THE

ARCHITECTS' JOURNAL

Architectural Engineer

With which is incorporated "The Builders' Journal."

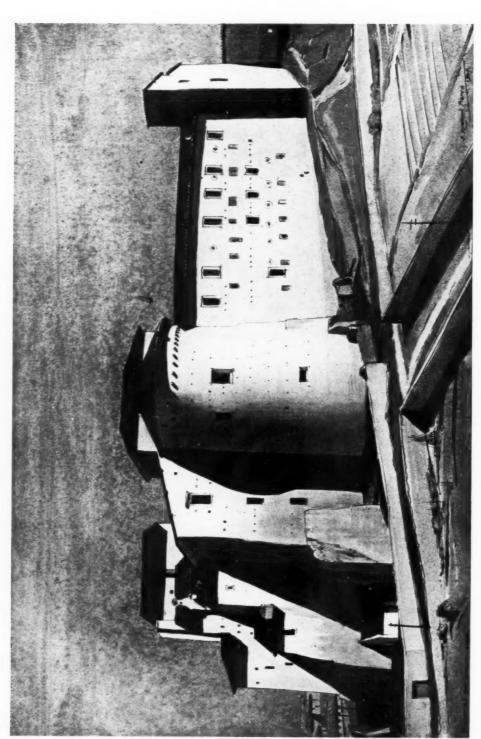


FROM AN ARCHITECT'S NOTEBOOK.

Image the whole, then execute the parts—
Fancy the fabric
Quite, ere you build, ere steel strike fire from quartz,
Ere mortar dab brick!

ROBERT BROWNING,
A Grammarian's Funeral.





From a water-colour drawing by S. Rowland Pierce.

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ARCHITECTS' JOURNAL

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church, emporium, or cinema.

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Sic Transit Gloria Mundi

T was once thought that there was a certain degree of permanence about brick and stone. The poet's writings, the painter's canvas, and even the sculptor's marble, all these things were comparatively shortlived and ephemeral, but the builder built for all time. Amongst the many revaluations which are taking place all around us, here is one to which we have to adjust ourselves, for surely the craft of building is fast becoming one of the least permanent results of man's activity. As for the architect, his name is never known, for, not only does he work anonymously, but the results of his labours are here to-day and gone to-morrow; far better known, indeed, is the shortstory writer, whose fatuous fancies lurk shamelessly behind the gaudy covers that bestrew the bookstall. His is a name that thousands utter, and many are the households that anxiously await his monthly musings; but unwept and unhonoured is the name of him who builds the latest

These thoughts occurred to us one day, as perhaps to others, when, in passing down a famous West End street in London, we came upon an unfamiliar void, like the gap made by a newly extracted tooth, caused by the sudden demolition of a rather striking building, which had arisen, as it seemed to us, but yesterday-actually some thirteen years ago. We know full well that the exigencies of modern city life demand a certain degree of iconoclasm; old outworn buildings must often go to make room for something more up to date, even when on account of their beauty we would fain retain them; land values increase, and so charm must make way for pomp; the character of districts changes, and houses must be destroyed that shops and offices may live. We have all seen these things happen, and though we may deplore them, we realize that they are inevitable in a growing city. But this is something altogether different; this is something wanton. For here is no question of the falling in of leases and a general rebuilding, no question of street widening, no question of one kind of building making way for another. A shop is pulled down and another is to be built in its place, and the new building is, so it would appear, to be used by the same firm and for the same purpose as was the old. The operation would, in fact, appear to be typical of the spirit of restlessness and the desire for change which is so very characteristic of the present time; it would seem to show, too, incidentally, that handsome profits can be made by shopkeepers.

One is set wondering as to what may happen should this practice extend. Architecture may indeed merge into scene painting, and a great canvas façade may hide a solid steel structure behind, and any one who is then weary of the appearance of his house or premises will be put to comparatively small expense in making a change.

While statisticians are telling us that in the last fifty

years the expectation of human life has increased by some ten years, commodities are being deliberately made for shorter lives. In America, we know, that motor-cars are scrapped after a year or two of service, and we in England find that our clothes have not the staying power of ten years ago, still less are they comparable with the stout old Melton which outlived a generation. For these things, however, it is an easy matter to substitute inferior materials. Boots, motors, and suitings are not governed by by-laws. Buildings in our cities are; and if a definite policy of wanton scrapping is to be inaugurated, craftsmanship must surely inevitably suffer, for in this department, at any rate, economies can be effected. Such a policy, too, must in time affect the architect; he will surely tend to become more and more a man of business, and less and less a serious artist, for whereas before he felt that by his work he was achieving in some degree that immortality for which the nature of all of us has a craving, now an insecurity awaits his every effort.

This is not a matter in which town-planning can render help; provision it may make against the need to demolish half a street in fifty years in order that it may be widened, or against the fall in fortune of a neighbourhood owing to indiscriminate factory building or the like, but it can hardly safeguard us against the restlessness and caprice of humanity.

It must not, however, be thought that we are ready to oppose every demolition and rebuilding which is not dictated by external conditions. Too little building activity would produce a far worse state of affairs, worse both from the point of view of trade and art than too much, and certainly when we discard philosophy and consider the immediate social conditions of unemployment and the like, we cannot but be encouraged by the sight of building activity wherever we meet it in our towns. And so we must just accept the phenomenon as typical of our age, and read into it what good we can. Success breeds success, we are told, and doubtless the spectacle of a shop in the process of what, for want of a better term, we have described as wantonly rebuilding, is an advertisement of prosperity of the very first order, so that the ramifications of one such undertaking spread themselves far and wide. Indeed, is it not possible that if the price of a front-page advertisement in our most popular dailies soars too high, an alternative means of attracting custom may be by demolition and rebuilding?

Be that as it may, we cannot but feel with the architect who one day passing along the street comes upon a yawning cavern where but yesterday stood his favourite creation, and we will bare our heads and reverently pause a moment with him. Sic transit

gloria mundi.

Notes and Comments

Two Cynics at Large

The "London Mercury," edited by the President of the Architecture Club, has always shown particular regard for architecture and architectural matters. The poetry section of the September issue is, however, exceptional. There is, first of all, a series of seven epigrams on London statues by George Rostrevor Hamilton. We understand it is nowadays thought a little passé to scoff at the Prince Consort, but the following four lines on the Albert Memorial is one of the best criticisms of this edifice that we remember having seen:

Immortal Albert, why this mortal strife
On thy Memorial twixt Death and Life—
That all too deathless tinsel round thy head,
And round thy feet those all too lifeless dead?

Contrasted with these rather solid lines the following, on the statue of Sir Arthur Sullivan, with a bronze figure of Grief leaning against the high pedestal, run very trippingly:

> Sorrowing nymph, oh why display Your beauty in such disarray? Is it decent, is it just To so conventional a bust?

"Let us Pull London Down"

A little further on in the same number Mr. Robert Herring contributes a "Song of New London" beginning:

Behold, I saw the sun to-day! Where Regent Street was pulled away.

Mr. Herring is rather hard on London, the whole of which he would like to see treated with as little mercy as Nash's old Regent Street, and in the last stanza but two he cries:

Let us pull London down and stand Once more 'neath skies, and walk on land! Let us pull London down and make A place to keep the soul awake, Destroy the city and forget A new one in its room to set!

Central Heating in the Third Century

That there is nothing new under the sun is an ancient saying of which the unearthings at Ashtead afford an interesting modern instance. Mr. Anthony Lowther, a student of architecture, having found there bits of tiles which had been thrown out by burrowing rabbits, obtained the aid of certain local societies in digging. They came upon the remains of a large Roman villa, thought to date from the third century. Most of the rooms had tessellated pavements. Many other objects of interest have been found, such as the remains of plaster walls, some of which were painted to imitate marble; while there were windows of opaque glass of light-blue tint. Most important of all the discoveries was the hypocaust, whence hot charcoal fumes passing through tiled flues reached the baths. This seems to anticipate the modern principle of central heating.

Millions for Road Improvements

Three million pounds more than the amount spent in any previous year on road improvements will be devoted to that very useful object during the coming winter by the Ministry of Transport. For this expenditure the justification is at least threefold. Throughout the country the roads need attention, work must be provided for the evergrowing army of the unemployed, and the constantly augmented motor traffic imposes vastly increased obligations of road repair, and further heavy expenditure on widening and straightening—not solely for the convenience of motorists, but more specifically to reduce the appalling number of accidents due to narrow roads, sharp bends, concealed crossings, irregular surfacing, absence of footpaths,

and so forth. Those millions allocated to the work will be well spent provided they be economically administered. Approximately two thousand miles of roadway will be subjected to various processes of reform, and the map of Britain on which the roads are indicated looks curiously like a spider's web, with the spider in it; London forming the colossal creature's body, whence the various roads radiate like legs, stretching out northward to Northumberland and Carlisle, westward to Liverpool and Holyhead, south-west to Fishguard and to Plymouth, eastward to Yarmouth, southward to Southampton and Sussex, southeast to Folkestone, and, of course, embracing all the important places in between. War-time exigencies, and the regional planning schemes which grew out of them, should not be forgotten in returning thanks for this comprehensive project.

A Flat-Dweller's Problem

An odd question about flat-dwellings has been propounded by the Hon. Mrs. Cust, of Datchet. She asks "the experts" to tell her where we can burn our cabbage-stalks in the Utopia of the future, "when we shall all live without a backyard in ten-story flats." She deems that then "our only course will be to throw the vegetables in question out of the window." Nay, dear madam; that were unduly to discount the resources of civilization, and, indeed, to return to a discredited habit that caused much annoyance and even bloodshed in a less refined era. It would, besides, much augment the litter and untidiness against which some of the more energetic of the municipalities have at length determined to make war. But the lady's point certainly deserves serious attention; for while it has been anticipated by the most thoughtful designers of flats, there are others whose views are less comprehensive. Perhaps the "experts" to whom the Hon. Mrs. Cust prefers her request will be disposed to reassure her as to the means of refuse disposal provided for flats. Several newspaper correspondents who seem to be occupants rather than experts, have volunteered useful information on the point. For instance, a gentleman from Worthing recommends a special kind of boiler in which refuse can be destroyed, while a lady dating from a London hotel speaks of the American incinerator extending from basement to roof of modern flats and apartment houses. It has an opening to every floor-a convenience which is obviously set off by certain minor disadvantages. But at least it offers some sort of solution of "a flat-dweller's problem."

The Howard de Walden Estate Sale

Recent mammoth dealings in London real estate have not greatly discounted public interest in the projected sale of forty acres of an important business section of the metropolis. Quite the contrary; very adequate attention was given by the Press to the announcement, last weekend, that Lord Howard de Walden had entered into a contract for the sale to the Audley Trust of property extending northwards from Oxford Street to Euston Road, and eastwards from Oxford Circus to Wells Street. For London that is rather a large slice of territory to change hands, and it is impossible to suppress conjecture as to the ultimate consequences for architectural and building interests, and the resultant effects on the aspects and amenities of London town. Seeing the high price that London property commands, there is always the probability that the purchasers will try to make such investments remunerative by building higher. Hence the persistent yearning for skyscrapers. For extravagantly tall buildings in London there is no demand half as urgent as the trading instinct. With regard to the property which Lord Howard de Walden is selling, no immediate fears need be entertained; for it is stated that no rebuilding plans are as yet contemplated.

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Leg-o'-Mutton Land

The Vernacular of the Nineteenth Century

HAVE often wished that one of the more subtle of our commentators on architecture, Mr. Goodhart-Rendel for choice, would, if it were possible to bring about an induction, give us a critical analysis, social architectural, though perhaps the last word can scarcely be admitted in such a connection, of the successive stages of speculative building, dating from say 1850 to our own times. Such a record would, I believe, give us a more complete social survey of the period than any we yet have; the more sophisticated work of the architectfor it can hardly be contended that during the greater portion of that time he spoke for any but a small, select class-necessarily imposing a restriction on his utterances from which his humbler confrère was singularly, if not happily, free.

The speculative builder, with a few noteworthy exceptions, spoke the vernacular, not to say the slang, using at times even the swear-words of his day and generation. His embroidered sentences bespeak a plenitude if not fastidiousness of existence, very plainly decipherable from

his uncensored perorations.

A Seaside Suburb

Lately I had occasion to visit for some short space of time one of the newer suburbs of one of the most recent of our seaside towns on the west coast. Originally a small fishing village, there had been a distinct development in later Georgian times, but this nucleus of the "old and charming" was, with the exception of a few noteworthy spots, very attenuated, and for the most part swamped and buried beneath the accretions which had taken place

since the middle of last century.

The actual district of which I write was quite devoid of any architectural intent. I could not find one single building which owed any inspiration to the aristocratic or peasant influences of an earlier age. At the end most remote from the earlier settlements, there were certain evidences of a more orderly development, which clearly dated it as of the twentieth, as opposed to the nineteenth, century. But "Leg-o'-Mutton" Land proper was entirely of the nineteenth, and by far the greater part was of the last decade of that bewildering epoch.

An Accidental Clue

I named it "Leg-o'-Mutton" Land because it was by a happy incident, as accidental as it was surprising, that I got, or thought I got, the clue which put me on terms of

intimacy with its bewildering complexities.

One evening, but a few days after my arrival, as I was standing at one of the hotel windows engaged in a meditative survey of that amazing street which formed the centre, or the spine as it were, of that amazing locality, I saw a lady of mature years walking along the right-hand side of that selectly residential thoroughfare. Her appearance was, even at a first glance, sufficiently astonishing, for she was dressed in the fashion of some twenty-five to thirty years ago. This in itself would have been interesting, but when one realized that she was the centre of a picture of exactly that period, the coincidence was nothing less than remarkable. She had on a little narrow-brimmed black straw hat, with her hair underneath strained back from her forehead, finished in a big bun at the back, and contained in a net. Her jacket, of some rather dense cloth of a dark colour, ended just on the line of her hips, with rather full skirts, very tight at the waist, and then billowing upward over the breasts and finishing at the side of the heavy lapels with two enormous puff sleeves, or "leg-o'sleeves, as the irreverents of that generation

called them. Her skirt, very well cut and closely fitting at the waistline, spread out in a heavy cascade of striped vicuna, scarcely allowing her feet, cased in tight and glittering patent leather, to twinkle from underneath its hindering folds. Around her neck was a stiff linen collar, and below, finishing it, and giving the final note, just between the lapels, peeped out a very froth of soft and frilly lace. She was so astoundingly, as I have said, "the centre of the picture," that she christened and gave a meaning to the place and the locality. The enormous bay windows which surged from one end of the street to the other, along both its sides, were but the counterparts, in terms of building, of these strange contorted sleeves. In the stiff marshalling of the plate-glass sheets, one saw but the stiffness of that feminine broadcloth, whilst the bright machine-made tile roofs, with their clipped eaves, were, of course, nothing but that straw hat so fantastically out of

The Comparison Heightened

Along the top of the thin wooden cornice to those monstrous bays, which so menacingly held one's attention, was a crush of white woodwork masquerading as a balustrade-the lace, as it were, though very much the lace of the century, which finished off the comparison. Or did one's fancy stretch the points of contact further? Were not those flashing front doors, four-panelled, with giltleaded lights filling the upper two, a meticulously shaded bird in a circle of dazzling colours, but another expression of those flashing patent leather shoes, and, as if to complete the resemblance; they—too—that is, the doors twinkled shyly at one from the recesses of semi-circular arched porches lined with glazed tiles of a somewhat crude green for some four or five feet from the red-tiled floor, finished above in a drab-coloured plaster.

Where the likeness between the lady and her surroundings ceased was when one studied her as an individual, for she had a shy retiring face, and was, I am sure, of an unimpeachable respectability; such air of recklessness as she had was, I am certain, due to the period of her queer

habiliments.

Did it Inspire Beardsley?

By comparison the street had a sinister aspect, there was something of the wilful and decadent about it, but this again may have been due to the lines of its extraordinary fashioning. I am assured that the respectability of its inhabitants at least was as unimpeachable as that of the lady! If one could have only taken the ensemble and have presented it with the devilish artistry of an Aubrey Beardsley, extracting, as it were, the essential essence of its "bourgeoisity," there would have resulted a more expressive, because more selective, example of the setting of the stage, the mise en scène for the drama of life of the naughty 'nineties. For it was surely there, from the contorted lines of its perverted buildings, that Beardsley drew his inspiration, filled in with the rich imagination of his histrionic and wistful fancy, seen through the eyes of his delicate perception. A strange and exciting period, a time of disillusionment and frustrated effort, forceful in its complete surrender and effacement of all humanizing influences, the human actors of which were all alike gamblers in life and art, intent on their dreary play of the moment, with sad oblique glances at the past and the

A time as distinct and dead as the carnival age of late eighteenth-century Venice, or as the ponderous parade period of Louis XIV.

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An Architect's Homeland Holiday-1

By H. J. BIRNSTINGL, A.R.I.B.A.

o the architect almost every type of holiday—solitary or gregarious, sedentary or active—has something to yield, for in its buildings mankind writes its autobiography; a document not always easy to construe, but well worth the trouble of patient endeavour. Everywhere are to be found cause and effect, and their constant interaction; the whole resting, as often as not, upon the physical conditions of the land, which, it will be found upon examination, have been the deciding factor in big things as in little; in what, in fact, to-day we call town planning and architecture. Thus those who can read will see just what factors—the configuration of the land, the presence of a ford, the protection of a range of hills, and the like—have caused a town to grow up in a particular spot.

The architectural student may spend one holiday measuring a piece of early English vaulting, and learn something of the delicacies and intricacies of mediæval masonry, and he may spend another on the road, learning something of the growth of towns, and of the organizations of which he is a member to-day. He may begin to understand how these organizations intersect and cut across each other, vertically, horizontally, and obliquely; organizations of government—parochial, rural, urban, municipal, national, and imperial; organizations of occupation—agricultural, mining, industrial, and professional; while meshing the

whole together is the family organization. Yes, without doubt, one of the most enjoyable and profitable holidays for the architect is to be spent on the

HIGH STREET, BURFORD.

road. The route may be carefully organized, or it may be left more or less to chance. A definite river valley may be explored, and the various activities that have grown up along it may be studied. In this way a sectional view of man's activities, and his reaction to environment from seacoast to mountain, can be comprehended. Or a definite area approximately unified by similar conditions and occupations can be taken. These require a prearranged programme. As a contrast to this method, start out with a map, and with nothing predetermined but the general direction. To leave the certainty and security of home late in the afternoon with the night's lodging undetermined,



SHEEP STREET, BURFORD.

an attractive inn sign, a shower of rain, an entrancing church spire, or a far-flung view, being potential deciding factors, is a true delight, not willingly to be exchanged for the soft upholstery of a first-class carriage to the south coast, with booked (and even paid for) rooms on the first-floor facing the sea. Such a happygo-lucky start, indeed, is not far removed from the vagrancy of the perfect tramp, or "vagrom man," who moves from hour to hour so as to keep his back to the wind.

And if one draws rein, dismounts, de-clutches, calls a halt—according to the means of locomotion—at such a place as Burford on the Windrush—to those with a sensitive ear the very euphony of the name might be reason enough to seek a roof for the night—what a day's delight is awaiting on the morrow. Burford lies on the southern limits of the Cotswolds, a typical example

of its building traditions, and showing plainly upon its placid aged countenance the history of the Cotswold district. All these towns prospered with the wool industry; indeed, was not the Windrush supposed to have special qualities particularly beneficial to woollen goods, from which the fame of the Witney blanket has grown?

It is easy enough still to associate thriving wool merchants with the larger stone houses in Sheep Street. For a view of the town of Burford, it is best to cross the Windrush by the old stone bridge, and climb the hill on the north side. At the top is a delightful old gabled house, with some cottages at right angles, and from here the town can be seen

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THE GREAT HOUSE, WITNEY ROAD, BURFORD.

climbing the opposite hillside, a disordered mass of grey, melting to blue, the faint wreaths of ascending smoke being indistinguishable from the chimneys from which they emerge.

Burford consists of a single broad street ascending from the river, with narrow lateral roads coming in from Witney and Northbach. In Witney Street is the Great House, which, at the first glance, appears to constitute within itself an odd anachronism. It is a somewhat grand and heavy building, looking strangely out of place in the narrow Witney Street, and reminiscent rather of some casa or palazzo in a small Italian town, where the juxtaposition of grandeur and squalor is less rare. The main structure above the basement and up to the cornice is certainly late seventeenth century, but the parapet, with its pineapples and battlement, seems to be of a much earlier date.

The explanation, however, is probably simple enough; the earlier building traditions here have been endowed with longevity, and have survived for a century longer than in other districts that are more accessible to outside influences.

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The other notable town on the Windrush is Witney. In many respects it is entirely different from Burford. Superficially viewed, if it is less picturesque, it is more alive, for its blanket factories are still active. Then, too, instead of the single street from the river, it is planned as a cross with the sixteenth-century market place and Butte Cross at the junction, and the main north and south street expands into a wide triangular green, with the church at the base.

But from the banks of the Windrush I want to turn south, for I have in my mind a little-known port, once, and that not so long ago, ringing with blows of hammers, and with a quayside stacked with oak, and great ships on the slip-

ways straining for the water; and now the whole is enwrapt in sweet and gentle slumber. On my way, however, shall slip back through the ages, so that the fifteenth and sixteenth centuries are but as yesterday. Within the circles of Avebury, if anywhere, we can feel the passage of thousands of years. There, on those great rolling downs, the never-ceasing wind seems to carry in its breath dim echoes of an immense past, of which we now are the imperfect consummation. In the very middle of the inner ring, the Temple, as it is called, stands the village of Avebury, part-built with the sacred stones. But to get to Avebury we shall have run along the Vale of White Horse, avoiding Swindon, unless we want to see what the industrial revolution has done to an old market town, and climbing Hackpen Hill see the plain of Oxford at our feet, and feel the south wind coursing over the Wiltshire Downs. We have entered a new country; a country of chalk and thatch and great open spaces.

Leaving Avebury, we shall pass up the ruddy high street of Marlborough, and turn through regal Savernake, and go into the luscious vale of Pewsey. Then we shall climbonce more, this time on to Salisbury Plain, and passing through the upland market town of Amesbury, drop into the cathedral city of Salisbury. A few miles south of Salisbury we find ourselves in the oldest nature-preserve in England, known, since Norman times, as the New Forest, and now bearing the slightly sophisticated air of park land. But our destination is in the south-east corner of the forest. A few miles down the estuary of Beaulieu river, on the right bank, we shall come upon Buckler's Hard. approached from the river. Suddenly a bend reveals two rows, each of some twenty houses, facing each other across a wide grass-margined track, looking like a section of pipeclayed grenadiers facing each other, as it might be for the piling of arms. Forlorn yet self-reliant, isolated yet compact, these few houses stand erect, and proudly carry their history of sixty years' activity. They have served their country as devotedly and honourably as any in the land. Did not Buckler's Hard send three ships to Trafalgar: the "Agamemnon," of sixty-four guns; the "Swiftsure," of seventy-four guns; and the "Euryalus," of thirty-six

Buckler's Hard was making ships in a small way at the beginning of the eighteenth century. Its situation was favourable; there are not many places on the river's estuary where a hard-gravel bottom stretches out to low-water mark. In the early years of the century, John Duke of Beaulieu owned the sugar-producing island of St. Vincent's in the West Indies; he also owned excellent timber. These two facts induced him to endeayour to turn Buckler's Hard into a shipbuilding town and a port of some importance.



TYPICAL BURFORD BUILDINGS.

He consequently advertised the advantages of the harbour, and the fact that it enjoyed the privileges of the Cinque Ports. Beneath a map published about the middle of the century are set out these advantages, together with statements that parcels of land, 170 ft. by 40 ft., may be had at a ground rent of 6s. 8d.; that every house may have a close of land of 2 acres at 13s. 4d.; that the front of the houses must be of brick; and that three loads of timber will be granted gratis for every house that may be built. These advertisements attracted a certain Mr. William Wyatt, and the brief prosperity of Buckler's Hard began. In 1743 the village changed its name to Montagu Town. Wyatt was followed by Adams, who became the master shipbuilder, until he died in 1805 at the good age of ninetytwo. Adams lived in the best house, a simple square eighteenth-century building at the north-east corner of the village. The fame of Montagu Town soon spread, and the output of vessels increased in size and number. The average time on the stocks for a seventy-four-gun ship was

thirty months. Two thousand oak trees were used on an average in the making of a ship. A big launching was the scene of immense local excitement, and people, to the number of many thousands, poured in from the surrounding country.

But the career of Montagu Town, if glorious, was brief. The last ship, a revenue cutter, the "Repulse," was launched in 1818. The little town—for so it might perhaps at its zenith have been called—relinquished its grandiose title, and, resuming the modest name of Buckler's Hard, sank

back into a peaceful life of inactivity.

The island of St. Vincent was the subject of constant disputes, and failed to be the source of wealth that the Duke had anticipated, and methods of shipbuilding changed, so that timber was no longer the first necessity. But for these facts the estuary of the Beaulieu might to-day throb with the coming and going of the great ships which now glide to and fro in Southampton Water. Buckler's Hard made a gallant bid for fame, but events thwarted her endeavour.

Bournemouth Pavilion

G. WYVILLE HOME and SHIRLEY KNIGHT, AA.R.I.B.A., Architects

HE plans of the new pavilion at Bournemouth as they stand to-day show very little alteration since the date of the competition award. The concert hall portion remains unaltered except in detail, but more floor area being required in the tea room, the large open-air balconies originally designed around this apartment have been absorbed into the room itself. This alteration has caused a certain modification in the elevations, an arched treatment of the balconies having given way to a lighter treatment with coupled stone piers and large glass surfaces, while the pantile roofs are provided with widely overhanging eaves.

In the concert hall a new idea has been introduced in the form of a descending platform. That portion of the platform taking the stringed instruments, which for acoustic purposes projects into the auditorium, is capable of being lowered to the level of a sunken orchestra as is usually found in the theatre of to-day. The motive power to be employed will be hydraulic, and the object of the innovation is to introduce into one programme an orchestral as well as a theatrical performance.

The accompanying plan illustrates the main or top floor, and shows very clearly the broad simple lines on which the building has been designed. An important feature has been incorporated on the west elevation in the form of a large terrace with a wide flight of steps leading down to the lower level of the gardens, while on the east

(Continued on page 375.)



A VIEW OF THE RESTAURANT, LCOKING TOWARDS THE SEA.

Current Architecture. 282.—Bournemouth Pavilion G. Wyville Home and Shirley Knight, AA.R.I.B.A., Architects

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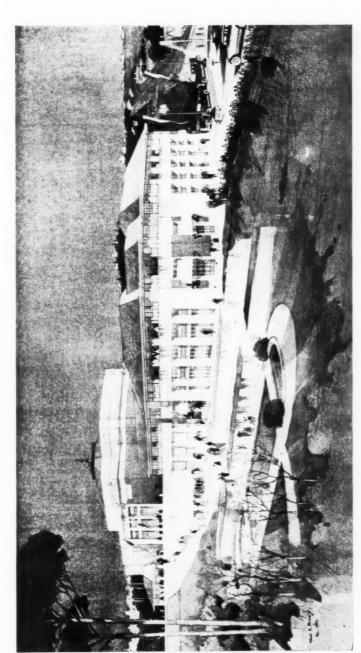
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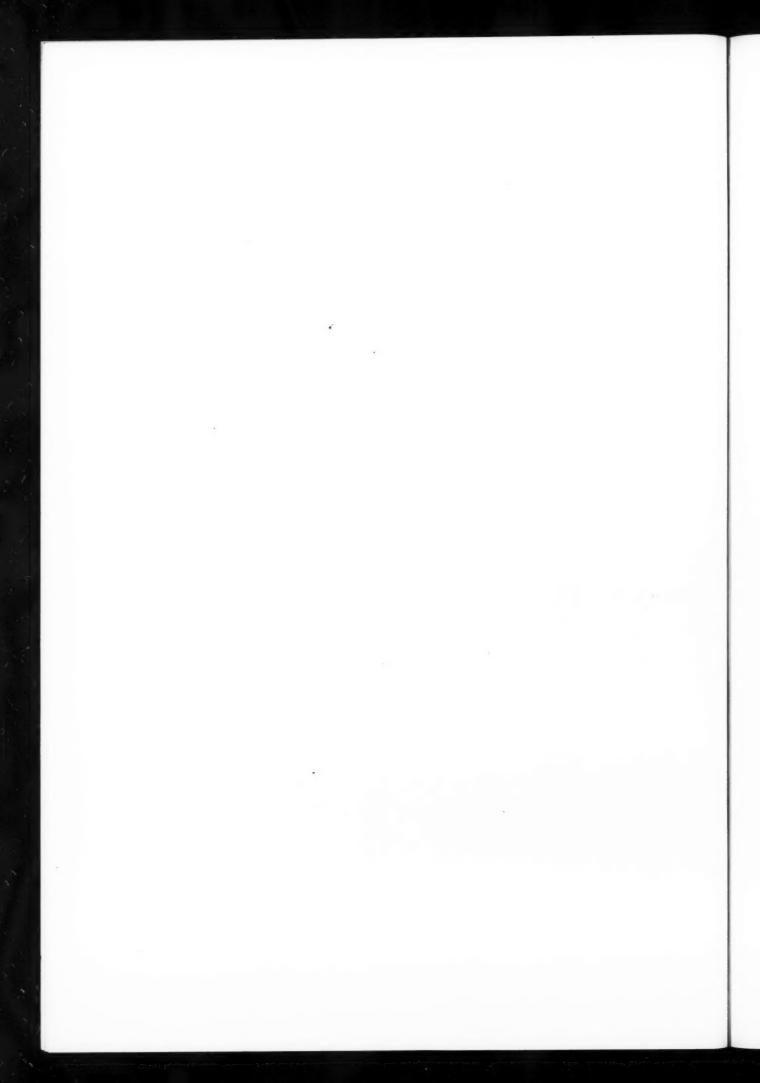
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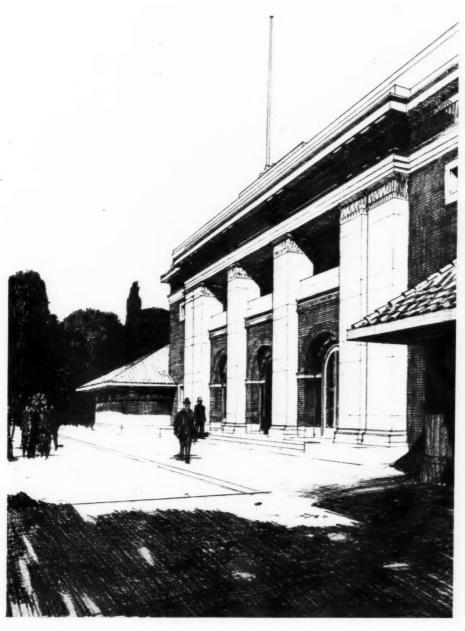
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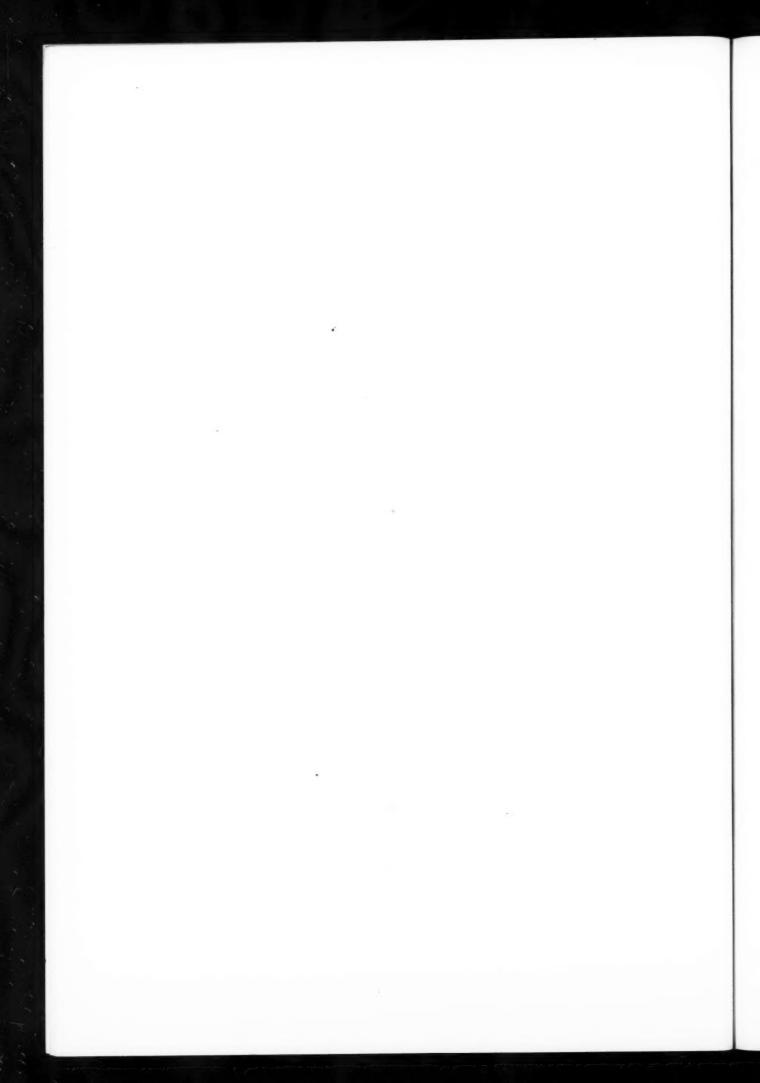
A Perspective View by Cyril A. Farey.

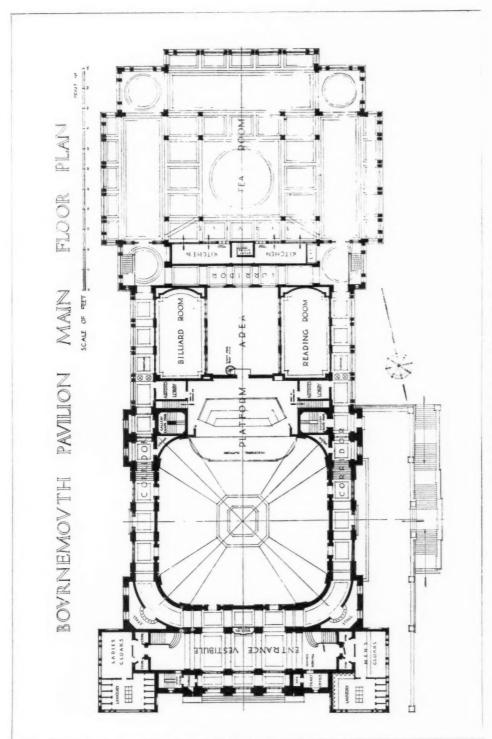


Current Architecture. 283.—Bournemouth Pavilion G. Wyville Home and Shirley Knight, AA.R.I.B.A., Architects



The Concert Hall Entrance (North Elevation).





BOURNEMOUTH PAVILION: MAIN FLOOR PLAN. G. WYVILLE HOME AND SHIRLEY KNIGHT, AA.R.I.B.A., ARCHITECTS.

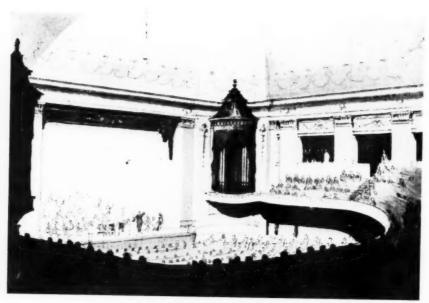
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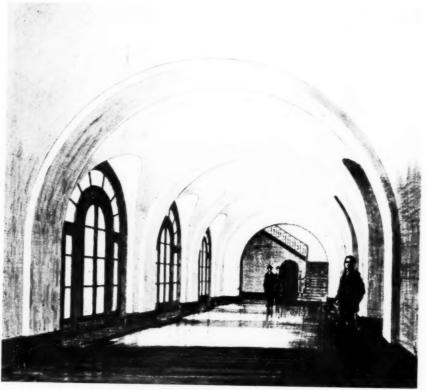
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INTERIOR OF THE CONCERT HALL.



THE ENTRANCE VESTIBULE: NORTH ELEVATION.

BOURNEMOUTH PAVILION.
G. WYVILLE HOME AND SHIRLEY KNIGHT, AA.R.I.B.A., ARCHITECTS.

side a scheme is in contemplation of a formal garden with a hard tennis court. Designs have also been prepared for a further considerable development of the gardens below the terrace already referred to, on the western side. In this scheme the river Bourne is diverted and developed into a large water-garden treatment, with stepped terraces, formal flower bads, and proved packs.

formal flower beds, and paved paths.

The excavations have disclosed a wonderful subsoil of good building sand. This sand, apart from being used in the foundation work at present in hand, is being employed for the manufacture on the site of concrete bricks. It is interesting to note, moreover, that in spite of its close proximity to the sea, no trace whatever, of salt has been found in this sand. Circumstances show that at one time the site formed the bed of a river of considerable size; and minute strata have also been found of pure white clay, similar to that found in Devonshire, which is so extensively

used for the manufacture of china ware.

The architects have secured the services of Sir Owen Williams, K.B.E., to design the steelwork of the pavilion, and the first contract, now in process, consists of the mass-concrete foundations, a large concrete retaining wall

reinforced with steel, the erection of the ground floor slabs, and of the western terrace referred to above.

As part of this contract, provision has also been made for a new pumping station. This plant, which will be electrically driven, supplies sea water to two large reservoirs in the upper part of the town, which is used for roadcleaning, drain-flushing, and for baths in private houses. There is also a fresh-water supply drawn from the stream which is used for watering the various pleasure gardens.

The interior sketches and one of the west elevations reproduced herewith have been prepared by Mr. Keith Murray from the architects' preliminary notes, while the general perspective is a reproduction of a drawing by Mr. Cyril Farey exhibited in this year's Royal Academy.

The general contractors for the first portion of the building are Messrs. Jones and Seward, of Bournemouth. The Portland stone is being obtained from the Bath and Portland Stone Firms, Ltd., and the steelwork is being supplied by Messrs. Morland Haynes & Co., Ltd., while the pumping plant is being installed under the supervision of Messrs. Mumford, Bailey, and Preston, Ltd., engineers. The borings on the site have been carried out by Messrs. Le Grand, Sutcliff, and Gell, Ltd., of Southall.

A Shoe Factory at Norwich

A. F. SCOTT & SONS, AA.R.I.B.A., Architects

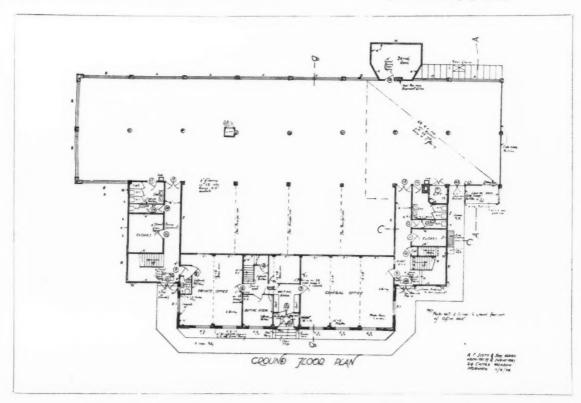
HIS reinforced-concrete factory is built on the beamless or flat slabs principle. This has been the ordinary method of construction in America and elsewhere for many years; yet this factory is believed to be the first example of its kind in England. The columns have spread or "mushroom" heads, and the slab, which is somewhat thicker than in the ordinary beam and slab floor, is reinforced so as to cantilever out from the column in every direction, and also to act as a beam between the supports. The structure is extraordinarily rigid and free from vibration, and the method, when

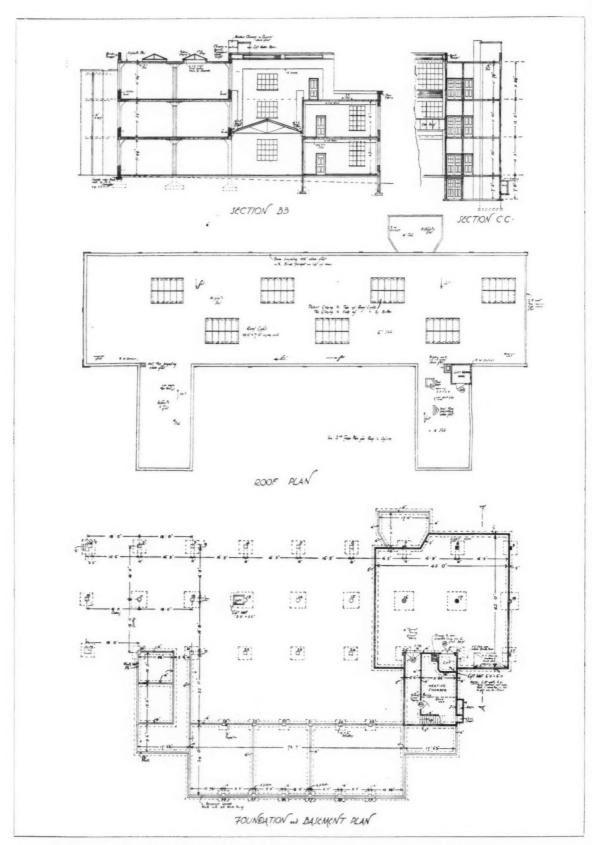
carried out by competent experts, is as perfectly safe as other reinforced concrete systems.

It is claimed that this system has several advantages besides those mentioned above, the chief being simplicity of the shuttering, speed of erection, cheapness, and the clean ceiling, with consequent ease of running pipes, shafting, etc., and brightness resulting from absence of shadows on ceiling.

Antiquated by-laws have hitherto operated against the more extensive adoption of this principle in Britain, and Norwich has set a rather plucky example.

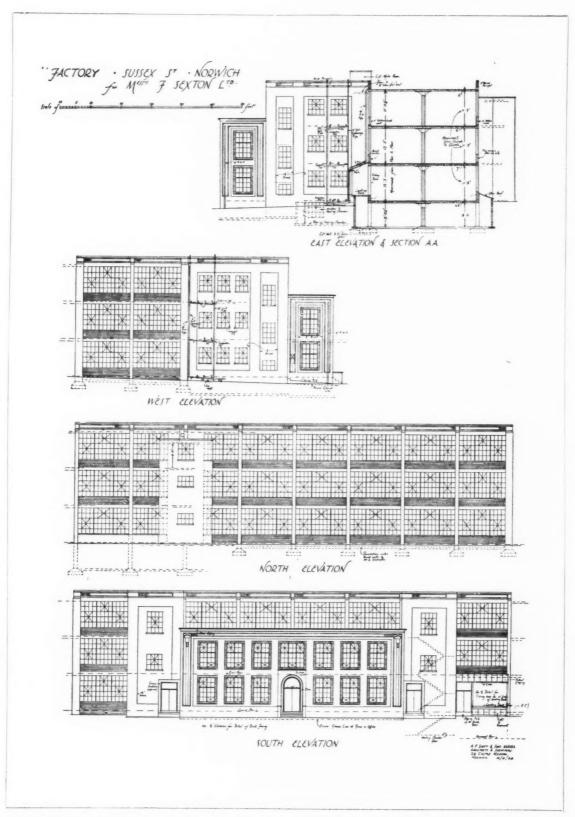
(Continued on page 383.)





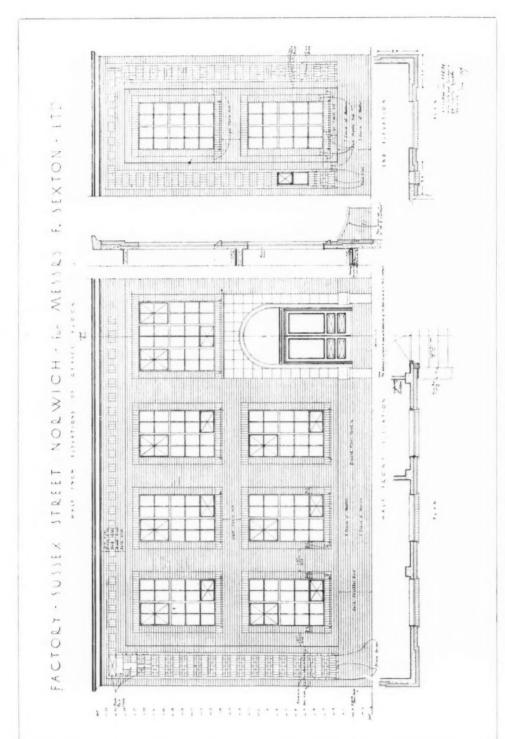
SHOE FACTORY AT NORWICH FOR MESSRS. F. SEXTON, LTD.: PLANS AND SECTIONS.

A. F. SCOTT AND SONS, AA.R.I.B.A., ARCHITECTS.



SHOE FACTORY AT NORWICH FOR MESSRS. F. SEXTON, LTD.: ELEVATIONS AND SECTION.

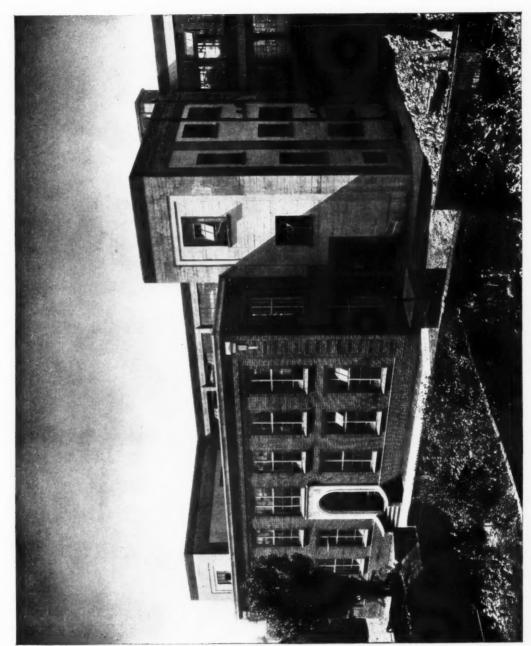
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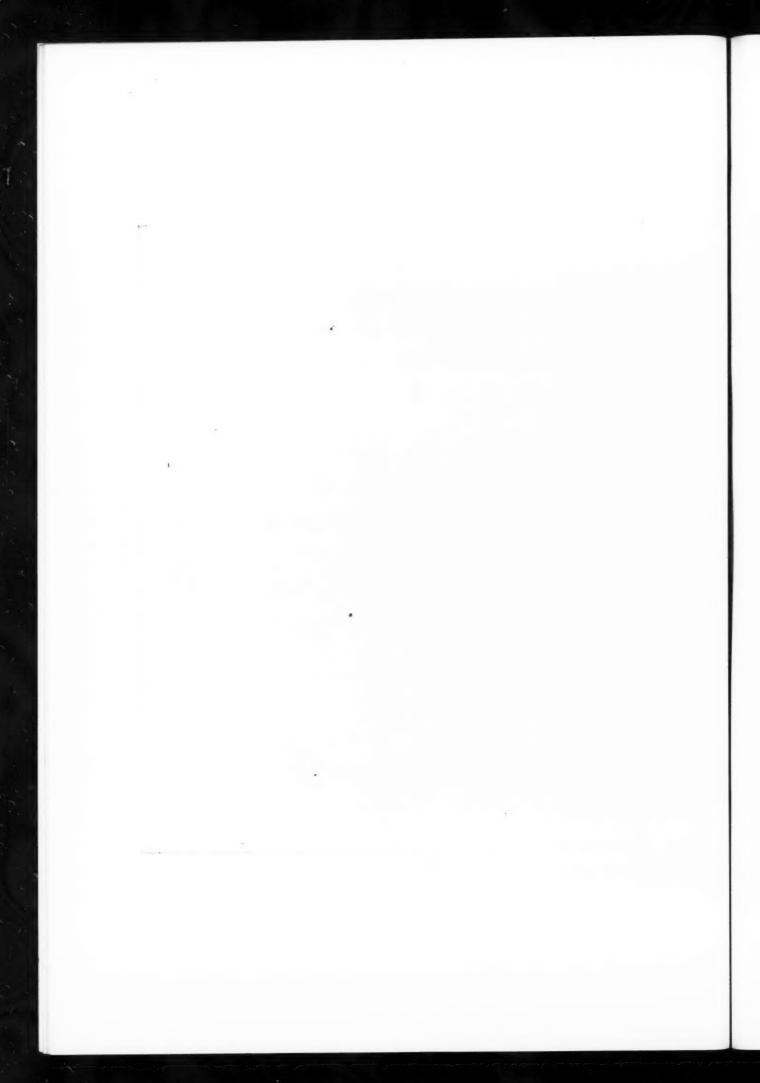
SHOE FACTORY AT NORWICH FOR MESSRS. F, SEXTON, LTD.: ELEVATIONS OF OFFICE BLOCK
A. F. SCOTT AND SONS, AAR.I.B.A., ARCHITECTS.

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Current Architecture. 284.—Shoe Factory at Norwich for Messrs. F. Sexton, Ltd. A. F. Scott and Sons, AA.R.I.B.A., Architects



The South Elevation.



Current Architecture. 285.—Shoe Factory at Norwich for Messrs. F. Sexton, Ltd.

A. F. Scott and Sons, AA.R.I.B.A., Architects



The Main Entrance.

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This is a three-story factory, each floor being 144 ft. by 35 ft. by 12 ft. high. Projecting forward are two staircase blocks, each having cloak and lavatory accommodation on all floors. The space between these is covered on the ground floor by a glass roof, thus extending the ground floor to 60 ft. wide at that part. Projecting still further forward is the two-story office block, 73 ft. by 24 ft. wide.

The external effect has been obtained by careful grouping and adjustment of proportions, the design being kept scrupulously simple. In the factory proper the concrete construction is exposed, with the steel-framed windows reaching close up to ceiling level, the filling below the windows being of red brick. The staircase blocks are entirely of concrete, relieved by recessed panels, while the office block is faced with red brick throughout, except for the stone doorway and coping. This brickwork was not attached after the concrete wall was built, but was used semi-constructively as a kind of permanent shuttering; this subordinate and mainly ornamental function being indicated by ignoring the bonding and building the bricks in a pattern.

The building is arranged for easy extension, one end being temporary and easily removed when the extension is required. Maple floors are provided throughout the factory, in which there are roof-lights to the top floor. There are also two electric lifts, a great cool basement 45 ft. square for storing leather, a remarkable system of electrically accelerated hot-water heating, hot water to

wash basins, a new type of warmed coat-and-hat rails, drinking fountains everywhere, fireproof non-slipping stairways and corridors. The offices are finished throughout in oak

Electrical power is used throughout the building. Electric motors are fixed to the ceiling so as to give free floor-space, driving the shafting which is carried on the usual hangers from special channel fixings, which are let in flush with the ceiling level. The same system is adopted for all conduits carrying wires, etc., so that ceilings and walls are practically free from what is usually an unsightly collection of tubes.

The lighting is arranged on two systems: (a) General lighting from high-candle-power gas-filled lamps with special reflectors; (b) local intensive lighting over special machines, etc. Great care has been expended on the artificial lighting, which differs in important particulars from the ordinary methods.

Electrically controlled clocks have been fitted throughout, working in conjunction with the works time-recorders, and also controlling the works time-bells, thus ensuring that the time of starting and leaving off must synchronize with the recorders and the general time-clocks.

A complete system of secret-line intercommunication telephones has been fitted, giving direct connection between all departments. A complete installation of automatic thermostats gives fire protection. The exact position of a fire in the premises is shown on the indicator, an alarm-bell

outside rings, and at the same moment the alarm is given in the City Fire Brigade station

With this system, which has been adopted in a large number of the most modern and efficiently equipped factories elsewhere, the alarm has been so prompt that the fire brigade has actually arrived at the factory where the fire has started before the workers on remote floors have known there has been anything wrong. All this complicated wiring is buried in the floors, and, as the illustration shows, the ceilings are perfectly free from obstructions.

The architects were Messrs. A. F. Scott and Sons, AA.R.I.B.A., of Norwich, who have made a special study of this type of building, and before commencing this scheme one of the partners, Mr. E. W. B. Scott, A.R.I.B.A., visited the United States for the sole purpose of examining the latest and best shoe factories there. The consulting engineer was Mr. G. T. Redgment, of Norwich.

The reinforced concrete engineers and contractors were Messrs. Lewis Rugg & Co., of Westminster, and the general contractor was Mr. A. R. Taylor, of Wroxham, Norwich. The sub-contractors were as follow: Edw. Potter, Norwich (stone); Henry Hope and Sons, Ltd., Smethwick (steel windows and roof lights); George Jennings, Ltd., London (sanitary ware and fittings); Brun-dall and District Supply Co., Ltd. (electric contractors); Oslers, London (electric light fixtures); The Safety Tread Syndicate, Ltd., London (stair treads); R. A. Evans, Ltd., Leicester (lifts); F. Broadhurst Craig, London, with A. Park and Sons, Norwich (heating apparatus); Gent & Co., Ltd., Leicester (telephones); National Radiator Co., Ltd., (boiler); Assoc. Fire Alarms, Ltd. (fire alarms—thermostats); J. Duckett and Sons, Burnley (drinking fountains); Building Products, Ltd., London ("Rigifix" hangers for shaft-ing and motors). "Pul-syn-etic" clocks are installed by Messrs. Gent & Co., Ltd.

The stone carving was done by Mr. Hubert Miller, sculptor, of Norwich.



SHOE FACTORY AT NORWICH FOR MESSRS. F. SEXTON, LTD.:
AN INTERIOR VIEW.

Housing Developments and Ideas

"Everyman's House" has been built in Kalamazoo by the Rev. Caroline Bartlett Crane. In spite of these somewhat fantastic names, this passage is not conceived in jest. The Rev. Caroline is no figment, but a veritable person—perhaps it were better to say personage. She was at one time the pastor of an undenominational church in a Michigan town, and was chairman of the local committee which built and furnished "Everyman's House" and conducted a Better Homes Week demonstration. Now she has written a book about the house. Clearly, therefore, she is a personage, as distinguished from a merely common person, or from no person at all—a living, bright reality, such as only the United States, possibly only Michigan, can raise. Nor is "Everyman's House" just a romantic dream. It has materialized, and is as real, and almost as precious, as the blessed name Kalamazoo, which is not the designation of some outlandish tune or excruciating freak instrument in a jazz band, but stands in an authentic postal address.

a jazz band, but stands in an authentic postal address. "Everyman's House," the Rev. Mrs. Crane states, "w built around the daily life of a mother and her baby, with unusual thought for their convenience, health, and happiness." Being such a practical-minded American lady, Mrs. Crane no doubt saw to it that a board was erected bearing the legend "Business as usual during building operations." This "Everyman's House" contains "a small efficiency, kitchen"; which is small, the efficiency, or the kitchen?-the phrase is ambiguous, and, as an American would say, leaves us guessing. Further guessing is required as to the exact character of the "large dining-living room," the "portmantalogue" term conveying no idea so strongly as that one must dine to live. This large dining-living room has an open fireplace, which is proof enough that Kalamazoo is broadminded enough to tolerate effete old customs which still linger in backward Britain, where the superlative virtues of the American stove are even yet regarded with a certain feeling that vacillates between prejudice and awe. That same curiously hyphenated room, "a bedroom and bath adjacent to the kitchen, forms part of what "is called the Mother's Suite, though apparently the father is also permitted to occupy it at times." This critical comment is from the pen of Mrs. or Miss Edith Elmer Wood; and appears in the August issue of "Housing Betterment: a Journal of Housing Advance, issued quarterly by the National Housing Association of America. This lady critic refers further to "a clever idea in the shape of a superimposed bed for the baby, elevated across the mother's on an iron frame, permitting her to sit up and attend to the baby at night without getting out in the cold." But what if "down came baby and cradle and all"? Yet, with this reservation, the idea seems worth passing on for consideration if not for action.

An idea that is even more valuable is that of building this 5,000 dollar to 7,000 dollar house "without anybody's putting up any money. The realtor, contractor, subcontractors, tradespeople, gardeners, each supplied his part on credit, to be reimbursed out of the proceeds when the house was sold, each agreeing to bear his pro rata share of the loss if there should be any." Like the critic, we "should like to hear just how this fine piece of team-work was brought about, and how it all turned out." We fear that in England it could not be done—for want of a powerful magnetic personality comparable to that of the Rev. Mrs. Bartlett Crane, who seems blessed with an optimistic faith that even realtors and contractors find contagious or infectious and compelling.

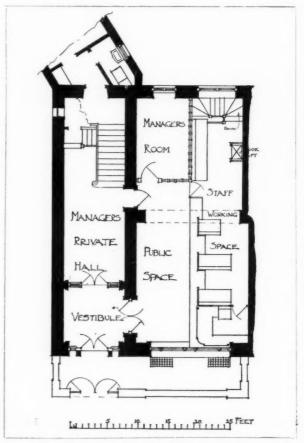
But this "jolly little house," as the critic calls it, will soon be hopelessly out of date, for at the National Town Planning Conference in New York an architect predicted, it is alleged, that in fifty years skyscrapers a mile and ahalf in height will be common to big cities, and that airplanes will be as numerous as automobiles. On this prediction Mr. H. I. Phillips, of the "New York Sun," founds a humorous anticipation of the "news jottings" of that giddy time. These are reproduced in "Housing Better-

ment," and we cannot resist quoting one of them, which is here selected for its moderation, the others being really too extravagantly facetious: "Rosenhoff and McGinty, real estate operators, have purchased the 200-story synthetic steel apartment house at 356 Park Avenue. They intend to remodel the structure, adding another half-mile of stories and putting in individual high-speed rapid-fire elevators. The old flying field on top of the present structure will be torn off and a new airdrome erected. There will be no plumbing in the building, all water being supplied by radio." "Everyman's House" at Kalamazoo is, it is perhaps needful to repeat, no joke, but an actuality offering points worth consideration.

Two New Irish Banks

On this and the following pages we illustrate the Munster and Leinster Bank at Mallow, Co. Cork (Henry H. Hill, B.A., A.R.I.B.A., architect), and the Ulster Bank at Athboy (Beckett and Harrington, architects). The building occupied by the Munster and Leinster Bank was formerly a house, about a hundred and twenty years old, and in bad condition. Considerable alterations have been made on the basement and ground floors to convert it to the uses of the bank; but upstairs, with the exception of extensive repairs, very little change has been made.

The front is of limestone, with wrought ironwork. The pilasters, columns, cornices, architraves, etc., on the front of the Ulster Bank are of pre-cast concrete (separate blocks), surfaced with granolithic, and the upper story, parapet, and chimney stacks are of red facing bricks. The roof is slated, the entrance door is of oak, and the ground floor windows have mahogany frames and sashes. The letters on frieze are bronze.

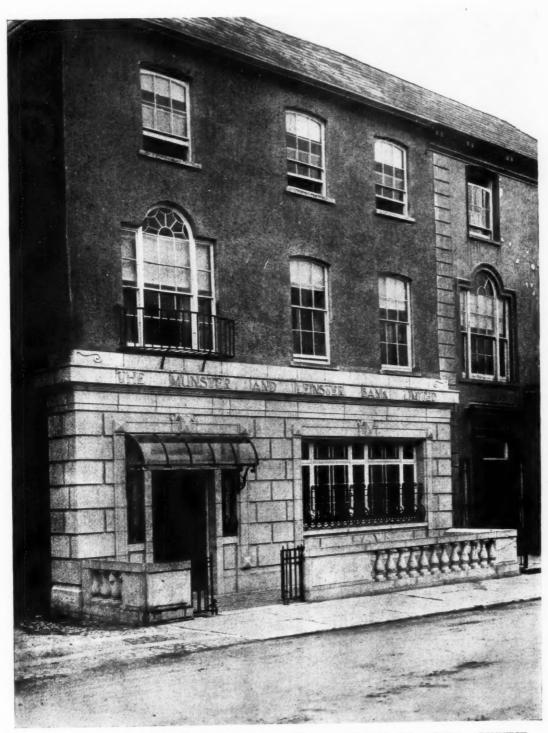


THE MUNSTER AND LEINSTER BANK, MALLOW, CO. CORK: GROUND FLOOR PLAN.

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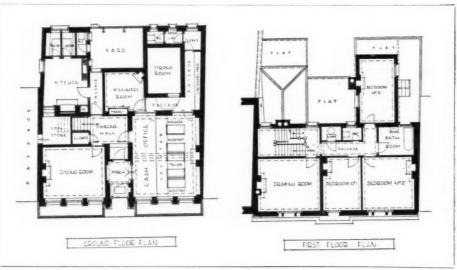
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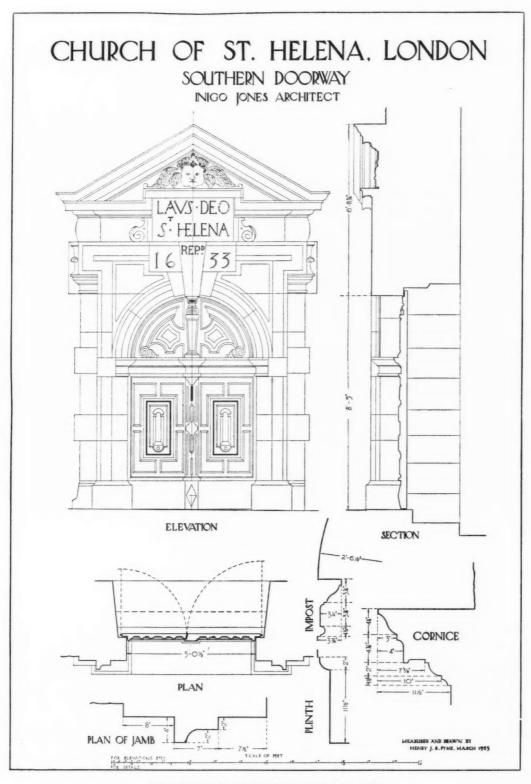


THE MUNSTER AND LEINSTER BANK, MALLOW, CO. CORK. H. H. HILL, B.A., A.R.I.B.A., ARCHITECT.





THE ULSTER BANK, ATHBOY BECKETT AND HARRINGTON, ARCHITECTS.



MEASURED AND DRAWN BY HENRY J. B. PYNE

This doorway was built in the latter half of the sixteenth century, and was repaired in 1633. The doorway is of Bath stone, and the doors are of carved oak.

Designing Fireplace Surrounds

BECAUSE of our variable climate the fireplace is the most interesting spot in our rooms. Its design seldom receives sufficient attention. Of course it should never be regarded apart from its environment. Its relationship to the whole should find appropriate expression. In designing a mantelpiece the complete wall in which it is to stand should be sketched, showing all its features, even the picture-rail. Only in this way can right proportion be achieved. In other words, the fireplace must be designed in accordance with the character of its environment.

Upon the position of the fireplace in the wall the character of the design will depend tremendously. If the fireplace is to go in or near the middle of a wall, the shape should be wide in proportion, and the cornice (if any) may be given a great overhang; but if the position is near or across the corner of the room, perpendicular lines should predominate and the cornice be more restrained, or even partly dispensed with, the design being carried upwards in one of the various ways familiar in the William-and-Mary corner chimney-pieces.

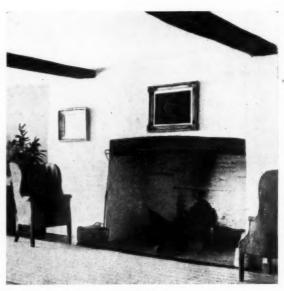
A very high room demands a high chimneypiece that directs the eye upwards, or, for sheer contrast and to emphasize the high plain space above it, a very low and very unobtrusive chimneypiece will serve. A low room also may have a high mantelpiece and overmantel, but in that case the design should go up to the ceiling, and the cornice return round it. A high mantelpiece that does not reach the ceiling in a low room leaves an awkward space above.

Mantelpieces Without Shelves.

An elaborate mantelpiece is often so conspicuous that it holds its own as furniture, whether in proportion to its surroundings or not, but very simple openings need greater skill in treatment. The illustration (Fig. 1) of an old Tudor fireplace which is really only a shaped opening in the wall, shows with what perfection line and proportion can fill a space without the aid of any decoration. The balance of wall-space is here seen to be good, and one feels that were it either higher or lower it would be spoilt, and were any decoration added the delicacy would be destroyed. In the same way the illustration (Fig. 2) of the opening, with the oak lintel, gives a certain impression of strength—there is no delicacy in this case—that is quite satisfying. This impression of strength would be destroyed were the



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FIGURE 2.

proportions altered. Both these fireplaces are designed for wood fires. They should be kept simple; added decoration would ruin them. Where the design is simple and dependent on line, every superfluous touch detracts; any addition of ornamental tiles or carving would completely destroy the effect.

For styles of later periods, to maintain this simplicity is not so easy. Certainly the bolection mouldings of the seventeenth century may help, but these are not really complete without their overpanels, despite the present custom of taking out all existing fireplaces and inserting good, bad, and indifferent substitutes. A good bolection surround that is to have no further decoration should be in stone or marble, and should be of sufficient size to fulfil its part in the scheme of the wall that it is to decorate. It is doubly decorative if the top is curved or scrolled, as the straight line of the lintel is apt to be too abrupt at the low point at which it is likely to occur, whereas a curved top will attract the gaze upwards.

There are many very simple forms of mantelpiece for all the later periods which can be designed easily if one looks for new *motifs* and uses new materials that may come to hand. A simple chimneypiece for a large room must, however, be made of beautiful material, whether it be wood or marble, and its lines must be perfect. It is fatal to trust to paint for the final effect of a simple design on a large scale. A small and very simple surround can be effectively treated in paint work, but the larger spaces of big work require the patterns of grain or vein. These very simple mantelpieces are really most suited to open hearths, where wood is burned on dogs, or where basket grates are supplied. A little more decoration is needed where there is a fitted grate.

The form of the grate should govern the design of the surround. The centre of a fireplace being the grate, the grate should therefore be chosen first, and the surrounding designed to conform to it. This reverses the usual order, but the curiously odd shapes of the surrounding tiles to most grates will at once attest its reasonableness. A little grate needs a very different setting from a large wide hob grate, and if the design is carefully constructed, an extra feature can be worked between the grate and the wooden mantel; the smallness of the working portions of many fireplaces can be disguised by clever arrangement. A wide

hob grate demands but little woodwork beyond the frame outside the marble jambs, but a small coal-saving grate may well receive some extra features. Architects should insist on supplying the fender designs, as they are really as much part of the fireplace as the hearth or mantelshelf.

During the eighteenth century mantelpieces reached a perfection that is almost too highly esteemed to-day, simply because we see little else but old examples, copies and adaptations—in most instances badly placed, unsuitable to their new positions, and picking up no decorative motifs from their surroundings. There should be some relationship between the mouldings and carvings of a room and those of the mantelpiece. To disregard this relationship is to treat an important architectural feature as if it were a separate piece of furniture. The illustration (Fig. 3) of an old mantelpiece of the eighteenth century, with its hob grate and fine carving, shows how absolutely complete it can be in every detail, and how perfectly related to the rest of the room. On the other hand, illustration (Fig. 4) shows a mantelpiece of a slightly earlier period that has been robbed of the painted panel round which it had been designed, and divested of its suitable wall decoration. Thus shorn it is a bleak, though still beautiful, affair.

It is often a great help when designing mantelpieces to use some extraneous feature—a picture, a piece of needlework, or a mirror, may be used—as a foundation round which the upper part is constructed, in the same way that the lower part is placed round the grate. This will help to elaborate the mantelpiece so that it will need little embellishment in the way of ornaments—an advantage, as such "ornaments" are too often only sentimental souvenirs.

Materials need not be limited to the usual wood and common marble; nowadays there are wonderful craftsmen in many materials. For example, glass-cutters and engravers were never better, and present-day gilders can surpass those of old.

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Inspiration for new forms to place above as overmantels may be found in many directions. One of the most fruitful sources will be found in old memorial tablets. These are most varied, and are full of ideas and suggestions for modern adaptation.

Wood mantelpieces must be painted or waxed. If left untouched they will get horribly dirty. The painting should be most carefully done, because of the usual habit of gazing at the fire and scrutinizing the surroundings rather closely. Though the rest of the room be flat, a mantelpiece is best stippled. Often a pleasant effect may be obtained by colouring the shelf and the top member of the mouldings with different or slightly different tints, or by gilding the edge of the shelf. Gilding adds considerable distinction. Where an overmantel runs up into the cornice, some part of the cornice should be coloured to match it, even though the rest of the cornice may match the ceiling.

Tiles should match the colour-scheme of the room, and so also should the marble slips. Marble is usually best left dull-polished, without that terrific gloss that the masons like to impose. Although there are lovely marbles, granites, onyxes, and slates available, the best are seldom seen except in public works; yet delightful effects can be got by choosing the veining with care, and having it quartered so that handsome designs occur at the angles. Such devices afford pleasure to the producer and satisfaction in the result.

Modern fireplaces are often incongruously designedlarge inglenooks and huge fireplaces often in small rooms in towns, yet seeming as if meant for large 4-ft. logs obtainable in the country but hard to procure and impossible to house in a crowded city. Such designs are pure affectation, involving waste of space and money. Much better can be done even in that cottage style, if it is needed. Much better Quaintness is no justification for anything, though sometimes humour is. In a well-designed house, every fireplace will have a charm of its own, and will be suited to its position. It will involve more trouble than plain uniformity, but the trouble will be worth while. It is the smaller details of design that give charm to a room that, already satisfactory in general design, is uninteresting in finish. It is in the finishing touches to objects like the fireplace that taste is expressed. Knowledge can create good design, but it is taste that creates beauty. There are many most excellently designed things that are not beautiful; and for our home life beauty is essential, and the mantelpiece is one of the easiest places in which to introduce it.



FIGURE 3.



FIGURE 4.

Reinforced Concrete Retaining Walls-VI

By PROFESSOR HENRY ADAMS, M.Inst.C.E., F.R.I.B.A., Etc.

OR the next example of retaining walls it will be interesting to take the case of vaults or cellars formed under the pavement in conjunction with a retaining wall. This principle was adopted at the Royal Insurance Offices, Piccadilly, London, and Messrs. Mappin and Webb's showrooms at the corner of Cheapside, London.

First consider the upper cantilever. Allow for a superimposed load of $1\frac{1}{2}$ cwt, per foot super, plus the dead load. Next the building we have $\frac{1}{2}(3.75\times1\times1.5\times112)=315$ lb. on end of cantilever. Then for distributed load on cantilever from remainder of footpath $8\times1\times1.5\times112+8\times1\times2.5\times$, say, 120=1344+2400=3.744 lb., giving a total load of 315+3744=4059, say, 4,060 lb., and a total bending moment of $315\times8\times12+3744\times\frac{8}{2}\times12=30,240+179,712=209,952$ lb. in. Then by formula $95bd^2$, $d=\sqrt{\frac{209,952}{95\times12}}=\sqrt{184\cdot17}=13.56$ in. effective depth. Adding $1\frac{1}{2}$ in. for cover will make the gross depth of cantilever at wall end, say, 15 in., which may be tapered off to, say, 9 in. at the free end.

Now we have the retaining wall, say, 12 ft. 6 in. high, to sustain a bank of earth, and loaded on top with traffic equal to, say, 2½ cwt. per foot super. We have also the effect of the cantilever to take into account with the load upon it. For the former we have in Fig. 22 the super load added, by its equivalent in earth at 112 lb. cub. ft., and the mean c.g.

worked out graphically; from which a vertical being dropped to cut the line of rupture, we get the position of the horizontal thrust, the amount of which we find to be 3,508 lb., with a leverage of 57 ins., giving a bending moment of 199,956 lb. in. We have also the bending moment due to the cantilever 209,952 lb. in., and 199,956+209,952 = 409,908 lb. in. total. Taking $B = 95bd^2$ will give us

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 $d=\sqrt{\frac{409,908}{95\times12}}=\sqrt{\frac{359}{359}}$ 6 = 18.97, say, 19 in., and adding 1½ in. for cover we get 20½ in. as the full thickness. The same thickness will be required in the base cantilever next to the wall, tapered off on the underside to, say, 12 in., at the wall of building. The underside of the cantilever should be made up by concrete to the edge of the concrete foundation of building.

For the reinforcement of upper cantilever at '675 per cent., we have $\frac{12 \times 13\frac{1}{2} \times .675}{100} = 1.0935$ sq. in. Say, three $\frac{11}{10}$ in. rods at 4 in. centres=1.11 sq. in., or two $\frac{7}{8}$ in. rods at 6 in. centres=1.2 sq. in. We will choose the latter. The same rods will continue down the back of wall. At the base of wall at '675 per cent. reinforcement we have $\frac{12 \times 19 \times .675}{100}$

=1'54 sq. in. Say, three ¹³/₁₆ in. rods at 4 in. centres=1'555 sq. in.; or two 1 in. rods at 6 in. centres=1'5708, of which we choose the latter. The "grip length" of a rod may be taken as 30 diameters. The experiments of Professor Mörsch gave only 27 diameters, but the L.C.C. rule makes

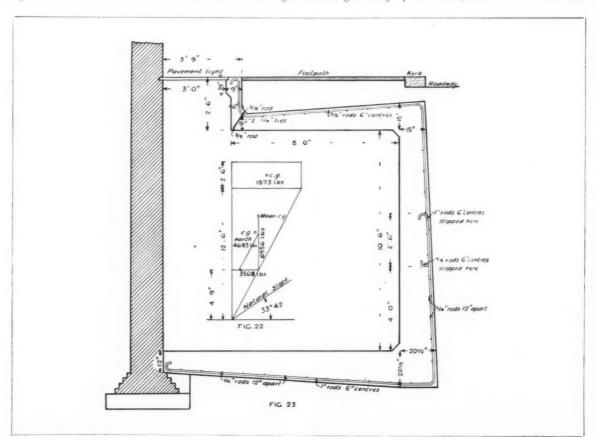


Fig. 22. Thrust diagram. Fig. 23. Section of Cantilever retaining wall and vaults.

it equivalent to 40 diameters, even when hooked at the ends, which is far more than necessary. The vertical bars in the wall may then overlap 2 ft. 6 in., as shown. This will allow of a change of diameter, and leave the rods a good working length. Distribution rods 4 inch in diameter will run at right angles to the seat 12 in. centres. Fig. 23 shows the complete section. Owing to the large area of bottom cantilever, the pressure on the soil will not exceed 3 ton per sq. ft. The calculations in this chapter have not been made quite so complete as before, because by now the student should be well able to make detailed calculations for

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Retaining walls for water, or dams, and also rectangular tanks, are designed on the same general lines. Circular tanks have the reinforcement graduated in size or spacing, or both, with the overlap breaking joint. Concrete in the proportion of I:2:4 properly mixed with just sufficient water to form a quivering mass is waterproof without the addition of any special compound, but to be on the safe side a mixture of $\mathbf{I}: \mathbf{I} \frac{1}{2}: 3$ is sometimes used.

When a rectangular reservoir has a flat roof connected to the walls by its reinforcement, the walls are not then in the same condition as ordinary retaining walls, and may be made lighter in consequence. They would be treated as beams supported at the top end and continuous at the bottom. In other words, the whole thrust per foot run, instead of being taken at one-third the height on a cantilever, would be taken as ordinates to a triangle giving a maximum positive bending moment of $\frac{1}{15}$ TH at a point about 387 н below the top, and a negative bending moment of $^2_{15}$ TH at the bottom; T being the whole thrust in lb. per foot run, and H the height of wall in inches. The shear at the bottom would be $\frac{4}{5}$ T.

(To be continued.)

[The previous articles of this series appeared in our issues for May 13, June 17, July 29, August 12 and 26.]

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.

PRESCRIBING A BOUNDARY LINE.

"Provincial" writes: "With regard to my enquiry published in your issue for August 26, I understand that the reason for a further setting-back of the slaughter-houses is not a desire to alter the building line (in fact, I was promised a written undertaking that any future building will be in order if built to the original building line), but to secure immunity from the public gaze and hearing. I fail to see how an extra 10 ft. is going to have such a great effect. The possibilities of there being any people about are remote."

The request of the local sanitary authority may be a reasonable one, but nevertheless I cannot see that they possess any powers to enforce a building line for what after all is a merely sentimental reason. Certainly the Public Health Acts give no such powers, and I am not aware of anything in the Town Planning Acts which can affect the question. I am of opinion that the Council must pass the plans under the circumstances mentioned in the enquiry; if they do not do so a mandamus of the High Court will compel them at once.

DRY ROT IN A HOUSE.

"G. B." writes: "Dry-rot is causing trouble in the diningroom, etc., of my house, the floor of which is laid with 6 in. by 6 in. tile quarries. The white fungus growth seems to emanate from underneath and at the back of the wood skirting, and at present it has completely rotted the wood, causing it to bulge out badly and crack and powder away. The trouble causes out bally and crack and powder away. The trouble causes an obnoxious smell. The skirting is nailed to a brick and wood stud partition. The growth is spreading rapidly along the underside of the thick linoleum covering the floor, in a white filmy growth, and is rotting it away. The damp appears to rise up between the joints of the tile quarries, and I am of the opinion that the concrete bed underneath the tile floor is of insufficient thickness and of poor material and proportions. What is the best remedy? The house is of two stories and was built in 1911. It stands on a sloping site. The room in which the trouble occurs is on the highest part of the site and is by an area. Will the work be a costly one to remedy?"

-The first thing to do is to remove the linoleum, which prevents the moisture in the tile floor from evaporating and being carried away out of windows and chimneys. Moisture will hang about for months and years under linoleum that is laid on a solid floor, and this might suffice to set up the trouble since dry-rot flourishes best in damp unventilated places.

woodwork that shows signs of decay must be removed and burnt forthwith in order to avoid infecting surrounding parts. The cost of the operations will depend upon how much wood is already infected, and upon the difficulty of putting the building into a condition to remain dry and well ventilated in

The experiment of removing linoleum (and using only removable mats on the tile floor) will determine the question

whether the moisture is merely the remains of water with which the building was put together, or whether fresh supplies of wet are oozing up through the floor. If the latter supposition should prove correct it will be necessary to make the tile floor waterproof, or to cut off all supplies of water that may be reaching it at present. It would seem probable that water flowing down the hill-side is likely to saturate the ground on which the house stands, and agricultural drain-pipes laid along the area behind the house and between it and the retaining wall may be needed. Rain-water falling in the area may also find its way through the walls and under the floor, and must be kept out by pavings and gutters. Linoleum itself contributes to the offensive smell when kept under damp conditions, and its removal should effect an immediate improvement. When all is sound and dry it may be relaid without fear of any unpleasantness, but as the first appearance of dryness may prove deceptive it is well to give the tiles some months of exposure, and to air the house thoroughly during this period.

A DAMP CELLAR FLOOR.

"T. R." writes: "Is there any cement or other wash which will render dry cellar floors in cement? The floors are sufficiently damp to destroy a floor-cloth or a carpet. I have tried a protective wash."

The success of any particular wash is conditional upon the amount of moisture in the floor and the pressure with which it is forced up through the pores of the cement. If the wash has been tried in accordance with the manufacturer's instructions and has failed to effect a cure, the special conditions of the case are probably too difficult for a wash, and demand the application of a substantial coating of waterproofed granoithic or of asphalt. The amount of moisture on the surface of the floor at the time the protective wash is applied affects the question, and if the floor can be kept dry until the reagent has thoroughly consolidated it has a far better chance of success. A chase cut all round the edges of the floor, to disengage it from sources of dampness in the walls, and sump pits hollowed at intervals in the length of the chase, might prove useful in withdrawing moisture or relieving its pressure while the wash is being applied. Good ventilation is essential to the life of a floor-covering laid direct upon cement, and if this is provided and the floor surface is thoroughly aired and dried out for some months, the floor can be treated and the linoleum relaid again on mastic of tar and pitch, or even stuck down with Staines Lino Cement. Linoleum manufacturers do not recommend their material for use on cemented floors, and it will only stand without shrinking when the floor is bone-dry and remains so.

Before covering the floor with any material that is likely be sticky, or offensive in smell, a part of its surface should be tested for dampness by covering it with a spare piece of lino for a week and then seeing if the moisture has been successfully dissipated. If this experiment is neglected the surface coating

of mastic, lino cement, or what not, may simply disintegrate into a disgusting slush which will ooze up through every seam.

It is just possible that exposure to air alone will make a sufficient difference in the water content of the floor; and if the building is a new one, and water of composition has not yet dried out, this experiment should be tried in the first instance.

A few removable mats will save the cement surface from wearing unduly if it is of good quality, and if not, treatment with impervious granolithic is indicated.

W. H.

EXTERMINATION OF HOUSE PESTS.

"S. M." writes: "In a newly erected house which has been occupied about fifteen months, small insects, nearly white in colour, have appeared on the woodwork of the window bottoms, on the furniture, and in various other places. The largest insect is about the size of a pin-head. These insects move very rapidly, and have increased alarmingly in number. No cause for their appearance can be traced, and treatment by spraying with a mixture containing methylated spirits (recommended by someone unknown to me) has proved ineffective. Is there any known disease in timber, etc., likely to produce these insects, and what steps should be taken to exterminate them? The house is in the country."

—The insect that is troubling your client must be, I think, the house mite. No house is entirely free from them, and they are usually more prevalent with antique furniture and old premises. It is impossible to hunt out their breeding grounds, which may be in crevices of woodwork or plaster, inside the upholstery of chairs and sofas, or in the material of heavy curtains, etc. The only known remedy is to fumigate the rooms thoroughly, taking care that all drawers, boxes, cupboards, etc., are turned out and left open.

There is no reason to suspect a disease in the timber; the mite is harmless, but becomes a nuisance when appearing in swarms,

J. C. R.

Societies and Institutions

Town Planning Institute Conference at Canterbury.

The seventh annual country meeting of the Town Planning Institute will be held at Canterbury from October 2 to 4, inclusive. Members will travel down on Thursday evening, October 1. It is proposed to devote most of the time available to the study of the future development of the Kent coalfields area, both by discussion and inspection. The Dean has also offered to take members round the cathedral. Hotel accommodation can be arranged at Canterbury if early application is made to the secretary, Mr. Alfred R. Potter, 11 Arundel Street, Strand, W.C.2. Delegates will pay their own hotel bills. The meeting is not confined to men or members of the Institute only—friends are invited.

The Institution of Structural Engineers.

In the past, admission to the Institution of Structural Engineers has been either by examination or, in the case of older candidates or practical experience, on production of evidence of works carried out. The membership of the Institution is now 2,000, and Sir Charles T. Ruthen, O.B.E., F.R.I.B.A., the president of the Institution, points out in a letter to all engineers and architects practising as structural engineers that it has been decided by the Council that as sufficient time has been given to all those who wish to enter on the grounds of work carried out, from January I next admission will be by examination only. In the meantime a final opportunity is to be given to those who have some years of practical experience in the profession, and who wish to make application for direct admission. Such intending candidates should at once obtain from the secretary of the Institution a form of application, which should be submitted as early as possible. Candidates admitted under the old system during the confluding months of this year will pay one subscription only to December 31, 1926.

The 1926 Edition of "Who's Who in Architecture"

The Editor of "Who's Who in Architecture" asks us to remind those architects who have not yet completed the questionnaire forms which were sent to them in May last, that these should be filled in and returned to him without delay, as the new edition is on the point of going to press.

Correspondence

"Architectural Style"

To the Editor of THE ARCHITECTS' JOURNAL.

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SIR,—Mr. Edwards's letter in your issue for August 12 clears up his inaccuracies as regards the building itself, but he does not seem to realize that the genius is not, and never can be, bound by "rules"; were it otherwise art would degenerate into a mere bundle of formulæ. Mr. Edwards clearly has not seen the Town Hall at Stockholm, and in measuring it in terms of rules he is putting himself in the position of those pedants who ache to amend Shakespeare's plays and Beethoven's symphonies because they, too, so often disregard rules. If he wishes to use the Town Hall he can use it as a perfect illustration of the freedom enjoyed by genius, but he may rest assured that if it comes to a battle between the tower of the Stockholm Town Hall and a set of rules—so much the worse for the rules. No matter how excellent those rules may be as guides for ordinary men. Let him go by those who have seen the building, and console himself with the tag "quod licet Jovi non licet bovi."

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Your correspondent "Skaal" apparently believes that a rule is the same as a principle, that seeing is the same as observing, and that the worth of a building is determined by clamour.

His Latin tag has all the levity of a platitude. But its converse expresses a greater truth. "Quod licet bovi non licet Jovi."

A. TRYSTAN EDWARDS.

House Building at Dunscroft, near Doncaster

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—In your "News of the Week" of your issue for August 19, you refer to the house building at Dunscroft, near Doncaster, and add that "twelve months ago the site was beautiful woodland country adjoining Dunscroft Abbey."

We shall be obliged if you will correct this statement. The site on which 414 houses have been erected at Dunscroft during the last twelve months for the Hatfield Main Colliery Company is purely agricultural land. There were very few trees—only twelve had to be cut down—and every tree that could possibly be spared has been left standing in the roadways or gardens of the houses. Dunscroft Abbey cannot be seen from the site.

The colliery village has been planned and laid out on the most up-to-date town-planning lines. The average density is about 7.75 houses per acre, and the scheme includes a central green of 5½ acres in extent, in addition to sites for schools, public buildings, institutes, and shops, hotels, and allotment gardens. The main road through the estate is 50 ft. wide between the fences, and 90 ft. between the houses. It is over 1¼ miles long, and when the second instalment of 260 houses is completed during the next twelve months it will connect up to the old Doncaster Road. This main road will shorten the distance by road from Hatfield colliery to Doncaster by over one mile, and avoid the narrow and winding streets of the old village of Hatfield.

The total lay-out is designed to accommodate eventually 1,100 houses, the area of the whole estate being 154 acres.

ARTHUR LLOYD THOMAS, DOUGLAS WOOD,

Joint Architects.

The Rebuilding of Tokyo and Yokohama

Writing in "The Times," the Tokyo Correspondent of that newspaper gives a vivid account of the cities of Tokyo and Yokohama as they are to-day—two years after the earthquake. He says: Tokyo may seem to the tourist to-day an unlovely city of inexpensive buildings. There is hardly anything to suggest that what he sees is one of the most wonderful triumphs over misfortune ever recorded. Those who are a little inclined to ridicule some of the queer little shanties which the owners have been compelled by financial ruin to put up in place of the more pretentious buildings which existed before the earthquake, do not stop to consider how much more poorly a European capital

might have done if it had been as hard hit.

This lesson is brought home the more by a visit to Yokohama, where the greater part of the work of reconstruction has been carried out by native capital and by the municipality. Not a single club, hotel, or shipping office has yet risen from the ashes of the Bund. A few temporary buildings, mostly residential, are to be seen, but none of them can be said in any way to take the place of the palatial edifices which formerly lined the Bund. Tokyo is just as liable to earthquakes as Yokohama or almost any other part of Japan; yet a dozen great buildings have risen, or are rising, in Tokyo, while nothing of the sort can be seen in Yokohama. Not only is the Bund still without any vestige of its former opulence, but the Bluff is, to all intents and purposes, as barren a hillside as it was on the days immediately following the earthquake. It is altogether different with the harbour facilities, which the Government have restored, and in some respects considerably improved. As a port Yokohama is almost normal, as a business centre it is a mere shadow of what it was.

Tokyo has certainly gone ahead if it is still far from the modest ideal which the city fathers promulgated 12 months ago. They then planned to widen several hundred miles of streets-more than 50 per cent. of the thoroughfares of Tokyo-by an operation entailing the complete or partial demolition of more than 100,000 houses. It will not be difficult to imagine the resistance that a civic earthquake of this kind met with from some of the property owners, especially when they were asked to forgo compensation for the first 10 per cent. of their property. Tokyo is a huge city, mostly of one-storied buildings. I have noticed in only two places any serious attempt to comply with the improvement scheme. I have been unable to discover a single one of those perfect little parks which were planned to provide us with refuge in times of earthquake and with water in times of fire and punctured water-mains. Until all the street widenings that were planned have been carried out, the provision of waterholes is a matter of little importance, as the fire-engines are still unable to reach directly quite 10 per cent. of the habitations.

Tokyo consists either of buildings of modern masonry, mainly concrete, or of wooden one- or two-storied structures. The two types are so intermingled that, except in the small business centre known as Marunouchi near the Central station, no line can be drawn between them. Even in the Ginza, the Regent Street of Tokyo, lowly singlestoried shops stand side by side with vast department stores. No doubt in the fulness of time wood will give place to masonry, but that time is not yet. It is in the Ginza that the rudiments of a brighter and better Tokyo are to be seen, for that is the only thoroughfare that is not in danger of any widening operations. It is about as wide as Regent Street, and at present carries about a quarter as much traffic. Since the catastrophe of two years ago, in which every wooden house in the Ginza was burnt down and all the others were gutted, two immense department stores, Matsuzakaya and Matsuya, have sprung up. Of these, the second is by far the larger—larger even than the famous Mitsukoshi store, which is situated about a mile farther along the Ginza in a part called Nihombashi. Mitsukoshi, together with its stock valued at 3,000,000 yen, was gutted by the earthquake fire; it has now been more or less reconstructed. Matsuya's store resembles one of the great Paris stores in its construction and internal decoration.

Bethnal Green and Thereabouts

To those who are familiar with the Bethnal Green of to-day it seems almost incredible that at the beginning of the nineteenth century it was "a garden suburb, inhabited principally by farmers and weavers." Mulberry trees grew in every private garden, and Bethnal Green Road was, in places, little more than a track across fields. These data, however, may be taken to be authentic, inasmuch as they are recorded in the introduction to an official publication issued under the authority of the Board of Education. This is a catalogue of drawings and prints relating to Hackney and Bethnal Green. ("Bethnal Green Museum—Catalogue of Drawings and Prints Relating to Hackney and Bethnal Green." London, published under the authority of the Board of Education. Price, including postage, 7d.) For the topographical drawings and prints catalogued and described, the public are indebted to the generosity of the Hon. Arthur Villiers, who, having purchased them at the sale of the famous Gardner collection in 1923, presented them to the Bethnal Green Museum, where they may be inspected by the public.

It is extremely fortunate that, the district having been changed, during the past hundred years, from a rather charming village to a rather vulgar suburb, the decadence was foreseen at a time when topographical draughtsmanship was at its zenith, so that, although photography was not then available, valuable records have been preserved for us by the pencil. Specimens of these drawings are given in a dozen plates appended to the catalogue. Too often they are attributed to "an unknown artist," but to W. Ellis is ascribed a view of Hackney in 1791; to J. Roberts, after Chatelain, a view of Brooke House, Hackney, as it appeared about 1750; a map of Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Gascoyne; the old Bishop's Palace, Bethnal Green, 1703, is by J. Harris, after J. Har about 1820, by G. M. Shepherd; and A. Beugo drew the Pilgrims' House, Hackney, about 1800. This last-named building, which was pulled down in 1800, had a curious lattice pattern in the brickwork of its three stepped gables. It is noted that the park-keeper's lodge at the Bonner Hall gate to Victoria Park has modified stepped gables, and also a brickwork lattice-pattern upon its walls. These features were apparently introduced by the architect in memory of the vanished Pilgrims' House. Brooke House is much the most notable old house still existing. It stands back from the west side of the Upper Clapton Road; but the front was rebuilt in the second half of the eighteenth century, entirely altering its sixteenth-century appearance. It gets its name from Fulke Greville, first Baron Brooke, the friend and biographer of Sir Philip Sidney. In a sense this little catalogue is a topographical manual of considerable interest with respect to the district to which it relates, in which it should greatly stimulate what remains of local pride and patriotism there.

This month a portfolio of five colour-block prints of "The Gateways of Salisbury Cathedral Close" is to be issued by Mr. Hesketh Hubbard, R.O.I., R.B.A., member of the Colour Woodcut Society. It will be recalled that some two years ago Mr. Hubbard established his own private press in an old thatched cottage in the New Forest for publishing hand-printed-colour block prints. Since that time he has issued forty-five of these, and they seem to be meeting a need for inexpensive home decoration. In the forthcoming publication all the illustrations are designed and cut by the author, Mr. Hubbard. The originals are mounted separately and put up in a portfolio measuring 18 in. by 13 in., and a technical note on the prints is supplied by Mr. Reginald H. Green, A.R.E. The portfolio is published at the Forest Press, Breamore, near Salisbury, price 42s. net.

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New Science Museum, South Kensington

Good progress is being made with the erection, from the designs of Mr. R. J. Allison, Chief Architect to H.M. Office of Works, of the new Science Museum at South Kensington. It will be recalled that work on the eastern block was begun in 1913, but was stopped during the war. Building was resumed a few years ago, and as the galleries are completed the collections, representing the development of science and invention in their application to industry, are arranged for

exhibition.

The Museum is part of a scheme decided upon by the Government in 1912, whereby the Natural History Museum, the Geological Museum, and the Science Museum would be co-ordinated and housed in close proximity at South Kensington. The site of the Museum lies north of the Natural History Museum, and extends from Exhibition Road to Queen's Gate. The original scheme consists of three halls, each with galleries on two floors above the ground floor, and a surrounding tier of galleries forming the top story. These great halls will eventually be connected by narrower blocks of buildings containing exhibition space designed in four floors above the basement. Conference rooms, administration rooms, offices, and workshops are also provided. The total length of the building between Exhibition Road and Queen's Gate is about 1,200 feet, and the frontage towards Exhibition Road is approximately 250 feet. This frontage is faced entirely with Portland stone, and shows a range of columns rising from the first-floor level to the entablature.

Manchester University School of Architecture

The Manchester University School of Architecture opens on October 8. The courses are intended to meet the needs of students who desire: (1) to take a degree of the University with honours in architecture in the Faculty of Arts; (2) to take the certificate of the University in Architecture; (3) to take a part-time course in architecture, in which examinations in certain specified subjects are accepted as equivalent to the intermediate A.R.I.B.A.; and (4) to take a course in architecture without proceeding to a degree or qualification. The degree and certificate courses are full-time, and are arranged to cover a period of five years. In the fourth and fifth years the classes are taken at the University during the two terms from October to Easter, and the remaining six months of each year must be spent in an architect's office. At the end of the third year successful candidates are exempted from the intermediate examination for associateship of the R.I.B.A., and at the end of the fifth year from all subjects in the final examination for the A.R.I.B.A., except "professional practice," which examination is conducted independently by the R.I.B.A.

The outline of the five years' course states that in the first year students proceeding to the degree of B.A. are required to take three accessory subjects—(a) a language; (b) history or English literature; (c) mathematics or physics. In the certificate course mathematics only is required to be taken. The architectural subjects consist of general history of architecture up to sixteenth century, building construction, elements of architecture, together with the various branches of drawing required for the effective illustration of architecture. The aim, at this stage, is to nurture in the mind of the student a sense of fundamental values and reasons broadly expressed in the

courses on general history and building construction.

In the second year the student applies technique and theory in architectural composition by assembling parts into simple groups. In the earliest stages of drawing the value of showing constructional jointing is emphasized, so as to develop the faculty for thinking and drawing in terms of building. Lectures on a special period of history of architecture and history of classical sculpture continue the archæological aspect of the work, while building construction and hygiene keep the practical needs of his art before the student. Drawing proceeds pari passu with the other studies, an important part of which are exercises in form and composition in conjunction with lectures on this subject. A short course in town planning is given to establish at an early stage the value of environment and manner, and so to widen the conception of architectural fitness.

In the third year the same general principles govern the course. Students work out in detail buildings which, in the town-planning course of the second year, they have laid out. Time studies in design are also set throughout the session in

connection with the lectures on theory of design. Lectures in Italian mural painting and a special period of architecture are taken. On the technical side the study is advanced to structural engineering. Drawing from the antique and still-life colour studies are carried on in the cast studio. In the fourth and fifth years advanced studies in design are set and detailed to half-inch and full size, and also a series of time sketch designs as in the previous year, which are criticized, when possible, by lay visitors who have special knowledge of the functions of the particular buildings concerned. Certain of these time subjects are later revised and re-modelled. Building construction during these years is taught to each student separately, and deals with his own particular designs. Lectures are delivered on the aesthetic properties of building material, specifications and quantities, and professional practice continue throughout the two sessions. According to the ability of the student he can take, in the studio, drawing from the antique, still life, and life studies.

Numerous valuable scholarships and prizes are awarded

nnually.

The Oxford Town-Planning Scheme

Oxford is carrying out an important scheme of town planning. The scheme was framed some time ago, and the Ministry of Health were sufficiently satisfied with it to grant provisional powers over the area it is proposed to control. The corporation have been getting ahead with the scheme already,

In the town planning of Oxford and district, there is really a two-fold problem, the Mayor explained to a representative of "The Observer." "In the first place," he said, "one has to consider what measures can be taken to preserve the beauty of the old city; and, in the second, to see what can be done to preserve the amenities of the beautiful district surrounding it. At the present time the city is progressing at a rate which is far greater than at any period in its history. Oxford is no longer the old university city it was, even up to the time immediately preceding the war. Its condition is changing just as rapidly as its population is increasing. No large night signs, or even outside advertisement boards beyond those of very small dimensions will be allowed. And no one may now erect objectionable hoardings for advertisements on the roads approaching the city. Hoardings are not in themselves prohibited, but they must not exceed a certain size. The town-planning area has, roughly, a radius of three miles from the centre of the city. This area is large enough to take in all the approach roads to the city, and will enable us to safeguard the beauty of the roads entering Oxford. We have also powers, under a new Act passed last session, to wipe out entirely London Place, a built-up island slum on the road from London to Oxford, at the foot of Headington Hill. This improvement will add enormously to the beauty of this approach. When a plan for a house is submitted it will first be examined by the Joint Town-Planning Committee. If, in their opinion, it is not appropriate it will be laid before the President of the R.I.B.A., or someone appointed by him, for suggestions. No charge will be made to the builder; he will receive the suggestions free of cost, and the district will secure the right type of architecture that it desires. With regard to what one may call the built-up portion of Oxford itself, special powers have been obtained to preserve its unique character, and within the University area it will not be possible to build any inappropriate structure.'

Big London Property Deal

About forty acres of the Howard de Walden estate, situate in the vicinity of Oxford Street, London, has been acquired by the Audley Trust Ltd. The portion of the estate sold extends northwards from Oxford Street to Euston Road, and eastwards from Oxford Circus and Regent Street to Wells Street, and includes such well-known business thoroughfares as Great Portland Street, Great Titchfield Street, Margaret Street, Mortimer Street, Eastcastle Street, and Great Castle Street. The streets comprised in the deal form a wedge-shaped area with Great Portland Street on the western boundary and Wells Street on the east, Euston Road on the north, and Oxford Circus to the south. There are no important public buildings in it, but it is a busy place. Great Portland Street is a centre of the motor-car industry, many big firms having their showrooms in this thoroughfare. In Great Titchfield Street, and the other smaller streets comprised in the area, the small retailer is prominent, and several hundred shops are crowded in the district (see comment on p. 364).

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America's Apartment Hotels

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Mr. W. T. Benslyn contributes to the Journal of the R.I.B.A. an interesting article on a new system which has arisen in America, and has become very common in Chicago, called "Apartment Hotels." These are buildings, he says, in which the functions of hotels are combined with those of apartments, the principal feature being that although the management takes over many of the worries and responsibilities of service, the apartments, although small, are capable of being made into a comfortable home in which the occupants can live their own lives in privacy. Most designs have a standardized unit as their basis. These do not vary much in type, and mostly occupy an area of approximately 500 square feet. Each unit consists of a large bed-living-room with a disappearing or portal bed or beds which fold up and swing round into a ventilated cupboard during the daytime. This room is thus made to serve as a bedroom at night and a living-room during the day. On one side a space seven feet wide is given up to breakfast-room and kitchenette, and on the other a space five feet six inches wide is utilized for bathroom, dressingroom, and wardrobe. Such a unit provides one or two persons with all the requisites for living with the minimum of housework.

The idea originated in California. Americans are very fond of travelling at all times, and do not mind making journeys between places as far apart as New York and San Francisco just for a short holiday. They do not, however, endeavour to move large quantities of furniture from place to place. Apartments of this type are, therefore, let furnished. Not only is the actual furniture supplied by the management, but also all the crockery, pots, pans, brooms, and the whole of the miscellaneous cooking equipment required in housekeeping, which are on charge to the occupant.

The kitchens themselves are marvels of compactness, and seem to have absorbed every ingenious contrivance for space and labour saving. The kitchen and breakfast-room are really one room. The actual kitchen occupies an area of approximately forty-five square feet, and in this it is quite possible to cook an ordinary meal properly. On one side there is the range and kitchen-cabinet containing groceries, etc., on the other side of the sink and draining-board. The success of apartments with kitchenettes depends largely on the efficiency of the ventilation. In some examples the bed, when not in use, stands vertically in the dressing-room.

York's Stained Glass

The Yorkshire Architectural and York Archæological Society have paid a visit to All Saints', North Street, York. Mr. J. A. Knowles, in describing the stained glass, stated that it was a mistake to imagine that all the best work in medieval glass was to be seen in the Minster. For though the Minster windows might exceed in size, they did not all surpass in quality the windows in the parish churches in the city. The reason for this was not far to seek. The Dean and Chapter were always handicapped for money. Moreover, as they represented a rival authority, they and the civic authorities regarded one another with the utmost dislike and suspicion. Therefore, when rich merchants such as Sir Richard Yorke, mayor of the city and mayor of the Staple at Calais, and Nicholas Blackburn, mayor and Admiral of the Fleet, died, they presented windows, not to the Minster, but to their own parish churches in which they and their families had worshipped Sunday by Sunday. As the windows were smaller and unlimited money was available, the work was of a correspondingly fine quality.

York men were great politicians, and they were fond of showing their political allegiance with Yorkist badges in the windows of their churches. The most popular were a lion sitting with its tail between its legs, a sun in splendour, and an eagle, all of which were used by Edward IV. Shakespeare makes York tell his brother Richard (referring to the death of their father):—

"If thou then be that kingly eagle's bird, Show thy descent by gazing 'gainst the sun." The opening lines of Richard III present another and better known instance. In one of the side windows of All Saints' a whole panel is filled with suns; and Archbishop Kempe employed Henry Roos, glass painter, of York, to paint "panels with a representation of the sun's rays" for his palace behind the Minster. The East Window of All Saints' shows lions seated; and another fragmentary window, which Gent, the historian, says contained a representation of a religious procession. But it may with diffidence be suggested that it possibly represented the coronation of Edward IV. in the city in 1463, for a banner has a sun in splendour embroidered on it. These suns may also have had something to do with civic pride, for they date back to the time of Richard II., who gave the city a charter.

Previous to the inspection of the stained glass, Dr. Evelyn presided over an informal meeting of the society, and announced that it was the original intention of the society to have all the medieval stained glass in York recorded, but owing to lack of funds that work had not been accomplished.

Subsequently the party visited the ancient cottages in the lane adjoining the church.

List of Competitions Open

Date of Delivery.	Competition.
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 Bragernas 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; escond 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. 15	Workers' homes for the Moscow Soviet of Workers, Peasants, and Red-Army leputies. The aim of the competition is to devise types of houses with dwellings for working-class families living in individual households, under the living and climatic conditions of the province of Moscow. The types of houses required are as follows: (a) A two-storied house containing 4-8 dwellings situated on one floor, i.e. the whole of each dwelling located on one floor; (b) a house of the ordinary block type with no less than three dwellings, each located on two floors; (c) a three or four-storied fireproof house with central heating; not less than three entrances to the dwellings from the staircase-platform on each floor. For the relatively best projects the following prizes will be awarded on each type of house separately: (a) (b) (c) First
Nov. 9	Proposed Fire and Police Station at Marlborough Crescent, New-castle-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.
Jan. 1, 1926	New buildings for Liverpool College on a site at Mossley Hill. Assessor, Sir Giles Gilbert Scott, R.A. Premiums, £500, £300, and £200. Conditions and plan of site can be obtained from Mr. J. H. Lintern, secretary, Liverpool College, Sefton Park Road, Liverpool, on and after September 1, on payment of a deposit of £2 2s.
June 30, 1926.	Competitive designs are invited by the Ministry of Wakfs for the rebuilding of the Mosque of Amrou. Prizes of £4,500, £1,000, and £500 are offered for approved projects. Those wishing to submit designs should apply before June 30, 1026, 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, 1027.

Competition News

Enlargement of Carnegie Hall, Dingwall, Fleetwood Hospital, and Topham Public Hall.

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

The Week's News

Cork Housing.

Plans for the erection of 150 houses for the Corporation are well advanced.

Change of Address.

Mr. W. F. Dawson, A.R.I.B.A., architect and surveyor, has moved to 129 Albion Street, Leeds. Telephone No. 22321.

Windsor Road Widening.

Proposals for widening King's Road, Windsor, are being discussed by the Council and Berks County Council.

A Walthamstow Road Widening Scheme.

Ferry Lane, Walthamstow, is to be widened at a cost of £28,280.

Houses for Morecambe.

Plans are being prepared for the Morecambe Corporation for a housing scheme costing £80,000.

A New Station for Welwyn.

The London and North Eastern Railway have placed a contract for the erection of a new station at Welwyn Garden City. The station will be completed by next summer.

Proposed Swimming Bath for Friern Barnet.

The question of constructing an open-air swimming bath is to be considered by the Friern Barnet Urban District Council. The site proposed is on the Bethune Park estate.

Professional Practice.

Mr. A. J. Butcher, A.R.I.B.A., has opened offices at 2 Premier Parade, Edgware ('Phone: Edgware 208), where he would be pleased to receive trade catalogues.

Housing at Retford.

The Retford Town Council are considering the erection of fifty more houses of the non-parlour type on the Corporation estate.

Nottingham's New Exchange Buildings.

The Nottingham City Council are applying to the Minister of Health for sanction to borrow £504,000 for rebuilding the Exchange Block for purposes of municipal buildings and shops.

York House, Twickenham.

The Ministry of Health have given their sanction to the Twickenham Urban District Council raising a loan of £33,000 for alterations to York House and grounds for the use of the Council and the public.

Lighthouse Builders.

When plans for the erection of a new lighthouse were discussed at a meeting of the Hartlepool Port and Harbour Commissioners, it was stated that there are only two builders of lighthouses in England.

The R.A. War Memorial.

The work of casting the remaining figures designed by Mr. C. Sargeant Jagger for the Royal Artillery Memorial at Hyde Park Corner is being rapidly pushed forward in view of the unveiling by the Duke of Connaught on October 18.

Public Baths for Hebden Bridge.

The Ministry of Health have given the Hebden Bridge Urban District Council sanction to a loan to purchase the Garden Square estate for the extensions to the District Council offices, street improvements, and as a site for public baths.

Housing in the Ramsbury District.

The Ramsbury Urban District Council have received the sanction of the Ministry of Health to the borrowing by the Council of £380 for the purchase of the land and £10,400 for the erection of the houses.

Bedworth Housing.

The Bedworth Urban District Council have decided to apply to the Minister of Health for sanction to a loan of £22,500 for twenty years to pay a lump sum subsidy on 366 houses, and £16,600 for sixty years for the erection of a further forty houses on the Bulkington Lane, Bedworth, site.

Ellesmere Port Improvements.

The Ellesmere Port Urban District Council have launched'a scheme of town improvements which, with a recreation ground as a central idea, will include tennis courts, bowling greens, croquet lawns, a bandstand, a children's paddling pool, and the war-memorial project.

Bridlington's £100,000 Improvement Scheme.

The Bridlington Corporation have passed two schemes for sea-front improvements—a £50,000 scheme for the extension and development of the Prince's Parade on the north side, and a £50,000 scheme for development at the Spa on the south side, Application will be made to the Ministry of Health for sanction.

American Building to Include Hotel, Church, and Bank.

Mr. Oscar Konkle, a New York builder, intends to erect, at a cost of £3,000,000, a sixty-five-story building that will include an hotel, a church, a hospital, a bank, and shops. The proposed building will contain 5,500 hotel rooms, an intendenominational church, a dining-room for 2,000 people, a bank for missionaries, and twelve roof gardens.

Gloucester Rural Housing.

The Gloucester Rural District Council have adopted proposals for the erection of fifty houses for agricultural and other workers employed in the rural district, and the scheme has been forwarded to the Minister of Health for approval. The whole of the fifty houses would be of the non-parlour type, and would each contain at least three bedrooms.

New Doncaster Infirmary.

The Doncaster Infirmary Committee have approved plans for a new infirmary, to be built at a cost of £300,000. Ultimately 600 beds will be provided, but the number to commence will be 300. It is expected that building operations will commence within a few months, and that a block containing seventy beds and administrative and other quarters will be ready by next summer.

Dublin Improvement Schemes.

Works which involve an expenditure of over £394,897 were considered at the last meeting of the Dublin Borough Commissioners, when it was decided to seek the permission of the Free State Minister for Local Government to raise the necessary sums by loan. The money is required for the new building project at Fairview, the Keogh Barracks housing scheme, and improvements in the city drainage system.

Wren's Materials for City Churches.

A reminder of the great difficulties which Sir Christopher Wren had in securing materials for the rebuilding of St. Paul's, and City churches destroyed in the Great Fire, has been provided in the course of the removal of the coating of stucco from the outer walls of St. Lawrence Jewry by Guildhall, built in 1671. A portion of the north wall has been found to contain Roman bricks, old paving setts, and lumps of chalk. Mr. Underwood, the architect, states that this shows that Wren took any materials he could get from the ruins or elsewhere. The presence of the lumps of chalk is a reminder that for lack of other material he and his masons had to excavate under Blackheath and take that substance and use it.

New Building Ballot.

An important ballot is now being taken by the National Federation of Building Trades Operatives. It is proposed that with every rise or fall of 6½ points, based on the cost of living at the index figure of 78, there shall be an increase or reduction of ½d. an hour. The wage agreement is to be annual on the average cost of living over the whole of the year, and the ½d. an hour increase that was won by the men after their last dispute is to be guaranteed. The men are now voting as to whether they will ratify this agreement, and it is unfortunate that both the bricklayers' and the plasterers' unions are standing aloof. If the agreement is ratified it is proposed to abandon the present National Wages and Conditions Council, and to appoint a new body known as the National Joint Council. One of the special aims of the scheme is to allow greater freedom of action to local districts to deal with questions of extra wages, travelling and lodging allowances, all of which affect directly the speed and cost at which houses are built.

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The Week's News-continued.

The Guards Division Memorial.

The Guards Division Memorial to be erected on the Horse Guards Parade will be complete in time for the King's birthday next year. The memorial will be in the form of a pylon of Portland stone, some 36 ft. high. Five soldiers, 7 ft. high, adorn the front facing the Horse Guards Parade, each of them representing a regiment in the Brigade. Mr. Gilbert Ledward, the sculptor, and Mr. H. Chalton Bradshaw, the architect, are jointly responsible for the design. On the face of the pylon there will be an inscription, and at the back a relief panel to balance, representing an 18-pounder gun in action. Other bronze panels will be mounted on the sides for inscriptions and lettering.

Gwydyr Castle.

That famous stronghold in Carnarvonshire, Gwydyr Castle, for centuries the home of the Wynn family, is again in the market. The site looks out over the valley of the Conway, and part of the castle, built in 1555 by Sir John Wynn, still exists. Both Queen Elizabeth and Charles I stayed at Gwydyr. Its first known owner was Howell Coetmor, captain of one hundred Denbighshire men who fought under the Black Prince at Poictiers, and whose son Dafydd sold it to Meredydd ap Jevan (the great-grandfather of Sir John Wynn), who rebuilt it about 1480. The mansion was restored in 1828, which date, together with another in the early sixteenth century, appear on either side of the doorway.

Norman Priory Used as Stable.

Local antiquaries propose to negotiate with a view to St. Leonard's Priory, Stamford, Lincolnshire, being made a national trust. The building was an important ecclesiastical establishment in the days of the Normans, and is now being used as a stable. The west and north sides are in excellent state of repair. Attached to one of the walls is an inscription stating that "St. Leonard's Priory was founded in the seventh century by Wilfrid, tutor to the son of the Saxon King Oswy. The present arches were erected by William II about 1090. The west front was rebuilt in 1150." It is claimed that the priory was built on the ruins of an older one erected about 658. The east bays are stated to be pure Norman, while the west front is transitional. Some fine carving is to be seen, evidently cared for, as well as several lovely pillars. Local antiquaries agree that every reasonable care has been taken of the building, but they feel that it is of sufficient beauty and interest to warrant other treatment.

The Passing of St. Olave's.

The demolition will take place shortly of St. Olave's Church, Tooley Street, S.E. The original church was probably the earliest parochial foundation in Southwark. St. Olave (or Olaff), to whom the present building and its predecessors were dedicated, was King of Norway. In A.D. 993 he made an incursion into England and sailed up the Thames with his fleet. He, however, made peace with King Ethelred, and being converted to Christianity by the English prelates, he became a fast friend of this country. Subsequently Olaff died a Christian martyr in his own land, and the citizens of London decided to build five churches in his honour, one of which was to stand on the present site. In 1736 the church was rebuilt, but about 100 years later it was seriously damaged by fire, and in 1840 the present church was opened. Among the relics preserved from the fire was a sword-rest dated 1674, now in Southwark Cathedral, and the pulpit with its sounding board.

Rehousing Scheme.

Plans have been prepared in Liverpool for a large rehousing scheme, which will involve the rebuilding a residential belt affecting a population of at least 50,000. The problem of how to dispossess dwellers with the minimum of hardship is being considered, and it is believed that this can be done by the erection of two vast "clearing houses" for the accommodation of the first batch of families to be disturbed preparatory to the work of demolition. The Housing Committee propose to erect at the Dingle—the south end of the city—a ten-story block of tenements for the first lot of residents to be removed, and a similar block of tenements for the north end is contemplated. The project has yet to obtain the sanction of the City Council and the Ministry of Health. The tenement blocks, if built, will represent a great improvement on the old type. Electric lifts will serve the higher levels, and there will be electric lighting throughout. Each living room will have a coal fire, and the provision of central heating and hot-water system, as well as a central laundry, is being considered.

The Corrosion of Tumbler Switches

Investigations have been carried out in the research laboratories of the General Electric Co. into the cause of the corroding of tumbler switch terminals. To begin with, visits were paid to houses in which the trouble occurred, and it was definitely ascertained that the corrosion, which is of a brownish-green colour, was found only in those houses which were wired on the negative side of a three-wire D.C. system, and that it did not occur in houses which were connected on the positive side of the system. It was then decided to reproduce the conditions in the laboratory. These laboratory tests were an absolute confirmation of the results met with in actual practice, viz., that the corrosion invariably occurred on the negative side. The experiments showed that the corrosion only becomes evident when the switches are fitted in a damp situation, and later tests proved that moisture is drawn up to the switch terminal by the capillary action of the outer braiding of the cable. Leakage is set up, and electrolytic action takes place. As the result of this, copper is deposited on the negative terminal, which in air turns to copper carbonate, and thus forms a porous covering of salt, tending always to keep the surface wet, thus spreading the trouble. As the blades of the switch become wet the solution is splashed on to the cover of the switch when the switch is operated.

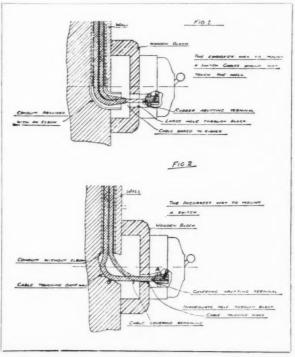
Further experiments were conducted in which the bare ends of the cables were well greased before insertion in the switch terminals, and this appeared to have a good effect, as only slight corrosion was observable.

Still further experiments were carried out under exactly similar conditions, with the exception that the outer covering of the cable was bared down to the rubber insulation for some distance before entering the switch, so that it could not possibly touch the metal of the switch terminals. It was then found that corrosion did not occur. Switches mounted on the positive side of the system are not subject to this trouble.

To summarize the matter, it is apparent that the trouble is caused by the mounting of switches in such a way that the outer braiding is brought right up to the base of the terminal on the switch (see "A" Fig. 2), after having been in contact with water from the damp wall (see "B" Fig. 2). The only remedy is good and careful installation. If the position of the switch is such that the wall and surroundings are damp, the following precautions should be taken:

following precautions should be taken:

(a) Cables should not touch the damp wall on their way from the conduit in the switch. A large enough cavity or the



THE CORRECT AND THE INCORRECT WAY TO MOUNT A TUMBLER SWITCH.

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protection afforded by an elbow-joint in the conduit should be provided behind the switch in order to ensure this

(b) Cables should be bared down to the rubber for some inches before entering the back of the switch.

(c) The ends of the cable should be covered in thick grease

before being inserted into the switch.

Although tumbler switches only are dealt with in this article it will be evident that exactly the same conditions may be met with in such other accessories as fuse boards, wall plugs, cut-outs, etc., and although these are not called upon to give a mechanical performance, as is the case with switches, it is important that for the sake of their lasting properties and electrical efficiency, similar care in installing them should be exercised.

Trade and Craft

The Fire at Messrs. Walter Carson and Sons.

We are informed that the fire at Messrs, Walter Carson and Sons, Grove Works, Battersea, caused damage to the machinery, etc., in one department only. Production is again normal, and the firm are in a position to give prompt delivery of all goods ordered

Mazda Lamps and the Southern Railway.

The British Thomson-Houston Company, Ltd., have been successful in obtaining a six months' contract for the supply of Mazda lamps to the Southern Railway.

New Inventions

Latest Patent Applications.

21090.—Lantz, M.—Manufacture of cement. August 22. 20905.—Fisk, E. T.—Ventilators for wall apertures, etc. August 20.

20573.—Glenister, A. H.—Concrete walls. August 17.

20649.—Grieger, R.—Concrete, etc., building construction. August 17.

Specifications Published.
237975.—Love, W. W.—Construction of framed buildings.
238029.—Montalk, R. W. de.—Facing of concrete slabs and buildings

238112.—Parker, J.—Roofing tile.

Abstract Published.

236458.—Nicholl, G., 26 Park Road, Cape Town.—Roofing.

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.

Liverpool School for Young Builders

To teach young builders how to build, the Liverpool Education Committee has opened a new day school at the premises in Fontenoy Street which were, until quite recently, known as the Lord Roberts Memorial Workshops. The classes will be attended by apprentices in the various sections of the building trade. The scheme has the enthusiastic support of the employers and the trade unions of the Liverpool area; indeed, it is the outcome of conferences which have been held In its working the Technical Instruction Comwith them. mittee will have the assistance of an advisory committee on which the employers' and the operatives' societies are directly represented. Moreover, the masters have undertaken to pay the fees of the apprentices they nominate to attend the classes, and to allow them a full day's wage for every day at the school.

While the premises in Fontenoy Street were being adapted to their new use, experimental classes on similar lines have been held at the Central Technical School in Byrom Street, with results which have been eminently encouraging. scheme provides six distinct courses—a general building course, dealing with the industry as a whole (designed to prepare youths of special promise for places of responsibility in the industry), wood-working, brick-working, plastering and concreting, and plumbing and allied trades. These are the normal courses, but for younger students and others likely to need more elementary teaching there will be a special preparatory course, which will comprise instruction in English, arithmetic, mensuration, and plane and solid geometry, leading up to practical work connected with the student's own craft.

New Irish Free State Patent Laws

Valuable interests will be involved in the changes arising from the new patent laws which will shortly come into force in the Irish Free State. Mr. Geo. H. Rayner, the patent agent, makes clear several of the points needing careful consideration by those concerned. He says: British patents granted before December 6, 1921, will be continued upon the Irish Register December 6, 1921, will be continued upon the Hish Register if a copy of the patent is lodged in Ireland and renewal are paid as in England. British patents applied for after December 6, 1921, and before the passing of the Act, will be granted subject to a search in the Irish Register. These privileges in regard to patents will also extend to registered trade marks and designs. Should an application for a patent be made without reference to any earlier British patents, then it must be accompanied by the report of a registered patent agent based upon a search for novelty in the British records. Messrs. Rayner & Co., of 5 Chancery Lane, London, W.C., patent agents, will be glad to supply further information.

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