

THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration



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June 1924

No. 331



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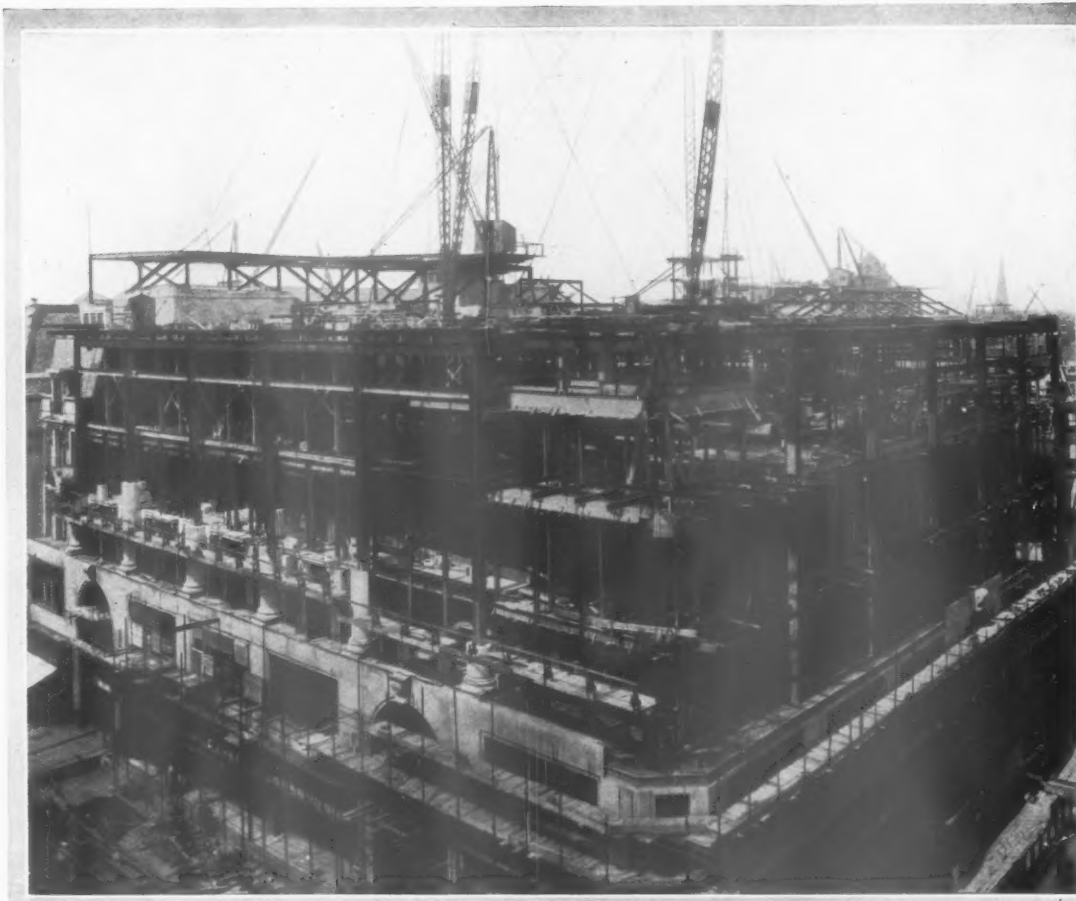
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A Magazine of Architecture & Decoration

EDITED BY WILLIAM G. NEWTON, M.C., M.A. OXON., F.R.I.B.A.

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Plate I.

IMPERIAL DELHI.

From a Water-colour by William Walcott.

June 1924.

Empire.

οἷτε νήστους οἶδα Κασσιτερίδας ἐούσας—HERODOTUS.

THE little islands from which tin was carried out of the dim northern seas to the armourers' shops of Greece have grown in importance since the days when Herodotus could write of them as less certainly vouched for than the sheep which trailed their luxuriant tails on wheeled trucks over the plains of Arabia. It was not so long ago, indeed, that the inhabitants of these same obscure islands were used in their unbuttoned moments to brag a little of dependencies that girdled the earth and of a sun which never went down upon the Imperial flag. And if in our generation we are less liable to outbursts of the kind, it is not because we have any less a lively sense of the romantic greatness of a world-wide commonwealth of nations which all acknowledge the same headship. It is rather because we have been together in the valley of shadows and now, struggling once more to the hill-top, stand, like "Cortez and all his men," sobered and silenced by the prospect at our feet. As we walk about the great fair grounds at Wembley and see displayed in a thousand ways the material resources of all these lands, and what the wit of man is making of them, it is exciting to think that those who tend the herds and the corn, the forest and the mine, or make the jungle their dwelling-place and teach self-government to childish races, these far-dwellers under alien stars, have all some link with this our own familiar land, a farmstead it may be on the Pentland Hills, where grandfather minded the sheep, or a doorstep in Bermondsey, where mother played as a girl, or some old parsonage in the west country, where the oar won in the Eights still hangs on the panelled wall.

This may, perhaps, be thought unduly sentimental; and certainly not every visitor we meet from overseas is patently aware of these fingers of the past pulling him ever so gently and all the time. Rather will he come to this old country wearing about him a certain air of hardness and satisfaction, as who should say: "You are of the past and survive interestingly enough, but the future and its wealth lies with us." I have read somewhere that the youth of America is fed on potatoes from the cradle to encourage that growth of jaw which is held the hall-mark of a man of resolution and business ability. In the Dominions, too, they run a little to chin, and pretend at least some contempt of matters which are not readily reducible to terms of material wealth. The captains of industry walk a little prominently on all the world's stages to-day. But they will not be dangerous until they aspire to be leaders of thought as well. A people must live by its industries, but it may die of them, too. Its per-

manent contribution to the real wealth or well-being of the world can only be found in those flowerings of the human spirit, which, in its various forms, we call thought or art: in philosophy, or letters, or architecture, or music, or the manual arts. We are little interested to-day in the annual turnover of Demosthenes' armament business, or in the Megarian pork industry of Athens. These names stand for other values in our memory. In the same way the historian of the distant future will weigh the commonwealth of the British Empire in other than material scales, and look for its service to mankind among the things of the mind, government, and philosophy, art and morals, when its corn and its fruit, its cattle and its gold, those material conditions without which that service would have been impossible, are no longer its own or separable from those of less distinguished ancestry.

While it would be folly to suggest that the things of the spirit are allowed even a measure of their due importance among our own people, it must obviously always be the supreme task of a mother country, with its greater opportunities and older civilization, to stand as a witness for these things and by all means in its power to foster in younger lands every agency engaged in such work. In its own sphere architecture, with its educational system spanning the Empire, has a very wide occasion of usefulness and a very great responsibility. And let us not be led away by sounding phrases. Perhaps our own art is at the moment too fumbling and uncertain for it to send a clear trumpet call over the seven seas. But at all times and in all places we can at least help the little that is good, preach order and cleanliness and the sterling value of simple things, and keep alive in new and sometimes impatient peoples a sense of the charm of the pleasant things of the past, whether it be the Dutch work north of Capetown, or old Colonial buildings in Canada and the Bermudas, or the serenity of Greenway in a land of hurry and corrugated iron. For without sympathetic study and understanding of old things all attempts to meet new needs in a new way, as we all hope we may learn to do, will surely turn out a little jejune and immature. It is ill preaching to readers who may have been walking down Regent Street this very afternoon, looking for a sense of spiritual values and finding nothing but our stony sepulchre of Nash's gracefulness. But if we preach at all it is from no sense of superiority, but only from a lively realization of how important it is that the things of the spirit should not be forgotten while every man cries aloud that great is Diana of the Ephesians and sells her image for silver to all comers.

W. G. N.

The British Empire Exhibition.

Wembley.

By Harry Barnes.

With Photographs for THE ARCHITECTURAL REVIEW

by Waller Benington.

IT is a difficult name. Even the Prime Minister feels that, to whom so few difficulties present themselves. To me it brings elusive memories of nursery rhymes at which I clutch only to find them gone. What about re-naming it, what would it require? An advertisement in "The Times"? I am not sure whether it is the agony column in which such things are done or not, or would it be a Private Bill.

It may be there are those who would oppose a change—who love the name—there must be.

On the side of the exhibition site are the sites of a septette of suburban villas. They are occupied, and no doubt deliberately, by people who must have weighed up all the advantages and the disadvantages, including the name.

Anyway, it is better than Olympia and the White City—much better—just as the exhibition is much better than any exhibition they ever housed.

It is an exhibition one may visit without loss of self-respect, nay more; that is but faint praise, it is an exhibition one may visit with exhilaration, nay much more; it is a place where those whose imagination but slightly smoulders need but lean it ever so lightly to the breeze to fan it to a flame.

I saw it first on a blue day in May, with the sun showing substantially, little white clouds blowing all about in a faint breeze, bright enough to be pleasant and cool enough to be comfortable. Somehow or other I had never realized I should some day be there. Wembley was a name to me like Nijni-Novgorod or Sarkmaand, well-known enough and perfectly credible, and yet with no relation to reality at all.

One had heard of its tons of steel, and its cubes of concrete, of its miles of track and acres of pavilions as one heard of the Grand Llama and Sir John Mandeville. They were travellers' tales with which some modern Munchausen was gulling a world.

Indeed, I had my private recollections of it, for had not once the busy moments of a busier day disappeared while I listened to an aggrieved individual who was the real author of Wembley and desired his grievances to be broadcast by a loud speaker in the House of Commons, and had not I, sceptical of his story and, indeed, of all stories about Wembley, joined with others in that same House, to oppose the grant of any money from public funds to a guarantee fund for Wembley?

Was not Wembley a mere ebullition of jingoism, in dreadful contrast to the dire starkness of the war, an exhibition of megalomania inflated by impossible promises and sustained by pinchbeck purposes? Yet here I was at Wembley Park Station with an admission ticket in my hand about to see the impossible performed, and the improbable come to pass.

I felt perturbed, and before long my peregrinations, as I perambulated the grounds, assumed the character of a

penitential procession, for which I felt my proper clothing should have been a white sheet and a guttering candle, for Wembley is a great place, the abode of a great idea conceived by a great man.

I take off my hat to Mr. Turnour. I do not find his name in any catalogue, or inscribed on any monument. I never met him and never expect to. I understand suavity was not his characteristic, and that he did not suffer fools gladly, but he was a great man to have succeeded in lifting a colossal enterprise like this into the region of reality. Mr. Turnour I salute thee, and having done so, I turn to salute my friend, Sir John Simpson, his partner, Mr. Maxwell Ayrton, and Sir Owen Williams, architects; called to a gigantic task they have performed, like giants refreshed with new wine.

If these three are the genii of Wembley, Mr. Ayrton and Sir Owen Williams are the Gemini. Theirs was the marriage of true minds to which there has been no impediment. Only those who have talked to them as I have talked in the most unofficial of unofficial ways can understand why Wembley is what it is.

If Mr. Arnold Bennett were twenty years younger, and had met them so, he could have made us realize the vivid and romantic spirit which has brought it into being. They have effected something more lasting than Wembley—they have shown the possibility of collaboration and co-operation between architect and engineer, each enhancing the work of the other. Together they have been working with the latest of materials and the latest of constructional methods, and have revelled in the experiments to which such conditions were bound to bring them.

The last thing I want to talk about is technique, but just as any perception of human form would be of the merest superficiality which did not note the ripple of muscles beneath the skin, so no note of Wembley would merit the name which did not recognize that the architectural forms of the various buildings are as intimately connected with their constructional needs.

We shall hear more both of this pair and of the materials and methods they have used here with such effect.

The place is not perfect, and no one would admit it more readily than they, if 'twere it would not be a fitting home for this raw, rude Empire we are still beating out on the anvil of time. Yet it is a place in which an architect may be proud of his profession, where architecture is the proven Mother of the Arts, where men may learn that for the expression of Titanic ideas there is to-day, as there has ever been, no other way than to rear a tower to the skies.

The individual is complete, he is the microcosm, and for him the sculptor and painter may liberate the whole of emotion by the magic of carved stone or painted canvas, but for man in the mass there is no such liberation, save he heap stone on stone to the limit of his power.

Something of this has been done at Wembley. I should

THE BRITISH EMPIRE EXHIBITION.



Plate II.

June 1924.

THE BRITISH GOVERNMENT PAVILION.

Sir John Simpson and Maxwell Ayrton, Architects.

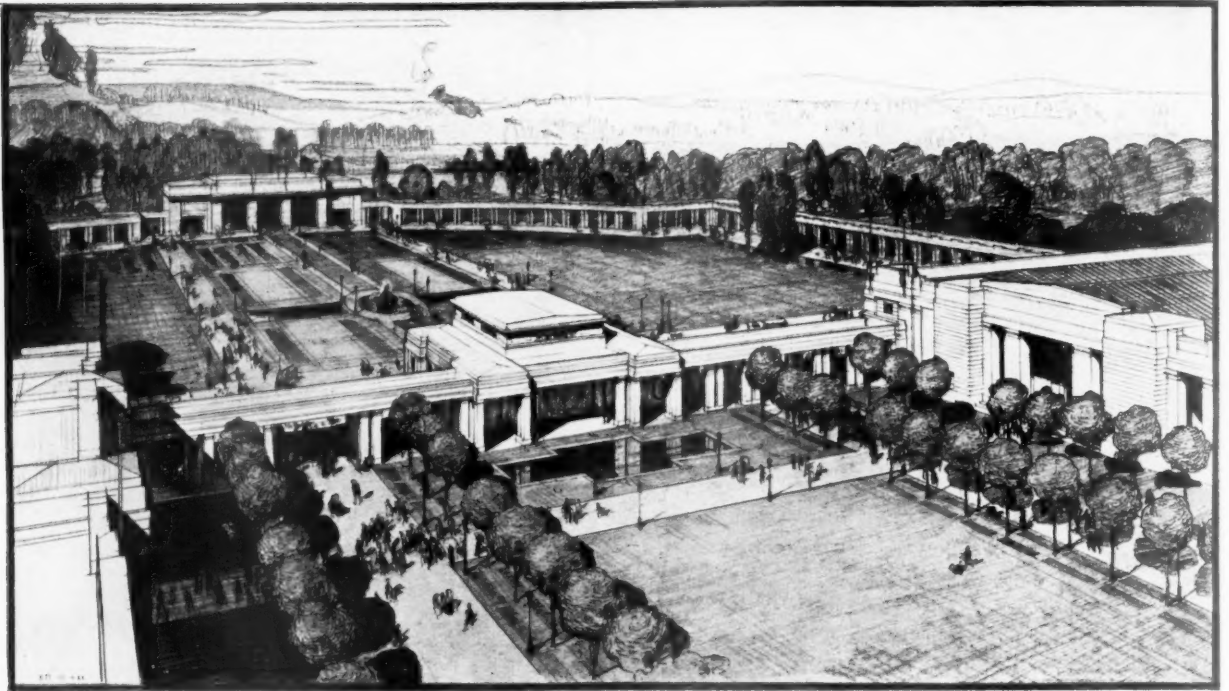
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THE PALACE OF ARTS.



THE PALACE OF INDUSTRY.



THE GARDEN, LOOKING TOWARDS THE ENTRANCE.



THE MAIN ENTRANCE TO THE EXHIBITION.



A GENERAL VIEW, LOOKING TOWARDS
THE STADIUM.



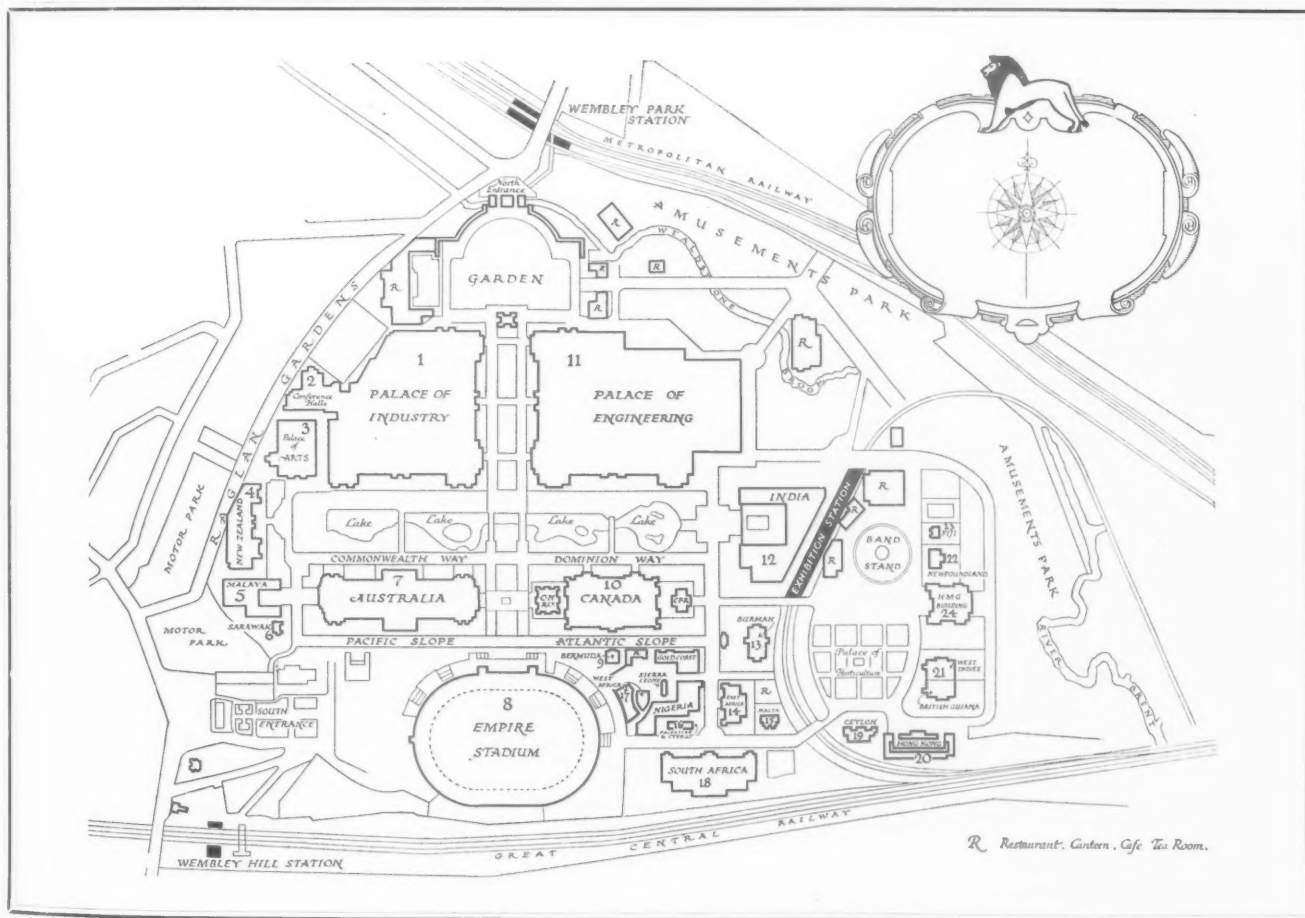
A GENERAL VIEW FROM THE STADIUM
BALCONY.

like to see it at night and alone, with some white moon behind the Stadium, so that its towers stood blackly out, while moonbeams flooded the colonnades of the garden and smote the great palaces into wonders of light and shade.

Someone grumbled to me that in the Palace of Arts architecture had but a few mean rooms. If that is so, there is surely a splendid contempt in an art which royally houses all others and is content with so bare a shelter for herself. We architects may be content to leave the Palace of Arts

to the painter and the sculptor and the cabinet-maker, when the whole exhibition is the apotheosis of our art. If you would see Her monument, look around.

Still I loiter outside the gate and reflect that Wembley is too easy to come by. I am told that there are 126 stations in London from which Wembley may be reached in eighteen minutes, and I am not pleased. I would have made it ill to get at. It should have been an adventure, where company was needed, and protection by the way. Even a good



A GENERAL PLAN OF THE BRITISH EMPIRE EXHIBITION.



INDIA, FROM A BRIDGE.

heath between, with some highwaymen, would have been something. As it is, apart from the fact that there are no signs at Baker Street Station to tell you from which platform your train goes, or, indeed, if there is either platform or train at all, it is as easy to get to Wembley as falling off a log.

How incongruous it is? Here we are on our way to see the records gathered from a world which adventure alone has made possible. Canada, with her sixteenth-century memories of Jacques Cartier leaving his old manor house of Limoiliou, by St. Malo, nearly 400 years ago, beating across the Atlantic, striking Labrador with its grim cliffs, such a land as God might send Cain to, pushing on past Newfoundland up the Gulf of St. Lawrence, far inland to green islands and dense forests, where gay and thoughtless folk danced with glee at the sight of the strange vessel and stranger folk who had broken through into their solitudes.

Australasia, with its elusive records of Portuguese, Spaniard, and Dutchman, at last to be leashed by the Yorkshire lad nurtured under the round green slopes of Roseberry Topping, and in the steep street of Sleights as it opens out to the alluring sea. His statue stands in the Mall, and a rude stone reminds Yorkshire shepherds of their kinship with the wave.

Cook and Cartier, two centuries between them, yet driven by the same undying urge—one west, one east. All that we may go to Wembley. Speke and Burton in the trackless deserts of the Australian continent.

Livingstone undying in his death, sealing the supremacy of his spirit over the miasma of African jungle and swamps in the very moment in which he yielded his body to its power.

Let a thought pass through our minds as we go to Wembley at our ease, to see what Africa has to show, of that triumphal march of the dead white man on the shoulders of his black

bearers, whose burden was at once made lighter and heavier by the mingled love and sorrow in their hearts.

What do they know of England who only England know, and what will they see at Wembley who only Wembley see? Adventures are, they say, to the adventurous, but that is all over, there are no more adventures, no more gatherings at the Tabard—even John Gilpin rides no more. We are all become mere parcels save that we collect and deliver ourselves. The most we can hope for is a scuffle for a seat, or that our neighbour's strap may break as he hangs on it.

Perhaps it is as well, for we have Wembley to see between lunch and dinner, and have no time for journeys.

Yet I wonder if Wembley were really difficult to get at, if, suppose Sir Henry Maybury had all the roads taken up, and we heard strange tales of the wonders there, in the inaccessible place, what would happen? Should we have all sorts of expeditions and pilgrimages? I shouldn't wonder. There is a spirit in people that demands some difficulty.

If we make roads level and easy they will have helter-skelters and switch-back railways, and it might be that—but this is nonsense, of course we all want to get to Wembley in the least possible time and with the minimum of exertion and expense.

I am afraid I am not easy to please, for I feel like grumbling not only at its accessibility, but also its openness.

Inside Wembley there is a space devoted to West Africa, and it is walled round with thick red irregular walls, pierced only by dark doorways on here and there a side. You can sit outside and imagine what there is within—Africa and all that means, West Africa most of all, Sierra Leone, the white man's grave, the Gold Coast, who first named it that? What



A BRIDGE OVER THE LAKE.



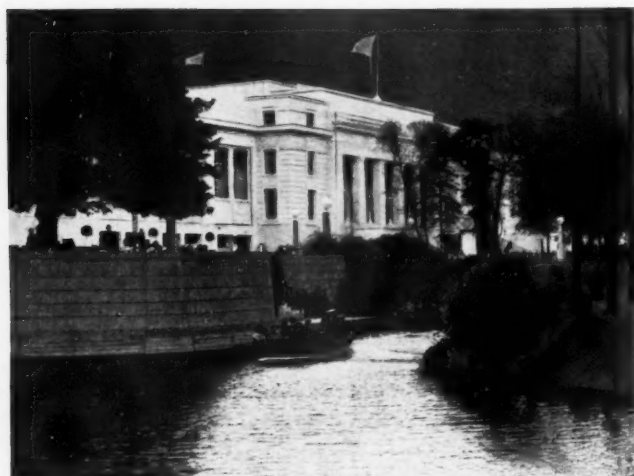
THE STADIUM, FROM PACIFIC SLOPE.



THE PALACE OF ENGINEERING.



THE STADIUM FROM THE SOUTH AFRICAN PAVILION.



AUSTRALIA.



CANADA.

auriferous dreams were dreamed in those old ships that first sailed it by? Nigeria! How fascinating to be outside with the power to go inside—to let the mind rove while the body rests—to skirt the walls, to glance at the ramparts, to pause at the gates. I would have had something like this for the whole of Wembley.

Supposing I had not opposed that grant of £100,000. Supposing I had pleaded for £1,000,000 or £10,000,000, and with a magical eloquence secured it, would they have walled Wembley round? I would not like to think they would. My remorse would be too much to bear, and yet—I wish they had.

It is too open. There it lies, brought into being by centuries of intrepidity, the record of half the marvel and mystery of the world, and you can see it from a suburban train!

Somehow it doesn't seem right. If you go, and, of course, you will, when you come up from Chinatown, and pause by the South African pavilion, cast a glance ahead at the Stadium. You will see the great spans that support the spreading tiers, flanked by square bastions, pierced by square windows, surmounted by unpierced parapet, and you will get some idea of the wall that should have been round Wembley.

I wonder if an association of cement makers and slag-crushers could wheedle a million or two out of the Trades Facilities Fund, all on account of the unemployed, of course, and build me that wall. That would make Wembley enduring, and I want it to be enduring. I want it to be a world club, a cosmopolis where we may rendezvous with our fellow citizens of every colour, creed, and race. Why shouldn't it be; there is only one place in the world where it is possible, and that is London, only one Empire in the world of which it is possible, and that is ours. We must adopt it, we must endow it, it must go into the Civil List, and Sir John Simpson and Mr. Maxwell Ayrton and Sir Owen Williams must have more time and more money to spend upon it, for there are some things I want them to do.

First of all, I think, they must buy off Messrs. Bass & Company—that would please me, but, perhaps, it wouldn't please Mr. Chesterton and Mr. Belloc. There is something Chestertonian in the paradox of a great exhibition solemnly opened in state by the dignitaries of the Empire, with its main entrance masked by an advertisement of beer.

I wonder what Latin peoples do think of us Saxons? With their wit do they credit us with humour? It must be humour, let no one say it was not, that placarded the entrance of Wembley with this alcoholic legend and set on its chief eminence a football ground. Beer and Sport, what a text for Mr. G. K. Chesterton! Will he go to Wembley, and if he does, will he, misled by this encouraging screed, expect to find within the gate a rolling English road leading up to the Stadium? If he does he will be disappointed, for inside the gate there is nothing but the dignity and decorum that go with great palaces and grand approaches.

I think that the allocation of the task of designing the buildings at Wembley has been made very happily. What was to be achieved was the ideal of unity with variety. That would have been impossible if one firm of architects had designed the whole, even when so admirably composed as that of the architects to the exhibition, and it would have been equally impossible if to them had not been entrusted so preponderating a share of the work as to unify the whole. Both have been done and very happy is the result.

There are many fine buildings here, but nothing more satisfying than the composition that meets the eye immediately one enters. In the foreground the delightful garden circled by the sweep of the colonnades, leading the eye up to the middle distance where stand the twin Palaces of Engineering and Industry, and then beyond, far up the great avenue called Kingsway, the Stadium with its twin towers closes in the scene.

The whole is complete and impressive, there is nothing tawdry, nothing trivial, nothing base or mean, it is commensurate with expectation. That is a great achievement.

When the opportunities permit, I hope the main entrance, relieved of its embarrassing chaperone, will be raised to the level of the main road, so that one will not have to go down the hill to it from the station; the entrance should be direct, and, if possible, a little elevated, so that the entrant may come out on a great balcony from which to get his first sight of this wonderful show.

I expect I am raising all sorts of problems of ingress and egress, but problems are to solve, and there is evidence at Wembley of ability enough to solve any problem.

But I must get on. I am not writing a guide to the Exhibition, that has been admirably done, and I am not going to describe the buildings in any kind of order, if at all.



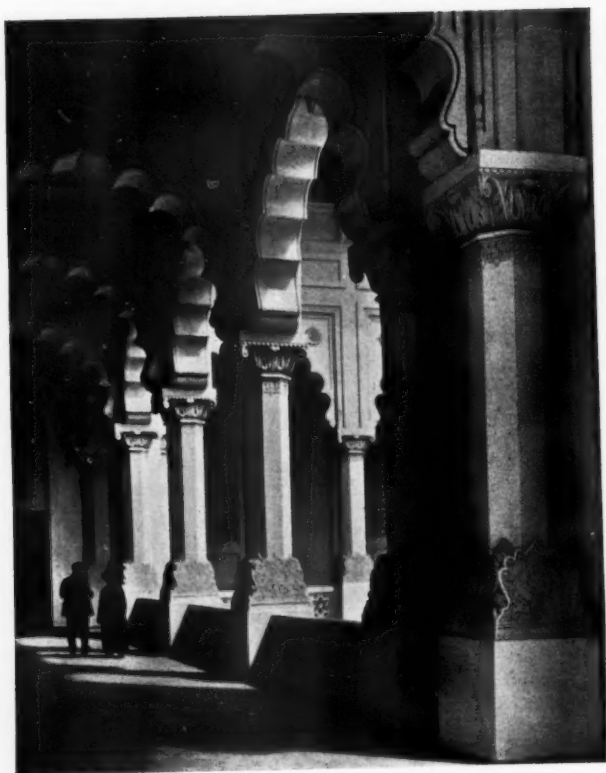
NEW ZEALAND.



SOUTH AFRICA.



BURMA.



INDIA.



INDIA.



CEYLON.



THE ENTRANCE, CEYLON.

All I have space for is a general idea of the impression that Wembley makes, with some note of those trifles that catch the eye and remain in the mind after the main picture has faded. One is glad of the grass and the trees, the close-cropped lawns of the garden, and the rough grass of the Lucullus Restaurant; may they both remain. I read the other day of a little girl who asked: "Why don't they pull down houses and build trees?" Why, indeed; well, at least they have spared what trees they could at Wembley—what they could. Eight thousand trees, they say, fell to find room for the Stadium—it seems beyond belief, and gives one more pause than all the statistics of steel and concrete with which journalists are wont to deck their pages.

Well, there's a price to pay for everything, and at least it is good to have got something that may excuse the price.

There is not only grass and trees at Wembley, but water; the Wealdstone brook runs through it, and the very core of the Grand Boulevard is the great lake. What a boulevard it is, and how happily conceived. It crosses the unified conception of plan that dominates the Exhibition, with a delightful variety.

Here great buildings are placed—New Zealand, Australia, Canada, India. Each is a worthy composition distinct in itself, and yet attuned to the whole. Each is placed on some axial line, and there is no vista that is not delightfully closed. Each merits an article to itself, and no doubt will get one, if not more. Here it would be impossible to do any one of them justice—they must speak for themselves. They stand with dignity, if not with majesty, in their incomparable setting, while all around them toy and trifle the tiny structures that turn the place into a perpetual carnival.

The Grand Boulevard is as full of barques as Paris in *Mi-Carême*. All along the lake side they are perched in their gay irrelevance, as bright as peacocks without the raucosity of that splendid bird. Not a detail but has been designed; lamps, fountains, signs, and stands all bear evidence of thought and invite a pause. But we may not linger. Past the interesting host of smaller dependencies, the many colonies in Africa, the West Indies, Burma, Palestine, we find the bridge across the railway, and then the Government Pavilion.

Nothing could be more suggestive, more consonant with the whole history of this British Empire than the modest aside of position occupied by the Government Pavilion.

If this Exhibition had been at Potsdam before the war, can it be doubted that the principal place to which all avenues would have led would have been the Palace of the Kaiser?

Here the Government Pavilion occupies the same unobtrusive position as the Crown does in the Constitution, detached, retired, and yet the key to all. The visitor will be well advised if, after making the grand tour, he enters this building before any other. Here he will find, as it were, the index to the volume he is to read. Leaning over the balcony in the central hall, gazing down on the relief map of the world, following the uncanny persistency of the moving models that trace out the great ocean routes, he will be dull, indeed, if some awe is not stirred in him by a revelation of the order that may come out of a seeming chaos of individual desire and enterprise.

Inchoate, unrelated, both in time and space, as it may seem to be, here has emerged out of the unrest of Elizabethan adventurers the rapacity of Georgian freebooters, the humdrum motive of the merchant, the inexplicable self-sacrifice of the missionary, the blind valour of soldiers and seamen, an associated humanity spreading into every corner of the world, carrying with it a common tradition, a general acceptance of standards of law and morality that are more unbreakable than bars of iron.

The Pavilion is one of the greatest, if not the greatest, achievement of the exhibition architects, and leaving it one is, however unconsciously, nearer to the true spirit in which the exhibition should be viewed than before.

The exhibition itself is the true type of Empire building, it owes its existence to no initiative from the State. It is the outcome of just that individual urge, that dogged determination to realize an idea to which every one of the places represented at Wembley owes its position in the British Commonwealth of Nations. With us our colonies have always been built up by the unregulated activity of adventurous men, and only in their later history come under the control of the State.

It is a fitting thing that at Wembley this should be symbolized.

These are the great impressions of Wembley, but how many and delightful are the subsidiary ones! Visions and vistas everywhere; a score of places striking the imagination and stirring the thought.

Here is the old house of Mata-Atua, the Maori house, carved in wood. Grotesque, intricate, and interlacing, so



"OLD LONDON BRIDGE."



A GEORGIAN PAVILION.



A CORNER OF "LONDON BRIDGE."



WEST AFRICA.



A RESTAURANT.

they carved in Maori land, and so they carved in Scandinavia, and so old Celtic carvers chiselled out their runes. What is it? From what primal fountain comes this flow that East and West and North, with seas and hills between, is all the same? If we could say, we should know what God and man is.

It's a far cry to the Bermuda House, with its date of 1651, and the innocent pride of the Bermudan Isle in this naïve specimen of colonial art. Let them be humoured, for here Tom Moore lived, and still lives, to remind us that:—

"The best of all ways,
To lengthen our days,
Is to steal a few hours from the night, my dear."

Indeed, one wants lengthened days at Wembley, for it is not one visit or two that will exhaust it. Let me leave it half untold, this great achievement, which is, apart from all its purposes, food for many thoughts.

Here it is on English soil, yet housed in buildings on which Greek and Arab alone have left their print. What has become of all the art that filled England from the first William to the last Henry? How are the dominant dominated, and those who have builded this enduring Empire become the imitators of those whose empires are in the dust?

It is the triumph of the temple and the mosque, the pillar and the beam. The arch is ousted, will it come again? The strange selective struggle seems to go deeper than life, to move in the regions of idea and to emerge in the realms of practice. Even Wembley is no doubt but a phase.



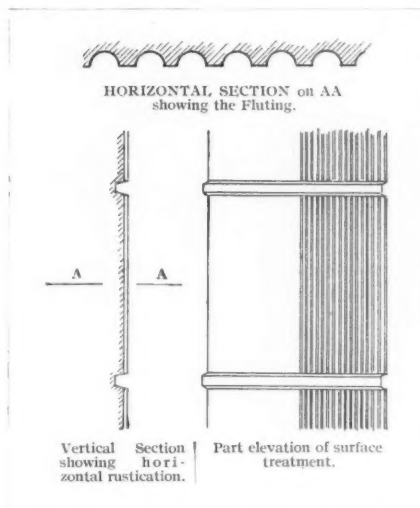
THE ENTRANCE TO THE AMUSEMENT PARK.

The Concrete Buildings.

By Oscar Faber, O.B.E., D.Sc., M.Inst.C.E.

I SUPPOSE Wembley differs most from other great exhibitions in the extensive use which has been made of reinforced concrete as a building material, and, therefore, it is natural that those of us who consider that this material is a promising one, and that we are at present still groping towards a full knowledge of the technique underlying its most effective use as a medium of architectural expression, should be specially interested in this extensive experiment of collaboration on a large scale between the architect (Mr. Maxwell Ayrton, of Simpson and Ayrton), and the engineer (Sir Owen Williams, K.B.E.). In the following notes I propose to give my first critical observations. If I am frank in my comments, I hope it may be forgiven me on the general grounds that no other criticism is really of any permanent use, and that it leads most quickly and surely to true development. I have to acknowledge my indebtedness to Mr. Ellison, the resident architect, who was good enough to devote some hours to showing me round. My impressions are naturally so many that it is quite necessary to confine my remarks with some severity to one aspect only, or the length of the article would surely exceed that of the patience of any likely readers. I shall therefore deny myself any comment on the political and commercial significance of the exhibition, its magnitude and magnificence and the vast outpouring of wealth which has obviously attended its construction, or on the architecture (with which abler pens than mine will no doubt deal), and confine myself to some of the technical aspects connected with the use of concrete as a building material, though I should like to say at the outset that I have nothing but admiration for the work of the architects generally, the general lay-out and conception of the more important buildings being, to my mind, of a high order.

The main fronts of most of the more important buildings, such as the Palace of Arts, the Palace of Industry, the Palace of Engineering, and the Government building, are executed in concrete without any covering or clothing; it was cast *in situ* between formwork and left. Concrete so treated generally leads to extraordinarily ugly and characterless effects, and the way this has been avoided is of special interest. This consists mainly of deep horizontal rustications, dividing the work up into horizontal layers, with vertically fluted surface treatment between the horizontal rustications. (Fig. 1.) The result is distinctly pleasing. The horizontal rustication serves obvious architectural purposes, and also has the practical advantage of masking the usual ugly irregular lines between one day's concreting and the next. This is particularly noticeable by comparing a section of rusticated wall with one also cast *in situ*, but not so rusticated as, for example, occurs on the south end of the front to the Palace of Arts. (Fig. 4.) Even



1. VERTICAL FLUTING AND HORIZONTAL RUSTICATION IN THE SURFACE TREATMENT OF THE *IN SITU* CONCRETE.

with the rustication, the intervening wall surface would be plain and uninteresting and lacking in texture and quality unless treated. The vertical fluting gives it the desired texture, and though there are many other possible treatments, some of which would have been quite effective, the one chosen is pleasing and satisfactory. Personally I would prefer a slightly bolder treatment in this fluting in the future. When the sun lights it from the side so as to throw up shadows in the fluting, it stands out well, but with a diffused front light it is barely noticeable at a little distance.

Portions of the wall surfaces have been built up of concrete blocks, with an ordinary plain cement surface. (Fig. 2.) These, of course, give much the effect of ashlar work, except for the uninteresting colour of cement as compared with such natural stones

as Portland, which considerations of cost no doubt ruled out. The chief interest in these blocks lies in their being made of cinder concrete and floated up with cement rendering which, I think, I gathered was done before the cinder concrete block had set. There is, of course, no architectural merit in this as compared with the use of blocks of ballast concrete, but no doubt a saving in cost was effected thereby. Whether such blocks can be described as permanent construction, time alone will show. Permanence is, of course, a relative term, and it is quite certain that blocks of so porous a nature as cinder concrete faced with a thin skin of mortar will only last a small fraction of the life of good stone, or of blocks of ballast concrete. Exactly what that life will be it is difficult to say, and I should hesitate to guarantee that it will very much exceed that of the materials used in the flimsier and admittedly temporary buildings of the White City and similar exhibitions. If this proves to be the case—which I sincerely trust may not be so—the economy effected by using cinder instead of ballast may prove to be illusory. It is curious that white cement has not been used in the facing to these blocks. The sombre grey of ordinary Portland could thus be escaped from, and though, of course, the white cement is more expensive, the amount required for this thin facing is relatively slight. Some of the buildings erected in a gayer mood than those previously referred to are built of cinder concrete blocks faced with Keene's cement and painted a first coat immediately. After being built up into position, they then form the basis for a brilliant scheme of painting. This treatment is adopted principally in the restaurants, the kiosks, and the bandstands. (Figs. 9 and 10.) Undoubtedly the effect is a very gay one, and entirely desirable where it has been used. Again one wonders what life one can reasonably expect from blocks so constructed.

The Palace of Engineering contains roof trusses of 50 ft. span in reinforced concrete. To my mind these would have



2. THE GOVERNMENT BUILDING.
Built of breeze blocks finished in cement mortar.

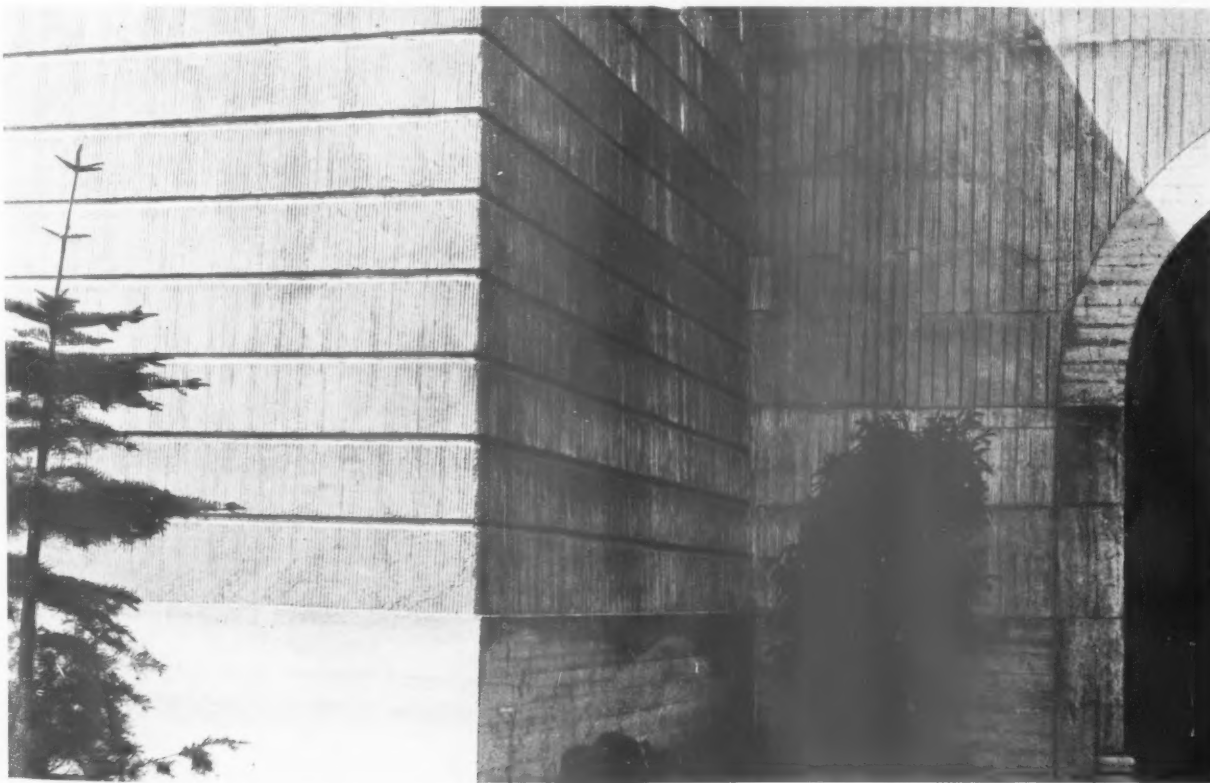


3. A DETAIL OF THE LIONS.
The lions, by B. Clemens, are cast in concrete.

been better in steel, both for reasons of economy and gracefulness. The heavy concrete trusses look clumsy and a little out of place. They are also much marred architecturally by the expansion joints which are provided at about a quarter span from the supports; these take the form of a broken joint, in which a space is left top and bottom amounting to about an inch in some cases and a quarter as much in others. Granted that expansion must be considered and provided for, it must, I think, be admitted that the solution adopted is not a pleasing one, and one may be excused for wondering whether perhaps the cure be not worse than the disease. (Figs. 5 and 7.) Several non-technical people

frankly believe them to be fractures in the material, and no one could consider them beautiful. Compare these trusses with the steel trusses in the Palace of Industry. (Fig. 11.)

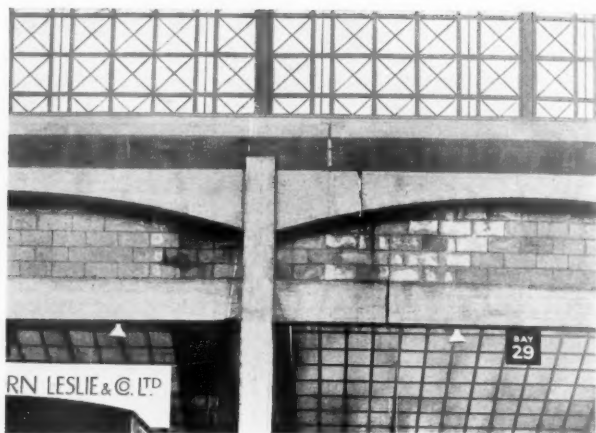
The large travelling cranes across the hundred-foot spans of the Palace of Engineering (the trusses over which, by the way, are of steel, and should be compared for lightness and grace with the 50 ft. trusses of concrete) run upon longitudinal arched beams and tapered pillars of reinforced concrete which are of altogether pleasing proportions. Again, the expansion joints in these beams are treated in a somewhat crude manner (Figs. 6 and 8), which could be much improved on by the adoption of a design satisfying all



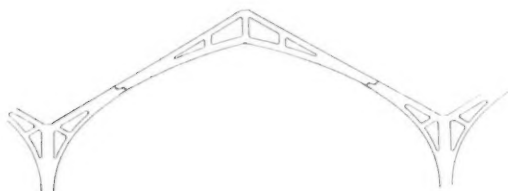
4. THE SOUTH END OF THE FRONT OF THE PALACE OF ARTS.
Showing the wall treatment of concrete cast *in situ*. Compare the rusticated treatment on the left with the part not rusticated on the right. Both are fluted.



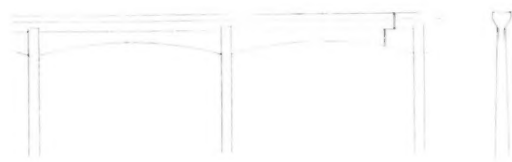
5. THE REINFORCED CONCRETE ROOF OF THE PALACE OF ENGINEERING.



6. CRANE-BEAM AND SUPPORTS IN THE PALACE OF ENGINEERING.



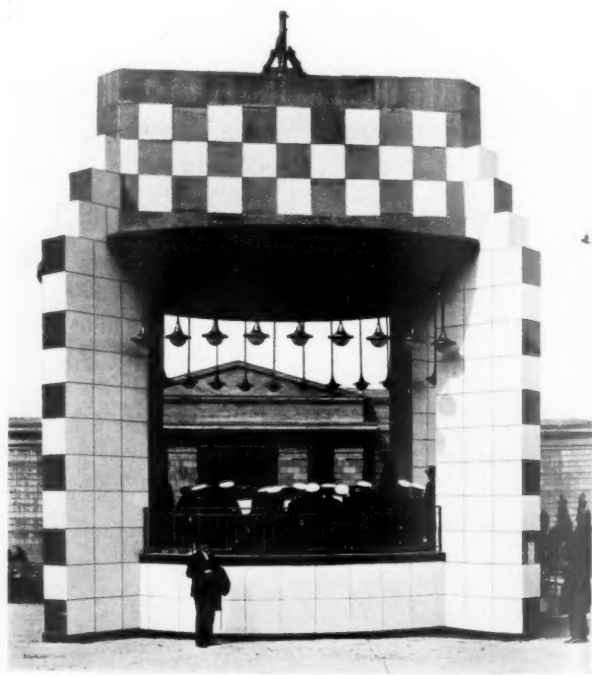
7. A DRAWING SHOWING THE EXPANSION JOINTS IN THE REINFORCED CONCRETE TRUSSES (50-ft. span).



8. AN ELEVATION AND SECTION OF THE CRANE-BEAMS, SHOWING THE EXPANSION JOINTS.



9. A KIOSK.



10. A BANDSTAND.

Two views showing breeze block finished in Keene's and painted in bright colours. A painted restaurant wall treated in the same way can just be seen behind the kiosk in the left-hand illustration.

structural requirements without exhibiting such architectural sores. On the outside walls some unfortunate cases exist of such an expansion joint occurring at the same place in two beams vertically above one another, while the wall between them is of cinder concrete blocks, built solid, without any provision for expansion and contraction. The result is a fracture.

The large lions of cast concrete outside the Government building are altogether fine. (Fig. 3.) Visitors will also notice the concrete lamp-posts which abound throughout the exhibition, surmounted by glass globes, representing the terrestrial globe on a sloping axis, and pointing to the north (at least they are supposed to, and no doubt with a little training will all do so in time); they will be attracted by the concrete bridges (Fig. 12) (which the posters have made familiar) across the artificial lake, the enclosing concrete wall of which is duly provided with watertight expansion joints of sheet copper embedded into each side and doubled back on itself in the joint for greater flexibility, all in the approved standard manner.

It is unfortunate that the execution has at times done but indifferent justice to the architects' designs. In the execution of the *in situ* concrete walls (with rustications and fluting) the actual surface is full of honeycombed voids and blemishes of all kinds, and is very rough and irregular. A proper face without such blemishes could easily have been obtained with very little extra trouble by one of several well-tried methods. The edges of the rustications are often irregular and broken off, and will not stand looking at critically at a distance of less than 20 ft. or so. The concrete roof trusses (previously referred to) frequently have their



12. A CONCRETE BRIDGE ACROSS THE LAKE.

edges fractured off so as to show a line against the sky suggesting an attack by monster rats. This, no doubt, occurred during handling, but could have been avoided by the use of a suitable sling which, after all, would have been used hundreds of times. Many of the lintel beams cast *in situ* are badly out of line. The effect at a distance is excellent, but one feels that the work will not bear comparison with a stone job when approached to within some 20 ft. or so. This is partly the inevitable result of comparing something made with a large proportion of so-called unskilled labour with the craft and tradition of the mason. It is also partly the inevitable result of doing in one year work which ought to take two to be done properly. The stadium has an imposing elevation treated with *in situ* concrete as already described, and looks well from the outside at a little distance. The inside was the roughest-looking concrete job I had seen for some time.

My general impression, therefore, was that this extensive use of concrete for exposed face work had been seized upon by the architects with success, but that owing to the execution, the result does not represent what can be done, and that while it is a milestone on the road towards the proper treatment of concrete, it is by no means the last milestone. Fortunately, the general design is magnificent, and at any reasonable distance this gives the main effect. I was told that steel formwork had practically not been used, timber being preferred. I should have thought much of the work offered a quite exceptional field for the use of steel formwork—as the fluted face could have been pressed on to steel sheet from a die at a very low cost, and such steel sheets could have been made both lighter and less liable to damage than timber and would also have given a better face, by reason of reduced leakage of cement grout and consequently reduced honeycombing.

A word of apology is needed for the photos, which I took specially to bring out the points of concrete interest, purposely blind to the designs as a whole. Also for the sketches, which were made from memory to illustrate particular points and are not to scale. There were many other wonderful things I saw which I will not refer to as being outside the scope of this technical article. But perhaps nothing pleased me more than to hear a loud speaker, near which and in spite of which, I had been trying to take a photograph, announce "closing down for this afternoon."



11. THE STEEL ROOF IN THE PALACE OF INDUSTRY.

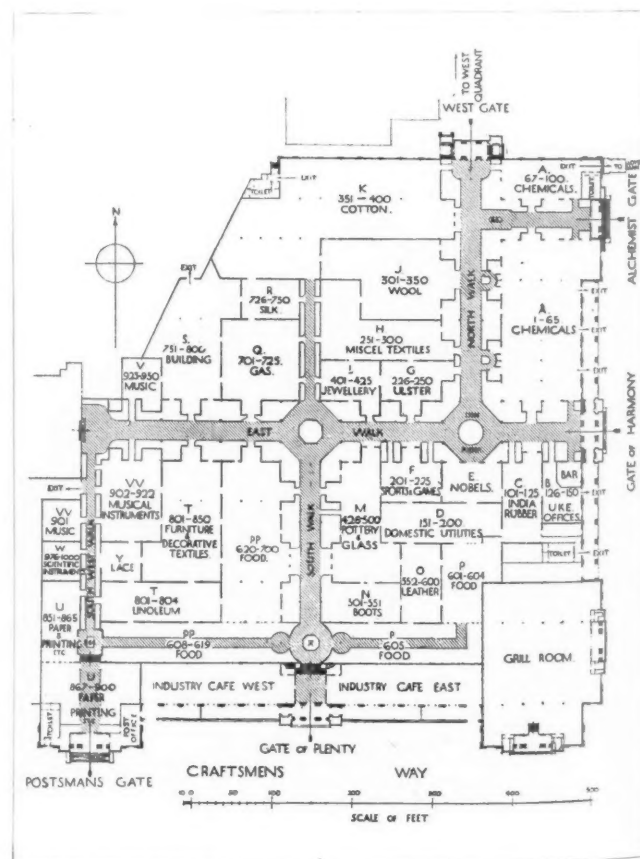
Exhibitors' Architecture.

By Sir Lawrence Weaver, K.B.E., F.S.A.,

Director of United Kingdom Exhibits, The British Empire Exhibition.

AVOIDANCE of the more obvious title of "Exhibition Architecture" is deliberate, and needs a few explanatory words. The planning of the British Empire Exhibition, and the creation not only of the United Kingdom palaces, but of the majority of the Overseas pavilions is the work of Sir J. W. Simpson and Mr. Maxwell Ayrton. They have achieved, in the happiest partnership with Sir Owen Williams, the engineer, results which must have a definite influence on architecture at large in this country. Reinforced concrete has too long been regarded as a handy material for engineers, and even for discreetly apologetic use by architects in contriving a convenient bony structure to be covered in customary ways. In the Wembley buildings, however, reinforced concrete has come into its own as a material used frankly and with vigorous invention for fine architecture, and even for sculpture in the six great lions on the British Government pavilion. I leave, however, to other and more skilful pens the description and analysis of methods by which architects and engineer alike have given a new orientation to plastic architecture. In this, on the practical side, they have been notably aided by the unique experience of the contractors to the exhibition, Sir Robert McAlpine and Sons. The great task in which all of them engaged was to make a home for the greatest assembly of exhibits which the world has seen. In November last they handed over to the exhibition management two completed palaces covering together twenty-five acres, wholly satisfying in their efficiency, austerity, and beauty. In the Palace of Engineering about 1,000 exhibitors, and in the Palace of Industry about 800 are displaying wares which represent the manufacturing might—and "might" is not too noisy a word to use—of the United Kingdom. The organization of exhibits in about 75 per cent. of the Palace of Engineering was undertaken by the British Engineers Association and the British Electrical and Allied Manufacturers Association, by which bodies were determined in 1922 the lay-out of avenues, the disposition of island sites, and so forth. The associations followed generally the customary ways of exhibition-makers, and the management reserved only the right to examine and approve the plans of stands. In the result it was possible to enforce a certain uniformity of lettering, some regularity in facia levels, and so forth, but no more can be claimed than a higher average of quality in the design of individual stands due to some proportion of exhibitors being persuaded to seek the advice of architects. In some cases even a group of half a dozen or more exhibitors were induced to combine in a unified scheme, witness the railway companies (Messrs. Forsyth and Maule), and the cable makers (Messrs. Imrie and Angell), with results that leap to the eye. Use and wont, however, were on the side of the familiar banality of the four-poster sort.

In the Palace of Industry things worked out differently. The trade associations rendered valiant service to the management in securing the support of their members, but no allotments of space were made until the planning of the various sections was completed and there was time to consider what conditions ought to be laid down in the interest of general amenity. The first problem was how best to utilize and, indeed, to emphasize the plan of the building which the architects had provided. The vast space of 352,500 sq. ft. consisted of bays, 50 ft. by 25 ft., divided into four unequal areas by far loftier bays, 75 ft. wide, running at right angles to each other. The art of exhibition-making in England has been governed since 1851 by the idea of the Crystal Palace, of a transparent structure which existed to protect the exhibits from rain. This encouraged, indeed compelled, the tradition that the area covered should be divided up into streets, and the exhibitor's stand was treated as a shop



A PLAN OF THE PALACE OF INDUSTRY.



2. NORTH WALK, LOOKING TOWARDS THE LION KIOSK.
With the Chemical Industries Section on the left.

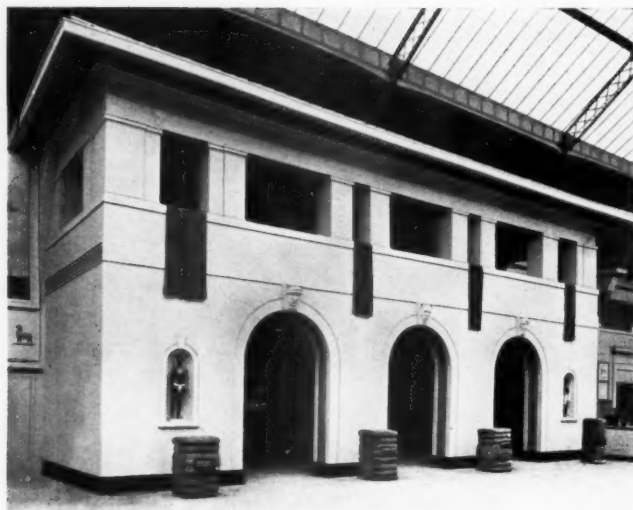


3. THE CAULDON PAVILION AT THE JUNCTION OF EAST AND SOUTH WALKS.
Designed by P. Morley Horder.



4. SOUTH WALK, LOOKING TOWARDS THE CAULDON PAVILION.

The Palace of Industry is of more than ordinary interest, for here Sir Lawrence Weaver has evolved a new type of exhibition plan. Tiresome streets of individual stands have been done away with, and the exhibitors have grouped themselves in sections under the title of their various industries, such as *Chemicals*, *Pottery*, *Food*, etc. Thus each industry forms a little town of its own which is approached through the great porticoes that flank the three main avenues. A pottery portico can be seen in the above illustration.



5. THE COTTON PORTICO.

Designed by Hubert Worthington.



6. THE BRUNNER-MOND PAVILION.

Designed by Clough Williams-Ellis.

front with a facia. For engineering exhibits this idea remains sound as to planning, but the shop-front tradition is a futility. For the proper display of locomotives and great guns it is necessary that there should be a lofty roof overhead, and it is essential for their convenient handling that powerful overhead cranes should move freely at a considerable height above them. For exhibits of general industries—textiles, chemicals, food, furniture, and the like—these needs disappear, and with them the necessity of laying out the exhibiting spaces streetwise.

In the Palace of Industry accordingly a British compromise was devised. As so great an area demanded some wide avenues to carry great crowds, gangways 25 ft. wide were provided in the middle of the 75 ft. bays, north and south, east and west, and the exhibitors' sections were planned so that a portico leads the way into each section from these main streets, or from two narrower but still important avenues. The remaining spaces, 25 ft. wide on each side of the gangways, were let to exhibitors with the condition that there should not be tall structures upon them. These gangways were further punctuated by the provision that exhibitors should build at certain intervals gilt columns, 24 ft. in height, on which are set either formal vases or emblems of the neighbouring industry. In the 75 ft. bays it follows broadly that a street effect has been achieved, which is emphasized in East Walk by the Lion Kiosk at the junction with North Walk, and by the Cauldon Pavilion at the junction with South Walk. And there the street analogy ends. The smaller bays, which are 26 ft. 6 in. to the ridge, as against a height of 49 ft. in the 75 ft. bays, were visualized as interiors, and are, in the main, divided up into a series of halls, entered through the porticos. Needless to say, the task of persuading about 800 exhibitors, in groups of anything from a dozen to a hundred, that a new sort of exhibition demanded new methods of display, was not without its difficulties. It involved, incidentally, unfamiliar methods of charging for the space, naturally a ground of suspicion. It involved, still worse, the hardly less familiar, and, to some minds, diabolical suggestion that the carrying out of an architectural idea was the proper business of an architect. I believe that individualism is the life blood of British industry, but it is the devil and all in exhibition-making.

However, the committees of the trade associations responded nobly to the idea that what was needed in the interests of Imperial trade was not a group of fifty different stands showing the product of fifty manufacturers of, say, woollen goods, but a coherent unified and persuasive picture of the range and power of the woollen industry. Needless to say, the idea of uniform decoration did not win equal acceptance in all sections, but in some it succeeded wholly, and I hope it may be found that in none has partial failure left an offensive mark on the Palace of Industry as a whole.

One feature of the scheme which did more than anything to commend it to groups of exhibitors was the simple fact that it is economically more sound for fifty firms to share in the cost of one contract in proportion to the space they severally occupy, than for fifty little orders to be placed with as many stand-fitters. Also of importance in reducing exhibitors' costs is the checking of the competitive idea as between firms in the same industry. Emulation tends to make them blossom into polished mahogany and other costly materials with the idea of outshining their neighbours, when deal, a pulp boarding and paint give them all alike a more attractive show at a trifling proportion of the cost.

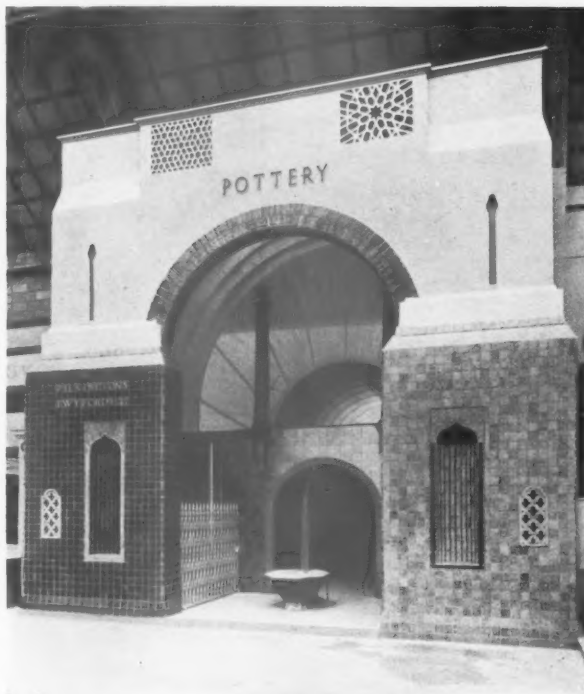
One of the difficulties was to persuade them that exhibition architecture does not need to have the solidity and richness of a permanent shop-front or showroom, that it should rather capture the spirit of the poster, and develop on lines of adventure and humour. Existing exhibition stands, often costly things, were a prodigious nuisance. It was difficult to explain that what had enchanted visitors at nineteenth-century exhibitions, some confection in gold-lined ebony and plate glass, was merely a bore in 1924. The suggestion, however, that it would convince visitors that the firm had not advanced its methods for half a century was not without avail. The task would have been impossible but for the delightful spirit of team-work in which the architects employed by groups of exhibitors worked together to "join the flats"; certain general rules were agreed at early meetings, but none to hamper the designer in his own section.

The accompanying plan will help to elucidate my notes on the sections and their designers.

Chemical Industries.—The Association of British



7. THE WEDGWOOD FORTICO.
Designed by Oliver Hill.



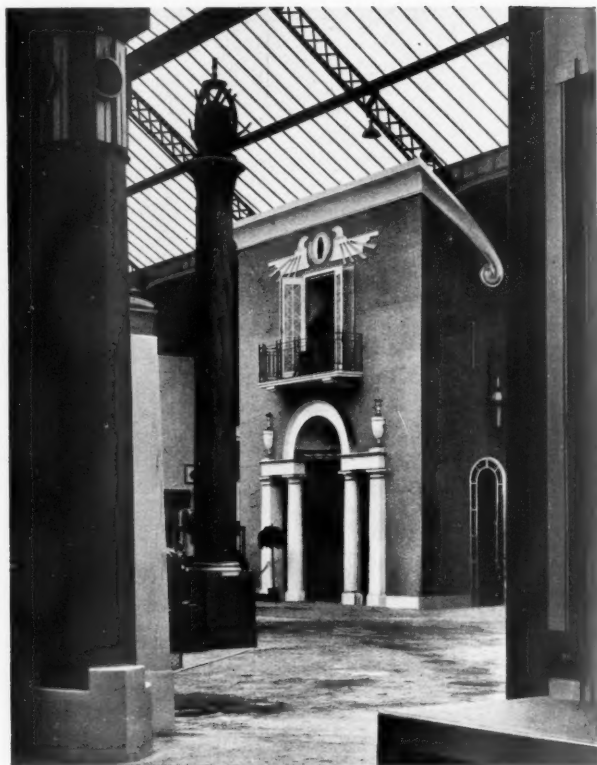
8. THE PILKINGTON PORTICO.
Designed by Oliver Hill.



9. THE MOORCROFT FORTICO.
Designed by Edward Maufe.



10. AN ULSTER FORTICO.



11. AN ULSTER PORTICO.

Two entrances to the Ulster Pavilion, both designed by Clough Williams-Ellis.



12. THE NOBEL HALL.

A design in silver and blue by Joseph Emberton.



13. THE LION KIOSK.

The kiosk is by J. Emberton, and the lion by P. J. Metcalf.



14. THE SCOTCH WHISKY PORTICO.
Designed by P. Morley Horder.

Chemical Manufacturers was the first to accept the idea. Mr. Clough Williams-Ellis was commissioned to design an enclosing screen for the section, and on his advice, Mr. Cosmo Clarke was employed to paint a frieze 400 ft. long, illustrative of the industry. Within this screen, however, the spirit of unity has not prevailed. The Brunner-Mond pavilion (Fig. 6), by Mr. Williams-Ellis, is a delightful and daringly-coloured composition that accords justly with the screen, but near it are a black showcase, which suggests a Victorian housekeeper in bombazine, and a suggestion of an "antique" village inn, which does less than honour to the efficiency of a notable manufacturing firm. The section, however, has an admirable core in a large space round which Mr. Williams-Ellis has built a dignified partition to enclose the exhibit of pure science, which the Royal Society has helped to stage. It is a heartening circumstance that a body of business men should find the considerable sum necessary for an educational exhibit, revealing the fundamentals upon which the manufacturing achievements of the industry are built.

The Cotton Section, with its portico for the raw material produced within the Empire, a complete exhibit of textile machinery at work, a large range of stalls and finally a cinema hall, gave Professor Hubert Worthington's ingenuity full play. (Fig. 5.) He also designed the adjoining Wool portico, but the Mannequin Theatre and the galleries of exhibits within were by Mr. Eric Morley.

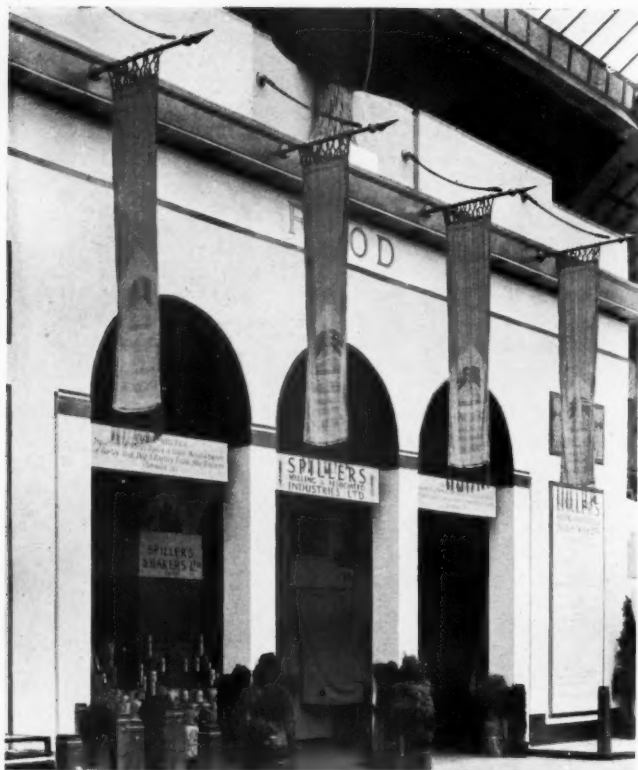
Also, on the North Walk is a wide portico with two entrances, one a kind of side door to the Ulster Pavilion, and the other the way in to Miscellaneous Textiles. As the Ulster section was by Mr. Williams-Ellis, he determined the form of the portico, and Mr. Ridley devised the colour scheme for the textile half. These Ulster porticos have the individual characteristic of running up straight to the roof instead of finishing with a parapet, a treatment which led to an amusing sort of volute treatment where the portico dies back into the slope of the roof. (Figs. 10 and 11.) Mr.

Morley Horder was responsible for the Rubber Industries section, and has given it a portico in the spirit of a planter's "go-down." The hall within has a frieze by Mr. Clive Gardiner, delightful both in colour and technique. Near by is a small group of publications with a frieze by Mr. McCance.

The front of the Nobel Industries Hall, in silver, gold, and colours, is in some ways the most successful thing in this palace, for Mr. Emberton has been content simply to emphasize the big lines he found. (Fig. 12.) He is also responsible for the Lion Kiosk at the octagon which houses the official publications stall. (Fig. 13.) The lion itself is a *tour-de-force* in a new and vigorous manner by Mr. Metcalf, who won the inter-Imperial competition for the Exhibitors' Commemorative medal. As unlike as it can be to the six grave, almost sphinx-like lions with which Mr. Clemens has adorned the British Government pavilion, its crouching militant pose suggests in its way as noble and as true a presentment. There are as many sorts of lions as there are Imperial emotions. Turning westwards along the East Walk there is Mr. Lawrence Dale's Sports and Games section, with its athletic panels painted by Mr. Thomas Derrick, Mr. Oliver Hill's portico of Pilkington's tiles on the left (Fig. 8), and Mr. Maufe's entrance to the Jewellery section on the right. At the next crossing is Mr. Morley Horder's graceful pavilion for Cauldon pottery (Fig. 3), and, by it, his highly ingenious habitation for Scotch whisky in a convincing baronial manner. (Fig. 14.) Facing its turretted porch on the east side of South Walk is Mr. Oliver Hill's portico for Wedgwood (Fig. 7), and, farther along, Mr. Maufe has done a pair of porches for Moorcroft pottery (Fig. 9) and Spiller's milling; the latter gives entrance to a large part of the Food section, with several galleries most admirably schemed by Mr. Leslie Glencross.



15. A TOBACCO PAVILION.
A design in black, red, and white by Lawrence Dale.



16. THE FOOD PORTICO.

Designed by Edward Maufe.

At the south end of this main walk is the front elevation of the Boot section by Mr. Emberton, and an octagonal pavilion by Messrs. Forsyth and Maule, who also designed the long gallery to the east for the biscuit exhibit. In a line with this is another food section, laid out by Mr. Williams-Ellis, including the notable Carson's chocolate factory. This avenue leads to the Paper and Printing section, devised by Messrs. Hendry and Schooling, very well and modestly done. Turning northwards here, we pass the portico to the Linoleum Hall, the work of Messrs. Oswald Milne and Paul Phipps; the Nottingham Lace Hall and its Mannequins' staircase, by Messrs. Calvert and Jessop, and right ahead we come to Mr. Emberton's Musical Instruments section, austere and satisfactory with its cream walls and ample velaria.

At the entrance to the Conference Halls we face eastwards again, and find on the left the Building portico, by Mr. Vincent Harris (Fig. 17), and the Gas Industry portico, by Mr. Austen Hall (Fig. 18), both admirable and scholarly compositions. On the right are Sir Charles Allom's entrance to furniture and decorative textiles, and Mr. Lawrence Dale's happy exercise in colonial design to give admission to tobacco. (Fig. 20.) Mr. Stanley Peach has done an amusing willow pattern elevation between the two. (Fig. 21.)

I must refer especially to the two dignified halls which Mr. Austen Hall has provided for the Gas Industry, because they represent, perhaps, more faithfully than anything in the palace the results that can be got by complete co-ordination of all elements in an industrial exhibit. (Fig. 19.) Adjoining it is a very good hall for Silk, by Messrs. Hendry and Schooling, and westward again, a successful little hall for Hope's casements, by Mr. Morley Horder, and another for a group of building specialists, notable for two jolly little



17. THE BUILDING PORTICO.

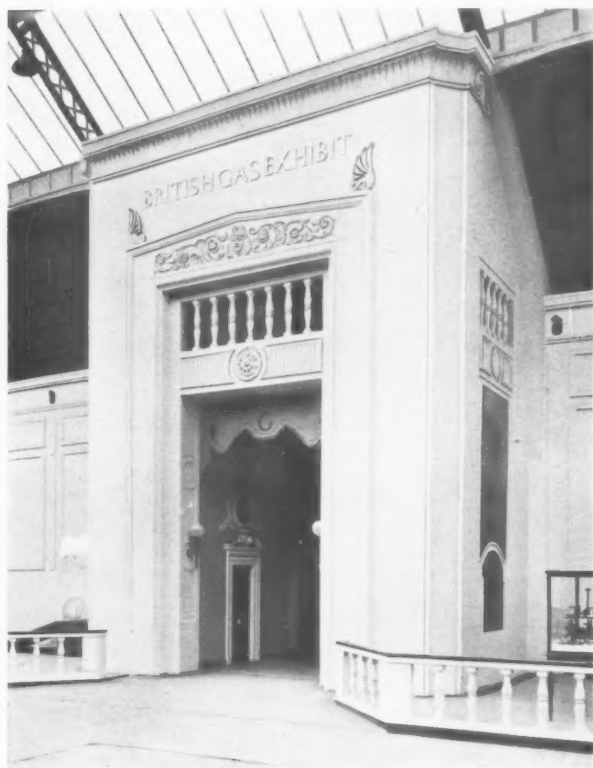
Designed by E. Vincent Harris.

slated pavilions, by Mr. Williams-Ellis. So much by way of detailed description of some of the framework of the picture.

But the purpose in framing the whole treatment was to get the exhibitors to express the efficiency, beauty, ingenuity, or what not, of their goods in the language of the architect. Two recent phrases of Mr. Goodhart-Rendel may be borrowed, as they neatly indicate the idea: "What architecture can give to the layman is pleasure," and (following Robert Louis Stevenson) "Arts consist in arranging things in patterns."

The essence of successful display is to give pleasure to the possible buyer, to present the commercial fact, whether it be a bottle of chemicals or a machine or a box of chocolates, in a persuasive, even in an intriguing manner. The business of the architect in an exhibition is to arrange all these things and hundreds more in patterns, not so much within the ambit of a single exhibit—that is rather the business of the window-dresser—but more largely by including adjoining exhibits in a comprehensive frame which will give a sense of orderliness.

My experience of the exhibitions at Munich in 1922, and at Gothenburg in 1923, was that I spent three days in each of them with sustained pleasure and interest and without fatigue, because my eye and my mind were soothed by the seamliness of the setting. I believe that the outrageous weariness that has been regarded as inevitable at ordinary exhibitions in England is partly the result of the air of garish muddle which invests them. I hope it may be otherwise at Wembley in the Palace of Industry, and that the exhibitors who have so loyally supported the idea of engaging the arts as the handmaids of industry will be rewarded by the sight of pleasure in the eyes of their visitors.



18. THE GAS PORTICO.
Designed by Austen Hall.



19. THE GAS INDUSTRY HALL.
Designed by Austen Hall.



20. THE TOBACCO PORTICO.
Designed by Lawrence Dale.



21. A CUSTARD PORTICO.
Designed by Stanley Peach.

The Architecture of the Empire. India.

By H. V. Lanchester.

IT is somewhat unfortunate that the "show cities" of India give an ill-balanced impression of its national architecture. Apart from the large seaports, which are more colonial than Indian in their buildings, which are the cities the tourist is urged to visit? Delhi, Benares, Agra, Fatehpur Sikri, Lucknow, and Lahore. Ahmedabad, Bijapur, and Gwalior may possibly be added, but except to the serious student the great cities of the south are rarely mentioned, and thus a visitor may complete his tour without having seen a single characteristic example of the architecture that grew to maturity before alien influences diverted it into new channels, not in themselves without their delights, but which, by themselves, are no more intelligible than would be our Jacobean style to one who had never seen an English Gothic building.

It is true that most of those who reach India have included the caves of Ellora in their itinerary, but it is a long leap across the gulf between these and Fatehpur Sikri, and the fragments at Delhi give no clue as to the development during the intervening centuries. Before the impact of Persian art India could claim a definitely expressed architecture of its own, not uniform, but varied according to racial and local conditions. This architecture has received less study than it deserves, owing to its being less familiar to the European mind than the Persian conceptions which, impinging on it, produced the style popularly known as Indo-Saracenic, a style which is to many the typical one by which they mentally define Indian architecture, an illusion illustrated by the fact that India is represented at Wembley by a group of buildings which the Indian artist would disclaim as in no way characteristic of his art.

It is true that the Persian elements in these "Indo-Saracenic" buildings have been qualified by many details that are purely Indian—the gain by this recasting will be seen at Ahmedabad and elsewhere—and eventually a gradual fusion took place which ultimately brought about a consistent harmony of treatment, though at its best this is, as architecture, less expressive and less virile than the original "classic" modes of ancient India, and is, moreover, farther removed from the spirit that dominates the art of building in our day. The present movement all the world over is towards constructing in a stark and forceful manner, with proportion and mass dictated by the hard logic of requirement and structure. We may decorate, but only so far as is expressive of the purpose of our buildings, and the distance that purpose is removed from the voluptuous graces of a Moghul court is not difficult to conceive.

The art of India before the Mussulman invasions, while its aims were very different to our own, possesses to a



A STREET IN UDAIPUR.

notable extent those qualities of strength and directness which are now valued; and if we make an endeavour to design with no pre-conceived stylistic intention, we shall find our work come much nearer to a consistent harmony with the indigenous Indian modes than with the highly sophisticated later developments, full of intricate detail conveying no meaning to the man of the present day. Numberless modern buildings in India testify to the impossibility of employing a style, which was the outcome of a cultivated and

luxurious court, for such purposes as offices, schools, and hospitals. All the intricacies and graces of detail have either been pared off, leaving the design trite and bald, or when allowed to remain, proclaiming only more insistently their redundancy.

Indian architecture shares with other well-recognized styles the origin in timber structures, and like these others it gradually shed the more obvious expressions of this and assumed those that were appropriate for stone. At the same time, stone being obtainable in long beams and slabs, it could be employed in a manner more akin to that of the timber prototypes. Though the arch was not unknown, it is so rarely found that we may regard the architecture as purely trabeated. Now for utilitarian reasons the architecture of our time is becoming year by year more trabeated, and while we yet have occasional opportunities of indulging ourselves in the employment of the arch in modern building, it appears to be to an increasing extent an anachronism.

Although in many parts of India, where brick has become the building material, the arch is still demanded, the Renaissance has taught us the art of harmonizing it with a treatment basically trabeated, and it ought to be no more difficult to achieve this in the typical trabeated architecture of the East than in that of the West, once the mastery over the handling of this is attained.

If it be asked whether this attainment should be aimed at in view of the effort involved, the answer is emphatically yes, for three reasons: first, that the style has developed under the influence of climatic conditions; secondly, that it secures a harmony between the old and the new; and, thirdly, because it is as adaptable to and as expressive of our present demands as any mode of design imported from Europe or elsewhere. Indeed, it is, if anything, more adaptable, as it is capable of modifications in structure and proportion, harmonized by the employment of variations in decorative detail that are out of the question with the more rigid formulæ established by the founders of European classic. We have, in fact, a classic manner endowed with a Gothic freedom, and the same measure of study given to the traditional technique of Indian architecture as is given to



HINDU TEMPLE ARCHITECTURE, SRIRANGAM.



THE TEMPLE TANK CHIDAMBARAM: MODERN.

that of Europe would make it no more, and no less, difficult to produce a design of high quality in the one as in the other. The European architect may prefer to remain European, but when the Indian architect arises (as arise he will), let us hope that he may realize the value of his own traditions and carry these forward into the new realms that modern requirements and modern construction offer.

As the most important and dramatic Indian building scheme now in progress, and one that is bound to have a considerable influence on future developments, no excuse is needed for including illustrations of the work at Delhi, even though it can hardly be regarded as expressive of the traditional art of northern India.

The problem before the designers of these buildings was not an easy one. The later traditional art of Delhi had lapsed into an enfeebled and expressionless form of Moghul design, which, at its best, could not be considered typical of India as a whole, and which had, therefore, little claim to dominate so important an undertaking.

As the planning of these great buildings was in large measure European in type, the massing, proportion, and much of the detail follow European precedents, while these

have been qualified by combination with features prescribed by climatic conditions—features which have inevitably followed the lines predetermined by the Indian tradition. While the purist may object to this combination and might contend that a more complete harmony would have resulted from the substitution of Hindu “classic” for the Greco-Roman, it has yet been possible to achieve, owing to the successful general composition and massing, a consistent and impressive ensemble.

Just here and there, it must be admitted, the harmonization fails, but these details only very slightly derogate from the dignity of the whole, which is well maintained throughout by the skilful grouping and placing of the blocks on the slope rising to the low ridge which extends in a south-westerly direction from Shah Jehan's city.

The two Secretariats stand out on a bastion projecting eastward from the general line of the ridge, and thus dominate their surroundings, while Government House is set back towards the higher ground. For several miles across the wide plain the white masses, rising above the terraces of red sandstone, form an appropriate focal point, marking the centre of the twentieth-century capital of India.



A NINETEENTH-CENTURY STREET IN UJJAIN.



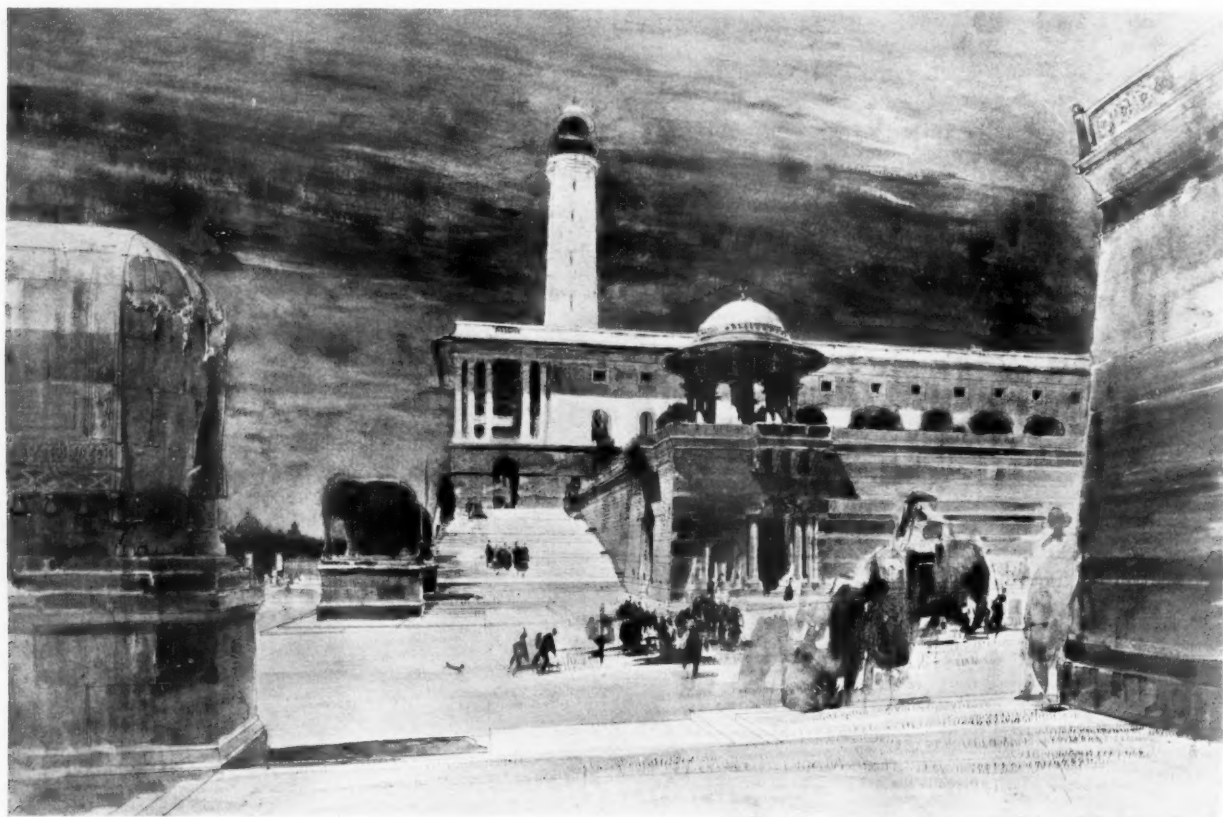
A NINETEENTH-CENTURY STREET IN LASHKAR, GWALIOR.



THE PRINCE'S PORCH, LEGISLATIVE BUILDING.
Designed by Herbert Baker. From a drawing by P. D. Hepworth.



THE ALL-INDIA WAR MEMORIAL ARCH.
Sir Edwin Lutyens, R.A. From a drawing by William Walcot.



SECRETARIATS, IMPERIAL DELHI.
Designed by Herbert Baker, A.R.A. From a drawing by William Walcot.

INDIA.



Plate III.

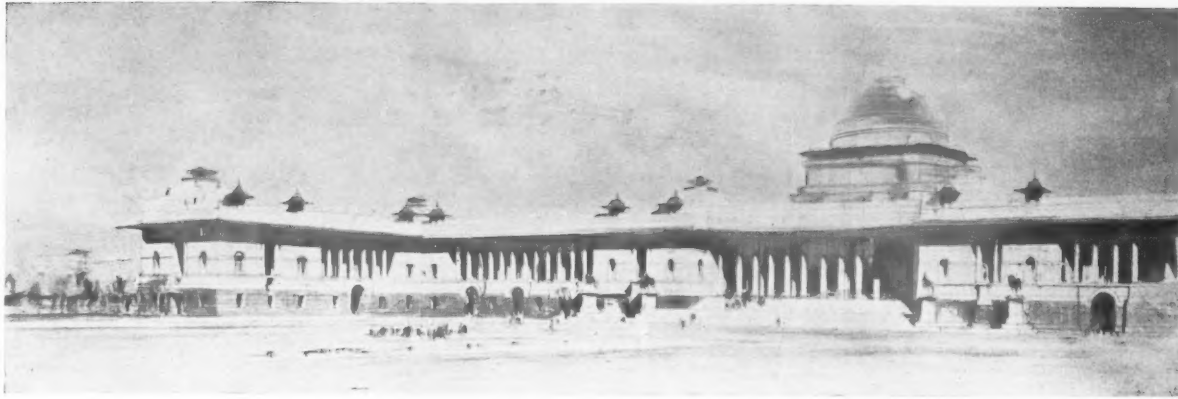
June 1924.

PROCESSIONAL WAY, IMPERIAL DELHI.

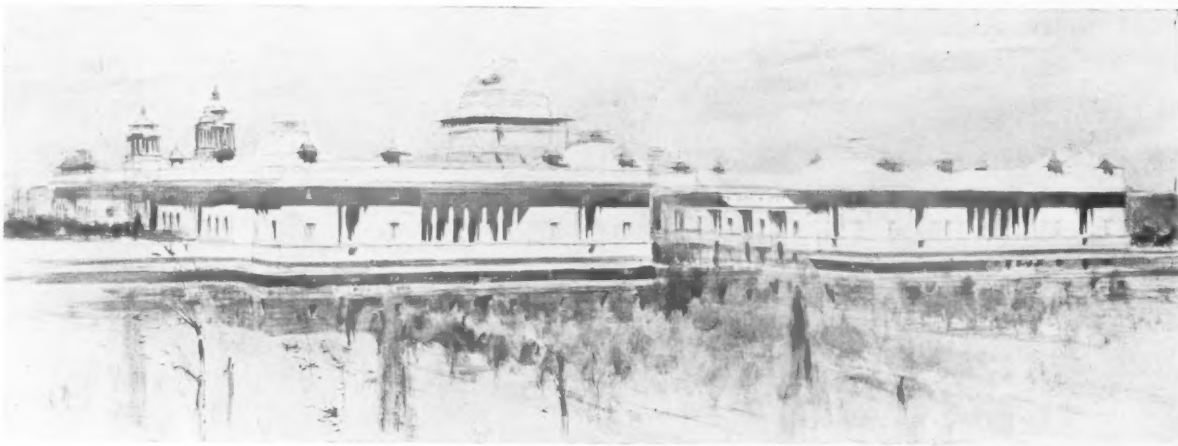
Sir Edwin Lutyens, R.A., Architect.

This photograph shows the model of the lay-out of the Government Buildings, which was on view at the Town Planning Exhibition, and is now to be seen in the Indian Pavilion. Rather under half of the Processional Way is shown; it runs out of the photograph on the left towards the All-India War Memorial Arch, and on the right passes between the Secretariats, designed by Herbert Baker, to finish at Government House, designed by Sir Edwin Lutyens.

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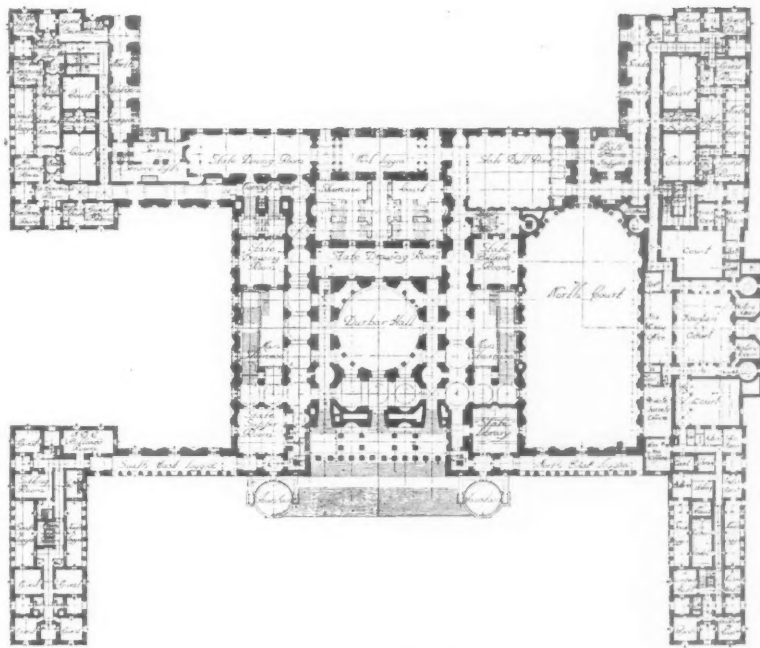


The Main Front.



The Garden Front.

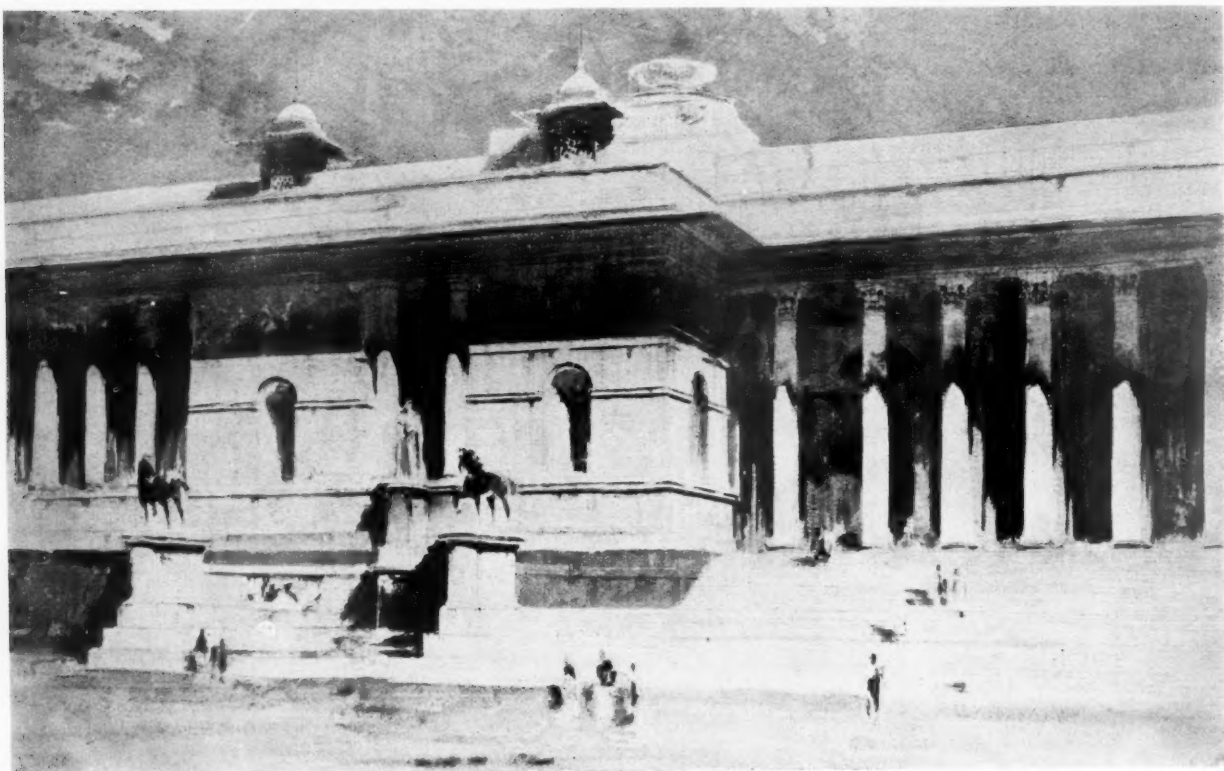
From Drawings by William Walcot.



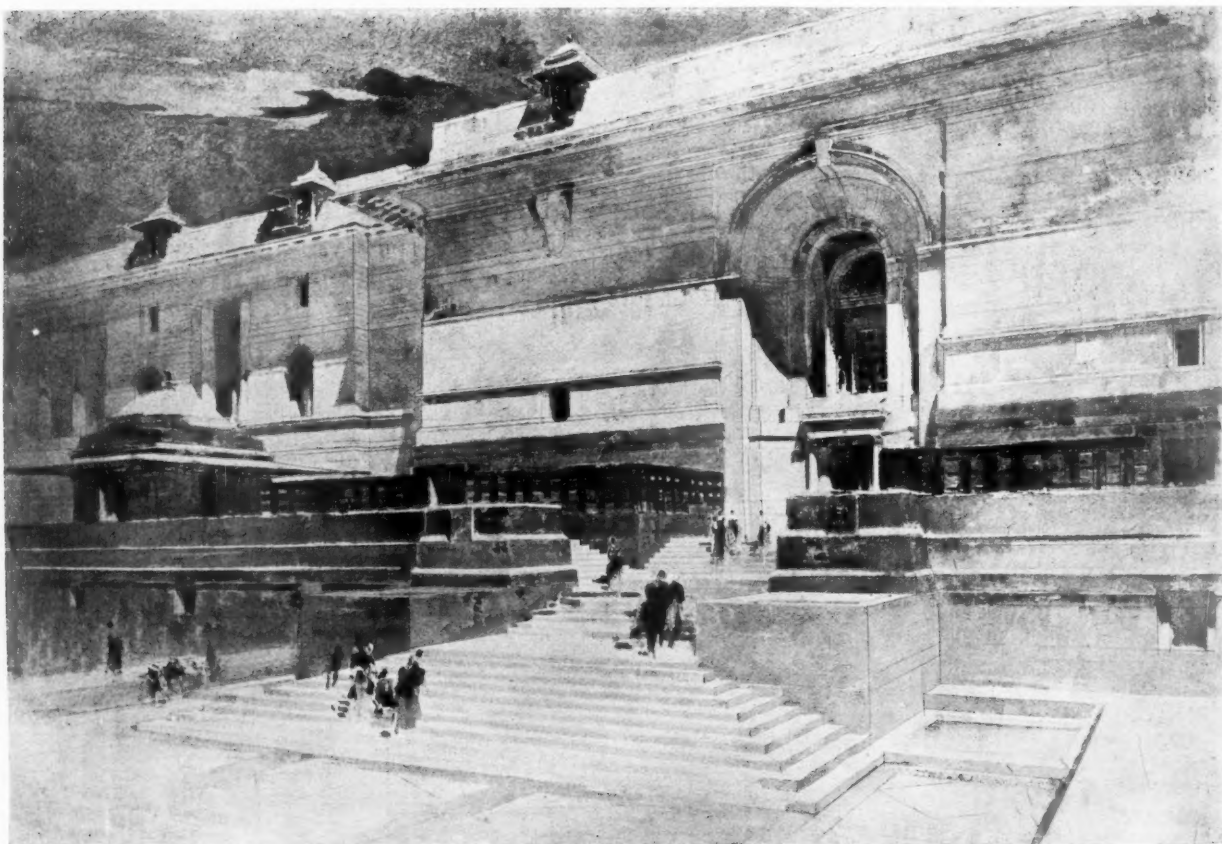
The Principal Plan.

GOVERNMENT HOUSE, IMPERIAL DELHI.

Designed by Sir Edwin Lutyens, R.A.

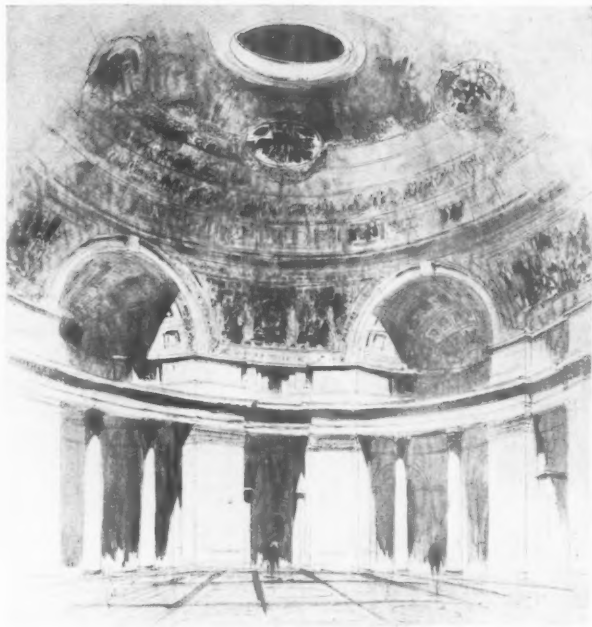


THE MAIN ENTRANCE, GOVERNMENT HOUSE.



A SIDE ENTRANCE, GOVERNMENT HOUSE, IMPERIAL DELHI.

Designed by Sir Edwin Lutyens, R.A. From Drawings by William Walcot.

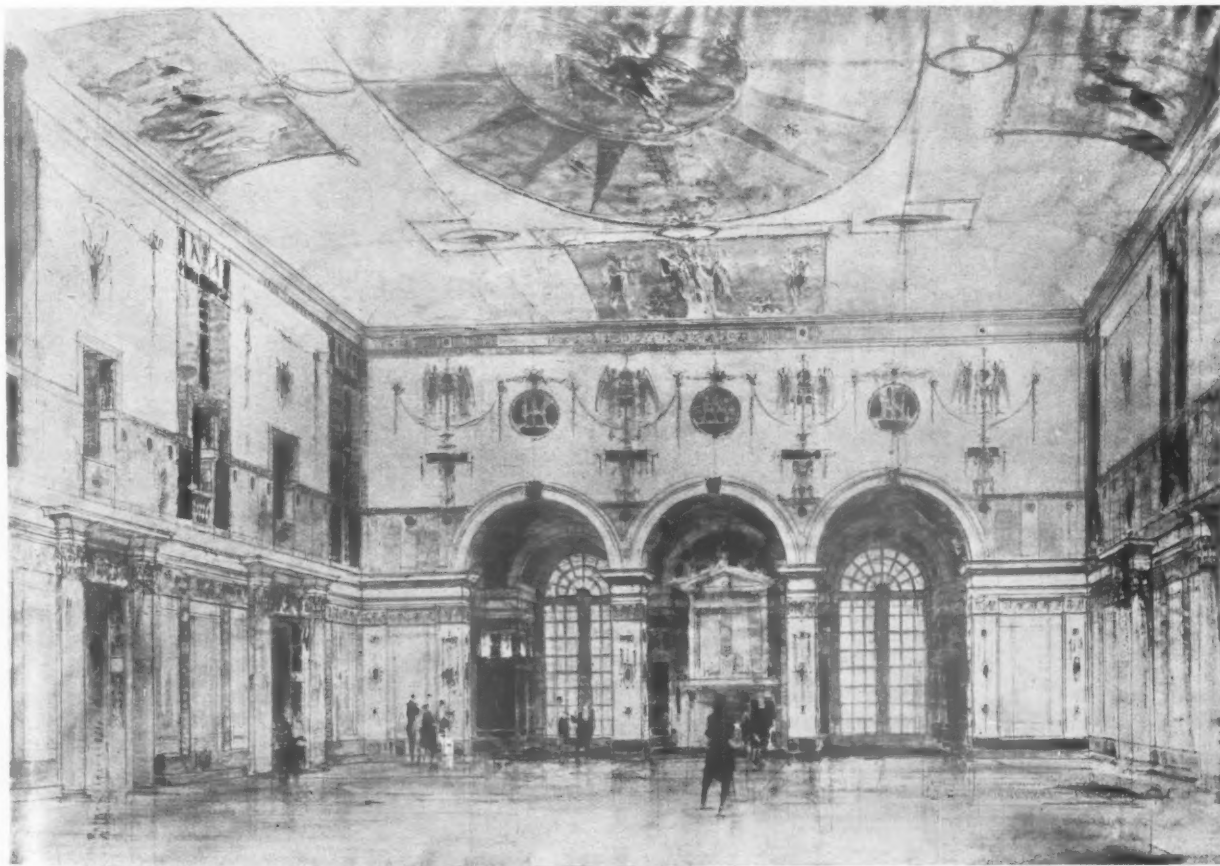


DURBAR HALL.



THE BALLROOM LOGGIA.

Government House faces Processional Way, which is closed at the opposite end by the All India War Memorial Arch. The Entrance leads into Durbar Hall, which forms the centre of the building. The Ballroom and Ballroom Loggia face the back.



THE BALLROOM, GOVERNMENT HOUSE, IMPERIAL DELHI.

Designed by Sir Edwin Lutyens, R.A. From Drawings by William Walcott.

The English Tradition in Canada.

By Percy E. Nobbs.

The examples of old work in Canada are illustrated in the form of drawings, while current work is shown by means of photographs.

THE ideal of a British Imperial Architecture as a ubiquitous outward symbol and monument of our political system and cultural heritage has a certain attraction which the writer readily confesses to have experienced, and in some measure to have acted on at a time when his appreciation of that political system and all it implies of elasticity and adaptability was less acute than it is now—a time when his sense of a racial cultural heritage was, perhaps, more imminent. It may be that the fact that Roman architecture extended very recognizably from Palmyra to Salamanca, and from Carthage to York, is not without significance when considered in relation to the fall of mighty Rome. That empire was a compact affair geographically and physically; an architecture more homogeneous than ours was therefore easier of accomplishment. Now, before one can formulate opinions on the genesis and fate of English architectural traditions in the Empire at large, or, in such part as is the concern of the moment—Canada*—some definition is necessary, for there is a good deal of diversity of view possible as to what an English architectural tradition might be and do. In the eighteenth century, when empire building was at its height—the Victorian expansion being but an inevitable and mechanically facili-

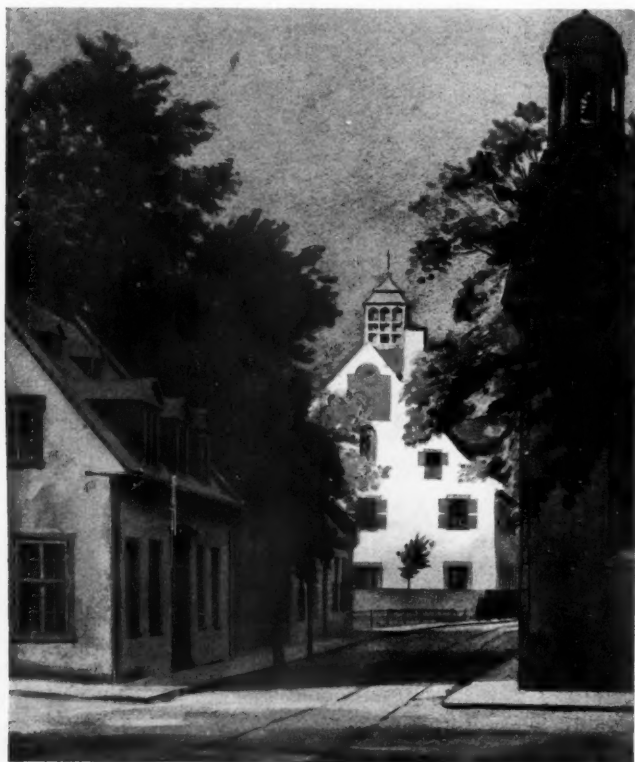
* In the British Empire Exhibition a collection of about fifty exterior views of Canadian architecture is incorporated in the Empire Architectural Exhibit under the management of the R.I.B.A. A similar number of examples of the older French and English architecture in Canada is on view in the Canadian Pavilion of the British Empire Exhibition.

tated continuation of work then undertaken—there was a well-defined and characteristic tradition in architecture. This, though a branch of the tree of current European architectural culture, was a branch with bends and twists of its own. It was, incidentally, a tradition with an aptitude for monumental dignity. In so far as Canada was involved, that old Georgian manner of building may be called both *natural* and English. St. Paul's Church at Halifax, the Anglican Cathedral of Quebec, and, in the beginning of the nineteenth century, the Nova Scotia "Province Building" (Fig. 3), are chips from the old block which might, with equal chance, have fallen on Tweedside, or in the West Indies. Needless to say, these and kindred structures exercised an influence on the taste of a succeeding generation of house-owners and house-builders.

This tradition, once planted, was not left to develop in its own way under new skies, however, but for a time received reinforcement from the parent source. The recently burned Court House of St. John, N.B., and many houses in Montreal and elsewhere throughout upper and lower Canada bear witness, for instance, to the facts of the Brothers Adam, and of the English neo-Grec movement. (Fig. 2.)

So much for the natural English tradition—the tradition which was to be expected and which came alive and integral with the politico-cultural whole.

It is, however, with the twentieth-century Canadian architecture that we are chiefly concerned, and here the English



1. THREE RIVERS, QUEBEC.
Old buildings of the French régime previous to 1763.
From a Drawing by Percy E. Nobbs.



2. MONT ST. MARIE CONVENT, MONTREAL.
Showing the neo-Grec influence. C. 1850.
From a Drawing by J. Roxburgh Smith.



3. THE PROVINCE BUILDING, HALIFAX, NOVA SCOTIA.

Designed by John Merrick, 1811.

From a Drawing by S. H. Maw.

4. THE ART ASSOCIATION BUILDING, MONTREAL.

1909.

Designed by E. and W. S. Maxwell.

tradition involves a problem to be disentangled and analysed rather than a fact to be recorded. The Gothic revival began to make itself distinctly felt in Canada by the middle of the nineteenth century, while a Georgian revival became manifest in its last decade, accompanied by neo-Tudorism and neo-Jacobeanism, and some faint echoes of the Age of Anne. Now, one cannot speak of contact with an English tradition in 1900, when it is abundantly manifest that by then English architecture had completely lost all but the trade practicalities of its tradition in a maze of artificial national historicism. The English influence in Canadian architecture is only recognizable at the opening of this century as the acceptance there of the English compromise of use with association—the basing of church design on the usages of the fourteenth century, recognized by ecclesiologists as the summit of Gothic art; the manifestation in public buildings of a respect for the practice of Wren; the reflection in country houses of Elizabethan or Jacobean ways of thought; the solution of other problems by experiment under a dissipated taste, or the accidents of mere economic evolution.

All this may have been inevitable in an old land, strewn from end to end with the monuments of the past, and during a period when sympathetic additions and alterations absorbed so large a proportion of the energies of the profession. It will, however, be readily recognized how ineffective such a state of taste and practice became for the reinforcement of that English tradition which had been set adrift around the Seven Seas a century before. The result, in Canada at least, was destructive of public taste, and detrimental to artistic effort.

It is interesting to speculate on what might have happened had the English revivals been confined, by a rigorous censorship, to England. The architectures of the various Dominions of the Empire (and of the United States to boot) would have been quicker in solving their own especial problems in terms of use and means. Much wild work would have been prevented, or at least would have proved otherwise; and perchance more interestingly dreadful. The opportunities of the half-baked architect throughout the English-speaking worlds beyond the seas were, of course, immense between 1800 and 1900, and resulted in much that is an exposition of confusion and ignorance. This it is less easy to condone than the "terribilita" that comes of unsuccessful search for illusive form—the unsolved problem.

It may be urged that the substitution of several simultaneously operative historic English traditions in 1900 for

the one in 1800 should have tended to the enrichment of Canadian architectural effort. This might have been so had there been means of architectural education for public and artists of an adequacy on which it is idle to speculate. A little knowledge has always been a dangerous thing, and we can rely on kindly Nature to keep it so.

Things, men, and art being what they are, it happens that there are no more interesting fields for the study of transmitted architectural ideas than colonies—Greek, Spanish, Arab, French, and our own. In the synthetic ameliorations which protean form undergoes with change of purpose, material, method, climate, none are more illuminating to the philosophically inclined than those resulting from ignorance. The Orders, as reproduced in stone or wood with the aid of an eighteenth-century wood-cut, by a native-born colonial Frenchman or Spaniard in the new world, throw much light upon the ultimate nature of these venerable formulæ. Fine design is not incompatible with a glorious ignorance, but it is rarely, if ever, achieved under the spell of smattered knowledge, as exemplified by the English architectural traditions in Canada in 1900. Nobody in Canada was in any way to blame for this. If blame there was, it is not the purpose of this essay to fasten it. The post-war English critics of pre-war English architecture seem abundantly endowed for that task. It is for us only to record the effect in Canada of the condition these writers seek to illuminate.

For the confusion of our architectural wild men I would point out that there is a double usefulness in tradition—as with mercy, "it blesses him that gives and him that takes"—for the artist it furnishes a vehicle more or less grammatic; for the public an apprehendable system of symbols enriched by experience. The familiar form carries with it a host of associations and suggestions, of which the unfamiliar is necessarily innocent. The æsthetic present is compounded all but entirely of residues.

Now, form being, by its very nature, capable of interpretation in terms of function, material, and technical agency, there is, of course, a sense in which form, æsthetically discovered, has absolute value. But ability to appreciate the unfamiliar only comes by the exercise of analytical effort, and the chosen few who are capable of this cannot get away from their individual pasts and trainings. They, like the man in the street, interpret architecture most readily in terms of the familiar.

Thus, Western Europeans, on changing their skies, stick



5. THE NEW PARLIAMENT BUILDING, WINNIPEG.
Designed by Frank W. Simon.



6. THE NEW BIRKS BUILDING, MONTREAL.
Designed by Nobbs and Hyde.

illogically to their prejudice for pitched roofs of slate and tile in climates where sheet metal has every advantage for slopes, or only adopt flat roof forms when driven by sheer economic necessity to do so, and then find themselves at a loss in treatment where roof and wallhead meet. A well-established body of tradition, affecting artist and public alike, and independently of such logical qualities as it may possess, is then, if not an absolute prerequisite, at least a most valuable basic asset in design. And this is likely to be so, even where design is compelled by its logical and economic ingredients to seek new solutions in relation to actualities. On the other hand, artificial disturbances of tradition reacting on artist and public are hindrances and handicaps to progressive development in art.

Such was the situation brought about in Canada by the unfortunate failure of the last three generations of English architects to maintain a co-operative discipline in design, or to produce an adequate system of training. Their simultaneous essays in the "middle flowing," the manner of Wren, the rusticities of the north and of the south, and the urbanities of the Georges, whether justified or not in the British Isles, have inevitably confused the issue in the Dominions.

It is pertinent to our subject to point out that an English tradition, once established, could not but be sensitive to subsequent developments in the parent country. What did happen has tended to the disintegration rather than the consolidation of the sound earlier tradition that might have enabled Canadian towns to grow up gracefully and in control.

An interesting commentary on the momentum of inertia in architectural ideas is provided by a comparison between the time it takes a cabled stock quotation and a Gothic revival to cross the Atlantic. We are assured that the Gothic revival is dead in England, yet since 1900 more cusps and mullions, aye, and crockets, too, have been cut in Canada than ever before. Of course, the spirit of Gothic art is preposterously impossible under modern Canadian conditions, but the fact that it is sedulously attempted in the letter calls for sympathy, at least where an experience of the results does not compel regret. The tangled skein of English tradition in Canada now is reminiscent of much that was characteristic of the London of from thirty to sixty years ago, when the Law Courts and Foreign Office were giving rise to resounding contentions. (Fig. 8.)

All this is also true in so far as English traditions obtain in the United States, for it must be clearly borne in mind that far more cultural unity (outside the realm of political ideals) exists as between Canada and the United States than between Canada and England. It is probably of far greater significance to us who reside in Canada, that the country is situated on the North American continent, than that it is within the hegemony of the British Empire. Indeed, it is not too much to say that the strong, though disordered, English traditions that manifest themselves in Canadian architecture come to us indirectly from across the southern border, rather than directly across the Atlantic Ocean. Although there is a marked predisposition in Canada to select from the rich architectural influences that impinge from the United States,

CANADA.



Plate IV.

June 1924.

THE CRANE BUILDING, MONTREAL, 1923.

Hugh Vallance, Architect.

Architecture
Library



7. THE CHAPEL OF THE GRAND SEMINARY,
MONTREAL, 1910.

Designed by Marchand and Haskell.



8. A CORRIDOR IN THE PARLIAMENT BUILDINGS,
OTTAWA, 1920.

Designed by John L. Pearson and Joseph Marchand.

those which have an English incarnation in the course of their historic diffusion from the Mediterranean sources of culture, yet the more cosmopolitan influences from the United States are not lacking. Three varieties may be most readily distinguished: the rarefied Italian classicism of McKim and his school (Fig. 4); that superficial Gallicism that passes muster for the academic among those who have received least benefit from a sojourn in Paris; and last, but not least, the over-literal Greek.

The limits of the occasion preclude any detailed account of domestic architecture in Canada. In this field the exigencies of climate, as affecting window and roof forms, of social conditions in their relation to labour-saving planning, of economics with reference to heating, and of availability in craftsmanship as bearing upon what can be executed after it has been drawn, all tend gradually towards generic character in spite of conscious historicism. This, by the way, is too often the sole cause of seeking professional assistance in the contrivance of a house. The architect is expected to traffic in periods. For the most part this historical taste, artificial as it is, and founded in the cults of revivalism, has an admittedly nationalistic motive; it is the English traditions from the days of Elizabeth to the days of Victoria that serve most commonly as the foundations of this faith ill-founded.

Unfortunately for Canada, these favoured traditions were each the natural outcome of a climate, a social life, an economic condition, and a state of craftsmanship all as different as it is possible to conceive from their counterparts in the Canada of to-day.

Canadian domestic architecture is thus in a state where fine things cannot be expected of it. The greater the means

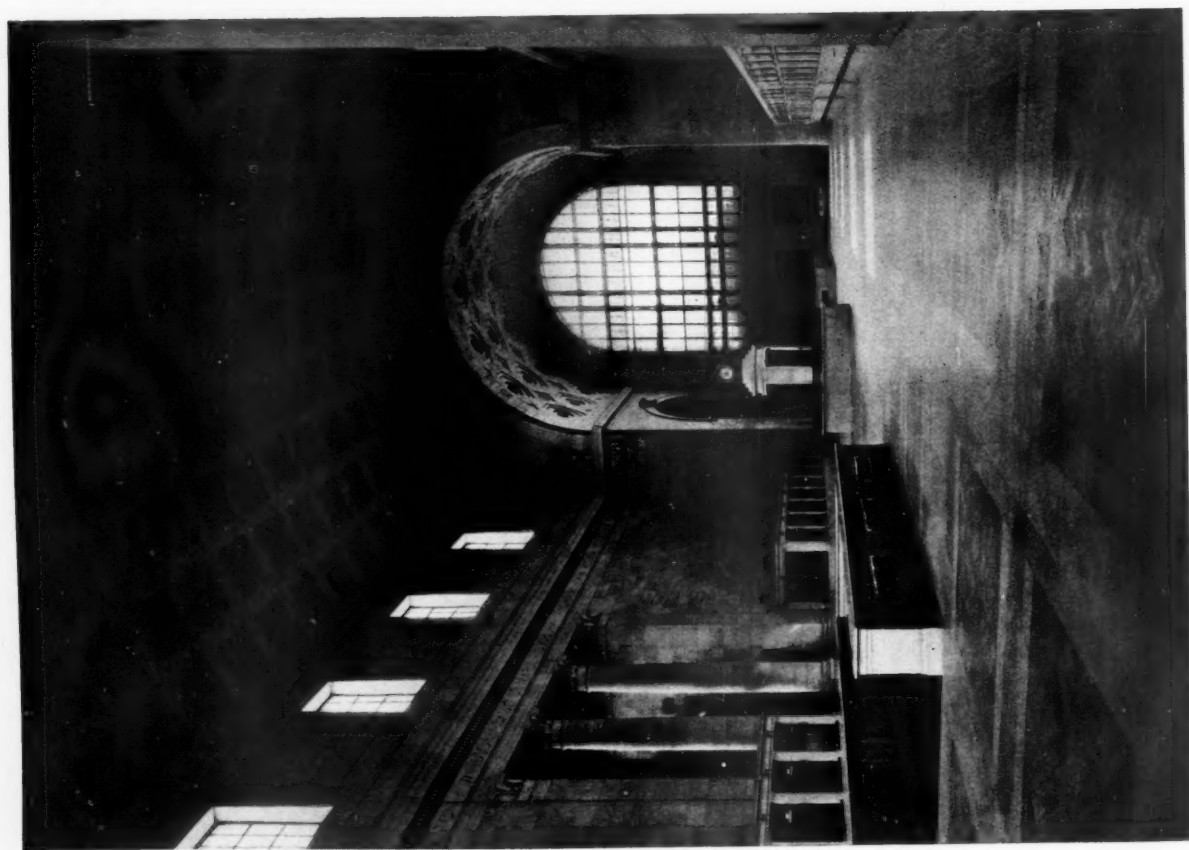
available in any case, the more likely is the result to be a piece of ingenious stage setting, with the ingenuity or the verisimilitude blocking the appeal. Mock half-timber and tile hanging are not as common as they were, and acceptance of the Georgian models is at the moment again in the ascendant. These have the advantages of the eighteenth century's amelioration on American soil, of an ultimate origin under sunny skies, and, more inestimable still, of a residual deposit in the consciousness of the North Americans having become by now racy of the soil.

But if Canadian domestic architecture inclines preponderantly towards what is at once both English and obsolete—for which it is now the ungrateful fashion to blame those guides and beacons of our youth, John Ruskin, William Morris, *et al.*—a fine catholicity of taste must be admitted, for in any suburb of a considerable Canadian town one may behold among the roofs those of old England and of New England, of Normandy, and of the Loire, the roofs of Spain and the roofs of Mesopotamia, but strangely few of the roofs of Switzerland or of Norway, which would do the work required of a roof particularly well in such snow-blessed situations. But where man refuses to be an agent of evolution, Nature can be relied on, by the pressure of the annual charges for maintenance, to assert her way.

Before passing from this very brief summary of the position of domestic architecture in Canada to-day, a word is due on vernacular house building. The old French house of the Montreal and Quebec districts (Fig. 1), and the old Scottish house of Glengarry, and the old New England house as found in Nova Scotia, have had their day. The Doukhobor and the Galician have built their picturesque thatched cottages on the prairies but once only. The national cultures



10. THE DOMINION BANK, TORONTO, 1910.
Designed by Darling and Pearson.



9. THE UNION STATION, TORONTO, 1919.
Designed by Ross and Macdonald, Hugh Jones, and J. M. Lyle.

responsible for all these types survived for a generation or two in the older days, but only for a decade or two in the present. The ruthless economy which imposes the factory-made windows and doors and the flat roof can be relied on to exorcize all hyphenated national spirit and character from the cottages of the simple. Nor can we expect much improvement in our cottage building until the architects of the gentle are set to the task of evolving natural types in place of artificial pleasantries. Helpful example is, at the moment, too rare to be of account.

The tentative character of domestic architecture in Canada saves the Canadian architect from the British obsession for solving all problems in terms of the house. In the planning of hotels much has been learned from across the border, but much also on home soil, and a Canadian hotel is usually a place in which one can find one's way about. The overgrown country house, or rabbit-warren plan beloved in England, does not occur.

The same is true of Canadian railway stations, which are usually as purposeful in fact and in appearance as the rolling stock they accommodate, and this often in spite of some arbitrary stylistic handicap. (Figs. 9 and 11.)

Canadian office buildings, again, whether restricted to ten stories or thereabouts, or of the really tall variety, permitted in misguided Toronto, are uncompromisingly natural. (Plate IV.) The treatment usually involves the recognition of the top and the bottom as functionally specialized, and the intermediate stories as so much honeycomb. (Fig. 6.) Such solutions are in notable contrast with the prevalent English habits of over-emphasizing structure and piling eight or ten ingeniously varied stories one above another, or of constructing massive towers developed inconsistently from the texture of the cellular structure, with what intention God alone can know. The office building has been a great educator of Canadian popular taste, which is apt to be shocked by such essays in inconsistency as are evinced in the Liver building.

In school planning, again, a rigorous climate and a rigorous economic sense have resulted in the evolution of highly-specialized types, imperfect as yet, but abundantly organic.

English tradition in Canada is more pronouncedly apparent in the interiors than in the outward aspects of buildings.



11. THE WAITING-ROOM, C.P.R. STATION, VANCOUVER, 1912.

Designed by Barott Blackader and Webster.



12. A STUDY IN ENGLISH DOMESTIC DESIGN.

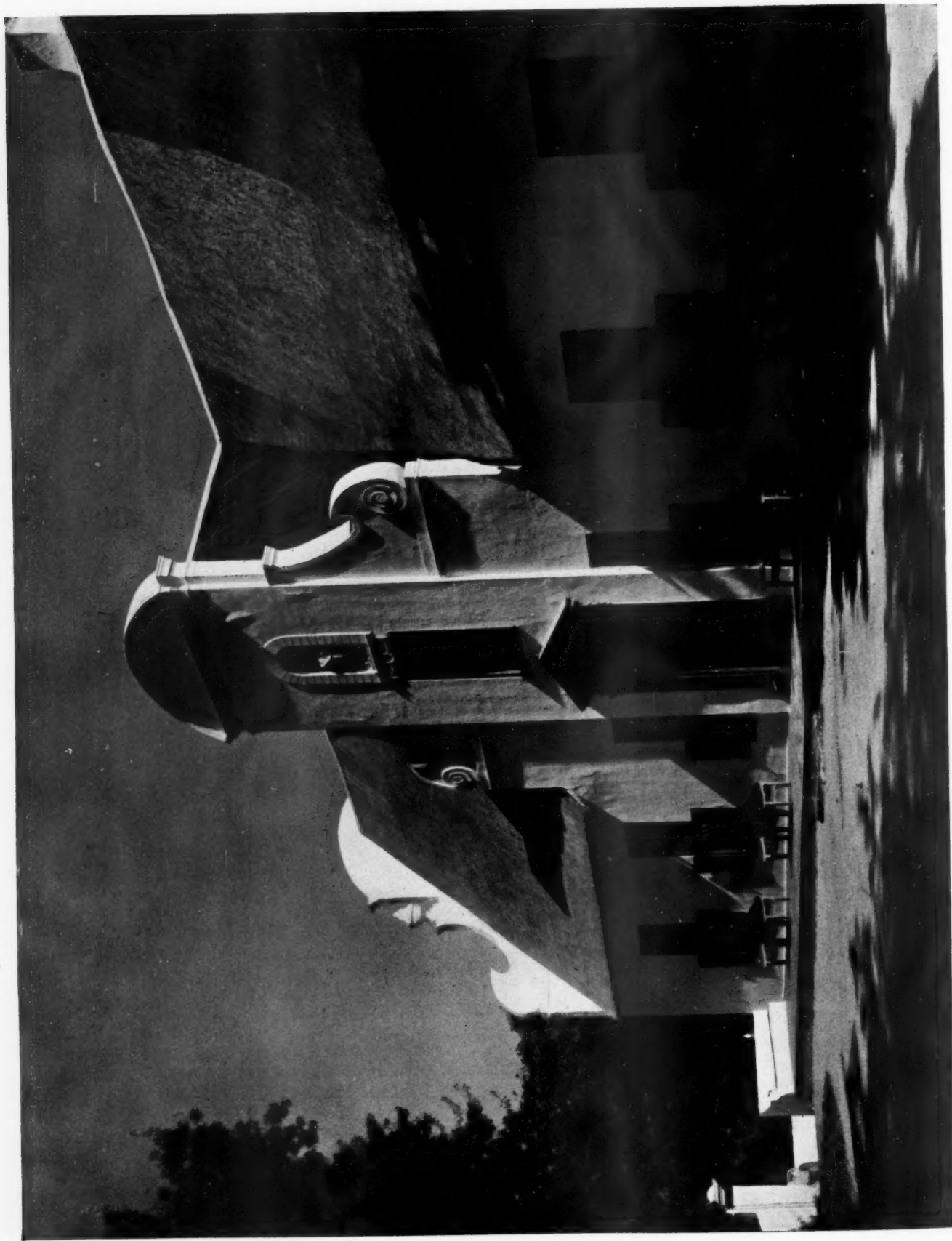
By Nobbs and Hyde.

The fireplace, as found throughout the English-speaking provinces, has usually an ancestry obviously English. The characteristic forms of French, Dutch, and German fireplaces and stoves are rarely found in a state of amelioration or evolution. Where these occur at all they are style-mongered and complete in artificial interiors, not in process of working their way into life and habit. The Canadian loves a big fireplace with dogs rather than a grate, and between the seasons he needs it, for the radiator only comes into its own as an alternative to hibernation, and does not dispute with the open fireplace its immemorial rituals of happiness.

Speaking broadly of the general apparatus of life in Canada, the furniture is often real old English, or imitation old—but real English, or the obvious lineal descendant of such. Even when crude and degenerate in form it usually enshrines a tradition in the last resort English. Fine French, Dutch, and Italian furniture occurs in collections and in the houses of the extravagantly elegant, of course, but there is a prevailing taste, amounting to an instinct, in favour of English types. To this the commerce in "period furniture" has ministered very abundantly. Of the emergence of new and indigenous types there is not a sign other than the degeneration and cheapening of the older forms. Craftsmanship is not the strong point in Canadian civilization just now.

Classic architecture, where done, is for the most part Roman in its inspiration—where not the Roman of the Emperor Augustus, then the Roman of Pope Julius II. But while the mullioned and the ordered systems strive for mastery, each offering an abundance of rival documentation as a means for economizing thought, there are so many interesting new problems of building design in Canada, which are not readily susceptible of solution in terms of either mullions or orders, that ingenuity has its opportunities. Design, in such cases, may degenerate into mere engineering, through complete and immediate subservience to the practical. Where the designers of these new things have the instinct for scale and proportion they sometimes achieve an architectural quality which must rest unenjoyed until it has become adorned, scented, and sanctified by use and familiarity, and so absorbed within tradition.

We may venture the prediction, in closing, that the next generation will see a diminution of the English tradition as an element in Canadian architecture, and an increase of the adventurous spirit.



"GROOT CONSTANTIA."
Built by Simon van der Stel about 1690.

South Africa.

By C. P. Walgate.

ARCHITECTURE in South Africa, except for a few remains which are of interest only to anthropologists, began with the building of a rude fort by the servants of the Dutch East India Company in 1652, when a small garrison under the command of Johan van Riebeeck landed where Cape Town now stands, for the purpose of establishing a victualling station for ships passing to and from Batavia. After a few years of privation the little settlement began to prosper, and the first permanent buildings were begun, at Rondebosch, several miles inland, a spot sheltered from the violent gales, which were the curse of both navigation and cultivation. In the year 1679 Simon van der Stel became Governor. He realized the great possibilities of the Cape as a colony, and made grants of land to such of the company's servants as were willing to brave the dangers of Hottentots and wild animals and begin independent agricultural work. Immigration of settlers from Holland was encouraged. Under the guidance of van der Stel, and with the help that he, as Governor, was able to give, these farmers succeeded, and in spite of their rough surroundings built for themselves homesteads which established an entirely fresh and altogether delightful style of architecture, and many of which, with a few minor alterations, serve to-day as stately and comfortable homes for those who are fortunate in possessing them. This first type of building carried on certain traditional forms which were at that time current in Amsterdam. The steep roof, used as a store, was merely translated from tiles to thatch. The gable of fanciful outline could not show its ornamental pattern of picked bricks and stone, as the local stone was refractory, and the bricks in the new country needed the protection of plaster to preserve them from the weather; but the general form still persisted. Development was very rapid. The newly-invented sash window was almost universally used, and in addition an ingenious combination of window above and door below. Fancy was allowed free reign in fanlight designs. Elements from the cool houses of the East Indies enriched the style and fitted it for its sunny environment. A charming contrast of broad surfaces and fine detail arose from the fact that building was done by slave labour with the addition of such highly-skilled craftsmanship as was obtainable from the carpenters and

locksmiths in the company's service who happened to be available from time to time.

In the domestic buildings two types of plans were in common use, both types originating in the exigencies of roofing with thatch.

In the country where space was unlimited an I plan was adopted. This comprised a long central hall, frequently divided by a folding screen, with rooms opening directly off it on both sides. One wing contained the pantry and kitchen, one wing was the best bedroom, and the other two were generally divided, giving in each two rooms *en suite*. Occasionally the spaces between the wings were covered with flat roofs below eaves level.

The town house was planned as U. At the port more varied materials were available, and the space between the wings was usually covered with a flat roof. This was constructed of stout beams, the intervals being bridged by brick arches, large tiles, or even boarding. Over this was laid lime concrete finished with a mastic probably composed of shell lime and coco-nut oil. Such roofs, long forgotten under a covering of corrugated iron, are still occasionally discovered by architects who are charged with the repair or alteration of old buildings.

Early in the eighteenth century the use of thatch was discontinued in the town, on account of the frequent fires which occurred, and flat roofs became general. The window in the high gable of the thatched roof had been a place of vantage for looking out to sea for the little sailing ships that were the only link with the rest of the world, and with the flat roof a substitute for it had to be found. Above the main upper story was built a single room, which, crowned with a pediment and buttressed with sweeping scrolls on either side, gave a touch of fancy to the square formality of the street façade.

A noticeable variety in style arose after the revocation of the Edict of Nantes in 1685 owing to the influx of French refugees. They adopted the general type and method of building which they found established, but France at that time was a leader in the Renaissance movement, and the refugees brought with them an ideal of refinement, and a little knowledge of Classic forms. They achieved delicacy of detail, and introduced pilasters, vases, and such ornaments



A MODERN HOUSE IN THE OLD CAPE MANNER.
Designed by Walgate & Elsworth.



A STREET IN CAPE TOWN.
Of Old Dutch Houses with Flat Roofs.



ST. GEORGE'S CATHEDRAL, CAPE TOWN.



THE DUTCH REFORMED CHURCH, CAPE TOWN.

into their treatment of the broad plaster surfaces, and very charming, indeed, was the result they achieved.

In addition to the private residences, which show a very marked consistency in style, there were erected but few public buildings showing the same general characteristics in form and detail. The Castle was sufficiently completed for occupation in 1674. Of outstanding interest was the Dutch Reformed Church, completed in 1703. Only the Clock Tower now remains, crowned with a fantastic roof of small slates and an elaborate weather vane.

In 1815 the possession of the Colony was formally transferred to Britain, and in 1834 St. George's Cathedral was opened. This is a very good example of copy-book Classic, built from a design supplied by Lieut.-Col. Bell.

From this time a period of distress, drought, and wars with the natives caused a suspension of building, and when, in 1867, the discovery of diamonds brought relief, the excited rush of fortune hunting did not conduce to settlement and the erection of permanent structures, so the thread of tradition was broken, and the first period of architecture in South Africa, which had lasted about 150 years, had definitely closed.

After more than fifty years marked by no building of merit, the second, or modern period, developed. About 1895 Cecil Rhodes commissioned Herbert Baker to remodel into a residence the remains of the Groote Schuur, the Great Barn which van Riebeeck had built at Rondebosch in the first years of the Dutch occupation. Rhodes's great vision and resources and Baker's enthusiasm and ability were well

met, and a revival of the arts of building was soon an accomplished fact. Baker's earlier works were modelled after the Dutch buildings, but soon he began to avail himself of a wider range of materials, and collected around him a school of accomplished craftsmen. Later on he adopted an Italian basis of design which proved itself well fitted for the clear and sunny atmosphere. Examples of this mature work are Villa Arcadia, built for Sir Lionel Phillips at Johannesburg, and the Union Buildings at Pretoria.

No national style arose with the consistency which marked the work of the eighteenth century. To-day the steep roof with rich gables rises beside the flat-pitched roof with Classical column and architrave. There is many a piece of hand-made ironwork or brasswork which owes some quaint conceit to the tradition of locksmiths of the Dutch East India Company, but the advent of woodworking machinery has almost destroyed the fanciful freedom found in the earlier joinery. The tendency of the moment appears to be towards a revival of the earlier forms in the Cape, where they originated, and a development of Classical design farther north where no precedent existed—a perfectly logical course which we sincerely hope will lead to that definition of aim and continuity of effort which are the necessary prerequisites of any high development of architectural art.

The writer is indebted to J. H. R. de Smidt, Esq., for historical notes; A. Elliott, Esq., for photographs of historical buildings; Lady Phillips for photographs of Arcadia; Dr. Charles Murray for photographs of Union Buildings; the architects represented for photographs of their work.



Plate V.

"MORGENSTER" (Morning Star).
This house was built in 1786.

June 1924.

Architectural
Library



"PHONE."

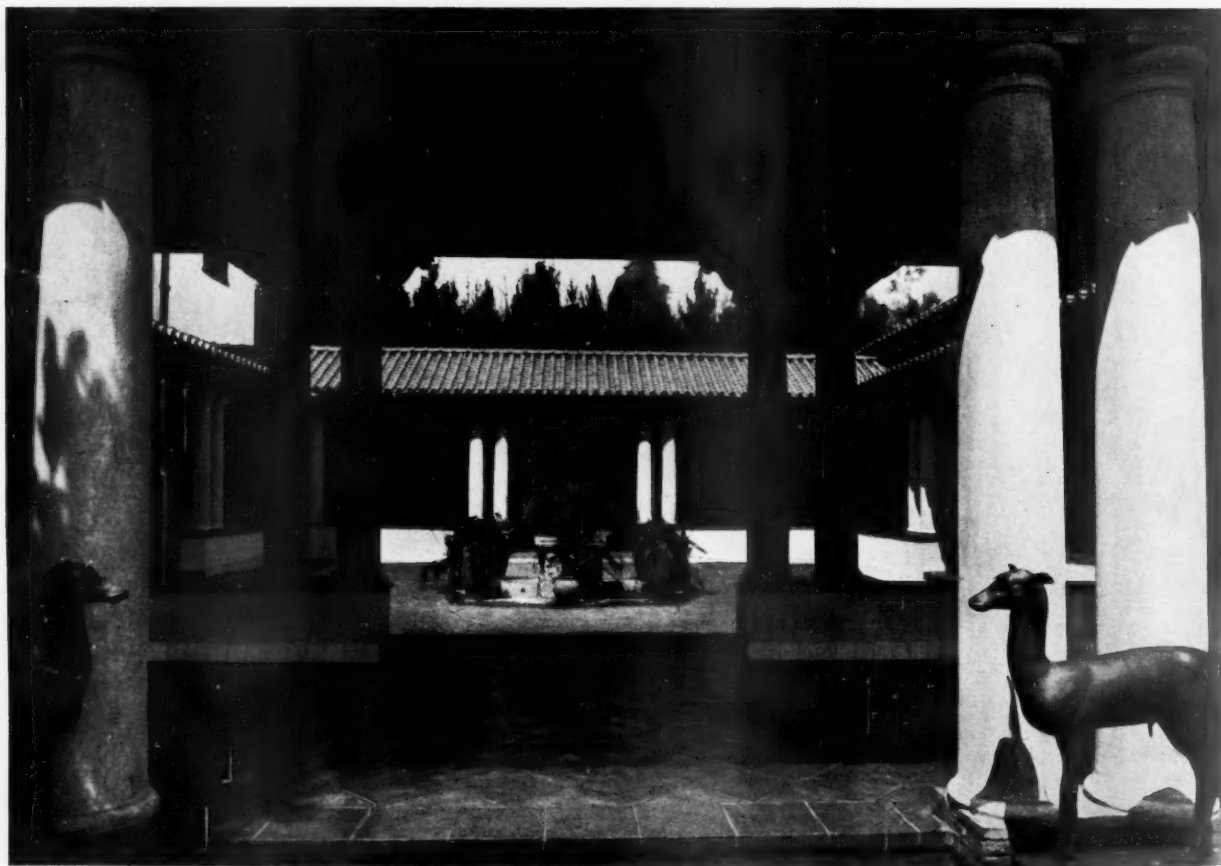
This land was granted to Jean Gardé in 1691.



A TYPICAL CAPE TOWN HOUSE WITH AN OBSERVATORY ON THE ROOF.



A COURT IN THE UNION BUILDINGS, PRETORIA.



"VILLA ARCADIA."

Designed by Herbert Baker for Sir Lionel Phillips.



THE EASTERN TOWER.



THE WESTERN TOWER.



UNION BUILDINGS, PRETORIA.
Designed by Herbert Baker.

Australia.

By Hardy Wilson.

(Some of the photographs illustrated are by the courtesy of the editor of ART IN AUSTRALIA.)

ON some maps of the world a line is drawn, fifteen hundred miles from end to end, which marks the Great Wall of China. When the Emperor Huang Ti set about building this wall, he was hopeful that it would prove a barrier against the barbarians of the north who were plundering his border towns. Straight up the highest mountain sides into the clouds and down to the bottom of the deepest valleys runs the Great Wall, in places so steep that one must cling to the stones of the pavement, which is wide enough for troops to march six or eight abreast along this road of solid masonry as high as the ramparts of a mediæval fortress, and pierced at intervals with gates and guardian towers. The Great Wall of China is the longest work of mankind in stone, and perhaps the greatest monument to human perseverance. It appears a formidable barrier, yet it failed in its purpose.

There is another line on the map which is called the Equator. Its structure is of sun-burnt land and brazen sea, and always it has been a far more effective barrier than any wall of brick or masonry. Ages ago Prince Henry of Portugal, planning the conquest of this dreaded line in his watch-tower on a headland overlooking the sea, heard, again and again, the footsteps of his captains returning baffled by the Equator. One after another his stoutest ships reached the Guinea Coast and no farther. But he was not discouraged, and gradually they crept along the coast of Africa until, at last, having rounded the Cape, the line was conquered.

Nowadays ships pass to and fro without heeding the obstacle which barred the way for the ships of Portugal. Nevertheless, the Equator remains a barrier: it bars the progress of the Arts in the Southern Hemisphere. From the southward voyages of ships have sprung nations and great cities, but all the masterpieces are made to the northward still, and to attract a master across the line is a task which faces Australia. Some day one will venture, when the opportunity is made ready for his hand. He will come, possibly, from the United States of America, the first to cross the Pacific in that slow and certain progress of the Masters westward which reached ancient Greece from a beginning made somewhere, perhaps, in the heart of Asia, and now lost in the depths of pre-history. Arriving in Australia, or China and Japan, the Masters will be nearing the completion of their circle westwards round the world. And then with their arts so changed in the journey, that reaching Europe once again, they will be hailed as flowers in the spring of a new creative movement. In the meantime the opportunity for the Master has to be prepared in Australia, where the first great building will be the work of an architect from the north who must create that standard of excellence without which the finest architecture cannot be established in a remote and insular land. As Henry VIII and other monarchs found desirable and brought master artists from abroad to introduce new styles and standards into the arts of England.

Of the architects who crossed the Equator to Australia there was one who established a standard on which the architecture of to-day is being moulded. He was Francis Howard Greenway, an architect of Bristol, who was transported in 1814 to New South Wales for concealing his treasured effects at the time of his bankruptcy. Lachlan Macquarie, Esquire, Governor of the Colony, appointed him Civil Architect at a salary of three shillings a day. Greenway was an artist, and being constantly harassed in his work by government officials and resented by the gentry, who were opposed to what they considered extravagance on the part of his patron, he lost heart and often neglected the supervision of features and details on the buildings which he designed. Yet he succeeded in producing architecture that has more restraint and simplicity, more beautiful texture and materials, and, above all, finer feeling for scale and proportion than is to be found in the work which has followed. After a century of neglect Greenway's architecture has become known and is the foundation on which the student now begins to base his art. From the knowledge that is thus being gathered will come the preparation and the welcome for the next accomplished architect.

The work of the Old Colonial period, or the Macquarie architecture, as it is often called, after the name of the Governor of New South Wales from 1810 to 1821, has a loveliness of its own. It has little scholarship in detail and ornament, but the homesteads are simple and symmetrical and pleasant to look upon. They are placed, as often as not, on beautiful hill-tops, and their stone-flagged verandas with colonnades of Greek or Roman Dorics overlook smiling territory. Leafy trees grow close beside their red-brick or whitewashed walls, and delightful gardens surround them where gay flowers bloom all the year, and the scent of thyme and lavender and the hum of bees penetrate to their cool interiors.

In 1840, or thereabouts, came the Gothic Revival, when buildings foreign to the land and the light were built, and in after years deserted. Then the cement of the Victorian period swept over the country like a pestilence—the age of florid town-halls and fashionless ornament. From that outburst Australia plunged into the melancholy which follows debauchery, and sombre blue-black bricks and umbery woodwork, roofed with purple slates, spread a gloom which jarred with the radiance around, until light penetrated the darkness and architecture was redeemed with a precious flow from the brush of whitewash.

And of the future what dare one say? To venture is unwise, even in a country of slow change, while in a new, where the buildings of to-day vanish to-morrow, prediction is far more likely to prove amiss. Nevertheless, as the blank canvas is preceded by the cartoon and the rough quarried stone by the plan, so the course of architecture in Australia seems foreshadowed in characters of the East. Australia is an oriental land, and geography, the great moulder of architectural form, is already silently at work.

AUSTRALIA.

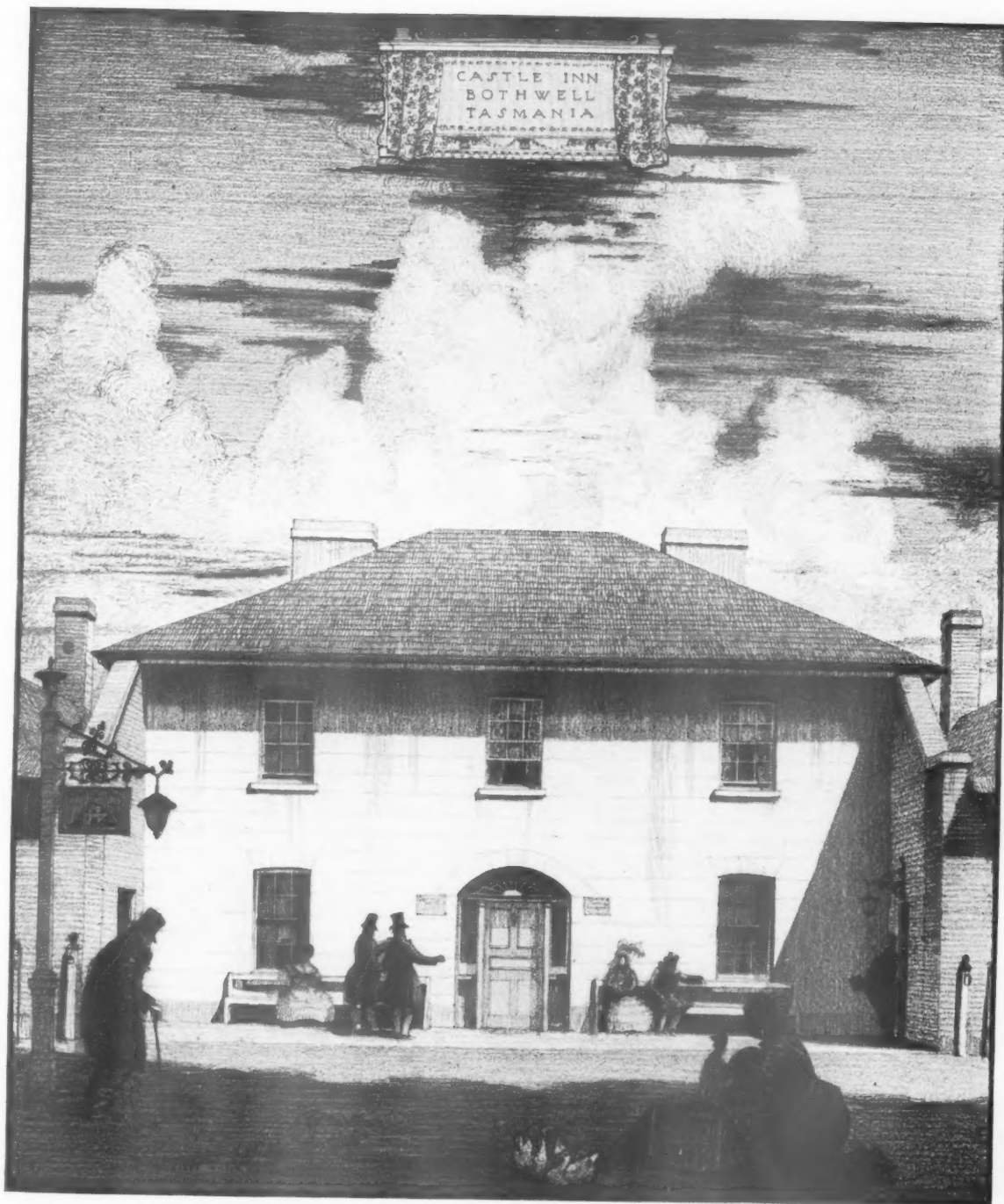


Plate VI.

June 1924.

OLD AUSTRALIA: THE CASTLE INN, BOTHWELL, TASMANIA.

From a Pencil Drawing by Hardy Wilson

Architectural
Library



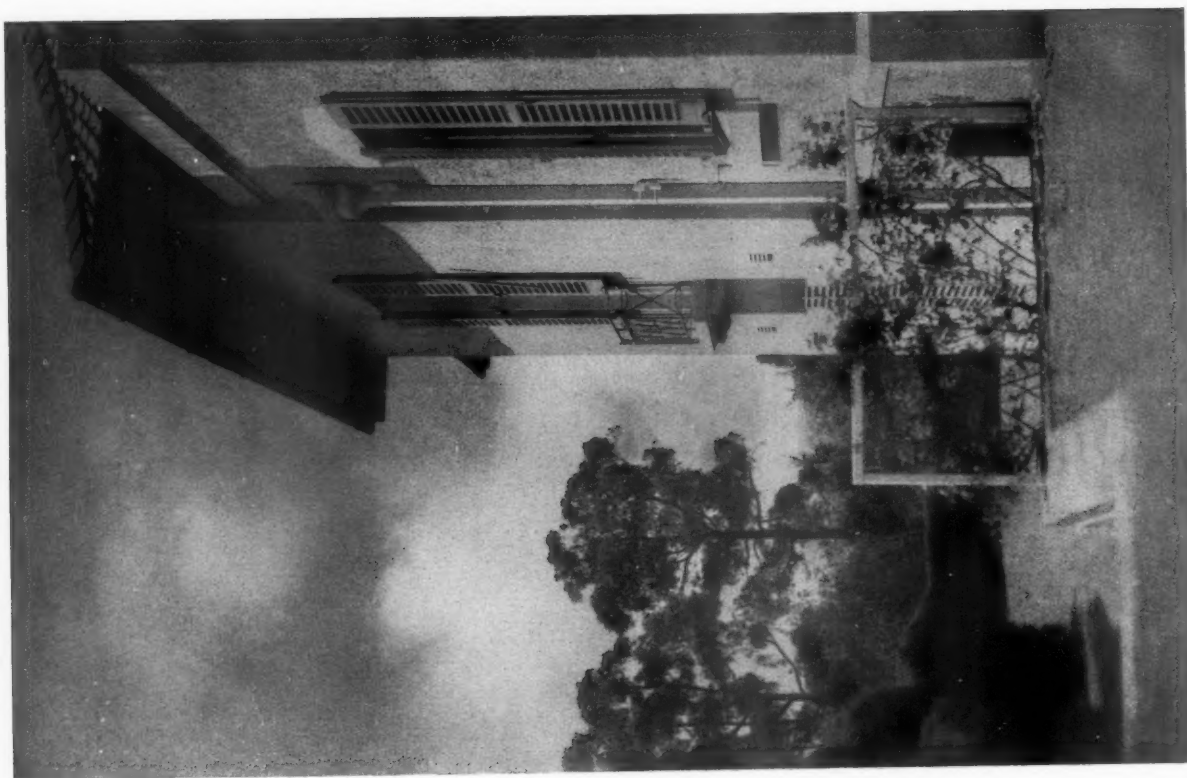
CUSTOMS HOUSE, BRISBANE, QUEENSLAND.



NATIONAL ART GALLERY, SYDNEY, N.S.W.



THE PUBLIC LIBRARY, MELBOURNE, VICTORIA.



MARLEE, MOUNT LOFTY, SOUTH AUSTRALIA.
Designed by W. H. Bagot. Modern.



THE OCTAGON, DARLING POINT, SYDNEY.
Early 19th Century.



DENHOLM, GORDON, SYDNEY.

Designed by John L. Berry. Modern.

Slowly the foundation is appearing above ground—the ground of an oriental continent—and the style foreshadowed is horizontal in rhythm, while the feeling of the race, which is European, is still for the vertical. And the whitewash is becoming sprinkled with vermillion and gold, and gay and ever gayer colours appear such as the sun evokes and subdues.

During this short century of change Time has worked with an eager hand speedily to make ancient the stones on which the story of the people is written. Time has toiled well, and already the Old Colonial buildings, bleached with his favourite tool, the sun, have that mellowed air about them which rouses veneration for the past. Although not ancient, as in older lands, they stand fast while fashions come and go, and give safe anchorage to the architect who knows not which way the wind will blow his ship of styles. For the moment the wind blows from the direction of the United States of America, a wind of convenience, easy adaptation, and economical application to the conditions in Australian cities. But Geography is at the helm, and gradually the horizontality of the East is surmounting the perpendicular lines of the skyscraper, and the ship of Architecture creeps towards the uncharted harbour.

While the styles follow the changing fashions, there is a steady current underlying the progress of planning in architecture throughout the Commonwealth. And the current is the march of Democracy. The plan of the house has proceeded hand-in-hand with the habits and maxims of the people. In the course of its century of growth the kitchen, which was detached and far at the rear in Old Colonial days, has gained a position alongside the parlour, and, furnished

with complex modern machines and contrivances, is now the most considered room in the house. In the office buildings and the shops, which grow larger and higher, the plan is a little ashamed of itself, and generous spaces are grudgingly allowed, while design has no magnificence. The industries, arts, and sciences are in their infancies, and the pride of the people is in their wool and cattle, their grains and fruits. When the industries rank in importance beside the products of Nature, the plans of the greater buildings will be given a more generous scale.

In establishing a nation in the wilderness, it is the flocks and herds, the wheat and the grape, that are first in importance. Architecture is no more than a hastily built shelter from the wind and the rain. And so there are many ramshackle little towns, reared in a day, scattered over the countryside, which, though a sad enough spectacle, need not be deplored: Time will soon remove the flimsy structures. Time will have a far more difficult task in changing the plans of these little towns, and of the cities, too, where haphazard growth and alteration proceed unchecked, and the lessons of the past and the present are ignored. If the Town is Mother of the Arts, Sciences, and Industries, these her children are not well-born in Australia. When the plan is badly laid the town is at a disadvantage, and its life, like that of a tree on barren soil, will be warped and twisted.

The plan is the foundation of the town and mortar is the substance which holds it together. The monuments of antiquity show that fine architecture should be built with strong mortar or it perishes swiftly. Throughout Australia the mortar in common use is made from lime which has not sufficient strength to endure, so that the towns will preserve



CLAYFIELD, BRISBANE.

Designed by Hall and Dods. Modern.

only a short history. The Old Colonial builders made their mortar with lime from burnt shells, and it is stronger and endures. Fortunately, there is lime of the quality which has upheld the homes of Britain and castles of Spain for centuries ready to be quarried when the work of establishment has reached security.

The use of weak mortar, perhaps more than that of any other inferior material, destroys the growth of civic pride in the mind of the community. Where there is no stability there cannot be that joy and pride which springs from work well done. Temporary buildings have a like effect. The various governments in Australia are responsible for an outcrop of makeshift structures which threaten some of the cities with the fate that has overtaken Manila. After the fever-swamps outside the old Spanish town of Manila had been filled in and converted into a charming park, planned by Burnham, and fine architecture began to appear, the Government built temporary buildings which soon ended the enthusiasm to make the new city beautiful.

Beautiful architecture is not yet one of the bulwarks of the British Empire. It is but a day, in the long course of Architecture, since the Empire began. Developing, for the most part, during the nineteenth century when commerce and industry were engaging the attention of the race, the arts suffered a decline and were overwhelmed. Although it is a privilege of the present to regard itself as an advancement on yesterday, nevertheless the position of the arts within the Empire is still little removed from the apathy of the nineteenth century. In that period the schools of architecture in the homeland were unequal to the effort of training accomplished architects for the Empire, where

indifference, and even hostility to beauty, prevailed. At the centre of the Empire the chief interest taken in the development of fine architecture overseas was the interest of exploitation. As the cities thrived and expanded, helpful criticism and suggestions were heard not in the far lands. If there had been a lively interest the cities of the Empire would have been better established, and Australia, which is a clear mirror of the homeland, must have reflected more of the feeling for the beautiful and less of the commonplace vulgarity in which the multitude were plunged. The fire that was lacking was the fire of enthusiasm for the Empire, and for its architecture and its arts. Of late a spark has been kindled, and in Australia that enthusiasm, without which the feeling for the beautiful cannot be sustained, is slowly spreading its warmth into architecture.

Although, at this early stage, one cannot very well point with delight to the achievements of Australia in fine architecture, yet there is that on which the arts will be presently established in admirable state. For the foundation and the future sovereignty of the Empire has been laid on security, freedom, cleanliness, and decent living; a foundation of which the artist, no less than the philistine, is justly proud. The immediate obstacle facing this establishment of fine architecture is the same as that which held Prince Henry of Portugal in check, and with perseverance, which is a quality manifested in our people, equal to that which reared the Great Wall of China; enterprise, which has developed the merino, whose folds of wool now have an almost architectural magnificence; and enthusiasm, which is alight, the Equator will be conquered again and masterworks appear on the antipodean shore.

AUSTRALIA.

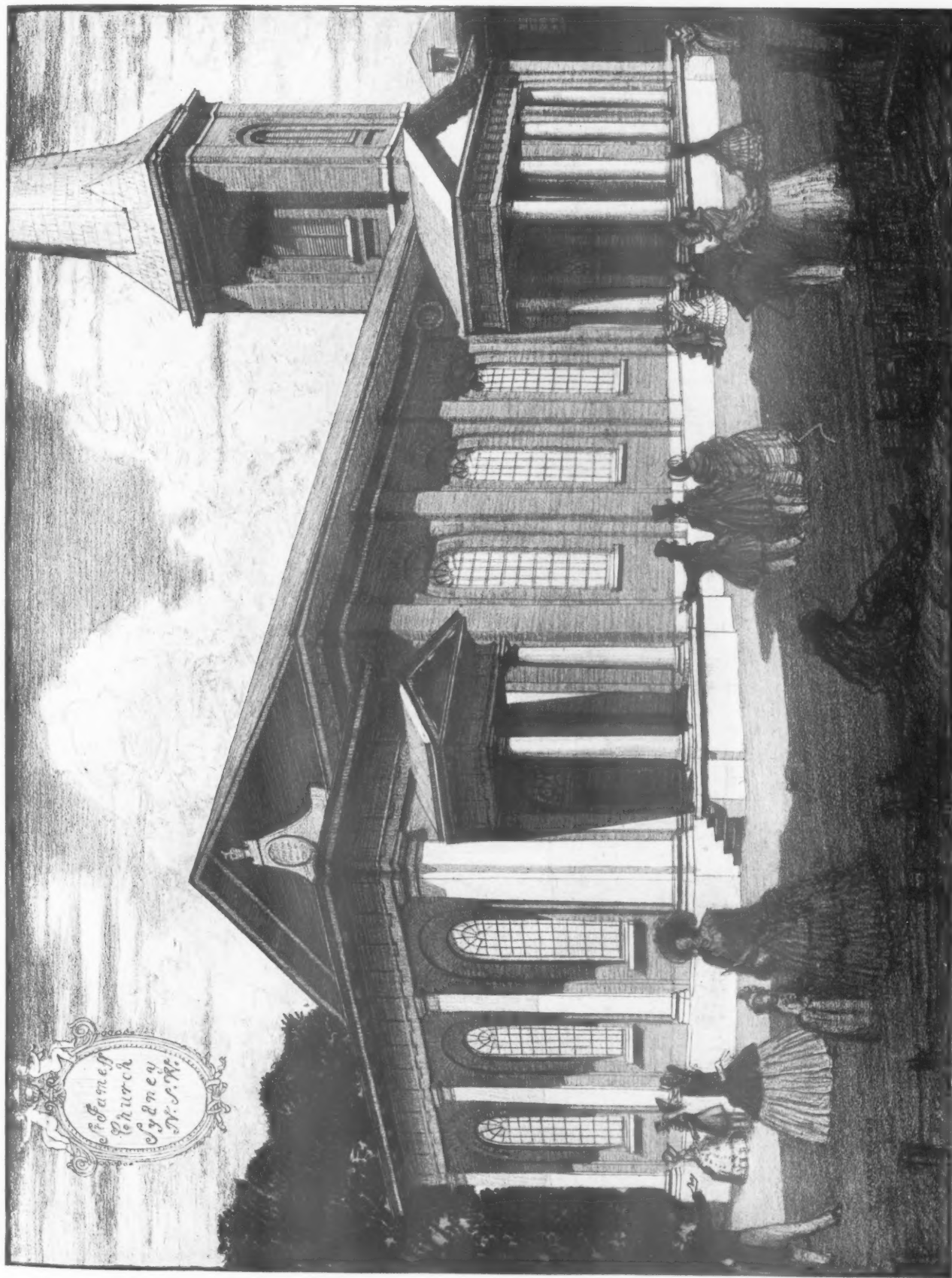


Plate VII.

June 1924.

ERYLDENE, GORDON, SYDNEY.

Designed by Wilson and Neave. Modern.



OLD AUSTRALIA: ST. JAMES'S CHURCH, SYDNEY, N.S.W.
From a Pencil Drawing by Hardy Wilson.

New Zealand.

By W. Gray Young.

THE development of architecture in New Zealand has three distinct phases, the first being the work done by the pioneers, the second the work built by the sons of those settlers, and the present one, which is the result of the travelling propensities of the New Zealander, together with his pride of British tradition.

The early settlers were of British stock, and had the benefit of the environment of the architecture of the Old Country, and it is clearly shown in the buildings they erected.

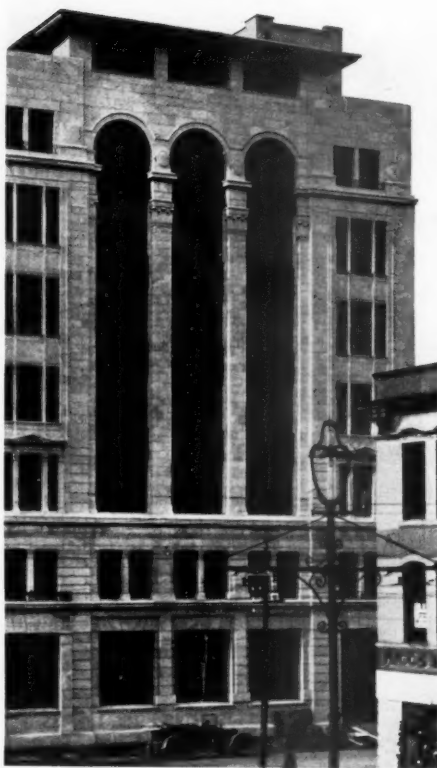
The buildings were simple in design, with steep roofs and correctly proportioned gables. The windows were nearly all of the double-hung type, divided up by moulded glazing-bars in well-proportioned squares. Where these buildings are now standing they are a pleasing relief to the welter of small so-called Californian bungalows that are springing up like weeds all over the country.

The houses built by the sons of the early settlers were boxes with high ceilings, large windows, cut-up roofs, and cast ironwork and brackets tacked on wherever possible. It is only fair to say that these people were too busy conquering all sorts of physical conditions to give any serious study to their houses and things pertaining to the æsthetic side of life.

These sons amassed money and travelled back to the land of their fathers, and the results are now being shown in the buildings erected within the last ten or fifteen years. They have seen how simple and dignified the good English house is, and many of them are having houses built that are essentially English in feeling.

The servant question is a very serious problem, and the houses are following the American plan with the compact arrangement of rooms with built-in fittings and labour-saving devices. Probably about 90 per cent. of the houses are one-story, because they are considered by the housewife to be more easily run from a domestic point of view than a two-story house.

The future development of domestic architecture will be along the lines of outdoor living. Many houses are being built with wide sleeping balconies and small bedrooms which are really only dressing-rooms. In the past practically all the houses have been built in timber, but owing to its increasing scarcity the better class of house is now being built in permanent materials.



THE STATE FIRE INSURANCE BUILDING, WELLINGTON.

Designed by Hoggard, Prouse and Gummer.

The church architecture is not of a very high standard, although there are some delightful small early churches designed in a few cases by the clergy.

In most cases the walls were low, covered with vertical boarding, the roofs steep, covered with wooden shingles which have become silver-grey, further enhanced by isolated patches of moss. The churchyards were planted with English trees, which now overshadow the churches, and going to make charming pictures.

In three of the four centres there are good modern churches, one designed by Sir George Gilbert Scott, one by J. L. Pearson, and another by Edmond Sedding, of which only the nave is built at present. The majority of the modern work is crude, the decoration being of the cast-iron order, and the designs where they have been built in reinforced concrete do not take cognizance of the material. Instead of being simple in form they are in most cases built in the Decorative or Perpendicular period of Gothic. With the increasing knowledge of the capabilities of this material the future work should show a marked improvement.

The New Zealand architects are very handicapped owing to the lack of building stone. There is a limestone very like the English Portland stone, but it does not stand the smoke of the towns, and quickly decays.

A good blue-stone has been used fairly extensively in the South Island, but it is now worked out, and a similar stone has to be imported from Australia.

A grey to black marble is obtainable, but being very expensive to work it is only seen in some of the larger Government buildings. Bricks are made in most of the towns, and as a result the buildings are nearly all either brick-faced with stucco dressings, or completely covered with stucco. Shingle is very plentiful, and reinforced concrete and steel-frame construction will be the materials of the future. This is as it should be, for the country is subject to fairly severe earthquakes, and there are many new buildings going up to the height limit, 102 ft. from the pavement.

Before the war most of the commercial buildings in the centres were of the three and four-story type, but now that the ground is increasing so much in value, the building owners are showing more confidence in the country, and



THE BOYS' INSTITUTE, WELLINGTON.
Designed by W. Gray Young.



THE N.Z. INSURANCE COMPANY, AUCKLAND.
Designed by Prouse and Gummer.

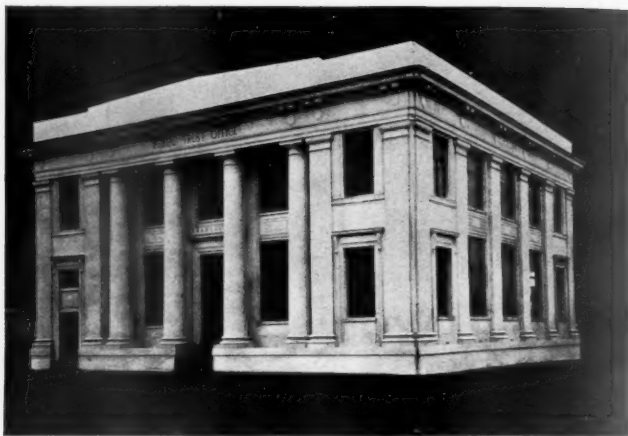


THE PUBLIC TRUST OFFICE, NAPIER.
Designed by Hyland and Phillips.



THE FIRE STATION, WANGANUI.

Designed by Ford and Talboys.



THE PUBLIC TRUST OFFICE, BLENHEIM.

Designed by Gray Young, Morton and Young.

are erecting buildings of seven or eight stories. The smaller buildings follow the English precedent, but the high buildings show a study of American commercial work.

It is noticeable that the younger architects are showing an appreciation of plain surfaces, and there is great hope for the future that the buildings will depend for their effect on proportion and not decoration.

The interiors do not show much variety in the treatment owing to the limited choice of materials available. The finishing timbers, if not New Zealand Rimu, are either oak or Australian hardwoods. Marblework is rarely used, and then only for wall lining to vestibules.

There is no interior decoration in the way of mural painting, nor is there any sculpture work to speak of, either internally or externally. The little sculpture there is is imported from England. The building owner is not yet educated up to the value of expensive buildings from an advertising point of view.

In viewing New Zealand architecture it should be borne in mind that the architect labours under a great disadvantage, inasmuch as there are very few skilled craftsmen available, and none of the specialist firms who render the architect so much valuable assistance in the old country.

All the State buildings have been done by the Government Architect's Department, and naturally show a monotony of treatment. New Parliament buildings are now being erected, and when completed the exterior will have an imposing elevation. The tendency of the Government is to give all buildings on which they grant money to the Government Architect's Department, and this is a bad thing for the country architecturally. The buildings will not be of the same standard of design as would be the case if the

work were done by private practitioners, nor will the country get the same service. The designs will be of a stock pattern, and will be supervised by the district engineers, who are not conversant with the finer points of building. In addition to the other buildings the Government has recently decided to have all schools carried out by the Public Works Department. If the children are to be educated in buildings devoid of architectural merit, and also (as stated by the Minister of Education lately) to be erected with second-class materials, it must be detrimental to their future well-being. Although the object is economy, the community must lose something that is of great value to the amenities of life, and it is not justified.

The civil architecture has suffered at the hands of the City Engineers' Departments, but the city of Auckland has lately given some of its buildings to private practitioners. They are now preparing a competition for a civic centre which will add greatly to the city, and set a standard for the other towns. Last year they held a competition for a war memorial museum, and a design has been accepted which, when built, will cost over £250,000, and will be a credit to any city.

The future of architecture is hopeful, as the New Zealand Institute of Architects has obtained compulsory registration. The examinations are modelled on the R.I.B.A. standard, and the complete course takes five years.

Many of the young draughtsmen are going abroad to study, and quite a number have already attended Liverpool University and the A.A. of London. As the country is not yet a century old, and the average New Zealander does not lack initiative, there is every reason to expect that the architecture of the future will develop on traditional lines, but will have a freedom and breadth of treatment that is lacking in most of the work of the older countries.

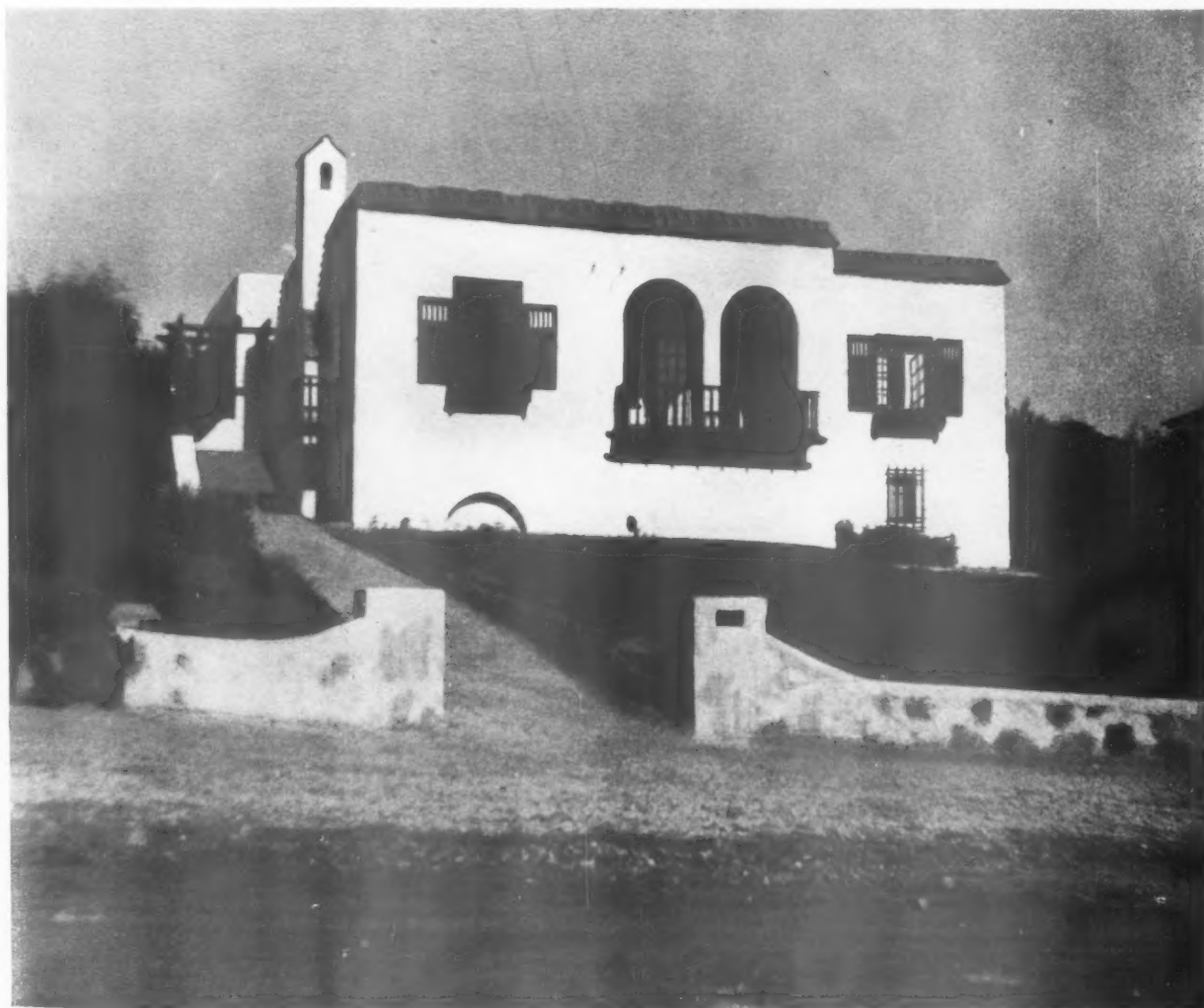




A HOUSE AT KARON, WELLINGTON.
Designed by W. M. Page.



A COTTAGE AT EPSOM, AUCKLAND.
Designed by G. E. Jones and A. J. Palmer.



A HOUSE AT AUCKLAND.
Designed by Massey, Hyland and Phillips.

Great Britain.

By Sydney Kitson.



1. BUCKINGHAM PALACE, LONDON.

Designed by Sir Aston Webb.

THE photographs which illustrate this article have been taken at random from among the exhibits of modern architecture at Wembley. Some of them, it is true, are of the architecture of yesterday—that yesterday before the war, which now seems so long ago. Buckingham Palace, from St. James's Park (Fig. 1), forms a picturesque monument to the stately reign of Edward VII and to the first architect president of the Royal Academy. The "close-up" view of one of the lions on the north front of the British Museum (Plate VIII) also belongs in point of date to Edward VII's reign, but the façade of which it forms a part has the quality which belongs to great buildings of all ages.

It may be that the historian of the future, if he uses current architecture as his documentary evidence, will turn from the monumental architecture of that wealthy, careless time before the war to the humbler specimens of architecture which have arisen lately all over the country in the attempt to house that great section of the population which, in normal times, would have emigrated to other parts of the Empire. Long before this great housing emergency arose, earnest souls had devoted much time and energy to town planning, and had enlisted the sympathy of public bodies and town clerks. By-laws had been modified, and common sense had been allowed to take a large share in the shaping of new sites. There had been a public demand, voiced by a certain laudable section of the Press, for better designed and more comely houses for the people. So, as soon as the armistice was signed, the stage was set and the country sat down to watch the architects produce houses of a new and worthier type. But soon trouble arose. Labour and materials were scarce, and the cost was enormous. In spite of all these difficulties—perhaps, in part, because of them—groups of small houses have risen up in England since the war which are well planned and which possess just that element of fitness which looks so easy and inevitable, and which is so difficult in the accomplishment. The group of houses in the Enham village centre for disabled soldiers (Fig. 2)—though probably not built at the bedrock bottom of cost—is surely a place fit for heroes to live in. It contains

no single architectural feature of any kind. The modelling of the thatched roof and the contrasting smooth white walls make up a picture which it would be hard to improve upon. This group is typical of many up and down the country, where local materials rightly used have made some housing schemes already a portion of England. Although France does not seem to have experienced the difficulties in carrying out her housing schemes which have beset the promoters in England, yet the new houses in the rural districts of France have for the most part a thin air of gentility, as though it were desired that they should appear to be a part of a Parisian suburb and not a growth of the soil on which they are planted.

Many small middle-class houses are being built, of which the house at Cuffley (Fig. 3) is a typical example. The attempt is made to give to the square box with unbroken roof some architectural expression at the least possible cost. And the conditions being the same as existed after the Napoleonic wars, architects have naturally fallen back upon a similar tradition. But whereas a hundred years ago that expression came naturally to the builders, who had inherited a settled and progressive instinct for right building, every detail has now to be dictated by the architect.

Such houses as Feathercombe, Surrey (Fig. 8), whose long, horizontal lines of ridge and eaves are contrasted so pleasantly with the slender stems of the larches, are, alas, but rarely built to-day. Such houses with their restraint in design and suitability of material were one of the special features of England before the war. Avoiding the pitfalls of quaintness, they were based upon tradition, and yet possessed a dignity which was altogether their own.

The competition among the big joint stock banks has led to the building of a very large number of branch banks throughout the country within recent years, and the bank buildings are now often the best modern buildings in country towns. Time was when the customer came, cap in hand, to the banker as he sat in the inner parlour of some demure looking house. But now the bank buildings greet you cheerfully in the street and invite your patronage. This invitation is generally couched in urbane and dignified terms, and

GREAT BRITAIN.



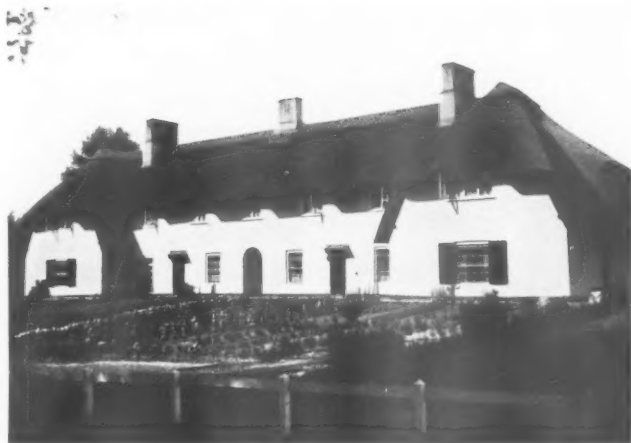
Plate VIII.

June 1924.

THE BRITISH MUSEUM.

Sir John Burnet, A.R.A., Architect.

Architectural
Library



2. ENHAM VILLAGE CENTRE FOR DISABLED EX-SERVICE MEN.

Designed by W. Harding Thompson.



3. A HOUSE AT CUFFLEY, HERTS.

Designed by Williams and Cox.

such a bank as that at Cheam (Fig. 11) shows the tendency of to-day. There is no parade of classical features, but a semi-domestic alliance with the ordinary buildings of the community.

The disinclination of the modern bank manager to live above his bank, and the meagre return from rents when the upper stories are let off as offices, has led to a new type of one-storied bank, whose development will be watched with interest.

The tale of the war memorials, which in the last five years have grown up in English towns and villages, is now almost complete. Everywhere these memorials tell of the sacrifice which the country has undergone. In hardly any case are

they boastful or vainglorious. But only too often they are stolid and unimaginative. If only, with the five years of experience and experiment behind them, the various war memorial committees could get to work again and revise their efforts, a great deal could still be done in the improvement of many a well-intentioned mediocrity. When the overwhelming desire came upon the nation after the war to commemorate the dead, the committees too often worked in ignorance of what form such a monument should take. The only standard was that of the monumental mason. The tradition of the village cross had been lost at the Reformation. The most successful war memorials in rural districts are undoubtedly those which are based upon a free



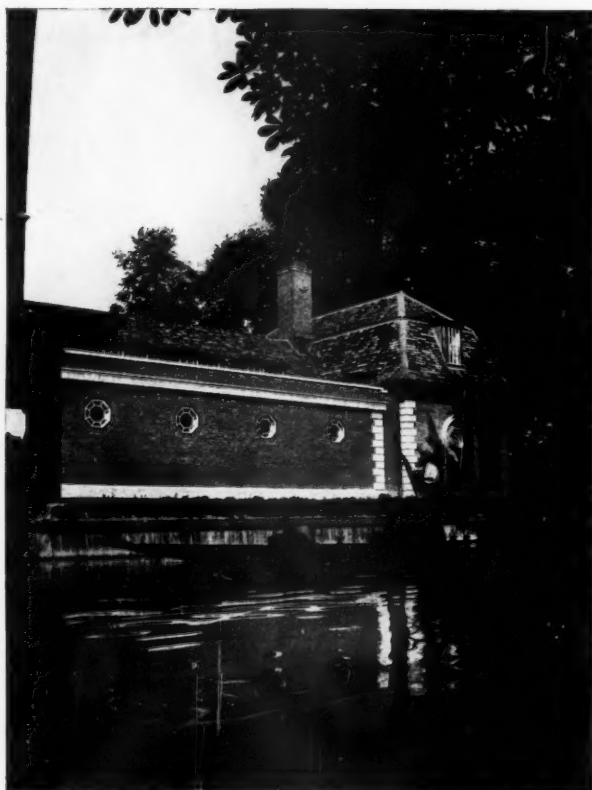
4. PORT LYMPNE: THE PATIO.

Designed by Philip Tilden.



5. CHAPEL OF THE THISTLE, ST. GILES CATHEDRAL, EDINBURGH.

Designed by Sir Robert Lorimer, A.R.A.



6. NEW BATHS, ST. JOHN'S COLLEGE, CAMBRIDGE.

Designed by A. W. S. and K. M. B. Cross.



7. THE CONVENT OF THE INCARNATION, OXFORD.

Designed by Paul Waterhouse.



8. FEATHERCOMBE, SURREY.

Designed by Ernest Newton, R.A., and Sons.

rendering of the old English village cross. In the towns there are many instances of the happy combination of the work of architect and sculptor, such as the R.A.F. memorial on the Thames Embankment (Fig. 9).

The motive force of the Gothic revival, which seems to have spent itself only when sufficient churches had been built to satisfy the needs of the country, still lives on in a few specially skilled hands. The standard demanded by the public, who, for a couple of generations, has studied mediæval work, is now very high. The Chapel of the Thistle at Edinburgh (Fig. 5) shows to how high a degree of excellence modern work may be carried by an architect who has trained a school of craftsmen to work in his spirit. Recent work, such as the new church at Hammersmith and the project for the church at Wembley, strike a new note, and rely upon a gracious simplicity for their effect.

Another example of this picturesque simplicity is seen at the Convent of the Incarnation at Oxford (Fig. 7), where the shadows from the trees in the foreground are cast upon the white walls of the building. Nor has Cambridge been behind-hand in some of its recent work. The quality of right placing and right shaping is very happily portrayed in the



9. THE R.A.F. MEMORIAL, LONDON.

Designed by Sir Reginald Blomfield, R.A.

illustrations of the new baths of St. John's College (Fig. 6), and reflected in the waters of the Cam. Another successful bit of picturesque architecture is given in the view of the patio at Port Lympe (Fig. 4), where the architect has played with unfamiliar forms and welded them into a picture of great charm.

But, after all, London remains the most picturesque place in the world. One sometimes wonders why people bother to buy pictures when, for a twopenny bus ride, they can see in London great cranes taking the skies, and new buildings just discarding their overalls and appearing in a creamy dress of Portland stone, and grey old buildings, among the most beautiful in the world; and crowds grouped as fantastically as in the foreground of Brangwyn's etchings. It is all so exciting that one does not pause to ask whether all this welter of energy and imagination has been educated in any school of architectural ethics or is being directed by any controlling and unifying authority. At present it all seems as individualistic as it was five and twenty years ago, but less vulgar, more dignified and serious. The Metropolitan Water Board fitly illustrates London building in this more dignified and serious mood.



10. THE METROPOLITAN WATER BOARD OFFICES, LONDON.

Designed by H. Austen Hall.



11. LLOYD'S BANK, CHEAM.

Designed by Edward Maufe.

Craftsmen of the Empire.

A Comparative Study of Decoration and Industrial Arts.

By Amelia Defries.

Every man is wise in his work. Without th se a city cannot be inhabited. They will maintain the state of the world . . . their desire is in the work of their Craft.—ECCLESIASTICUS 39.

ALMOST the whole evolution of the human mind can be traced and seen in the various handicrafts and industrial arts shown in the many exhibits in the various buildings at the British Empire Exhibition. Never before have we had such an opportunity to study the development of human nature and to revise our æsthetic theories and our standards of taste. Everywhere human skill is triumphant, but taste shows strange ups and downs.

If we look on these arts from the trade point of view we need only remember that, in one recent year, in the United States of America alone, half a billion dollars was spent merely on interior decoration; and that someone else said not long ago, "the nation which produces the finest designers will win in modern commercial competition"—to see at once that the proper training and right using of artists and craftsmen becomes of national importance. Business men cannot win in this competition until they are ready to cultivate their own taste and to pay their artists adequately. The best genius will never devote itself to applied arts or industrial design, on a trade footing, while to do so it steps down the ladder of fame and enters into the penal servitude of poor and precarious employment; neither will it work for men of common tastes who seek to imprison imagination and knowledge in their own small mould. A wise man of business will seek out the best designer he can find and then pay him well and give free rein to his fancy. But the artist who desires such opportunity must put in a period of stern discipline, as French artists do, and see how best to use and even to improve the machine which will be the tool for broadcasting his art. It is no longer necessary for goods destined for mass production to be badly designed. In the matter of colour, much of our industrial art is poor; and a visit to the stands of the manufacturers of dyes shows that chemists, too, need to work out their problems with those among the artists who have a special *flair* for colour-tonality. Geddes and Thompson have prophesied that "the re-union of the arts and sciences with labour is coming and with it a new age of social evolution," and the sooner this new era comes the quicker will our trade recuperate.

There is nothing wrong with the workmanship of our craftsmen, who have not lost their cunning or skill, but they have been too long in bondage to bad taste among the manufacturers, bad payment for their work, and a theory of false æsthetics of their own.

From a study of the crafts of primitive peoples, such as can be made with ease at Wembley, we face anew the truth enunciated by Shakespeare and by Tolstoy, that "the art itself is nature," for "art is an organ of human life"; drawing, decoration and crafts were common to humanity long before literature, and began with music and dance, almost before speech. The problem



1. KELAMANTAN MASK, SARAWAK.

confronting the modern craftsman is to get back to this true outlook and to make his myths and symbols, as did the first artists, such that his fellow-creatures can read them; this he can do by touching the eternal sources of human emotion, for, as Romain Rolland has well said, there exists an "emotional solidarity of mankind;" and as Tolstoy wrote, there is still an untilled field of human experience awaiting the coming of inspired artists.

At Wembley a precedent has been created in the manner in which the restaurants and certain other buildings were decorated, for the contract to cover all the space was given to Oliver Bernard, who estimated to carry it out in a definite period of time and at a given cost—as a building contractor might have done; he engaged 100 art students, paid them a living wage, and carried the work to completion according to schedule.

This sort of contracted work might be undertaken by master artists with their students for many business purposes; it constitutes a new freedom for them.

I have spoken of the bad taste to be seen in the goods displayed by certain British merchants and manufacturers, but they are not alone in their degradation, for, alas! their spirit has influenced India, even Ceylon, and is beginning to influence Burma. The Oriental merchant shows the same desire to sell cheaply-produced work, for which such time has not been given as is required by the best craftsmen. And in their display they seem to have little or no discrimination between their finest traditions and the worst influences of modern commerce.

With these thoughts in mind we start our pilgrimage, entering first the West African section, where we feel happy among the natural arts of mankind, as yet mercifully untouched by trade with the outside world. These are the most valuable to us if we are to revise our æsthetic theory and base it on sound principles. For here we find that scarcely a design is made that has not got a meaning; we see the same thing when we go to the native art of South Africa, Central Australia, New Zealand, Sarawak, the South Seas, or any that is still hardly touched by "civilization." It is a false theory to imagine that any design should be meaningless. Nature may be conventionalized, symbolized, or rendered in cubes or abstractions, but in every case the design must have a signification that all can understand.

It is no credit to Australia or to Canada that in their vast buildings at Wembley they have ignored the crafts of the native people who were once the sole inhabitants of their countries. We illustrate their arts in the following articles as we recognize their æsthetic value. From such people, many races of whom are still living in the Stone Age, we pass to the more developed race which inhabits Fiji, where nearly all the elaborate decoration is done in black and white. We admire not only the magnificent workmanship but also the very fertile imagination of the de-

signers. It is a surprise in this building to come across the decorative paintings of an English artist, Stephen Haweis, who, some years ago, left civilization behind him and travelled to the South Seas to find out for himself what sort of art was natural to mankind; here he lived for over two years with the native people and made extensive studies of all he saw around him. In the Bahamas section of the West Indies building his work may also be found, for he lived there too for several years. He has since exhibited in over two hundred museums in America and Canada, and has completed several large mural decorations wherever he has lived, the examples of his work to be seen at Wembley being merely a few studies for these. It is high time he was better known in his native country.

We pass by Sarawak, where the native craftsman is still unspoilt, to the Holy Land, where we see the varied influences that have passed over the old land of Palestine. Textiles, Arab in style; metal work, Jewish; pottery, almost Persian, and the age-long glass from Hebron, which is believed to be the first place where glass was ever made. From there we go to Burma, so well described in a following article that I need not dwell on it here, except to say that it is a link between India and China, and one of the most important in the great exhibition, with magnificent symbolical carving decorating its architecture. In Hong-Kong, the sapphire and topaz silk brocades worn by the waiters in the tea-shop dazzle our eyes as we marvel at their texture; and there, too, may be seen, side by side with "junk," some splendid examples of celestial workmanship and decoration, in embroidery, carving, pottery, ceramics, and lacquerwork. And so we pass on to Ceylon—like Burma—a Buddhist stronghold still. Native painters came to decorate this building, and they painted, from memory, traditional patterns everywhere. A cockney who pushed my chair told me that this was the building he admired most at Wembley. In Ceylon artists form a caste with a history that has remained unbroken since 300 B.C.; there are no art schools, a man comes of a family of artists from whom he learns his craft. Fine matting, furniture made of ebony, porcupine quills and ivory; and silks galore, can be found here.

And so to India, where the various States and Provinces have each a separate Court. The Punjab has walls decorated by native artists who have reproduced the traditional mosaic-work of their country; and here also are innumerable fine crafts—the exhibit



2. DYAK WOMAN IN FULL DRESS (SARAWAK).

of the Mayo School of Art, Lahore, founded by the father of Rudyard Kipling. Bengal has one wall painted by Mukel Dey, a student from Tagore's art school, who has lately been working at South Kensington too; he has painted here a famous design that every woman in his country draws on the floor of her house, as our women might hearthstone theirs. He has added panels recalling the famous pre-Christian paintings by Buddhist artists in the caves of Ajunta. It is important, here, to remember that the finest period of Indian art was about 300 B.C., and it is a sign of the great flood of beauty which overran India during the reign of the perfect Buddhist, King Asoka, who died 228 B.C., that despite the vast distances and the difficulties of transit, it reached Ceylon where, at the same time as the Ajunta caves were painted, artists were doing equally important work at Gupta, which is in a state of complete preservation to-day. Wherever Buddhist art travelled it was modified and varied by the temperament of the people.

Even to-day all these artists of India, Burma, Ceylon, grind their own colours; and sometimes it will take a month to make one paint, for which reason they were forced to abandon this practice while doing their Wembley decorations and to use our paints, which do not give the same jewel-like brilliance. Wherever we go in these Courts of India, or in Ceylon, or Malaya, we are delighted by the marvellous silks with which the merchants charm us; all these, and the muslins and cotton textiles too, are entirely hand-made; and from the growing of the raw material to the spinning of the silk or the flax, the dyeing of the goods and the weaving of the patterns, they are the outcome of age-long experience and skill. Like baskets filled with flowers are the colours of these materials, and everywhere the patterns and the harmonies alter, and the sense of touch is always satisfied by the lovely quality of the materials. A *tour de force* is exhibited in the Patiala Court, where a shawl, large and very warm, has been woven out of the down of a bird, and with such skill that it will go through the smallest finger-ring. It is an improvement upon the famous Kashmere shawls of old. Kashmere shows remarkable lacquer and also silk carpets of great value. Likewise, lace-like wood carving and silver filigree. In the following articles both Mr. Lanchester and Mr. Symms have told how lacquer work is done, but in Hong-Kong I came across another method, after a secret process of the time of Kien Lung, Manchu Dynasty, which



3. SPORT IN THE BAHAMAS.

From a design by Stephen Haweis.



4. FIGURE OF HORNBILL.

A Dyak Wargod (Sarawak).



5. LACQUER FIGURE FROM HONG-KONG.



6. LACQUER FIGURE FROM HONG-KONG.



7. ONE OF THE LIONS GUARDING THE BRITISH GOVERNMENT PAVILION.

B. Clemens, Sculptor.

involves first making a clay figure and then putting on about ten or fifteen layers of alternate silk and lacquer, with a fortnight between each working; when the piece is complete the clay is soaked away and the surface of the lacquer is painted with never-fading colours, mixed with gold dust. In every part of the East and among all primitive peoples too, great skill is lavished on the weaving of straw, leaf or grass, into mats and baskets. An enormous variety of these can be found at Wembley, and the evolution of design can be traced from the matting of the negro of West Africa, or (at his lowest) the West Indies, to that of the native of Malaya, which is perhaps the most detailed of all.

The negro of Africa uses red-ochre and black, with natural straw-colour, though in his textiles he adds other colours; the Fijian, as I have said, loves black and white, or brown and white; and so we pass on through a whole gamut of hues to the rose-pink, yellow, magenta, violet, purple, olive, and jade green, with black and white, which the Malayan (in his liking for squares, comparable to a Highlander of Scotland) uses all at once. When studying the use of colour it is important to remember that in olden times even the expert artist of Ceylon did all his decoration with only three, others coming in as contact was made with outside influences.

Australia and Canada loom too large to be forgotten, and in the former we find a *tour de force*, by Ruth Bannister, who has carved out of one piece of wood the resemblance of a native wild flower so well that no master-carver of any race could outrival her. Wonderful Australian woods are well made up by their own cabinet-makers, according to the usual designs, beautifully finished; so are the Canadian woods. Indeed, Canada shows four completely furnished rooms, all Canadian-made from Dominion-grown raw material. They can hold their own with anything of the same type made in this country, the carpets are excellent in tone and design, and the workmanship is first rate. Canada excels in cut-glass, following English styles, and upholding a fine standard.



8. WEDGWOOD PLATE: TROPHY PATTERN.

There are 168 separate pieces applied by hand in the ornamentation of this plate.

tried; there are beautifully made models of the Spanish Armada Fleet, and of modern men-of-war, with every detail complete. Here, too, are friezes by Gerald Moira which were carried out by students.

We wander on until we reach the great Palace of Industry, and here two firms stand out as on a level with the goldsmiths of old; these are Sir Frank Warner and Sons (silk and velvet weavers), whose goods can vie in quality with those of the East or of France, though one feels the need of an influx of new designers; and Josiah Wedgwood and Sons, whose delicate skill is lavished on works so original that they are recognizable at a glance, and so fine in technique that they remain a joy for ever. Based upon designs by Flaxman, these belong to the best period of the nineteenth century, and one does not wish them ever to be brought "up to date." Moorcroft pottery also stands out, for Mr. Moore has evolved not only a good style and perfect finish, but a wonderful blood-red colour. Joseph Rodgers and Southall show with a pair of giant scissors whose gold filigree handles and chased steel blades are beautiful pieces of craftsmanship,



9. KENOWIT BASKET WORK AND KAYAN BEAD WORK (SARAWAK).



10. WORK OF THE LONDON SCHOOL OF WEAVING.
A Design by K. Crasset.



11. BEGGARS' OPERA FIGURES BY DOULTON.



12. WEDGWOOD POTTERY.



13. LEACH POTTERY.

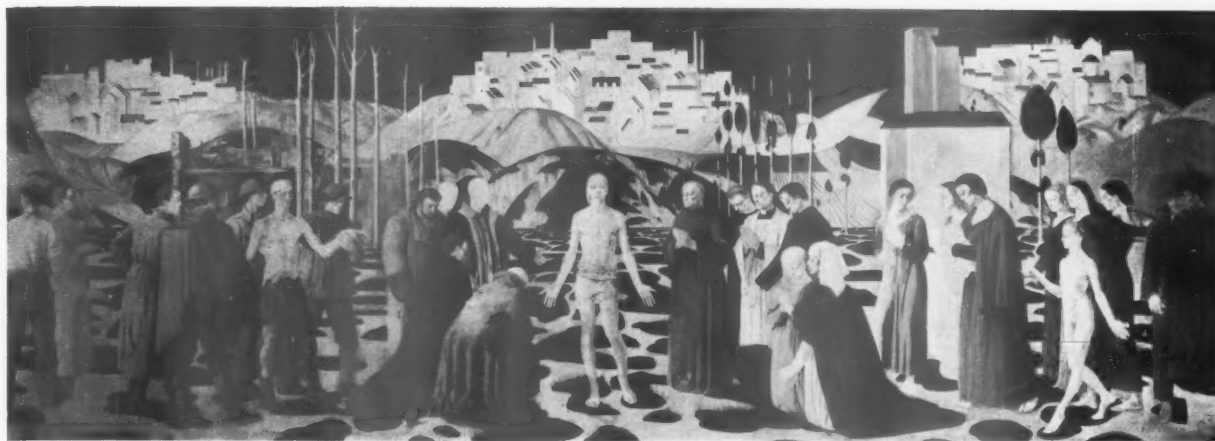


14. WEDGWOOD QUEENSWARE.



15. A TEA-SET: THE RAVENSCOURT POTTERY.

DECORATION AND INDUSTRIAL ARTS.



16. "SERVICE AND SACRIFICE": A DECORATION FOR THE APSE OF THE BASILICA.

From a Painting by A. K. Lawrence.

that the art of chasing steel and decorating weapons has not been lost. Irish lace and linen, seen in the Ulster section, deserve the highest praise; and Nottingham makes a brave show, with designs that do the utmost for machine-made lace. Mr. Reville, chief of English dressmakers, here exhibits what he can do with this all-British material, and a drawing, especially made for this review by Mr. Ranken, of this dress, is an example of how trade might use art. In the South African building there is another dress made by Mr. Reville, showing what he can do with ostrich feathers, and of this Mr. Ranken has also made a study. There are one or two other firms whose works are worth looking at,

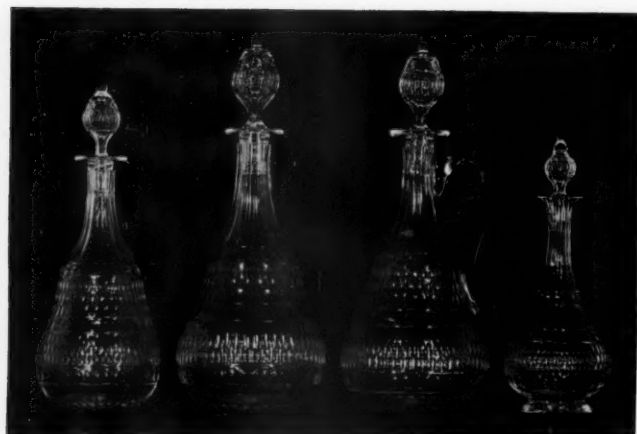
but, on the whole, these apart, the design and colour of British industrial art is depressingly bad. It lacks ideas, spontaneity, and tone, and obviously needs a thorough revision of the staff of designers and of dyers employed in the various industries.

From the Palace of Industry we pass on like pilgrims nearing the end of a long journey, to the all too small Palace of Arts. By what right, one wonders, have certain people allocated to themselves the supreme task of representing what should be the very flower of civilization, the arts of the Empire? Certainly this collection is anything but representative, and, as we go to press nearly three weeks after opening day, it is far from ready; no



17 & 18. DESIGNS FOR WOMEN'S DRESSES BY REVILLE.

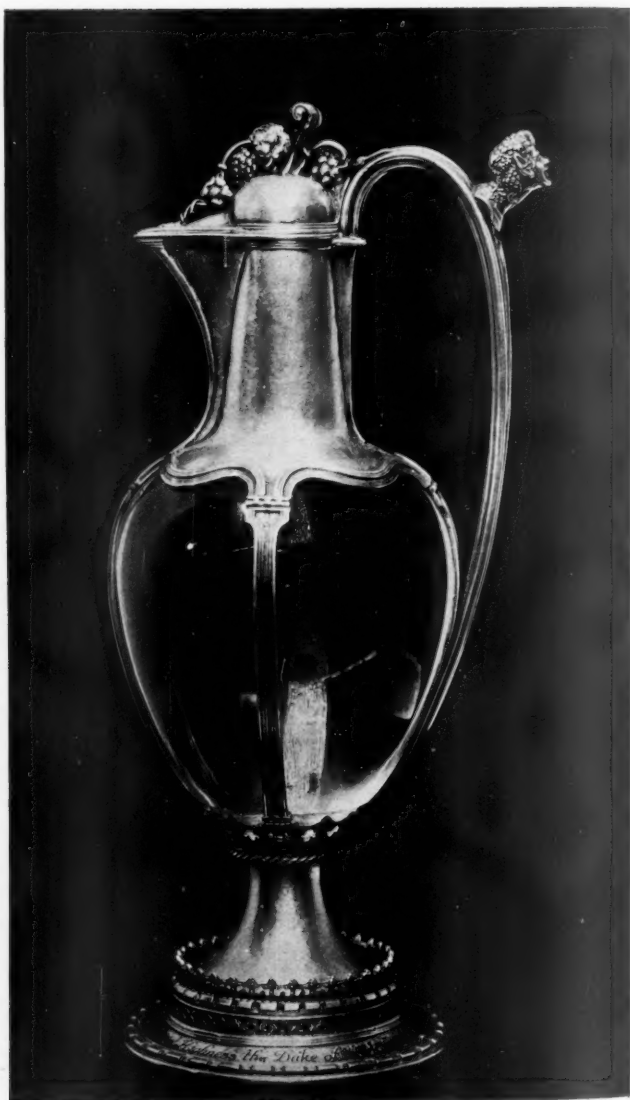
From Drawings by William Ranken.



19. DECANTERS BY JAMES POWELL AND SONS.



20. GLASSES BY JAMES POWELL AND SONS.

21. A CUP DESIGNED AND EXECUTED FOR
H.M. THE KING.
By Omar Ramsden.22. SILVER AND CRYSTAL.
By Omar Ramsden.

catalogue is available, and the unlucky critic has to make inspired guesses at the names and titles of the works and their makers. Luckily a little preliminary help was kindly given me by Major Longden and Mr. Maxwell.

It may be some consolation to those who, like myself, are wofully disappointed by the sparse, meagre, small section devoted to the applied arts, that galleries are set aside for temporary exhibitions, at present occupied by town planning; here will be seen, as time goes on, independent exhibitions of what the Prince of Wales, at the Academy dinner, called "the arts which minister to publicity and applied arts generally." At present we see a few excellent examples of bookbinding, the designs by Miss Pye being easily recognizable; and of printing and illuminated scribes' work, also of colour lithography, pottery, and ironwork, the latter being in the Basilica, where some of the crafts that go to furnish a church are well assembled into a chapel, designed by W. H. Blacking and executed by J. Wippell and Co. Here we see well-designed and perfectly executed embroidered banners, stained-glass windows full of colour, a soundly painted "Annunciation," by Kerr Lawson, and a symbolical mural decoration by A. K. Lawrence, in subdued tones and hard outlines, yet not without feeling and dignity coupled with expression, setting forth the theme "Service and Sacrifice" with a certain faithful coolness.

But it is the glass by James Powell and Sons (whose furnaces have never been extinguished for over 200 years), and the silver-work by such master craftsmen as Omar Ramsden, Bernard Cuzner, and Bernard Spencer, each with a very definite style of



23. A SILVER SHIP.

By Omar Ramsden.

his own, that raises this section of British art to a level as high as that of any country, even to the best traditions of our own. Coloured table-glass by Stephens and Williams, of Stourbridge, is also in the front rank; and so is a masterly carved oaken chest, which will last for ever and improve with age, made by Micklewright from designs by Henry Wilson; this is effortless work done by a master. Sir R. Lorimer's oaken child's-cradle has charm, but is a trifle heavy in conception; and there is a refined and beautifully-made cabinet in the eighteenth-century style, combined with that of to-day, by Heal. The coarse weaving by Mrs. Mairret, who delights in savage design, is not equal to that of the races she copies, but it is good strong work; the Gainsborough Weaving Company, on the other hand, shows fine workmanship, but no inspiration, in design or colour. There are some delicious paintings for wall-papers, exhibited by the firm of Jeffrey & Co., who seek to outlive old cottage-gardens with their array of lupins, hollyhocks, and gay flowers. I suppose the *clou* of the applied-art section will be the "period" rooms, not ready on the day we go to press. A glance at these revealed a very studied effect in a bedroom, designed by Palmer Jones, carried out by Heal, with smart little wall-paintings by Laverdet, and a cold hearth of black marble and platinum; leading out of it is a room, also modern, by Lord Gerald Wellesley and Trenwith Wills, gaily decorated in panels by Alfred Palmer, but I think this is something of an effort, too. Very fragrant is the next room, in the "Morris" period, by the late Philip Webb. Farther back than this I could not, at the time of writing, go.



24. AN IVORY MALLET AND SILVER TROWEL BY BERNARD CUZNER.

Given to H.R.H. Prince of Wales.



25. A CHAPEL IN THE BASILICA.

Designed by W. H. Blacking.



26. A CHEST
By W. E. Micklewright



27. A CHEST.
By the Walbersnick Peasant Pottery.



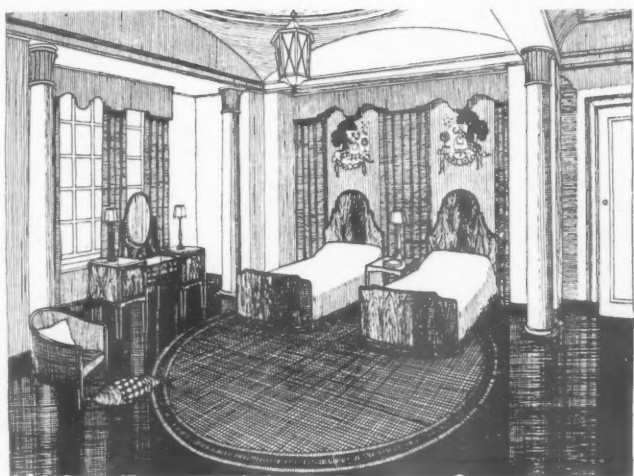
28. A SETTEE.
By Edward Gardiner.



29. A CHEST.
By Henry J. Sellers.



30. A CABINET.
By Henry J. Sellers.



31. A 1924 BEDROOM.

Designed by H. Palmer Jones and executed by Heal and Son.



32. A WEMBLEY POSTER.

Designed by Spencer Pryse.

The theatre section, where all the crafts of the nation should, by right, be orchestrated, is totally inadequate, despite a model by Gordon Craig, one of the few modern British artists who has influenced Europe and America. But in the fine arts section, where stand several cases and pieces of applied arts, one sees with delight a few lively, well designed and well executed examples of decorative painting by men of such varied temperaments as William Wadsworth, T. Derrick, John Nash, Ernest Proctor, Ethelbert White, D. W. Hawksley, and Fred. Elwell. These all show, in different ways, personal force, a sense of style, and an original outlook on life and on painting.

The history of British applied arts is a long and varied one, reaching its fullest flowering in the eleventh, twelfth, and thirteenth centuries, as can be seen from the marvellous illuminated manuscripts of that period, still unfaded, in the King's Library of the British Museum; and from relics, remaining all over the country, of a time when British art influenced Europe. The splendid pageant went on despite the dead hand of puritanism right down to the beginning of the nineteenth century, when the invention of machine industry might have killed it for good, but for the powerful personality of William Morris and the labours of his friends and spiritual descendants to our own day. After the battles with industrialism and the spiritual crimes of common men exploiting these arts in the name of Trade, there came the almost crushing blow of the War, since when the crafts have never really recovered, though some brave souls go on providing lasting joy for us, come what may.

In face of the poor show we have been allowed to make at Wembley, with its one or two outstanding figures that save it from complete extinction, it is well to remember that in 1913, at the Ghent International Exhibition, we won all the honours, and our industrial arts exhibition was invited in 1914 by the City of Paris to show itself at the Palace de Louvre, in whose cellars it remained for safety throughout the war. Sections of it have since been seen in Amsterdam, the Hague, Milan, Brazil, and the British Isles, including the Victoria and Albert Museum.

But a new age is coming, in which men of better education and culture will handle the trade in these things, and it is safe to prophesy, as anyone who has seen the illustrations every week in the "New Leader" or who has listened to the remarks of "The People" can certify, that the public in general is improving its taste, so that the demand for good craft and good design is growing, and there will soon be an era of better appreciation of fine work than we have had for over a hundred years; and with it will come a demand for art even in cheaper household things, such as are being painted for Mrs. Nigel Playfair and Mrs. Pitt Chatham by carefully chosen art students at the "Cottar's Market."

Industrial art may be seen outside the exhibition, on the railway hoardings in fact. Spencer Pryse has drawn, and Vincent Day and Brooks have printed, twenty-seven posters in colour, representing the industries of the Empire; all of these will never be seen by the general public—some have been suppressed as "not decent"—but we like these posters and do not agree as to this criticism of them, and so we reproduce one, that those who read may judge.



33. FIGURE PAINTINGS, AJUNTA (PANEL) DESIGNS. PART OF A DECORATIVE SCHEME BY MUKEL DEY.

Handicrafts in Australia.

By Sir John Cockburn, K.C.M.G.

HUMAN activity, whose overflow and highest expression is to be seen in the handicrafts of art, derives its stimulus from that source of all terrestrial energy, the sun. Every muscular movement, every nerve, impulse, and, indeed, every thought is a translation of the rays of that great luminary of nature. The flame of the fire in the hearth is the leaping forth of long imprisoned sunbeams. The rainbow-hued dyes, extracted from coal tar, are rehabilitated rays. The perfume and colours of flowers that clothe the earth with beauty have a similar source, and it is the green colouring matter of the leaf, elaborated by sunlight, that provides us with the oxygen which is the breath of our life.

Alertness, spontaneity, and power of adaptation are the natural heritage of the Australian who dwells in a sunny land. Moreover, the conditions of settlement in a new country provide a strong incentive to ingenuity. The Australian is essentially a handy man. His expedients up country, in what is known as "the bush," are proverbial. Out of old packing-cases he will rig up a dwelling and make its furniture. With fencing wire and strips of raw hide he will quickly put to rights a disabled vehicle or farming implement.

The authorities have been alert in furnishing means of developing this inborn aptitude. In centres of population technical schools abound. Drawing and clay modelling are everywhere recognized as the basis of teaching. Carpentry, lathe work, pattern making, French polishing, plumbing, sheet metal work, electric wiring, motor-body trimming, silver smithing, stencilling, leather work, cookery, dressmaking, and laundry work are ordinary subjects in the curriculum, whose details it would be tedious to enumerate.

Under the genial influence of the heresy of protection not only are the great manufactures flourishing, but the minor industries and handicrafts have received a beneficial impetus. Quite recently the dumping exchange duty, under the Commonwealth Industries Preservation Act, has been applied to imported artificial flowers. The handicrafts have also been recruited from the ranks of repatriated soldiers who, pending other employment, have turned their attention to the minor industries. They utilize many of the strange natural products peculiar to Australia for decorative purposes, such as the multiform seed capsules of gum trees and the richly reticulated stones of the native peach. In their basket-work they surpass the skill of the Aborigines, by which name the indigenous races are known. The term "Native" being applied only to those born of white parents.

The art of the Aborigines, though primitive, is remarkably skilful; their industries show a highly intelligent adaptation of means to their requirements. It is a common error to imagine them as a degraded race. On their own plane they have reached a high stage of civilization. Their social laws, especially those of marriage, are extremely intricate. It is true that they have no names for numbers beyond three or four, but not having invented that root of all evil, money, they have no need of elaborate calculation. They are eminently truthful until they are taught the convenience of deceit; they conceal neither their thoughts nor their bodies. The central tribes, except where they have come into contact with white men, use clothing chiefly for decoration. Sometimes they throw over their shoulders cloaks of matting or skins fastened in front with a wooden skewer, but open on the right-hand side. It is commonly said that they have no religion. Certainly they have no idea of a deity in form resembling that of a man. Nevertheless, they have an implicit belief in a spiritual atmosphere which surrounds and pervades their every action, they attribute few events to what are known to us as natural causes. Birth and death are equally mysterious. When a child is born it is the incarnation of some spiritual being. Death by other means than evident injury is due to some malign or magical influence. Rain is made to fall by an elaborate ceremonial. Doubtless the occasion is chosen when it is likely to succeed; this calls to mind the attitude of an Australian bishop, who, when pressed to pray for

rain, remarked that it would be no good with the wind in that quarter.

At funerals and important ceremonies the Aborigines daub themselves with pipeclay, charcoal, and ochre, and decorate their bodies with fantastic patterns formed by tufts of down stuck in with blood or grease. As a rule they wear no head covering. They use mussel shells for cutting their hair, and ornament it with kangaroo teeth hung in strings made from hair or vegetable fibre. In full dress, with a necklace of fur coloured with ochre, or of shells strung together, not omitting a bit of bone or wood through the septum of the nose. What need is there of further attire? A man may wear a belt made by his mother-in-law out of her own hair. But as tribal marriages are ex-organic and he is necessarily of another totem, no conversation is permitted between them.

Being of nomadic habits the Aborigines have no permanent dwellings. In so genial a climate they need little protection from inclement weather, but they are very clever in twining branches of trees to form booths, or wurlies, as they call them; sometimes they construct huts made of slabs of bark. They have no knowledge of agriculture. The natural production of the huge spaces occupied by the different tribes supply them with sufficient food. By various ingenious methods of birth control, and occasionally by infanticide they prevent population from exceeding food supply. Such labour as is necessary is performed by women and youths. The men roam over the country and occupy themselves in the aristocratic pastimes of hunting, fishing, and fighting. The chief aboriginal weapons of war and of the chase are the boomerang and spear; the shaft of the spear is made of bamboo, to which a head of flint or hard wood, charred and sharpened, is cemented with resin, gum or wax. The bow and arrow are used only by coastal tribes, and are probably not indigenous. Axes and knives are laboriously fashioned out of flint.

The invention of flint as a cutting tool is regarded by the Aborigines as the most important epoch in their history. It is traditionally reported that this great discovery was revealed to their forefathers in remote antiquity by two superior beings dwelling in the western sky. The weapons are often beautifully made and cunningly carved and coloured; they are evidently the work of men who took pride in their art. The shields are made of bark curved by means of heat, or cut and shaped on the living tree.

The textiles of the Aborigines consist of blankets or cloaks made of felted sea-weed, or scum that gathers on the surface of stagnant waters. For a needle the bone of an emu, and for thread the tendon of a kangaroo suffices. For catching fish they weave nets of sinews, fibres or fur. The use of hooks for this purpose was probably unknown to them until recently. An astonishing feat is often performed by a black fellow, who, with a weighted spear, sinks to the bottom of a deep water-hole. If a fish happens to pass above him he transfixes it with an upward thrust. To the wonder of the beholder, first a fish, then a spear, then the black head of the sportsman emerges from the water.

The carvings and paintings which abound in caves and on rocks have long been a puzzle to archaeologists. The Aborigines themselves can now give no explanation of the meaning of the signs depicted. Some of the drawings are representations of animals, and doubtless relate to the totems of the various tribes. The human hand is frequently delineated. There are many mysterious marks for which no explanation can be suggested. Some are supposed to be phallic. There is no indecency in the ancient art of the Aborigines. Not having partaken of the fruit of the tree of knowledge of good and evil, such ideas would naturally not occur to them. The subject is now receiving the attention of explorers, and light will soon be thrown upon it.

Australia presents a unique example of art of the Stone Age co-existing with all the achievements of modern science and industry, but owing to the adoption of clothing, which preserves germs, the ravages of alcoholic liquors and the contamination of the diseases of civilization, the Aborigines are a rapidly disappearing race, and are doomed to extinction.

Industrial Arts and Handicrafts in Canada.

By G. A. Reid, R.C.A.

Principal of the Ontario College of Art, Toronto.

IN respect of all matters pertaining to the industries, Canada must take her place among the countries of new development. There are those who think that we should develop a new form of decorative expression from the art of the North-American Indian, and that form of design has been used with comparative success in special cases where it was appropriate. It is, however, an entirely foreign art to the Canadian of all conditions, whose associations, both of the past and present, are European. Although the trained artist and craftsman should be able to turn from the rendering of one style to another with ease, his inherent character must be carefully retained if he is to develop that art expression which is deeply bound up with his whole life.

It is thus that Canada is developing in industrial art, and no power can turn it into other channels. Canada, like the United States, has had British and European products as the foundation of all its industrial activities, and many of the craftsmen working in Canada from the earliest times to the present day have been trained in England, Scotland, and Ireland, or on the Continent, while the general character of all art training as established in Canada is European.

There are at the present time a number of native home industries being carried on in various parts of the Dominion, some of them being the earlier crafts, such as the weaving and rug-making of the French settlers of the province of Quebec as practised by French, English, Scotch, and Irish settlers of Ontario, New Brunswick, Nova Scotia, and Prince Edward Island. These have been revived and organized to some extent along decorative lines at various places, and production increased and merit advanced by the supervision, exhibition, and sales under the auspices of the Women's Art Association of Canada and its branches. The Women's Art Association has held exhibitions of these goods at New York, San Francisco, St. Louis, U.S.A., Melbourne, Australia, London, Edinburgh, and in other cities and towns in Canada and the United States. Of the more recent developments of the native crafts, the most distinctive are those of the Russian, Galician, and Czecho-Slovakian settlers. These have been brought into notice mainly by the above-mentioned exhibitions.

The trained designers and craftsmen who have migrated to Canada from various old lands form, as a matter of course, the foundation of very widely extended activities. The greater number have been absorbed into industrial work, and are often lost to any free movements in art. Art schools, studio classes, and various forms of art teaching came and went, but a general mass influence was left. The cumulative effect of this may be illustrated by reference to the founding of the Canadian Society of Applied Art in 1903. This society held annual exhibitions for a number of years, and its catalogue of 1905 shows about eighty exhibitors in various classes—jewellery, china painting, mural painting, posters, illumination, book decoration, printing, advertising designs, stained glass, ornamental iron work, hardware, furniture, leather work, metal work, enamelling, wood carving, pottery, bookbinding, stencilling, embroidery, weaving, architectural designs, photography, and various exhibits shown by the Canadian Handicrafts Guild, mostly of French-Canadian weaving, Doukhabor crafts, and Indian work.

The Graphic Arts Society is one of the most active, and at the present time is organizing a general exhibition to be held in the Toronto Art Gallery, which will include all the arts now generally regarded as graphic art in which the crafts are very largely included.

The Quebec Association of Architects has recently held an exhibition in the galleries of the Art Association of Montreal of the various arts and crafts allied to architecture. Some Toronto

art workers were represented in this exhibition. Many of the workers in the handicrafts, who formed the Canadian Society of Applied Art at its foundation in 1903, are still active in their various lines, although the society is now disbanded, and many new ones have come into the field. Numerous small exhibitions are held by "Free Lance Workers," and, with the work of the Women's Art Association, indicate a continuous activity in the handicrafts.

The development of art education in connection with industry has been a steady growth, and in recent years has shown especial advancement. Technical education has become an important side of the educational system in all parts of Canada, and the encouragement of technical and art education by the Federal Government, which is the only form of contribution made by the Federal Government to education, is doing much to stimulate this type of training throughout Canada. The teaching of art and of handicrafts in technical schools varies, the differences being due mostly to the importance of the school and its location; but the acknowledged object of such art teaching is its direct relation to industry, and it is intended more for the training of workers in the trades than for the training of designers and craftsmen as artists.

The development of the more direct form of art training has been of a struggling nature, and from the historical standpoint presents many aspects of hardship and sacrifice. The Ontario School of Art, one of the earliest schools, was founded in 1876, and after many changes of administration and name, it was transformed into the present Ontario College of Art. There has always been a division between design and industrial art in its teaching. The growth of the work of the college has been very rapid. Over a year ago an instructor in crafts was appointed, and a special house was added to the college to accommodate this department. In the four years' course for the diploma, students of all departments are required to take a portion of their work in design and crafts, and by this means every student gets at least a general knowledge of design and its application to the crafts and to industry. A very large number of the students at the present time are fitting themselves to enter what is called "Commercial Art" occupations of some sort, and the first-year work of the college is planned to give the necessary foundation for any of the departments of painting, sculpture, design, and crafts.

Though the Ontario College of Art is, perhaps, the largest and most systematically developed institution for art education in Canada, there are a number of schools doing work of a similar character, others where one department of instruction is provided for, and some new schools are being established or projected. The schools of Halifax, Montreal, and Winnipeg are of a general character as regards instruction, but varying in the stress laid on the different departments of study. The University of Toronto and McGill University in Montreal have well-developed departments in architecture. Two new schools have recently been established in Montreal and Quebec, and another is being projected for Vancouver, which it is expected will be similar to that of the Ontario College of Art.

In a comprehensive survey of art teaching affecting all handicrafts, what is being done in the public and high schools cannot be overlooked. In Ontario the teachers are being given special free training by the Department of Education at the Ontario College of Art and, during the past twelve years, over 2,000 have been authorized, following the training given, to teach art subjects. There is lively interest evident in the teaching, and good results are shown. While there is not the same systematic training of teachers in the other provinces, there is some training being done, and the influence of the work carried on in Ontario is felt and is being emulated.

The Crafts of India.

By H. V. Lanchester.

GRADUALLY, during the past century, the introduction of European ideas and methods has been undermining the indigenous crafts of India, and one may almost fear that in another two or three generations these will have entirely disappeared. Many of the Indians themselves have ceased to take an interest in them, and the average European is frankly contemptuous, having been born and bred under the industrial regime and looking on production purely from a financial standpoint. If modes of workmanship, that many are content to describe as out of date, are to excite our interest, we must first seek a philosophic basis for our point of view.

The basis is this, that the only work worth doing is that which develops initiative and capacity in the worker, making him feel that his craft is a vital part of his life. Work that cramps and narrows such an outlook is to be discouraged even though it may conduce to an increase in material production. Now, the Eastern mind is only too prone to formularize and stereotype even when occupied in the free exercise of an art, and when brought into the clutches of Western industrialism the effect on his life is wholly disastrous.

One may well maintain that the present methods of intensive production are often too costly in the drain they make on individuality and happiness, and this is most markedly the case in Eastern countries, such as India and Japan.

Let us compare the life of the Indian hand weaver with that of the mill hand there. The former carries on his craft in a room in his own house, selecting the colours and combining them in patterns according to his own taste. His life is a simple one, but his work is carried on in the family circle, and he has the delight of initiating his children into the craft he practises, employing them while still quite young in the minor and preparatory processes.

The weavers' street is quite a pleasant place, with its line of trees down the centre along which the yarn is twisted and stretched, and where children play and neighbours meet.

The work produced is good of its kind, though the finer and more costly textiles have ceased to find a market. The weaver, though poor, is not depressed, his work interests him, and while carried on for long hours, the monotony is relieved by the fact that his home is around him. An instance of the gain in this respect may be given. Passing, during the hot season, a cheerful little camp in a mango grove some two miles out of the city, I inquired as to the people there, and found that they consisted of a few weaver families who were out of work owing to a shortage of yarns, and had taken advantage of the fact to picnic, as it were, in the country and enjoy the change and relaxation. For Indians this showed an unwonted degree of enterprise.

The Indian recruited for the mills is not usually of the weaver caste, but a "coolie" labourer or peasant; he is tempted by a wage much higher than his previous earnings, but fails to realize till too late the difference between the conditions of life in a country village and a busy city. He works long hours, as he did before, but instead of being in the open air he is in a crowded mill. Instead of his village hut he lives in one room in a crowded "chawl" or tenement. The lack of interest in his work encourages him to drink and gamble, in a few years he is degraded and feeble. The death rate from tuberculosis among mill hands in India is appalling.

Let us pass on to a more cheerful aspect of our subject. Fortunately there are still crafts that are not so easily industrialized



A ROSE WATER EWER AND
BASIN OF MORADABAD TYPE.

Showing Persian Influence.

as that of weaving. Strolling round the outskirts of the city one comes on a tiny village, or rather a group of tidily-built mud huts ranged round a small open space, the home of a family of potters, whom we may have the luck to find at work at their vocation. On the one side there will be a heap of newly-tempered clay from which supplies are drawn, near this is the heavy stone wheel which when once fairly set spinning will maintain its velocity long enough to complete the bowl or pot. Ranged on the other side will be found the newly-formed vessels set out to dry in the sun. These may vary from the globular *chattie* or *ghara*, a water vessel of any size up to that of a large pumpkin, down to the little saucer employed to hold *ghee* or *pan*, or used as a *charag*, the tiny oil lamp. Very large pots for cattle troughs or grain jars are moulded by hand without the use of the wheel. *Sarais*, or water coolers, are also made in great quantities, and all these products when sufficiently dried are baked in a primitive clay kiln.

The Indian potter was formerly well-skilled in coloured glazes, white, blue, and green being favourites, though most colours were obtainable; but these have to a large degree lost favour owing to the introduction of Western

crockery, and the failing demand for decorative tiles in building work. Black pottery is still made in considerable quantities, and is usually decorated with patterns in lines or dots of silver.

Somewhat akin to the potter in the general organization of his work is the brass founder, whose moulds are made of somewhat similar clay, and whose products are frequently almost identical in design to the earthen pots. Around his hut you will see a large stock of the clay cores and cases, the latter arranged to separate round the waist of the pot or jar when it is cast. The pot is cast inverted, the core being adjusted on the lower half of the case and the upper half placed over it with the aperture in the top, through which the molten brass is poured out of the crucible brought from the furnace. The latter is blown up by a skin bellows skilfully manipulated. When the vessel is taken from the mould the roughnesses at the seam and at the bottom are filed off, and it is put in a lathe to be turned down to true surface and then highly polished. These heavy cast pots (*lota*) are practically indestructible, and only suffer an infinitesimal diminution by the polishing they are given when in use. They have no base as they are generally carried on a cloth wound in a ring round the woman's head, a smaller pot and yet another being often set into the mouth of the one below it, making a very picturesque tapering headgear.

Other metal workers form vessels from sheet iron or copper, hammering these into bowls, and if a *chattie* is aimed at, brazing a bowl and a bowl-shaped ring together and thus forming the globular jar of the familiar *chattie* form. The Indian is expert in beating and embossing metal with the hammer and punch, and the designs he evolves are most intricate and elaborate, frequently too much so to the Western eye, but he has a noble decorative tradition and often achieves a treatment of marked merit.

As jeweller the metal worker is equal to almost any task, and while the East has been outdistanced by the West in the art of cutting and setting precious stones, in the design of jewellery the West has learnt much from the East, and during three centuries India undoubtedly influenced Western ideas in this branch of art. Much more might be said on this subject, but we must pass on to other crafts.

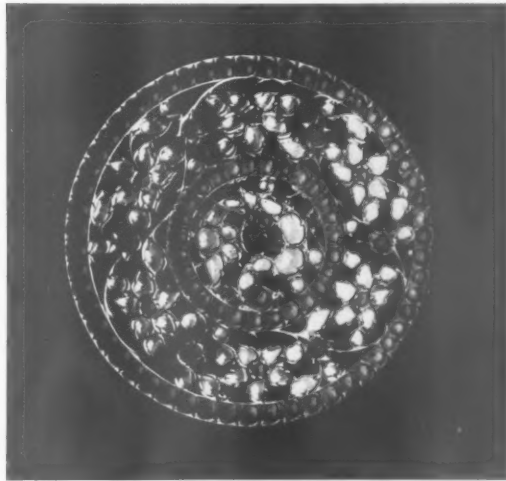
Engraving and chasing in metal has long been a highly-developed art. In the typical Benares ware a sunk ground is

chased out and filled with a mastic composition, the favourite colours being black and red. At Moradabad a variant of this is devised by covering the brass with a thin surface of silver or white metal and finishing by removing portions of this so that the pattern shows in white and yellow metal on the black background.

The well-known art of damascening was also carried on in India, but little is done nowadays owing to the lack of demand for articles of a costly nature. The crafts have all suffered from this, and the better class of work has now almost disappeared, the more opulent Indian spending much of his wealth on European goods, and the European being too rarely sufficiently interested in Indian art to make a point of securing the best examples of craftsmanship when he can obtain something that gives him a similar impression at a much lower price.

Lacquer work of various grades still employs a large number of craftsmen throughout the Indian provinces. The basis is usually wood, or *papier-mâché*, but the type of design has marked variations in different parts of the country. The English market has been flooded with mediocre specimens of the Kashmiri product with its intricate floral designs covering the whole surface, but the best is notably fine in colour arrangements and sometimes in the forms employed. In Southern India the forms are more considered and the lacquering is usually plain with a small amount of metal or colour decoration.

Burmese lacquered articles are usually of simple form, being on a basis of fine basket work made from split bamboo or, in the highest



A PIECE OF INDIAN JEWELLERY.

This piece contains 78 diamonds, 93 rubies, and 9 emeralds.

class of ware, from very fine bamboo strips interlaced with horse-hair. The finished bowls and vessels are thus quite thin and slightly flexible. Red is the favourite colour, covered with a small pattern in pale green, but black and other decorations are sometimes employed.

While little lacquered furniture is made in India, mainly for the reason that the Indians have but scant use for what we understand as furniture, namely, tables, chairs, and cupboards, the bedstead frames of the better class are usually lacquered, the legs receiving their numerous coats while on the lathe. The treatment indicates the traditions of the materials regarded as appropriate, ivory colour and black (for ebony) predominating. While the most important thrones, beds, howdahs, etc., were always covered with embossed silver plates, ebony and ivory were considered quite respectable materials for these purposes.

Wood carving is, of course, one of the principal Indian crafts, and the high skill of the wood carver is well known. Unfortunately, the employment of wood carving in building work has, in many districts, been abandoned, and such carvers as remain are now engaged on furniture, the designs for which are dictated by others, and are more or less exotic. Probably the best patterns are those commissioned by the Portuguese in the sixteenth and seventeenth centuries, but these are overloaded with ornament, and compare unfavourably with the carved work on typically Indian structures.

The best wood carving is now to be found in the extreme



HAND CARVED FIGURE AND FILIGREE WORK
IN SILVER.

From Madras.



CENTRE PIECE IN GOLD, SILVER, BRASS
AND STEEL.

From Madras.

south and in Burma, where the work displays freedom and vigour in the rendering of characteristic forms. This art has, in Kashmir, suffered from the demands of the European trade.

Another important craft still carried on in India on traditional lines, is that of cotton printing, in conjunction with which it is convenient to group cotton painting and dyeing. A vital point in these arts is the selection and fixing of the colours so that they shall not fade, and in the best work the colours are reliable in this respect, though not absolutely proof against repeated washings. This must always have been recognized, for in Kantilyas "Artha-Sastra," written some 2,000 years ago, rules are laid down for the admissible loss of colour due to successive washings.

The designs for printing are composed from a number of blocks carved to represent flowers, sprays, animals, figures, etc., which are employed in compositions arranged according to the imagination of the printer so that a great variety of designs can be produced. Each *purdah* (curtain) or cover is a complete design, usually having a central panel to the largest practicable scale with a series of borders around it which often embrace an additional panel at the bottom to give an extra length without sacrificing proportion.

In cotton painting, executed by hand with a kind of brush pen, naturally more freedom is available in the designs, and these are remarkable for the manner in which, with only a few guiding points, a complicated design is painted direct on the material as accurately as the design demands. The subjects vary from figure groups to purely conventional decorative schemes.

Cottons also receive patterns by dyeing them after the design has been drawn in liquid wax, which protects the material from



A PAINTED TOY ELEPHANT.

From Bengal.

the dye, and which is afterwards melted out; the pattern is usually white or a light colour on the more strongly dyed background, but it is practicable by successive paintings in the wax to introduce several colours.

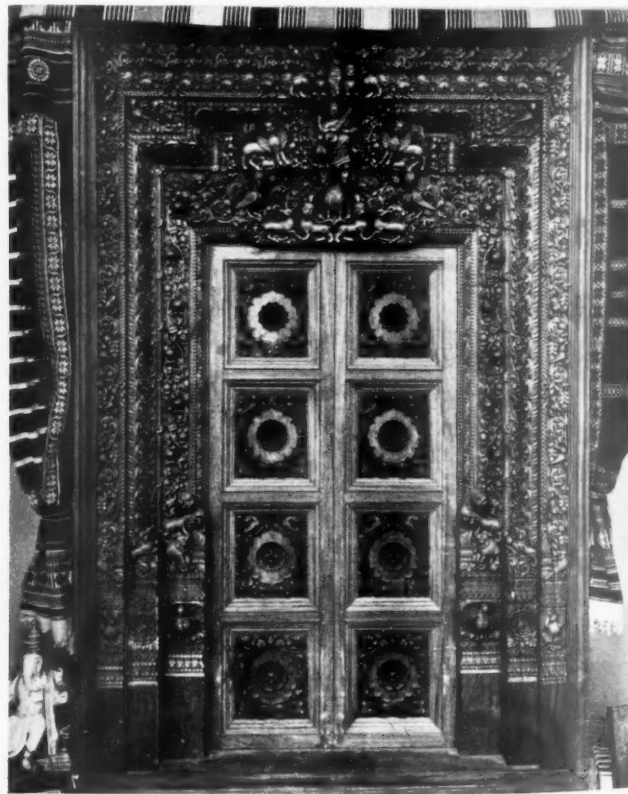
Indian embroidery also has a distinguished career behind it, but this also, alas, is now deteriorating owing to the same influences that have affected so many of the other arts. The *chiken* work of the United Provinces, a delicate white embroidery on fine white cotton cloth, has long been popular with Europeans as it can be freely employed in western costumes, but even this seems to be endangered by the demand for cheapness in preference to high quality. Again, the trade in sewing machines has induced the vendors of these to distribute samples of sewing machine embroidery which are in the worst possible taste and cannot fail to vitiate the judgment of those who receive them.

No article on Indian craftsmanship would be complete without a reference to the models and toys that are produced in many parts of India. The small-scale figures of every representative character in Indian life form, perhaps, the most important feature of this class of work. The fakir, the soldier, the student, the coolie, and dozens of other types are all represented, and sometimes these are set up in sets to represent a feast, a school, a party of jugglers, and other amusing groups. Those made in the south are highly-coloured, aiming at a decorative effect, while the Lucknow school adopted a naturalistic standard which would in this respect secure the admiration of the sculptor. Here the modelling in clay is carried so far that in a little figure some 7 in. high the face is given an expression appropriate to the character of the type rendered. The southern artist is content with something more



A CARVED CHAIR SHOWING EUROPEAN INFLUENCE.

From Madras.

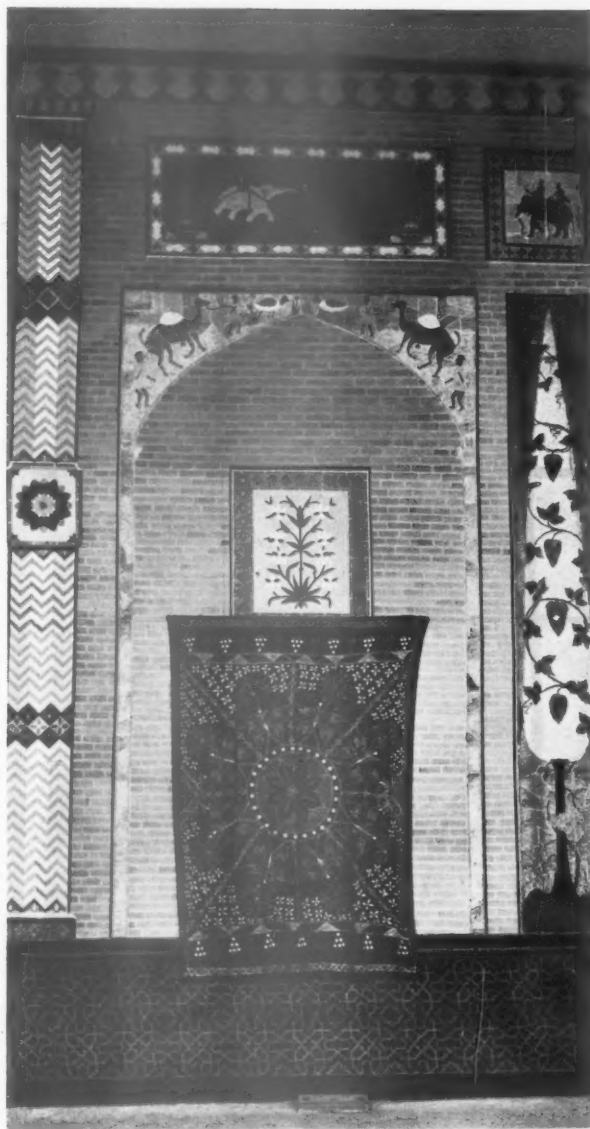


A DOORWAY IN CARVED WOOD.

From Madras.



A COTTON PRINT FROM MADRAS.

A WALL DECORATION IN THE PUNJAB COURT,
WEMBLEY.

All the works illustrated in these pages can be seen at Wembley. The Decoration in the Punjab Court represents mosaic tile work of the 17th Century from Lahore, and was done by students from the Mayo School of Arts, Lahore.

conventional, and works in a kind of *gesso*, finishing with paint. In addition to these typical figures, models of animals, implements, wagons, etc., are also carved or fabricated, while in Burma numbers of ingenious toys of this kind are constructed of paper and light *papier-mâché*.

Crafts limited to certain localities are too numerous for full description, and only a brief reference can be made here to a few typical instances. Thus, on the Malabar coast great use is made of the products of the coco-nut palm, the fronds being woven into mats, cart-covers, etc., and the fibre used for ropes, doormats, and other purposes. The palmyra palm is used for basketwork, and

the leaf stems for brushes and brooms. Grass mats are also made in the south, though not of equal quality to the very fine grass weaving of Ceylon, where satchels, hats, and other articles of a high quality are produced. Kurnool specializes in painted leather work, and both the Karen and Shan districts in Burma have distinctive local industries, while elsewhere, even when the general technique is on normal lines, the character of the designs has a local flavour. It will be realized that in a country of the extent of India, occupied by peoples of varied racial origin, there cannot be a uniform type of design, but rather a number of varied artistic conventions with an underlying unity in their significance.



Burma.

By J. M. Symms.



AN ENTRANCE TO THE BURMA PAVILION AT WEMBLEY,
SHOWING EXQUISITE BURMESE CARVING.

THE art of this country, like its drama, is intimately connected with the religion of its people; the dragons, heraldic lions, birds, are all creatures of religious legend; the scenes depicted on frescoes of teak or on bowls of silver are almost invariably representative of the religious romances of the past. It is this dependence on the past which may explain why the craftsman never works from a model and why attempts to detach him from the hereditary path always end in failure. This independence of the Burmese craftsman in the matter of models has undoubtedly resulted in a directness of scheme and boldness in conception which are to-day the chief charms of Burmese art. Here is an example of the persistence of this inherited tradition: recently an Italian tortoise-shell comb was given to one of the ivory master craftsmen in Rangoon with instructions to imitate the shape, which was that of a wave; but he was told to follow his own bent regarding the design; the result was that after a month he returned with a comb that reproduced perfectly the undulations of the Neapolitan model, but it was decorated in the typical Burmese manner with a lace-work of foliage through which two elephants could be seen. This trait of the Burman is especially noticeable in his woodwork. Teak is hard and does not lend itself readily to elaboration, yet he never tires of elaborating it. The native wood modelling is perhaps less remarkable than the carving, but it may safely be asserted that no artist in the world, except possibly the Siamese, can compare with the Burman in this art. Lack of marble may account for the lack of sculpture in the accepted sense of the word, but the alabaster found near Sagaing is largely used in the making of Buddhas. These statues, commonly found in the vicinity of monasteries and pagodas are, like the pagodas themselves, made of brick and stucco, but frequently reveal lines of considerable beauty.

Moulmein was once the centre for ivory working, but workers there, as in the case of other crafts, now tend to settle in or near Rangoon. Burma ivory is recognized as being the best for carving, and on this account it is exported to India in large quantities; as a result of this our craftsmen frequently find it difficult to keep up the supply of raw material. Fretwork tusks carved to the delicacy of Flemish lace, boxes on the lids of which elephants may be seen in heavy relief dragging logs through a dense jungle, pendants on which dancing girls seem to be pirouetting in mid-air, are but a few of the gems which are made to order by the craftsmen of Burma.

Large quantities of mother-of-pearl are brought from Mergui by the pearl-fishers, and are shipped to Europe, where they go into button factories. There are, however, a few shell-carvers in the town, and an attempt is being made to encourage them to turn out work of a higher standard than they have lately done.

Lacquer work, both in colours and in gold, is an important industry in and near Pagan, in central Burma, and in parts of the Shan States. The foundation on which the lacquer varnish (thitsi) is rubbed is a soft white wood, bamboo, or horsehair, or a combination of these. The method of work differs from that of the Japanese. The Burman applies a thin coating of the varnish to the article, which is then placed in the sun and then underground in a cellar for four or five days. If it is a basket that is being lacquered, this, containing its mould, is placed on a rough lathe, and another coat of thitsi is forced into the fabric; while being turned, coatings of sand, more thitsi, powdered cow-dung, more thitsi, and paddy-husk are applied to the article until it is ready for the artist, who draws the design with a long-pointed steel style. A paste is then made of thitsi, powdered vermilion and a vegetable oil, mixed; and this is thoroughly rubbed into the design at least three times, with the usual intervals of sun and cellar. When the design is fixed, the surface is polished with paddy-husk and water. The other colours used are yellow (sulphur) and green (sulphur and indigo). The details of the green and yellow designs are made by scratching the surface with the steel style and rubbing in the required powder. The original shining black thitsi remains as the background, which is often almost entirely hidden by the reds and greens and yellows. The above will show that the work must necessarily be slow, and in the case of anything large or elaborate it will often take a year to make. The gilt lacquer-ware goes through the same preliminary operations. When the article is sufficiently smooth a coat of thitsi mixed with vermilion is applied. When the thitsi has hardened the artist paints the design, using powdered sulphide of arsenic mixed with gum arabic; this outline must be finished before the varnish is dry; gold leaf is then applied and adheres all over, but on washing with water, and rubbing, the



A DETAIL OF BURMESE WOOD-CARVING.

From the Burmese Pavilion at Wembley.



BURMESE EMBROIDERY FLUNG OVER
A CHEST.



THE SAME CARVED AND GOLD LACQUERED
WOODEN CHEST.

gilding comes away wherever the article has been painted with the arsenical paint; and here the artist's designs are again exposed, leaving the rest to form a gold background. The moulded lacquer work of Mandalay and the Shan States, is very fine; this work may be seen in the ornamentation of the Buddhas, sadeiks, coffin-stands, and thrones; it is a form of the Burmese art which, in the opinion of many, is most likely to attract the West. It should be explained that the thitsi is thickened with husk or burnt dung until it assimilates putty, which is moulded to the required shape with the hands or a small knife. Stone moulds were also used, and some of these have recently been found in Mandalay. When the moulding is complete each small piece is transferred to the surface of the article to be decorated, which has previously been painted with thitsi to make it adhere. It is then varnished with thitsi and put in a cellar to dry; finally it is covered with gold leaf. In many cases the designs are richly ornamented with gems, mica, and coloured glass, embedded in the soft thitsi putty.

Another characteristic Burmese method of decoration is the use of mosaics of coloured glass on a sort of looking-glass, examples of which are to be seen on the pillars of the beautiful building at Wembley, and around the alabaster Buddha which stands in the little temple there.

After wood carving and lacquer work, perhaps the most characteristic of the arts of Burma is the silver work; the form it usually assumes is what is known in England as a rose-bowl. On such bowls appear scenes from the zats (religious dramas), the twelve signs of the Zodiac, animals, agricultural scenes, and that scroll tracery which is typical of all Burmese art. The method of working is as follows: The solid silver is melted in a crucible and poured into an iron pan, where the silver solidifies into a circular mass with a thin circumference and thick centre. This round piece is hammered until the required size of the bowl's mouth has been attained, the silver being heated at intervals to render it soft; then the body of the bowl is worked out and smoothened by hammering. It is then heated, cooled, and dipped into alum water. Two parts of petroleum, two parts of brick-powder, and four parts of resin are then melted and the molten mass is poured into the bowl, a stick being placed in the middle, which can be used as a handle. When the molten mass has cooled and hardened, a line is drawn on the edge of the bowl by means of a compass and style, then figures and flowers are drawn with a pencil on the outside of the bowl, and the pencil marks are deepened by means of the style. The bowl is then heated again to liquefy

the resin, and this is poured out. The bowl is now hammered from the inside, when the figures appear roughly on the outside; the bowl is again heated, cooled, and dipped into alum water. Then the resin is again poured into the bowl, when the figures are more carefully worked out by the artist, who uses different types of sharp instruments. When this work is completed the bowl is once more heated, dipped into alum water, and polished with a copper brush, the figures being smoothened by means of an iron rod. The bowl may then be polished with charcoal-powder to make the figures appear more prominent and to effect a lasting colour. Silver modelling is done in the same way as the making of bronze models, and the method will be described later.

Although it belongs rather to Chinese than to Burmese art, mention should be made here of the silverware obtained in the Shan States on the eastern frontier of Burma. From Yawnghwe in the Southern States come delicate filigree silver chains, which widen in front into a network of flowers and peacocks, or whatever may appeal to the artist's fancy. From North Hsenwi come silver chatelaines, necklaces, girdles, and hair ornaments, which are made up to the standard of the best Chinese work. The abundance of silver in the unadministered Wa area will explain the extraordinary cheapness of this work.

Niello work is carried out in Rangoon and the Shan States, but the chief centre is Pyawbwè, in Upper Burma, where it is a favourite method of decorating handles of *dahs* or long-sheathed knives carried by Burmans and most of the hill people. A compound of two tolas of silver, $1\frac{1}{2}$ tolas of copper, and $1\frac{3}{4}$ tolas of lead, is melted in a crucible, a considerable amount of sulphur being thrown into the molten mass. When dry the compound is made into powder; figures and flowers are drawn in pencil on a thin silver plate of about one-sixteenth of an inch in thickness; the artist then hammers down the silver a little, avoiding those parts covered with the pencil drawings, also using a sharp instrument to make his indentations. After this has been done, the powder mixed with borax is smeared over the hammered parts, and the plate is then heated, when all the powder settles on to the hammered portions. Finally, the plate is smoothened with sand-paper and rubbed with powdered charcoal.

Pegu is the chief centre of the bronze workers. The art is comparatively modern, and was started to enable silver workers to work when silver was not so easily obtainable; the method of modelling is exactly the same as that employed for making silver statuettes. Two parts of wax and one part of resin are mixed



SHAN SILVER WORK.

As they are of some interest, the prices of the silver work illustrated above have been included with the description of each object. The photograph shows:—

	£	s.	d.		£	s.	d.
1. Rose bowl	3	0	0	5. Semi-circular box	2	0	0
2. Betel box	9	9	0	6. Needle-case on a chain	2	0	0
3. Flat box	3	0	0	7. Necklace (floral and peacock design)	3	0	0
4. Necklace and pendant	3	0	0	8. Oval box	2	0	0

together and a model is made of this mixture. The statuette is then covered with powdered gunny rags and soft earth; it is again covered with pasty mud and heated; the wax then melts and is poured out from the hole. While the mud is still red-hot the molten silver is poured into the hole; when it cools down, the mud is removed, leaving behind the statuette in rough form. All finishing work is then done by means of sharp instruments of various design.

In the making of these statuettes, as in the other crafts, the artist uses no model, and the objects modelled best are those which the artist may be said to know by heart; conventional Burmese figures: Buddhas, princes, princesses, ogres, demons, animals, such as elephant and buffalo. The best bronze work is undoubtedly that which represents ornately clad figures. Occasionally one comes across a well-modelled nude. Some of the models of elephants and buffaloes are convincing, but the general standard of work is not so high as in the wooden model. Many of the hill tribes afford in their dress or the bag that is slung across a shoulder interesting examples of embroidery. The herring-bone stitch is common, but there are others which have puzzled Western embroiderers; with such embroidery, silver and seeds are most effectively combined. The Burmans, however, do not wear embroidered coats or skirts, but there is one form of embroidery which is popular and may be seen in monasteries and the houses of the rich; this is the tapestry or *kalaga* which is used as a funeral pall, and is hung upon the walls. It is most ornate, a thing of gold and silver threads with embossed figures of men and animals, and with jewels or coloured glass inset. The figures are cut out of coloured cloth by artists, who sell them to the embroiderers. The cutting out of the figures is an art in itself. The *kalaga* is so ornate that one is apt to overlook the details which these figures supply, details of palace scenes, or war, or the chase.

An industry rather than an art, silk weaving plays an immensely important part in the life of Burma. In a country where on a festival every inhabitant, male and female, dons silk, weaving must necessarily be an important industry. But, Burma being a Buddhist country, and silk weaving involving the taking of life, practically all the raw silk is obtained from China, a fact which militates against the reduction of price. The price has always been high. The lack of raw silk in the province, and the narrowness of the loom, are undoubtedly features which have up to date prevented Burmese silk from competing in Western markets. Attempts are now being made to encourage the rearing of silkworms in the Shan States and other parts; and the Saunders Weaving Institute at Amarapura, near Mandalay, is turning out young women trained to use wider and more up-to-date looms. Burmese silk is probably more durable than any other silk on the market to-day, and for linings and upholstery it cannot be surpassed. The chief centres of silk weaving are Amarapura, Shwedaung (near Prome), Tavoy, and Mergui, while Arakan makes a silk almost as thick as tweed. In the Southern Shan States a good quality of silk is woven in Yawngwhwe. Designs are classed as follows: the Bala, with over thirty patterns; the Acheik, with thirty; and the Gaik and the Sat, with one. There is no doubt that the extraordinary durability makes the wholesale trade in the West chary about putting Burmese silk on the market, and the ephemeral silks of Japan are better suited to the vagaries of Fashion; but any purchaser who wants a quality that will last a lifetime will be well advised to ask for Burmese silk.

Pottery is for the most part a dry-weather occupation. There is the black pottery made at Letthit, near Amarapura, and that of the Shan States, at Lawksawk and Samka (here an openwork design is popular), and in Legu jars of a shape that recalls the story of Ali Baba and the Forty Thieves are made. Twante, near



PAPIER MÂCHÉ TOYS AND MARIONETTES.



BURMESE TOY FIGURES ON NATIVE SILK TEXTILES.

Rangoon, produces red-glazed pottery, and the flower jars of Pynnmana may be noted. The water goblets of Tavoy are frequently seen on a railway journey, for these are almost as useful as thermos flasks for keeping water cold on the hottest day.

Burma has brought her theatre to Wembley, with native actors and plays. As in mediæval Europe, so in Burma to-day, religion and drama are closely connected, and it is at religious festivals that the plays may always be seen. A bamboo stage, the tree trunk, which from the dawn of the drama has always possessed a dramatic significance, and rows of mats along the roadway, these are all that are necessary for the production of a village play. In the towns Western influence is apparent, and here scenery and even limelight are frequently seen. There are four types of pwès, or performances; the zat pwè, or historical drama interspersed by songs, an eight-hour performance. The yein pwè is a posturing dance with songs. The ohsee pwè, or drum dance with songs, is probably the most attractive of all; here the performers carry long drums and frequently reveal an abandon which brings the house down. The yokethe pwè, or marionette show, is very entertaining. The orchestra usually consists of clarion (hne), flute (palwe)—the latter is the instrument which is frequently heard of an evening in any village when the young men go a-courting—gongs (kyiwaing), and drums (saing); the last named are very interesting instruments, consisting of eighteen cylindrical drums hung on a circular frame and tuned by applying a paste made of a mixture of boiled rice and wood ash to the centre of the top head. The player's attention is continually divided between playing his instrument and keeping it in perfect tune; the playing of a skilled

player on the saing is well worth watching, as the instrument is unique and the Burmans are the only people who can make and use it with any effect. The above are all melody instruments. They also use the bass drum (parma), two tenor drums, cymbals, both large and small (lagwin and thanhlwin), and bamboo clappers (waletkók).

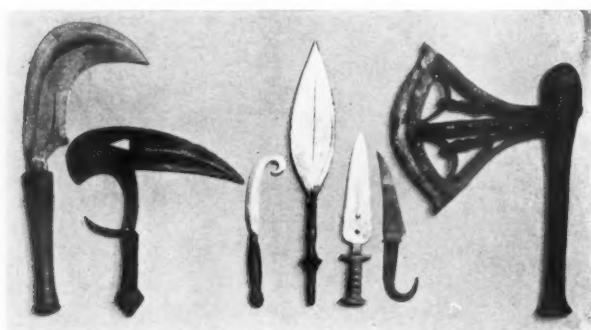
Rangoon itself is a new city, but more than a thousand years before its foundation the hill on which the Shwe Dagon Pagoda stands had been a sacred shrine. This pagoda is one of the wonders of the world, and is an object of intense veneration to many millions of Buddhists in China and Indo-China. What St. Peter's is to Catholic Christianity, what the Golden Temple is to the Sikh, what Mecca is to the Mahomedan, that the Shwe Dagon is to the Buddhist; and when we remember the number of Buddhists in the world to-day, the age of this shrine and the general belief that it contains the actual relics of Gautama, it is perhaps no exaggeration to say that this is one of the most sacred edifices in the world.

The Buddhists place the date of its erection at 585 B.C., but they say that the site was sacred long before that date. Pilgrims in ceaseless thousands visit the Shwe Dagon, the greatest of all Burmese works of art and craftsmanship, and have done so for centuries; and few leave it without applying gold-leaf, which is for sale in the many stalls that line the steps; much of this gold is washed away in the rains, but is carefully collected by the authorities, who thus find an endless source of revenue which is used for the upkeep and improvement of the pagoda. Gold plates are continually being added to the upper portions, and the vane above the "hti" is a mass of precious gems.



Africa: The Art of the African Negro.

By F. W. H. Migeod, F.R.G.S., F.R.A.I.



AFRICAN IMPLEMENTS.

Reading from left to right the photo shows:—1. A bill hook. 2. A bill hook. 3 and 4. Knives. 5. A knife with an ivory handle. 6. A copper knife. 7. A ceremonial axe.

FOR some 150,000 years at least, to judge by skeletal remains found, the black race has lived in Africa. Every kind of art is therefore to be found with the negro just as it is found with the white race and the yellow race and the brown race. The various stages of advancement can be traced in the black race just the same as in the other races of the world.

The black race has had its palæolithic age, we may assume, because palæoliths have been found in the Gold Coast, in the Congo, equally with Egypt, Somaliland, and South Africa, and also in the Sahara, a region that was not a desert in bygone ages. In Egypt, Somaliland, and South Africa the palæoliths were the product of fairer complexioned races than the negro, but we may give the black man credit for the others until there is proof to the contrary. The type of artefact produced corresponds with the Acheulean of Europe.

Then followed the neolithic age, about which there is less uncertainty as its remains are vastly more numerous. Axe heads are the principal objects found; and from these are derived, with but little variation, the iron axe heads of to-day.

In Europe there followed a copper age. This existed also in Egypt, though possibly of short duration; and it was, as in Europe, the forerunner of the iron age.

Iron seems to have succeeded immediately to stone among the negro tribes of Africa, for there is no trace at present of an intermediate copper age, and the probability is there was none. There is good evidence for surmise that the iron age of the world began in Africa, where surface ironstone is abundant; but whether the art of working iron originated with the negroes or was acquired by them from others, there is nothing at present to indicate.

They are no mean iron-workers. Their principal output is hoes for agriculture, axes for forestry, and swords and spear-heads for war. Utility is the aim of the smith, but ornamentation is not neglected; and the ceremonial axes of the Baluba of the upper Congo region, for instance, are splendid examples of both iron chiselled and iron twisted into fancy designs.

Gold and silver are worked into personal ornaments. Mohammedans may not wear gold. Hence in Mohammedanized parts of Africa it is not seen, but the wonderful filigree work of the Gold Coast goldsmith is, perhaps, the equal of anything ever produced in ancient Egypt. The beautiful gold ornaments worn by the Gold Coast chiefs, and also those—family property—worn by a Fanti girl on her ceremonial walk through the town prior to her betrothal are, for workmanship, almost unsurpassable.

In modern times copper and brass, especially the latter, have been imported. The latter is not only smelted and hammered into various shapes, usually rings for the neck, arm or leg, but is also cast by the "cire perdue" process, of which, as fine examples, the Benin castings are famous. Human beings and animals are the most common objects reproduced.

To these must be added ivory carving, which has reached a high stage, especially about the gulf of Benin.

Then we come to representations of the human figure in other materials. Small images are made all over Africa in wood for such ritual purpose as commemoration of the dead. Tribal features are often recognizable, even if crude. Representations in stone are rare, but a few nearly full-sized heads in soft stone have been found in the Mende country (Sierra Leone), of which the present-day inhabitants do not know the origin. Small statette figures are also made in the southern part of the Belgian Congo. Figures of clay usually seated under a thatched roof, are found as memorials to the dead throughout tropical Africa among the pagan tribes, but not, of course, in Mohammedanized tribes.

The art of carving the human figure is probably the oldest of its class. Its prototype is commonly seen along a bush track near a village. It is a piece of wood about a foot high with a knob on the top, and may mark a grave. From that was evolved the complete human figure. It is only later that comes the high relief in clay on the walls of a house, for which a good clay is postulated. Later comes low relief; and, later still, mere wall-drawing. For drawing a plane surface is necessary. In east Africa especially, the houses of the natives have grass walls, and so one sees no drawing. Cross the line of the Great Lakes and every house wall is decorated with charcoal line-drawings, and rarer coloured drawings, usually conventional, both as to design and with some indifference as to the appropriateness of the colours applied, but they are never wanting in life and action. The untutored artist perceives the action rather than the form that carries the action. Children as artists have little to learn from their elders, and, indeed, are the most numerous draughtsmen. Inanimate objects appeal little to them, and are rarely seen depicted, except as necessary adjuncts in a set scene.

Decorations of this nature extend to calabashes used as household utensils, but pottery is decorated only with geometrical designs.

The women in Africa are the potters. In some of the more advanced tribes other objects besides household pottery are made, and one finds pipe bowls of most varied designs, including human

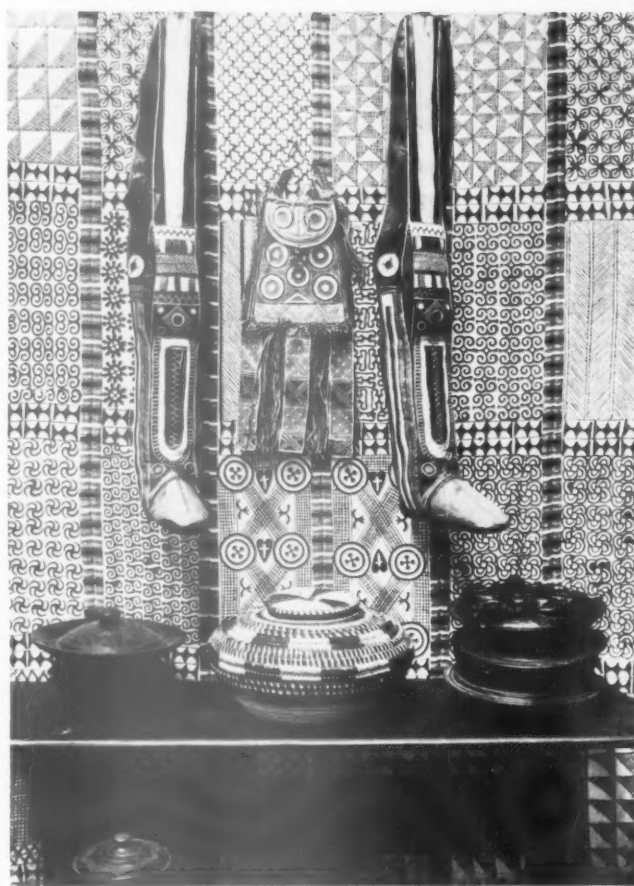
figures, as in Ashanti; and other things which are mere ornaments, as in Cameroons.

In some parts of Africa there is no clay. Earthenware vessels may be imported from neighbouring tribes. Where they are not, or side by side with them, are used calabashes, and failing them vessels are made of fibre so closely woven that they hold water. Some of the tribes of the Eastern Soudan make such vessels, as also do the Budduma, who dwell on the islands in Lake Chad.

Basket-work in simple and also in elaborate design is universal. So is mat-making. The last may be, and most commonly is, done by hand, strand by strand, but I have also seen them made on looms in Nigeria.

Quite a number of tribes are without a knowledge of weaving; even such an advanced one as the Baganda. The looms one sees throughout Western and Central Africa vary considerably in design, so much so that they cannot be variants of one original pattern. The one thing common is the narrowness of the woven product, usually only three or four inches wide. This is how cotton is woven, but cotton is not grown everywhere. Curiously enough the Congo tribes, which use fibre for wearing apparel, weave the pieces at least a foot wide, and up to two feet long, to be afterwards sewn together. Both in cotton and fibre weaving strands are dyed different colours and worked in, taking the forms of geometrical patterns.

Down to the present day many tribes are dressed scantily in skins, but between the merely softened skin that the uncivilized man wears round his loins to the beautiful leather work of the tribes bordering the desert, such as the Mandingo, Hausa, Fulbe, Bornuese, etc., there is a great gap. This gap is not bridged by intermediate grades of art, which indicates that this fine leather work is exotic. It was, indeed, introduced by the Arabs and Moors. There has come to my personal notice only one single attempt by a primitive savage to decorate his skin garment. That was on the western border of Uganda, and he had burnt or



NATIVE CLOTH, BOOTS AND BAG, WOODEN BOWLS AND BASKET WORK.

From the Gold Coast.



GOLD COAST WOOD CARVINGS.

cut away part of the hair of his goat's skin in something like straight lines.

There is possibly no nation in the world that has not some idea of musical rhythm. The negro is by no means behind the others in this art. His hearing is acute, so much so that quarter tones can be discriminated. I should venture to say that it is impossible to find in all Africa a person with no sense of music whatever such as can be found in the industrialized states of Europe. His instruments are of great variety. The drum is the principal, and this is made in all shapes and all pitches from the deep-toned war-drum to the small, sharp-sounding dance-drum, and they are beaten either by sticks or by the fingers, and also rubbed to give certain sounds. The limited capacity, or, rather, use of the drum in Europe gives no indication of what a drum can do in Africa. Words and names can be given forth, and are understood, provided they be in the language of the hearer. Other instruments are pipes of various kinds, general everywhere; guitars, mostly in the Soudan; violins in East Africa; instruments with notes that are tapped in the Soudan, metallophones, or small hand instruments with metal notes under tension which are sprung with the fingers, common through all the Congo region. The African takes readily to European music, and brass bands, especially in Western Africa, are common in all the coast towns. The players of the latter will never play anything but foreign music; adaptations of their own music they will not have: the merging of the two is, therefore, still far off.

Perhaps I should include, under art, tattooing of the body and hair-dressing. These are important all the more as they are dying out with the advance of Christianity and Mohammedanism, the two most potent influences working on the African at the present day. House-building and canoe-making are beyond the limits of this paper.



STEATITE IMAGES FROM LUSAMBO.



A WALL DRAWING IN THE BALUBA COUNTRY.

As to the future of negro art and its trend I hardly like to express an opinion. Certainly European influences are tending to modify it, and many things of the "curio" nature are made solely for sale to Europeans. Other things are ceasing to be made as imported goods take their place. This is especially the case when foreign influence becomes an attraction, as in cotton cloth and articles of clothing. The hand-made article must inevitably go down before mass production by machinery. In Gaboon, for instance, I found the tribes had ceased to make

agricultural implements and pottery. They used imported goods, and their clothing was entirely foreign. It depends much on whether the natives of a given region can sell enough of their forest products to enable them to buy foreign goods; and all this hangs on distance from the ports and cost of transport. It will take time materially to influence the far interior away from the railways and waterways, but the foreign influence is extending, and possibly one by one the native local manufactures will be swamped out of existence, and African art will in time become negligible.

Sierra Leone.

By W. Addison.

Representative of the Government of Sierra Leone, the British Empire Exhibition.

THE Government of the Colony teaches medicine, mechanics, and various handicrafts by means of schools, the medical, railway, and public works departments. The merchants teach their employees motor mechanics and boat building.

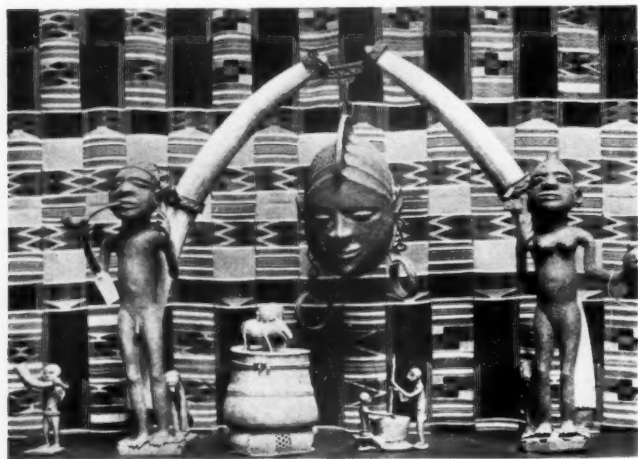
In every part of the country may be seen the woven products of the people. Cotton is grown, cleaned, spun, dyed, woven, and made up into clothes. The whole process is one of hand-manufacture. The women clean, spin, and dye the cotton; the men weave and make up the clothing.

In certain chiefdoms primitive furnaces may be seen in which

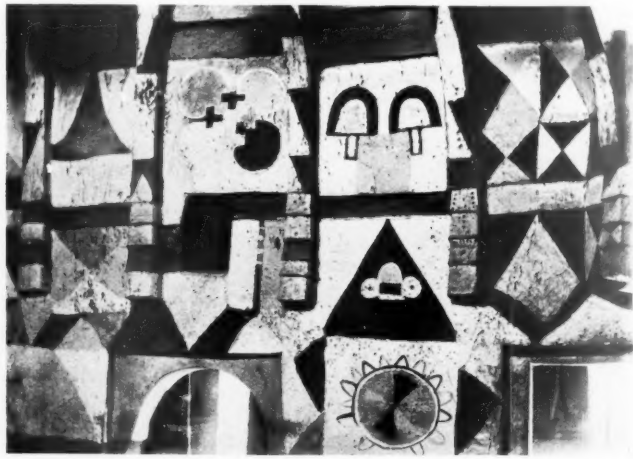
the blacksmith extracts metal from the iron ore found in the locality, for the manufacture of agricultural implements.

Pottery is another useful industry of the people. Pots of all shapes and sizes are made without a potter's wheel. The shaping of the vessels is done entirely by hand, the clay being moved round and round on a wet board or stone until it is shaped and ready for baking.

The palm-nut tree provides fibre for the fishing lines and nets of the fishing population, who manufacture their lines and nets by hand. The women make nets, which are generally circular or oval in shape, and the men manufacture them.



GOLD COAST NATIVE WORK.



A DECORATED WALL AT KANO.



A BUNDU DEVIL WITH SENIOR ATTENDANT.

The Bundu Society, Sierra Leone.

All over the country baskets are made from various fibres, barks, and leaves. The baskets take all shapes, sizes, patterns, and colours. Local vegetable dyes are largely used. Basket-making is carried on by both men and women.

Mats are a household necessity, and are made in considerable variety, almost entirely from different kinds of palm. This industry is confined chiefly to men.

Various kinds of furniture are manufactured from the piassava palm tree, and its raphia lends itself to the weaving and plaiting of hats and caps.

The men are the tailors and needleworkers of the community in the Protectorate; *the women do no sewing.*

The houses of the people in the Protectorate are all one story high, and are either rectangular or circular in shape. They are mostly built of mud reinforced with wattling. The roofs are thatched with grass, palm-leaf slates, or fronds of various palm trees. The men put up the woodwork and the thatch; men and women make the mud walls and the floor. A variety of architecture prevails in the colony, from the Law Courts of concrete and iron, down to the mud hut.

Much has been written, but it would appear very little is known, of the origin of the steatite figures. Nomori is the name by which the steatite figure is spoken of locally, particularly in the Mendi country, where it is treated with profound deference and respect. It is said that Sierra Leone is the only place in the world in which the Nomori is found. Some of the carvings are grotesque, others are of animals, and a number represent the heads of men. A few of the latter are almost life-size, with the face to the sky, rings in the ears and in the partitions between the nostrils, long, drooping moustache, and the hair of the head raised in nodules. Nothing is known of the race of men represented by the heads, nor is anything known of the negro sculptor. Supernatural powers are attributed to them.



TWO BLACK MASKS OF THE BUNDU SOCIETY AND FOUR COLOURED USED BY CONJURORS.

The Bundu is a secret society for women only.

A Nomori is placed in a rice field to bring good luck to the farmer and every now and then the Nomori receives a sound flogging to make it steal rice from the neighbouring farm and plant it in the farm of its master. A few "medicine men" possess Nomoris who will supply to the seeker of aid a young and beautiful wife, cause the death of his enemy, effect a complete cure of some serious illness, bring him much wealth, and a good harvest.

There are several secret societies, the most important being the Porro, for males, and the Bundu, for females. Females are not admitted to the Porro, and men are forbidden the Bundu. The meeting-place of both societies is generally in a group of trees surrounded by thick undergrowth.

Initiation into the Porro society takes place in youth. During the period that the lads are in the Porro bush they are taught the arts and crafts of their tribe, singing, dancing, farming, house building, etc. Circumcision also takes place with much ceremony. Modern surgical appliances and medical treatment find no place in the Porro bush. A sharp knife, a clean, swift cut, a herb applied, and the operation is finished, without a sound from the lad being operated upon. All members of the Porro society bear the Porro marks.

Where the traditions and customs of the country are not in conflict with the well-being and peaceful progress of the people, they are not interfered with in any way. As far as possible, the native laws and customs are adhered to in the administration of the country. Each chiefdom is governed by a paramount chief and councillors. There are several women paramount chiefs, who perform their duties in a dignified, capable, and satisfactory manner. In difficult matters the assistance of the Government is sought. All well-ordered chiefdoms manage their own affairs, and have little cause to be envious of the inhabitants of other countries.

Recent Books.

Art and Architecture in Australia.

Domestic Architecture in Australia. Edited by SYDNEY URE SMITH and BERTRAM STEVENS in collaboration with W. HARDY WILSON. Sydney: Angus & Robertson, Ltd. 4to, pp. 34 plates 47.

The Exhibition of Australian Art in London, 1923. A Record of the Exhibition held at the Royal Academy and organized by the Society of Artists, Sydney. Sydney: Art in Australia, Ltd. 4to, pp. 13+ coloured plates+plates in black and white 162.

Art in Australia. A quarterly magazine. Edited by SYDNEY URE SMITH & LEON GELLERT. Sydney: Art in Australia, Ltd. Sm. 4to. Illustrations in colour and black and white. (In London: The British Australasian Book Department, 55 High Holborn, W.C.1.)

The rise of Australian art has been phenomenal. Within a few years a distinct and admirable school of Commonwealth painting has become a recognized feature of the world's art. It seems to have grown more vigorously in Sydney than elsewhere, and that beautifully placed city apparently lays claim to the larger number of the foremost painters. In Melbourne there is the wonderful Fulton bequest, which will enable Australians to stay at home to study some of the world's masterpieces of the great ages, and further factors are the presence in Europe of distinguished Australian painters who have not recently been in the Commonwealth, or having been have recently returned, and the distinction the school possesses in the well-known sculptors, Sir Bertram Mackennal, Harold Parker and C. Web Gilbert.

The real distinction, however, of the whole body of Australian artists lies in their treatment of colour and character. They love both, and their country gives them both. They excel in landscape and portraiture. So far pure form has attracted them less, and their production of it has been on a more modest scale, although in some directions promulgated with something less than mere modesty. Nevertheless, both in sculpture and architecture, there have been notable things done, and in drawing the stark masterliness of George Lambert is nowhere to be surpassed in contemporary art.

Last summer at the Victoria and Albert Museum a rare feast of pure architectural interest was provided by Hardy Wilson's drawings of old Colonial houses in New South Wales and Tasmania. To this accomplished architect the frontispiece of the volume on Domestic Architecture is due, and to him also a lament over the bad buildings that are so common in the Commonwealth. To judge, however, by the plates in the book a new era has dawned there as it has here, for there are several examples by Australian architects of very charming houses of the recent past and of to-day.

The book contains some interesting observations on architecture, expressed in the incisive manner common to all the publications enumerated above. The manner is more than incisive, it is indeed crude at times; it is compact of culture newly acquired and eagerly absorbed; it is honest, eager, and nearly always touched to life with humour. All the items emanate from one source—Art in Australia—and it says much for the Commonwealth's vivid interest in art that it can support a quarterly publication of this excellent character and bring it out in such a satisfactory form. A little improvement in the colour printing and a little further detachment of sentiment may be desirable; but the publications as they are take a high place among the half-popular, half-artistic productions of the world.

As a record of the exhibition of pictures, drawings, and prints of last year the volume of reproductions is admirable. There are two hundred of them, and they reveal to those who had the misfortune to have left the exhibition unvisited what this Australian art is and is likely to become. But not wholly. There must be other artists in the Commonwealth, and there are those in Europe, who are not represented. If to this fine record as it stands could be added one which should treat absentees with like favour, it would be a revelation indeed. In landscape the representative character is best seen: Arthur Streeton heads the procession, and is followed by Elliott Gruner and Hans Heysen, three splendid painters of the Australian scene and its sunlight. In portraiture George Lambert proves himself not only a great

Australian, but a great world-artist. There is John Longstaff, whose work is sound, rich, and satisfying. If to these are added George Coates and James Quinn, Australian portraiture has but little to fear. In the making of drawings and prints there is great accomplishment. Norman Lindsay's fecund imagination needs pruning and purging; Percy Leason does good work. In etching Lionel Lindsay, Henry Fullwood, and H. van Raalte might have been better represented, but they hold their own. Among the women artists missing from the collection are Dora Meeson and Bess Norriss, and there is no mention of Fred Leist and Will Dyson.

KINETON PARKES.

Housing.

Housing. By HARRY BARNES. London: Ernest Benn, Ltd. Price 25s. net.

One of the characteristics of modern civilization is the complex inter-relation of its activities and, therefore, of its finance. It is not an uncommon occurrence nowadays in many large businesses and commercial undertakings for one department to be run at a loss to the ultimate benefit of the whole concern, and if this be so with private enterprise, it must apply to a much larger extent to municipal and Government undertakings; and yet the same men who display business acumen in their own affairs are the first to raise an outcry against the unbusinesslike methods of public enterprise. Yet the test of public enterprise is not whether an undertaking pays in terms of a limited balance-sheet, but whether or no it be to the ultimate good of the community. It is possible, for example, that it might be to the benefit of a country with State-owned railways to run its goods freights below cost price on account of the general stimulus which it gave to the nation's trade, thus enriching its coffers through other sources. Again and again town planning is stigmatized as extravagance, because it entails an expenditure of public money, yet its main purpose is to prevent, in the future, the occurrence of mistakes such as have occurred in the past, the results of which are now costing, both by private and public expenditure, millions of pounds. And so it is with housing. There are those who still throw up their hands in horror at the idea of a Government housing balance-sheet which shows an annual deficit of some ten million pounds. It was estimated in 1922, by Lieut.-Colonel Fremantle, consulting medical officer of health for the County of Herts, that the loss to this country through tuberculosis alone is £94,000,000. The primary cause of tuberculosis is overcrowding and bad air, in other words, bad housing. Experts have no doubt whatever that if the nation were properly housed, the incidence of tuberculosis would enormously decrease. Thus, on this count alone, it would probably pay the nation to expend some of that ninety-four millions in the provision of better houses.

Major Barnes rallies all the facts to show that housing must be undertaken as a public service, in the same way as education, to which he compares it. But to admit a principle is one thing, to apply it another. Since the war three Housing Acts have been placed on the Statute Book, of which only the first can be said to be sound in its method of applying an accepted principle, although faulty in its detail. If the community is to pay for houses it must not only ensure that the houses for which it pays are good houses, but also that they are properly disposed, both in relation to each other and to the surrounding district. In the first post-war Housing Act these conditions were fulfilled, the Act failed in its administration of the finance and through its lack of co-ordinated control over materials and labour. The remaining Acts, with their promiscuous subsidizing of miscellaneous houses, are examples of a misapplied principle.

Major Barnes knows the subject on which he writes better, perhaps, than any other man in England, for he is that unique combination—an architect of wide experience in this particular class of work, and a statesman. His style, moreover, is delightful, witty, and incisive, with here and there a rich touch of irony.

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THE ARCHITECTURAL REVIEW.

London Street Architecture.

The jury appointed by the Royal Institute of British Architects to award a medal to the architect who has designed the best street frontage completed during the year 1923 within a radius of four miles from Charing Cross has just completed its task.

After careful examination of drawings and photographs of all the buildings which were nominated for the honour, the jury has given its award in favour of "The Shepherd's Bush Pavilion," designed by Mr. Frank Verity, F.R.I.B.A., of 7 Sackville Street, London, W.

The jury consisted of:—

The Earl of Crawford and Balcarres, Hon.F.R.I.B.A. (Chairman); Mr. J. Alfred Gotch, F.S.A., President of the Royal Institute of British Architects; Sir Edwin Lutyens, R.A., F.R.I.B.A.; Mr. E. Guy Dawber, F.S.A., F.R.I.B.A.; Mr. Walter Tapper, F.R.I.B.A.

Drawings by Inigo Jones.

His Grace the Duke of Devonshire has kindly lent to the Victoria and Albert Museum for exhibition during May and June the very valuable series of drawings by Inigo Jones from the library at Chatsworth, comprising designs for scenery and costume for use in the masques performed at the Court of James I. and Charles I.

A Catalogue Raisonné of these drawings, with fifty reproductions, is being published this year by the Oxford University Press as the twelfth annual volume of the Walpole Society.

Bethnal Green Museum.

The Bethnal Green branch of the Victoria and Albert Museum will be opened in future on Monday and Thursday evenings until 9 p.m. This arrangement has been made to give facilities for study to those who are unable to use the museum at other times.

Arrangements have also been made for a guide-lecturer to be available to conduct parties round the galleries of this museum on Monday evenings (7-8 p.m.) and Thursday afternoons (3-4 p.m.). No charge is made for his services.

Victoria and Albert Museum.

It will be remembered that until August 1914 the Victoria and Albert Museum, including the Indian section, was open in the evening on certain days in the week. This opening, except for the library, was discontinued during the war, and for reasons of economy it has been since found necessary to close the museum every day at 5 p.m. The library also has been closed in the evening since early in 1922.

We have pleasure in announcing that these restrictions have now been removed, and the museum is open until 9 p.m. on two evenings each week, namely, on Thursdays and Saturdays. The library and the students' rooms of the Department of Engraving, Illustration and Design, and Textiles will also be open on these evenings, when the usual facilities for study will be afforded. No charge is made on any day for admission.

A Monument to the British Cavalry.

Mr. A. B. Burton, whose well-known foundry at Thames Ditton has been responsible for the casting of many fine bronze monuments, has added another to his achievements in the equestrian statue which constitutes the Cavalry Memorial erected at Stanhope Gate, Hyde Park, which was recently unveiled by Field-Marshal the Earl of Ypres.

Captain Adrian Jones, the sculptor, and himself an old cavalryman, has produced a statue of St. George, which shows the patron saint, not only as a saint, but as a knight as well. St. George, having killed the dragon, has reined in his charger, and sits with uplifted sword as a signal to the populace that their enemy has been subdued. The architectural features were undertaken by Sir John Burnet, A.R.A.

Upon its plinth of Aberdeen granite the statue forms an island between two roads that lead into Park Lane, and in the handsome background of Portland stone a bronze plate sets forth the names of the various cavalry units which engaged in the Great War. Four batons introduced between the columns of the names further record that the cavalry gave to the army four field-m Marshals during the war.

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This is one of a series of sketches from the pen of Mr. Leonard Squirrell, R.E. This young artist regularly exhibits at the Royal Academy, and we confidently believe that at no distant date he will be generally regarded as in the front rank of British etchers and line draughtsmen.

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Proposals of R.I.B.A. Council.

At a recent meeting of the committee of the Association of Licentiate, R.I.B.A., it was unanimously resolved that the support of the Association be given to the Councils of the Royal Institute and the Society, in their effort to consolidate the profession by amalgamation; and that all members of the Association be urged to forward the scheme by all means in their power.

The chairman, having read a number of letters received from members in many parts of the country, said it did not seem to him necessary to say very much at the present moment, since it was perfectly clear that, as far as Licentiate were concerned, they recognized the importance of the fact that the two Councils of the Institute and the Society had arrived at the point at which to put proposals before the whole profession with unanimity; and they felt that even if they might criticize details, no good purpose would, or could, be served by doing so when and while the question at stake was one of principle and not of detail.

If, as he sincerely hoped, the scheme was accepted on the broad lines set out, no doubt all parties would have every opportunity for making suggestions on the detailed working of the scheme, and he had no hesitation in returning his card to the secretary with a most emphatic "Yes," as the answer to the question put by the Council to the Licentiate.

"To secure the representation of the profession by one great Institute is an ideal we have always hoped to see realized, and we desire most earnestly to appeal to Members to support the Council's scheme in every way in their power."

With this quotation from the letter signed by all the living past presidents of the R.I.B.A., the chairman thought he might close his remarks.

Mr. Adam Sampson.

Mr. Adam Sampson, chief architect and master of works, Education Department, Dumbartonshire County Council, has been appointed architect to the Belfast Education Committee, which was recently constituted under the Ulster Education Act. There were sixty-two applicants for the position.

Models of Old Buildings.

Lady Constance Hatch, whose interest in English Architecture is well known, has received numerous enquiries from Colonials and foreigners, as well as our own sightseers, as to where and how the many models of old buildings can be viewed.

She is accordingly compiling a catalogue of such models, and would be grateful if any private individuals or public bodies possessing interesting models of old buildings or cities would send descriptions (and if possible, photographs) of same to her at 257a St. James's Court, Buckingham Gate, S.W.1.

Lady Hatch would also be glad to hear of models of recently constructed buildings of outstanding interest, which would be included in the catalogue for purposes of comparison.

The Decoration of Furniture.

A large number of fine books about furniture are published every year, and it might at first sight be thought impossible to find anything very new to say on the subject. In "The Decoration of Furniture," however, by Mr. H. P. Shapland, A.R.I.B.A., which will shortly be published, the author treats the well-worn theme from an entirely fresh angle. Mr. Shapland's aim has been to examine in detail the various treatments which cabinet-makers have adopted for the embellishment of their work—moulding, piercing, carving, painting, etc., and then to detail the infinite variations of each method. The work will be illustrated with about 200 photographs of fine specimens, quite two-thirds of which are from continental museums, the majority never having before been published in this country.

A New Winter Garden.

Southend Corporation have decided to spend £135,000 on a winter garden, which will be built right into the cliff.

At the base of the cliff will be refreshment rooms and lounges, in the centre a main hall to seat 5,000, and at the top will be the existing cliffs bandstand, enlarged to hold 8,500, with a promenade for another 2,000.

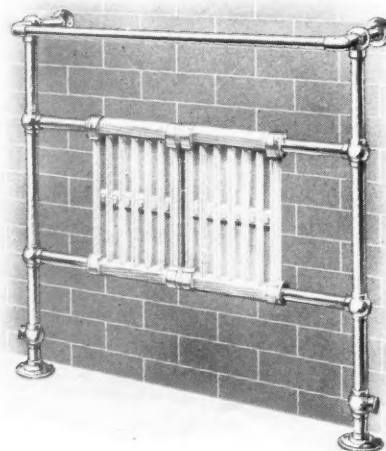
Work on the foundations will begin at the end of the summer.

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Kemsley Paper Mills, near Sittingbourne.

When Messrs. Edward Lloyd, Ltd., found it necessary to extend their plant, the existing site of the Sittingbourne Mills proved to be too congested to allow new mammoth paper machines to be housed, and a fresh site was selected at Kemsley Downs, near Sittingbourne, upon which has grown the Kemsley Paper Mills.

The buildings were designed and erected under the supervision of the chief engineer to the company, Mr. A. A. Richards, M.I.Mech.E. The framework is of steel with brick panel walls. The roofs throughout are entirely of concrete, reinforced with Hy-Rib. The total length of the buildings is 800 ft., the main building comprising a machine room 360 ft. long and 112 ft. wide, which will house two paper machines of the most modern type; in this building the roof span is 84 ft. and the main trusses are 17 ft. 6 in. apart.

The pulp store is a single span building 112 ft. wide and 65 ft. long. At the finished paper end of the machine room a paper store is provided with a capacity for the storage of 1,000 tons of paper. This building is 84 ft. wide and 260 ft. long, and has a concrete roof with Hy-Rib reinforcement. This is fitted with a very rapid travelling crane of 3 tons capacity.

Adjoining the store is the engineers' shop—this is a well-lighted building fitted with all the latest tools. There is a 25-ton overhead electric travelling crane to handle heavy pieces of the paper machines.

Beyond the engineers' shop is the carpenters' and joiners' shop and the blacksmiths'. All the repair shops and papermakers' stores are on exactly the same level as the machine room floor, so as to avoid any time being lost in handling material.

Adjoining the main machine room on the west side is the main power house and the stokehold; both of these buildings are constructed upon the same lines as the remainder of the mill.

The construction of the Kemsley Mills has been very rapid; the actual buildings were commenced on May 1, 1923, and paper is to-day being manufactured on two machines. The site will provide room for sixteen of these big machines, should it ultimately prove necessary. The architect is Mr. W. Leonard Grant, of Sittingbourne, and the contractors are Messrs. E. Bishop and Sons, of Sittingbourne.

Winchester Diocesan Architect.

At the invitation of the Bishop of Winchester, Sir Charles Nicholson has accepted the post of Diocesan Consulting Architect, in succession to Sir Thomas Jackson. Sir Charles is already consulting architect for Lincoln, Wells, Lichfield, and Norwich Cathedrals, and diocesan architect for Wakefield and Chelmsford. He was educated at Rugby and New College, Oxford, and was a pupil of Mr. J. D. Sedding.

Removal of Famous Bridge.

Whitefriars Bridge, Norwich, which spans the River Wensum, under the shadow of the cathedral, is being removed stone by stone as part of a scheme of river widening. The original bridge at this spot was built of wood about seven centuries ago. In 1591 it was rebuilt of stone, with one pointed arch, and was thoroughly repaired in 1835.

Recreation Ground for Alloa Workers.

Recently many large manufacturing concerns, realizing that not only is healthful recreation a pleasant mental and physical tonic to the worker, but that it must produce greater individual and collective effort with consequent greater production and reduced cost as well as stimulating a form of esprit de corps, have laid out comprehensive recreation grounds in the vicinity of their works.

The latest scheme is one for Messrs. Patons and Baldwins, Ltd., of Alloa, who have placed with Mr. Maxwell M. Hart, of Glasgow and London, a contract for the construction and lay-out of two football fields, cricket pitch and practice wickets, bowling green, seven "Dura" tennis courts, putting course, race track, and the lay-out of the grounds generally.

Mr. Hart was the contractor for Messrs. Clark & Co.'s recreation scheme at Anchor Mills, Paisley, as well as for Messrs. G. and J. Weir, Ltd., Messrs. Wallace, Scott & Co., Ltd., Cathcart, and many other firms in Scotland and England.

Messrs. John Melvin and Son, Alloa, are the architects.

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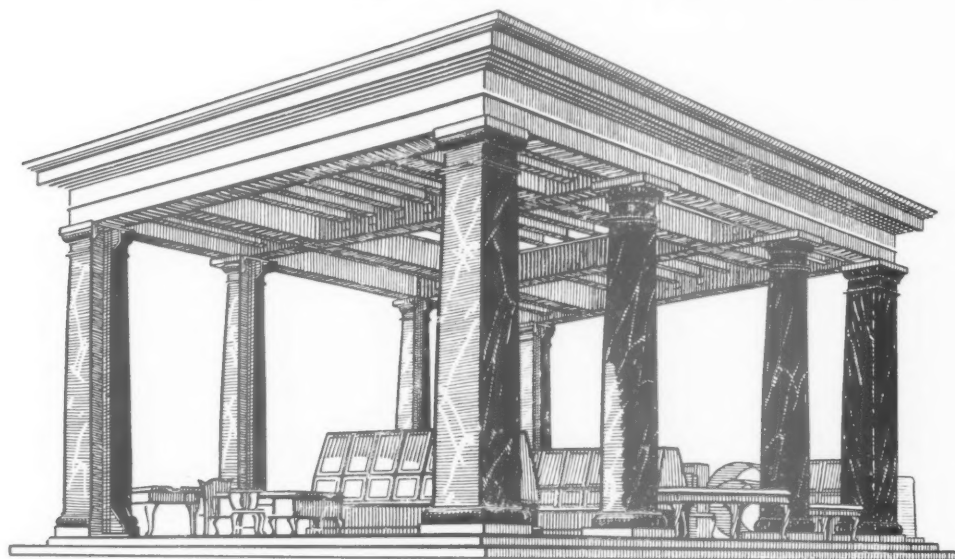
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STAND 43 AT WEMBLEY



THE COMPANY'S STAND AT THE BRITISH EMPIRE EXHIBITION, DESIGNED BY SIR EDWIN LUTYENS, R.A.

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TRADE AND CRAFT.

Stands at the British Empire Exhibition.

Some Notes on a Selection of the Exhibits.

The general contractors were Sir Robert McAlpine and Sons, who constructed the foundations for the heavy machinery shown on eighteen of the stands in the Palace of Engineering and the Palace of Industry, including that of Messrs. Vickers, and erected most of the steelwork for the machinery in the bottom section of the Palace of Engineering. They also supplied the framework for the decorative columns in the Palace of Industry.

The chief work carried out by Sir Robert McAlpine and Sons for the exhibitors, however, was the construction of all the gas, water, and drain services required by about 150 stands, which involved laying some two miles of main drains, mostly Mannesman steel tubes, and 1,000 linear yards of branches, laying 1,000 linear yards of cast-iron water-main, $1\frac{1}{2}$ miles of branches (wrought iron and lead), and fixing about ninety water-meters, also laying $1\frac{1}{4}$ miles of cast-iron gas-main and 600 linear yards of wrought-iron branches.

The main services are laid in special ducts let in the floor, but the branch services by either tunnelling under or cutting up the existing reinforced concrete floor. Practically the whole of the branch services were carried out in six weeks under very difficult conditions.

The Palace of Industry.

The gas undertakings of the country have united to present a co-operative and co-ordinated gas exhibit. There are two main sections—industrial and domestic. The chief feature of

the Domestic Section, which occupies the larger portion of the gas building, is a series of living pictures, each in a model room, fitted up with the latest gas appliances in actual working order. These illustrate "The Seven Ages of Woman," from infancy to old age.

The organization of this feature was entrusted entirely to Mrs. E. M. Wood, C.B.E., who, it will be remembered, presided over the Government Committee which recently enquired into and reported upon the problems of present-day domestic service.

The Industrial Section includes a brazing hearth, such as is used in the cycle, motor-car industries, and general engineering trades, various types of furnaces, a quenching tank and oil-tempering bath, blow pipes, pottery kiln, glass-firing furnace and drying cabinet, and sweetmeat-making appliances. This section also contains an oxy-coal-gas cutting plant, a rivet heater, a cyanide furnace for hardening steel, engravers' dies, etc., a waste-heat vertical boiler supplying hot water or steam, and an air-compressor for supplying high-pressure air to blast burners. In the centre of the section will be found a very interesting installation of crucible furnaces for the melting of aluminium.

Among the latest types of combination grates, etc., exhibited by Messrs. Walker, Hunter & Co., Ltd., is the "Kooksjoie" Patent Range. The important features of this range are that it is always ready for use day and night. It gives a constant and abundant supply of hot water, and burns anthracite coal, coke,

(Continued on p. lxviii.)

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The Master Key on left hand was made for Captain Townsend, of Caldecote Hall, Nuneaton, and is designed in a similar character to the old Key.

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Kilmarnock Infirmary
Midland Bank, Mosley St., Manchester
Anglo-South American Bank, Bradford
Bank of Liverpool & Martins Ltd., Preston
Barclays Bank, Chester
National Bank, Liverpool
Lloyds Bank, Leeds
Rampton State Institution
Barclays Bank, Manchester
Midland Bank, Cardiff
Ayr Station Hotel, Glasgow
Municipal Buildings Extension, Glasgow

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THE ARCHITECTURAL REVIEW.

wood, peat, bituminous or soft coal, or any other kind of fuel. Perfect safety is claimed for this range, as the fire is entirely closed in. There are no fumes, dust, or smell, and the flues require cleaning but once in six months, and the chimney once in five years if anthracite or coke is used. Other types of ranges shown by this firm are the "Perfex," the "Wondrex," the "Reflex," the "Fervex," and the "Simplex," all of which illustrate special advantages and novelties of construction.

The Thames Board Mills Co., Ltd., have an exhibit in the Building Section, a part of which has been designed as a uniform scheme for the display of the various products of exhibitors in this section. The walls and back of this portion of their stand have been decorated in several colours to show the artistic possibilities of the "SX" board, which is a product of the Thames Board Mills Company. Hundreds of thousands of square feet of this material have been used throughout the exhibition. In addition to the stand in the Building Section, the Company have an exhibit in the ceilings of a fifteenth-century house, which have been painted white and show the possibilities of "SX" Board as an alternative to lath and plaster for ceilings.

Messrs. Ozonair, Ltd., have an exhibit in the Building Section of their Ozonair apparatus for air purification, ventilation, laboratory use, etc., etc. In addition, they are, at the request of the Government, showing a working plant for water sterilization in the section devoted to tropical hygiene in the annexe adjoining the Government Pavilion.

The exhibit of the British Insulated and Helsby Cables, Ltd., includes electric light, telephone, armoured, and other types of cables, telephone and other cords, wire bar and sample sections, samples of wire, finer sizes of wire and strip, cone wire drawing machine in operation, small butt welder, diamond polishing machine, extruded sections in copper and aluminium, specimen showing form of billet prior to extrusion, aluminium and copper samples, tinned wires, trolley wires, and special manufactures, enamelled wire and coils, cotton-covered wire and braided aerial cables, paper insulated transformer wire, cable accessories, electric railway and tramway overhead constructional material, rail bonds, overhead line equipment on bench, primary batteries and fittings, exploders for mining work, condensers, condensers

for power factor improvement, electric welders, electricity meters, reactances, fans, a group of paper pinions, and various types of lamps.

Messrs. Bath Artcraft, Ltd., are showing at their stand a needlework-covered settee with carved and gilded arms and legs. This is worked throughout in *petit* point needlework, the ornament being in subdued colours on a blue ground. The colours of the needlework and the gilding tone very harmoniously together. Another exhibit is a Queen Anne love-seat in walnut, covered in fine needlework, a floral design on a russet-coloured groundwork. There is also an oak settee of Elizabethan design, and a four-fold screen in needlework of a later period, Queen Anne, and a card-table in walnut of Queen Anne design. There are numerous chairs, stools, cushions, etc., all covered in needlework, and each possessed of some particular interest; also two walnut banners and fire screens.

The most important exhibit is a large tapestry panel of modern style, representing "Youth," and designed and worked in the Bath Artcraft studios. There is also a comparatively small panel designed by Mr. H. Davis Richter, R.I., R.O.I., which is conceived in the grand manner, the colours being chosen and wrought with great care and subtlety. The working of this panel has been superintended throughout by Mr. Davis Richter. Some of the doorways are also to be noted, as they are draped with embroidered curtains of Jacobean design.

The stand for the Chatwood Safe Co., Ltd., was designed by Mr. Vincent Harris, and forms part of the replica of the new Chatwood strong-room lately installed at the headquarters of a large London bank. The contractors were Messrs. Holland and Hannen and Cubitts, Ltd. A feature of interest is the Chatwood circular door. This giant door of steel weighs almost 30 tons, is 20 in. thick, and the entrance is 100 in. in diameter. Twenty-four 3½-in. round bolts of the finest steel, operated by a series of connecting rods, are controlled by one centre wrist-plate. The door is fitted with two letter locks which can be set at over two million different combinations. This door is so perfectly balanced that a man can swing it shut with one hand.

Messrs. Henry Hope and Sons, Ltd., have an interesting stand, the architect for which was Mr. P. Morley Horder. The

(Continued on p. 1xx.)



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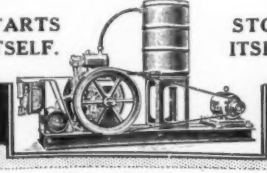
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THE ARCHITECTURAL REVIEW.

contractors were Messrs. W. Cooke and Sons, Wimbledon. Various types of windows supplied by Messrs. Hope have been incorporated in the exhibit, including their new "Austral" window. A series of water-colour paintings of buildings for which Messrs. Hope have supplied windows decorate the frieze of the stand, and have been executed by Mr. Clive Gardiner. The windows open out on to examples of leadwork. An effective kiosk in the centre gangway of the stand displays bronze hardware. The lantern light of the stand is opened and closed by an electric motor operated by a switch from the ground.

Messrs. Pilkington Bros., Ltd., have an exhibition of the various grades of glass which they manufacture.

The most important types are polished plate glass, used for glazing shop-fronts, showcases, windows in city offices and public buildings, etc.; polished plate glass for silvering, and used for mirrors, and all types of bevelled glass for cabinet work; sheet glass for glazing windows in houses and buildings. For roofing purposes in factories, public buildings, and workshops there is rolled plate and rough-cast glass. Where protection against burglary and fire is required there is wired glass in the rough-cast and polished plate kinds. Also there is figured, rolled and cathedral glass for screens, lead lights, etc.

Another exhibit is a gigantic piece of polished plate glass, 24 ft. by 14 ft., which has been erected in an ebony frame at the Watt Gate, within the entrance to the Palace of Engineering.

Messrs. Harris and Sheldon, Ltd., are displaying at their stand a selection of their manufactures, including Selphast Unit fixtures, a glass counter with marble frame, specimen parts of shop front sashes, caps and bases, grills and sash bars—all in bronze in various finishes, letters and ornamental work with enrichments enamelled in different colours, a bronze door and frame based on a Grecian design, coats-of-arms and escutcheons in bronze, sundry shop fittings, and steel furniture.

At the stand of Messrs. Sidney Flavel & Co., Ltd., are to be seen many patterns of their "Leamington" stoves, including an old 9 ft. 6 in. Flavel Kitchener, which was exhibited at the Great Exhibition of 1851, and which interested their Majesties the King and Queen and the Prince of Wales when visiting the exhibition recently. Messrs. Flavel are also showing a compre-

hensive series of interior fires, together with the latest types of interiors in rustless steel, and also mantel registers in both coal and gas patterns. Reproductions of period grates and fire backs are on view, and the gas-cooking and heating section of Messrs. Flavel's business is well represented in a display of gas cookers, gas radiators, hot plates, boiling rings, grillers, etc.

The Palace of Engineering.

The British Thomson-Houston Company's stand occupies over one-seventh of an acre, and exhibits a complete automatic sub-station, a large synchronous motor driving and air-compressor, an oil circuit-breaker for outdoor use on three-phase circuits of 110,000 volts, also a wide range of other breakers for numerous voltages and rupturing capacities; many examples of switch and control gear for various industrial purposes, trolley bus, railway, and tramcar equipments, etc.

In addition to the exhibits, B.T.H. motors and control equipments are driving machinery of every description in nearly every building throughout the exhibition. The model colliery is equipped with complete electrical winding gear, and the powerhouse and sub-stations contain B.T.H. turbo-generating plant, rotary converting plant and switchgear.

Messrs. Turner Brothers' Asbestos Co., Ltd., who have always been prominently associated with the modern asbestos industry, exhibit a selection of asbestos goods from the crude to the most refined product, including examples used for spinning, cloth, packings, and jointing materials, paper and millboard, cement, electrical uses, and belting.

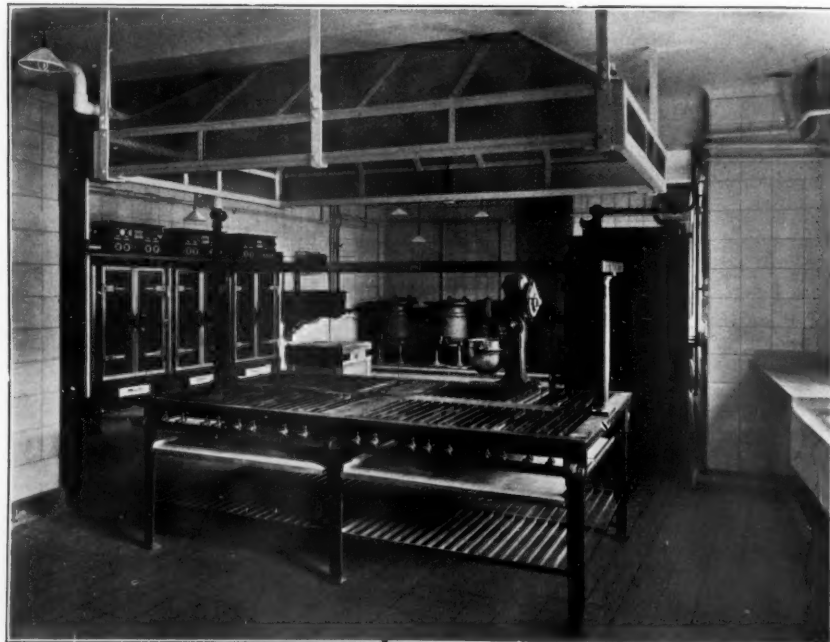
Messrs. Mellows & Co., Ltd., have a stand consisting of a wooden structure with examples of steel windows and doors of their own manufacture. Similar steel doors to those on the stand have been supplied by them for the restaurant and tea rooms in the Stadium. In the roof of the stand is a steel lantern light glazed with their "Eclipse" patent roof glazing, consisting of lead-covered steel bars and rough-cast glass. This lantern was also manufactured by Messrs. Mellows. The roof glazing, which is their speciality, has been used for the covering of many of the exhibition buildings. Various models of roof glazing and steel

(Continued on p. 1xxii.)

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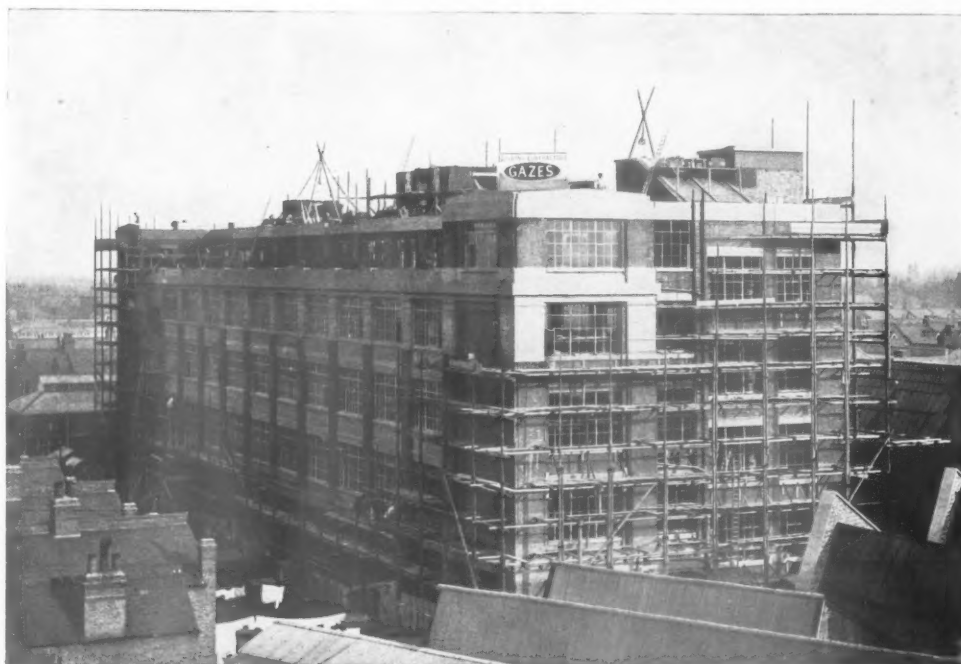
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THE ARCHITECTURAL REVIEW.

sections for sashes and casements are also shown, together with a large model of a portion of roof glazing with a spray of water running down the glass in order to demonstrate that the system of glazing is perfectly watertight.

The stands displaying the exhibits of Messrs. Vickers, Ltd., and The Metropolitan-Vickers Co., Ltd., are impressive in their scale and dignity. The long line embracing the stanchions running down the centre of Messrs. Vickers' stand, with the Meunier-like figure of Labour at the one end, and the thoughtful figure of Science at the opposing end, symbolizes the two poles round which this powerful force revolves, whilst in the centre is the revolving light of Civilization with figures of Distribution sending out their message and their products by sea and by air.

With regard to The Metropolitan-Vickers Co., Ltd., the problem here was a different one and the stand has been treated more from the showman's point of view.

The great Teeside steelmakers, Messrs. Dorman, Long & Co., Ltd., have erected an exhibit of unusual interest. A far-reaching feature of this large concern's business is their control of production from the raw material—coal and iron ore—up to the finished steel, of which latter they have an output capacity of 1,000,000 tons per annum.

With these great resources their products cover a wide field of industry, and on the stand a thoroughly representative display is on view. Apart, however, from the samples exhibited, the stand itself will claim much attention since it has been designed by Sir Edwin Lutyens, R.A. The severe simplicity and beauty of line in its design has been translated into stone and marble in a manner that exemplifies the relationship between the architectural stonework or casing and the vital steel skeleton in the modern steel-framed building. Certain portions are left open to show the construction of the internal steelwork of the columns and the roof. Each stanchion is surrounded by Scagliola marble in "Blue Belge," manufactured and fixed by Messrs. Bellman, Ivey and Carter, Ltd. This material can be made good round steel stanchions without showing any joint whatever.

The stand of the General Electric Company has been designed to demonstrate the ability of this company to undertake everything connected with the generation, distribution, and applica-

tion of electricity. In each of the sections will be found plant and apparatus appropriate to the respective branch of electrical engineering, all of which are products of one or another of the G.E.C. associated factories.

In the exhibit showing generation and distribution, the main item is a complete G.E.C. Fraser and Chalmers turbo-alternator, which revolves at slow speed, the top section of the turbine end being raised so that the movement of the blades can be observed. The remainder of the plant operates under working conditions.

Adjoining the power-house section are exhibited various G.E.C. appliances for handling materials, and other electrically-driven machines for use in exposed positions. The principal exhibits in this section are a Fraser and Chalmers belt conveyor, which is shown in constant operation, and a "Witton-Kramer" electric lifting magnet and hoist, which is arranged for lifting scrap-iron and depositing it in a pit. There is also an exact model of a Fraser and Chalmers winding engine driven by a "Witton" motor, an over-winder suitable for A.C. electric or steam-driven winders, a "Witton" colliery motor and control gear, and a charging rack for "Kingsway" miners' electric safety lamps. Steelworks electrification is indicated by a live-roll motor with specially designed control gear. A 45,000-volt three-phase outdoor type oil switch for outdoor operation, connected to Isenthal type protective gear by overhead lines, represents the latest development in overhead distribution systems.

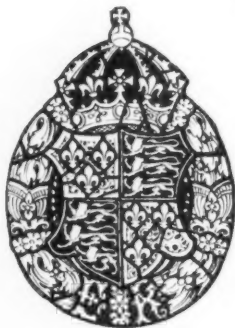
A very wide range of G.E.C. products for the application of electricity to various industries is shown in the Industrial Electrification exhibit, including ship, railway, and textile electrification, portable tools, motors, industrial heating and lighting, and a series of cases displaying factory bells, telephones, iron-clad switchgear, carbons and batteries.

The whole of the electrical installation of the stand has been designed to form an exhibit of various methods of wiring, lighting, heating, ventilating, etc., using exclusively G.E.C. products.

The main power-house of the exhibition, the sub-stations, the model colliery, the British Electrical Development Association stand, the Malay State Building, H.M. Government

(Continued on p. lxxiv.)

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THE ARCHITECTURAL REVIEW.

Building, and the general electric installation of the exhibition, all illustrate the products of the G.E.C.

An interesting exhibit at the stand erected for Messrs. Etchells, Congdon and Muir, Ltd., is the passenger lift in motion working in a steel tower. The machinery connected with several other types of lifts is also shown. The stand is constructed of wood throughout, and was designed and erected by Messrs. F. G. Minter, of Putney.

The exhibit of the Ioco Rubber and Waterproofing Co., Ltd., includes waterproof piece goods, mechanical and railway goods, sports requisites, etc.

This firm are the originators of rubber flooring, which is now being extensively used. A special display of the product has been prepared, and some very attractive designs are shown on small sections of the stand.

The Company have also carried out a considerable amount of work for other firms throughout the Exhibition.

The Delta Metal Company's stand takes the form of a pavilion constructed entirely of "Delta" Bronze No. IV sections and plates, with the occasional use of "Delta" silver bronze and copper for enhanced effect. The pavilion was made by the Crittall Manufacturing Co., Ltd., and is a fine specimen of constructional work showing the special advantage of "Delta" bronzes for architectural purposes.

Messrs. Siemens Brothers & Co., Ltd., in conjunction with their associated companies, Messrs. Siemens and English Electric Lamp Co., Ltd., and Elliott Brothers (London), Ltd., are showing at their stand a comprehensive range of their collective manufactures. It is impossible to describe these in detail, but special mention should be made of the specimens of electric wire having all classes of insulation and covering for every form of electric circuit, including the "Stannos" system of wiring for electric supply, in which exhibit is comprised a model housing scheme with changing illumination effects. Automatic telephone exchanges, vacuum arresters, automatic switchboards, and telephone instruments of all kinds are also well displayed. Other interesting exhibits in the stand are the various types of electric lamps, "Zed" safety fuse fittings and distribution boards, and

also the range of domestic electrical appliances, including fires, irons, kettles, utility cookers, boiling plates, toasters, etc.

Messrs. W. T. Henley's Telegraph Works Co., Ltd., have devoted a section of their stand to paper insulated cables up to 60,000 volts, including samples of two E.H.T. cables for working pressures of 27,600 and 35,000 volts, being manufactured by them for two large companies in America. Another feature of interest is the Henley Wiring System, installed in a reception room of Jacobean oak, which shows how inconspicuous the wires are when treated to match the surroundings, and how unobtrusively they can be run on the surface without cutting away of walls. The Model Power Transmission Line forms a very interesting section of the exhibit, and gives an idea of the work carried out by Messrs. Henley in power transmission line erection.

The exhibit of the London Electric Wire Company and Smiths, Ltd., displays a complete series of samples, showing the various uses of copper wire for electrical purposes.

The first group, provided by their Salford Company, Frederick Smith & Co., Ltd., consists of bare copper from the wire-bar stage down to the very finest wire, as well as samples of hard-drawn copper trolley wires and phosphor bronze wires.

The second section contains examples of covered copper wires of all sizes, covered with cotton, silk, or enamel, as well as strips, compressed strands, and special flexibles for wireless work. This section also shows examples of telephone switchboard cables, head receiver cords, etc.

The third section is devoted entirely to insulated cables for power and lighting, and samples are shown of rubber insulated wires and cables, cab tyre sheathed cables, and cables insulated with vulcanized bitumen.

Messrs. Waygood-Otis, Ltd., are exhibiting at their stand one of their patent micro-drive self-levelling electric passenger lift machines. The special feature of this machine is that by means of a small auxiliary motor and controller driving through a friction clutch, and controlled by limit switches in the well-hole, the floor of the car is always brought to exact level with the floor of landing, irrespective of the load in the car and the speed at which the lift is travelling. While the machine is working

(Continued on p. lxxvi.)



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on the levelling apparatus the car doors can be opened so as to save time in passengers getting in and out.

Another interesting item of the exhibit is a replica of one of the lifts which they have fitted in the Queen's Dolls' House, in which they also fitted one electric passenger and one service lift, which are built to a scale of 1 in. to 1 ft., with automatic control and electric light in the car.

A model to a larger scale of a full automatic push-button electric passenger lift is also shown, as well as samples of hand-power lifts for warehouse purposes and for private houses.

There is also on view a Waygood-Otis standard passenger car built in oak, with ceiling painted white and reflected lighting from concealed lamps.

Another exhibit is a board containing a number of their standard fittings, such as position indicators, illuminated car indicators, hydraulic valves, and other items.

The stand of Messrs. W. H. Gaze & Sons, Ltd., which is called the "Gazeway-Lounge," displays examples of the work of their decorating, furnishing, upholstery, and electrical departments. The writing-room portion of the stand shows modern adaptation of Renaissance motifs, and special features are the decorated ceiling beams and paved imitation stone floor.

The Queen of Roumania and her sister, the Infanta Beatrice of Spain, recently paid a visit to "Gazeway" at Surbiton, and were much interested in the rooms decorated to show the value of colour used in the home, the collection of lustre glass, and the gardens.

Messrs. Hamptons' model bungalow at the British Empire Exhibition has been built by their own building and engineering departments from the plans and designs of the architects, Messrs. Henry Tanner, F.F.R.I.B.A. The furnishings are typical examples of the inexpensive furniture, carpets, curtains, etc., such as Hamptons are constantly designing and producing.

In addition to being pleasingly picturesque, this bungalow is skilfully and conveniently planned.

The bungalow is designed on lines which, for many years past, Hamptons have found to be most acceptable to clients for whom they have been instructed to build small houses or week-end cottages at the least expense consistent with substantial con-

struction. In allocating the position of the various rooms every consideration has been given to the convenience of the occupiers, and the utmost care has been taken to utilize to the best advantage every foot of the space available.

The grouping of all the fireplaces in the centre of the building has the advantage, it will readily be seen, of retaining within the house the utmost warmth from the fires, all of which are conveniently located in the rooms, a point in planning which, although it is most important, is often entirely overlooked.

The lounge hall, with its old oak timbers, rough plaster walls and stone fireplace, is an attractive feature. The rooms are of such dimensions and shapes as to afford scope for the attainment of an atmosphere of comfort and refinement.

All the furniture is substantially constructed, the materials used being, without any exception, only such as Hamptons guarantee to be of good quality, and throughout the bungalow the lines and colours of the furnishings impart to the rooms that distinction and sense of restfulness which, nowadays, all cultured people aim to secure in their homes.

The rooms are all exceptionally well lit. Another feature which is both useful and decorative is the dormer window, with its lay light just inside the entrance. The additional light from this adds materially to the value of the hall.

With a view to comfort and economy of upkeep, the latest labour-saving appliances have been adopted throughout the bungalow, as far as is possible, within the limited cost. At a slight extra cost the bedrooms could be supplied with lavatory basins, fitted with hot and cold water supply. The existing gas-heated hot-water apparatus would then give a constant supply of hot water to every room.

Three thousand people per hour pouring through the British Columbia bungalow illustrates the love of every human being for a home, and proves the wisdom of exhibiting woods in the form of the finished product, exterior woodwork, shingle siding and roofing, flooring, wall and ceiling panelling, sash and doors.

The bungalow consists of two rooms only, a living-room and dining-room, and is in a very prominent position inside of the Canadian building.

Both rooms are floored with edge-grained Douglas fir. The living-room walls are panelled with Douglas fir. The ceiling is

(Continued on p. lxxviii.)



PANELLING.

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GOVERNMENT OF INDIA
Forestry Section (Exterior)



GOVERNMENT OF INDIA
Forestry Section (Interior)

THE ARCHITECTURAL REVIEW.

of Douglas fir with cottonwood panels. This room has a built-in ingle-nook with a fireplace.

The dining-room walls are panelled in British Columbia hemlock in the solid. The ceiling is beamed with solid red cedar beams, having cottonwood panels between. This room also contains a fireplace, which has built-in china cabinets with leaded glass doors on either side of it.

The overhang of the two doorways has in each case been carried on carved cedar brackets.

A little garden has been added to give a more homelike appearance. In this have been set out small seedlings of Douglas fir, Western hemlock and Sitka spruce.

On an adjoining space is shown a miscellaneous exhibit of British Columbia forest products, comprising sash and doors, cedar and cottonwood panelling, and sample mouldings and boards.

Exhibits by commercial firms showing British Columbia woods include those by the British Columbia Manufacturing Co., of New Westminster; the Hoard Silo Co., of Victoria; the Canusa Trading Company, European agents for H. R. MacMillan Export Co., of Vancouver; and Messrs. Beatty Bros., of Fergus, Ontario.

In addition, an automatic cinema with a daylight screen tells the story of the British Columbia lumber industry and of the Province generally.

Other firms who have carried out important contracts, both in connection with the erection and decoration of the exhibitors' stands and the exhibition buildings, are as follows: Messrs. H. H. Martyn & Co., Ltd.; Twyfords, Ltd.; E. Pollard and Co., Ltd.; Langley, London (Marseilles Roofing Tiles); Sage & Co.; Roberts, Adlard & Co.; Siemens Bros. & Co., Ltd., and Siemens and English Electric Lamp Co., Ltd.; Burlison and Grylls; Samuel Haskins and Bros., Ltd.; Ruberoid Co., Ltd.; The Charrier and Marbut Carvings, Ltd.; Wm. Morris & Co. (Westminster), Ltd.; British Empire Gas Exhibit Committee; Robert Adams; The British Challenge Glazing Co.; Holland and Hannen and Cubitts, Ltd.; Harris and Sheldon; Venesta, Ltd.; The Cement Marketing Co., Ltd.; Howard and Sons, Ltd.; Richard Crittall & Co., Ltd.

A Notable Example of Stained Glass.

For the filling with stained glass of the twelve windows in the Basilica, a similar number of artists were invited each to design a window. They were chosen as representative of the various schools of glass-painting of the present day in the British Isles. Mr. Harry Grylls was chosen to represent a school of design and technique which the firm of Burlison and Grylls has consistently worked in for more than fifty years, and which took for its model the characteristics and methods of the cinquecento glass-painters. In this respect this example can be said faithfully to adhere to those traditions in general design, colouring, and technique.

The subject he has illustrated is "The Annunciation," and the opening having a semicircular head, the artist has chosen a Renaissance rather than a thirteenth-century treatment as offering a better opportunity of exhibiting the well-known style of the firm which he now controls.

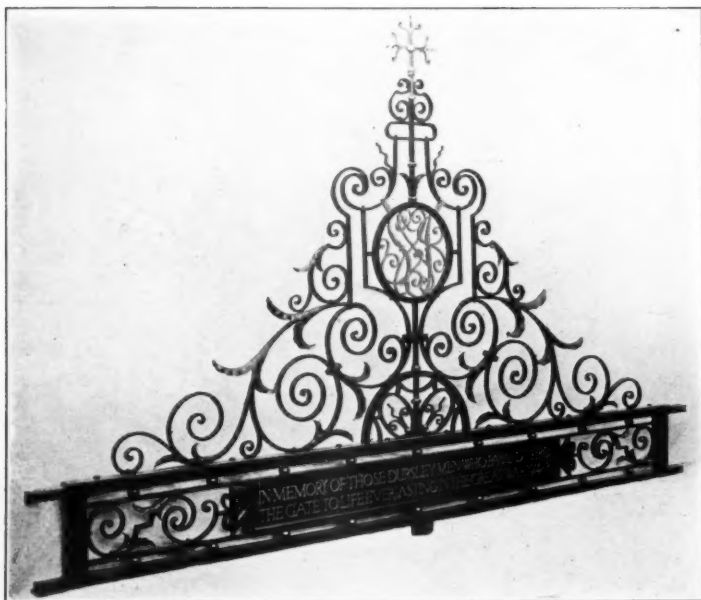
The window is situate on the sunny side of the building in the last "Chapel" on the left-hand side, and as it is essential that as much light as possible should be admitted in this position, a liberal use has been made of light glass, the various coloured glass being rich in contrast, and the whole giving the effect of a mediæval rather than a modern window.

Two Important Contracts.

The employment of reinforced concrete construction in the new Limerick Road reconstruction scheme is but another pointer to the trend of developments in modern road engineering. The practical advantages of reinforced concrete—its economy, strength and permanence, its ability to carry modern traffic, are too well-known to call for elaboration. For this particular contract "Maxweld" double layer reinforcement steel to British standard specification has been approved and adopted, and the makers, Richard Hill & Co., Ltd., reinforced concrete engineers, of Middlesbrough and London, are now engaged on the manufacture and delivery of the first 36,000 sq. yds. of their well-known product required in connection with this work. "Maxweld"

(Continued on p. 1333)

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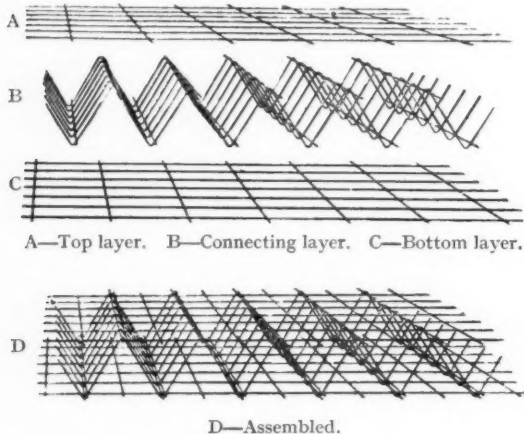
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THE ARCHITECTURAL REVIEW.

double layer reinforcement is a steel wire mesh designed to take up the tensile stresses that occur along the lower or upper part of the slab under certain conditions and also to provide against the diagonal tension stresses resulting from the rapid increase in wheel loads combined with higher traffic speed. Expansion and contraction stresses are also provided for. Briefly, it consists of a bottom layer, a connecting layer, and a top layer, for all of which

"MAXWELD" DOUBLE-LAYER REINFORCEMENT.



"Maxweld" electrically welded fabric is used. The three components are assembled and secured together on the site. The illustrations show method of assembly by the simple operation of sliding a plain rod through the loops formed at the top and bottom of the stooling corrugations. The girder-like construction of the assembled units ensures maximum distribution of reinforcing strength over a wide area. The Limerick Road reconstruction is being carried out by the contractor, Mr. P. Dillon, under the direction of J. J. Peacocke, Esq., B.E., the borough engineer.

Messrs. Hill & Co., Ltd., are also to be congratulated in securing the contract for the supply of the reinforcement for 692 concrete

piles to be used in the extension of the Grain Warehouse, Edinburgh Dock, Leith. These concrete piles are 45 ft. long by 13 in. square, and the main steel bars are $1\frac{3}{8}$ in. in diameter. The auxiliary hoops and helicals to be used are Standard "Maxweld" fittings.

The "Panel" Heating System.

We have received from Messrs. Richard Crittall & Co., Ltd., a copy of their illustrated brochure describing the "Panel" heating system, for which are claimed many advantages over other forms of central heating.

Messrs. Crittall state that central heating systems, now almost universally installed in public buildings, business premises, and the larger private houses in this country, have impressed public opinion with their efficiency and economy. From æsthetic and hygienic points of view, however, they leave much to be desired, and the "Panel" system has been evolved to overcome their more objectionable features.

The hygienic advantages claimed for the new system are that the low temperature of the warmed surface eliminates altogether the stuffy atmosphere inseparable from rooms heated by radiators or other high temperature media. The distribution of warmth is uniform, keeping the air of any room as clean and invigorating as it is outside. Messrs. Crittall consider the "Panel" system is ideal for hospitals, and mention that it was installed in the operating theatres of King's College Hospital, London, over ten years ago. It is also claimed that the amount of fuel consumed is less than in the case of any other form of heating, and that the cost of installation compares favourably with radiator systems, whilst it is very much cheaper than any other combined system of heating and ventilating.

The "Panel" system has been adopted for warming the large banqueting hall, the royal retiring suite, and the Press room in the Stadium at the British Empire Exhibition, thus avoiding the use of exposed pipes and radiators. The same method has also been used for warming the loggia.

Messrs. Crittall, who carried out the "Panel" heating installation, were also responsible for the ventilation and the system of drainage of the Stadium kitchens, which had to be installed in a special manner owing to the nature of the structure.



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THE ARCHITECTURAL REVIEW.

The Electrification of Accra, Gold Coast.

An electrification scheme on a large scale is being carried out at Accra at the present time, the purpose being to provide buildings of all kinds, governmental and otherwise, with electric current. Owing to the tropical conditions prevailing there, aggravated by the proximity of the sea, it was a matter of some difficulty to find an electric wire which would withstand the exceptionally trying conditions. Ordinary vulcanized india-rubber wires in casing and capping were tried, also lead-covered and cab-tyre sheathed cables, but were found wanting. "Stannos" wires were given a test and were found to be the most suitable electric wires for the purpose. Large quantities of this wire have been supplied, and further consignments are on order from the makers, Messrs. Siemens Brothers & Co., Ltd., of London.



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Everyone interested in the design, building, or purchase of a bungalow will welcome the issue (No. 122) of "A Thousand and One Uses for Gas," which deals in a practical manner with the equipment of the labour-saving bungalow.

The information given in this magazine is designed to interest alike architects and builders who design and construct bungalows for sale, and private individuals who already own a bungalow or are about to place an order for one in which are to be incorporated their own ideas and ideals.

This publication will be sent free of charge to every architect, builder or bungalow owner, actual or prospective, on application being made to the secretary of the British Commercial Gas Association, 30 Grosvenor Gardens, S.W.1.

ARCHITECTURAL COMPETITION: THE HIGH SCHOOL OF GLASGOW WAR MEMORIAL.—Competitive designs are invited for a Memorial Club House and Pavilion to be erected on the ground of the Glasgow High School Club at Anniesland, Glasgow.

The competition is confined to former pupils of the High School of Glasgow and will be conducted under the R.I.B.A. Regulations for architectural competitions.

MR. JOHN KEPPIE, F.R.I.B.A., Glasgow has consented to act as Assessor. Particulars of the competition, with instructions to competitors and a plan of the site, may be obtained on application to the undersigned.

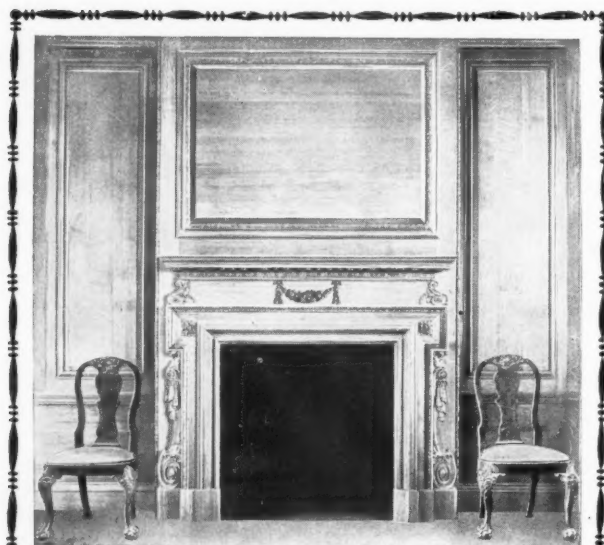
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BOARD OF EDUCATION: APPOINTMENT OF A STAFF INSPECTOR OF ART.—The Board of Education invite applications for appointment as Staff Inspector of Art.

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Applications must be made on the prescribed form and must reach the Board not later than June 16th, 1924. Copies of the prescribed form, together with particulars as to conditions of employment, can be obtained on application in writing to the Secretary, Board of Education, Whitehall, London, S.W.1.



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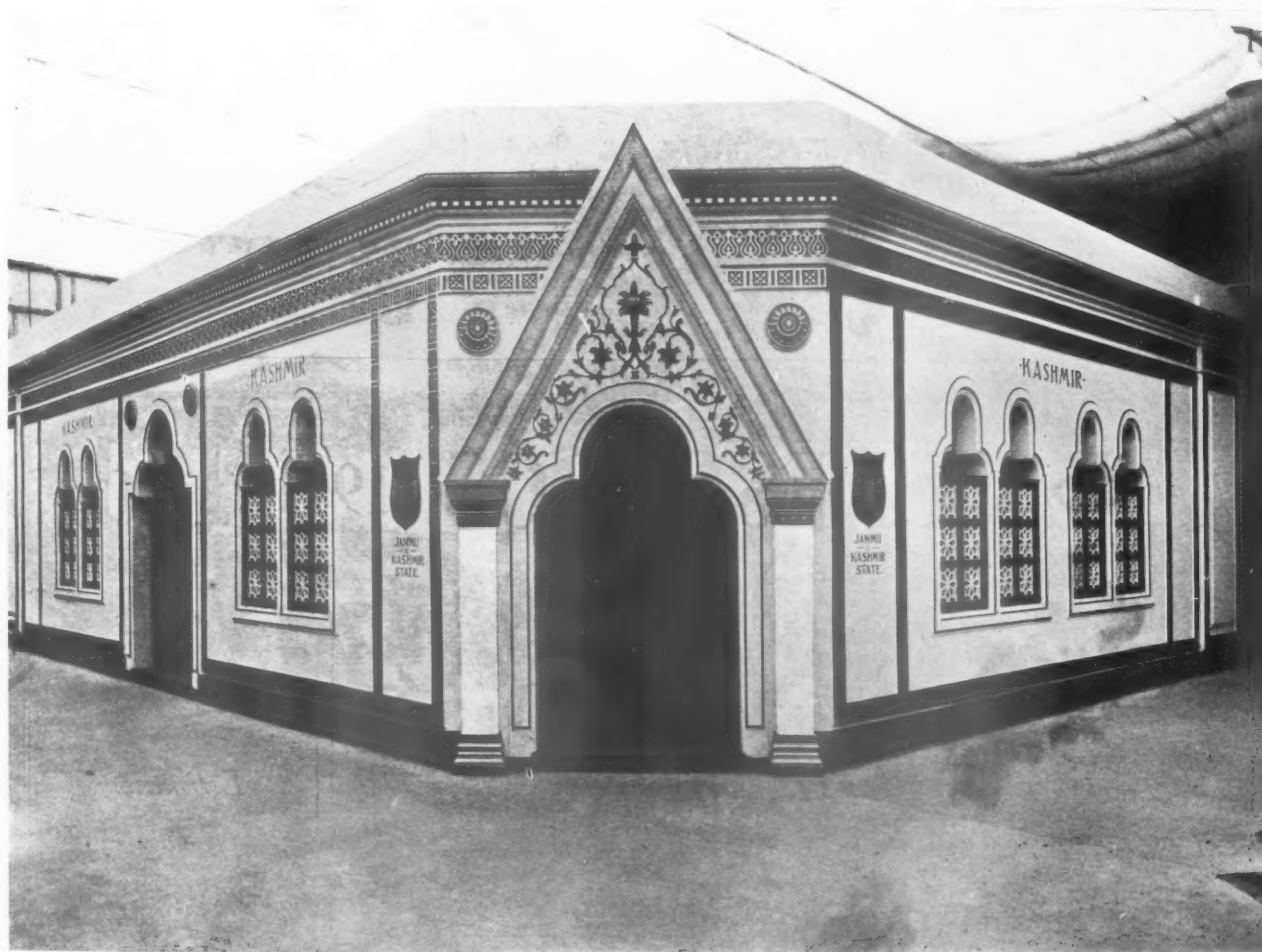
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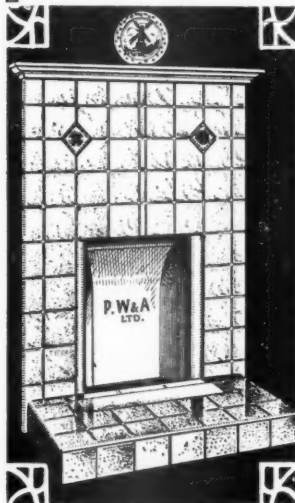
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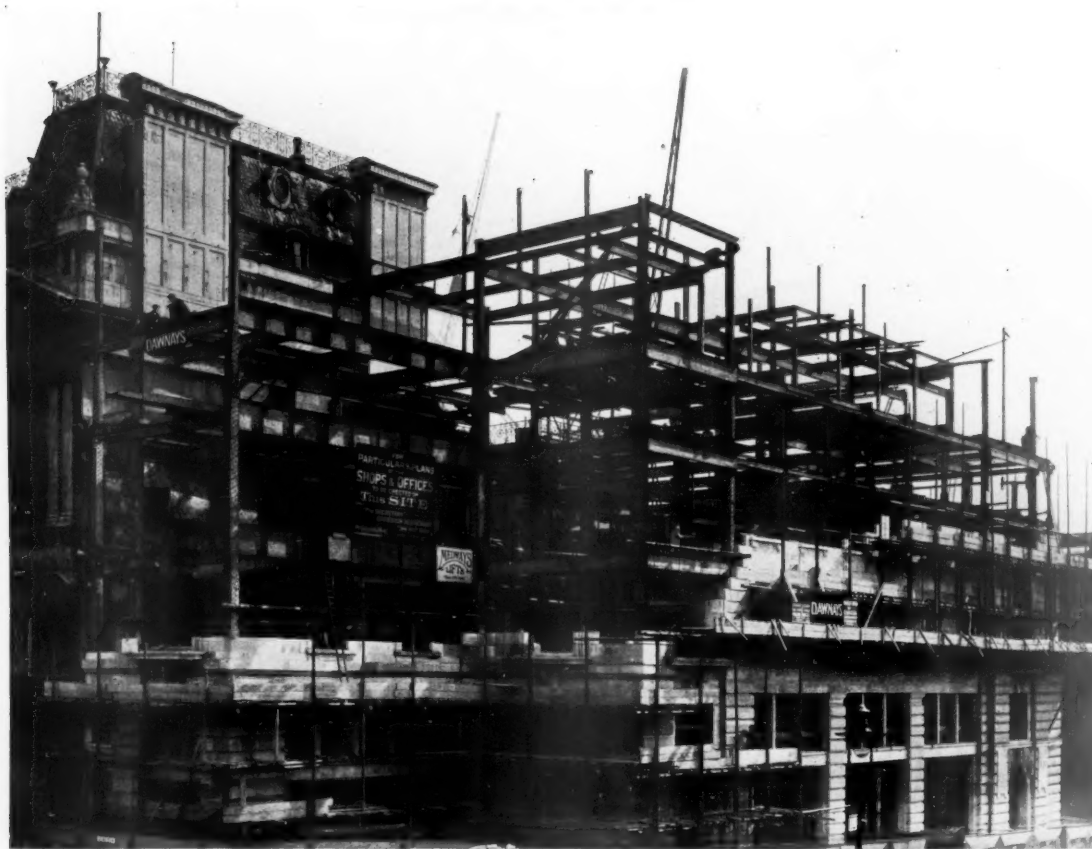
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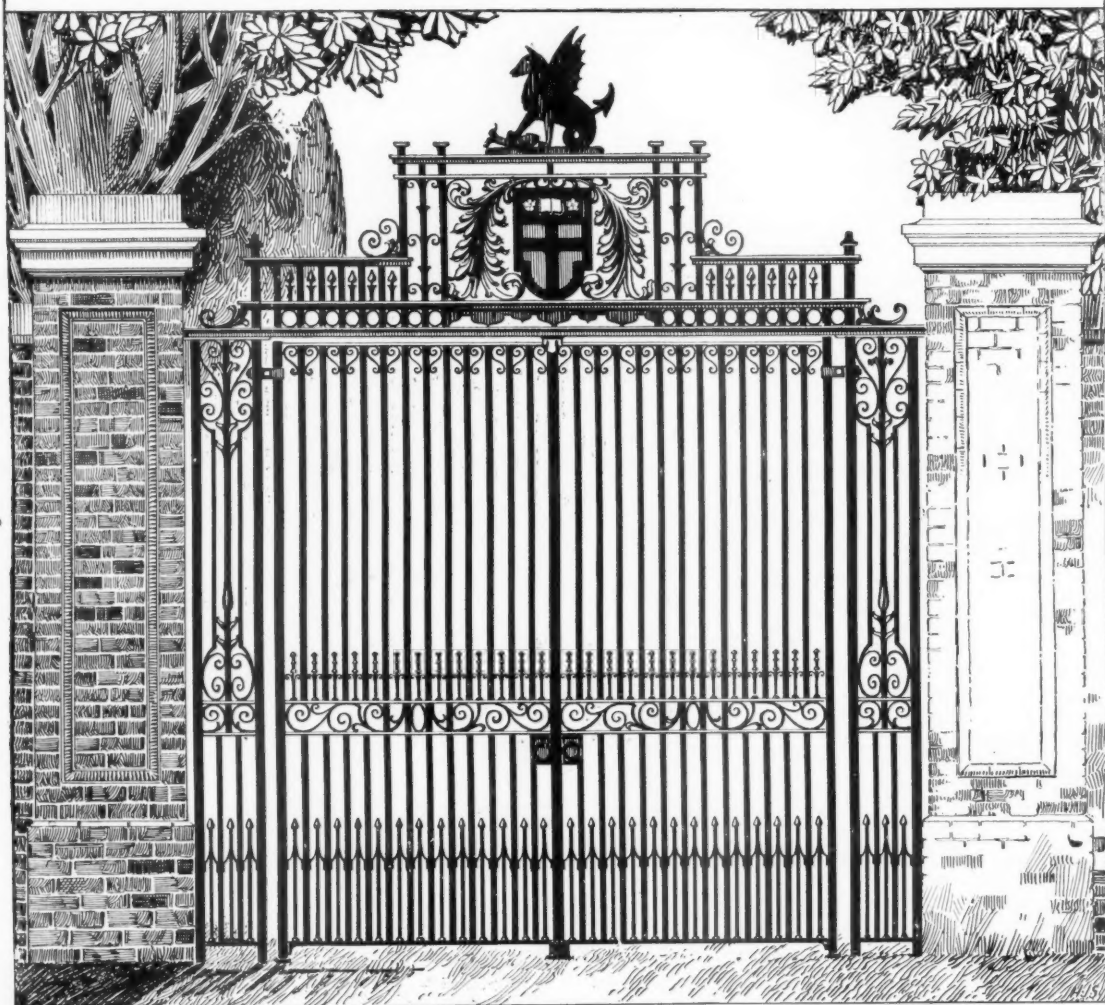
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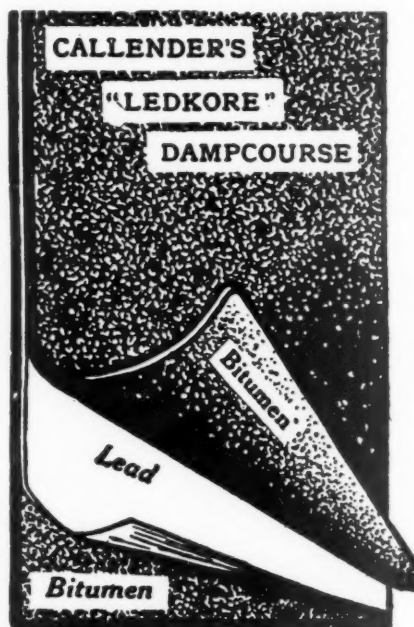
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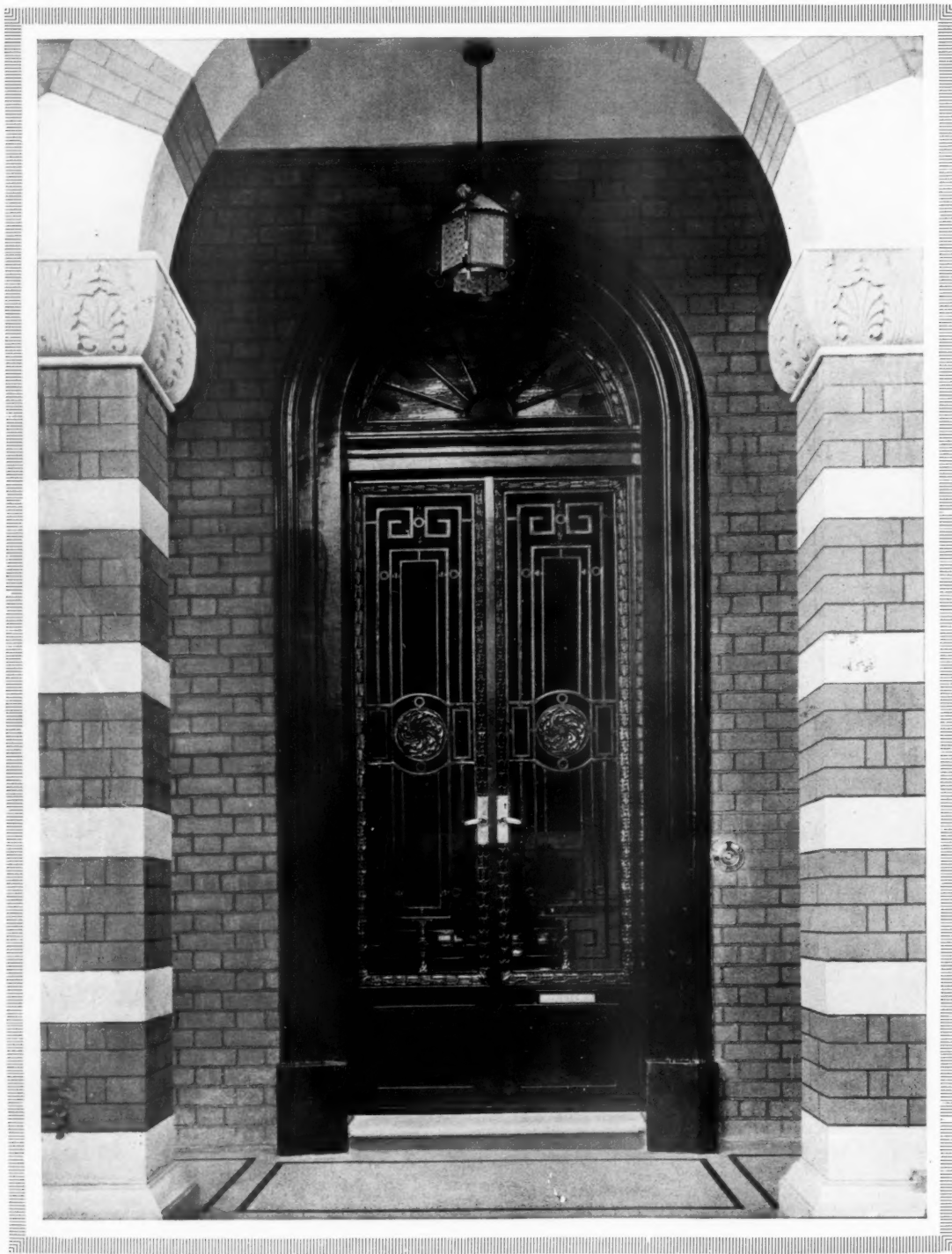
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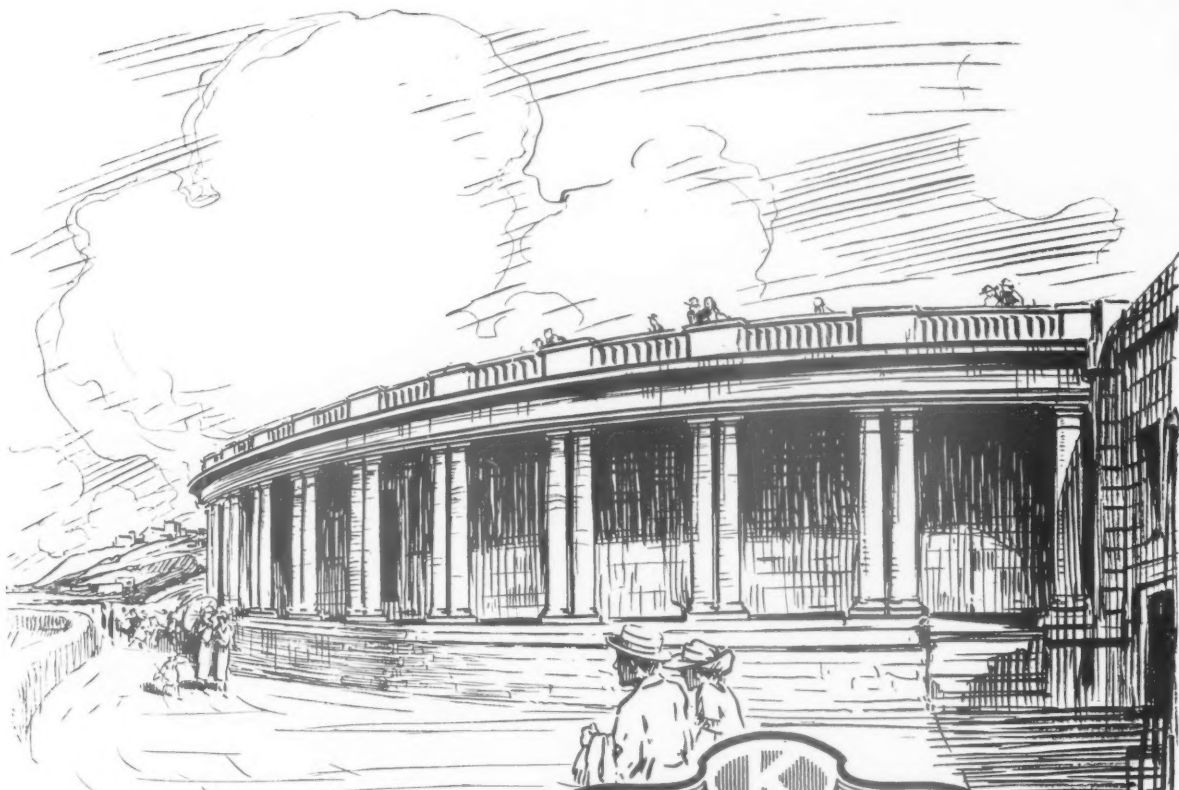
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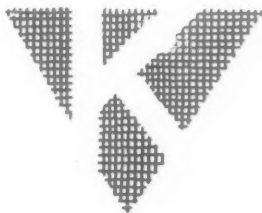
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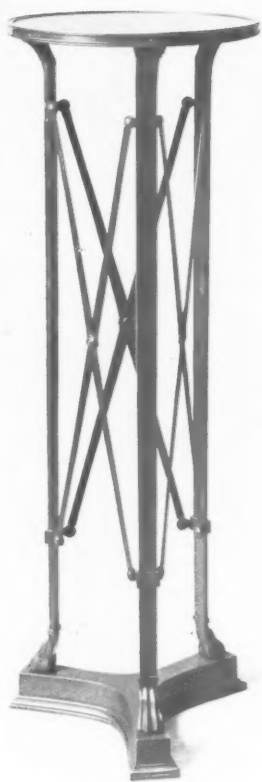
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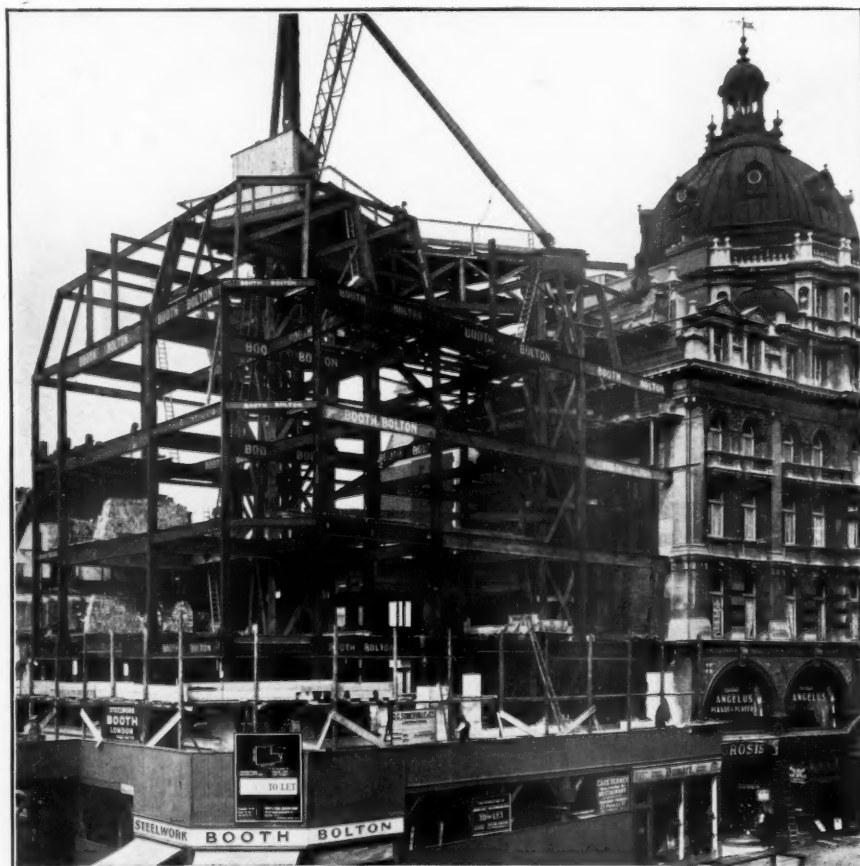
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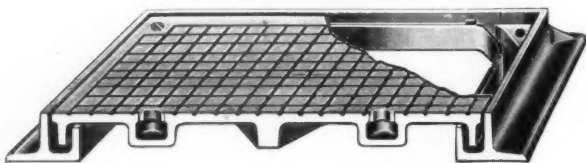
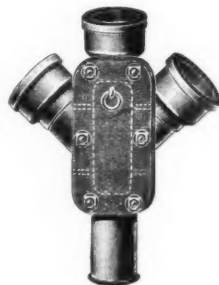
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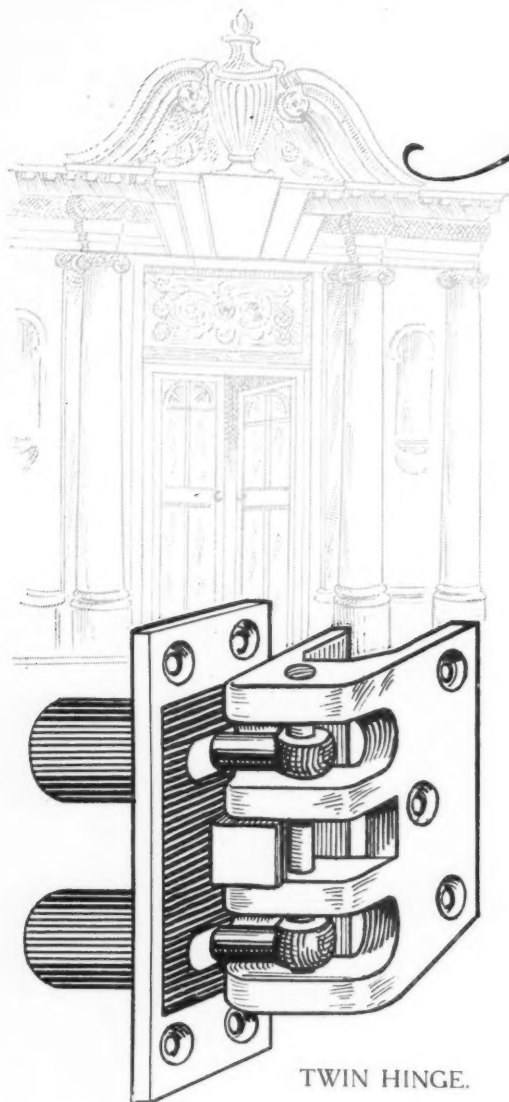
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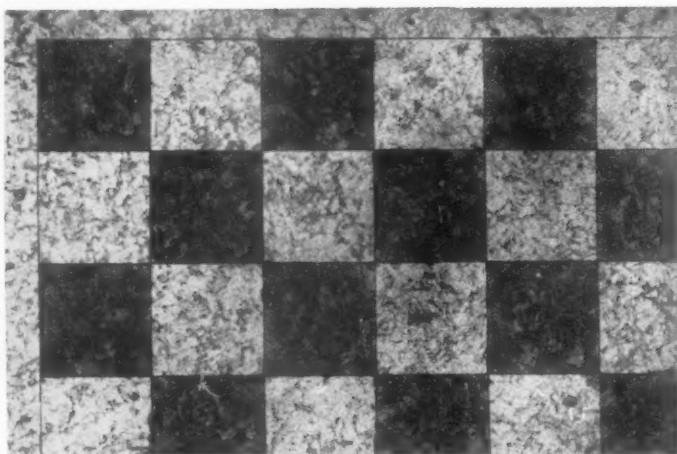
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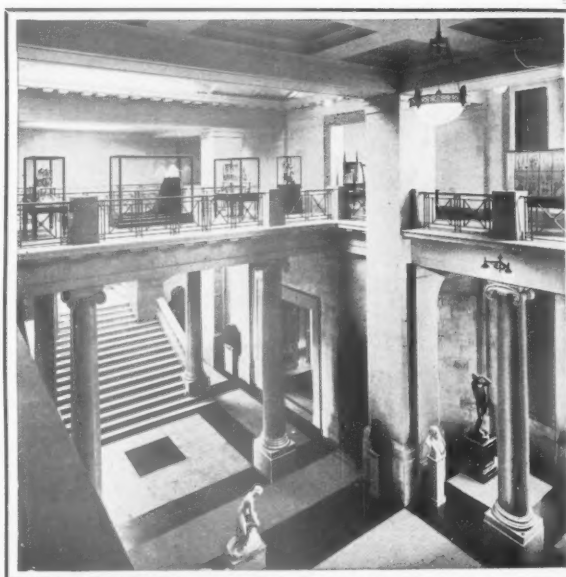
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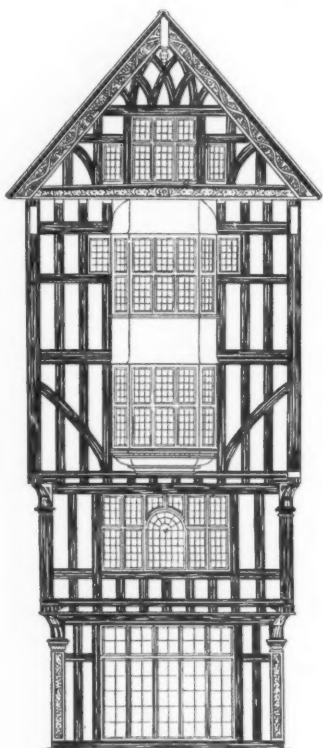
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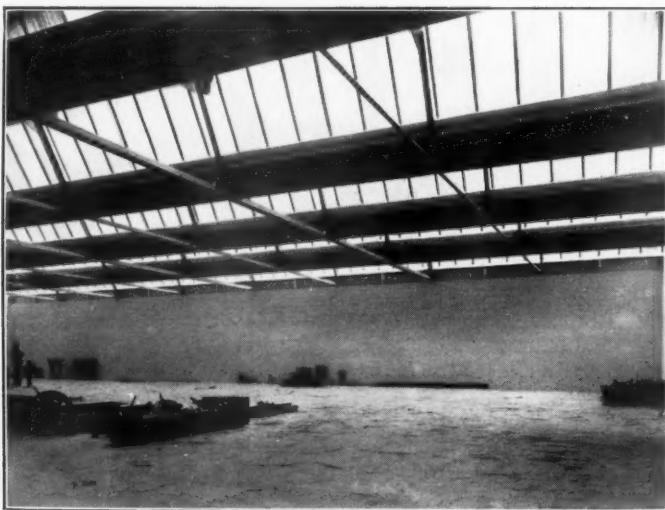
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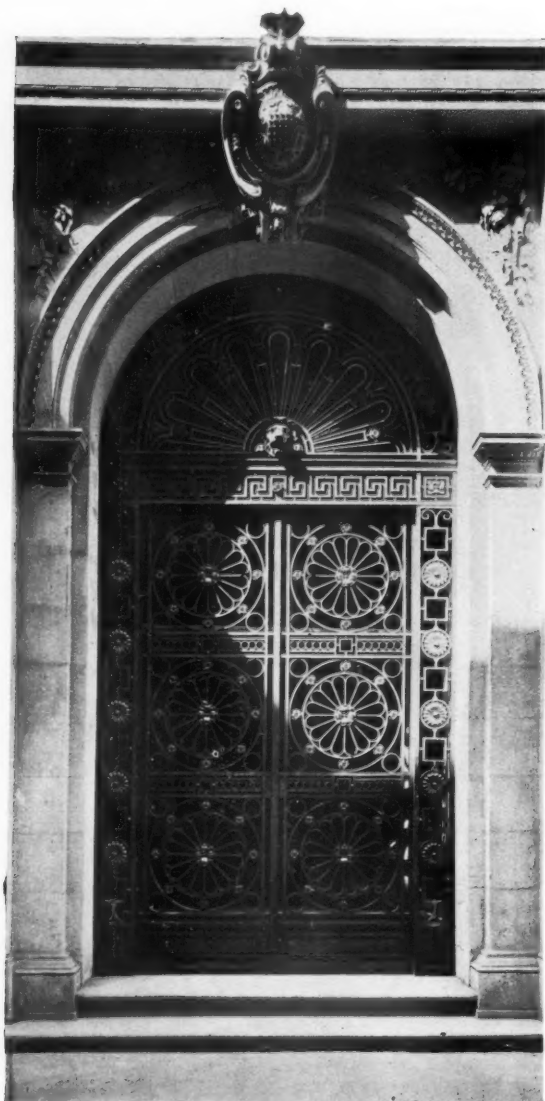
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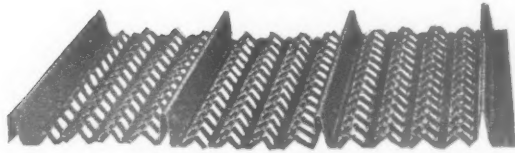
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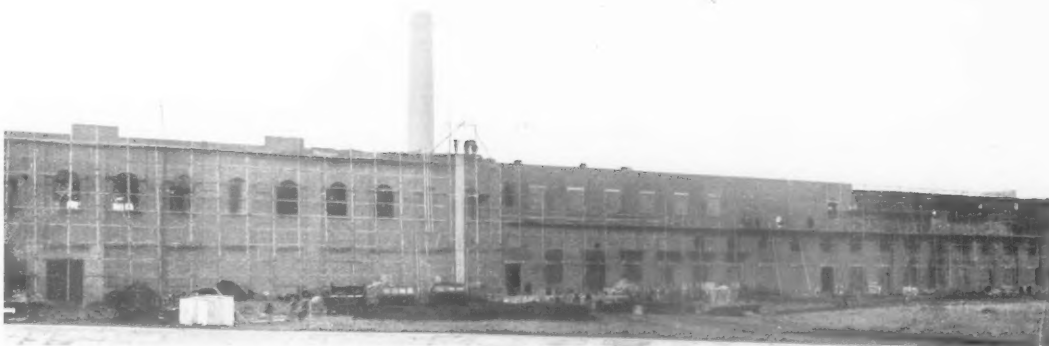
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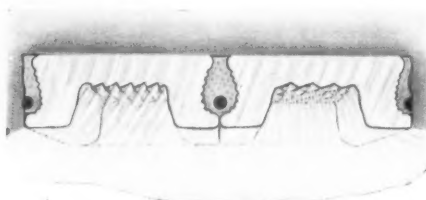
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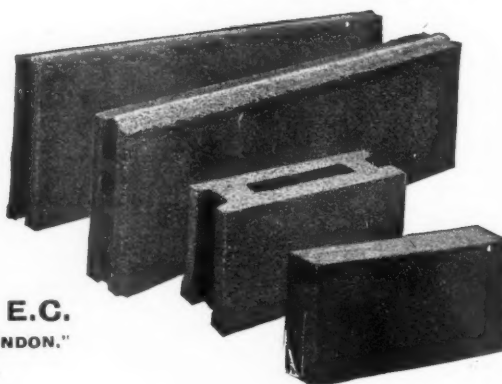
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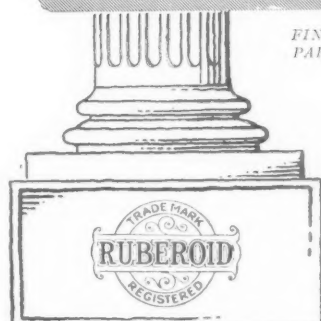
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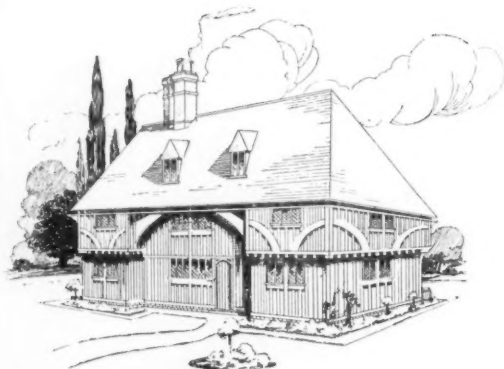
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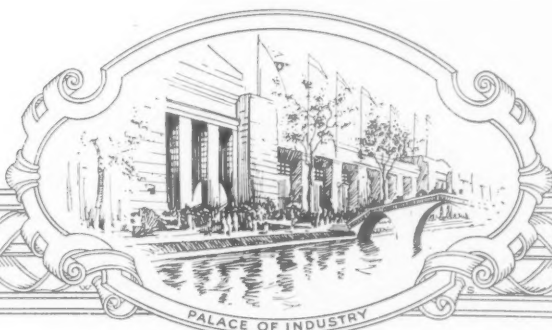
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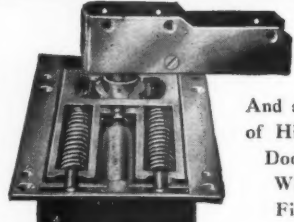
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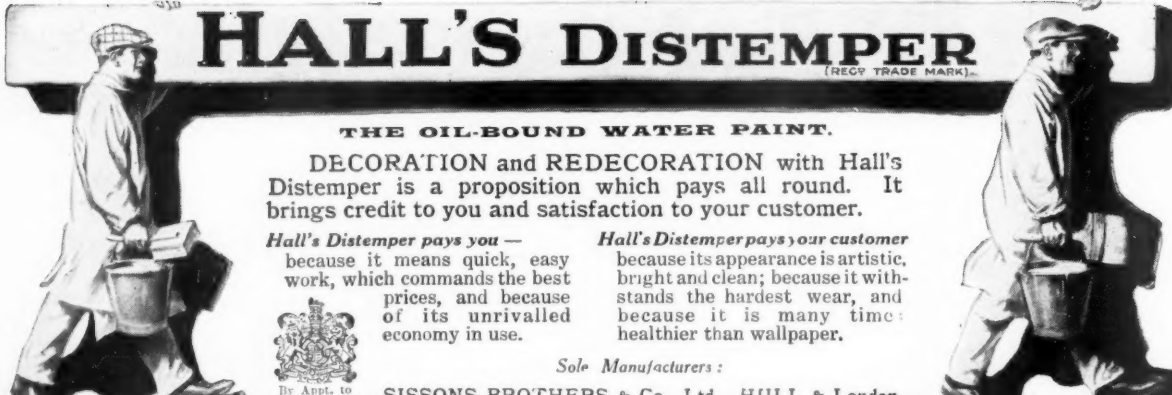
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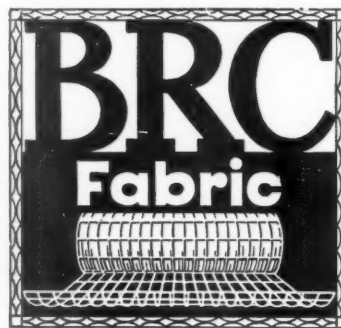
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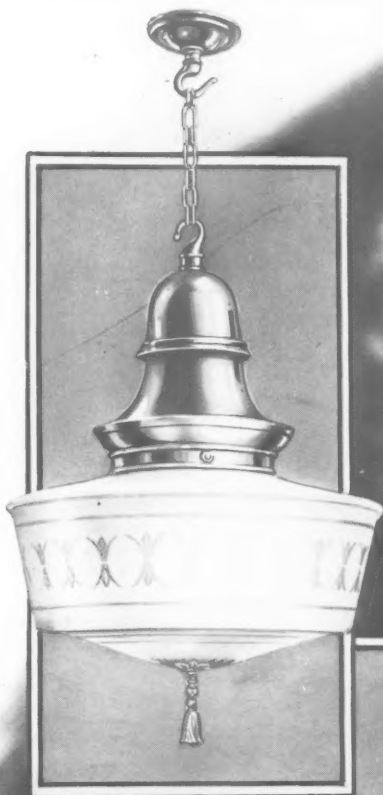
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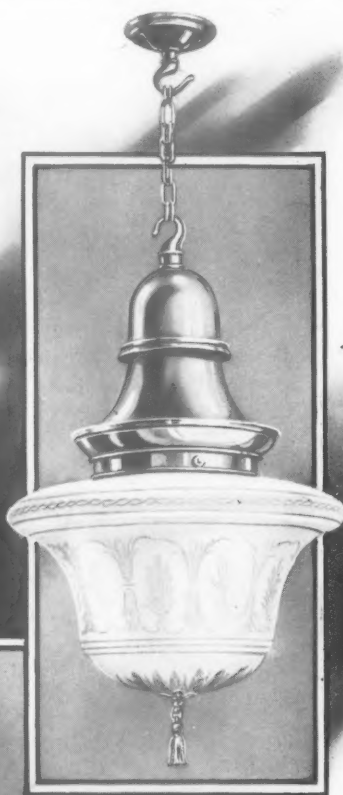
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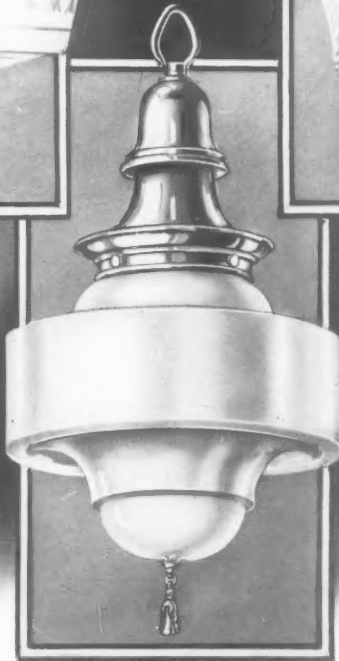
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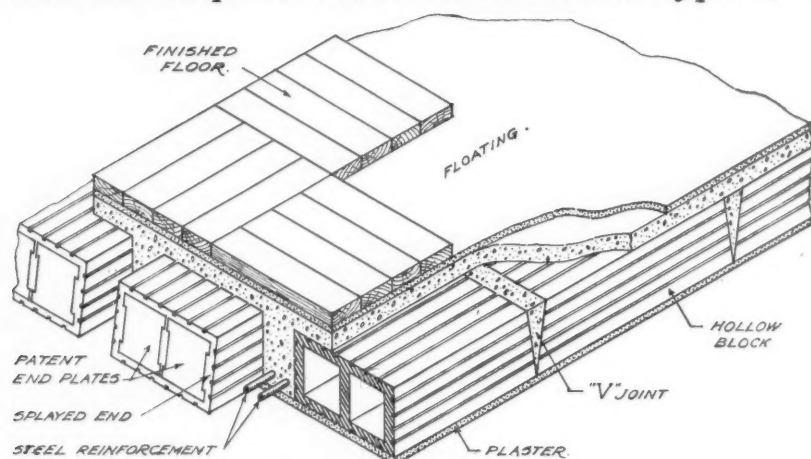
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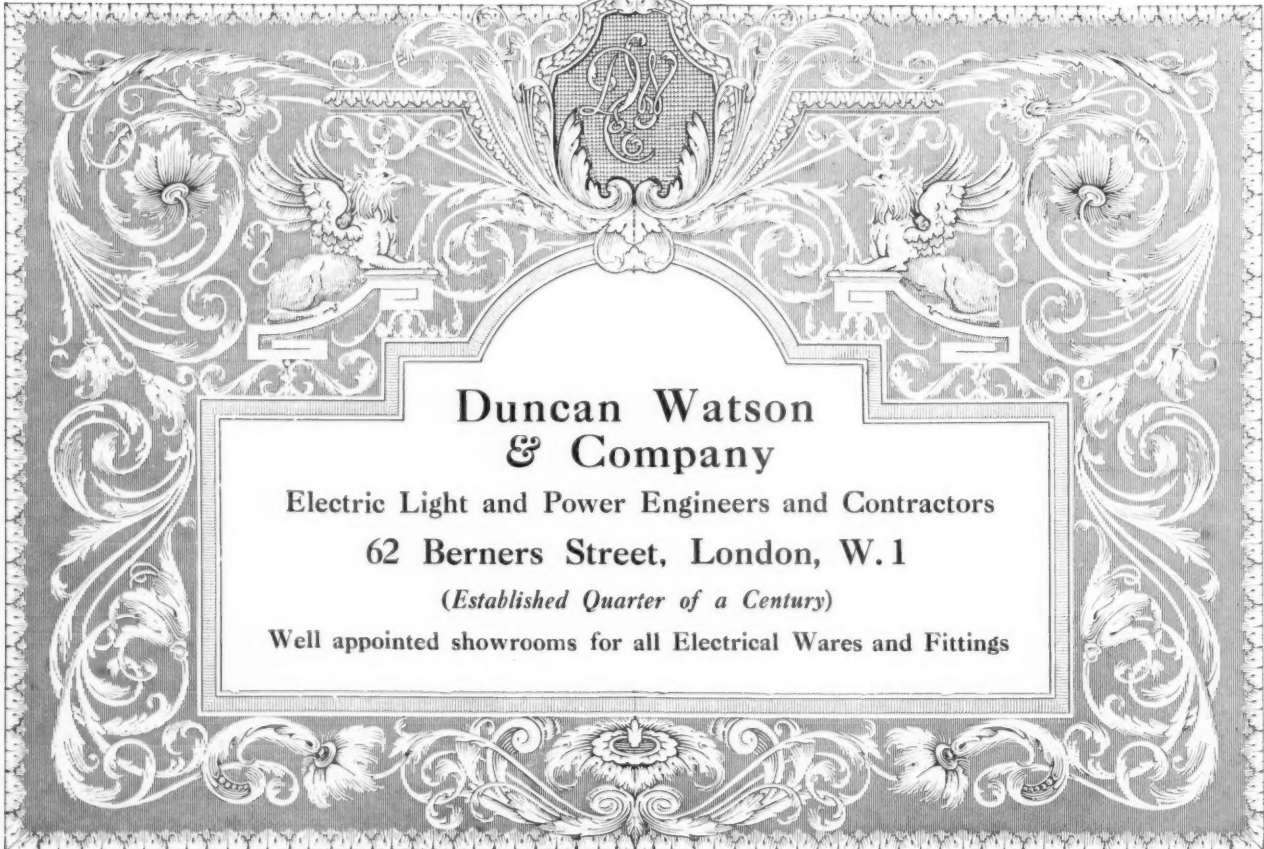
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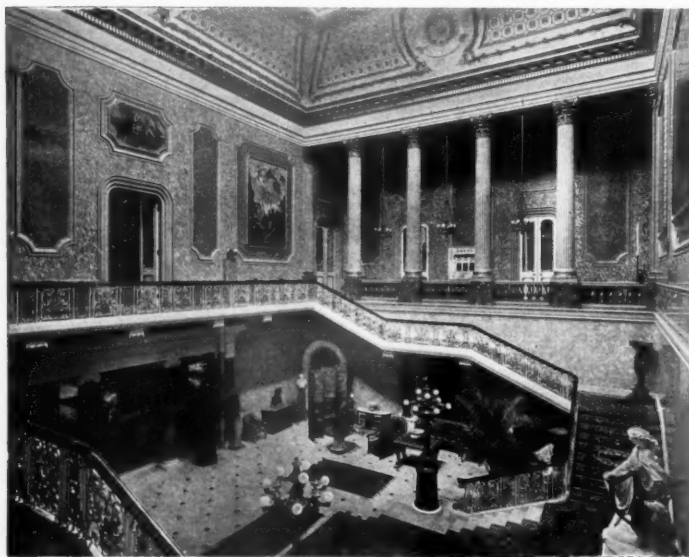
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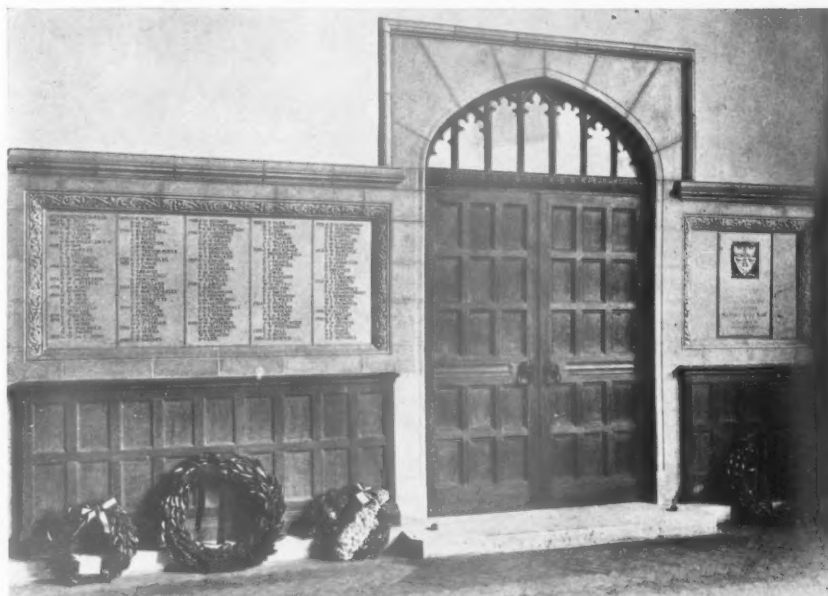
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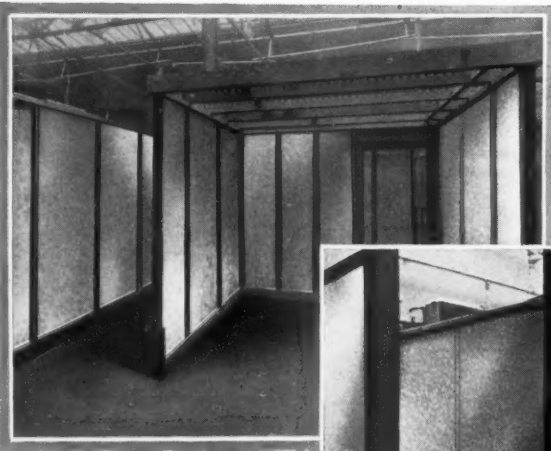
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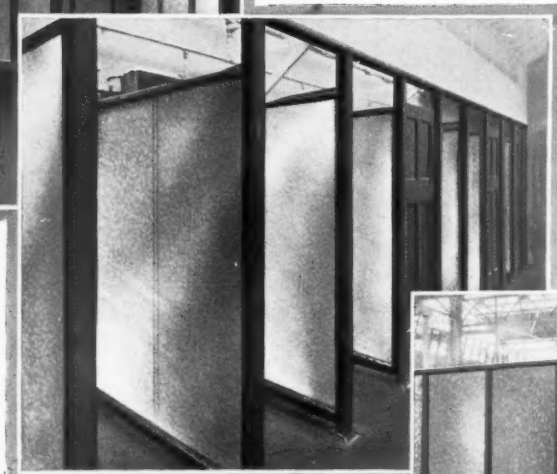
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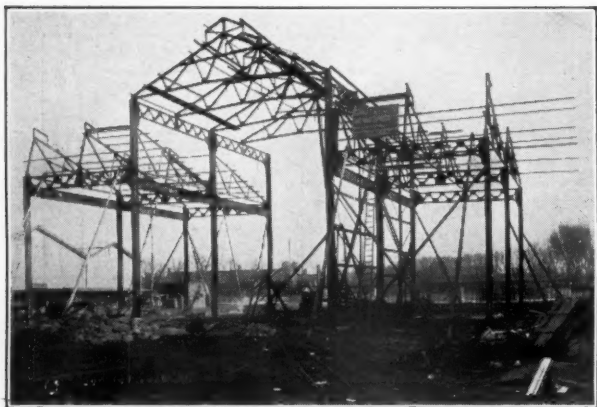
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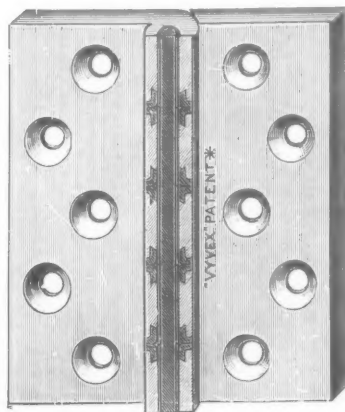
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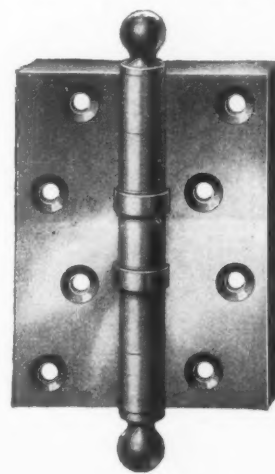
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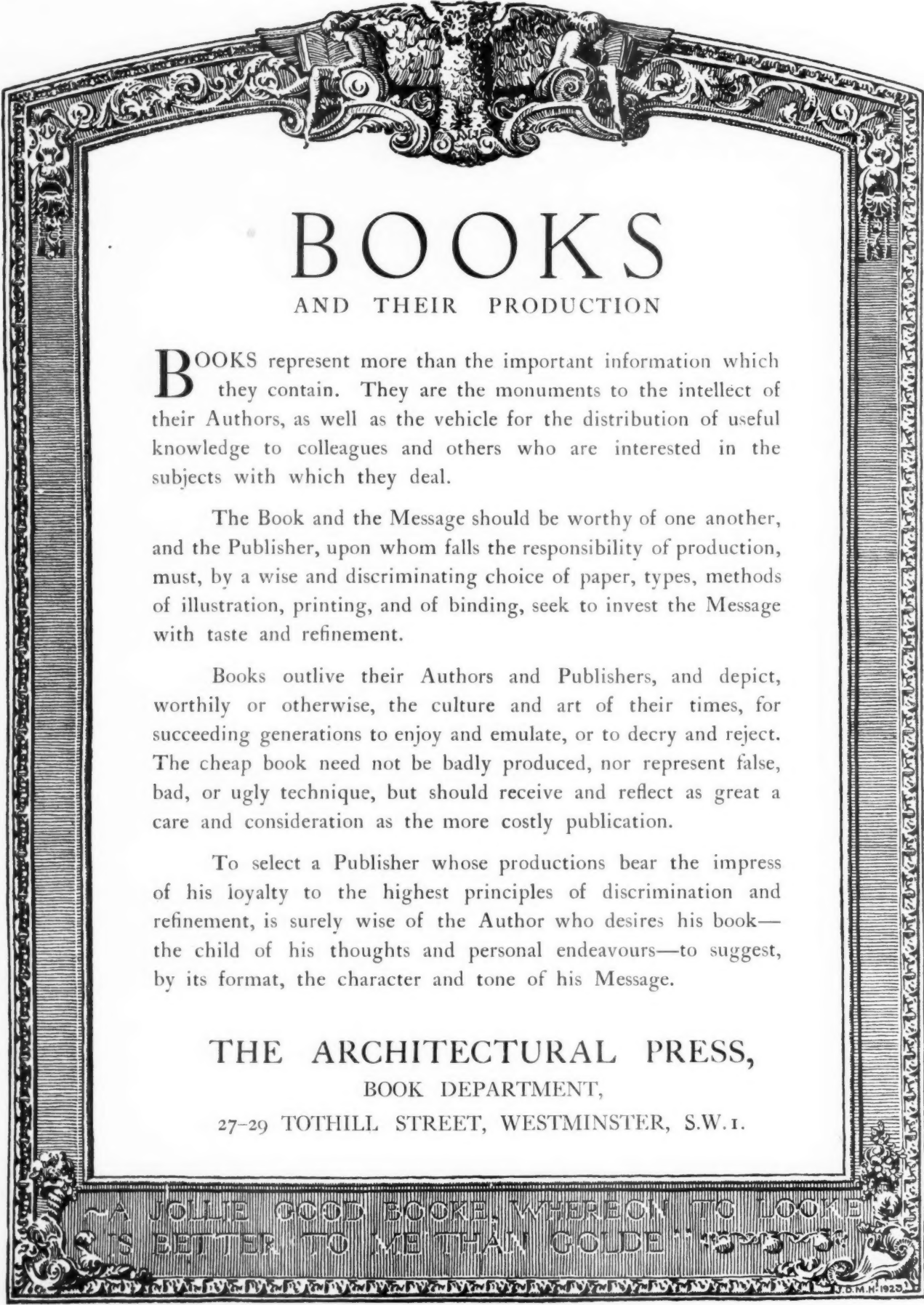
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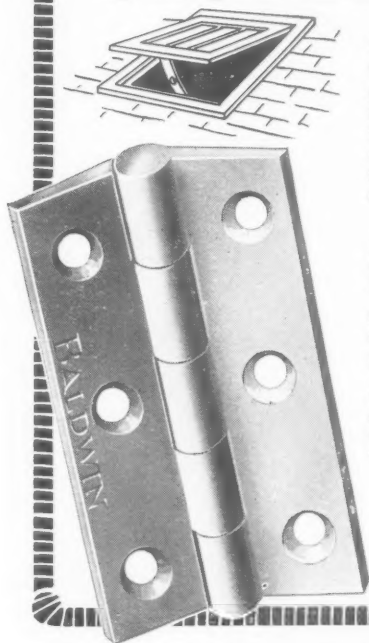
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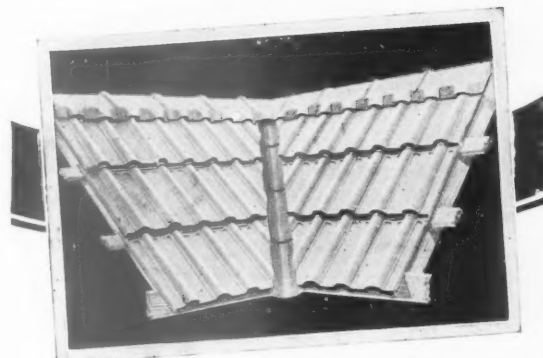
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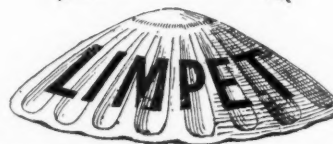
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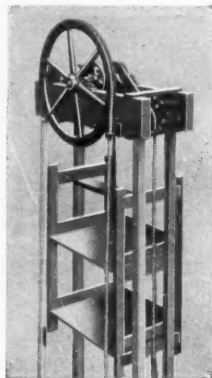
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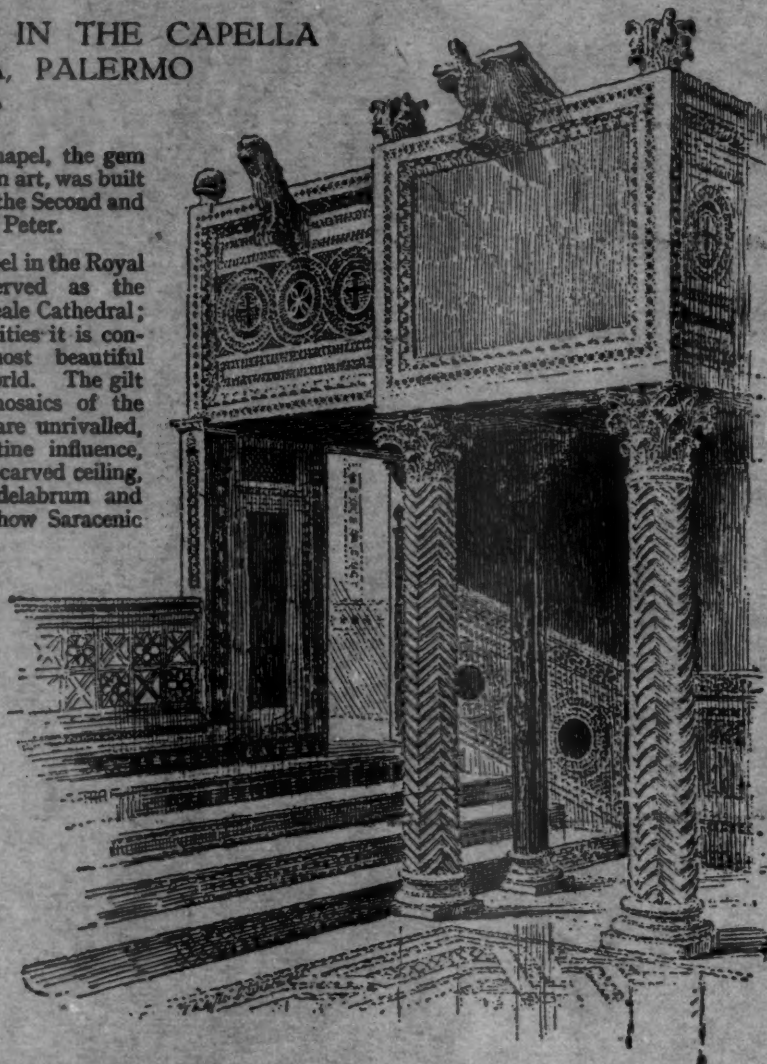
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