Wednesday, August 5th, 1925. Vol. LXII. No. 1596.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

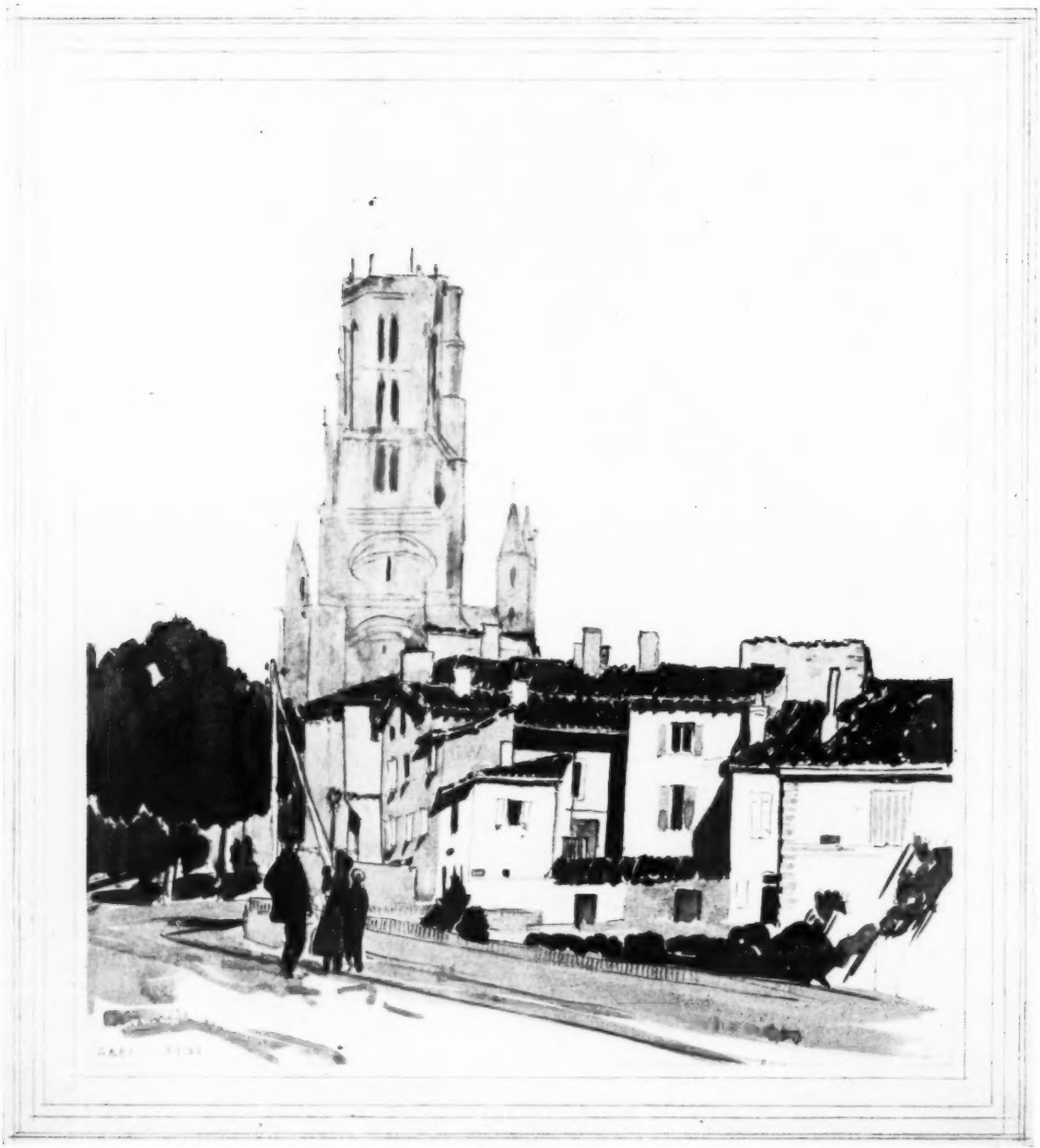
The writer confesses his profound disbelief in any perfect or permanent work of art. All art, all science, and still more certainly all writing are experiments in statement. There will come a time for every work of art when it will have served its purpose and be bereft of its last rag of significance.

H. G. Wells.

"Collected Writings."

9 Queen Anne's Gate. Westminster.

Albi



From a Water-colour Drawing by Keith Murray.

THE

ARCHITECTS' JOURNAL

9 Queen Anne's Gate, Westminster.

Wednesday, August 5, 1925. Volume LXII. No. 1596.

Overcrowding

THE report of the conference on the overcrowding of the architectural profession, presented to the Council of the Royal Institute of British Architects, raises some interesting reflections. It is, in the first place, a reminder that we who practise the art of architecture can in but few instances afford the luxury of art for art's sake. The majority of us, like the most of our fellows, are occupied with the necessity of living. We are in the market with our services, and although by our code of professional conduct we protect ourselves from some of the more sordid incidents of the market-place, we cannot wholly escape its laws.

The law of supply and demand is an old rule, however much in these later days its sway be disputed.

We who offer our services are prosperous when those services are most in demand, and, from the report, would seem to suffer when they are in too abundant a supply.

It is perhaps not altogether to the bad that we in the profession should at times share the common lot of other men and realize something of that insecurity which is the fate of so many of our fellows. That we should be taking common action against it serves still more to bring us into line with them.

In the social environment which now surrounds us the articulation of grievances is incessant, and if to these our complaint be added it only serves to show that we too are in the spirit of the age.

Organized remedies are now the fashion, and it is inevitable that as the architectural profession takes more of a corporate shape the engrossment of the individual artist, to some extent at least, is merged into preoccupation with a common experience.

This report is but the beginning of many to follow, which will evidence the impact of social and industrial conditions upon the status of our profession.

Architects dwell in a kind of borderland between art and industry, and, unlike the sister professions of the Church, the law, and medicine—or, at least, to a much greater extent than any of these—have a vital inter-connection with, and dependence on, industry and commerce.

Nothing in which we engage can we bring to an entire completion without the co-operation of many others. The glass of our prosperity is too often dimmed by the shadows which they cast. The time is fast passing, if it is not already gone, when we can maintain an attitude detached and disregarding.

The joint conference with which we are concerned may seem to have been dealing with a problem domestic to the profession, but I think it will be found, before we have finished our consideration, that it is but one of a series of problems which bring us into quite other contacts than those we make within the Institute.

We have now a joint consultation board of architects and builders, and many of us desire to see side-by-side with it a similar board on which architects and operatives could meet.

No profession can live to itself alone, and least of all ours, and nothing brings this more plainly before the mind than this question of overcrowding.

If architecture began and ended with our designs, how busy we could be! Was there ever paper sufficient to record the teeming ideas of our minds? Was there any architect ever worth the name who, with a pencil and a little paper, could not keep himself employed?

We cannot, however, live upon our dreams, and only when others help them to come true are we assured of that modicum of comfort which even the most austere of us must have. If others will not build, it profits little that we design. When they build much we are busy, when they build little we are idle, and small wonder that under these circumstances the minds of the conference were turned to the question of fitting supply to demand, of gauging the proportion in which the designing faculty should be applied to building.

This rationing of supply to demand is not a new idea; if it were held to be, the slightest acquaintance with industry and commerce would dispel it.

It is pretty safe to say that no body of men, whether concerned with the supply of labour, materials, or commodities, but have at some time or other turned their eyes, and in many cases set them persistently, in this direction.

This attention will probably increase as we grow more scientific in our application of means to ends. We shall be more and more concerned with waste. What greater waste could there be than the non-utilization of trained faculties because of the absence of the medium on which they were meant to be employed?

With this impression of the commonalty of the problem, it is interesting to see the result of the application of the mind of the conference to this particular aspect of it. The data upon which they have employed themselves are arresting:

That architects should have increased in a greater ratio than population, though apparently occasioning some disquiet in the minds of those who have framed the report, may only mean that the provision of buildings has come to play a greater part in the satisfaction of human needs than it has done hitherto.

In the study of population, nothing holds the attention more than the change which takes place in the occupation of peoples at various periods in their history.

There are many who deplore the fact that in this country the number of people employed in some of the basic occupations tends to diminish. There are fewer in agriculture; fewer in some branches of the building industry; fewer engaged in navigation. All these appear to be disquieting factors; but if inspection shows that on the other hand a larger percentage of our population is occupied in callings of a less arduous and more remunerative character, it may be that the change is advantageous.

With an increase in wealth, in education, it is only to be expected that the percentage of the population in the professions should increase in greater ratio than the population itself. I do not know, but I should not be surprised to find, that the facts which have impressed the members of the conference would be equally true, if not more so, of the three great professions I have already named.

The conference does not recommend restriction, and of that I think many will be glad. Restriction is so obvious

and easy a road; all history teems with instances of its application. Under its influence mediævalism broke up, and to many it may seem that a like fate may befall, if not our whole society, many portions of it. In nothing is this more evident than in that great branch of industry with which we, as architects, are so closely allied. The restrictions upon the entry of apprentices to the more skilled of the crafts bids fair to defeat the desire for the great building and rebuilding enterprises which are so prominently before us as a people.

In this connection it is interesting to note, on the figures quoted by the conference, that there are in England about as many architects as plasterers. It is something at least to be said for architects that they do not suggest any artificial means by which their numbers should be reduced.

The other great professions have not taken such a course, and I for one would be sorry to see architects initiated.

There is a natural restriction upon all professions which lies in the time and expense incurred in preparation for them. In the case of architecture that is an increasing inhibition. The extraordinary development in our educational system which has taken place in the last twenty years has so raised the standard of architectural training as to be itself a barrier to any rapid influx into the profession. On such inhibitions no one can look askance. They are in the long run the best thing both for the profession and the public.

The conference contents itself with noting the facts and making but two important recommendations. The first is that architects should refrain as far as possible from the employment of casual labour. This is a hard saying. It seems to forget that, to some extent at least, the architect himself is but a superior casual labourer. With but few exceptions he is employed job by job; with a commission he takes up his pencil; with his payment he lays it down. Work comes in rushes, and goes as fast, and it requires not only courage, but capital, to carry a staff increased by abnormal work over periods of depression.

No architects like to lose good assistants if that can be avoided, and it is a consummation devoutly to be wished that it should not be necessary.

The second suggestion is that the public generally, and parents in particular, should have a true picture of the profession brought to their notice before they decide to engage their sons and daughters upon it. That again is sound sense. The truth is always helpful, and nothing is more proper than to apprise parents of the prospects they must fairly face for their children in the future.

In the main, with these two suggestions the conference contents itself; but there are other thoughts which arise to the mind on reading their report. Some of them tread on very delicate and dangerous grounds, and one would give expression to them in a very quiet voice.

Dwelling on the sphere in which an architect makes his living, one notices the tendency to contract it, to restrict the kindred occupations in which an architect may engage. One notes the dislike to official architecture despite the fact that official architecture would seem to be the best security at least for the architectural assistant who has no aspiration for independence.

One wonders if there is a sufficiently wide perception of the careers for which an architectural training is the best preparation. Many men take the Bar examination without ever practising at the Bar. They find other occupations more congenial and almost as remunerative, and one wonders whether to have been trained as an architect necessarily means that one finds oneself in a cul-de-sac.

Then there is the great question on the restrictions on the building industry due to deficiencies in the supply of materials and to the shortage of skilled labour. The reflex action of these in the retardation of building enterprise operates dually on the prosperity of the architectural profession. It may be that overcrowding is connected with under-building in more senses than that in which it is usually considered.

HARRY BARNES.

London County Council and Waterloo Bridge

At its last meeting before the summer recess the London County Council agreed, after a full-dress debate, to consult "an eminent architect" on the possibility of making Waterloo Bridge safe without destroying its beauty. These are not the literal terms of reference, but they give the gist of them. Then the architect is to be consulted "as to the possibility, from an artistic point of view, of providing for four lines of vehicular traffic across the bridge, while securing facilities for foot passengers, and without alteration of the dimensions of the existing piers." At the present stage of the case it were well to abstain from comment; yet we cannot resist calling attention to a few precious gems of thought from the speech in which an amendment to the resolution was moved. It was contended that "the ordinary Londoner did not view the bridge in the same way as did those people who wrote to 'The Times'"; that the problem before the Council at the moment "was not a problem of architecture at all—they had to deal with the bridge as a traffic bridge"; that "no one on the sub-committee was convinced by the documents brought up by the conference of societies urging preservation"; and that "there must be a bridge at Waterloo to take six lines of traffic." One would fain believe that these observations (always supposing them to have been accurately reported) do not fairly represent the collective wisdom of the Council. But they are nevertheless sufficiently illuminating.

Steel Housing

A steel house in Tooting is being taken down for re-erection in Epsom. A declaration that the steel used in its construction shows no sign of rust after five months would be more reassuring but for the phenomenally dry weather prevalent during most of that short period. Nor will the opponents of the steel house be much disquieted by the demonstration of the ease with which it can be put up, taken down, and conveyed to a distant site. That fact was in no need of demonstration.

G. F. Watts Mosaics

When the church of St. Jude, which until a short time ago stood next door to Toynbee Hall in Whitechapel, was demolished, the Watts mosaic that had graced an outer wall was mercifully spared. It has been transferred to an external wall of a school in Endell Street, there to resume its interrupted mission. Watts, like the late Canon Barnett, believed that art had a redeeming message for the people, if by any means they could be persuaded to accept it; and he hoped much from the sweet uses of mosaic, thinking it an ideal material for carrying art into grimy streets. To us it has always seemed that the picture chosen for the Whitechapel experiment was rather too esoteric for the locality. That truly great emblematic picture called "Time, Death, and Judgment," doubtless perplexes more persons that it exalts. Even at the Tate Gallery, or in St. Paul's Cathedral where there is a replica, it is too commonly regarded as a puzzle picture, which no ordinary person can be expected to understand. But the case of the semi-cultured is subject to the saving clause in Praed's account of the sermons which "all who understood admired, and some who did not understand them." Something that nobody can fail to understand is the more direct ethical message and the more primitive emotional appeal of the mosaic memorial tablets that Watts caused to be set up in the Postmen's Park in Aldersgate Street. More moving, because less remote in time, than any chronicle of the Cid is the record of the noble young doctor who gave his life in the effort to avert death from a child patient in a hospital; and a heroine as worshipful as Joan of Arc is revealed in the memorial to the Southwark serving-maid Alice Ayres, who heroically sacrificed her own life in saving from the flames the children of her employer. But this note is intended to be practical rather than emotional.

The New Ironmongers' Hall

SYDNEY TATCHELL, F.R.I.B.A., Architect

FERRONERS, or ironmongers, are mentioned in 1300, seven years before the close of the reign of Edward I. Under this great lawgiver and the second and third Edwards, England was expanding like the opening petals of her beautiful national emblem the rose. Before 1351, when the mystery of ironmongers had become a fraternity or guild, Creçy had been fought and won, Calais had been captured, and Edward III had made England mistress of the narrow seas and blazoned her supremacy by quartering her three golden lions on a scarlet ground with the French shield of blue strewn with golden lilies, on his Royal Standard.

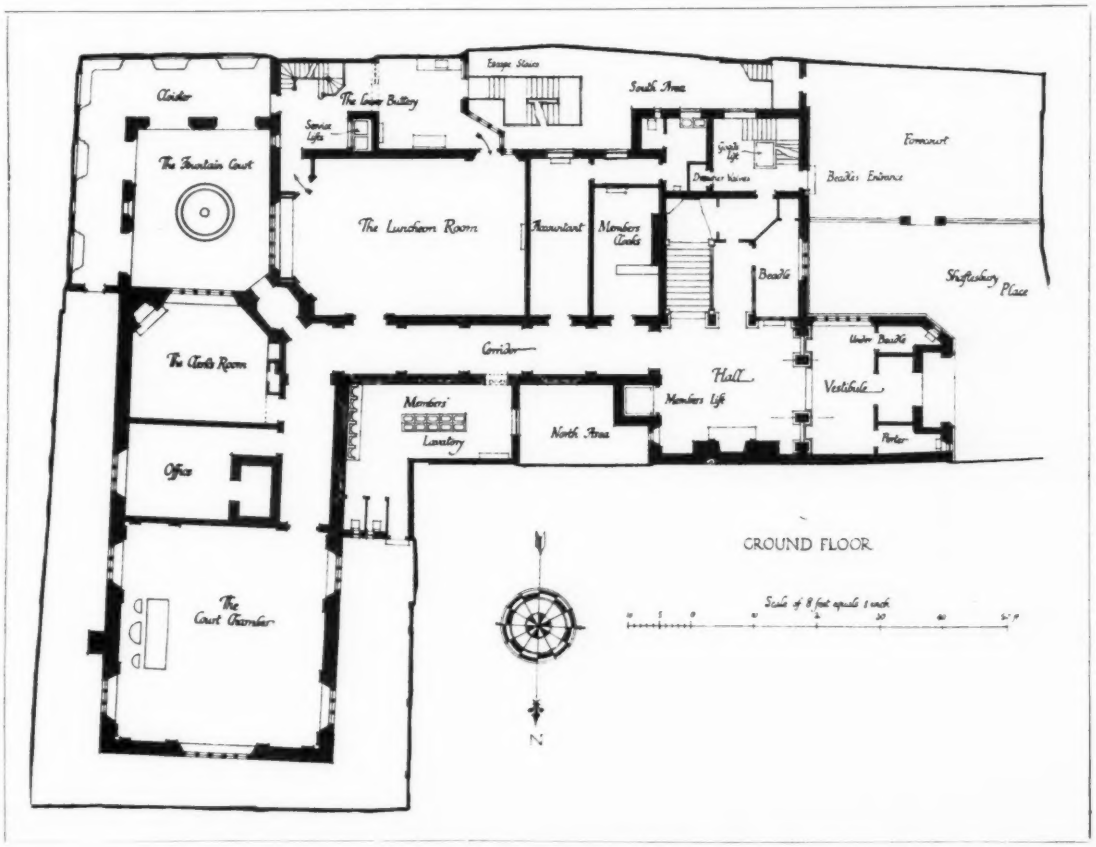
Edward III realized more fully than his predecessors the needs and potentialities of English manufacture and trade, and to him is chiefly due the opening of our gates of commerce to the continent of Europe. The City of London for centuries had been established as the great centre of commerce and finance. It owed nothing directly to Magna Carta, as its first charter from William the Conqueror had already confirmed its privileges. The necessity for the domestic control of the arts, trades, and crafts used and practised within its walls and in its suburbs brought into being the powerful fraternities or guilds. These, in addition to regulating their respective mysteries and succouring their brethren in sickness or distress, followed religious observances to the full, having their patron saints, vigils, and feasts, accredited chaplains, and their periodical feast days. Gradually the surviving guilds received charters of incorporation, and most of them became Livery Companies : the Ironmongers becoming one of the twelve chief or principal of the latter.

As in past centuries so to-day, the Ironmongers' Company, in no spirit of vainglory, but in a proud yet humble sense of great responsibility, seeks to carry on the traditions of service to the Commonwealth, in the relief of poverty and suffering, the spread of education, and in all that tends to further the welfare of this great city, this realm, and the Empire of our Sovereign Lord the King. The first hall of the Company, purchased in 1457, was in Fenchurch Street, and was rebuilt in 1587; it escaped the Great Fire of 1666, but was newly built in 1750. In the Great War it was destroyed by German aircraft on July 7, 1917. The site was subsequently sold, and in 1922 was purchased the site in Shaftesbury Place, Aldersgate, on which the new hall stands.

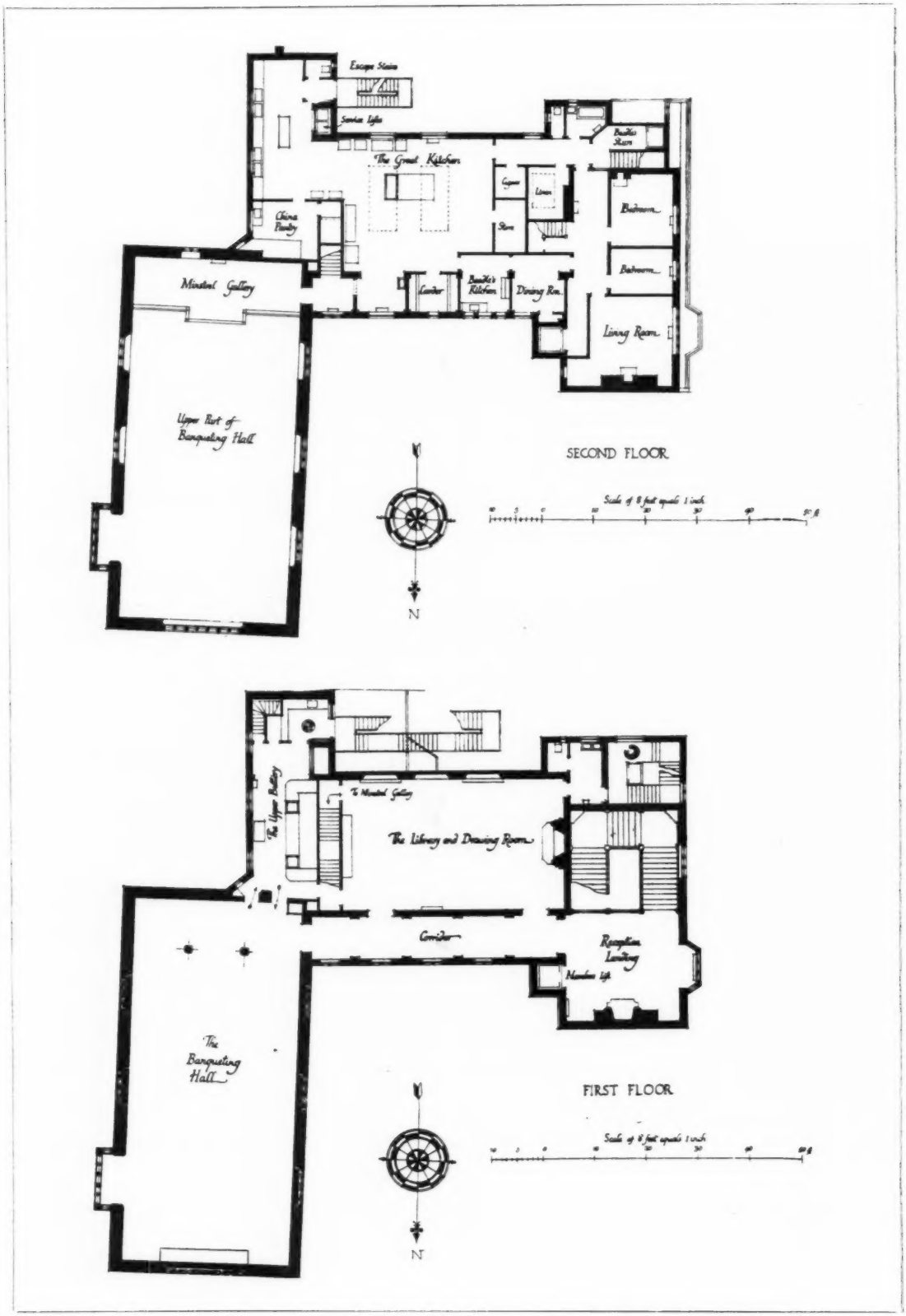
Aldersgate Ward is full of historical associations. Beyond the City wall to the north was a marsh, or lake, which down to the thirteenth century was a regular source of difficulty to the City Corporation. The great ditch was cut in 1211–1213 which reduced the lake to a marsh. After various draining operations between 1411 and 1527, which proved ineffective, Nicholas Leat (who became master of the Ironmongers' Company in 1616, 1626, and 1627) was entrusted by the Corporation with the considerable engineering task of filling up the marsh and raising the general level of the ground. The work was begun on August 7, 1606, and continued for a period of ten years. The fringe of this marsh and the filling were discovered in the course of the excavations for the new hall, so that a former master of the Company may be said to have laid its first foundations.

Shaftesbury Place formed part of the site of a fine house called Thanet House, built for John Tufton, Earl of Thanet, by Inigo Jones in 1644. After the death of Lord Thanet in

(*Continued on page* 198.)



THE GROUND-FLOOR PLAN.



IRONMONGERS' HALL, ALDERSGATE. SYDNEY TATCHELL, F.R.I.B.A., ARCHITECT.

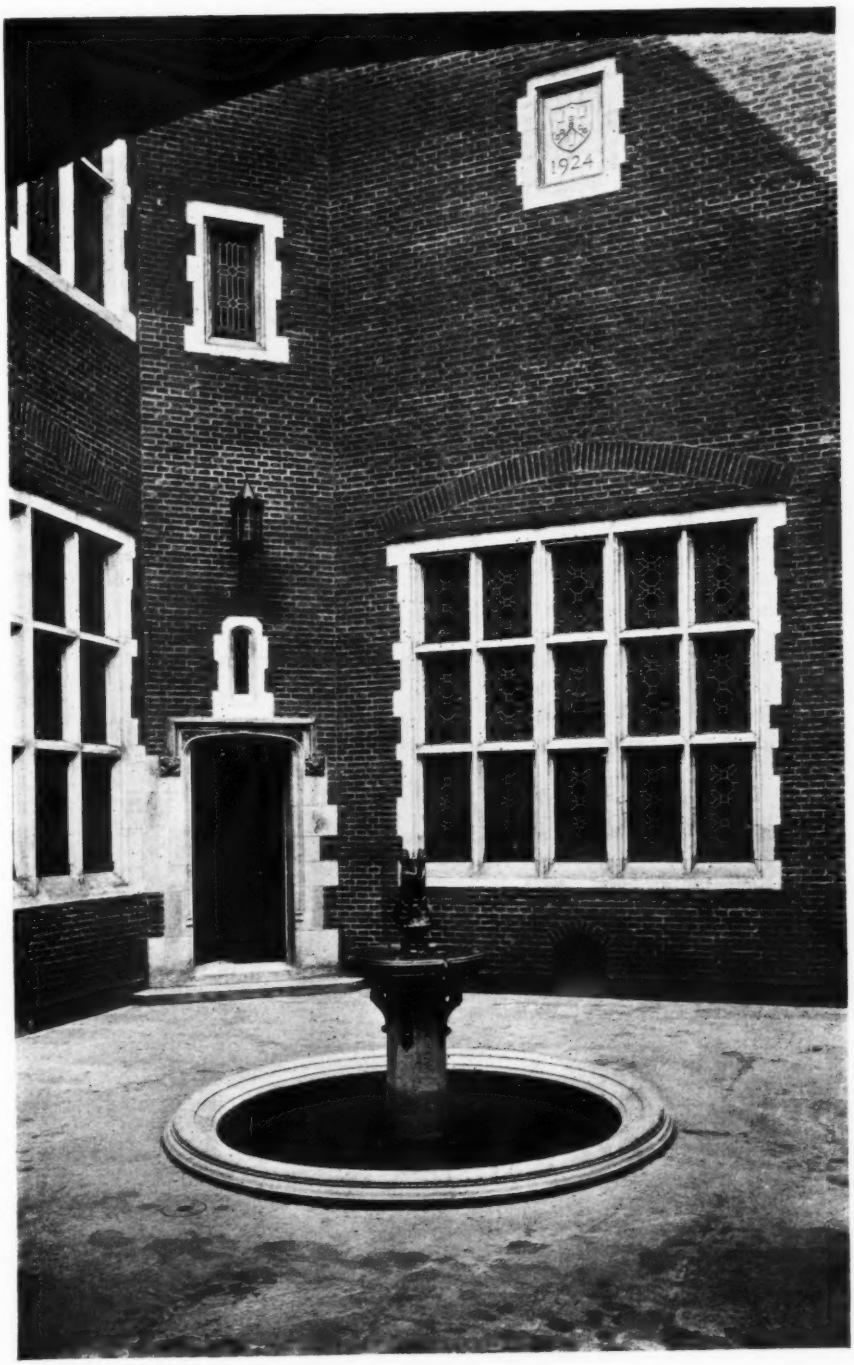
Current Architecture. 276.—Ironmongers' Hall, Aldersgate

Sydney Tatchell, F.R.I.B.A., Architect

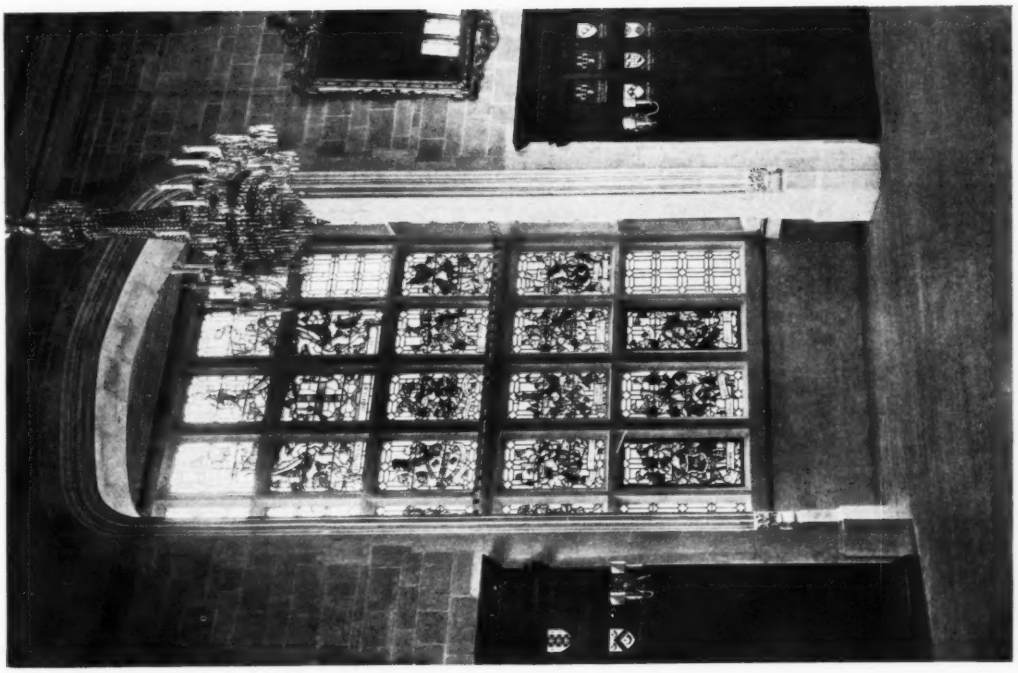
The Principal Entrance.

Current Architecture. 277.—Ironmongers' Hall, Aldersgate

Sydney Tatchell, F.R.I.B.A., Architect

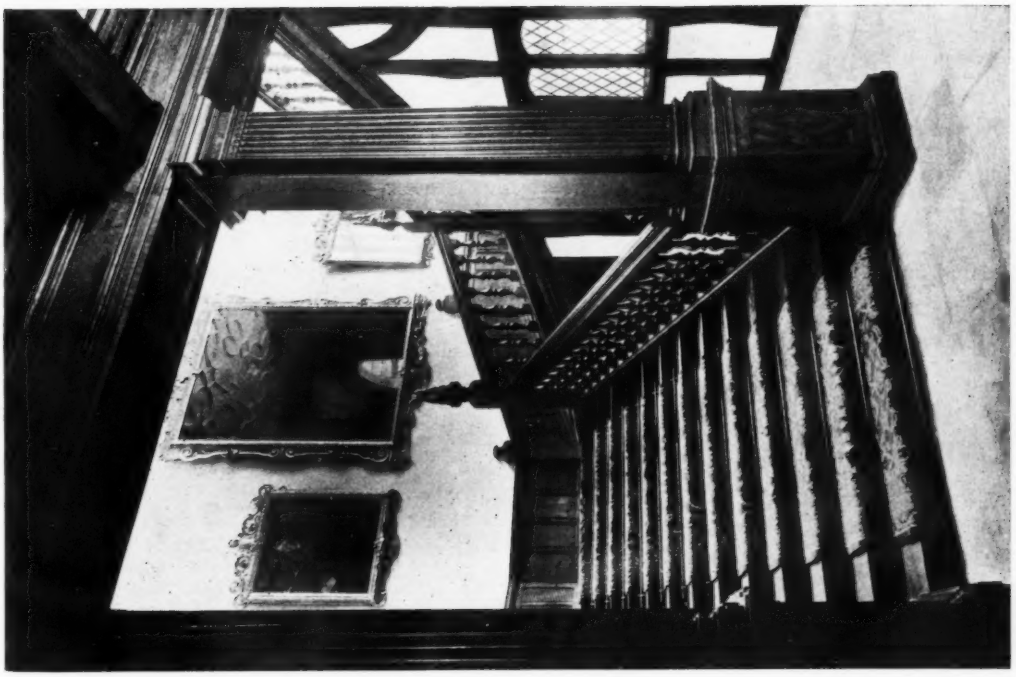


The Fountain Court.



THE GREAT BAY IN THE BANQUETING HALL.

IRONMONGERS' HALL, ALDERSGATE. SYDNEY TATCHELL, F.R.I.B.A., ARCHITECT



THE GRAND STAIRCASE.

THE BANQUETING HALL AND MINSTRELS' GALLERY.

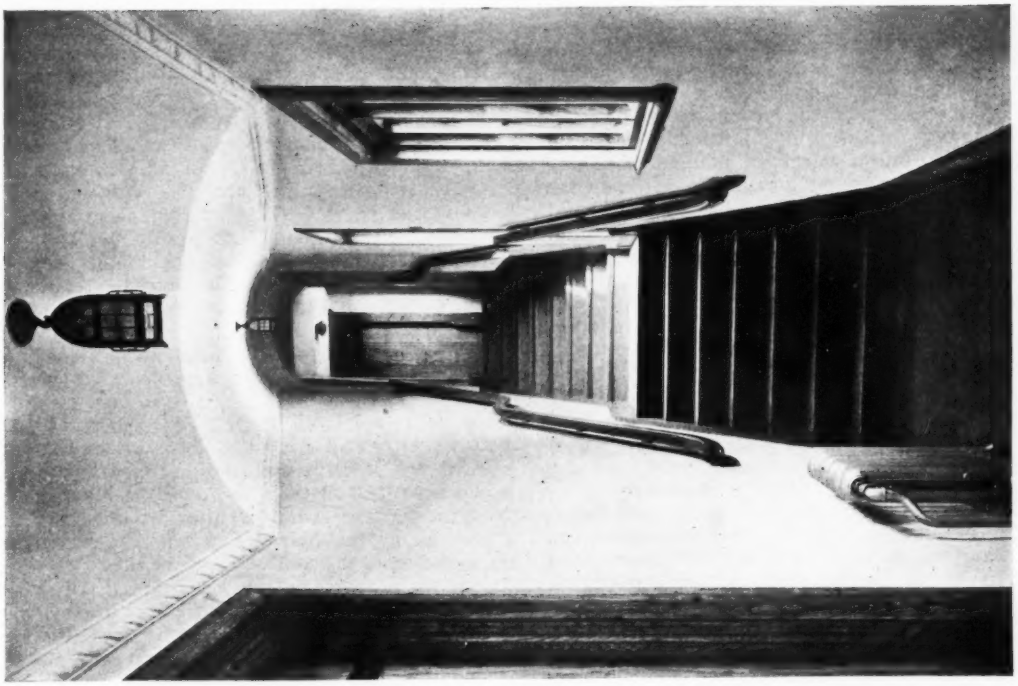
THE COURT CHAMBER.

IRONMONGERS' HALL, ALDERSGATE. SYDNEY TATCHELL, F.R.I.B.A., ARCHITECT.

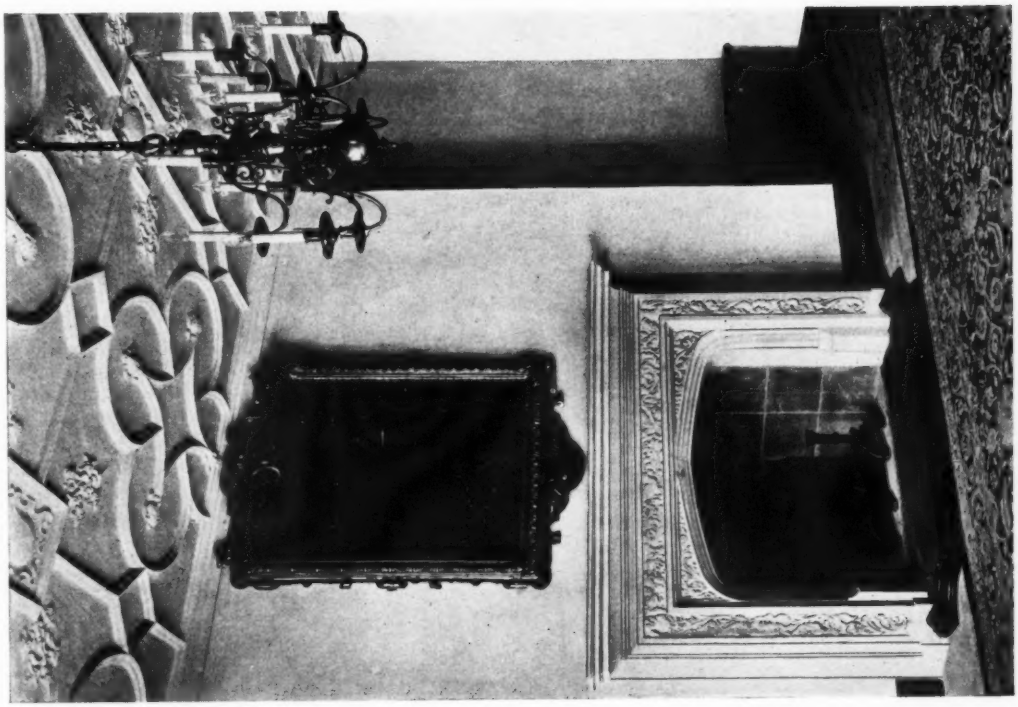
Current Architecture. 278.—Ironmongers' Hall, Aldersgate

Sydney Tatchell, F.R.I.B.A., Architect

The Clerk's Room.



STAIRS TO MINSTRELS' GALLERY.



FIREPLACE ON RECEPTION LANDING.

IRONMONGERS' HALL, ALDERSGATE. SYDNEY TATCHELL, F.R.I.B.A., ARCHITECT

1664, Anthony Ashley Cooper, first Earl of Shaftesbury, entered into possession, and from that date it was known as Shaftesbury House. In 1679, when Lord Shaftesbury was head of the Ministry, John Locke took up his residence there, and it remained Locke's home during Lord Shaftesbury's lifetime. The Duke of Monmouth is believed to have been concealed there on at least one occasion. The house reverted to the Thanet family in 1708. Between 1720 and 1850 the Shaftesbury House served successively as an inn, a hospital, and the first general dispensary to be established in London; and the garden upon which the new hall is built, and which became known as Shaftesbury Place, was converted into a court containing some thirty tenement houses. The house designed by Inigo Jones was demolished in 1882 to make way for the block of shops and offices which now occupies the frontage to Aldersgate. The tenement houses were pulled down in 1910.

The Tudor style for the new hall was decided on not only for its seemliness for the housing of an ancient guild, but because it recalls the Golden Age of craftsmanship when men not only loved their work for its own sake, but brought to their task great traditions and ideals.

The attempt which has been made to restore this atmosphere has proved that even in this commercial age a large measure of success will attend the co-operation of the architect, the craftsman, and the artisan.

Into the building of this hall there has entered the spirit of true craftsmanship—each stone and brick, each oaken panel, every piece of carving and emblazonment that is seen—and what perhaps is of more account, much solid work that is hidden and buried—has had put into it that half-conscious but wholly divine touch which ennobles all effort.

The site is ⅂-shaped, the upper arm being due north and south, and the lower arm east and west. The planning was in large measure determined by the approach from Aldersgate, the necessity for obtaining a sunny aspect for those rooms which are in permanent use by the clerk and his staff, and the maximum of light and air in a building in a somewhat restricted area surrounded by ancient lights. The problem was further complicated by the site being within the Fire Danger Zone of the City.

Briefly described, the basement contains the strong rooms for the archives and plate, the wine cellar and store rooms, and the heating chamber, vacuum cleaner plant, waiters' room, and other offices.

On the ground floor are planned the entrance vestibule, hall, cloakrooms, luncheon room, and lower buttery, the clerk's room and those of his staff, and the court chamber.

In the south-east corner of the site are the cloisters and fountain court, looking into which are the luncheon room and the clerk's room.

An electric passenger lift connects all floors, and in addition to the grand staircase which serves between the entrance hall and the reception rooms on the first floor, there is a secondary staircase for the beadle and his staff. Electric goods and service lifts are provided, together with an outside fire escape staircase, with suitable exits from each floor.

The reception landing, drawing-room, or library, and the banqueting hall, with its buttery, are on the first floor.

The great kitchen and beadle's quarters are on the second floor, and in the space over the banqueting hall is the great garret (so named after an inventory of 1553), which contains the dressing-rooms for the master, wardens, and members of the court.

Over the principal entrance are carved the full armorial bearings of the Company, on the left of the doorway is the figure of St. Lawrence the patron saint of the Company, and on the right St. Elegius the patron saint of smiths and other artificers in metal.

On the splayed angle of the entrance projection is a

THE BEADLE'S KITCHEN.

A CAST LEAD RAINWATER HEAD MADE BY J. L. EMMS.

badge depicting in conventional form the "Parrotia persica" (known in folk lore as "the iron tree") with the initials of the Company issuant therefrom.

In the railed-in forecourt is an old boundary stone belonging to the Company, which was excavated from their Old Street estate. This bears the date 1623, the year in which Shakespeare's *Tempest* was published. The rainwater-heads and eaves gutters bearing the Company's arms, initials, and devices, were cast from old lead.

On the left on entering the vestibule is the foundation-stone, laid on June 15, 1923, by Major Cecil Pemberton Stedall, then master.

On the east wall of the hall is the Company's window. The centre light shows the heraldic achievement of the Company; and in the light underneath is an extract from the original grant of armorial bearings by Lancaster King of Arms in 1456 (Henry VI).

The Hall of the Company of 1587 is also shown; together with the last Hall, which was occupied from 1753 to 1917. The kneeling figure is that of a master of the Tudor period in his livery robe and hood.

The design of the modelled plaster ceiling in the hall and corridor is based on that of the long gallery at Haddon Hall.

The windows in the corridor leading from the hall display the arms of Nicholas Leat, John Tufton Earl of Thanet; Anthony Ashley Cooper Earl of Shaftesbury; and James Duke of Monmouth, whose association with the site has already been referred to.

A small panel showing Inigo Jones is introduced in the window in the north corridor, which corridor leads to the court chamber.

The new hall is erected on a reinforced concrete raft, which covers the whole site. Fireproof construction is used throughout, and the building is, in addition, protected on the outside by drenchers, which operate automatically on an outbreak of fire occurring in surrounding property. The heating is by low-pressure hot water; the cleaning by vacuum controlled by an electric motor in the basement and operated at hydrant points distributed on the several floors; and the ventilation of the luncheon-room, court chamber, and the banqueting hall is obtained by inlets of fresh air and by exhaust fans. The cooking is by gas. Intercommunicating house telephones are installed throughout.

English oak is used for all the panelling, the grand staircase, and the joinery generally on the principal floors. Thin hand-made bricks from the Daneshill Works, near Basingstoke, are employed on the Shaftesbury Place frontage, and in the fountain court, and Portland stone is used for the windows and doorways.

The following craftsmen were engaged on the work: Mr. George Alexander (stone and wood carving); Mr. Reginald Bell (heraldic glass); Messrs. George Jackson and Sons, Ltd. (modelled plaster); Messrs. F. G. Frost and Bainbridge Reynolds (wrought-iron work).

The general contractors were Messrs. Holland and Hannen and Cubitts, Ltd. The general foreman was Mr. F. Wallis; the electrical foreman, Mr. F. Taylor; the foreman plumber, Mr. H. Bater; and the clerk of works, Mr. Marten B. Perry.

Following is a list of the sub-contractors: Jacob, White & Co., Ltd. (electrical work); Durbin and Katesmark (plumbing and sanitation); Redpath, Brown & Co., Ltd. (constructional steelwork); French Asphalt Co., Ltd. (asphalt); Ames and Finnis (roof tiling); Hobbs, Hart & Co., Ltd. (locks); Benham and Sons, Ltd. (cooking apparatus); James Ritchie and Sons (service and goods lifts); Waygood-Otis, Ltd. (passenger lift); Bells United Asbestos Co., Ltd. (jointless flooring); Hollis Bros. & Co., Ltd. (oak and wood-block flooring); J. C. Edwards, Ruabon (floor tiling); Martin Van Straaten & Co. (wall tiling); C. W. Welstead, Ltd. (gun-metal casements); Crittall Manufacturing Co., Ltd. (steel casements); Luxfer Co. (skylights and prismatic glazing); J. W. Gray & Co. (lightning conductors); British Vacuum Cleaner and Engineering Co., Ltd. (vacuum cleaning plant); James Keith and Blackman Co., Ltd. (ventilation); Mather and Platt, Ltd. (automatic drenchers and fire appliances); Kleine Patent Fire-Resisting Flooring Syndicate, Ltd. (fireproof floors); George Wright (London), Ltd. (escape stairs); Chatwood Safe Co., Ltd. (strong-room doors and safe); Building Products, Ltd. (Akoustolith tiles); John Bolding and Sons, Ltd. (sanitary fittings); Patent Impervious Stone and Construction Co., Ltd. (secondary staircases); Wm. Harland and Sons (internal paints and enamels); Indestructible Paint Co., Ltd. (external paints); Estler Bros. (steel cupboards, etc.); Burt, Escare and Denelle, Ltd. (electric light fittings); Wm. Morris & Co., Ltd. (tapestries and curtains); J. L. Emms (cast lead work); Thomas Elsley, Ltd. (cast-iron work).

The facing bricks were supplied by the Daneshill Brick and Tile Works, Ltd. These bricks are the Daneshill multi-colour best facings, $1\frac{3}{4}$ in. by $4\frac{3}{8}$ in. by 9 in. (a smaller size than the usual). There is a fair amount of Daneshill moulded brickwork in the fountain court, etc.

A DETAIL OF A WINDOW IN THE BANQUETING HALL.

The Valletta Lay-Out Competition

The Winning Design

THE International Competition for the Development of Lands and Fortifications at Valletta and Floriana, Malta, has been won by Messrs. James Burford, A.R.I.B.A., and S. Rowland Pierce, as announced in a previous issue. In this number we publish illustrations of the principal drawings submitted by the winners.

The conditions of competition required that the scheme should comprise the following principal works :

(*a*) The lay-out of streets, gates, squares, and the allotment of sites for the erection of high-class grouped dwellings and detached villas where suitable, on the lines of modern garden suburban development; also workmen's dwellings and industrial and other buildings.

(*b*) The improvement of the main approach to Valletta from Floriana and of the surroundings of Porta Reale.

(*c*) The assignment of a convenient site for a first-class modern hotel, to accommodate 200 guests, with possibility for extension, with provision for a garden, recreation grounds, garages, etc.

(*d*) Site for the erection of New Courts of Justice, such site to be as near as possible to Porta Reale; the new courts building to provide accommodation for the following : Superior Courts, Courts of Judicial Police, Court for Juvenile Offenders, Prisoner's Lock-up, the Government Notary's Office, Public Registry and Notarial Archives, Offices of the Order, Offices for Legal Practitioners (detailed requirements were set out in a special schedule). Certain of the main bastions of Valletta and Floriana were required to be kept intact, or to be opened up to give effect to improvements of the gates, etc. Whilst an indication was given that other fortifications on account of their historical interest should be preserved as far as possible.

All military properties were required to be left intact, with adequate accesses thereto from new or existing roads. Competitors were allowed to contemplate the acquisition by the Government of private property where necessary to give effect to their schemes.

The assessors appointed to judge the competition were : (1) Mr. Edward P. Warren, F.S.A., F.R.I.B.A.; (2) Professor Patrick Abercrombie, M.A., A.R.I.B.A.

Following is an extract from the assessors' report :

"In making this award, in consonance with our duties as appointed assessors of this competition, we desire to recognize the high average of ability shown by the authors of the schemes recommended for premia or indemnities in dealing with the peculiar difficulties of the areas indicated for exploitation, in respect of constant, and sometimes acute divergence of levels, of the many complications arising from reserved territories within the limits of those areas, and of the irregularity of the boundaries."

List of the names, etc., of the authors of the premiated or indemnified schemes :

First premium (£1,000).—James Burford, A.R.I.B.A., and S. Rowland Pierce, 3 Staple Inn, Holborn Bars, London, W.C.1.

Second premium (£500).—Réne Danger, 6 Due D'Angoulême, Paris.

Indemnities (of £100 each).—Jacques Alleman, Bethune; Umberto Di Segni, Tripoli; Alberto Laferla, B.E.A., L.S. and A., Valletta.

EXTRACTS FROM THE WINNING COMPETITORS' REPORT.

Strada Santa Anna.

The main traffic to Valletta from Sliema, Hamrun, Paula, and the Porto Nuovo area concentrates on the Piazza S. Anna, and thence by the Strada S. Anna to Valletta. It may be said, therefore, that the Strada S. Anna is the governing factor in the lay-out of roads. It is developed and improved with a view to the concentration of traffic at the Porta Reale, and to the formation of such building sites as will permit of a full development of the architectural possibilities of the area. For these reasons and in view of the difficulty of obtaining access to buildings from a sunken road, and in consideration of the necessity for the provision of a site adequate to the Courts of Justice, it is considered advisable from all points of view to close the existing Duke of York's Avenue, and to form a new road to the south of it which will be a continuation of the Strada S. Anna, and which will provide a more direct access to southern Floriana and the Salita Crocifisso.

Since the existing Strada S. Anna is the main business and commercial street of Floriana the sites adjacent to the new extension of it are intended for buildings of a commercial and business character. A site selected for its accessibility and centrality of position is allocated for a theatre, cinema, and café.

The vista in a north-easterly direction, as may be seen on the drawings, will be closed by the fine façade of the Auberge de Castille and by the fortifications below it.

The planning of this new road permits the removal of the tramway to a screened side-track from that portion of the road fronting the Courts of Justice.

Piazza S. Anna.

The Piazza S. Anna is developed as a terminal to the Strada S. Anna at its south-west end, and in view of the business and commercial character of the Strada S. Anna, it is proposed that the lower stories of the new buildings in the Piazza should be given to commercial and business purposes. The upper stories would provide residential flats.

Porta Reale.

It is considered that the Porta Reale in its existing form is not adequate to the necessities of modern traffic and to its increasing importance as the link between Valletta and the new developments of Floriana and the Harper area, and that any structural alterations to it, such as the removal of the central pier and the conversion of the two arches into one, would destroy its character without providing a full solution of the problem presented.

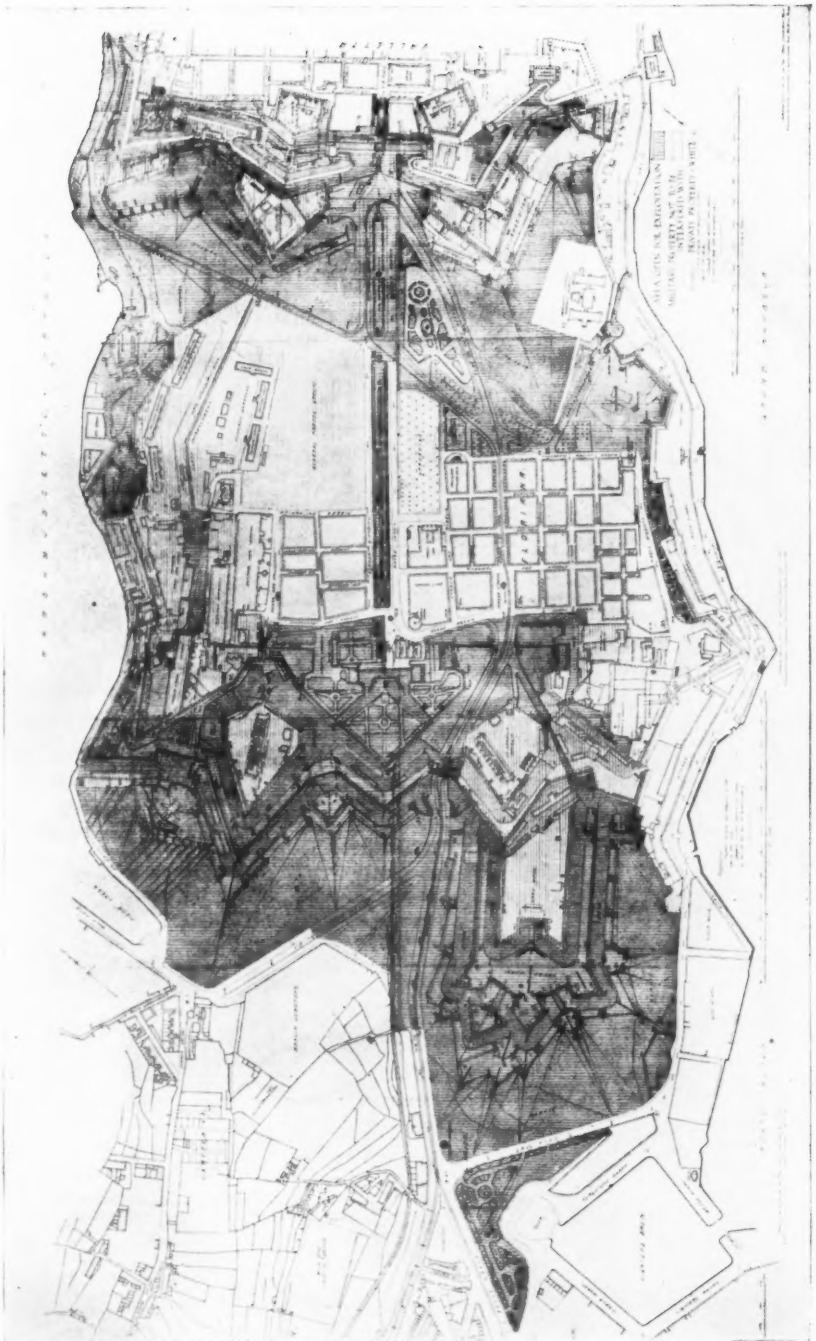
It is therefore proposed that the existing bridge be incorporated into a wider approach-bridge leading to the reconstructed entry shown by the drawings.

It is claimed that the reconstruction of the gate and replanning of the area immediately within it provide the greatest width of entry which can be obtained without interference with the existing buildings, and that the redesigning of the bridge carrying the Strada Regina gives the maximum of light and air to the main approach.

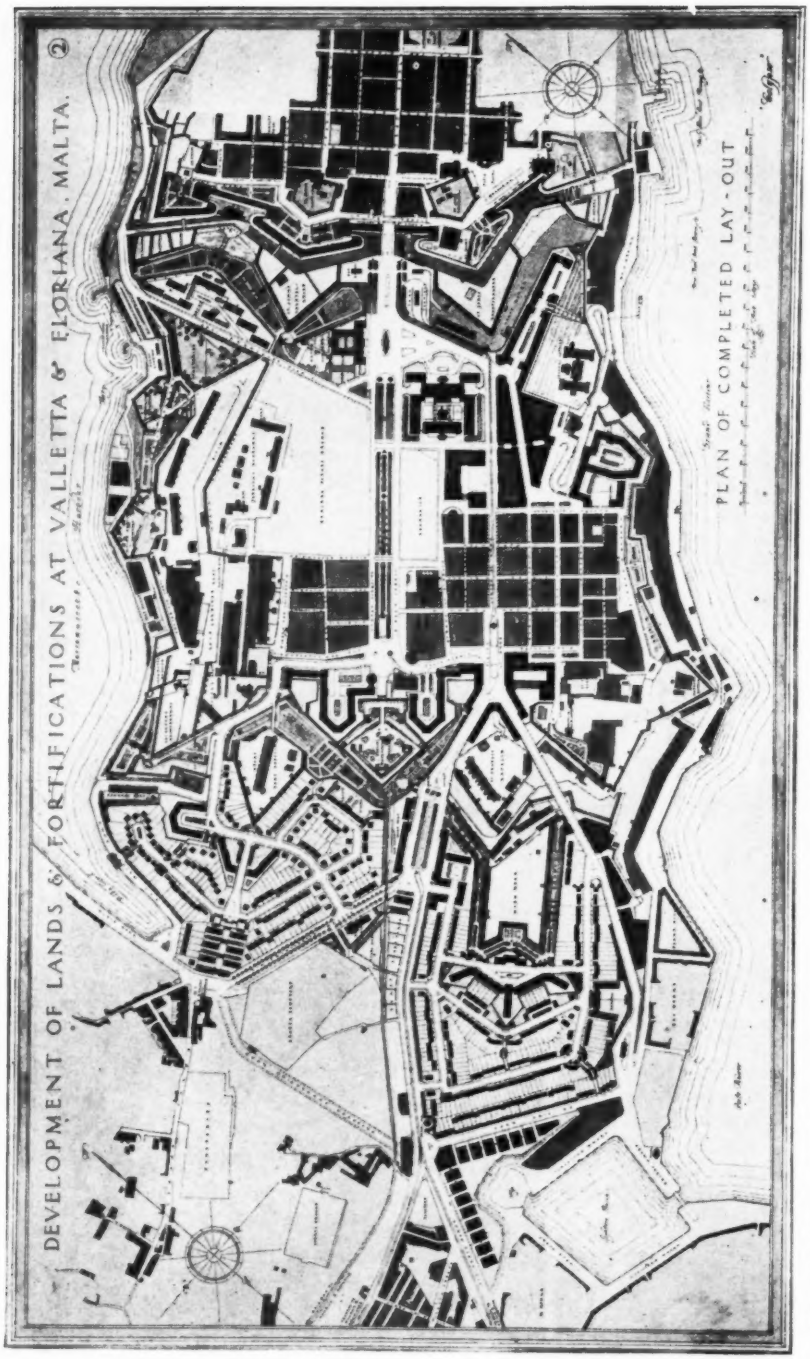
The towers making abutments to the new approach-bridge are formed by a refacing of the existing curtain wall, and the new approach is designed to maintain the architectural character of the existing Porta Reale. It is proposed that the two statues and principal decorative features and inscriptions of the present gate should by historical association be incorporated in the new work.

New Piazza near Porta Reale.

In addition to forming a centre of concentration and distribution of traffic outside the Porta Reale the Piazza is



THE VALLETTA LAY-OUT COMPETITION. PLAN OF AREA TO BE DEVELOPED, AS EXISTING.



THE VALLETTA LAY-OUT COMPETITION: WINNING DESIGN. JAMES BURFORD, A.R.I.B.A., AND S. ROWLAND PIERCE, ARCHITECTS.

bounded by the two principal buildings of the new work, namely, the Courts of Justice and the first-class hotel.

Attention is also directed to the following points in relation to the new Piazza :

1. Tram and 'Bus Services.—The tram and 'bus services are given (for the convenience of the public) termini which are as close as possible to the Porta Reale, and at the same time kept free from the main traffic lines. The tramway terminus on the south-east side provides a circulation for expeditious handling of return services, and trailer cars, together with facilities for waiting cars. It includes tramway offices and a public shelter and lavatories.

On each side of the Piazza are 'bus stops (see plan), whilst on the north-west side is placed the 'bus office with adequate parking space and turning room for waiting long-distance 'buses, which might otherwise encumber the main traffic lines.

2. Site for Courts of Justice.—It is claimed that the Courts of Justice have been allocated the only site which at once gives close proximity to and provides a frontage to the Porta Reale, and which is also of an importance commensurate to the size and civic character of the building.

3. The site, on the north-west of the piazza, allocated to the first-class hotel, allows room for its extension to the west, for garages and gardens, and provides for tennis courts, etc., in the shelter of St. John's ditch. The site is held to be in the most central position for its purpose, and is unenclosed by other buildings. It is conveniently near to Valletta, the tram, 'bus, and train services, and the various public gardens, and has the commercial asset of being on the direct route from the Molo Marina to Valletta by way of the reconstructed Salita Crocifisso.

4. Valletta Bastions.—In the design of the piazza consideration is given to the desirability of framing views of the Valletta bastions.

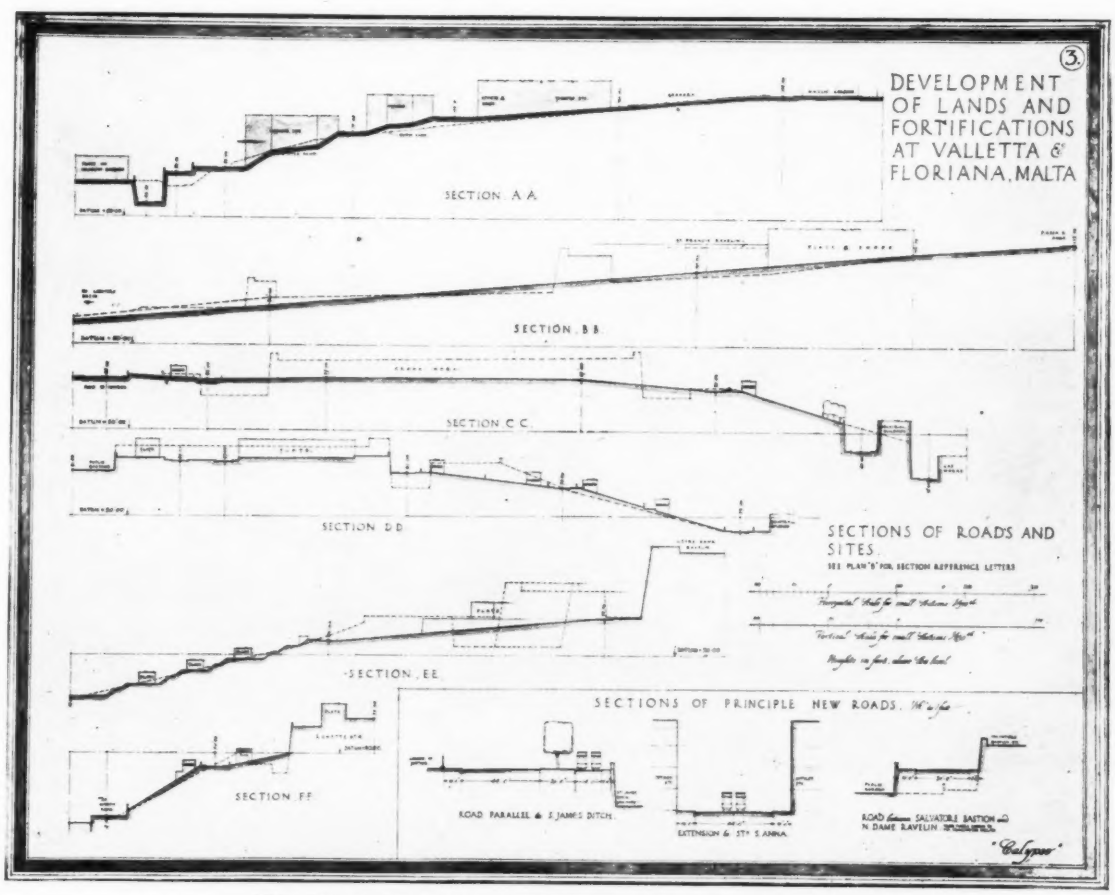
Road from North-east End of Strada S. Anna Extension to Piazza F. Sceberras.

The new road between the north-east end of the Strada S. Anna extension and the Piazza F. Sceberras gives a direct route to Valletta from the Salita Crocifisso, and from southern Floriana by way of the Piazza F. Sceberras, and provides a by-pass for slow traffic through Southern Floriana and the lower Piazza Fosse. In this way it relieves the existing and narrower part of the Strada S. Anna.

Reconstruction of the Salita Crocifisso.

In view of the importance of the Molo Marina as a place of disembarkation of passengers, the Salita is developed and reconstructed as a motor-road having gradients not steeper than one in twenty, giving a direct route from the Molo Marina to the Porta Reale and Valletta, also to Floriana, and, in addition, with the Via Otto Septtembre 1565, providing for traffic from harbour to harbour. The road includes the approach to the Merchant Seamen's Hospital and the Seamen's Rest, at the existing levels. Government stores are incorporated in the construction of the lower part of the Salita.

It is proposed that, in view of its proximity to Valletta, and to the main business and commercial road of Floriana, and in consideration of its accessibility from the Molo Marina and Grand Harbour, that the area between the Salita Crocifisso and the extension to the Strada S. Anna should be developed for commercial and business purposes which might be, in many instances, connected with maritime interests.



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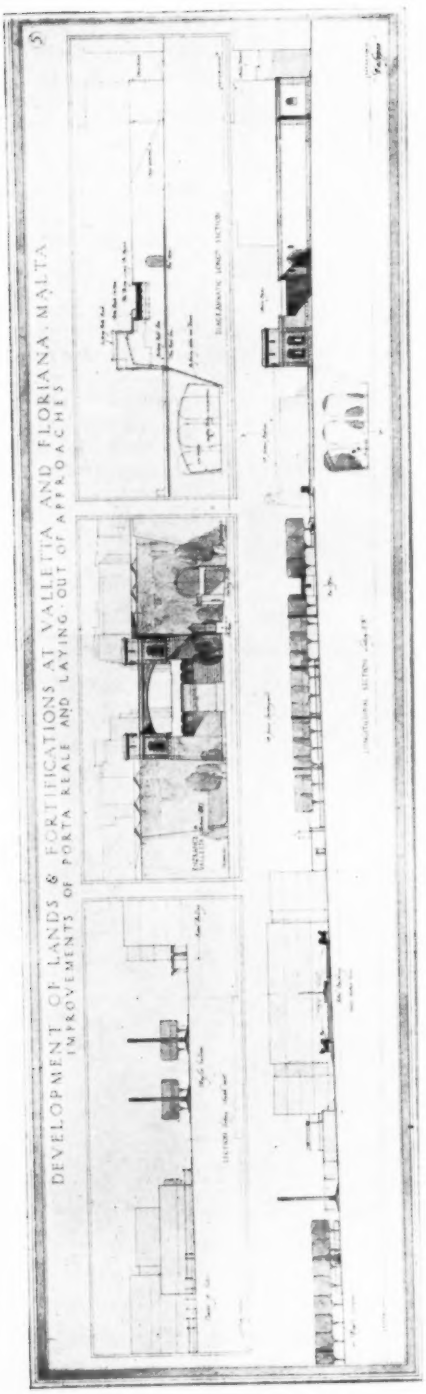

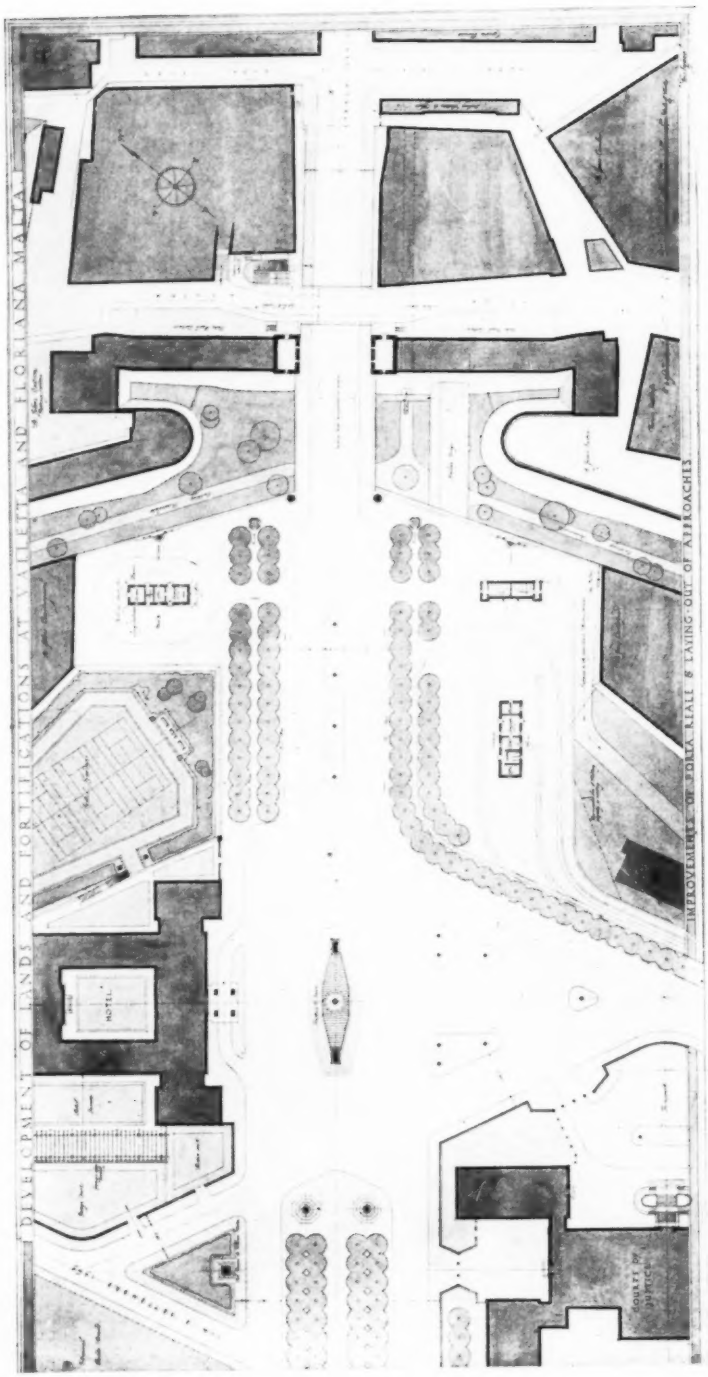

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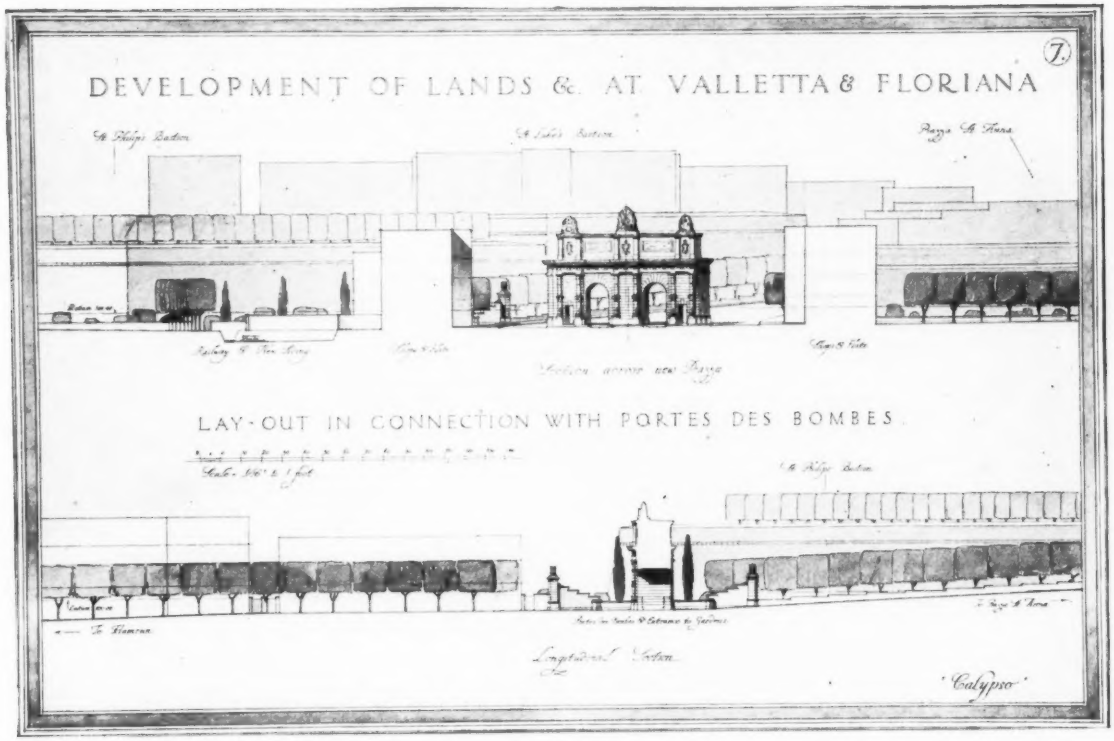

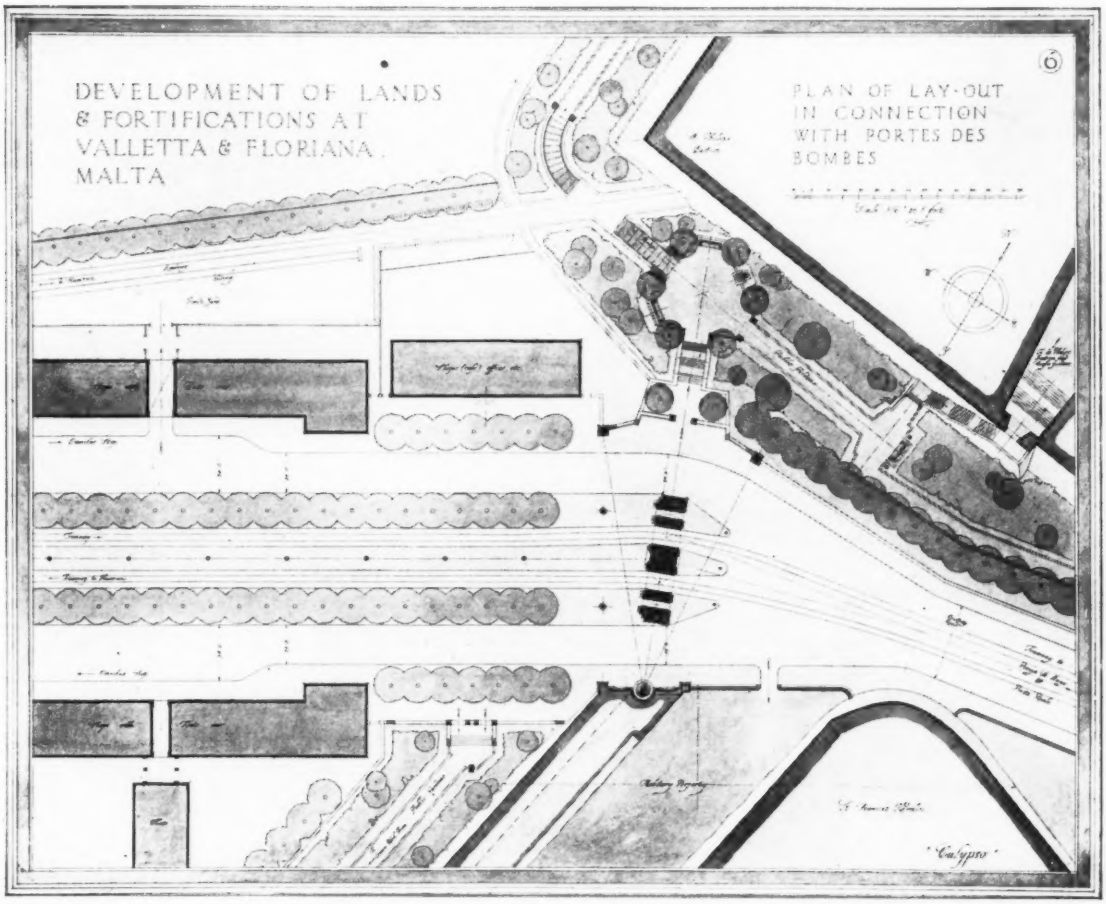

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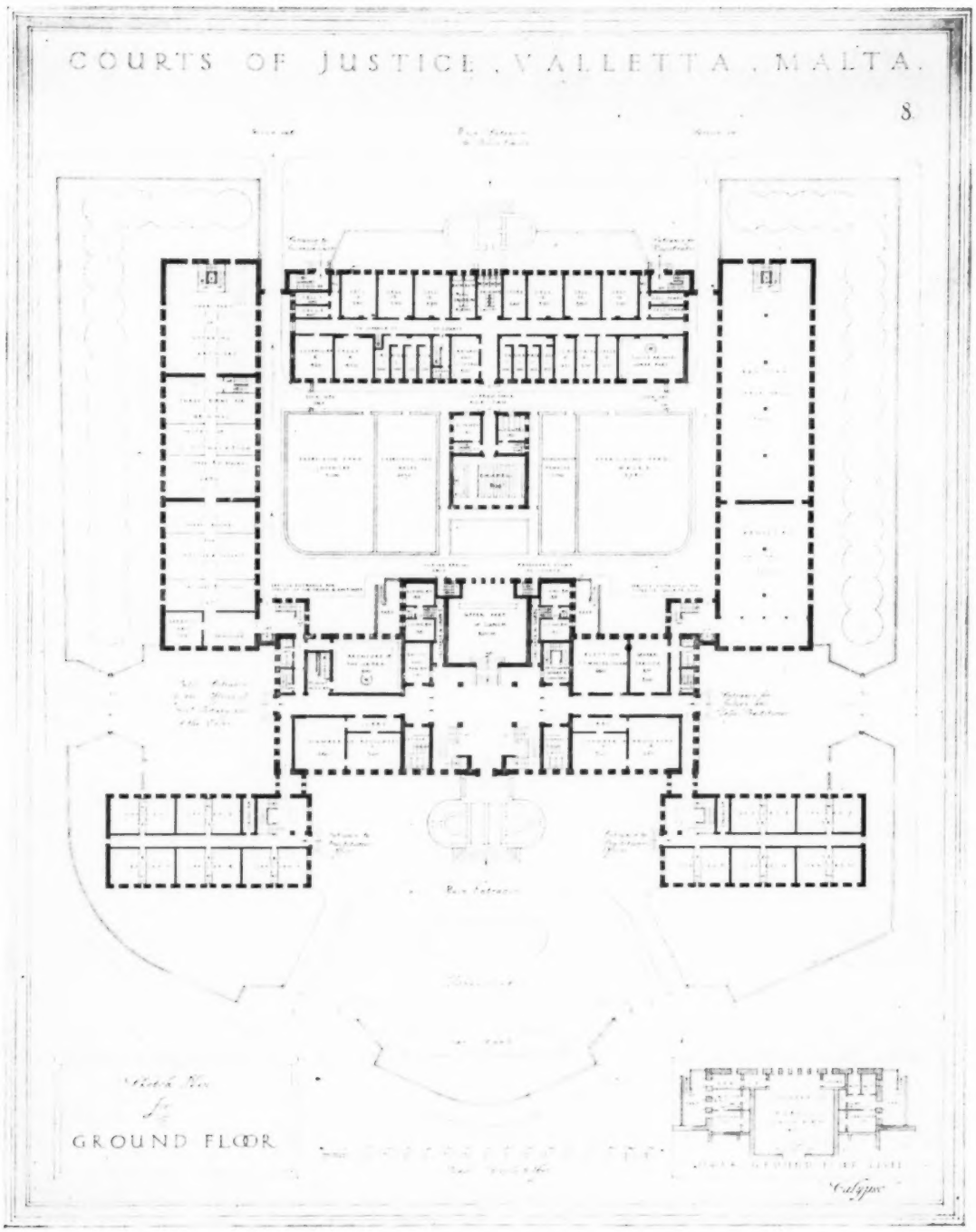

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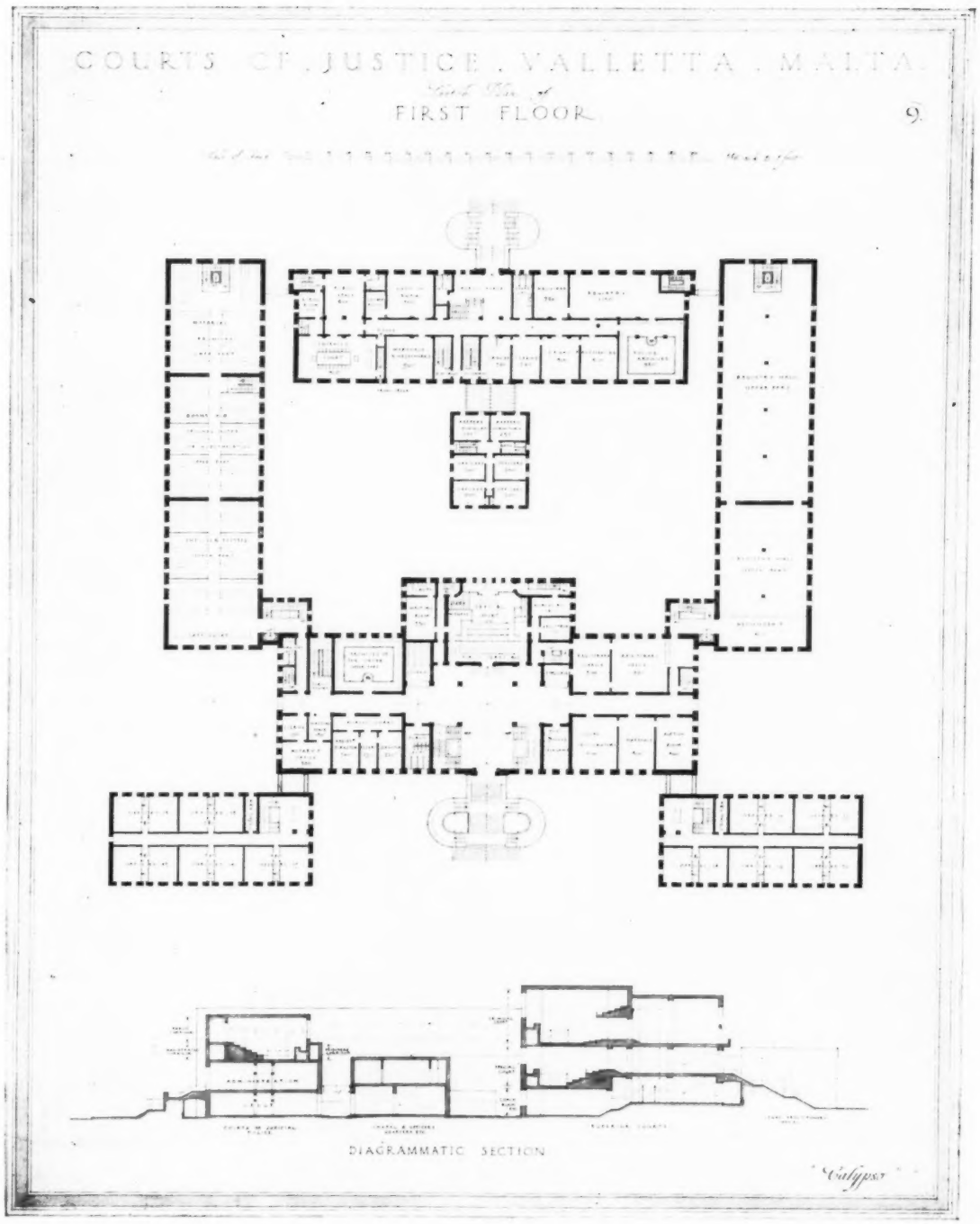

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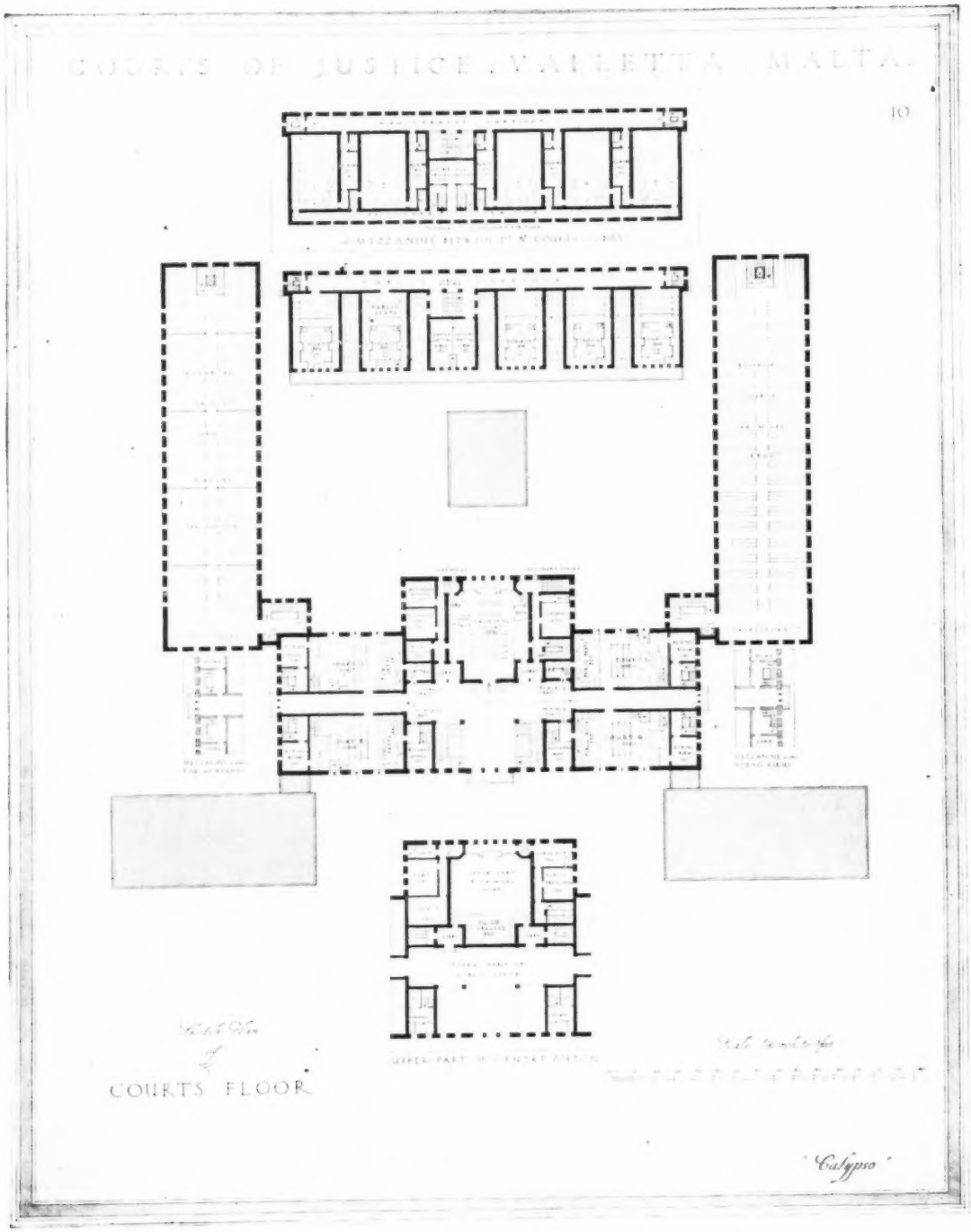

THE VALLETTA LAY-OUT COMPETITION: WINNING DESIGN.
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New Road to Lighters Basin.

The formation of the new road to the Lighters Basin from the Piazza S. Anna is rendered possible by the proposed acquisition of about 980 sq. yds. of military property. The road has a constant gradient of one in twenty, and its purpose is to provide a direct route from the Porto Nuovo area to Floriana and Valletta; it also connects with the residential roads of the Crown Work area.

Portes des Bombes and Adjacent Piazza.

On account of its architectural merit and archæological interest, and as an indication of the main entrance to Floriana, it is considered desirable to retain the Portes des Bombes. The main road passing on either side of it separates ingoing and outgoing traffic, whilst the trams pass, as at present, through the main arches of the gateway.

The Piazza, to which the Portes des Bombes forms a terminal feature, collects the roads from Hamrun, Sliema, and the Crown Work area. It provides a shopping and business centre, and a stopping-place for 'buses and trams common to, and forms a connection between, the Notre Dame and Crown Work residential areas.

Main Road through Notre Dame Area.

The main road through the Notre Dame area, in addition to its immediate purpose of serving the houses along it, and the subsidiary roads of that area, is designed to relieve the road past the Portes des Bombes of traffic to Sliema from Northern Floriana.

Roads in Residential Areas.

The roads in the residential areas are constructed with the least grades obtainable; the steepest grades on these roads, as on the new main roads, in no case exceed one in twenty. They are designed with a view to the greatest economy, and to readiness of access and openness of planning, stepped connecting paths for the convenience of pedestrians are provided on the steepest parts of the residential areas.

Allocation of Residential Sites.

1. First Class.—Sites for first-class residential buildings are allocated on the north-western side of the Peninsula by reason of their being less occupied or required for business purposes, for their greater openness, and for their separation from the traffic attending the Porto Nuovo and new industrial areas. For the same reasons, and for the advantages of their outlook, sites for first-class flats are allocated on the St. Luke's and St. James's bastions (Floriana). Also it is considered that the steepness of the north-west side of the Notre Dame area indicates that that part of the land open for exploitation is more suitable for detached houses than for grouped dwellings.

It is suggested that the north-west coast of the Peninsula would be improved if a promenade by the sea could be constructed between the Sa Maison Road and Via Otto Septtembre 1565.

2. Second Class.—Sites for second-class grouped dwellings and flats are allocated on the Crown Work area, on the Crucifix bastion, and by St. James's ditch (Valletta) by reason of their proximity to the new industrial areas, the Porto Nuovo, the Grand Harbour, and the business and commercial centres.

Schools.

Provision is made for three new schools.

Those in the Crown Work area and on the Crucifix bastion respectively are intended for elementary schools, the former is calculated to accommodate 700–800 pupils, the latter, acting mainly as a relief school for Floriana, for 400–500 pupils. It is proposed that the school in the Notre Dame area should be a preparatory secondary school, and it is calculated to provide for 200–300 pupils.

Sites for Industrial Buildings.

Convenient sites are allocated for warehouses and industrial buildings, for industries not of a nature to spoil reasonable enjoyment of adjacent residential areas, near the Lighters Basin and Porto Nuovo.

The existing public gardens north of Lighters Basin, and sites south of the new road from Lighters Basin to the Piazza S. Anna, are developed as industrial areas by reason of the shipping and transport facilities their position affords and their consequent economic value, and of their proximity to existing industrial buildings.

Industrial store-yards have been allocated to sites between the Hamrun Road and Braxia Cemetery, unsuitable for residential purposes.

Proposed Connecting Road.

The formation of a new connecting road is suggested between the Molo Pieta and Via Croce Marsa, to function as a circulatory road for traffic between Sliema and Paula and Cospicua, thus avoiding the necessity for its entering the Portes des Bombes area.

Access to Military Property.

In all cases accesses to military property are preserved in their existing positions or improved.

FORTIFICATIONS.

Fortifications Preserved.

The fortifications coloured green on "Plan A" have been preserved in their entirety, whilst other fortifications, wherever feasible, have been retained on account of their historical or picturesque interest.

Relation of Fortifications to New Planning.

The roads and blocks of flats in areas open for exploitation are arranged with a view to preserving, as far as possible, the lines followed by the fortifications, and whilst the blocks of flats form culminations to groups of houses, the fortifications themselves fulfil throughout the scheme an important part in the composition of the buildings.

As an exemplification of the relation between the fortifications and the new buildings may be cited the views towards:

1. St. Philip's, St. Luke's, and St. James's bastions from the piazza adjacent to the Portes des Bombes or from the Via Principessa Melita.
2. The Crown Work and Hornwork from the south-west.
3. Notre Dame bastion from the south-west.
4. The Crucifix bastion from the Grand Harbour.
5. St. John's glacis from the Quarantine bastion.

The opening up of the fortifications is assisted by the formation of gardens about them.

PUBLIC GARDENS, ETC.

Gardens in Ditches.

The two lines of fortifications to Valletta and Floriana respectively are fronted by a belt of gardens, in which tennis courts and recreation spaces are provided, formed in the existing ditches, which, by reason of their enclosed character and relatively low levels, are unsuitable for building sites.

The "Promenade" gardens beneath the Valletta bastions are maintained.

Gardens on Bastions.

The approach to St. Philip's bastion from the Maglio Gardens is widened and improved by the formation of steps and a bridge. The garden on this bastion is developed as a culmination to the Maglio Gardens, and it is suggested that, in view of its size and central position, an open-air theatre might be suitably and profitably provided in it.

The area comprising St. Philip's, St. Luke's, and St. James's bastions is connected by steps to the ditch gardens below them, by which means it is accessible from the Notre Dame, Portes des Bombes, and Crown Work areas.

A garden is laid out on St. Francis's bastion, and the gardens on the Valletta bastions, the Capuchin's Curtain, and the Sa Maison bastion are retained and developed.

Maglio Gardens.

By reason of their situation, maturity, and historical interest, the Maglio Gardens are, for the greater part, retained without alteration. A traffic way is opened through them between San Pubblio and the Piazza Britannica as an additional connection between northern and southern Floriana.

Cemeteries.

All existing cemeteries in the area about the Misida and Quarantine bastions are retained as open spaces and connected by public gardens, though the removal or partial removal of these cemeteries, if that were considered feasible, would release sites of value for building purposes.

COURTS OF JUSTICE.

Character.

The Courts of Justice are planned with a view to simplicity and economy, and with a dignity compatible with their civic importance.

Disposition of Parts.

The main block of the building comprises the Superior Courts, the offices of the Order and of the Government notary, and is flanked by the offices of the legal practitioners. This block is given the greatest prominence on the site; it fronts the Porta Reale, and is approached by a forecourt. The registry and archives blocks occupy positions on the two sides of the site.

The Courts of Judicial Police, the Court of Juvenile Offenders, and the prisoners' approach to the lock-ups, face and are entered from the new road on the north-west side of the site. The exercising yards are surrounded by buildings, and consequently are concealed from view.

Detail of Superior Courts Block.

The four courts and the Criminal Court occupy the top floor, together with all necessary robing-rooms, and rooms for witnesses, counsel, etc. The Special Court, which might be on occasions required for criminal or maritime cases, is situated on the first or main entrance floor. The Criminal and Special Courts have provision for access for prisoners.

On the remainder of the entrance floor are planned the legal offices used by the public and the offices of the Order and Government Notary (*infra*). The ground floor is mainly occupied by rooms for private legal purposes.

It is considered that the above disposition obtains quietness for the courts, and whilst providing convenient access to them for the public concerned in cases or as spectators, has the additional advantage of allowing them to be closed without interference to the legal offices used by the public and legal practitioners.

The judges are provided with a separate entrance and with private accesses to robing-rooms.

Legal Practitioners' Offices.

The offices of the legal practitioners may be entered externally from the forecourt, or internally from the courts building.

Offices of the Order and of the Government Notary.

The offices of the Order and of the Government notary, incorporated in the courts building, are approached by a separate entrance on the Grand Harbour side.

The Courts of Judicial Police.

The Courts of Judicial Police are planned on the same principle as the Superior Courts, and similar advantages are claimed for them. Separate accesses to the courts are planned for the public, the magistrates, the prisoners, and police respectively. A private entrance for magistrates and a separate entrance to the Juvenile Court are provided.

Prisoners' Lock-up.

The prisoners' lock-up occupies the ground floor of the police courts block. The chapel, and infirmary, and the quarters for officers are planned in a separate building.

Reorganization of the Work of the Council and Committees of the R.I.B.A.

During the period that has elapsed since the end of the war the regular work of the R.I.B.A. has increased very greatly in amount and in scope. The new charter and by-laws have largely increased the size of the Council, and its membership is drawn, to a much larger extent than before the war, from outside the London area. The Council now numbers sixty-seven members in place of forty-two, and of these about 45 per cent. have to make a special journey to London to attend meetings. Attendance at fortnightly Council meetings involves a heavy call on the time of non-London members.

It is felt that the existing machinery for carrying on the work of the R.I.B.A. is becoming overstrained. The old method under which a Council, consisting mainly of architects living in the London area met once a fortnight and was the sole executive authority, is becoming unworkable under the new conditions. The Council forms a narrow funnel through which all matters involving executive decisions, however trifling, must necessarily pass. The time of the Council is much occupied with small matters of routine and detail, and it is difficult to find time for the full discussion of really important matters of policy and principle which vitally affect the future of architecture. The time appears to have come for finding a means of simplifying the work of the Council and endeavouring to save the time of its members by eliminating all unnecessary work and allowing the Council greater time to concentrate on the more important questions of general policy.

With this object in view it has been decided that in future the Council shall meet once a month during the session, and that the Selection and General Purposes Committee shall be reconstituted with enlarged powers as an Executive Committee consisting of the president, the hon. secretary, the chairman of the four standing Committees, the chairman of the Board of Architectural Education, the chairman of the Finance and House Committee, the chairman of the Allied Societies' Conference, the chairman of the Registration Committee, and two non-London members of the Council.

The Executive Committee will meet at least fortnightly from the beginning of October to the end of July. It will receive on behalf of the Council the reports of all committees, except those of the Board of Architectural Education, deal with any matters in these reports that call for immediate action, and lay before the Council with or without comment the reports received from committees. It will have executive power to deal summarily with all matters of routine not affecting general policy or finance, and all business requiring urgent attention before the next meeting of the Council, and will report to the Council for ratification any action taken since the last Council meeting.

The Board of Architectural Education will be enlarged and made more widely representative, and will meet four times a year, and the large number of existing committees of the Board will be reconstituted as three committees—schools, examinations, and prizes and scholarships—with executive powers to deal with all routine matters, but making recommendations to the Board on all matters of principle or policy.

Members of the Council will retain their present power of bringing any matter directly before the Council by giving notice to the secretary.

The Executive Committee has been constituted forthwith as follows: the president, the hon. secretary, the chairman of the Art Standing Committee, the chairman of the Literature Standing Committee, the chairman of the Practice Standing Committee, the chairman of the Science Standing Committee, the chairman of the Finance and House Committee, the chairman of the Board of Architectural Education, the chairman of the Allied Societies' Conference, Mr. H. T. Buckland (Birmingham), Mr. Francis Jones (Manchester).

The Alleged Overcrowding of the Architectural Profession

AS briefly announced in our last issue, the report of the joint committee appointed by the Council of the R.I.B.A. to examine the question of the alleged overcrowding of the architectural profession has been approved by the Council. The committee was set up in 1924, under the chairmanship of Mr. Maurice E. Webb, F.R.I.B.A., and consisted of three representatives of the R.I.B.A., and three representatives of the Association of Architects, Surveyors, and Technical Assistants.

Following are the conclusions of the committee :

1. That there are to-day some 12,000* architects, including 1,300 pupils and students in England and Wales, as against 7,000 forty years ago. These figures are obtained from the census returns, and represent an increase of 70·65 per cent.

The population of England and Wales has increased from twenty-six millions to thirty-eight millions during the same period, representing an increase of 46·15 per cent.

In other words there is to-day one architect or potential architect to every 3,167 of population in England and Wales, compared with one to 3,714 forty years ago.

2. It appears, therefore, that the number of architects who describe themselves as such in the census returns has risen in a greater proportion than the population during the past forty years.

3. Approximately 400 would-be architects are now being trained in schools providing whole-time courses. So far as can be ascertained, there are 900 pupils or learners in offices, and of this number about 100 are taking part-time courses in a recognized school of architecture.

This means that there are about 1,300 youths to-day in training for the profession.

These figures do not include the comparatively large number of persons who enter the profession irregularly or accidentally by promotion from the office-boy or clerical grades.

4. If three and a half years be taken as the average period of training before wage-earning begins, it will be seen that some 400 young architects presumably enter the profession every year. Of this number 300 have been pupils and 100 have undergone whole-time training in the recognized schools.

5. If the average professional life of an architect be taken as thirty† years, it follows that sufficient men are being trained to maintain the total numerical strength of the profession at 12,000. This does not allow for wastage, which will probably account for the difference between this figure and that of the 10,700 architects who are earning a living to-day as professional men.

6. Admitting that these figures are incapable of absolute proof, the joint committee feel that at least as many men are entering the profession as the profession can at the present time absorb, and are of opinion that steps should be taken, not to limit the numbers entering the profession, but to warn the profession and the public of this fact, and to ensure that the training given to students wishing to become architects is thoroughly adequate.

7. From the evidence available, of which the salient parts have been quoted above, and from the evidence of those responsible for the keeping of employment registers, the committee believe that there is no overcrowding so far as the highly trained, competent man is concerned. But they believe also that there is a surplus of indifferently trained persons, especially amongst the junior grades.

8. Finally, we consider that the utmost importance attaches to the following points, which we believe should be widely circulated to the profession :

(A) Overcrowding not caused by the Schools.—The figures which we have examined prove beyond question that the recognized architectural schools are in no way contributing to the overcrowding of the profession. Owing to their lengthy courses and to the cost of maintaining a school student away from home, the tendency is, if anything, the other way. As an illustration of this opinion it may be mentioned that in the districts where the pupilage system still survives, namely, everywhere except in London and Liverpool, there are only some twenty-five whole-time students per annum who are passing through the schools. We therefore recommend :

(i) That the Board of Architectural Education be requested to get into touch with all unrecognized schools, art schools and polytechnics, with a view to the improvement of the architectural courses at such schools.

(ii) That letters be addressed to headmasters of all public and secondary schools, to the Association of Headmasters, and to all education authorities setting forth the method of entry into the architectural profession.

(B) Training and Maintenance.—Architects in practice should be reminded of the unfairness of taking a boy into an office in a junior capacity without making adequate arrangements for his education and training if he shows a bent for architecture.

In this connection the committee desire to record their wholehearted support of the present proposals of the Board of Architectural Education for the establishment of maintenance scholarships, which they consider will be invaluable as a means of encouraging the growth of whole-time training.

(C) Casualization of Employment.—There is a growing tendency to casualize employment in architects' offices. Assistants are engaged for special work for a few months only, and are then cast aside to swell the employment registers. We recommend that private practitioners should be urged to avoid short-term employment of assistants wherever possible, and to remember the evils in the building and other industries of which casual labour has been the cause.

(D) Interchange of Assistants.—It is suggested that by local co-operation more particularly between the allied societies and the branches of the A.A.S.T.A., some system of interchange of assistants between offices might relieve the present difficulties of casual labour.

We recommend that the allied societies be urged to elaborate some such system as this.

We also recommend that students, on termination of their pupilage, be recommended for and aided to obtain employment, if possible in some town where the student can obtain useful experience and further professional tuition in some good evening school.

(E) Temporary Official Staffs.—Government departments and municipal authorities are particularly prone to the engagement of temporary staffs, a practice from which many cases of extreme hardship have resulted and will result. For example, at the present time the War Office, the Admiralty, H.M. Office of Works, the Board of Trade, the Air Ministry, the Ministry of Transport, the Ministry of Health, and the Post Office employ 647 temporary and unestablished draughtsmen.

If the system cannot altogether be avoided, these authorities should be urged to alleviate the hardships which it entails.

(F) Education of Pupils and Assistants.—We recommend that all architects' assistants who have not passed the R.I.B.A. examinations should be urged to do so.

We also recommend that no articled pupils should be accepted in an architect's office under the age of seventeen years, and unless they possess qualifications of the standard required for probationership of the R.I.B.A. or for entrance to a recognized school of architecture.

We also suggest in this connection that the Board of Architectural Education should be invited to consider whether it is not possible to provide some kind of training syllabus for the use and guidance of architects who take in pupils. This suggestion applies particularly to districts where school education is not easily attainable.

(G) Indentures.—We recommend the Council of the R.I.B.A. to resist the practice of incorporating in indentures clauses restrictive of future practice within a certain prescribed area, and to encourage the use of the R.I.B.A. Form of Articles of Pupilage.

(H) Overcrowding in Scotland.—Owing to the difficulty of obtaining up-to-date statistics and other information, Scotland has not been included in the field covered by this report, which deals with England and Wales only.

We recommend that the Incorporation of Architects in Scotland be invited to initiate a similar inquiry into the question of overcrowding in Scotland.

* This figure does not include 647 temporary architectural draughtsmen in the Civil Service who were returned in the census as Civil Servants.

† This figure is somewhat conjectural, but the committee believe, in the absence of accurate information, which they made every effort to obtain, that it is a reasonable average.

Enquiries Answered

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

HEATING COLD WATER.

"Reader" writes: "A stove has been installed in a small cupboard in the scullery of a downstairs flat, behind which the main water pipe ascends to the flat above. When cooking operations are in progress downstairs hot water only can be drawn from the cold-water tap, and if cold water is absolutely necessary about two gallons of water has to be run off first. Will you kindly advise me who is responsible in this case; the landlord had the pipes fitted, and the Water Board supplies the water."

—If the cooking stove has been installed since the cold-water supply pipe, the liability (such as it is) naturally attaches to the person who installed it in such a position as to heat the water pipe; the Water Board has nothing to do with the matter. The question then arises as to whether the water supply is injuriously affected to a sufficient extent to give the sufferer a legal cause to call for amendment. This I should very much doubt, and I advise him to submit to the evils of which he knows rather than get into further woes by action against his neighbour—life in a flat, after all, is only possible by mutual forbearance.

F. S. I.

THE LAW ON PROVISIONAL SUMS.

"M. W. C." writes: "What is the law on, or the usual procedure in dealing with, 'provisional sums,' presuming that in a bill of quantities the following items occur: Provide for firegrates the P.C. sum of £100; add for profit if required beyond 2½ per cent. cash discount, £10; receive, unpack, and fix ten firegrates, providing all materials required, £30.

1. "If the building owner orders these articles direct from a dealer, pays for them direct, and has them delivered to the site, is the contractor entitled to claim the £10 profit, or should it, as well as the provisional amount, be deducted from the contract amount at final settlement?

2. "If the building owner decides to have no fires, and the provisional amount is deducted on final settlement, is the contractor entitled to claim the amount of profit he inserted in his schedule, or should it be also deducted?

3. "On what grounds generally does a contractor claim the right to add a 'profit' to each 'provisional sum' if he also charges separately for the work he does in receiving, unpacking, fixing, etc.?"

—The law which is applicable to the terms of a contract dealing with "provisional sums" must be decided upon reference to all the words of the contract. It is impossible to arrive at any decision without examining the bill of quantities and any documents annexed. But speaking generally and according to our own interpretation of what is meant by the preface to and clause (1) of your query, our view is that the contractor is not entitled to claim the £10 profit, but that it should be deducted from the contract amount at final settlement.

We take the same view with regard to the clause marked (2).

With regard to (3), the contractor claims profit according to any item provided by him under the terms of the written contract between himself and the building owners.

Our advice is that the matter be referred to the Surveyors' Institution, 12 Great George Street, S.W.1, with a full copy of the contract and any material correspondence, etc.

PRICE OF TOWN HALL.

"Reader" writes: "What is the present price (average) per foot cube for a town hall building of fireproof construction with no extravagant ornamentation?"

—One would require to have much more detail before computing a cube price for such a building with any degree of accuracy. Only approximate figures could be given without such information, and perhaps the enquirer might be referred to the article on Cube Estimates in this year's "Specification."

NOISE FROM MACHINERY.

"A." writes: "The owner of property adjoining another building complains, among other things, of the noise from machinery. Shafting is fixed to a wall adjoining the property, but the complainant's dwelling is not alongside the machinery, although it touches the wall much further along. Can you tell me by what tests the amount of the sound and vibration in the complainant's premises can be tested or registered? Has any ruling been given as to the degree of noise, etc., allowable?"

—I think this is purely a legal matter. So far as I understand the situation, the complainant has a remedy only if the machinery has been installed since he first owned or occupied his premises. If it were there before his occupation I think it is fairly certain that the Court would decide against him. A further point to be taken into consideration also is the type of neighbourhood. If other industries are carried on near by, or if the business has been established for a considerable time, I do not think that any action for nuisance could be upheld. As regards the technical aspect of the case, there is no legal definition of what is a permissible degree of noise, every case having to be judged upon its merits. For instance, the Court would be more likely to find in favour of the complainant in the case of a continuous noise than if it were only intermittent. The only legal standard by which the noise could be judged would be its effect on normal individuals, and not by any technical evidence as to the period or amplitude of the vibrations. As regards tests, it should not be difficult to fit on the wall a simple recording pendulum, fitted with a glass pen, which would record on a flat board mounted underneath the pendulum. It would be a rather tedious process, however, since some arrangement would have to be made for varying the length of the pendulum to suit the periodicity of the vibrations and a series of trials made to ascertain this. To record the sound would be a much more elaborate matter, necessitating the use of some form of microphone, but it might be possible to obtain a phonograph record. I do not, however, think such records would be of the slightest use in influencing the decision of the Court in the event of an action.

H. C. C.

STABILITY OF PIERS.

"W. J." writes: "Your expert's reply to my enquiry *re* stability of piers, published in your issue for May 20, agrees with my own conclusions. I should, however, like to have his opinion on the following points: (*a*) If the piers are built in cement mortar, can five tons per square foot be taken as the safe load? The piers are 13½ in. deep, 9 in. from the top of the pier is a horizontal offset 2¼ in. wide, and to this depth two vertical R. S. J.'s are bedded. (*b*) In view of the eccentricity of the load, should the safe loads be reduced, or, alternatively, the area of the pier calculated only for the part comprised with the area from the top of the pier to the top of the offset? (*c*) A good working rule for isolated brick piers is that the height should not exceed *six* times its least width; in this case $6 \times 1\frac{1}{2}$ ft. = 6 ft. 9 in., whereas its actual height is 8 ft. 1½ in. Is there not a greater liability to failure by buckling stress than by crushing stress? The brick courses are 3¼ in. high."

—(*a*) If the piers are built in cement mortar the safe load will be increased from 3 tons per square foot to 5 tons per square foot; (*b*) with a total of 14½, say 15 tons, and a safe load of 5 tons per square foot, the area of a symmetrically loaded pier should be 3 sq. ft., or, say, 2 ft. 3 in. by 1 ft. 4 in. If the pier is 3 ft. by 1⅛ ft., with a pilaster 2 ft. 3 in. by 9 in., the neutral axis will be ·875 ft. from outer face, and if the girder terminates 4½ in. inside the face, the centre of loading will be 3 in. from the neutral axis, giving a maximum compression of $\frac{W}{A} \pm \frac{M}{Z} = \frac{15}{5} \pm \frac{15 \times \cdot 25}{1 \cdot 423} = 5 \cdot 63$ tons sq. in. This shows that a large pier with an eccentric load is not so strong as a smaller pier with an axial load. If built in cement mortar it should be safe; (*c*) it is a good working rule that a brick pier should not exceed in height six times its least breadth, but in this case the pilaster will form part of the breadth. An eccentric load always causes a bending moment or tendency to buckle: the compression will always be greater on the side the load comes nearest, and in extreme cases there will be tension on the opposite side.

HENRY ADAMS.

Surveying, Levelling, and Contouring

WITH regard to the enquiry, published some time ago in the JOURNAL, on the best method of contouring a site, Mr. E. Douglas Selway, A.R.I.B.A., sends us the following notes on the use of the tachiometer. This method is not recommended for comparatively small plots, but it appears to the writer to be very suitable where a large estate is to be developed, and roads laid out. It is not in general use in England, but is largely used in the colonies by the railway engineer in location work, etc.

The instruments used are the ordinary levelling staff, one or more, and the tachiometer. The latter is a theodolite, and having stadia lines (or cross hairs), the following observations of any desired point can be made with it :—

1. Horizontal bearing, in relation to a given base line, or magnetic bearing.

2. Vertical bearing in relation to horizontal datum or height of instrument (line of collimation).

3. Distance of observed point from point of observation (instrument).

With regard to 2, this forms the basis of the "levelling." The readings 2 and 3 of the instrument are angular and lineal, and a fairly simple calculation reduces these to levels in feet, etc., above or below the height of the instrument. By means of a calculator the conversion can be made almost instantaneously.

If a survey of the land has already been made by other methods, that described can still be used for the levelling and contouring. If not, the operations will, at the same time, enable a complete survey of the whole topography to be carried out. If the method is to be used for the survey as well as levelling, it might in certain circumstances be advisable to check the more important base lines by chaining, at any rate, where, in the very exceptional circumstances, the triangulation by horizontal bearings could not be definitely established.

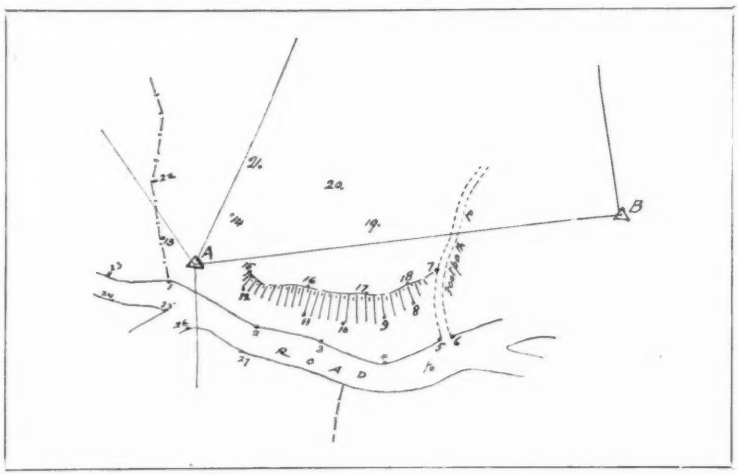
The survey commences in the usual way by fixing and staking stations to form the lines of triangulation, etc. We will assume that the method is not by magnetic bearings.

The instrument is first set up (plumbed and levelled) on station A, and adjusted to give a zero reading on the horizontal scale of an arrow (or rod) held on station B; A and B being our first two stations forming the junction of various lines of triangulation of our survey. The reading zero is noted in the column provided in the field book. If the height of the instrument is, say, 4·5 ft., a vertical reading on a levelling staff held at ground level at station B is next taken of 4·5 on the staff. This (angular) reading is noted in the next column.

The distance from the instrument to the staff held on B is next read off by the stadia, and similarly noted in the following column.

A plan of as much of the surrounding topography as appears suitable, and as can conveniently be observed near station A, may now be sketched on the page in the field book, opposite that on which the readings will be entered. The hedges, ditches, streams, roads, etc., should all be indicated in the usual way, as well as the positions of stations A and B.

Having taken the above readings of station B from A, the next proceeding is to carry on with similar readings of all points in the topography surrounding A, such as breaks and variations in the levels of the ground and changes in the directions or alignment of roads, fences, etc. The number and closeness to each other of the points observed depends largely upon the minuteness of detail with which the survey is to be carried out, and, of course, on the nature of the land. Such points as are observed are all numbered consecutively and marked with a dot and a number on the corresponding sketch plan, and the tabulated portion of field book



contains a column for noting down these numbers before the three respective readings of each are entered up.

The accompanying sketch shows a portion of an imaginary survey. From this it will be seen that observations (three in each case) from station A of points 1, 3, 4, 5, 6, 2, 13, will not only provide us with the necessary information for our survey about the line of the road, path, fence, etc., but we are also provided with the levels at these points. Nos. 15–18 and 7–12 give us the positions of a bank, and the levels at the top and the bottom of it, also all these positions are fixed in relation to line A–B; 19, 20, 21 may be spot levels in the meadow, where a change in undulation appears pronounced, and should be supplemented as necessary.

This process is then carried on from the next (B) and succeeding stations until the field work of the whole survey is completed. It is not necessary to dwell here on the check afforded on the triangulation by cross or back readings from various stations to others, etc., or, in particular cases, to outstanding features, as that will be obvious.

The next step is to reduce the levels by quite ordinary methods to a suitable datum. This is done by converting the "verticle angle x distance" readings as before mentioned, and the process then becomes the ordinary one of "rise," "fall," and "reduced level."

The final step is to plot out the survey in the drawing office.

Law Reports

The Crown and Its Rights—Compensation Claim

Spranger and Others v. *H.M. Commissioners of Works.*

Court of Appeal. Before Lords Justices Bankes, Scrutton, and Atkin.

This appeal raised a point under an award by the War Compensation Court. Springhill Court, Southampton, was commandeered by the Crown during the war, and they paid a rental of £750 a year. It was not restored to the owners, the appellants, till November, 1922, when, they said, the day for its sale at a good figure had passed, and that instead of the property realizing some £20,000, as it would have done at the end of the war, they could only obtain for it £13,600.

Mr. Hawke, K.C., for the appellants, said if it had not been for the uncertainty of the Government's occupation the house would have realized a good price. By their judgment the Compensation Court said that the house was requisitioned in January, 1918, by the War Office. In March, 1919, it was transferred to the Ministry of Pensions. The occupation continued until November, 1922, when the house was restored to the appellants. Compensation was paid for the use and occupation, and Col. Spranger asked for the difference between the value of the house at the date of requisition and the value in May, when it was eventually sold by private contract for £13,600. The Court held that the claimants were not entitled to further compensation as they had failed to satisfy the Court that as a matter of fact they would have sold the premises if the Government had not occupied them. The Court were not satisfied that if they had had possession they could have sold for £17,000 or at any intermediate less price. From November, 1922, to March, 1923, no attempt was made to sell the house. The Court added that, even if Col. Spranger satisfied them that he would have sold and was prevented from doing so by not being able to give vacant possession, the Court remained of the opinion that the appellants were not entitled to any further compensation than that they had already received, and that the compensation they had already received exhausted their legal rights under the Indemnity Act of 1920. Counsel contended that the Compensation Court had taken a wrong view of the matter, and that the appellants were entitled to the difference between what they could have sold at and the price realized at a later date.

The Court held that no question of law was raised, and dismissed the appeal.

Lord Justice Bankes observed that there was a wide margin between an intention to sell and the realization of the intention. Although the court below was satisfied that the Colonel was anxious to sell, it also found that there was not a definite offer by a prospective buyer at any greater sum than that ultimately obtained.

Alleged Building Encroachment

McGrath v. *T. Wale and Sons, Ltd.*

Chancery Division. Before Mr. Justice Romer.

Plaintiff, who resides at High Street, Upper Mitcham, asked the Court for an injunction to restrain the defendants from erecting any building so as to encroach upon the northern boundary of his property, and he further sought a mandatory order on defendants to remove so much of the wall as they had erected.

Mr. Farwell, K.C., appeared for the plaintiff, and Mr. Hughes, K.C., for the defendants.

Mr. Farwell said plaintiff's land had a frontage on the High Street of 47 ft. 4 in., and was separated from the High Street by a fence at the northern end with double gates giving access thereto. The defendants were the occupiers of a plot of land abutting on a part of the northern side of the plaintiff's land, and it was complained that they had built a 9-in. wall some 88 ft. long almost wholly on the plaintiff's property, and at one point encroaching to the extent of 2 ft. 6 in. The plaintiff used his land for amusement purposes, and as it was rather narrow it was of great importance to him that he should retain it in full.

For the plaintiff, Mr. E. W. Banfield, architect, of Mortimer Street, Regent Street; Mr. B. L. A. Breach, of Messrs. Farebrother, Ellis & Co., of Fleet Street; and Mr. C. W. Willoughby, of Chancery Lane, were called, and gave the opinion that the foundations of the defendants' walls rested on the plaintiff's land.

Mr. Hughes said his client denied any encroachment, but if there had been, it was so trivial that the Court would not interfere.

Mr. R. M. Chart, J.P., and Mr. Reading, of Messrs. Chart, Sons, and Reading, architects, of Mitcham, and Mr. F. J. Morgan, architect, gave evidence that from the plan of the enfranchisement deed there had been no encroachment.

His lordship found in favour of the plaintiff, but did not make a mandatory order to pull down, ordering an inquiry as to damages. His lordship said it was clear from the position of the tree stumps that there had been an encroachment to some extent, reaching 2 ft. 4½ in. at one point: although it was all extremely difficult and debatable, as the evidence was not clear enough for him to decide how far the boundary fence was from the trees when the latter were first planted. As the defendants thought their line was the true boundary, and had commenced work before any complaint was made, he would not make a mandatory order to pull down, but would direct an inquiry as to damages, which must not exceed the cost the plaintiff would have incurred in removing the encroaching part of the wall or exceed the value of the land encroached upon. Costs were reserved.

Dedication by Invitation

Pickering v. *Derham.*

King's Bench Division. Before the Lord Chief Justice and Justices Avory and Shearman.

This was an appeal by Mr. Pickering, a chemist, of Rothsay Road, Blackpool, by way of case stated, against a decision of the Blackpool justices, imposing a fine of 6s. for an alleged offence against the Blackpool Improvement Act, 1893.

It appeared that the Act made it an offence for the owner of property to fix a sign in front of a building, which sign projected into the front of the street more than 2 ft. from the inner wall, without consent of the local authority. It was not contended that the sign did not hang out over the 2 ft., but the question was whether it projected over the street, seeing that in the front of the shop was a forecourt owned by Mr. Pickering, and which he allowed the public to use when approaching his shop and windows. It was argued that the justices had no evidence on which to find that the forecourt was part of the street. Before they could convict, it was contended, they must find that the forecourt had been dedicated to the public.

The Lord Chief Justice said the Court came to the conclusion that the appeal must be dismissed with costs. The only question for the Court was whether there had been a dedication of the forecourt to the public. It was asphalted and quite open, and in the opinion of the Court the justices had evidence on which they could hold that the chemist, in asking the public to use the court without let or hindrance, had dedicated it to the public, and in this way it had become part of the public highway.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

In the House of Lords, Lord Gale, replying for the Government to a question by the Bishop of Southwark on housing progress, said that the Government intended to continue to base their housing policy on the Housing Acts of 1923 and 1924. The full effect of those Acts had not yet been properly felt. Up to the present they were working fairly satisfactorily. Under the three principal Housing Acts 307,689 houses had been built, and there were under construction 183,023 houses. In addition, there were a number of houses of a working-class character which had been erected privately, without State assistance, in regard to which statistics were not yet complete. He was, however, safe in saying that since the war over 500,000 houses had been built. Schemes for dealing with slum areas were in process of completion throughout the country, sixteen of which were in London. For the last twelve months to March 31—a record year in regard to housing—136,889 houses were completed, about half with State assistance, and half without, and of that total 117,817 were classed as working-class houses. New houses were being completed at the rate of 7,000 a month. There was no reason to suppose that the supply of materials would be interrupted, and the Govern-

ment were convinced that by certain new methods they could give satisfactory accommodation. Special financial arrangements had been made for the erection of four different new types of houses in four different parts of the country. The Government were fully alive to the detrimental effects and the hardships that resulted from the shortage of houses, and they were resolved to continue to press forward under the Acts of 1923 and 1924.

In the Commons Mr. N. Chamberlain informed Mr. H. Williams that during the six months ended March 31, 1925, 41,836 houses were completed with the aid of a subsidy, and 34,785 without; a total of 76,621. During the same period in the preceding year 10,626 houses were completed with the aid of a subsidy, and 38,597 without; a total of 49,223.

Mr. N. Chamberlain informed Mr. T. Thomson that from the armistice to July 1 last, 307,689 houses had been completed in connection with State-assisted schemes under the Housing Acts. Complete statistics were not available as to the number of houses built by private enterprise without assistance by way of subsidy, but during the two and a half years to March 31 last, for which figures were available, it was estimated that the number of houses so built was 160,566. Of these, 117,587 had a rateable value not exceeding £26 in the provinces, and £35 in London. It might, therefore, be taken that not less than 425,000 houses of this type had been erected since the armistice.

Lieutenant-Colonel Horlick asked the Minister of Health what loan period was allowed for the Weir, Atholl, Wild, Telford, Nissen, Burney, and Dorman Long houses respectively; and what distinction in this respect was made between brick houses and other forms of alternative construction that were reported to be equally durable and permanent?

Mr. N. Chamberlain said that the period allowed for repayment of loans for houses was based on what he was advised was the reasonable expectation of useful life of the houses. In the case of houses of the Weir, Atholl, Telford, and Nissen types he was allowing a period of forty years. In the case of houses of the Wild type, which were mainly constructed of the normal building materials, he was allowing sixty years. In regard to the two other types referred to, the loan period had not yet been fixed.

Sir W. Davison asked whether the Epstein bas-relief which had been erected in the bird sanctuary in Hyde Park was now the property of the nation, by whom was the gift made, and by whom was it accepted on behalf of the nation?

Mr. Locker-Lampson, for the First Commissioner of Works, said that the bas-relief was erected by a committee formed to commemorate the work of the late Mr. W. H. Hudson. It was now the property of the nation in the sense that the First Commissioner had, with the assent of the Treasury, undertaken that his department should be responsible for its future care and maintenance.

Asked by Sir Martin Conway whether he was aware that Warwick Priory, a fine Elizabethan house, with a later wing in the English Renaissance manner, was threatened with early demolition; and whether the Ancient Monuments Department of His Majesty's Office of Works was putting the Ancient Monuments Act, 1913, into action with a view to preventing the loss of this building, Mr. Locker-Lampson said that the First Commissioner was aware that this building was threatened but he very much regretted that, for financial reasons, he was unable to intervene under the Act. The First Commissioner was acutely conscious of the loss which the district would suffer by the destruction of this fine old mansion. He very much hoped that a local effort would be made to save it, and had appealed to the Mayor of Warwick to use his influence to this end.

Sir K. Wood informed Sir G. Wheler that under the 1923 Act 89,427 houses had been completed up to July 1 last, 42,807 were in course of construction, 31,186 had been definitely arranged for but not commenced, and 51,153 had been authorized but no arrangements made. Under the Act of 1924 at the same date 6,282 houses had been completed, 19,423 were under construction, and a further 24,027 had been definitely arranged for. There was no doubt that the process of housing generally would be expedited if more skilled labour were available.

Sir K. Wood informed Captain Fraser that the numbers of houses completed each year since 1919 in connection with State-assisted schemes under the Housing Acts, were: 1919, 100; 1920, 15,711; 1921, 86,669; 1922, 89,001; 1923, 19,185; 1924, 52,730; 1925 (up to June 30), 44,293; total, 307,689. In addition, 160,566 houses had been built by private enterprise without Government assistance in the period September 30, 1922, to March 31, 1925. The total number of houses authorized under the various Acts was 499,464. Under the Acts of 1923 and 1924 the number of houses authorized to be built were 218,769 and 66,969 respectively.

During the passage of the Roads Improvement Bill through Committee in the House of Lords an amendment was agreed to, including among the subjects for which grants may be made out of the Road Fund to highway authorities the prescription of building lines for purposes of subsequent road widening. Safeguards were inserted in clause 4, which imposes restrictions as to fences at dangerous corners to prevent the demolition of walls forming part of an ancient monument or other object of archæological interest. The Government intended to introduce shortly a Bill dealing with building lines, said Viscount Peel, during the debate.

In written answers to questions by Mr. Trevelyan Thomson, Mr. Neville Chamberlain stated that, on July 1, 62,230 houses were under construction in connection with schemes under the Housing Acts of 1923 and 1924. In addition contracts had been let or definite arrangements made for the erection of 5,213, and a further 65,590 had been authorized but not definitely arranged for. From figures taken from Inland Revenue returns as to inhabited house duty, it appeared that the average annual increase in the number of houses exempt from such duty by reason of being less than £20 annual value was 70,051 in the decennial period 1895–1904, and 62,859 in the succeeding decade.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to June 30:

	Completed.	Under Construction.
1919 Act	.. 24,672	824
Private Subsidy Schemes	.. 2,324	—
Slum Clearance Schemes	.. 1,502	2,627
1923 Act	.. 3,047	6,440
1924 Act	.. 157	1,493
Total ..	.. 31,702	11,384

Of the total number of houses completed and under construction under the 1923 Act, 2,951 are by the local authorities, and 6,536 by private enterprise.

Two New Housing Orders

The Minister of Health has issued two new statutory rules and orders with regard to housing in England. One of them, No. 638, concerns the Housing Act (Appeal Procedure) Rules, 1925, dated July 8, 1925, made by the Minister with reference to procedure on appeals under section 115 of the Housing Act, 1925 (15 Geo. 5, C. 14), and the other, 637, the Housing Act (Forms of Orders and Notices) Order, 1925, dated July 9, 1925, made by the Minister under section 122 of the Housing Act, 1925 (15 Geo. 5, C. 14), prescribing forms of certain notices and other documents. Copies of the rules and orders can be obtained from H.M. Stationery Office. No. 638 is published at 1d. net, and No. 637 at 7d. net.

Obituary

Mr. E. C. Bull.

We regret to record the death of Mr. Edward Charles Bull, at Southampton, in his eighty-fifth year. He was partner in the firm of Joseph Bull and Sons, of Southampton, who were the contractors for the building of the Law Courts in the Strand. The new courts were opened by Queen Victoria in state on December 4, 1882, and Mr. Bull and his brother, Mr. Henry Bull, then had the honour of being presented to her Majesty. The same firm built the new Houses of Parliament at Cape Town, and Mr. Edward Bull visited the Cape in connection with that work. He leaves two sons and a daughter.

Mr. Rowland Lloyd Jones.

We regret to record the death of Mr. Rowland Lloyd Jones while on holiday at Carlisle. For twenty-two years he was architect to the Carnarvonshire Education Committee. Sixty-six years of age, Mr. Jones was one of the best-known members of his profession in North Wales, and at one time carried on an extensive private practice, and as county architect he was responsible for all the schools in the county.

R.I.B.A. Council Meeting

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

Overcrowding of the Architectural Profession.—The Council approved and ordered the publication of the report of the joint committee of the R.I.B.A. and the Association of Architects, Surveyors, and Technical Assistants on the subject of the alleged overcrowding of the architectural profession.

Improvement of the R.I.B.A. Organization.—The Council approved a scheme for improving the work of the Council and committees of the R.I.B.A., which involved the creation of an Executive Committee and the holding of monthly instead of fortnightly meetings of the Council.

R.I.B.A. Soirée.—It was decided that the occasion of the completion of the amalgamation of the Society of Architects with the R.I.B.A. should be marked by a soirée to be held in the R.I.B.A. Galleries in the coming autumn.

British Architects' Conference, 1925.—A cordial vote of thanks and appreciation was passed in favour of the Northern Architectural Association for having organized and carried out the arrangements for the conference with such conspicuous success.

The University College of the South-West of England.—Mr. J. Leighton Fouracre, F.R.I.B.A., was appointed to represent the R.I.B.A. as a member of the Court of Governors of the University College of the South-West of England for the three years beginning August 1, 1925.

The Institution of Public Lighting Engineers.—Mr. W. Alban Jones, president of the Leeds and West Yorkshire Architectural Society was appointed as the representative of the R.I.B.A. at the second annual meeting and conference to be held at Leeds on September 14, 15, and 16, 1925.

The Ministry of Health Report

The sixth annual report of the Ministry of Health, just issued, states that the net total of the estimate of the department for the year 1925–26 is £19,525,977, that is £22,206 more than that for the year 1924–25. On March 31, 1925, approval had been granted to schemes for the erection of 239,354 houses under the Acts of 1923 and 1924. Of these houses 99,620 were to be provided by local authorities themselves, 132,464 by private enterprise, and 7,270 by public utility societies, etc.; 72,907 of these houses had been completed, and 54,131 were under construction at the date mentioned. At the same date 211,614 houses had been completed under the Housing Acts of 1919, making a total of 284,521 houses erected with State assistance since the war. The average cost in March, 1925, of houses erected by local authorities under the Acts was £439 for a non-parlour house, and £489 for a parlour house, increases of £23 and £30 respectively over the average cost in March, 1924.

The amounts paid in subsidies for the year were £7,863,846 under the 1919 Acts, and £97,875 under the 1923 and 1924 Acts. Approximately 135,000 houses were erected during the year with and without State assistance, and the report states that a rate of construction appears now to have been reached which provides not merely for the normal increase in population, but also in some degree for overtaking arrears.

A notable increase has occurred during the year in the amount of loans sanctioned by the department to local authorities for the purchase of houses or for advances to builders. The amount sanctioned was £7,349,726, nearly double the amount for the whole period from the passing of the Small Dwellings Acquisition Act, 1899, to the beginning of the year under review. In addition, the London County Council sanctioned loans to metropolitan borough councils amounting to £116,830, and themselves made advances amounting to £163,530. It is stated that the amount of house building by private enterprise without financial assistance shows a considerable increase. Loans were sanctioned during the year under the Small Dwellings Acquisition Act amounting to £4,658,367; and under section 5 of the Housing, etc., Act, 1923, to £2,691,359, or a total of £7,349,726.

With reference to unhealthy areas, the report states that between 1919 and March, 31, 1925, sixty-six local authorities had submitted eighty-two schemes for the improvement of insanitary areas. Of these schemes forty-three, involving the demolition of 5,323 houses and other buildings, had been confirmed, on March 31, 1924, and twenty-seven schemes, involving the demolition of 3,750 houses and other buildings, were confirmed during the year. A growing interest in town planning is recorded, and it is stated that the number of local authorities which have embarked upon the preparation of town-planning schemes, and the acreage of land subject to town-planning powers, has much increased during the year. There is an appeal to authorities to proceed more quickly with the formulation and submission of their plans, and emphasis is laid on the importance of co-ordination between neighbouring authorities.

The department sanctioned the borrowing by local authorities in England and Wales during the year of sums amounting to £27,287,801 for public works, exclusive of Poor Law and housing works, and loans for providing temporarily for current expenses. Of this total £7,156,067 was for works certified to have been undertaken for the provision of employment for unemployed persons.

Waterloo Bridge

In a report to the L.C.C., the Improvements Committee state that they are considering the report of the conference of societies urging the preservation of Waterloo Bridge, but are not yet in a position to submit a comprehensive report on the subject. It would assist them in their deliberations if they had the opinion of an architect of eminence on a certain point. They recommend: "That the Improvements Committee be authorized to obtain the opinion of an architect of eminence as to the possibility from an artistic point of view of providing for four lines of vehicular traffic across Waterloo Bridge, while securing the necessary facilities for foot passengers, without alteration of the dimensions of the existing piers." The Highways Committee also report on the same subject. The Waterloo temporary bridge, they say, will be completed shortly and opened for public traffic. The cost of cleansing and watering the bridge is estimated at £460 a year, and that of the lighting of the bridge at £350 a year.

Mr. C. A. G. Manning, at the last meeting of the Council, moved as an amendment that the committee be instructed to report forthwith what action they had taken to carry out the resolution of the Council with regard to replacing Waterloo Bridge, or, alternatively, were they now of opinion that it was possible to retain the bridge with due regard to the safety of the public? The buttresses could not keep up the bridge for ever, and at the last meeting of the committee it was reported to them that, in spite of the buttressing-up of the bridge it was beginning to go over still farther. The majority of the committee were satisfied that it was not possible to preserve Waterloo Bridge, and he felt they would be doing themselves a disservice and a disservice to the people who wrote to them, and who were waiting for a decision, and likewise a disservice to London, by hanging up the matter of a decision in the way now proposed. They had been advised that if they made attempts to underpin the bridge, or to do anything but to remove it, those methods of dealing with it would be highly dangerous. There was a possibility—and no one knew how big that possibility was—that if anything was done Waterloo Bridge might fall into the river. The collapse of Waterloo Bridge would mean the flooding of a considerable area of South-East London. It was only playing with the matter to say they wanted to go to an architect to see if they could by some scheme preserve the artistic merits of the bridge.

Mr. G. Belt seconded the amendment. He said it was not necessary to persist in the camouflage of the artistic and æsthetic merits of Waterloo Bridge. It was necessary, though, and it was essentially desirable also, that there should be a new Waterloo Bridge capable of carrying six lines of traffic, with a double set of tram-lines.

Mr. R. C. Norman referred to the report of the conference of societies which had urged the preservation of Waterloo Bridge, and said that one of its outstanding features was the great divergence of technical engineering opinion on the question of whether the bridge could be retained. He could not believe that the engineering profession was incapable of providing a technical answer to the question, which, if it did not command anything like universal assent, would at least command that of the Council on the one hand and of the societies on the other. They had reason to believe that structurally the bridge could take four lines of traffic. London Bridge, another of Rennie's famous bridges, was treated in exactly the same way, and if that was possible with London Bridge, presumably it was possible for Waterloo Bridge. But it was very little use making that alteration if, at the same time, it was to take away all the artistic value of the old structure. That was the point they wanted to determine.

The amendment was defeated, and the recommendation of the committee was carried.

Justinian weds Theodora. *W. Walcot.*

List of Competitions Open

Date of Delivery.	COMPETITION.
August 10	Designs are invited from architects practising in Coventry for a new ward of the pavilion type. The designs will be adjudged by an architect approved by the Secretary of the Coventry Society of Architects. Apply, Miss Hooper, Secretary, Coventry and Warwickshire Hospital.
Sept. 1	High bridge over Copenhagen Harbour. Three prizes to the value of Kroner 35,000. Apply City Engineer's Office, Town Hall, Copenhagen. Deposit of Kroner 100 (returnable).
Sept. 5	Proposed new out-patient and casualty department for the Board of Management of the Wolverhampton and Staffordshire Hospital. Assessor, Mr. T. R. Milburn, F.R.I.B.A. Premiums, £200, £150, and £100. Apply, with deposit of £1 1s., to Mr. W. H. Harper, House Governor and Secretary, Wolverhampton and Staffordshire Hospital.
Oct. 1	The Municipality of Drammen, in Norway, invites Norwegian and foreign architects and engineers to compete for the construction of a new bridge across the river of Drammen (Drammenselven) between the two neighbourhoods Bragernæs and Strömsö. Judging Committee: Professor Otto Linton, Stockholm, appointed by the Norwegian Engineers' Association; Mr. Arne Eide, architect, Oslo, appointed by the Norwegian Architects' Association; Mr. M. E. N. Saxegaard, district-chief, appointed by the Norwegian State Railways; Mr. Olaf Stang, engineer-in-chief, Oslo; Mr. U. Lied, chief physician, chairman, appointed by the Municipality of Drammen; Mr. Otto K. Römcke, wholesale merchant, Drammen; and Mr. A. Heitmann Arntsen, secretary, Drammen. Mr. Lied and Mr. Saxegaard are respectively president and vice-president of the committee. The following prizes are offered for the best designs: First prize, 10,000 Norwegian crowns; second prize, 8,000 Norwegian crowns; third prize, 6,000 Norwegian crowns. Apply Bureau of the Government Engineer (Statsingeniörkontoret) at Drammen. Deposit 40 Norwegian crowns.
Oct. 8	Proposed Fire and Police Station at Marlborough Crescent, Newcastle-upon-Tyne. Premiums: £500, £300, and £100. Assessor, Mr. Percy S. Worthington, D.Litt., M.A., F.R.I.B.A Apply, with deposit of £2 2s., to Mr. A. M. Oliver, Town Clerk, Town Hall, Newcastle-upon-Tyne, by July 4.
Dec. 31	The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.
June 30, 1926.	Competitive designs are invited by the Ministry of Wakfs for the rebuilding of the Mosque of Amrou. Prizes of £2,500, £1,000, and £500 are offered for approved projects. Those wishing to submit designs should apply before June 30, 1926, to H.E. the Under-Secretary of State to the Ministry of Wakfs, Cairo (cables "Wakfs Cairo"), who will forward details, conditions, etc. The final date for acceptance of proposals is January 1, 1927.
No Date.	H.M. Senior Trade Commissioner at Johannesburg has forwarded a copy of minutes received from the clerk to the Municipal Council of Pretoria concerning the erection of a new Town Hall in that city. It is stated in the minutes that competitive designs will be invited at a cost (first estimate) of about £200,000. British firms interested in this announcement can consult the minutes referred to on application to the Department of Overseas Trade, 35 Old Queen Street, London, S.W.1.
No Date	A new secondary school for girls on the Thames House site for the Worcester City Council, at an estimated cost of £32,000. The competition is limited to local architects. Premiums, fifty guineas and twenty-five guineas.

Competition News

Coventry and Warwickshire Hospital Proposed New Ward Block.

The following notice has been issued by the R.I.B.A.: "Members of the R.I.B.A. must not take part in the above competition, because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions."

Societies and Institutions

The Architects' and Surveyors' Approved Society.

On receipt from the Ministry of Health of a very satisfactory report on the valuation of the assets of the Architects' and Surveyors' Approved Society, the Committee of Management have framed a new scheme of "Additional Benefits." This scheme was adopted at a general meeting, and is retrospective from July 6. It comprises the following additional benefits over and above those specified in the National Health Insurance Acts: Sickness benefit increased by 7s. to a maximum of 22s. per week; disablement benefit increased by 3s. 6d. to a maximum of 11s. per week; maternity benefit by 14s. to a maximum of 54s.

The following amounts were also earmarked for grants to members requiring the undermentioned benefits: Dental treatment, £1,650; members in distress, £250; convalescent treatment, £1,000; treatment in hospitals or nursing homes, £750; provision of surgical appliances, £250; optical treatment and provision of glasses, £1,000; provision of nurses during serious illness of members, £270. As the rates of contributions payable by members have not been increased, the scope of the benefits now offered by this society should be well worth the consideration of the younger members of the profession who come within the scope of the National Health Insurance.

Membership Reorganization.

For some time past the Association has had under consideration the question of widening the scope and influence of its work, and we are now informed that the main committee has decided to enlarge the membership, so as to enlist the active support and participation of all the great industries of the country. This will bring the main committee more closely in touch with industry, as the members are to be given direct representation on the committee. The new membership is to include professional engineers, industrial firms, and business men connected with all the great industries of the country, who are invited to become members of the B.E.S.A. at a minimum annual subscription of two guineas. Technical and trade organizations connected with the work of the B.E.S.A., as well as public utility undertakings, are also eligible. The members of the technical committees who give their time and experience to this national work without fee or recompense, and who now number some 2,300, are in the future to be known as honorary members. All members will be entitled to certain privileges, including direct representation on the main committee through a duly elected Advisory Council, as well as being able to apply to the organization for advice on any matters of simplification or standardization as carried on in this country and in the other large producing countries. Present contributors are being invited to become members without additional fee, at the same time they are being asked to maintain their present contributions. It is, moreover, hoped, in view of the importance of the work the Association is carrying out for the industries of the country, that H.M. Government will eventually agree to support this national movement to a greater extent than is the case at present.

Soane Medallion and Tite Prize

As the result of the preliminary competitions for the Soane Medallion and the Tite Prize, the following have been selected to take part in the final competitions:

The Soane Medallion.

Miss E. Scott, School of Architecture, Architectural Association.
Mr. W. Percik, School of Architecture, Architectural Association.
Miss A. M. Hargroves, School of Architecture, London University.
Mr. S. Lloyd-Thomson, London University Architectural Atelier.
Mr. A. D. Connell, London University Architectural Atelier.
Mr. T. Theo. Wills, School of Architecture, Liverpool University.
Mr. H. L. Barton, School of Architecture, Liverpool University.
Mr. Leslie R. Hiscock, School of Architecture, Architectural Association.

The Tite Prize.

Mr. K. E. F. Gardiner, School of Architecture, Architectural Association.
Miss L. F. M. Payne, School of Architecture, London University.
Mr. Robert G. Heal, School of Architecture, Liverpool University.
Mr. E. F. Davies, School of Architecture, Liverpool University.
Mr. A. Calvaley Cotton, School of Architecture, Liverpool University.
Miss E. B. Alexander, School of Architecture, Manchester University.
Mr. G. Alan Burnett, School of Architecture, Leeds School of Art.
Mr. F. Chippindale, School of Architecture, Leeds School of Art.
Mr. T. Murray Ashford, School of Architecture, Birmingham.
Mr. D. G. Walton, School of Architecture, Birmingham.
Mr. S. H. Smith, Northern Polytechnic Institute.
Miss M. Harvey, Northern Polytechnic Institute.
Mr. I. Schultz, Northern Polytechnic Institute.
Mr. V. Banks.

The Week's News

The French Prix de Rome in Architecture.

M. Alfred Audoul has been awarded the French Prix de Rome for architecture.

New Elementary School for Hornsey.

A new public elementary school to be erected in Hornsey, at an estimated cost of £56,500, will include a swimming bath.

Lurgan and Housing.

The Lurgan Town Council have decided to raise a loan of £10,000 for the building of houses.

Housing at Brentford.

A firm of builders is to erect 400 houses at Gunnersbury, and the Brentford Urban District Council have promised to render all possible assistance.

Lambeth Building Loan.

The Lambeth Borough Council have received sanction to a loan not exceeding £160,862 for the erection of 188 houses and thirty-two flats on the Bloomfield estate.

A New School for Haydock.

A proposal to erect a new school at Haydock, to accommodate 250 children, is to come before the Lancashire County Council shortly.

Housing at Newton Abbot.

The Newton Abbot Urban District Council have received the sanction of the Ministry of Health to the erection of 200 houses.

One hundred more Houses for Rugby.

The Rugby Urban District Council have decided to erect 100 houses on the Eastlands Estate, provided the sanction of the Ministry of Health can be obtained. The total cost is estimated at £68,116.

Housing at Croydon.

The Croydon Corporation have formulated a scheme for erecting 152 houses by direct labour, but the Ministry of Health suggests building by instalments in order to prevent the diversion of labour from other housing schemes.

Newcastle Cathedral.

Canon Newsom, vicar of the cathedral church of Newcastle, reports that an anonymous donor of £5,000 has very generously decided to bear the whole cost of the new cathedral buildings, which will be proceeded with as quickly as possible.

New Cardiff Houses.

At the last meeting of the Cardiff Public Works Committee a lay-out plan for the first 500 houses of a scheme of 1,000 houses at Splott Park, submitted by Mr. Gordon Griffiths, architect, Whitchurch, was approved.

The Deanery of Châlon-sur-Saône.

Mr. Frank Jay Gould has restored from its ruined condition and presented to the town the tower of the deanery at Châlons-sur-Saône, which is considered one of the finest existing specimens of fifteenth-century architecture in France.

More Edinburgh Houses.

At Edinburgh Dean of Guild Court a warrant was granted to Edinburgh Corporation for the erection of 264 houses at Gorgie. Of that total about 130 will be with three apartments and constructed in blocks of twelve, 66 with three apartments in blocks of six, and 66 with two apartments in blocks of six.

The Fitzwilliam Museum.

More quickly than had been expected, it will be possible to proceed with the desired extensions to the Fitzwilliam Museum, Cambridge. Out of the £100,000 required for the scheme, no less than £55,000 has been received, in donations of £30,000, £20,000, and £5,000.

Proposed New Park for Bristol.

Blaise Castle estate, near Bristol, formerly the home of the Harford family, has been offered for sale to Bristol Corporation for the purposes of a public park. The estate comprises the residence (the castle), a Roman camp, and extensive woodland, a total area of 167 acres.

The West of England Health and Housing Exhibition.

The West of England Health and Housing Exhibition will be held in the Drill Hall, Old Market Street, Bristol, from September 21–26. The exhibition has the support of certain influential bodies and associations connected with health and housing. The address of the organizing secretary is St. Stephen's Rooms, Tontine Buildings, Bristol.

Keats's Cottage to be Demolished.

Keats's cottage in Church Street, Edmonton, where the poet worked as an apprentice to a chemist, is to be demolished in connection with a road-widening scheme. It was proposed that the cottage should be re-erected elsewhere and preserved as a museum, but the local Council found that the material would not withstand pulling down and re-erecting.

Proposed Housing Scheme for Devil's Dyke.

Plans are being prepared for the erection of more than 300 houses of the week-end type at Devil's Dyke, Brighton's famous beauty spot. Although the Dyke has been open to the public for many years it is private property, and the owners, a firm of London contractors, consider that the time is ripe for its development.

Sargent Picture for Victoria and Albert Museum.

A water-colour drawing of "Santa Maria della Salute, Venice," by the late John Singer Sargent, R.A., was generously presented, before the recent sale at Christie's, to the Victoria and Albert Museum by the artist's sisters, Mrs. Ormond and Miss Sargent, in memory of their brother. This drawing which was specially selected as a gift to the nation has been placed on exhibition in the central hall of the museum.

Wandsworth Housing.

The Wandsworth Borough Council have agreed to erect a further 209 non-parlour type houses. These 209 houses will practically complete the development of the four estates—Magdalen Park, Elmwood House, Furzedown, and Southfields—originally acquired under the assisted housing scheme of 1919. The number of houses already erected is 760, and eighty are in course of erection.

Vatican Buys Asylum.

The Vatican have bought for about £307,690 the old Roman lunatic asylum on the slopes of the Janiculum Hill. The Vatican will erect there a new building for the Congregation de Propaganda Fide, now in the Piazza di Spagna, in the heart of the city. Part of the land will be resold to the American College, which will build a new seat there. The new grounds of the Congregation de Propaganda Fide will be joined to the Vatican by a bridge over a street.

550 Flats for Liverpool.

The Liverpool Housing Committee have approved plans for blocks of working-class flats at the north and south ends of the city. The sites are a disused timber yard measuring about 3¾ acres in Melrose Road, Kirkdale, and land in South Hill Road, Dingle, now occupied by old mansions and gardens, and comprising about 2¼ acres. The buildings will have eight or ten stories, and are intended to afford accommodation to families to be dispossessed of their present houses in insanitary areas. The Melrose Road buildings will consist of 350 dwellings, and those in South Hill Road of 200 dwellings.

Big Slum Clearance Scheme for Stockton.

A scheme involving an expenditure of £111,000 for the clearing of an unhealthy area known as the Housewife Lane district was the subject of an inquiry conducted at Stockton by Mr. W. H. Collin, inspector for the Ministry of Health. The total number of new houses to be provided apart from lodging-house accommodation is 164. The Council have made arrangements, subject to the consent of the Ministry, for the purchase of 9½ acres of land upon the Mount Pleasant estate at Norton, upon which it is proposed to erect some 154 of the houses, and the balance on the Corporation's Blue Hall estate.

Housing in the Rotherham Rural District.

The Rotherham Rural District Council have resolved to put in hand immediately the erection of houses in the following parishes: Aston-cum-Aughton, 30; Brinsworth, 58; Catcliffe,

24; Laughton, 20; Treeton, 30; Wickersley, 24; Ravenfield, 30. This is the first instalment under the two years' programme. The Council have decided to submit a scheme to the Ministry asking for sanction to build as a first instalment fifty houses at Thrybergh and fifty houses at Thurcroft. After discussion it was resolved that any future houses shall be erected under the 1924 Act, instead of the 1893 Act.

A New Hydraulic Gypsum Cement

A syndicate has been formed to establish the manufacture in all useful countries of the new hydraulic gypsum cement produced by Mr. Frank Mulligan, a Belfast inventor, in collaboration with Mr. Robert Robertson, of Glasgow. At present the cement is manufactured only in the British Isles. Credit is due to Mr. Mulligan for the conception of the material. After conducting early experiments he secured the collaboration of Mr. Robertson in further research, and between them the cement has been brought to its present-day position. In the United States particularly, and in continental countries, the material has aroused much interest, especially among consular officials. This cement is known as "Astroplax," and is produced by a process in which gypsum is so manipulated as to result in a condition isomorphous with dehydrated calcium sulphates as obtained by any other process in the treatment of gypsum for the production of cement or plaster, but isomeric and/or/polymeric, as the case may be, with these in many new and improved properties. This description suggests that the makers of "Astroplax" have determined the "appropriate" treatment many years ago surmised to be possible by an eminent chemist, who then made the properties of gypsum and anhydrite the subject of attentive research. In a paper read before one of the continental academies of sciences more than twenty years ago, this scientist admitted he had failed to "isolate" the condition his experiments indicated, but stated that, according to his findings, such an ideal condition of gypsum or anhydrite would be developed eventually. The resulting product is a definitely hydraulic cement that cannot be "killed" by excess of water. In addition, its spreading capacity is stated to be at least twice as great as the highest hitherto claimed. Among the other qualities and advantages claimed for the material are the following :—

"It persists in resetting when disturbed or broken down an unknown number of times; sea-water sand may be used with it, and no salt, fungus, or other disfigurement develops on the surface of the work, while it amalgamates in intimate and permanent conjunction with Portland cement, either in bonding or as a mixture. The material is prepared for use by being 'run' into a cistern, very much in the same manner as common lime for 'putty'; it may be so contained for an indefinite period and removed and returned as may be required. New stuff may be added to old batches, and may lie on a plaster-board for hours, and at the end of a day's work any stuff left over may be returned to the receptacle and applied later. Interiors of houses may be first and second coated and finished on successive days, decorated with paint or paper within the next forty-eight hours, and occupied in safety and comfort at the end of a complete week. With suitable sand as an aggregate, exteriors may be plastered in imitation of any approved building stone and in any style of masonry. The material may be used for all sorts of indoor and outdoor work, either as a plaster or as a cement." The investigations of the inventor and his collaborator have been carried out in a large scale experimental plant, and it is stated that the process is so exact that no one single bag of material, of which over 2,000 tons have been manufactured and sold, has failed to exhibit all the qualities claimed for it. These "qualities and advantages," the makers declare, have not been brought out merely by experiment, but have been realized, and are being realized daily, by numerous buildings and plastering contractors, whose work may be inspected by any person interested.

This syndicate is represented in this country by Messrs. James Miller, Son & Co. (Limited), 79 West Nile Street, Glasgow.

It is claimed that the "Astroplax" now issued is not the result of the full process, but that it is released at a stage in which its properties are brought to a pitch equal to high performance for such a material, and more than satisfactory to the needs of the building trades. On this account, it is stated, the product of the full process has been somewhat neglected for the time being. "Complete Astroplax," as it is claimed, is a cement that has a translucent "set," an enormous tensile and crush, and may be likened only to quartz. This material will be available in due course—when the syndicate get time to standardize its commercial production.

New Inventions

Latest Patent Applications.

17706.—Bedford, F.—Concrete building construction. July 10.

17271.—Benson, H. B.—Construction of buildings. July 6.

17757.—Boorne, W. H.—Resinous compositions for building, &c. July 10.

17616.—Lindhardt, H. H.—Tiled roofs. July 9.

18379.—Barton, F.—Methods of hardening and preserving stone. July 18.

17990.—Dulac, A.—Coating compositions for wood, stone, and cement. July 14.

179167.—Handasyde, G. H.—Girders, beams, &c. July 13.

18100.—Heuschkel, O. E.—Construction of buildings, &c. July 15.

18023.—Knapen, A.—Drying buildings. July 14.

Specifications Published.

235997.—Tassi, G.—Asphalt composition coverings for floors, roofs, and other surfaces.

236089.—Billner, K. P.—Floors.

236133.—Kendrick, F. D., and Wolfe, M.—Means for illuminating the gangways and passages of cinemas, theatres, and the like.

236259.—Airey, Sir E.—Construction of concrete buildings and pillars or piers therefor.

236278.—Temperley, J.—Concrete and like mixers.

236325.—Tomlins, A.—Building-blocks and walls.

236368.—Main, J. A.—Means for securing roofing to purlins.

Abstracts Published.

233796.—Mote, F. F., Abbey House, Victoria Street, Westminster.—Moulding walls *in situ*.

234599.—Downing, C. J., 16 Woodland Rose, Muswell Hill, London, and Daniels, W. B., 8 Limes Parade, Weybridge, Surrey.—Concrete structures; building-blocks.

The above particulars are specially prepared by Messrs. Rayner & Co., registered patent agents, of 5 Chancery Lane, London, W.C. 2, from whom readers of the JOURNAL may obtain all information free on matters relating to patents, trade marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and abstract only, and forward on post free for the price of 1/6 each.

The Latest Trade Marks

The following trade marks have been "accepted" by H.M. Patent Office, and unless any objection is lodged the marks will be duly registered. Opposition must be lodged within one month from the date quoted. All particulars and forms of opposition will be sent free by Messrs. Rayner & Co., of 5 Chancery Lane, London.

Stablex.

459116.—Manufactures from mineral and other substances for building or decoration.—D. Anderson and Son, Ltd., Park Road Works, Park Road, Stretford, Manchester.—July 8.

Cellolit.

457526.—Manufactures from cement, stone, sand, and similar material for building.—Christiani and Nielsen, 72, 74 Victoria Street, Westminster, S.W.1. July 15.

Primoplax.

458578.—Manufactures from mineral and other substances for building or decoration.—F. Mulligan, 45 High Street, Belfast. July 15.

Pretex.

458880.—Roofing felts.—J. Erskine, trading as The Northern Counties Asphalte Co., Whitehouse, Belfast. July 15.

459712.—Signature of Geo. Bennie for Engineering, Architectural, and Building Contrivances.—George Bennie, Normanhurst, Craigmore, Bute, Scotland. July 22.

458070.—Monogram bearing the initials B.M. & R., Ltd. for Engineering, Architectural, and Building Contrivances.—Brecknell, Munro & Rogers, Ltd., 3 Lawrence Hill, Bristol. July 22.

Rates of Wages in the Building Trades‡

The following table shows the revised rate of wages for craftsmen (bricklayers, masons, carpenters and joiners, woodcutting machinists, slaters, plumbers, plasterers and painters) and labourers in the building trade. The labour rates for London are given in the Table of Current Prices published on pages xxv, xxvi.

Grade.	Craftsmen.	Labourers.	Grade.	Craftsmen.	Labourers.	Grade.	Craftsmen.	Labourers.
	s. d.	s. d.		s. d.	s. d.		s. d.	s. d.
A	1 8	1 3½	B	1 6	1 1½	C	1 4½	1 0½
A1	1 7½	1 2½	B1	1 5½	1 1	C1	1 4	1 0½
A2	1 7	1 2½	B2	1 5	1 1	C2	1 3½	11½
A3	1 6½	1 2	B3	1 4½	1 0½			

The towns in which the above Grade rates have been reported to apply are shown below, divided into their main Area Groups. The principal exceptions are indicated in the notes appended to each group. In towns marked* the rate for painters is 1d. less than that paid to other craftsmen, and in those marked † it is ½d. less than the craftsmen's rate.

NORTH EAST COAST :—

Grade A.—Alnwick, Annfield Plain, Barnard Castle, Bishop Auckland, Blackhill, Blyth, Chester-le-Street, Consett, Crook, Darlington, Durham, Gateshead, Hartlepool, Hebburn, Hexham, Jarrow, Middlesbrough, Morpeth, Newcastle, North and South Shields, Seaham Harbour, Shildon, Stanley, Stockton-on-Tees, Sunderland, Thornaby, Wallsend, Whitburn, Whitley Bay, Willington, and Wooler. **Grade A2.**—Berwick-on-Tweed.

YORKSHIRE :—

Grade A.—Barnsley, Batley, Beverley, Bingley, Birstall, Bradford, Brighouse, Castleford, Cleethorpes, Colne Valley, Crosshills, Dewsbury, Doncaster, Grimsby, Guiseley, Halifax, Harrogate, Hebden Bridge, Holmfirth,* Horbury, Huddersfield, Hull, Ilkley, Immingham, Keighley, Leeds, Mexborough, Mirfield, Morley, Normanton, Ossett, Pontefract, Pudsey, Rawdon, Rotherham, Scunthorpe, Selby, Sheffield, Shipley, Sowerby Bridge, Spen Valley, Wakefield, Wombwell, Yeadon, and York. **Grade A1.**—Bridlington and Scarborough. **Grade A3.**—Barnoldswick, Driffield, Filey, Goole, Skipton, Whitby, and Worksop. **Grade B3.**—Kirby Moorside, Malton, Northallerton, and Pickering.

[NOTE.—*Malton was up-graded on 1st July from B_3 to A_3 by the Yorkshire Joint Regional Wages Committee, but pending the result of an appeal against the regrading, B_3 rates are being paid. Barnoldswick, Goole, Skipton, and Whitby, craftsmen, 1s. 7d.; labourers, 1s. 2½d.*]

NORTH WESTERN COUNTIES :—

Grade A.—Accrington, Adlington, Alderley Edge, Altrincham, Ashton-in-Makerfield, Ashton-under-Lyne, Atherton, Bacup, Barrow, Birkdale, Bispham, Blackburn, Blackpool, Blackrod, Bolton, Broughton (Flints.), Burnley, Bury, Carlisle, Chester, Chorley, Church, Clayton-le-Moors, Cleveleys, Clitheroe, Colne, Connah's Quay, Dalton-in-Furness, Darwen, Denton, Droylesden, Dukinfield, Eccles, Farnworth, Fleetwood, Frodsham, Glossop, Great Harwood, Haslingden, Hawarden, Helsby, Heywood, Higher Kinnerton, Horwich, Hyde, Kirkham, Leigh, Leyland, Littleborough, Longridge, Lymm, Lytham, Manchester, Middleton, Mossley, Nelson, Oldham, Ormskirk, Oswaldtwistle, Padiham, Pendlebury, Poulton, Preston, Prestwich, Queensferry, Radcliffe, Ramsbottom, Rawtenstall, Rishton, Rochdale, Runcorn, St. Annes-on-Sea, St. Helens, Saddleworth Sale, Salford, Shaw, Shotton, Southport, Stalybridge, Stockport, Swinton, Thornton, Todmorden, Tyldesley, Walkden, Warrington, Westhoughton, Whalley, Whitefield, Widnes, Wigan, and Wilmslow. **Grade A1.**—Lancaster, Macclesfield, Morecambe, and Wrexham. **Grade A3.**—Askam, Broughton-in-Furness, Buxton, Chapel-en-le-Frith, Cleator Moor, Congleton, Coniston, Crewe, Distington, Egremont, Grange-over-Sands, Harrington, Hayfield, Knutsford, Macclesfield, Maryport, Middlewich, Nantwich, New Mills, Northwich, Sandbach, Tarporley, Ulverston, Whitehaven, Winsford, and Workington. **Grade B1.**—Colwyn Bay, Conway, Holywell, Llandudno, Llandudno Junction, Mostyn, Prestatyn, Rhos and Rhyl. **Grade B2.**—Ambleside, Bowness-on-Windermere, Cockermouth, Grasmere, Kendal, Keswick, Langdale, Penrith, and Windermere. **Grade B3.**—Bangor, Carnarvon, Holyhead, and Llanfairfechan.

[NOTE.—*In the Liverpool and Birkenhead districts the rates are 1s. 8½d. for carpenters and joiners, woodcutting machinists, and painters, 1s. 9d. for other craftsmen, and 1s. 3½d. for labourers. The rate for plumbers at Warrington is reported as 1s. 9d.; New Mills and Whaley Bridge, craftsmen, 1s. 7½d.; labourers, 1s. 2½d. Bangor, Beaumaris, Carnarvon, Holyhead and Llanfairfechan, craftsmen, 1s. 5½d.; labourers, 1s. 1½d.*]

MIDLAND COUNTIES :—

Grade A.—Alfreton, Belper, Bilston, Birmingham, Blackheath, Chesterfield, Coalville, Coventry, Derby, Heanor, Hinckley, Ilkeston, Kenilworth, Langley Mill, Leek, Leicester, Lincoln, Long Eaton, Loughborough, Mansfield, North Staffordshire (Stoke-on-Trent, Burslem, Hanley and Newcastle-under-Lyme), Nottingham, Nuneaton, Oldbury, Ripley, Sutton Coldfield, Sutton-in-Ashfield, Swanwick, West Bromwich, Willenhall, and Wolverhampton. **Grade A2.**—Brierley Hill, Burton-on-Trent, Coseley, Cradley Heath, Darlaston, Dudley, Gornal, Halesowen, Knowle, Melton Mowbray, Northampton, Old Hill, Rugby, Sedgeley, Solihull, Stafford, Stourbridge, Swadlincote, Walsall, and Wednesbury. **Grade A3.**—Atherstone, Bewdley, Boston, Bromsgrove, Cannock, Droitwich, Gainsborough, Grantham, Hednesford, Kidderminster, Leamington, Lichfield, Louth, Malvern, Matlock, Newark, Oakengates, Peterborough, Redditch, Retford, Rugeley, Shifnal, Shrewsbury, Skegness, Sleaford, Southwell, Stourport, Stratford-on-Avon, Tamworth, Warwick, Wellington, and Worcester. **Grade B.**—Kettering, Market Harborough, and Wellingborough. **Grade B1.**—Oakham, Oundle, Raunds, Rushden, Thrapston, and Uttoxeter. **Grade B2.**—Bridgnorth, Church Stretton, Horncastle, Ludlow, Newport, Spalding, and Wirksworth.

[NOTE.—*The rate for plumbers at Chesterfield is reported as 1s. 9d. and at Stafford as 1s. 8d., and for labourers at Ludlow, 1s. 0½d.*]

EASTERN COUNTIES :—

Grade A3.—Brentwood, St. Albans, and Welwyn Garden City. **Grade B.**—Bedford, Cambridge, Felixstowe, Ipswich, Luton, and Norwich. **Grade B1.**—Baldock, Biggleswade, Braintree, Chelmsford, Clacton, Colchester, Frinton, Halstead, Harpenden, Hatfield, Hertford, Hitchin, Hoddesdon, Ingatestone, Letchworth, Lowestoft, Southend-on-Sea, Stevenage, Stotfold, Walton-on-the-Naze, and Yarmouth. **Grade B2.**—Dovercourt, Gorleston, Harwich, King's Lynn, Newmarket. **Grade B3.**—Ampthill, Attleborough, Aylsham, Bishop's Stortford, Braughing, Cromer, Dunstable, Ely, Fakenham, Leighton Buzzard, March, Much Hadham, Puckeridge, Southwold, Standon, Stowmarket, Tring, and Woodbridge. Grade C1.—Aldeburgh, Halesworth, Leiston, Saxmundham, Wickham Market, and Wymondham. **Grade C2.**—Coltishall and Saffron Walden.

SOUTHERN COUNTIES :—

Grade A2.—Gravesend and Northfleet. **Grade A3.**—Addlestone, Ashford (Middlesex), Ashtead,† Cobham, and Leatherhead.† **Grade B.**—Abingdon, Ascot, Didcot, Henley, Maidenhead, Oxford, Portsmouth, and Reading. **Grade B1.**—Amersham, Bournemouth, Bracknell, Brighton, Byfleet, Chatham, Chalfonts, Chesham, Christchurch, Dorking, Eastbourne, Eastleigh, Egham, Eton, Gerrard's Cross, Gillingham, Gosport, Guildford, Hove, Maidstone, Marlow, Poole, Redhill, Reigate, Rochester, Sevenoaks, Slough, Southampton, Staines, Sunningdale, Sunninghill, Tilehurst, Tonbridge, Tunbridge Wells, Windsor, Woking, Wokingham, and Wycombe. **Grade B2.**—Bexhill, Bramley, Cranleigh, Fareham, Godalming, Haslemere, Horsham, Littlehampton, New Forest (Brockenhurst, Lymington, Lyndhurst, Milford, New Milton and Ringwood), Oxted, Winchester, Witley and Worthing. **Grade B3.**—Arundel, Ashford (Kent), Aylesbury, Bagshot, Banbury, Basingstoke, Bicester, Fletchley, Bognor, Bosham, Broadstairs, Buckingham, Burgess Hill, Camberley, Canterbury, Chichester, Crawley, Deal, Dover, East Grinstead, Faringdon, Faversham, Fenny Stratford, Folkestone, Hastings, Havant, Herne Bay, Hythe, Lingfield, Margate, Midhurst, Milton Regis, Newbury, Newport Pagnell, Pangbourne, Petworth, Ramsgate, Sandgate, Sittingbourne, Stony Stratford, Thame, Walmer, Wendover, Westgate, Whitstable, Witney, Wolverton, and Woodstock. **Grade C.**—Andover. **Grade C1.**—Hayward's Heath, Isle of Wight, and Tidworth. **Grade C2.**—Alton,* Hartley Wintney,* Hawkhurst, Petersfield, Rye, and Staplehurst.

[NOTE.—*Amersham, Bournemouth, Brighton, Chalfonts, Christchurch, Eastbourne, Eastleigh, Egham, Englefield Green, Eton, Gerrards Cross, Gosport, Hove, Poole, Slough, Southampton, Staines, Windsor, Wokingham, and Wycombe, craftsmen, 1s. 6d.; labourers, 1s. 1½d.*]

SOUTH WESTERN COUNTIES :—

Grade A.—Bristol. **Grade A1.**—Devonport* and Plymouth.* **Grade A2.**—Newton Abbot, Paignton, and Torquay. **Grade B.**—Bath. Cheltenham, Exeter,* Gloucester,* Hereford,* Swindon,* and Ross-on-Wye.* **Grade B1.**—Barnstaple, Princetown, Stroud,† Taunton, and Weston-super-Mare. **Grade B2.**—Bridgwater, Burnham-on-Sea, Cirencester,* Coleford,* Exmouth, Ledbury,* Lydney,* Totnes,† Weymouth,* and Yeovil.* **Grade B3.**—Bovey Tracey, Box,* Bradford-on-Avon,* Brixham, Cheddar Valley,* Corsham,* Melksham,* Midsomer Norton, Radstock, Trowbridge,* Wellington,* and Westbury.* **Grade C1.**—Calne,* Chippenham,* Crediton,† Cullompton,* Dawlish, Dorchester,* Frome,* Glastonbury, Minehead,* Shepton Mallet, and Street.

[NOTE.—*Exeter, painters, 1s. 6d.; other craftsmen, 1s. 7d.; labourers, 1s. 2½d.† Plymouth, Devonport and district, painters, 1s. 7d.; other craftsmen, 1s. 8d.; labourers, 1s. 3½d. Weston-super-Mare, craftsmen, 1s. 6d.; labourers, 1s. 1½d.*]

SOUTH WALES AND MONMOUTHSHIRE :—

Grade A.—Aberdare, Ammanford, Barry, Bridgend, Burry Port, Cardiff, Ebbw Vale, East Glamorganshire and Monmouthshire Valleys, Garw Valley, Gorseinon, Llanelly, Maesteg, Merthyr, Neath, Newport, Ogmore Vale, Pontardawe, Pontypridd, Porthcawl, Port Talbot, Rhondda and Rhymney Valleys, Sirhowy Valley, Swansea and Swansea Valley. **Grade A1.**—Abergavenny. **Grade A2.**—Chepstow. **Grade B.**—Brecon, Builth, Carmarthen, Llandilo, Llandrindod Wells, and Milford Haven. **Grade B2.**—Monmouth. **Grade C.**—Pembroke and Pembroke Dock.

[NOTE.—*The rate for labourers at Milford Haven is reported as 1s. 1½d.*]

SCOTLAND :—

Grade A.—Airdrie, Alloa, Alva, Ayr, Barrhead, Bellshill, Bridge of Weir, Burntisland, Clydebank, Coatbridge, Dumbarton, Dundee, Dunfermline, Dunoon, Edinburgh, Falkirk, Glasgow, Gourock, Grangemouth, Greenock, Haddington, Hamilton, Helensburgh, Irvine, Johnstone, Kilmarnock, Kirkcaldy, Lanark, Larbert, Largs, Leith, Leslie, Markinch, Motherwell, Musselburgh, Neilston, North Berwick, Paisley, Pencaitland, Perth, Port Glasgow, Renfrew, Rothesay, Stirling, and Wishaw. **Grade A2.**—Arbroath, Brechin, Montrose, and Peebles. **Grade B.**—Dumfries, Galashiels, Hawick, Maxwelltown, and Selkirk.

[NOTE.—*The rates quoted do not apply to plasterers and painters in Scotland, who are not affiliated to the National Wages and Conditions Council. The rate for labourers at Perth and Irvine is reported as 1s. 3d., and at Arbroath, Brechin, and Montrose, 1s. 1½d. In the case of plasterers a rate of 1s. 9d. per hour after the increase of ½d. in August is payable at the following towns :—Airdrie, Alloa, Alva, Ayr, Clydebank, Coatbridge, Dumbarton, Dundee, Dunfermline, Edinburgh, Falkirk, Glasgow, Greenock, Hamilton, Irvine, Kilmarnock, Kirkaldy, Leith, Motherwell, Paisley, Perth, and Stirling. Grade A.—Airdrie, Alexandria, Alloa, Alva, Ardrossan, Ayr, Barrhead, Bellshill, Beith, Bridge of Allan, Broxburn, Broughty Ferry, Buckhaven, Burntisland, Carnoustie, Clydebank, Coatbridge, Cowdenbeath, Dumbarton, Dundee, Dunfermline, Dunoon, Edinburgh, Falkirk, Glasgow, Gourock, Grangemouth, Greenock, Gullane, Haddington, Hamilton, Helensburgh, Irvine, Johnstone, Kennoway, Kilmacolm, Kilmarnock, Kirkcaldy, Larbert, Largs, Larkhall, Leith, Leslie, Leven, Markinch, Methil, Motherwell, Neilston, North Berwick, Paisley, Perth, Port Glasgow, Renfrew, Rothesay, Saltcoats, Stenhousemuir, Stirling, Uddingston, Vale of Leven, Wemyss, and Windygates, painters, 1s. 8d. Grade B.—Aberdeen, Arbroath, Biggar, Callander, Carluke, Cupar, Galashiels, Girvan, Hawick, Kelso, Kirkcudbright, Lanark, Peebles, Selkirk, and St. Andrews, 1s. 7d. Grade C.—Peterhead, 1s. 6d. Brechin, Forfar, and Montrose, painters, 1s. 5½d.; Dumfries and Maxwelltown, craftsmen, 1s. 7d.; labourers, 1s. 2½d. Galashiels, Hawick, Jedburgh, Kelso, and Selkirk, craftsmen, 1s. 7d., labourers, 1s. 2½d. Inverness, joiners, 1s. 5d.*]

‡ From "The Labour Gazette."

Current Prices of Materials

LONDON PRICES.—The following information is intended to serve as a guide only, and should be confirmed by Trade inquiry. The Labour Rates are those current at the time of issue and are the Union Rates. 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.

LABOUR RATES AND MATERIAL PRICES.	MEASURED WORK PRICES.
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.	Excavating and throwing out in ordinary earth not exceeding 6 ft. deep basis price 2s. 10d. per yd. cube. 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, 2s. 4d. per yd. Spread and level, including wheeling, 2s. 4d. per yd. Planking, 5d. per ft. sup. Do. over 10 ft. deep, add for each 5 ft. depth 30 per cent. Hardcore, 2 in. ring, filled and rammed 4 in. thick, 2s. 1d. per yd. sup. Do. 6 in. thick, 2s. 10d. per yd. sup. Puddling, 31s. 6d. per yd. cube. Cement concrete, 4-2-1, 45s. per yd. cube. Do. 6-2-1, 41s. per yd. cube. Do. in upper floors, add 15 per cent. Do. in ferro-concrete work, add 20 per cent. Do. in underpinning, add 60 per cent. Lias lime concrete, 38s. per yd. cube. Breeze concrete, 27s. 6d. per yd. cube. Do. in lintols, etc., 1s. 6d. per ft. cube.
Broken brick or stone, 2 in., 10s. per yd. Thames ballast, 13s. 0d. per yd. Pit gravel, 18s. per yd. Pit sand, 14s. 6d. per yd. Washed sand, 16s. 6d. per yd. Screened ballast or gravel, add 10 per cent. per yd. Clinker, breeze, etc., prices according to locality. Portland cement, 59s. per ton. Lias lime, 60s. 0d. per ton. Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d. Transport hire per day : Cart and horse, 23s. 3-ton motor lorry, £3 15s. Steam lorry, 5-ton, £4. Trailer, 15s. Steam roller, £4 5s. Water cart, 25s.	
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 drains, jointed in cement, tested pipes, 4 in. 3s. 0d., 6 in. 4s. 0d., 9 in. 6s. 6d. per ft. Cast-iron drains, jointed in lead, 4 in. 10s. 0d., 6 in. 13s. 6d. per ft. Note.—These prices include digging and filling for normal depths, and are average prices. Fittings in Stoneware and Iron according to type. *See* Trade Lists.
Stoneware pipes, tested quality, 4-in. 1s. 3d., 6-in. 2s. 8d., 9-in. 3s. 6d. per yd. Cast-iron pipes, coated, 9-ft. lengths, 4-in. 6s. 9d., 6-in. 9s. 2d. per yd. Portland cement and sand, see "Excavator" above. Lead for caulking, 45s. 0d. per cwt. Gaskin, 5½d. per lb.	
BRICKLAYER.	
Bricklayer, 1s. 9½d. per hour. Labourer, 1s. 4½d. per hour. Scaffolder, 1s. 5½d. per hour.	Brickwork in stone lime mortar, Flettons or equal, £36 per rod. Do. in cement do., £37 per rod. 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. Facings, fair, 2d. per ft. sup. extra. Do. T.L.B. Rubbers, gauged and set in putty, 4s. 6d. per ft. Do. salt, white or ivory glazed, 5s. 6d. per ft. sup. extra. Tuck pointing, 10d. per ft. sup. extra. Weather pointing, 3d. per ft. sup. extra. Granolithic and Cement paving, 1 in. 5s. 0d. per yd. sup. Do. 1½ in., 6s. 0d. per yd. sup. Do. 2 in., 7s. 0d. per yd. sup. Bitumen damp course, ex rolls, 7d. per ft. sup. Asphalt, damp course, ½ in., 8s. per yd. sup. Do. vertical, 11s. 0d. per yd. sup. Slate damp course, 10d. per ft. sup. Asphalt Roofing (Mastic) in two thicknesses, ¾ in., 8s. 6d. per yd. Skirting, 6 in., 11d. 2½ in. Breeze Partition Blocks, set in Cement, 5s. 6d. per yd. sup. 3 in. do. do. 7s. 0d.
London stocks, 90s. per M. Flettons, 65s. 0d. per M. Staffordshire blue, 192s. per M. Firebricks, 2½ in., 223s. per M. Glazed salt, white, and ivory stretchers, £22 per M. Do. headers, £21 10s. per M. Colours, extra, 110s. per M. Seconds, less, £1 per M. Cement and sand, see "Excavator" above. Lime, grey stone, 52s. 0d. per ton. Mixed lime mortar, 26s. per yd. Damp course, in rolls of 4½ in. 2s. 6d. per roll. 9 in. 4s. 9d., 14 in. 7s. 6d., 18 in. 9s. 6d. per roll.	
MASON (INCLUDING SLATER).	
Mason, 1s. 9½d. per hour. Do. fixer, 1s. 10½d. per hour. Labourer, 1s. 4½d. per hour. Scaffolder, 1s. 5½d. per hour.	Hoisting and setting stone, 2s. 2d. per ft. cube. Do. for every 10 ft. above 30 ft., add 15 per cent. Plain face Portland basis, 2s. 8d. per ft. sup. Do. circular, 4s. 0d. per ft. sup. Sunk face, 3s. 9d. per ft. sup. Do. circular, 4s. 10d. per ft. sup. Joints, arch, 2s. 6d. per ft. sup. Do. sunk, 2s. 7d. per ft. sup. Do. do. circular, 4s. 6d. per ft. sup. Circular-circular work, 22s. per ft. sup. Plain moulding, straight, per inch of girth, 1s. 1d. per ft. run. Do. circular, do. 1s. 4d. per ft. run. Half sawing, 1s. per ft. sup. Add to the foregoing prices if in York stone 35 per cent.
Portland stone : Whitbed, 4s. 4d. per ft. cube. Basebed, 4s. 7d. per ft. cube. Bath stone, 2s. 9½d. per ft. cube. Usual trade extras for large blocks.	

LABOUR RATES AND MATERIAL PRICES.	MEASURED WORK PRICES.
MASON—continued.	
York paving av. 2½ in. 5s. 6d. per yd. super. York templates sawn, per ft. cube, 6s. 9d. Slate shelves, rubbed, 1 in., 1s. 8d. per ft. sup. Cement and sand, see "Excavator," etc., above.	Do. Mansfield, 12½ per cent. Deduct for Bath, 33⅓ per cent. Do. for Chilmark, 5 per cent. Setting 1 in. slate shelving in cement, 7½d. per ft. sup. Rubbed round nosing to do., 6d. per ft. lin. York steps, rubbed T. & R., 29s. 0d. ft. cub. fixed. York Sills W. & T. 33s. 0d. ft. cub. fixed.
SLATING AND TILING.	
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 "Piecework."	Slating, 3 in. gauge, compo nails, Portmadoc or equal : Ladies 76s., Countess 85s. Duchess 90s. 0d. per square. Westmorland, in diminishing courses, 125s. per square. Cornish do., 123s. per square. Add, if vertical, 13s. 0d. per square approx. Add, if with copper nails, 2s. 6d. per square approx. Double course at eaves, 1s. 0d. per ft. approx. Tiling, 4 in. gauge, every 4th course nailed, in hand-made tiles, average 106s. 0d. per square. Do., machine-made do., 97s. 0d. per square. Vertical Tiling, including pointing, add 18s. 0d. per square. Fixing lead soakers, 10d. per dozen. Stripping old slates and stacking for re-use, and clearing away surplus and rubbish, 10s. 0d. per sq. Labour only in laying slates, but including nails, 20s. 0d. per sq. *See* "Sundries for Asbestos Tiling."
Slates, 1st quality, per M. : Portmadoc Ladies £17, Countess £30, Duchess £36.	
Clips, lead, 4d. per lb. Clips, copper, 2s. 3d. per lb. Nails, compo, 26s. per cwt. Nails, copper, 2s. 3d. per lb. Cement and sand, see "Excavator," etc., above. Handmade tiles, 118s. per M. Machine-made tiles, 108s. per M. Westmorland slates, large, 185s. per ton, Peggies 150s. per ton.	
CARPENTER AND JOINER.	
Carpenter, 1s. 9½d. per hour. Joiner, 1s. 9½d. per hour. Labourer, 1s. 4½d. per hour.	Fir fixed in wall plates, lintels, sleepers, etc., 5s. 9d. per ft. cube. Do. framed in floors, roofs, etc., 6s. 6d. per ft. cube. Do., framed in trusses, etc., including ironwork, 8s. 3d. per ft. cube. Pitch pine, add 33⅓ per cent. Fixing only boarding in floors, roofs, etc., 13s. 6d. per sq. Sarking felt laid, 1-ply 1s. 6d., 3-ply 1s. 9d. per yd. Centering for concrete, etc., including horsing and striking, 70s. per sq. Slate battening, 18s. 6d. per sq. 1 in. deal gutter board on firring, 71s. per sq. 1½ in. moulded casements in 4 sqs., glazing beads and hung, 3s. 0d. per ft. sup. 2 in. do. do., 3s. 3d. per ft. sup. Deal cased frames, oak sills, 2 in. D.H. sashes brass-faced pulleys, etc., 4s. 0d. per ft. sup. Doors, 4 pan. sq. b.s., 2 in. 3s. 6d. per ft. sup. Do. do. do., 1½ in. 3s. 0d. per ft. sup Do. do., moulded b.s., 2 in. 3s. 9d. per ft. sup. Do. do. do., 1½ in. 3s. 3d. per ft. sup. If in oak multiply 6 times. If in mahogany multiply 6 times. If in teak multiply 7 times. Wood block flooring, standard blocks, laid in. Mastic, Herringbone—deal, 1 in. 12s. 0d., 1½ in. 14s. 6d. per yd. sup., average. Do. do., 1½ in. Maple blocks, 17s. 0d. Staircase work, deal : 1 in. riser, 1½ in. tread, fixed, 3s. 9d. per ft. sup. 2 in. deal strings, fixed, 4s. 0d. per ft. sup.
Timber, average prices at Docks, London Standard.	
Scandinavian, etc. (equal to 2nds) : 7 × 3, £23 per std. to 11 × 4, £35 per std. Memel or Equal Slightly less than foregoing. Flooring P.E., 1-in., 28s. 0d. per sq. Do. T. and G., 1 in. 28s. 0d. per sq. Planed Boards, 1 in. × 11 in. £36 per std. Wainscot oak, 2s. 0d. per ft. sup. of 1 in. Mahogany, 2s. 0d. per ft. sup. of 1 in. Do. Cuba, 3s. 0d. per ft. sup. of 1 in. Teak, 3s. per ft. ; cube, 15s.	
PLUMBER AND RAIN-WATER GOODS.	
Plumber, 1s. 9½d. per hour. Mate or labourer, 1s. 4½d. per hour.	Milled lead and labour in gutters, flashings, etc., 69s. 0d. Lead pipe, fixed, including running joints bends, and tacks, ½ in., 2s. 2d. per ft. Do., ¾ in., 2s. 6d. per ft. Do., 1 in., 3s. 6d. per ft. Do., 1½ in., 4s. 9d. per ft. Lead waste or soil, fixed as above, complete, 2½ in., 6s. 6d. per ft. Do., 3 in., 7s. 0d. per ft. Do., 4 in., 9s. 9d. per ft. Cast-iron R.W. pipe, at 24 lb. per length, jointed in red lead, 2½ in., 2s. 4d. per ft. Do., 3 in., 2s. 8d. per ft. Do., 4 in., 3s. 0d. per ft. Cast-iron H.R. gutter, fixed, with all clips, etc., 4 in., 2s. 6d. per ft. Do., O.G., 4 in., 2s. 10d. per ft. Cast-iron soil pipe, fixed with caulked joints and all ears, etc., 4 in., 7s. 0d. per ft. Do., 3 in., 6s. 0d. per ft. Fixing only : W.C. pans and all joints, P. or S., and including joints to water waste preventers, 43s. 0d. each. Baths only, with all joints, 38s. 0d. Lavatory basins only, with all joints, on brackets, 28s. 0d. each.
Lead, milled sheet, 45s. 0d. per cwt. Do. drawn pipes, 45s. 6d. per cwt. Do. soil pipe, 48s. 6d. per cwt. Do. scrap, 29s. 0d. per cwt. Copper, sheet, 2s. 0d per lb. Solder, plumbers, 1s. 3d. per lb. Do. fine, 1s. 7d. per lb. Cast-iron pipes, etc. : L.C.C. soil, 3 in. 4s. 2d., 4 in. 5s. 1d. per yd. R.W.P., 2½ in. 1s. 10d., 3 in. 2s. 2d., 4 in. 3s. 0d. per yd. Gutter, 4 in. H.R., 1s. 10d., 4 in. O.G., 2s. 0d. per yd.	

LABOUR RATES AND MATERIAL PRICES.	MEASURED WORK PRICES.
GLAZIER.	
Glazier, 1s. 8½d. per hour.	Glazing in putty, clear sheet. 21 oz. 10d., 26 oz. 11d.
Glass: 4ths in crates: Clear, 21 oz. 5d., 26 oz. 6d.	Glazing in beads, 21 oz. 1s., 26 oz. 1s. 3d. per ft.
Cathedral white, 5½d. per ft.	Small sizes slightly less (under 3 ft. sup.).
Polished Plate, British ¼ in., up to 2 ft. sup. 2s. 5d., 3 ft. sup. 3s. 2d., 7 ft. sup. 3s. 9d., 25 ft. sup. 4s. 3d., 100 ft. sup. 5s. 1d.	Patent glazing in rough plate, normal span, 1s. 5d. to 1s. 10d. per ft.
Rough plate, $\frac{3}{16}$ in., 5½d., ¼ in. 6d. per ft.	Lead light, plain, med. sqs. 21 oz., usual domestic sizes, fixed, 3s. 6d., and up, per ft. sup.
Linseed oil putty, 16s. 0d. per cwt.	Glazing only, polished plate, 6½d. to 8d. per ft., according to size.
PLASTERER.	
Plasterer, 1s. 9½d. per hour.	Lathing with sawn laths, 1s. 7d. per yd.
Labourer, 1s. 4½d. per hour.	Metal lathing, 2s. 3d. per yd.
	Floating in Portland, 1 to 3, for tiling or wood-block, ¾ in., 2s. 4d. per yd.
	Do., vertical, 2s. 7d. per yd.
Chalk lime, 5½s. 6d. per ton.	Render, on brickwork, 1 to 3, 2s. 7d. per yd.
Hair, 17s. 6d. per cwt.	Render in Portland and set in fine stuff, 3s. 3d. per yd.
Sand and cement, see "Excavator," etc., above.	Render, float, and set, trowelled, 2s. 6d. per yd.
Lime putty, 2s. 8d. per cwt.	Render and set in Sirapite, 2s. 5d. per yd.
Hair mortar, 27s. per yd.	Do., in Thistle plaster, 2s. 5d. per yd.
Fine stuff, 34s. per yd.	Extra, if on but not including lathing, any of foregoing, 5d. per yd.
Sawn laths, 2s. 6d per bdl.	Extra, if on ceilings, 5d. per yd.
Keene's cement, 105s. per ton.	Angles, rounded Keene's on Portland, 6d. per ft. lin.
Sirapite, 70s. per ton.	Plain cornices, in plaster, per inch girth, including dubbing out, etc., 5d. per ft. lin.
Do. fine, 78s. per ton.	White glazed tiling set in Portland and jointed in Parian, 33s. per yd. and up.
Plaster, 60s. & 72s. 6d. per ton.	Fibrous plaster slabs, 1s. 11d. per yd.
Do. fine, 112s. per ton.	
Thistle plaster, 69s. per ton.	
Lath nails, 4d. per lb.	
DECORATOR.	
Painter, 1s. 8½d. per hour.	Lime whiting 3d. per yd. sup.
Labourer, 1s. 4½d. per hour.	Wash, stop, and whiten, 6d. per yd. sup
French polisher, 1s. 9d. per hour.	Do., and 2 coats distemper with proprietary distemper, 9d. per yd. sup.
Paperhanger, 1s. 8½d. per hour.	Knot, stop, and prime 7d. per yd. sup.
	Plain painting, including mouldings, and on plaster or joinery, 1st coat, 10d. per yd. sup.
	Do., subsequent coats, 9d. per yd. sup.
	Do., enamel coat, 1s. 2½d. per yd. sup.
Genuine white lead, 57s. 6d. per cwt.	Brush-grain, and 2 coats varnish, 3s. 8d. per yd. sup.
Linseed oil, raw, 5s 0d. per gall.	Figured do. do., 5s. 6d. per yd. sup.
Do. boiled, 5s. 3d. per gall.	French polishing, 1s. 2d. per ft. sup.
Turpentine, 6s. 6d. per gall.	Stripping old paper and preparing, 1s. 7d. per piece.
Liquid driers, 9s. 6d. per gall.	Hanging paper, ordinary, 1s. 10d. per piece.
Knotting, 25s. per gall.	Do., fine, 2s. 4d. and upwards per piece.
Distemper, washable, in ordinary colours, 48s. per cwt. and up.	Varnishing paper, 1 coat, 9s. 0d. per piece.
Double size, 3s. 6d. per firkin.	Canvas, strained and fixed, 2s. 8d. per yd. sup.
Pumice stone, 4d. per lb.	Varnishing, hard oak, 1st coat, 1s. 2d. yd. sup.
Varnish, hard oak, 14s. per gall. and up.	Do., each subsequent coat, 11d. per yd. sup.
Single Gold Leaf (Transferable), 1s. 10d. per book.	
Varnish copal, 17s. per gall. and up.	
Do. Flat, 20s. per gall.	
Do. Paper, 17s. per gall.	

LABOUR RATES AND MATERIAL PRICES.	MEASURED WORK PRICES.
DECORATOR—continued.	
French polish, 19s. per gall.	
Ready mixed paints, 10s. 6d. per gall. and up.	
STEELWORK, SMITHWORK, etc.	
Smith, Weekly Rate = 1s. 9½d. per hour.	Mild steel in trusses, etc., erected £27 per ton.
Mate, Do. 1s. 4d.	Do., in small sections as reinforcement, £17 per ton.
Erector, 1s. 9½d. per hour.	Do., in compounds, £18 per ton.
Fitter, 1s. 9½d. per hour.	Do., in bar or rod reinforcement, £20 10s. per ton.
Labourer, 1s. 4d. per hour.	Wrot. iron in chimney bars, etc., including building in, 40s. per cwt.
	Do., in light railings and balusters 47s. per cwt.
	Fixing only corrugated sheeting, including washers and driving screws, 2s. 2d. per yd.
Mild steel in British standard sections, £13 per ton.	
Sheet steel: Flat sheets, black, £23 per ton. Do. Galvd., £26 per ton.	
Corrugated sheets, galvd., £24 per ton.	N.B.—Extra for galvanizing uncertain at present.
Driving screws, galvd., 1s. 9d. per grs.	
Washers, galvd., 1s. 1d. per grs.	
Bolts and nuts, 38s. per cwt. and up.	
SUNDRIES.	
Fibre or wood pulp boardings, 2½d. per ft. sup. and up according to quality and quantity. The measured work price is on the same basis.	Fibre boardings, fixed on, but not including studs or grounds, 6d. per ft. sup.
Plaster Board, 1s. 7d. per yd. sup.	Plaster Board, fixed as last, 2s. 8d. per yd. sup.
Asbestos sheeting, $\frac{5}{32}$ in., grey flat, 2s. 5d. per yd. sup.	Asbestos sheeting, fixed as last, flat, 4s. 4d. per yd. sup.
Do. corrugated, 3s. 6d. per yd. sup.	Do. do., corrugated, 5s. 6d. per yd. sup.
Asbestos composition. Flooring:	Laid in two coats, average ¾ in. thick, in plain colour, 7s. 0d. per yd. sup. Do. ½ in. thick, suitable for domestic work unpolished, 6s. 6d. per yd.
Metal casements for wood frames, domestic sizes, 1s. 6d. per ft. sup.	Hanging only metal casements in, but not including wood frames, 2s. 10d. each.
Do. in metal frames, 1s. 9d. per ft. sup.	Building in metal casement frames 7d. per ft. sup.
Asbestos cement slates or tiles, $\frac{5}{32}$ in. punched per M. grey £17, red £19.	Asbestos slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey 52s. 0d., red 57s. 6d.
Waterproofing compounds for cement.	Add about 75 per cent. to 100 per cent. to the cost of cement used.
PLYWOOD.	
3 m/m Alder 2½d. per ft. sup.	
4½ m/m Amer. White 3½d. per ft. sup.	
5 m/m Figured Ash 5d. per ft. sup.	
4½ m/m 3rd Quality, Composite Birch 1½d. per ft. sup.	