of the R.I.B.A. Council which has voted against the proposal is fighting a last-ditch battle, and intends to use the name and machinery of the Institute to cover up the sweating of colleagues. They pretend to have the best interests of their staffs and of all assistants at heart, and know quite well that they are only fighting what they think to be their own battle. So they attempt to draw the red herring across the trail and to pretend that minimum salaries are standard salaries. It is cant and humbug, indeed, and they will find that they have given us such a weapon that they will wish they had not.

The Executive has appointed a special committee to deal with the matter, and the fight will be continued until we have won. There is no going back. We have won a lot of ground in the last few years. We have won a strategic position, and can look forward with confidence to the day of victory.

# COMPETITION CALENDAR

*The conditions of the following competitions have been received by the R.I.B.A.:*

*November 30.* New town hall and municipal buildings, proposed to be erected on a site in the Broadway, Wimbledon, for the Wimbledon Corporation. Assessor: Mr. H. V. Ashley, F.R.I.B.A. Premiums: £200, £150, and £75. Particulars from Mr. Herbert Emerson Smith, LL.B., Town Clerk. Deposit £2 2s.

*December 15.* The Portland Cement Selling and Distributing Co., Ltd., announce a competition for architects, with prize awards totalling £1,000. The President of the R.I.B.A. has appointed the following assessors: Messrs. Maxwell Ayrton, F.R.I.B.A.; William Edward Riley, F.R.I.B.A., M.I.C.E., R.B.A., member of the Council of the Royal Sanitary Institute, late superintending architect of Metropolitan Buildings and architect to the London County Council; Douglas G. Tanner (Douglas G. Tanner and Arthur L. Horsburgh), consulting architects to the *Daily Mail* Ideal Home Exhibition; and Baker and Mallett, quantity surveyors. There will be two sections of the competition, "A" and "B"; the prize awards in each being: first prize, £250; second prize, £150; third prize, £100. In section "A," designs for a house in concrete costing £1,750 are called for, and in section "B," for a house in concrete costing £750. The winning designs will be erected at Olympia for the *Daily Mail* Ideal Home Exhibition.

# COMPETITION NEWS

The Corporation of the City of Manchester invite architects of British nationality to submit designs in a competition for an extension of the Municipal College of Technology, Sackville Street, Manchester. The assessors will be Messrs. Alan E. Munby, Henry M. Fletcher, and Francis Jones. Premiums: £500, £400, and £300. Date of sending in designs, Friday, March 30, 1928.

Applications for the conditions of the competition should be made to P. M. Heath, Town Clerk, Manchester, accompanied by a payment of one guinea, returnable upon receipt of a *bona fide* design, or upon return of the conditions on or before Friday, November 15, 1927.

# FORTHCOMING EXHIBITION

Mrs. E. Beresford Chancellor is holding an exhibition of her barbola figures and watercolour drawings at Messrs. Coolings' Art Galleries, 92 New Bond Street, from November 7 till November 19. The possibilities of barbola in the hands of a skilful and artistic worker are admirably exemplified in Mrs. Chancellor's charming productions.

# TRADE NOTES

The editor of the publication of the British Commercial Gas Association has moved to 32 Victoria Street, London, S.W.1.

Messrs. W. H. Gaze and Sons, Ltd., have secured a contract for the London County Council to erect an elementary school at Hammersmith.

An inspection of the list of orders received in a fortnight by Messrs. Smith, Major and Stevens, Ltd., for S.M.S. lifts makes interesting reading. The large proportion of repeat orders speaks volumes for the quality of this make of lift. The list contains a number of orders for lifts fitted with the S.M.S. TRUELEVEL control gear. This new gear ensures that the lift stops accurately at floor-level. It performs this duty automatically and irrespective of the skill of the attendant (if any) or weight of load.

A housing and building exhibition will be held at the Waverley Market, Edinburgh, from February 18 to February 29, 1928. The exhibition will be under the patronage of the Right Hon. the Lord Provost, Magistrates, and Council of the City; the Edinburgh Chamber of Commerce and Manufacturers; the Edinburgh Architectural Association; the Scottish Federation of Plumbers' and Domestic Engineers' (Employers) Associations; the Edinburgh, Leith and District Building Trades Association; Sanitary Inspectors' Association of Scotland; the Edinburgh Women Citizens' Association. The organizer of the exhibition is Mr. T. Percy Bentley, of 7 Waverley Market, Edinburgh.

The No. 4 Universal excavator of Messrs. Ruston and Hornsby, Ltd., is being shown at the Public Works, Roads, and Transport Exhibition, Agricultural Hall, Islington, N.1, for the first time. It is of the full-circle or crane-navvy type, with ½ cub. yd. bucket, which is exhibited with the necessary equipment for adapting the machine as a dragline, grabbing crane, skimmer scoop, back-acting trencher, or ordinary loco crane. It is a one-man machine, is rendered self-contained by the internal combustion engine, and is independent of rail or prepared roads by the caterpillar tracks. Alternate drives of steam or electric can be fitted if required. The No. 4 has proved particularly popular with contractors, and a large number of machines are already at work on road-making and building contracts. The dragline is used for irrigation work, cleaning, widening, and deepening drains and canals. Oil engines and other specialities of the firm are also shown.

## RECENT WORK AT WELWYN

The following contractors and sub-contractors carried out work in connection with the houses at Welwyn, illustrated on pages 569 *et seq.* of this issue:

Ninety-three houses in Guessens Road, Messrs. Sims, Son and Cooke; 100 houses in Longcroft Lane, Mr R. L. Tonge; Welwyn Public Utility Society houses, Welwyn Builders, Ltd.; casement windows, Messrs. Crittall; doors, Metco doors; tiles, Messrs. Langley; ranges, National Radiator Company, Carron Company; cement, Cement Marketing Company.

# NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

### LATEST PATENT APPLICATIONS

26111. Awbrey, S. C. Clips for securing floor boards. October 3.
26693. Barratt, S. H. H. Flooring, &c. October 8.
26102. Clark, C. W. Hinged windows and doors. October 3.
26029. Cullinane, A. M. Firegrates. October 3.
26692. Williams, G. B. Manufacture of metallic gridwork, &c. October 8.
26860. Braithwaite & Co., Engineers, Ltd. Screw piles. October 11.
27094. Burn, J. F. Tamping apparatus for moulding plastic substances. October 12.
27334. Davy, J. F. Gas-heated cooking apparatus. October 14.
27220. Fraenkel, E. Mortar-sprayers. October 13.
26992. Ward, E. Wall ties for building construction. October 12.

### SPECIFICATIONS PUBLISHED

278031. Weymann, C. T. Apparatus for opening vertically sliding windows.
278057. O'Brien, M. C. M. Means for the protection of jewellers' windows and the like.
243728. Schlosser, G. Method of and device for conveying building materials.
278120. Duffield, F. L. Manufacture of bricks, blocks, and other articles from materials typifiable by dolomite.
278212. Barton, C. H., and Mayson, H. Slab and concrete walls.
278461. Dome, E. M. Building-bricks.
278466. Lightalloys, Ltd., and Grieve, W. H. All-metal frames, window sashes or ventilators.
278503. Clark, F. H. Hearths of fireplaces.
278547. Gough, H. T. W. Chimney-pot or ventilating-cowl.
278629. Middleton, A., and Davidson, J. M. Casement windows.

### ABSTRACTS PUBLISHED

276344. Stam, M. J., 32 Paulinastraat, The Hague. Pneumatic conveyers.
276241. Powell, H. P., Small Gains, Canvey Island, Essex. Walls.

# THE WEEK'S BUILDING NEWS

Plans passed by the BOLTON Corporation: Four shops and houses, Rishton Lane, for Mr. T. P. Smith; shops and offices, Bowkers Row, for Messrs. Watson and Watson; stores, Orient Mill, Brandwood Street, for Messrs. R. Farnworth, Ltd.

*

Plans passed by the BEDFORD Corporation: Alterations, ice factory, Lurke Street, for Lightwood Refrigeration Co., Ltd.; two houses, Beverley Crescent, for Mr. W. Hull; two houses, Beverley Crescent, for Mr. A. E. Pryer; alterations, Bridge Hotel, for Messrs. Usher and Anthony.

*

The BLYTH Education Committee has obtained sanction to proceed with the scheme for the erection of a central school.

*

The Board of Education has approved revised plans for the reconstruction of St. David's Roman Catholic School, SWANSEA.

*

Arising out of proposals for filtration plant at baths, the YORK Corporation Baths Committee has asked a sub-committee to inspect such plant at Leeds and Bradford.

*

The governors of the Elizabeth Anderson Hospital, Euston Road, are to erect extensions in Churchway, KING'S CROSS.

*

The Westminster Diocesan Trustees have acquired a site in Thirleby Road, HENDON, for the erection of a Roman Catholic Church and school.

*

Messrs. de Bertodano and Simpson, on behalf of Messrs. Schweppes, Ltd., are to extend the mineral water factory in Vauxhall Walk and Lilac Place, VAUXHALL.

*

The CHESTERFIELD Corporation has appointed Messrs. Jackson and Fryer as architects for the erection of thirteen houses in the vicinity of Dunstan Road.

*

Plans passed by the OXFORD Corporation: additions to St. Ebbe's school, Paradise Square, for managers; alterations and additions, Victoria Inn, Walton Street, for Hall's Oxford Brewery, Ltd.; alterations and additions, premises in Hurst Street and Henley Street, for Oxford Co-operative Society; extensions, Somerville College, Woodstock Road, for governors; workrooms, University Museum, South Parks Road, for Professor Soddy; shops and offices, Brewer Street, for Mr. T. Bott.

*

The OXFORD Corporation has arranged to acquire from Hall's Oxford Brewery, Ltd., for £51,000, the brewery premises in St. Ebbe's Square, and property in Queen Street, required for public improvements.

Plans passed by the GRAVESEND Corporation: alterations, Parrock Hall, Milton Avenue, for Messrs. Robert Hopkins and Sons; fourteen houses, Woodfield Avenue, for Mr. J. R. Pettman.

*

The borough architect of GRAVESEND has prepared a layout for the erection of a further 255 houses on the King's Farm housing estate.

*

The OXFORD Corporation has obtained a report by Sir Alexander Binnie, Son and Deacon on the best methods of augmenting the water supply and referred it to the Water Committee for consideration.

*

Plans passed by the CHESTERFIELD Corporation: machine shop, Sheepbridge Works, for Sheepbridge Stokes Centrifugal Castings Co., Ltd.; warehouse, stables, etc., Boythorpe Road, for Chesterfield Co-operative Society Ltd.; warehouse, Low Pavement, for Mr. Charles Mason; extensions, Oldfield Pottery, for Messrs. James Pearson, Ltd.; stores, Portland Works, Goyt Side Road, for Messrs. Robinson and Sons, Ltd.; temporary chapel, Cromwell Road, for Magdalene Refuge Committee; pump-house and office, Wharf Lane, for British Petroleum Co., Ltd.; stands and dressing-rooms, Sheffield Road, for Chesterfield Rugby Football Club.

*

The GLASGOW Corporation Housing Committee has decided to erect eighty-eight houses of the intermediate type, and 188 for rehousing purposes on land at Gairbraid Avenue.

*

The GLASGOW Corporation Housing Committee has asked the housing director to prepare a scheme for the layout of an area on the Knightswood estate for shops.

*

The CITY OF LONDON Corporation is acquiring land from the Fishmongers' Company for widening Lower Thames Street.

*

The Postmaster-General is acquiring properties in Houndsditch, LONDON, required for a site for a telephone exchange.

*

Plans passed by STREATHAM B.C.: Erection of L.C.C. school, Granton Street, for Messrs. Fred and T. Thorne; ten houses, Leigham Avenue, for Messrs. F. T. Wooding and Sons; twenty-two houses, Valley Road, for Collett Building Co., Ltd.; shops and garages, corner of High Road and Lewin Road, for Messrs. J. S. Daniels and Sons.

*

The trustees of the New Wesleyan Methodist Church are to erect a church in Stephen Terrace, ANNIESLAND.

Nos. 18, 19, 20, and 21 Gracechurch Street are to be rebuilt, and the CITY OF LONDON Corporation is negotiating with a view to a street improvement there.

*

The CITY OF LONDON Corporation is acquiring land for the widening of Godliman Street.

*

In connection with an application by Mr. W. Inglis, architect, of Bath Street, for a site at Knightswood for the erection of a cinema, the GLASGOW Corporation Housing Committee has decided to allocate a site for such purpose and to invite tenders for its purchase.

*

The Estates Governors of Dulwich College have in view a proposal for the erection of a girls' college and boarding-houses at DULWICH COMMON.

*

Plans passed by the BALHAM B.C.: Houses, flats, and garages, on two new roads on Bell estate, for Messrs. Swain and Selley; boiler-house, 105 Nightingale Lane, for Mr. A. Mock; block of flats, Hazelbourne Road, for Mr. E. J. Logan; six houses, Birchlands Avenue, for Mr. W. Gritton.

*

Plans passed by CLAPHAM B.C.: Two houses, Edgeley Road, for Messrs. A. H. Sanders and Son; workshop and stores, King's Avenue, for British Broadcasting Corporation; four houses, Thornton Road, for Mr. H. A. Smith.

*

Plans passed by the WANDSWORTH B.C.: Additions, Barclays Bank, High Street, for Messrs. James Carmichael (Contractors), Ltd.; alterations, Kenilworth Court, for Kenilworth Estates, Ltd.; five shops and flats, Summerstown Road, for Mr. A. G. Keatch; five shops, Allfarthing Lane, for Mr. C. S. Banks; offices, Railway Wharf, York Road, for Messrs. R. A. Jewell, Ltd.; club premises, Wandsworth Road, for Messrs. H. Wakeford and Sons.

*

Mr. G. E. Clare is to erect a covered market on a site at the junction of Garratt Lane and Twilley Street, Springfield, WANDSWORTH.

*

Plans passed by the SOUTHFIELD B.C.: Additions, Messrs. Stevens and Adams' factory, Point Pleasant, for Mr. R. A. C. Churchward; sixteen garages, Purbright Road, for Mr. J. Woodley; alterations, Southfield Club, Standen Road, for Messrs. Nox, Ltd.; seven houses, Augustus Road, for Mr. R. Emerson; additions, "Lord Palmerston" public-house, Southlands Terrace, for Messrs. A. Roffey and Sons; shops, junction of Garratt Lane and Buckhold Road, for Messrs. Faulkner and Son.

Messrs. F. and H. F. Higgs, Ltd., are to erect additions to patients' and nurses' blocks at the Priory, ROEHAMPTON.

*

The WANDSWORTH B.C. Housing Committee is considering the question of providing housing accommodation for lower-paid workers, and have in view a scheme for the erection of a block of flats and the provision of certain communal offices.

*

Messrs. W. Wilmot, Ltd., are to erect a church in Lordship Lane, DULWICH.

*

Plans passed by the CAMBERWELL B.C.: Buildings, site of 133-137 Queen's Road, Peckham, for Messrs. Culpin and Bowers; block of garages, rear of 161 Queen's Road; shop, Old Kent Road, for Messrs. Gledhill and Wigmore.

*

The PORTSMOUTH Corporation has arranged to allocate £32,000 for the lay-out of Southsea Common, and the city engineer is to prepare plans for dealing with the western portion, which is estimated to cost £12,000. The eastern portion will be dealt with later.

*

A survey by the medical officer of health of PORTSMOUTH shows the need for the erection of 500 houses in order that slums may be cleared, and the Housing Committee is to consider the selection of sites and the preparation of plans.

*

The BRADFORD Corporation Libraries and Baths Committee is conferring as to the provision of a site on the Chellow Grange housing estate for the erection of baths and a library.

*

Plans passed by the WESTMINSTER City Council: Buildings, Hereford Gardens, Oxford Street, Park Street, and North Street, for Messrs. Boodle, Hatfield & Co.; buildings, 9 and 10 North Audley Street, and 1 Providence Court, for Mr. J. S. Beard; alterations, 3-5 Oxford Street, for Messrs. W. and E. A. Hunt; rebuilding, 37-38 Golden Square, 4-7 Upper James Street, and 34-38 Beak Street, for Mr. Gordon Jeeves; alterations and additions, 3-5 Burlington Gardens and Cork Street, for Mr. A. K. Dyson.

*

The WESTMINSTER City Council has agreed to the plans submitted by Messrs. Adams, Holden and Pearson for the erection of the new office buildings for the Metropolitan District Railway Co., at Broadway, adjoining St. James's Park Station.

*

The PAIGNTON U.D.C. has obtained sanction to borrow £8,280 for the erection of sixteen houses on the Preston housing estate.

*

The PAIGNTON U.D.C. has arranged for the extension of the cemetery at a cost of about £3,000.

The REDDITCH U.D.C. has appointed a special committee to consider a proposal for the erection of baths at a cost not exceeding £10,000.

*

Plans passed by the SHOREDITCH B.C.: New buildings, site of 179-189 City Road; new buildings, site of 128 Hoxton Street.

*

Stoke city engineer has prepared plans for the construction of a mortuary at HANLEY at an estimated cost of £1,250.

*

The STOKE-ON-TRENT Corporation Cemeteries Committee recommends the provision of a crematorium in connection with the new cemetery to be provided for the Henley district.

*

The IPSWICH Burial Board has approved plans for the provision of a crematorium and chapel at an estimated cost of £6,000.

*

The STOKE-ON-TRENT Corporation has asked the city engineer to prepare plans for forty houses to be erected on the Etruria Vale site.

*

Plans have been prepared by Mr. J. R. Ashworth for the erection of a billiard hall and a block of shops in Hartshill Road, HARTSHILL, Staffs.

*

The governors of the LONGTON (Staffs) Cottage Hospital are to erect a new children's ward.

*

STOKE-ON-TRENT Corporation has given provisional approval to proposals from Messrs. Cooper & Co., of Newcastle, and Messrs. R. Scrivener and Sons, for the lay-out of land off Grove Road, Fenton, for a greyhound racing track, &c.

*

The STOKE-ON-TRENT Corporation is arranging for the purchase of land and premises for the provision of a colony for mental defectives.

*

The L.C.C. is in negotiation with the B.C. regarding a scheme for the construction of a swimming bath on HACKNEY MARSHES.

*

Objections are being raised to the proposal of the STOKE-ON-TRENT Board of Guardians to erect a hospital in London Road at a cost of £185,000, it being contended that the scheme is unnecessary.

*

West Riding Education Committee has compulsorily acquired a site at ECCLESFIELD for the erection of a secondary school.

*

The governors of the HARROGATE secondary school are acquiring premises for the extension of the school.

*

The PENRITH U.D.C. is undertaking a housing census to ascertain the advisability of a further housing scheme.

The Board of Control has approved the proposals of the West Riding C.C. for the adaptation of OULTON HALL for the provision of further accommodation for mental defectives, and the work will be proceeded with without delay.

*

West Riding Education Committee has acquired a site for the erection of an elementary school for the districts of Great and Little PRESTON.

*

The Board of Education has approved the plans of the West Riding Education Committee for the new premises for the WATH secondary school.

*

West Riding Education Committee has purchased a site at KEIGHLEY for the erection of a secondary school.

*

The PAIGNTON U.D.C. has discussed with Sir Alan Cobham the provision of a municipal aerodrome, and is to hold a special meeting to decide what action shall be taken.

*

The BEDFORD Corporation Water Committee recommends an arrangement with Mr. Midgley Taylor for the supervision of a scheme for the extension of filters, etc., and the provision of a new storage reservoir, the cost being estimated at £28,000.

*

Surrey Education Committee is to proceed with the erection of an elementary school for 272 children in Rowan Road, MITCHAM.

*

The L.C.C. Education Committee is to erect an elementary school for about 600 children in Twyford Street, ISLINGTON.

*

The WOOLWICH Catholic Trustees are to erect a school for about 300 children in High Street, Eltham.

*

Plans are being prepared by the managers for the enlargement of the BLACKHEATH and Kidbrook non-provided school.

*

The L.C.C. Education Committee has arranged for the contractors of the Downham housing estate, Messrs. Holland & Hannen and Cubitts, Ltd., to erect an elementary school on the seventh site at Downham, LEWISHAM, at an estimated cost of £33,490.

*

The PAIGNTON U.D.C. has asked the surveyor to submit sketch plans for the proposed concert hall at the next meeting.

*

The SHOREDITCH B.C. Electricity Committee, out of six designs for the new electricity offices, stores, and showrooms, has selected that of Messrs. Yates, Cook and Darbyshire, who have been instructed to prepare the necessary specifications and drawings.

# RATES OF WAGES

| | | | I | II |
|---|---|---|---|---|
| | | | s. d. | s. d. |
| A | ABERDARE | S. Wales & M. | 1 8 | 1 3½ |
| A1 | Abergavenny | S. Wales & M. | 1 7½ | 1 2½ |
| B | Abingdon .. | S. Counties | 1 6 | 1 1½ |
| A | Accrington | N.W. Counties | 1 8 | 1 3½ |
| A9 | Addlestone | S. Counties | 1 6½ | 1 2 |
| A | Adlington .. | N.W. Counties | 1 8 | 1 3½ |
| A | Airdrie .. | Scotland | *1 8 | 1 3½ |
| C1 | Aldeburgh | E. Counties | 1 4 | 1 0½ |
| A | Altrincham | N.W. Counties | 1 8 | 1 3½ |
| B9 | Appleby .. | N.W. Counties | 1 4½ | 1 0½ |
| A | Ashton-under-Lyne | N.W. Counties | 1 8 | 1 3½ |
| A9 | Atherstone | Mid. Counties | 1 6½ | 1 2 |
| B9 | Aylesbury .. | S. Counties | 1 4½ | 1 0½ |
| B9 | BANBURY | S. Counties | 1 4½ | 1 0½ |
| B9 | Bangor .. | N.W. Counties | 1 5 | 1 1 |
| A | BarnardCastle | N.E. Coast | 1 8 | 1 3½ |
| A | Barnsley .. | Yorkshire | 1 8 | 1 3½ |
| B1 | Barnstaple | S.W. Counties | 1 5½ | 1 1½ |
| A | Barrow .. | N.W. Counties | 1 8 | 1 3½ |
| A | Barry .. | S. Wales & M. | 1 8 | 1 3½ |
| B9 | Basingstoke | S.W. Counties | 1 4½ | 1 0½ |
| B | Bath .. | S.W. Counties | 1 6 | 1 1½ |
| A | Batley .. | Yorkshire | 1 8 | 1 3½ |
| B | Bedford .. | E. Counties | 1 6 | 1 1½ |
| A9 | Berwick-on-Tweed | N.E. Coast | 1 7 | 1 2½ |
| A9 | Bewdley .. | Mid. Counties | 1 7 | 1 2½ |
| B9 | Bicester .. | Mid. Counties | 1 4½ | 1 0½ |
| A | Birkenhead | N.W. Counties | *1 10 | 1 4½ |
| A | Birmingham | Mid. Counties | 1 8 | 1 3½ |
| A | Bishop Auckland | N.E. Coast | 1 8 | 1 3½ |
| A | Blackburn | N.W. Counties | 1 8 | 1 3½ |
| A | Blackpool | N.W. Counties | 1 8 | 1 3½ |
| A | Blyth .. | N.E. Coast | 1 8 | 1 3½ |
| B9 | Bognor .. | S. Counties | 1 4½ | 1 0½ |
| A | Bolton .. | N.W. Counties | 1 8 | 1 3½ |
| A9 | Boston .. | Mid. Counties | 1 6½ | 1 2 |
| B1 | Bournemouth | S. Counties | 1 6 | 1 1½ |
| B9 | Bovey Tracey | S.W. Counties | 1 5 | 1 1 |
| A | Bradford .. | Yorkshire | 1 8 | 1 3½ |
| A9 | Brentwood | E. Counties | 1 7 | 1 2½ |
| A | Bridgend .. | S. Wales & M. | 1 8 | 1 3½ |
| B9 | Bridgwater | S.W. Counties | 1 5 | 1 1 |
| A1 | Bridlington | Yorkshire | 1 7½ | 1 2½ |
| A | Brighouse | Yorkshire | 1 8 | 1 3½ |
| B1 | Brighton .. | S. Counties | 1 6 | 1 1½ |
| A | Bristol .. | S.W. Counties | 1 8 | 1 3½ |
| B9 | Brixham .. | S.W. Counties | 1 4½ | 1 0½ |
| A9 | Bromsgrove | Mid. Counties | 1 7 | 1 2½ |
| C | Bromyard .. | Mid. Counties | 1 4 | 1 0½ |
| A | Burnley .. | N.W. Counties | 1 8 | 1 3½ |
| A | Burslem .. | Mid. Counties | 1 8 | 1 3½ |
| A9 | Burton-on-Trent | Mid. Counties | 1 7 | 1 2½ |
| A | Bury .. | N.W. Counties | 1 8 | 1 3½ |
| A1 | Buxton .. | N.W. Counties | 1 7½ | 1 2½ |
| B | CAMBRIDGE | E. Counties | 1 6 | 1 1½ |
| B9 | Canterbury | S. Counties | 1 4½ | 1 0½ |
| A | Cardiff .. | S. Wales & M. | 1 8 | 1 3½ |
| A | Carlisle .. | N.W. Counties | 1 8 | 1 3½ |
| B | Carmarthen | S. Wales & M. | 1 6 | 1 1½ |
| B9 | Carnarvon | N.W. Counties | 1 5 | 1 1 |
| A1 | Carnforth .. | N.W. Counties | 1 7½ | 1 2½ |
| A | Castleford | Yorkshire | 1 8 | 1 3½ |
| B1 | Chatham .. | S. Counties | 1 5½ | 1 1½ |
| B1 | Chelmsford | E. Counties | 1 5½ | 1 1½ |
| A9 | Cheltenham | S.W. Counties | 1 6½ | 1 2 |
| A | Chester .. | N.W. Counties | 1 8 | 1 3½ |
| A | Chesterfield | Mid. Counties | *1 8 | 1 3½ |
| B9 | Chichester | S. Counties | 1 4½ | 1 0½ |
| A | Chorley .. | N.W. Counties | 1 8 | 1 3½ |
| B9 | Cirencester | S. Counties | 1 5 | 1 1 |
| A | Clitheroe .. | N.W. Counties | 1 8 | 1 3½ |
| A | Clydebank | Scotland | 1 8 | 1 3½ |
| A | Coalville .. | Mid. Counties | 1 8 | 1 3½ |
| B1 | Colchester .. | E. Counties | 1 5½ | 1 1½ |
| A | Colne .. | N.W. Counties | 1 8 | 1 3½ |
| A3 | Colwyn Bay | N.W. Counties | 1 6½ | 1 2 |
| A | Consett .. | N.E. Coast | 1 8 | 1 3½ |
| A3 | Conway .. | N.W. Counties | 1 6½ | 1 2 |
| A | Coventry .. | Mid. Counties | 1 8 | 1 3½ |
| A9 | Crewe .. | N.W. Counties | 1 6½ | 1 2 |
| A9 | Cumberland | ..... | 1 6½ | 1 2 |
| A | DARLINGTON | N.E. Coast | 1 8 | 1 3½ |
| A | Darwen .. | N.W. Counties | 1 8 | 1 3½ |
| B9 | Deal .. | S. Counties | 1 4½ | 1 0½ |
| A3 | Denbigh .. | N.W. Counties | 1 6½ | 1 2 |
| A | Derby .. | Mid. Counties | 1 8 | 1 3½ |
| A | Dewsbury .. | Yorkshire | 1 8 | 1 3½ |
| B | Didcot .. | S. Counties | 1 6 | 1 1½ |
| A | Doncaster | Yorkshire | 1 8 | 1 3½ |
| C1 | Dorchester | S.W. Counties | 1 4 | 1 0½ |
| A9 | Driffield .. | Yorks | 1 6½ | 1 2 |
| A9 | Droitwich .. | Mid. Counties | 1 6½ | 1 2 |
| A1 | Dudley .. | Mid. Counties | 1 7½ | 1 2½ |
| A | Dundee .. | Scotland | 1 8 | 1 3½ |
| A | Durham .. | N.E. Coast | 1 8 | 1 3½ |
| B1 | EASTBOURNE | S. Counties | 1 6 | 1 1½ |
| A | Ebbw Vale | S. Wales & M. | 1 8 | 1 3½ |
| A | Edinburgh | Scotland | 1 8 | 1 3½ |
| A | E. Glamorganshire & Monmouthshire | S. Wales & M. | 1 8 | 1 3½ |
| B | Exeter .. | S.W. Counties | *1 7 | 1 2½ |
| B9 | Exmouth .. | S.W. Counties | 1 5 | 1 1 |
| B | FELIXSTOWE | E. Counties | 1 6 | 1 1½ |
| A9 | Filey .. | Yorks | 1 6½ | 1 2 |
| A | Fleetwood .. | N.W. Counties | 1 8 | 1 3½ |
| B9 | Folkestone | S. Counties | 1 5 | 1 1 |
| A | Frodsham .. | N.W. Counties | 1 8 | 1 3½ |
| B9 | Frome .. | S.W. Counties | 1 4½ | 1 0½ |
| A | GATESHEAD | N.E. Coast | 1 8 | 1 3½ |
| B1 | Gillingham | S. Counties | 1 5½ | 1 1½ |
| A9 | Gloucester | S.W. Counties | 1 6½ | 1 2 |
| A9 | Goole .. | Yorkshire | 1 7 | 1 2½ |
| B | Gosport .. | S. Counties | 1 6 | 1 1½ |
| A9 | Grantham | Mid. Counties | 1 6½ | 1 2 |
| A1 | Gravesend | S. Counties | 1 7½ | 1 2½ |
| A | Greenock .. | Scotland | *1 8 | 1 3½ |
| A | Grimsby .. | Yorkshire | 1 8 | 1 3½ |
| B1 | Guildford .. | S. Counties | 1 5½ | 1 1½ |
| A | HALIFAX .. | Yorkshire | 1 8 | 1 3½ |
| A | Hanley .. | Mid. Counties | 1 8 | 1 3½ |
| A | Harrogate | Yorkshire | 1 8 | 1 3½ |
| A | Hartlepools | N.E. Coast | 1 8 | 1 3½ |
| B9 | Harwich .. | E. Counties | 1 5 | 1 1 |
| B9 | Hastings .. | S. Counties | 1 4½ | 1 0½ |
| B1 | Hatfield .. | S. Counties | 1 5½ | 1 1½ |
| B | Hereford .. | S. W. Counties | 1 6 | 1 1½ |
| B | Hertford .. | E. Counties | 1 5½ | 1 1½ |
| A1 | Heysham .. | N.W. Counties | 1 7½ | 1 2½ |
| A | Howden .. | N.E. Coast | 1 8 | 1 3½ |
| A | Huddersfield | Yorkshire | 1 8 | 1 3½ |
| A | Hull .. | Yorkshire | 1 8 | 1 3½ |

The initial letter opposite each entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; column II for labourers; the rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

| | | | I | II |
|---|---|---|---|---|
| | | | s. d. | s. d. |
| A | ILKLEY .. | Yorkshire | 1 8 | 1 3½ |
| A | Immingham | Mid. Counties | 1 8 | 1 3½ |
| B | Ipswich .. | E. Counties | 1 6 | 1 1½ |
| C1 | Isle of Wight | S. Counties | 1 4 | 1 0½ |
| A | JARROW .. | N.E. Coast | 1 8 | 1 3½ |
| A | KEIGHLEY | Yorkshire | 1 8 | 1 3½ |
| B1 | Kendal .. | N.W. Counties | 1 5½ | 1 1½ |
| B1 | Keswick .. | N.W. Counties | 1 5½ | 1 1½ |
| B | Kettering .. | Mid. Counties | 1 6 | 1 1½ |
| A9 | Kidderminster | Mid. Counties | 1 7 | 1 2½ |
| B9 | King's Lynn | E. Counties | 1 5 | 1 1 |
| A | LANCASTER | N.W. Counties | 1 8 | 1 3½ |
| A9 | Leamington | Mid. Counties | 1 7 | 1 2½ |
| A | Leeds .. | Yorkshire | 1 8 | 1 3½ |
| A | Leek .. | Mid. Counties | 1 8 | 1 3½ |
| A | Leicester .. | Mid. Counties | 1 8 | 1 3½ |
| A | Leigh .. | N.W. Counties | 1 8 | 1 3½ |
| B9 | Lewes .. | S. Counties | 1 4½ | 1 0½ |
| A9 | Lichfield .. | Mid. Counties | 1 6½ | 1 2 |
| A | Lincoln .. | Mid. Counties | 1 8 | 1 3½ |
| A | Liverpool .. | N.W. Counties | *1 10 | 1 4½ |
| A3 | Llandudno | N.W. Counties | 1 6½ | 1 2 |
| A | Llanelly .. | S. Wales & M. | 1 8 | 1 3½ |
| | London (12 miles radius) | | 1 9½ | 1 4½ |
| | Do. (12-15 miles radius) | | 1 9 | 1 4 |
| A | Long Eaton | Mid. Counties | 1 8 | 1 3½ |
| A | Loughborough | Mid. Counties | 1 8 | 1 3½ |
| B | Luton .. | E. Counties | 1 6 | 1 1½ |
| A | Lytham .. | N.W. Counties | 1 8 | 1 3½ |
| A1 | MACCLESFIELD | N.W. Counties | 1 7½ | 1 2½ |
| B | Maidstone | S. Counties | 1 5½ | 1 1½ |
| A9 | Malvern .. | Mid. Counties | 1 6½ | 1 2 |
| A | Manchester | N.W. Counties | 1 8 | 1 3½ |
| A | Mansfield .. | Mid. Counties | 1 8 | 1 3½ |
| B9 | Margate .. | S. Counties | 1 4½ | 1 0½ |
| A9 | Matlock .. | Mid. Counties | 1 6½ | 1 2 |
| A | Merthyr .. | S. Wales & M. | 1 8 | 1 3½ |
| A | Middlesbrough | N.E. Coast | 1 8 | 1 3½ |
| A9 | Middlewich | N.W. Counties | 1 6½ | 1 2 |
| B9 | Minehead .. | S.W. Counties | 1 5 | 1 1 |
| A | Monmouth S. and E. Glamorganshire | S. Wales & M. | 1 8 | 1 3½ |
| A1 | Morecambe | N.W. Counties | 1 7½ | 1 2½ |
| A9 | NANTWICH | N.W. Counties | 1 6½ | 1 2 |
| A | Neath .. | S. Wales & M. | 1 8 | 1 3½ |
| A | Nelson .. | N.W. Counties | 1 8 | 1 3½ |
| A | Newcastle .. | N.E. Coast | 1 8 | 1 3½ |
| A | Newport .. | S. Wales & M. | 1 8 | 1 3½ |
| A | Normanton | Yorkshire | 1 8 | 1 3½ |
| A9 | Northampton | Mid. Counties | 1 7 | 1 2½ |
| A | North Staffs. | Mid. Counties | 1 8 | 1 3½ |
| A | North Shields | N.E. Coast | 1 8 | 1 3½ |
| A9 | Norwich .. | E. Counties | 1 6½ | 1 2 |
| A | Nottingham | Mid. Counties | 1 8 | 1 3½ |
| A | Nuneaton .. | Mid. Counties | 1 8 | 1 3½ |
| B | OAKHAM .. | Mid. Counties | 1 5½ | 1 1½ |
| A | Oldham .. | N.W. Counties | 1 8 | 1 3½ |
| A9 | Oswestry .. | Mid. Counties | 1 6½ | 1 2 |
| B | Oxford .. | S. Counties | 1 6 | 1 1½ |
| A | PAISLEY .. | Scotland | *1 8 | 1 3½ |
| C | Pembroke .. | S. Wales & M. | 1 4½ | 1 0½ |
| A | Perth .. | Scotland | *1 8 | 1 3 |
| A9 | Peterborough | Mid. Counties | 1 6½ | 1 2 |
| A | Plymouth | S.W. Counties | *1 8 | 1 3½ |
| A | Pontefract | Yorkshire | 1 8 | 1 3½ |
| A | Pontypridd | S. Wales & M. | 1 8 | 1 3½ |
| B | Portsmouth | S. Counties | 1 6 | 1 1½ |
| A | Preston .. | N.W. Counties | 1 8 | 1 3½ |
| A | QUEENSFERRY | N.W. Counties | 1 8 | 1 3½ |
| B | READING .. | S. Counties | 1 6 | 1 1½ |
| B | Reigate .. | S. Counties | 1 5½ | 1 1½ |
| A3 | Retford .. | Mid. Counties | 1 6½ | 1 2 |
| A | Rhondda Valley | S. Wales & M. | 1 8 | 1 3½ |
| A9 | Ripon .. | Yorkshire | 1 6½ | 1 2 |
| A | Rochdale .. | N.W. Counties | 1 8 | 1 3½ |
| B | Rochester | S. Counties | 1 5½ | 1 1½ |
| A1 | Ruabon .. | N.W. Counties | 1 7½ | 1 2½ |
| A9 | Rugby .. | Mid. Counties | 1 8 | 1 3½ |
| A9 | Rugeley .. | Mid. Counties | 1 6½ | 1 2 |
| A | Runcorn .. | N.W. Counties | 1 8 | 1 3½ |
| A9 | ST. ALBANS | E. Counties | 1 6½ | 1 2 |
| A | St. Helens | N.W. Counties | 1 8 | 1 3½ |
| B9 | Salisbury | S.W. Counties | 1 4½ | 1 0½ |
| A1 | Scarborough | Yorkshire | 1 7½ | 1 2½ |
| A | Scunthorpe | Mid. Counties | 1 8 | 1 3½ |
| A | Sheffield .. | Yorkshire | 1 8 | 1 3½ |
| A | Shipley .. | Yorkshire | 1 8 | 1 3½ |
| A9 | Shrewsbury | Mid. Counties | 1 6½ | 1 2 |
| A9 | Skipton .. | Yorkshire | 1 7 | 1 2½ |
| B | Slough .. | S. Counties | 1 5½ | 1 1½ |
| A9 | Solihull .. | Mid. Counties | 1 7 | 1 2½ |
| A3 | South'pton | S. Counties | 1 6½ | 1 2 |
| B1 | Southend-on-Sea | E. Counties | 1 5½ | 1 1½ |
| A | Southport .. | N.W. Counties | 1 8 | 1 3½ |
| A | S. Shields .. | N.E. Coast | 1 8 | 1 3½ |
| A9 | Stafford .. | Mid. Counties | 1 7 | 1 2½ |
| A | Stockport .. | N.W. Counties | 1 8 | 1 3½ |
| A | Stockton-on-Tees | N.E. Coast | 1 8 | 1 3½ |
| A | Stoke-on-Trent | Mid. Counties | 1 8 | 1 3½ |
| B | Stroud .. | S.W. Counties | 1 5½ | 1 1½ |
| A | Sunderland | N.E. Coast | 1 8 | 1 3½ |
| A | Swadlincote | Mid. Counties | 1 8 | 1 3½ |
| A | Swansea .. | S. Wales & M. | 1 8 | 1 3½ |
| B | Swindon .. | S.W. Counties | 1 6 | 1 1½ |
| A1 | TAMWORTH | N.W. Counties | 1 7½ | 1 2½ |
| B1 | Taunton .. | S.W. Counties | 1 5½ | 1 1½ |
| A | Teeside Dist. | N.E. Counties | 1 8 | 1 3½ |
| B | Teignmouth | S.W. Coast | 1 6 | 1 1½ |
| A | Todmorden | Yorkshire | 1 8 | 1 3½ |
| A9 | Torquay .. | S.W. Counties | 1 7 | 1 2½ |
| C | Truro .. | S.W. Counties | 1 4 | 1 0½ |
| B1 | Tunbridge Wells | S. Counties | 1 5½ | 1 1½ |
| A | Tunstall .. | Mid. Counties | 1 8 | 1 3½ |
| A | Tyne District | N.E. Coast | 1 8 | 1 3½ |
| A | WAKEFIELD | Yorkshire | 1 8 | 1 3½ |
| A1 | Walsall .. | Mid. Counties | 1 7½ | 1 2½ |
| A | Warrington | N.W. Counties | 1 8 | 1 3½ |
| A9 | Warwick .. | Mid. Counties | 1 7 | 1 2½ |
| B | Wellingborough | Mid. Counties | 1 6 | 1 1½ |
| A | West Bromwich | Mid. Counties | 1 8 | 1 3½ |
| B | Weston-s-Mare | S.W. Counties | 1 6 | 1 1½ |
| A9 | Whitby .. | Yorkshire | 1 7 | 1 2½ |
| A | Widnes .. | N.W. Counties | 1 8 | 1 3½ |
| A | Wigan .. | N.W. Counties | 1 8 | 1 3½ |
| B9 | Winchester | S. Counties | 1 5 | 1 1 |
| B | Windsor .. | S. Counties | 1 6 | 1 1½ |
| A | Wolverhampton | Mid. Counties | 1 8 | 1 3½ |
| A9 | Worcester .. | Mid. Counties | 1 6½ | 1 2 |
| A9 | Worksop .. | Yorkshire | 1 6½ | 1 2 |
| A1 | Wrexham .. | N.W. Counties | 1 7½ | 1 2½ |
| B | Wycombe .. | S. Counties | 1 6 | 1 1½ |
| B1 | YARMOUTH | E. Counties | 1 5½ | 1 1½ |
| B9 | Yeovil .. | S.W. Counties | 1 5 | 1 1 |
| A | York .. | Yorkshire | 1 8 | 1 3 |

* In these areas the rates of wages for certain trades (usually Painters and Plasterers) vary slightly from those given. The rates for each trade in any given area will be sent on request.

# PRICES CURRENT

## EXCAVATOR AND CONCRETOR

EXCAVATOR, 1s. 4½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; NAVVY, 1s. 4½d. *per hour*; TIMBERMAN, 1s. 6d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; WATCHMAN, 7s. 6d. *per shift.*

| | | | |
|---|---|---|---|
| *Broken brick or stone, 2 in., per yd.* | £0 | 11 | 6 |
| *Thames ballast, per yd.* | 0 | 11 | 0 |
| *Pit gravel, per yd.* | 0 | 18 | 0 |
| *Pit sand, per yd.* | 0 | 14 | 6 |
| *Washed sand* | 0 | 15 | 0 |
| *Screened ballast or gravel, add 10 per cent. per yd.* | | | |
| *Clinker, breeze, etc., prices according to locality.* | | | |
| *Portland cement, per ton* | £2 | 19 | 0 |
| *Lias lime, per ton* | 2 | 10 | 0 |
| *Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.* | | | |
| *Transport hire per day:* | | | |
| *Cart and horse* £1 3 0 *Trailer* | £0 | 15 | 0 |
| *3-ton motor lorry* 3 15 0 *Steam roller* | 4 | 5 | 0 |
| *Steam lorry, 5-ton* 4 0 0 *Water cart* | 1 | 5 | 0 |

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube . . 0 3 0

Exceeding 6 ft., but under 12 ft., add 30 per cent.

In stiff clay, add 30 per cent.

In underpinning, add 100 per cent.

In rock, including blasting, add 225 per cent.

If basketed out, add 80 per cent. to 150 per cent.

Headings, including timbering, add 400 per cent.

| | | | |
|---|---|---|---|
| RETURN, fill, and ram, ordinary earth, per yd. | £0 | 1 | 6 |
| SPREAD and level, including wheeling, per yd. | 0 | 1 | 6 |
| FILLING into carts and carting away to a shoot or deposit, per yd. cube | 0 | 10 | 6 |
| TRIMMING earth to slopes, per yd. sup. | 0 | 0 | 6 |
| HACKING up old grano. or similar paving, per yd. sup. | 0 | 1 | 3 |
| PLANKING to excavations, per ft. sup. | 0 | 0 | 5 |
| DO. over 10 ft. deep, add for each 5 ft. in depth, 30 per cent. | | | |
| IF left in, add to above prices, per ft. cube | 0 | 2 | 0 |
| HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup. | 0 | 2 | 1 |
| DO. 6 in. thick, per yd. sup. | 0 | 2 | 10 |
| PUDDLING, per yd. cube | 1 | 10 | 0 |
| CEMENT CONCRETE, 4-2-1, per yd. cube | 2 | 3 | 0 |
| DO. 6-2-1, per yd. cube | 1 | 18 | 0 |
| DO. in upper floors, add 15 per cent. | | | |
| DO. in reinforced-concrete work, add 20 per cent. | | | |
| DO. in underpinning, add 60 per cent. | | | |
| LIAS-LIME CONCRETE, per yd. cube | £1 | 16 | 0 |
| BREEZE CONCRETE, per yd. cube | 1 | 7 | 0 |
| DO. in lintels, etc., per ft. cube | 0 | 1 | 6 |
| CEMENT concrete 4–2–1 in lintels packed around reinforcement, per ft. cube | 0 | 3 | 9 |
| FINE concrete benching to bottom of manholes, per ft. cube | 0 | 2 | 6 |
| FINISHING surface of concrete spade face, per yd. sup. | 0 | 0 | 9 |

## DRAINER

LABOURER, 1s. 4½d. *per hour*; TIMBERMAN, 1s. 6d. *per hour*; BRICKLAYER, 1s. 9½d. *per hour*; PLUMBER, 1s. 9½d. *per hour*; WATCHMAN, 7s. 6d. *per shift.*

| | | | |
|---|---|---|---|
| *Stoneware pipes, tested quality, 4 in., per ft.* | £0 | 0 | 10 |
| DO. *6 in., per ft.* | 0 | 1 | 3 |
| DO. *9 in., per ft.* | 0 | 2 | 3 |
| *Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.* | 0 | 5 | 6 |
| DO. *6 in., per yd.* | 0 | 8 | 6 |
| *Portland cement and sand, see "Excavator" above.* | | | |
| *Lead for caulking, per cwt.* | £2 | 5 | 6 |
| *Gaskin, per lb.* | 0 | 0 | 4½ |

| | | | |
|---|---|---|---|
| STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft. | 0 | 4 | 3 |
| DO. 6 in., per ft. | 0 | 5 | 0 |
| DO. 9 in., per ft. | 0 | 7 | 9 |
| CAST-IRON DRAINS, jointed in lead, 4 in., per ft. | 0 | 8 | 0 |
| DO. 6 in., per ft. | 0 | 10 | 0 |

*Note.*—These prices include digging concrete bed and filling for normal depths, and are average prices.

Fittings in Stoneware and Iron according to type. *See* Trade Lists.

## BRICKLAYER

BRICKLAYER, 1s. 9½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour.*

| | | | |
|---|---|---|---|
| *London stocks, per M.* | £4 | 15 | 0 |
| *Flettons, per M.* | 2 | 18 | 0 |
| *Staffordshire blue, per M.* | 9 | 10 | 0 |
| *Firebricks, 2½ in., per M.* | 11 | 3 | 0 |
| *Glazed salt, white, and ivory stretchers per M.* | 24 | 10 | 0 |
| DO. *headers, per M.* | 24 | 0 | 0 |
| *Colours, extra, per M.* | 5 | 10 | 0 |
| *Seconds, less, per M.* | 1 | 0 | 0 |
| *Cement and sand, see "Excavator" above.* | | | |
| *Lime, grey stone, per ton* | 2 | 17 | 0 |
| *Mixed lime mortar, per yd.* | 1 | 6 | 0 |
| *Damp course, in rolls of 4½ in., per roll* | 0 | 2 | 6 |
| DO. *9 in. per roll* | 0 | 4 | 9 |
| DO. *14 in. per roll* | 0 | 7 | 6 |
| DO. *18 in. per roll* | 0 | 9 | 6 |

| | | | |
|---|---|---|---|
| BRICKWORK in stone lime mortar, Flettons or equal, per rod | £33 | 0 | 0 |
| DO. in cement do., per rod | 36 | 0 | 0 |
| DO. in stocks, add 25 per cent. per rod. | | | |
| DO. in blues, add 100 per cent. per rod. | | | |
| DO. circular on plan, add 12½ per cent. per rod. | | | |
| DO. in backing to masonry, add 12½ per cent. per rod. | | | |
| DO. in raising on old walls, etc., add 12½ per cent. per rod. | | | |
| DO. in underpinning, add 20 per cent. per rod. | | | |
| HALF-BRICK walls in stocks in cement mortar (1–3), per ft. sup. | £0 | 1 | 0 |
| BEDDING plates in cement mortar, per ft. run | 0 | 0 | 3 |
| BEDDING window or door frames, per ft. run | 0 | 0 | 3 |
| LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run | 0 | 0 | 2 |
| CUTTING do. in old walls in cement, per ft. run | 0 | 0 | 4 |
| CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup. | 0 | 0 | 7 |
| TERRA-COTTA flue pipes 9 in. diameter, jointed in fireclay, including all cuttings, per ft. run | 0 | 3 | 6 |
| DO. 14 ft. by 9 in. do., per ft. run | 0 | 6 | 0 |
| FLAUNCHING chimney pots, each | 0 | 2 | 0 |
| CUTTING and pinning ends of timbers, etc., in cement | 0 | 1 | 0 |
| FACINGS fair, per ft. sup. extra | 0 | 0 | 3 |
| DO. picked stocks, per ft. sup. extra | 0 | 0 | 7 |
| DO. red rubbers gauged and set in putty, per ft. sup. extra | 0 | 4 | 9 |
| DO. in salt white or ivory glazed, per ft. sup. extra | 0 | 5 | 6 |
| TUCK pointing, per ft. sup. extra | 0 | 0 | 10 |
| WEATHER pointing, do. do. | 0 | 0 | 3 |
| TILE creasing with cement fillet each side per ft. run | 0 | 0 | 6 |
| GRANOLITHIC PAVING, 1 in., per yd. sup. | 0 | 5 | 0 |
| DO. 1½ in., per yd. sup | 0 | 6 | 0 |
| DO. 2 in., per yd. sup. | 0 | 7 | 0 |
| If coloured with red oxide, per yd. sup. | 0 | 1 | 0 |
| If finished with carborundum, per yd. sup. | 0 | 0 | 6 |
| If in small quantities in finishing to steps, etc., per ft. sup. | 0 | 1 | 4 |
| Jointing new grano, paving to old, per ft. run | 0 | 0 | 4 |
| Extra for dishing grano, or cement paving around gullies, each | 0 | 1 | 6 |
| BITUMINOUS DAMP COURSE, ex rolls, per ft. sup. | 0 | 0 | 7 |
| ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup. | 0 | 8 | 0 |
| DO. vertical, per yd. sup. | 0 | 11 | 0 |
| SLATE DAMP COURSE, per ft. sup. | 0 | 0 | 10 |
| ASPHALT ROOFING (MASTIC) in two thicknesses, ½ in., per yd. | 0 | 8 | 6 |
| DO. SKIRTING, 6 in. | 0 | 0 | 11 |
| BREEZE PARTITION BLOCKS, set in cement, 1½ in. per yd. sup. | 0 | 5 | 3 |
| DO. DO. 3 in. | 0 | 6 | 6 |
| BREEZE fixing bricks, extra for each | 0 | 0 | 3 |

THE wages are the Union rates current in London at the time of publication. The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. Though every care has been taken in its compilation it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry.

## MASON

MASON, 1s. 9½d. *per hour*; DO. *fixer*, 1s. 10½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour.*

| | | | |
|---|---|---|---|
| *Portland Stone:* | | | |
| *Whitbed, per ft. cube* | £0 | 4 | 6 |
| *Basebed, per ft. cube* | 0 | 4 | 7 |
| *Bath stone, per ft cube* | 0 | 3 | 0 |
| *Usual trade extras for large blocks.* | | | |
| *York paving, av. 2½ in., per yd. super* | 0 | 6 | 6 |
| *York emplates sawn, per ft. cube* | 0 | 6 | 9 |
| *Slate shelves, rubbed, 1 in., per ft. sup.* | 0 | 2 | 6 |
| *Cement and sand, see "Excavator," etc., above.* | | | |

| | | | |
|---|---|---|---|
| HOISTING and setting stone, per ft. cube | £0 | 2 | 2 |
| DO. for every 10 ft. above 30 ft. add 15 per cent. | | | |
| PLAIN face Portland basis, per ft. sup. | £0 | 2 | 8 |
| DO. circular, per ft. sup. | 0 | 4 | 0 |
| SUNK FACE, per ft. sup. | 0 | 3 | 9 |
| DO. circular, per ft. sup. | 0 | 4 | 10 |
| JOINTS, arch, per ft. sup. | 0 | 2 | 6 |
| DO. sunk, per ft. sup. | 0 | 2 | 7 |
| DO. DO. circular, per ft. sup. | 0 | 4 | 6 |
| CIRCULAR-CIRCULAR work, per ft. sup. | 1 | 2 | 0 |
| PLAIN MOULDING, straight, per inch of girth, per ft. run | 0 | 1 | 1 |
| DO. circular, do., per ft. run | 0 | 1 | 4 |

| | | | |
|---|---|---|---|
| HALF SAWING, per ft. sup. | £0 | 1 | 0 |
| Add to the foregoing prices, if in York stone 35 per cent. | | | |
| DO. Mansfield, 12½ per cent. | | | |
| Deduct for Bath, 33⅓ per cent. | | | |
| DO. for Chilmark, 5 per cent. | | | |
| SETTING 1 in. slate shelving in cement, per ft. sup. | £0 | 0 | 6 |
| RUBBED round nosing to do., per ft. lin. | 0 | 0 | 6 |
| YORK STEPS, rubbed T. & R., ft. cub. fixed | 1 | 9 | 0 |
| YORK SILLS, W. & T., ft. cub. fixed | 1 | 13 | 0 |
| ARTIFICIAL stone paving, 2 in. thick, per ft. sup. | 0 | 1 | 6 |
| DO. 2½ in. thick, per ft. sup. | 0 | 1 | 9 |

## SLATER AND TILER

SLATER, 1s. 9½d. *per hour*; TILER, 1s. 9½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; LABOURER, 1s. 4½d. *per hour.*

N.B.—Tiling is often executed as piecework.

| | | | |
|---|---|---|---|
| *Slates, 1st quality, per 1,200:* | | | |
| *Portmadoc Ladies* | £14 | 0 | 0 |
| *Countess* | 27 | 0 | 0 |
| *Duchess* | 32 | 0 | 0 |
| *Old Delabole Med. Grey* | *Med. Green* | | |
| 24 in. × 12 in. £42 11 3 | £45 | 1 | 0 |
| 20 in. × 10 in. 31 4 3 | 33 | 0 | 6 |
| 16 in. × 10 in. 20 18 0 | 22 | 4 | 9 |
| 14 in. × 8 in. 12 1 0 | 12 | 16 | 3 |
| *Green Randoms per ton* | 8 | 3 | 9 |
| *Grey-green do., per ton* | 7 | 3 | 9 |
| *Green peggies, 12 in. to 8 in. long, per ton* | 6 | 3 | 9 |
| *In 4-ton truck loads, delivered Nine Elms station.* | | | |
| *Clips, lead, per lb.* | £0 | 0 | 6 |
| *Clips, copper, per lb.* | 0 | 2 | 0 |
| *Nails, compo, per cwt.* | 1 | 6 | 0 |
| *Nails, copper, per lb.* | 0 | 1 | 10 |
| *Cement and sand, see "Excavator," etc., above.* | | | |
| *Hand-made tiles, per M.* | £5 | 18 | 0 |
| *Machine-made tiles, per M.* | 5 | 8 | 0 |
| *Westmorland slates, large, per ton* | 9 | 0 | 0 |
| DO. *Peggies, per ton* | 7 | 5 | 0 |

SLATING, 3 in. lap, compo nails, Portmadoc or equal:

| | | | |
|---|---|---|---|
| Ladies, per square | £4 | 0 | 0 |
| Countess, per square | 4 | 5 | 0 |
| Duchess, per square | 4 | 10 | 0 |
| WESTMORLAND, in diminishing courses, per square | 6 | 5 | 0 |
| CORNISH DO., per square | 6 | 3 | 0 |
| Add, if vertical, per square approx. | 0 | 13 | 0 |
| Add, if with copper nails, per square approx. | 0 | 2 | 6 |
| Double course at eaves, per ft. approx. | 0 | 1 | 0 |

SLATING with Old Delabole slates to a 3 in. lap with copper nails at per square.

| | Med. Grey | Med. Green |
|---|---|---|
| 24 in. × 12 in. | £5 0 0 | £5 2 0 |
| 20 in. × 10 in. | 5 5 0 | 5 10 0 |
| 16 in. × 10 in. | 4 15 0 | 5 1 0 |
| 14 in. × 8 in. | 4 10 0 | 4 15 0 |
| Green randoms | | 6 7 0 |
| Grey-green do. | | 5 9 0 |
| Green peggies, 12 in. to 8 in. long | | 4 17 0 |

| | | | |
|---|---|---|---|
| TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square | 5 | 6 | 0 |
| DO., machine-made do., per square | 4 | 17 | 0 |
| Vertical Tiling, including pointing, add 18s. 0d. per square. | | | |
| FIXING lead soakers, per dozen | £0 | 0 | 10 |
| STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square | 0 | 10 | 0 |
| LABOUR only in laying slates, but including nails, per square | 1 | 0 | 0 |

*See* "Sundries for Asbestos Tiling."

## CARPENTER AND JOINER

CARPENTER, 1s. 9½d. *per hour*; JOINER, 1s. 9½d. *per hour*; LABOURER, 1s. 4½d. *per hour.*

| | | | |
|---|---|---|---|
| *Timber, average prices at Docks, London Standard Scandinavian, etc. (equal to 2nds):* | | | |
| 7 × 3, per std. | £20 | 0 | 0 |
| 11 × 4, per std. | 30 | 0 | 0 |
| *Memel or Equal. Slightly less than foregoing.* | | | |
| *Flooring, P.E., 1 in., per sq.* | £1 | 5 | 0 |
| DO. *T. and G., 1 in., per sq.* | 1 | 5 | 0 |
| *Planed boards, 1 in. × 11 in., per std.* | 30 | 0 | 0 |
| *Wainscot oak, per ft. sup. of 1 in.* | 0 | 1 | 6 |
| *Mahogany, Honduras, per ft. sup. of 1 in.* | 0 | 1 | 4 |
| DO. *Cuba, per ft. sup. of 1 in.* | 0 | 2 | 6 |
| DO., *African, per ft. sup.* | 0 | 1 | 3 |
| *Teak, per ft. sup. of 1 in.* | 0 | 1 | 6 |
| DO., *ft. cube* | 0 | 15 | 0 |

| | | | |
|---|---|---|---|
| FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube | 0 | 5 | 6 |
| DO. framed in floors, roofs, etc., per ft. cube | 0 | 6 | 6 |
| DO. framed in trusses, etc., including ironwork, per ft. cube | 0 | 7 | 6 |
| PITCH PINE, add 33⅓ per cent. | | | |
| FIXING only boarding in floors, roofs, etc., per sq. | 0 | 13 | 6 |
| SARKING FELT laid, 1-ply, per yd. | 0 | 1 | 6 |
| DO. 3-ply, per yd. | 0 | 1 | 9 |
| CENTERING for concrete, etc., including horsing and striking, per sq. | 2 | 10 | 0 |
| TURNING pieces to flat or segmenta soffits, 4½ in. wide, per ft. run | 0 | 0 | 4½ |
| DO. 9 in. wide and over per ft. sup. | 0 | 1 | 2 |

*continued overleaf*

## CARPENTER AND JOINER: *continued.*

| | | | |
|---|---|---|---|
| SHUTTERING to face of concrete, per square | £1 | 10 | 0 |
| DO. in narrow widths to beams, etc., per ft. sup. | 0 | 0 | 6 |
| USE and waste of timbers, allow 25 per cent. of above prices. | | | |
| SLATE BATTENING, per sq. | £0 | 12 | 6 |
| DEAL boarding to flats, 1 in. thick and firrings to falls, per square | 2 | 10 | 0 |
| STOUT feather-edged tilting fillet to eaves, per ft. run | 0 | 0 | 6 |
| FEATHER-edged springer to trimmer arches, per ft. run | 0 | 0 | 4 |
| STOUT herringbone strutting (joists measured in), per ft. run | 0 | 0 | 6 |
| SOUND boarding, ⅞ in. thick and fillets nailed to sides of joists (joists measured over), per square | 2 | 0 | 0 |
| RUBEROID or similar quality roofing, one-ply, per yd. sup. | 0 | 2 | 3 |
| DO., two-ply, per yd. sup. | 0 | 2 | 6 |
| DO., three-ply, per yd. sup. | 0 | 3 | 0 |
| TONGUED and grooved flooring, 1¼ in. thick, laid complete with splayed headings, per square | 2 | 5 | 0 |
| DEAL skirting torus, moulded 1¼ in. thick, including grounds and backings, per ft. sup. | 0 | 1 | 0 |
| TONGUED and mitred angles to do. | 0 | 0 | 6 |
| WOOD block flooring standard blocks laid herringbone in mastic : | | | |
| Deal 1 in. thick, per yd. sup. | 0 | 10 | 0 |
| DO. 1¼ in. thick, per yd. sup. | 0 | 12 | 0 |
| Maple 1¼ in. thick, per yd. sup. | 0 | 15 | 0 |
| DEAL moulded sashes, 1¾ in. with moulded bars in small squares, per ft. sup. | 0 | 2 | 6 |
| DO. 2 in. do., per ft. sup. | 0 | 2 | 9 |
| DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys and iron weights, per ft. sup. | 0 | 4 | 6 |
| MOULDED horns, extra each | 0 | 0 | 3 |
| DOORS, 4-panel square both sides, 1⅛ in. thick, per ft. sup. | 0 | 2 | 6 |
| DO. moulded both sides, per ft. sup. | 0 | 2 | 9 |
| DO. 2 in. thick, square both sides, per ft. sup. | 0 | 2 | 9 |
| DO. moulded both sides, per ft. sup. | 0 | 3 | 0 |
| DO. in 3 panels, moulded both sides, upper panel with diminished stiles with moulded bars for glass, per ft. sup. | 0 | 3 | 6 |
| If in oak, mahogany or teak, multiply 3 times. | | | |
| DEAL frames, 4 in. × 3 in., rebated and beaded, per ft. cube | £0 | 15 | 0 |
| Add for extra labours, per ft. run | 0 | 0 | 1 |
| STAIRCASE work : | | | |
| DEAL treads 1¼ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup. | 0 | 2 | 6 |
| DEAL wall strings, 1¼ in. thick, moulded, per ft. run | 0 | 2 | 6 |
| If ramped, per ft. run | 0 | 5 | 0 |
| SHORT ramps, extra each | 0 | 7 | 6 |
| ENDS of treads and risers housed to strings, each | 0 | 1 | 0 |
| 2 in. deal mopstick handrail fixed to brackets, per ft. run | 0 | 1 | 6 |
| 4½ in. × 3 in. oak fully moulded handrail, per ft. run | 0 | 5 | 6 |
| 1¼ in. square deal bar balusters, framed in, per ft. run | 0 | 0 | 6 |
| FITTINGS : | | | |
| SHELVES and bearers, 1 in., cross-tongued, per ft. sup. | 0 | 1 | 6 |
| 1¼ in. beaded cupboard fronts, moulded and square, per ft. sup. | 0 | 2 | 9 |
| TEAK grooved draining boards, 1¼ in. thick and bedding, per ft. sup. | 0 | 4 | 6 |
| IRONMONGERY : | | | |
| Fixing only (including providing screws) : | | | |
| TO DEAL— | | | |
| Hinges to sashes, per pair | 0 | 1 | 2 |
| Do. to doors, per pair | 0 | 1 | 7 |
| Barrel bolts, 9 in., iron, each | 0 | 1 | 0 |
| Sash fasteners, each | 0 | 1 | 0 |
| Rim locks, each | 0 | 1 | 9 |
| Mortice locks, each | 0 | 4 | 0 |

## SMITH

SMITH, *weekly rate equals* 1*s.* 9½*d. per hour ;* MATE, *do.* 1*s.* 4*d. per hour ;* ERECTOR, 1*s.* 9½*d. per hour ;* FITTER, 1*s.* 9½*d. per hour ;* LABOURER, 1*s.* 4*d. per hour.*

*

| | | | |
|---|---|---|---|
| *Mild Steel in British standard sections, per ton* | £12 | 10 | 0 |
| *Sheet Steel :* | | | |
| *Flat sheets, black, per ton* | 19 | 0 | 0 |
| DO., *galvd., per ton* | 20 | 0 | 0 |
| *Corrugated sheets, galvd., per ton* | 20 | 0 | 0 |
| *Driving screws, galvd., per grs.* | 0 | 1 | 10 |
| *Washers, galvd., per grs.* | 0 | 1 | 1 |
| *Bolts and nuts per cwt. and up* | 1 | 18 | 0 |

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| | | | |
|---|---|---|---|
| MILD STEEL in trusses, etc., erected, per ton | 25 | 10 | 0 |
| DO., in small sections as reinforcement, per ton | 16 | 10 | 0 |
| DO., in compounds, per ton | 17 | 0 | 0 |
| DO., in bar or rod reinforcement, per ton | 20 | 0 | 0 |
| WROT-IRON in chimney bars, etc., including building in, per cwt. | 2 | 0 | 0 |
| DO., in light railings and balusters, per cwt. | 2 | 5 | 0 |
| FIXING only corrugated sheeting, including washers and driving screws, per yd. | 0 | 2 | 0 |

## PLUMBER

PLUMBER, 1*s.* 9½*d. per hour ;* MATE OR LABOURER, 1*s.* 4½*d. per hour.*

*

| | | | |
|---|---|---|---|
| *Lead, milled sheet, per cwt.* | £1 | 13 | 6 |
| DO. *drawn pipes, per cwt.* | 1 | 14 | 0 |
| DO. *soil pipe, per cwt.* | 1 | 17 | 0 |
| DO. *scrap, per cwt.* | 1 | 5 | 6 |
| *Copper, sheet, per lb.* | 0 | 1 | 9 |
| *Solder, plumber's, per lb.* | 0 | 1 | 3 |
| DO. *fine, per lb.* | 0 | 1 | 9 |
| *Cast-iron pipes, etc. :* | | | |
| *L.C.C. soil, 3 in., per yd.* | 0 | 4 | 0 |
| DO. *4 in. per yd.* | 0 | 4 | 9½ |
| *R.W.P., 2½ in., per yd.* | 0 | 2 | 2 |
| DO. *3 in., per yd.* | 0 | 2 | 7 |
| DO. *4 in., per yd.* | 0 | 3 | 6½ |
| *Gutter, 4 in. H.R., per yd.* | 0 | 1 | 6½ |
| DO. *4 in. O.G., per yd.* | 0 | 1 | 10½ |

*

| | | | |
|---|---|---|---|
| MILLED LEAD and labour in gutters, flashings, etc. | 3 | 2 | 6 |
| LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft. | 0 | 2 | 0 |
| DO. ⅝ in., per ft. | 0 | 2 | 3 |
| DO. 1 in., per ft. | 0 | 3 | 0 |
| DO. 1¼ in., per ft. | 0 | 4 | 0 |
| LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft. | 0 | 6 | 0 |
| DO. 3 in., per ft. | 0 | 7 | 0 |
| DO. 4 in., per ft. | 0 | 9 | 9 |
| WIPED soldered joint, ½ in., each | 0 | 2 | 6 |
| DO. ⅝ in., each | 0 | 3 | 2 |
| DO. 1 in., each | 0 | 3 | 8 |
| BRASS screw-down stop cock and two soldered joints, ½ in., each | 0 | 11 | 0 |
| DO. ⅝ in., each | 0 | 13 | 6 |
| CAST-IRON rainwater pipe, jointed in red lead, 2½ in., per ft. run. | 0 | 1 | 7 |
| DO. 3 in., per ft. run | 0 | 2 | 0 |
| DO. 4 in., per ft. run | 0 | 2 | 10 |
| CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft. | 0 | 2 | 0 |
| DO. O.G., 4 in., per ft. | 0 | 2 | 3 |
| CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft. | 0 | 4 | 6 |
| DO. 3 in., per ft. | 0 | 3 | 6 |
| Fixing only : | | | |
| W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each | 2 | 5 | 0 |
| BATHS, with all joints | 1 | 3 | 6 |
| LAVATORY BASINS only, with all joints, on brackets, each | 1 | 10 | 0 |

## PLASTERER

PLASTERER, 1*s.* 9½*d. per hour (plus allowances in London only) ;* LABOURER, 1*s.* 4½*d. per hour.*

*

| | | | |
|---|---|---|---|
| *Chalk lime, per ton* | £2 | 17 | 0 |
| *Hair, per cwt.* | 1 | 15 | 0 |
| *Sand and cement see "Excavator," etc., above.* | | | |
| *Lime putty, per cwt.* | £0 | 2 | 9 |
| *Hair mortar, per yd.* | 1 | 7 | 0 |
| *Fine stuff, per yd.* | 1 | 14 | 0 |
| *Sawn laths, per bdl.* | 0 | 2 | 9 |
| *Keene's cement, per ton* | 5 | 15 | 0 |
| *Sirapite, per ton* | 3 | 10 | 0 |
| DO. *fine, per ton* | 3 | 18 | 0 |
| *Plaster, per ton* | 3 | 0 | 0 |
| DO. *per ton* | 3 | 12 | 6 |
| DO. *fine, per ton* | 5 | 12 | 0 |
| *Thistle plaster, per ton* | 3 | 9 | 0 |
| *Lath nails, per lb.* | 0 | 0 | 4 |

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| | | | |
|---|---|---|---|
| LATHING with sawn laths, per yd. | 0 | 1 | 7 |
| METAL LATHING, per yd. | 0 | 2 | 3 |
| FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock. ¾ in., per yd. | 0 | 2 | 4 |
| DO. vertical, per yd. | 0 | 2 | 7 |
| RENDER, on brickwork, 1 to 3, per yd. | 0 | 2 | 7 |
| RENDER in Portland and set in fine stuff, per yd. | 0 | 3 | 3 |
| RENDER, float, and set, trowelled, per yd. | 0 | 2 | 9 |
| RENDER and set in Sirapite, per yd. | 0 | 2 | 5 |
| DO. in Thistle plaster, per yd. | 0 | 2 | 5 |
| EXTRA, if on but not including lathing, any of foregoing, per yd. | 0 | 0 | 5 |
| EXTRA, if on ceilings, per yd. | 0 | 0 | 5 |
| ANGLES, rounded Keene's on Portland, per ft. lin. | 0 | 0 | 6 |
| PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin. | 0 | 0 | 3 |
| WHITE glazed tiling set in Portland and jointed in Parian, per yd., from | 1 | 11 | 6 |
| FIBROUS PLASTER SLABS, per yd. | 0 | 1 | 10 |

## GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

*

| | | | |
|---|---|---|---|
| *Glass : 4ths in crates :* | | | |
| *Clear, 21 oz.* | £0 | 0 | 4½ |
| DO. 26 oz. | 0 | 0 | 5 |
| *Cathedral white, per ft.* | 0 | 0 | 7 |
| *Polished plate, British ¼ in., up to 2 ft. sup. per ft.* | 0 | 1 | 6 |
| DO. *4 ft. sup.* ,, | 0 | 2 | 9 |
| DO. *6 ft. sup.* ,, | 0 | 3 | 0 |
| DO. *20 ft. sup.* ,, | 0 | 3 | 7 |
| DO. *45 ft. sup.* ,, | 0 | 3 | 9 |
| DO. *65 ft. sup.* ,, | 0 | 3 | 11 |
| DO. *100 ft. sup.* ,, | 0 | 4 | 4 |
| *Rough plate, ⅛ in., per ft.* | 0 | 0 | 6⅞ |
| DO. *¼ in., per ft.* | 0 | 0 | 6⅞ |
| *Linseed oil putty, per cwt.* | 0 | 15 | 0 |

*

| | | | |
|---|---|---|---|
| GLAZING in putty, clear sheet, 21 oz. | 0 | 0 | 11 |
| DO. 26 oz. | 0 | 1 | 0 |
| GLAZING in beads, 21 oz., per ft. | £0 | 1 | 1 |
| DO. 26 oz., per ft. | 0 | 1 | 4 |

Small sizes slightly less (under 3 ft. sup.).
Patent glazing in rough plate, normal span 1*s.* 6*d.* to 2*s.* per ft.

| | | | |
|---|---|---|---|
| LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up | £0 | 3 | 0 |

Glazing only, polished plate, 6½*d.* to 8*d.* per ft. according to size.

## PAINTER AND PAPERHANGER

PAINTER, 1*s.* 8½*d. per hour ;* LABOURER, 1*s.* 4½*d. per hour ;* FRENCH POLISHER, 1*s.* 9*d. per hour ;* PAPERHANGER, 1*s.* 8½*d. per hour.*

*

| | | | |
|---|---|---|---|
| *Genuine white lead, per cwt.* | £2 | 7 | 6 |
| *Linseed oil, raw, per gall.* | 0 | 3 | 6 |
| DO., *boiled, per gall.* | 0 | 3 | 8 |
| *Turpentine, per gall.* | 0 | 4 | 0 |
| *Liquid driers, per gall.* | 0 | 8 | 6 |
| *Knotting, per gall.* | 0 | 18 | 0 |
| *Distemper, washable, in ordinary colours, per cwt., and up* | 2 | 5 | 0 |
| *Double size, per firkin* | 0 | 3 | 6 |
| *Pumice stone, per lb.* | 0 | 0 | 4 |
| *Single gold leaf (transferable), per book* | 0 | 2 | 0 |
| *Varnish, copal, per gall. and up* | 0 | 14 | 0 |
| DO., *flat, per gall.* | 1 | 2 | 0 |
| DO., *paper, per gall.* | 0 | 16 | 0 |
| *French polish, per gall.* | 0 | 17 | 6 |
| *Ready mixed paints, per gall. and up* | 0 | 15 | 0 |

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| | | | |
|---|---|---|---|
| LIME WHITING, per yd. sup. | 0 | 0 | 3 |
| WASH, stop, and whiten, per yd. sup. | 0 | 0 | 6 |
| DO., and 2 coats distemper with proprietary distemper, per yd. sup. | 0 | 0 | 9 |
| KNOT, stop, and prime, per yd. sup. | 0 | 0 | 7 |
| PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup. | 0 | 0 | 10 |
| DO., subsequent coats, per yd. sup. | 0 | 0 | 9 |
| DO., enamel coat, per yd. sup. | 0 | 1 | 2½ |
| BRUSH-GRAIN, and 2 coats varnish, per yd. sup. | 0 | 3 | 8 |
| FIGURED DO., DO., per yd. sup. | 0 | 5 | 6 |
| FRENCH POLISHING, per ft. sup. | 0 | 1 | 2 |
| WAX POLISHING, per ft. sup. | 0 | 0 | 6 |
| STRIPPING old paper and preparing, per piece | 0 | 1 | 7 |
| HANGING PAPER, ordinary, per piece | 0 | 1 | 10 |
| DO., fine, per piece, and upwards | 0 | 2 | 4 |
| VARNISHING PAPER, 1 coat, per piece | 0 | 9 | 0 |
| CANVAS, strained and fixed, per yd. sup. | 0 | 3 | 0 |
| VARNISHING, hard oak, 1st coat, yd. sup. | 0 | 1 | 2 |
| DO., each subsequent coat, per yd. sup. | 0 | 0 | 11 |

## SUNDRIES

*Fibre or wood pulp boardings, according to quality and quantity.*
*The measured work price is on the same basis . . . per ft. sup.* £0 0 2½

| | | | |
|---|---|---|---|
| FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. . . . from 3d. to | 0 | 0 | 6 |

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| | | | |
|---|---|---|---|
| *Plaster board, per yd. sup.* . from | 0 | 1 | 7 |
| PLASTER BOARD, fixed as last, per yd. sup. . . . . from | 0 | 2 | 8 |

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| | | | |
|---|---|---|---|
| *Asbestos sheeting, 5/32 in., grey flat, per yd. sup.* | 0 | 2 | 3 |
| DO., *corrugated, per yd. sup.* | 0 | 3 | 3 |
| ASBESTOS SHEETING, fixed as last, flat, per yd. sup. | 0 | 4 | 0 |
| DO., corrugated, per yd. sup. | 0 | 5 | 0 |
| ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey | 2 | 15 | 0 |
| DO., red | 3 | 0 | 0 |
| *Asbestos cement slates or tiles, 5/32 in. punched per M. grey* | 16 | 0 | 0 |
| DO., *red* | 18 | 0 | 0 |
| ASBESTOS COMPOSITION FLOORING : DO., ¼ in. thick, suitable for domestic work, unpolished, per yd. | 0 | 6 | 6 |

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| | | | |
|---|---|---|---|
| *Metal casements for wood frames, domestic sizes, per ft. sup.* | 0 | 1 | 6 |
| DO., *in metal frames, per ft. sup.* | 0 | 1 | 9 |
| HANGING only metal casement in, but not including wood frames, each | 0 | 2 | 10 |
| BUILDING in metal casement frames, per ft. sup. | 0 | 0 | 7 |

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*Waterproofing compounds for cement.*
Add about 75 per cent. to 100 per cent. to the cost of cement used.

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PLYWOOD, per ft. sup.

| Thickness | 5/16 in. | | | ¼ in. | | | 3/8 in. | | | ½ in. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Qualities .. | AA. | A. | B. | AA. | A. | B. | AA. | A. | B. | AA. | A. | B. |
| | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. | d. |
| Birch .. .. | 4 | 3 | 2 | 5 | 4 | 3 | 7½ | 6 | 4½ | 8½ | 7 | 6 |
| Alder .. .. | 3½ | 3 | 2 | 5 | 4 | 3 | 6½ | 5½ | 4½ | 8 | 7 | 6 |
| Gaboon Mahogany | 4 | 3 | 3 | 6½ | 5½ | 4 | 9½ | 7½ | — | 1 0½ | 10 | — |
| Figured Oak 1 side | 8½ | 7 | — | 10 | 8 | — | 11½ | — | — | 1 6 | — | — |
| Plain Oak 1 side | 6½ | 6 | — | 7½ | 7 | — | 9½ | — | — | 1 0 | — | — |
| Oregon Pine | 5 | 4 | — | 5½ | 5 | — | 6 | — | — | — | — | — |