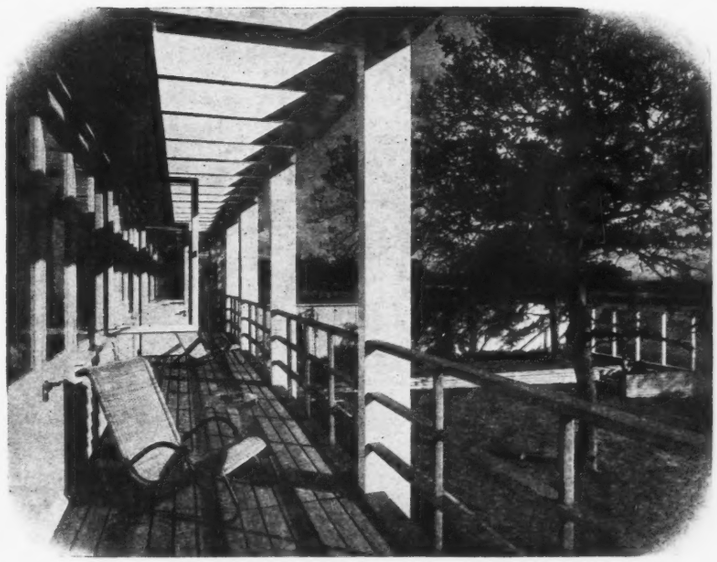
THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration



Incorporating
THE
DECORATION
SUPPLEMENT

Two Shillings and Sixpence Net.

9 Queen Anne's Gate, Westminster, S.W.1.

Vol. LXXXV February 1939 No. 507

THE
ARCHITECTURAL REVIEW
A Magazine of Architecture & Decoration

VOL. LXXXV No. 507. FEBRUARY 1939

CONTENTS

FRONTISPIECE

Articles, photographs, or drawings sent with a view to publication will be carefully considered, but the Proprietors will not undertake responsibility for loss or damage. All photographs intended for reproduction should, preferably, be glossy bromide prints.

All articles and illustrations should bear the name and address of the sender, and postage should be sent to cover their return.

The Editor disclaims responsibility for statements made or opinions expressed in any article to which the author's name is attached, the responsibility for such statements or opinions resting with the author.

All communications on Editorial matters should be addressed to the Editor, THE ARCHITECTURAL REVIEW, *9 Queen Anne's Gate, Westminster, S.W.1.*

Prepaid Subscription Rates

United Kingdom, £1 5 0 per annum, post free. U.S.A., $8.00 per annum, post free. Elsewhere Abroad, £1 5 0 per annum, post free. Cheques and Postal Orders should be made payable to THE ARCHITECTURAL PRESS, LTD., *and crossed Westminster Bank, Caxton House Branch.*

Subscribers to THE ARCHITECTURAL REVIEW *can have their volumes bound complete with Index, in cloth cases, at a cost of 10s. each, or cases can be supplied separately at 4s. 6d. each.*

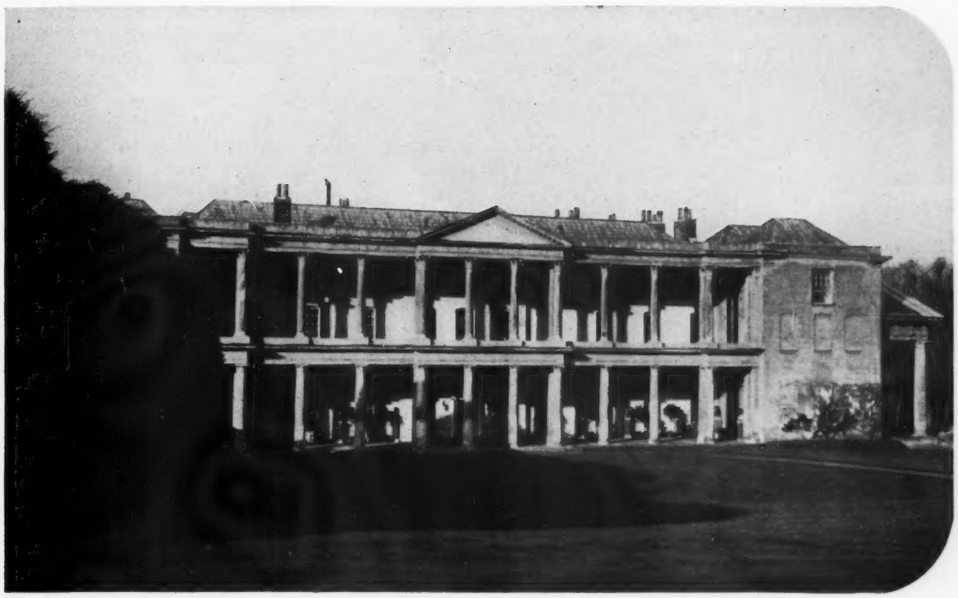
An index is issued every six months, covering the months of January to June and July to December, and can be obtained, without charge, on application to the Publishers, 9 Queen Anne's Gate, Westminster, S.W.1.

THE ARCHITECTURAL PRESS, 9 Queen Anne's Gate, Westminster, S.W.1

Telephone : 9212-7 Whitehall (6 lines)

Telegrams : " Buildable Parl, London."

Although the relationship between Andrea Palladio's villas and the English eighteenth-century house has been the subject of considerable study, little serious attention has been paid to his town palaces, although the latter were equally a source of the Classical idiom adopted by English eighteenth-century architects. It is of course in Vicenza, Palladio's home town, that his town palaces are found in the greatest profusion. In his study of Palladio's Vicenza Mr. Lees-Milne describes the most notable of the palaces and appends some notes on the English examples that most obviously derive from them. The photograph above, for example, shows Palladio's Palazzo Chiericati, *while on the facing page is Robert Adam's north façade of West Wycombe Park, Buckinghamshire, resembling it in many points of composition.*



PALLADIO'S VICENZA

By J. Lees - Milne

VICENZA is the home of Palladio. It is his birthplace, where he lived and where he died. It forms the nucleus of all his works. It is indeed the Mecca whither all students of the English Classic Architecture should some time or other turn.

The whole of this small town is redolent of Palladio's existence, and at every street corner some palace elevation sharply brings it to mind. A few of his most successful designs are at Vicenza although this is really beside the point. What is of importance is that here may be seen the execution of all those basic principles of Palladio's architecture. It is unwise to seek in Vicenza in consequence the causes and germs of English town building during the 18th century. English town building, perfected in later Georgian days, was immeasurably superior to anything the Italians ever did. In spite of this, or because of it, the academic eminent of our own country, rather than admit through native diffidence English superiority where, as in this regard, it is justified, have during the last thirty years or so covered their embarrassment by systematically condoning the obliteration of all traces in our English towns of the genius of great town planners like John Fordyce, Nash and Leverton. Palladio had in fact no influence upon English 18th century town planning, because such a thing simply was not in his line, and probably little influence upon the actual structure of the English town house as a single unit. As far as we know, Palladio never considered any town planning at all. Certainly there is nothing at Vicenza to show that he did. He built no streets as such, but just palaces here and there as they might be required. These he adapted with consummate genius to their mostly awkward sites, which reminds us of Wren's great ability to adjust his City Churches to the most unnaturally architectural ground plans imaginable.

Palladio's town palaces were different then from his country villas, circumstantially rather than on principle. As completed plans they are mostly deficient and we go instead to the villas, which incidentally have, on the whole, fared better at the hands of succeeding generations; many still preserve Palladio's original interior features, whereas practically every single palace has long been dismantled and gutted internally. What we should look for in the town palaces is something more detailed, more abstract and more academic; and perhaps in these respects the Vicenza palaces afford better examples than would a selection of his country villas. One material advantage is that at Vicenza a great number of Palladio's buildings are confined within a small compass, all within walking distance of each other.

Although the term "Palladian" is commonly bandied about as descriptive of a certain phase of English architecture, there is little or no general knowledge of Palladio's actual work, and until recently Palladio's buildings were belittled by those erudite people who were conversant with them, just as the academic eminent will today depreciate the greatness of the English Classic according to their own pedantic standards.

By briefly appreciating Palladio's schooling, the genealogy of English Classical Architecture is directly traced, and traced without a break to those very foundations upon which the academic eminent so firmly hoist their standards. Andrea Palladio was born in 1518 and he died in 1580, at a time when the worst Elizabethan atrocities, like Wollaton Hall in Nottinghamshire, were rearing their monste

BASILICA PALLADIANA

Designed by Palladio as a new façade to a medieval hall whose semi-circular roof spoils the flat Renaissance skyline. The width of the arcading was also determined by the existing piers of the 15th century building. It is built of stone instead of Palladio's usual brick and stucco.

PALAZZO THIENE

An unfinished building, but showing Palladio's masterly use of heavy rustication on the ground floor. It was an inspiration for Inigo Jones's Banqueting House in Whitehall.

heads to shock the quiet English landscape. Though the Renaissance had been ushered into Italy one hundred years before Palladio's birth, by Brunelleschi and his school (and Palladio was a child of the Renaissance) the 15th century masters did not trouble to study the Roman scientifically. Whether they were Florentine like Brunelleschi himself, the builder of the Duomo and the Pitti at Florence, or Roman like Bramante, the builder of St. Peter's, and Peruzzi, of the Villa Farnesina, they did not trouble, as, indeed, their great works testify. The celebrated Vitruvius was the first to point this out, and in doing so he was committing a true service to architecture. The young Palladio was not slow to seize upon this revelation and he turned to Vitruvius for his bearings as greedily as did St. Ignatius to the early Fathers. He was, Palladio wrote, " the only author that remains extant on this subject," i.e. the Roman, and Palladio ascribed himself a faithful disciple. One other architect only to have done so previously was the Venetian, Sansovino (the builder of St. Mark's Library, of which the Carlton Club in Pall Mall is a copy). Sansovino was the immediate precursor yet contemporary of Palladio, who greatly admired him, for he had been in fact the first architect to build according to the Roman Classic tradition, whose threads had been so deftly picked up by Vitruvius.

Palladio spent the early years of his life journeying round Italy faithfully measuring up Roman remains and battening upon his Vitruvius. In 1540 his early work was done in Rome at the completion of his intensive studies of the past. By 1545 he was back again at Vicenza, commencing his first work in the town of his origin. This was at the Palazzo della Ragione. His life, though a full and a fruitful one, was in the worldly sense comparatively uneventful. His last work was the Teatro Olimpico at Vicenza, which was still unfinished at his death in 1580.

On the whole but little positive structural interference has been made with the exterior of Palladio's palaces at Vicenza, where total destruction has not taken place. There are still left a remarkable number of palaces that can confidently be attributed to his hand. How much better is this recognition of a great artist which suffers his masterpieces to remain standing, even if it involves a degree of neglect and decay, than in England where no respect whatever is paid by public officials to works of art in brick or stone. In Vicenza, it is true, the present condition of most of Palladio's palaces is at best indifferent, both structurally and superficially. None the less, at least an official reverence is paid to them as works of art, however embarrassing their continued existence may be considered financially.

The apparent decay of so many of Palladio's buildings is as much due to the material with which they were constructed as to their neglect. He chiefly used a soft brick, and faced it with stucco, which in the course of centuries has peeled off. It does not appear that Palladio had much understanding of the potentialities of brick or regard for it except in so far as it served a utilitarian purpose. On the other hand one explanation may be advanced in the meanness of his patrons, whose desire for display exceeded their concern for the architect's reputation with posterity. In this regard their attitude must have conflicted sadly with the third injunction in the maxim which Palladio never tired of preaching : " Convenience, Beauty and Durability." These virtues his pupils learnt were to be the three inseparables, the three indispensables.

Basilica Palladiana

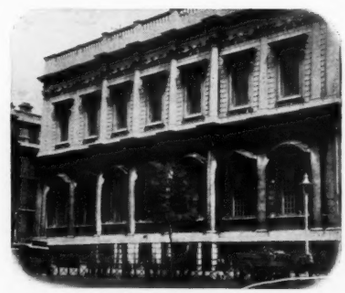
The Basilica Palladiana, or Palazzo della Ragione, was begun in 1550, and stands a triumph of technique over stringent conditions. Unfortunately the great technical beauty of this masterpiece is sadly handicapped by the vast semi-circular lead roof hipped at both ends, which rises above the colonnades like some half-submerged sea monster. It is the roof over the medieval hall, round the three exposed sides of which Palladio was commissioned to do his best. How successful is the finished work, for once constructed of a beautiful white stone brought specially from Piovene instead of the usual brick and stucco, we do not need to be informed. But Palladio himself with justifiable pride wrote that it was " to be reckoned among the noblest and most beautiful buildings created since the time of the ancients." Yet he was necessarily allowed little compass here in which to indulge his own genius. The width of his arcade bays was strictly determined by the Gothic piers of the 15th century fabric. The ground storey he encased with Doric half-columns, the upper with Ionic, and the returned entablatures most wonderfully prevent what might so well have resulted in a squat ignoble appearance, had there been no such break. The treatment of the corner angles, where the coupled columns are brought closer to the piers, is no less remarkable and lends an additional strength to the support of the superimposed mass.

Palazzo Chiericati

The Palazzo Chiericati (begun in 1551) is unlike any other building by Palladio. It at once contradicts the theory that Palladio invariably made one Order embrace two storeys; but it corroborates our observation that Palladio's works adumbrate every phase and sentiment of all the English Classic architects of the 17th and 18th centuries put together. Here we have the building which quite obviously inspired Robert Adam's conception of the north elevation of West Wycombe Park in Buckinghamshire, (see the frontispiece to this issue), and possibly Wyatt's porticos at Goodwood. A Doric colonnade extending the whole length of the ground floor rests upon a raised podium. Above it an Ionic colonnade has had its central portion walled in. The Doric columns of the lower colonnade have been made stouter in circumference than accord with Palladio's usual custom, with the result that a sense of solidity is lent to an incredibly sensitive elevation. Because of this, the upper central portion has not introduced an air of top-heaviness nor has the curious disparity in the window proportions, the windows on the upper floor being higher by one-eighth than those of the lower. A closer examination of this place induces a suspicion that here the architect met self-imposed handicaps in order to give wing to his victorious genius. Without the balance of the figures on the acroteria the mystery would dissolve.

Palazzo Thiene

Of the Palazzo Thiene, Bertotti Scamozzi, who recorded the plans and designs of Palladio, wrote : " The striking magnificence of



Inigo Jones's Banqueting House.

the exterior and interior, the solidity of the ground storey, the elegance of the second, the continuity of the entablature, the strength of the arcades and of the pilasters which ornament the courtyard façade, the noble and judicious distribution of the apartments, make up a scheme which, if extended in its entirety, would have made an ornament worthy of the country of Palladio." Begun in 1556 the Palazzo Thiene was unfortunately never finished. It is noteworthy as illustrating the fullest understanding of heavy rustication, both in the ground storey and in the window jambs. The piano nobile is divided by a series of Composite pilasters whose pedestals continue so as to form the buttresses of the balustrading. Exceeding strength, simplicity of line and lack of ornamentation indicate a

standard for work on the grand scale and it is easy to see that Inigo Jones had this palace in mind when six years after his Vicenza discovery he set about the design for his great Banqueting House in Whitehall.

Palazzi Valmarana, de Palladio, Barbarano

Next in chronological order of Palladio's chief buildings in Vicenza come the Palazzo Valmarana, the Casa de Palladio and the Palazzo Barbarano. They appeared between the years 1566 and 1570. The Valmarana, which is also unfinished, has its ground floor rooms vaulted and its upper ones ceiled at a height equal to their breadth in true fulfilment of the Palladian rule for rooms with flat ceilings. As to the street elevation, much criticism has been levelled at this façade. The alternation of Composite pilasters with Corinthian half-pilasters, their entablatures broken at each inter-columniation, and all on the same plinth level, is certainly not happy; nor do the lesser pilasters at the two extremities, each supporting a statue above the cornice, carry conviction. Rather do they disturb the length of the façade and accentuate the disproportionately great depth of the crowning entablature. On the other hand the correlative treatment of the Composite pilasters themselves is so gracious that it is not surprising how late 18th century architects in England made of them a model.

The Casa de Palladio, in which the architect is reputed to have lived, is now a fragment of its former glories, but enough is left to show the striking purity of its proportions. The spandrels between the central Ionic columns are filled with winged figures in high relief.

The Palazzo Barbarano has undergone little alteration without, apart from the position of the entrance doorway. It is chiefly interesting on account of the rich decoration of its façade. Above the flat-headed windows on the lower storey are panels of deeply undercut relief work, depicting sculptured scenes framed in elaborate cartouches. Between the windows of the upper storey are rich swags of fruits and trophies. The juxtaposition of the twin corner columns, Corinthian above and Ionic below, is particularly striking and the absence of pedestals to the columns shows how the Roman influence over Palladio had asserted itself here, for in the original design one Corinthian Order of semi-columns on a podium was to have been carried through both storeys.

Palazzo del Consiglio

The Palazzo del Consiglio, built in 1571, is of course a portion only of the original design, three out of seven bays now remaining. Like the Palazzo Barbarano it is chiefly remarkable for the bold treatment of its swags of military trophies and its garlands, which immediately call to mind similar treatment in plaster in mid-17th century England. In England it is rare to find such treatment on the façades of buildings. We still occasionally find heavy outdoor frieze work in East Anglia. Sparrow's House, Ipswich, is a rare and elaborate example, but the inspiration for it is obviously pre-Palladian and more in accordance with the Tudor idea of Italian Renaissance workmanship. Owing to the more inclement weather of the north it was not found practicable, and this kind of work was confined within doors. The Consiglio palace is unfortunately very dilapidated; where the stucco has peeled off we are left to regret that Palladio had not deigned to execute his bold

P A L A Z Z O V A L M A R A N A

Another unfinished palace. The bold treatment of Composite pilasters served as a model for a quantity of English 18th century architecture.

C A S A D E P A L L A D I O

Only a fragment now remains of the house in which Palladio himself lived.

PALAZZO BARBARANO

A well-preserved example of Palladio's town palaces remarkable for the rich decoration of the wall surface. The absence of pedestals to the columns indicates Roman influence.

PALAZZO DEL CONSIGLIO

Three out of seven bays remain of the original design. The bold relief ornament has affinities with East Anglian relief plaster-work, though the latter was, of course, a pre-Palladian Tudor version of the Renaissance. Note also the early "Venetian" window.

treatment in the common brick that is now revealed underneath.

The treatment of the side façade is different to that of the front. The Venetian window, which cuts ruthlessly into the entablature, with its fluted Doric pilasters, was frequently

Sparrow's House, Ipswich. Compare the high-relief ornament with that on the Palazzo del Consiglio.

copied by the Adam brothers and by the Wyatts. To our English eyes this seeming late 18th century window is in strange company, surrounded as it is by what appear the familiar swags of essentially Carolean aspect.

Palazzo del Diavolo

Lastly, the Palazzo del Diavolo, poor fragment of past greatness, is perhaps the best memorial of all the palaces to the genius of Palladio. Its two remaining bays embody features of real importance, for the proportions between plinth, column and entablature are wonderfully enhanced by the stern logic of the window openings and the robust swags about them.

Opinion is sharply divided upon the paternity of most of those remaining "Palladian" buildings at Vicenza not already mentioned, and it is fruitless here to attempt determining it in any instance. For a while after Palladio's death his mantle was not allowed to drop unheeded in Vicenza. His actual unfinished works were completed and possibly some of his own designs were put into execution. His own son, Silla Palladio, was commissioned out of respect for the father to complete the Teatro Olimpico, and Vicenzo Scamozzi himself designed and carried out the Palazzo Porto which in no respect disgraces the Palladian tradition.

The Teatro Olimpico was one of the very grandest of Palladio's conceptions and it stands today a monument to post-Renaissance architecture in Italy. The balanced relation to each other of the two Orders of Corinthian columns on the face of the scene, the free restraint of line, the gay treatment of each bay and the unturbulent assortment of the statuary constitute a triumph of the new movement over the old without any concession to the Baroque. The theatre shows to the full Palladio's grasp of Roman principles, from which the ingenuity of Scamozzi's street perspectives detracts nothing. Forming the entrance to the theatre stands a gateway, simply constructed of bold rusticated blocks. It at once calls to mind the same virile, unaffected eclecticism behind Inigo Jones's famous gateway at Chiswick.

The beautiful Arco di Trionfo at Vicenza may or may not be the product of Palladio's genius. It was certainly erected fifteen years after his death, and Scamozzi's name has been associated with it. Based on the Roman triumphal arch it shows far fewer technical points in common with, say, the Arch of Septimius Severus than with Robert Adam's

The Inigo Jones gateway at Chiswick, closely resembling the gateway to the Teatro Olimpico.

entrance screen to Syon House, in spite of all the fanciful conceits so evident in the latter. In short, the essence of Palladianism was somehow to focus concentration upon the Orders, even at the expense of the form of the whole, and this sometimes degenerated into a subterfuge, by which English 18th century architects would on occasions successfully save their faces by diverting the eye away from a plethora of conceits.

It must be borne in mind that Palladio was never a slave to his own theories. In Architecture, possibly more than in any other art, there can be divergency from principle with impunity; and considering that Palladio was the legislator of a system that held good in one country at least for over 200 years, there can be no quarrel with him for infringing on occasion the code that he himself established. There is no need here to capitulate the niceties of Palladio's rules on the Five Orders which in England became the basic principles of its post-Renaissance architecture and to a certain extent survived the Gothic Revival down to our own times.

Suffice it to say that in the use of the Orders he was full of resource. He was tied to no

Robert Adam's entrance screen to Syon House. Compare the Arco di Trionfo at Vicenza.

particular *method* of building although he evolved one of his own. To attempt a definition here of his principles on academic lines would be to court disaster and to engender unendurable tedium. To look for the material results of his principles in his own and his followers' works is more rewarding and certainly more instructive.

In his *exteriors* Palladio most frequently used two Orders, one within another and both springing from the same plinth level, as did the Romans. Often his columns or pilasters rested on a continuous podium as on the façade of the Palazzo Chiericati. A characteristic of his plinths is that they are extremely high. Those of the Casa del Diavolo are a good example and they at once produce a bold and noble impression. These plinths are never panelled, just as the columns and pilasters are seldom, if ever, fluted, presumably because of the stucco with which Palladio's buildings are normally faced. To complete the boldness and nobility of his façades the two storeys were often included within one Order as at the Palazzo Valmarana (a practice followed by John Webb on his Greenwich Palace façade), whereas a lesser Order would embrace either one storey alone or else some entrance way or central and dominating window. This device had the effect of accentuating the size as well as the dignity of the whole elevation.

Palladio was fond of constructing his ground storeys of vast rusticated blocks, as at the Palazzo Thiene, according to the older Renaissance tradition. This use of exceedingly heavy rustication was cautiously adopted by him to the scale of his particular building, and his great skill in this regard is best illustrated by comparing some of his rustication with the far clumsier work of his contemporaries and predecessors. While a sense of solidity was thus given to his basement floor he would emphasize the piano nobile by one Order, as we have indicated, and the attic storey with flat pilasters as at the Palazzo Valmarana or the Consiglio.

One of Palladio's chief innovations was the employment of an attic storey, built so as to form an unbroken sky-line and seldom

Appuldurcombe, Isle of Wight, showing the Palladian use of an attic storey.

recessed, in lieu of a crowning cornice (*vide* Palazzo del Consiglio) and this was rarely followed in England before the opening of the 18th century. In a country house it can well be seen at Appuldurcombe in the Isle of Wight, which was built in 1710. Unlike those of Sansovino, Palladio's entablatures were invariably in proportion to his columns, their depths being usually 1/5th the height of the latter. His entablatures were uninterrupted and often returned so as to emphasize with their powerful cornice the quiet precision of their line.

With regard to his *interiors* Palladio took great care of their disposition, even to the extent that the utilitarian functions of his rooms were never allowed to interfere with their proportions, a factor that has more often invited comment in the case of his villas. He laid it down as a fairly rigid rule that in rooms with flat ceilings, the height should be equal to the breadth; that in vaulted rooms, when square, the height should be one third more than the breadth, and where length exceeded breadth, the height should be half the length plus breadth. To these principles we owe the proportions of Inigo Jones's splendid rooms at Wilton, the Banqueting House at Whitehall and his saloon at Forde Abbey, based upon whose success James Gibbs reiterated Palladio's rules in his architectural book.

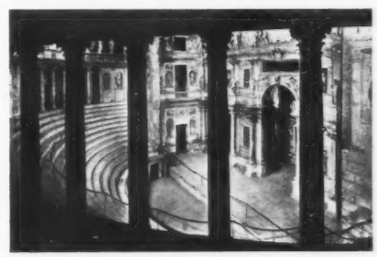
The conclusion to be drawn from a study of Palladio's work at Vicenza is that he rejoiced to indulge in a fairly lavish display over simple lines. The key-note of his work is simplicity of line movement reduced to a fine art. Unadulterated " simplicity " is a criterion of virtue by which anyone should be chary of judging architecture. Only too often is the word " simplicity " implied as an absurd camouflage under which every villainous excess, i.e. hideous lack of proportions, cheap conception of plan and worthless plagiarism in treatment, is allowed to masquerade. But in Palladio's simplicity of line there is real virtue. In England this quality was not attained until the later days of the brothers Adam and of James Wyatt, and even then these artists were too fearful of relieving it by the application of properly restrained decoration. Palladio, on the contrary, was checked by no such apprehensions. He built not for the faint-hearted nor for the vulgar. His patrons, albeit parsimonious, were people who did not fear too much magnificence. They revelled in it, and Palladio was fully confident that he could control his magnificent conceptions, which never became grandiose.

Generally speaking, Palladio's work is columnar rather than fenestral. In his writings he is constantly dwelling upon intercolumniation in relation to the use of the Orders whereas actual window proportions are of secondary concern. The answer is of course that if proper insistence is laid upon the first, the second falls into its correct department as a matter of course. He always concentrates therefore upon the fundamental proportions of his buildings so that his applications, his treatment, follow naturally and unostentatiously. His regard for strict and uncompromising Classicism in his structures was invariable. Baroque deviations, as we understand them, were never sanctioned by him in the smallest particular. To take an obvious instance, Palladio always crowned the central doorways of his country villas (at the Rotonda, of course, it is represented) with a pediment in contrast to his town palaces. This pediment conveniently held a cartouche for the armorial device of the patron and in England in the 18th century the habit was almost universally adopted (*vide* Brocket Hall, Attingham Park, etc.). In no case were Palladio's pediments broken. Even Inigo Jones allowed this Baroque innovation. In his applications Palladio relaxed a little, for he was fond of introducing those Michaelangelesque reclining figures on his pediments, and to his façade panels he allotted a certain sculptural licence which was always welcome. Oddly enough, this lighter

PALAZZO DEL DIAVOLO

Two bays only remain, but for purity of proportion and magnificence of conception this building, perhaps more than any other, stands for what is meant in England by "Palladian."

TEATRO OLIMPICO



Unfinished at Palladio's death and completed by his son. The entrance was a model for Inigo Jones's gateway now at Chiswick. The other photograph shows the interior of the theatre.

ARCO DI TRIONFO

Erected after Palladio's death but possibly to his designs.

VILLA ROTONDA

Palladio's famous villa, not strictly a town building but close to Vicenza. On it several English houses were based.

GARDEN PAVILION

This pavilion by Palladio in the public garden at Vicenza might equally be an Adam pavilion in an eighteenth - century English garden.

side of Palladio was seldom imitated by his staider and often humourless disciples in England; and where we remark, for instance, similar reclining figures over the window pediments in Basevi's Belgrave Square houses, we are inclined to suppose their presence due to nineteenth century caprice rather than to any very serious understanding of Palladio's technique.

Palladio's influence in England

It is a commonplace that, whereas Palladio was forgotten on the continent soon after his death, in England he became the acknowledged source of that school of Classic Architecture which persisted and predominated for two centuries. In his own country, in France, Spain and in Germany, Palladio's influence was negligible; perhaps because he flourished at a time when the great architectural swing of the Renaissance pendulum had practically expended its vigour in those more sophisticated countries and the Baroque movement had already set in. In northern England, where continental innovations were accepted slowly, the Baroque has hardly been felt at all, and this fact can be attributed to the accidental existence of Inigo Jones, who completely forestalled its arrival in these islands by his having alighted upon the palaces of Palladio at Vicenza during a chance tour of discovery in northern Italy. When Inigo Jones visited Italy in the reign of James I the Renaissance style of building was flourishing in England. Indeed it was at its zenith. Vast new palaces, such as Hatfield, Audley End and Bramshill were springing up to prove that the Renaissance in England showed no sign of abatement. On the contrary they merely instanced that the work introduced at Henry VIII's Italian Hampton Court and German Nonsuch Palace nearly one hundred years previously was being perfected and stabilized. The return of Inigo Jones in 1619, his head teeming with his discoveries at Vicenza, caused a complete architectural revolution in Great Britain. The Renaissance, the Jacobean style, was to be utterly routed.

Foots Cray Place and Mereworth, Kent, both built in imitation of Palladio's Villa Rotonda.

We may truthfully say that from the date of Inigo Jones's Banqueting House in Whitehall (c. 1620) down to that of the distinctly Classic early Victorian Queen's Hotel, Cheltenham, architecture in England was off and on a live and inspired art. Throughout this period, from James I's reign down to Victoria's, the Italian Palladio rather than the Englishman, Inigo Jones, was regarded by successive architects as the creator of the English Classic. The exclusive acknowledgement of Palladio's pre-eminent authority must be accepted if the unbroken continuity and greatness of the English Classic style is to be appreciated. So far were the English architects still strangely uninsular. Maybe they inherited from their Renaissance forebears the national lack of confidence in English architectural inspiration. No matter what the reason, proof lies in the fact that successive English architects did contrive to go literally straight to Palladio as the fountain head itself. They were not content to develop on purely insular lines as did the medieval builders in Britain down to Tudor times. Further, political vicissitudes indirectly assisted to strengthen the Italian, and hence the Palladian, culture at the expense of the French; for since the English Civil Wars right down to Napoleonic times relations with France, when not positively dangerous, were normally difficult and uncomfortable. This meant that the English tended to turn away from France and consequently towards Italy as the source of their artistic inspiration.

In consequence we find that nearly every prominent architect of the 17th and 18th centuries made an initial pilgrimage to northern Italy to study the actual works of the great master. Inigo Jones had been to Vicenza twice. Lord Burlington considered it essential for William Kent to complete his architectural training in Italy before he was allowed to make his *debut* under that great nobleman's coveted patronage. James Gibbs even went to study under Fontana, the pupil of Bernini. Colen Campbell likewise went to Vicenza to "finish off" and returned to build Mereworth Castle in Kent in imitation of the Rotonda and to publish in 1715 his Vitruvius Britannicus, a book that was to become the 18th century text book on Palladianism. Sir William Chambers paid his youthful respects at the shrine. So did Robert Adam (who literally recreated Palladian temples which he renamed orangeries when he returned home) Sir Robert Taylor, and, in fact, every Georgian architect of distinction. They all came back freshly imbued with the spirit of Palladio which they translated anew into their own work. All were the lineal descendants of Palladio. From Inigo Jones the English modifications were inherited only, and by no means the bare bones.

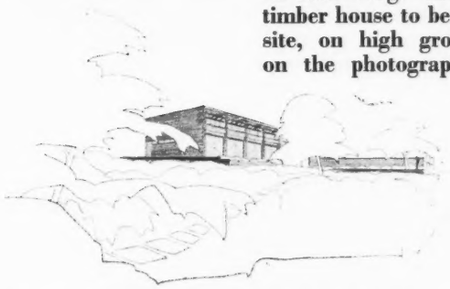
Wren probably was the single exception to this rule. He never went to Italy nor studied his Palladio first-hand. He alone was influenced firstly by the French of Louis XIII before the prolonged French hostilities broke out (there are obvious affinities between St. Paul's and the Val de Grace) and latterly, of course, by the Dutch style. In consequence, Wren's architectural consanguinity with the 18th century masters was slight in contrast to Jones's. It is strange how negligible was the influence of this colossal and prolific mind upon subsequent architects of note. Apart from Gibbs, in his ecclesiastical work, only the lesser vernacular architects, whose names are mostly unknown, seem to have followed along the Wren tradition. Talman, his contemporary and rival, was actually a closer link between the 18th century and the introducer of English Palladianism.

It is recognized that the Classic persisted in England until at least the first years of Queen Victoria's reign. If, generally speaking, Classical work was not necessarily Palladian, it can all certainly be attributed indirectly to Palladio's influence. What ultimately killed it there is no need to speculate here. Some will say that it was the neo-Grecian style, and that the publication by Stuart and Revett of the "Athenian Antiquities" as early as 1762 had set the seal upon Palladianism. The book undoubtedly brought about a portentous fashion for Grecianism which Robert Adam was the first to perfect and which Soane, Smirke and others elaborated. Others will say that it was the Gothic Revival and will point an incriminatory finger at Strawberry Hill. It does not concern us.

The orangery at Shardeloes, Bucks., built by Robert Adam in 1760: nearing the end of the Palladian tradition.

MODERN ARCHITECTURE IN THE SUSSEX LANDSCAPE

In 1935 Serge Chermayeff submitted to the Uckfield Rural District Council plans for a timber house to be built for his own occupation on a rural site near Halland, Sussex. The site, on high ground overlooking the South Downs, is in the centre of the horizon on the photograph above, which is taken from the nearest stretch of main road.



The Council, however, refused to sanction the plans.

The house, as the photograph shows, was to be in an isolated position, with no close neighbours with whose design it might in other circumstances have been good manners to conform, and had been designed with the greatest care in relation to its landscape setting. The Council's grounds for rejecting it were, however, that the design was " unsuitable in the particular position chosen." According to the usual procedure in such cases the architect appealed to the Minister of Health, who is empowered to arbitrate on disputed cases under the Town and Country Planning Act.

The Minister appointed an Inspector who held an inquiry at the Council Offices at Crowborough.

Apart from expressing their general dislike of the design, the Council made these two points : in the words of the Chairman, giving evidence at the inquiry, " Do you think it is right to suggest building a house in wood in a county where the materials are brick and tile ?" ; and " the flat roof is out of keeping with existing neighbouring buildings." In answering the first point it was only necessary to mention the important local weatherboarded timber tradition, illustrated on the right, ★ with which the Chairman was apparently not acquainted although it is very characteristic of both Sussex and Kent. In answering the second point the architect referred to the horizontal sky-line of the Regency house, of which there are numerous beautiful examples in the neighbourhood, and mentioned at the same time that the building in which the inquiry was being held, Crowborough Municipal Offices, illustrated on the right, ★ itself had a horizontal roof-line. The other point that was raised by the inquiry, one that provides a permanent anomaly in the administration of the Town and Country Planning Act, was that of the design of houses in the neighbourhood that had been approved by the Council. Photographs of some of these, illustrated on the right, ★ were submitted as evidence and they suggested that, far from using their powers under the Act to insist on a high standard of design, the Council were using them to prevent designs that were superior to the standard which they themselves accepted.

The result of the inquiry was in the architect's favour.

The Ministry saw nothing to object to in the plans and the Council therefore were compelled to pass them. The architect was thus allowed to proceed with his scheme, but only after considerable delay and after the expense of collecting evidence to substantiate the merits of his design at an inquiry. Such is all too often the experience of the modern architect who designs a house. The

★SUSSEX HOUSES IN THE LOCAL TIMBER TRADITION

★THE FLAT ROOF OF THE CROWBOROUGH MUNICIPAL OFFICES

★TYPICAL HOUSES IN THE NEIGHBOURHOOD

architect, in this case a Fellow of the R.I.B.A., is better qualified than anyone to build with proper regard for the amenities of the countryside, but it is against the architects that local Councils tend to use their powers while the real culprits, the speculative builders and the local authorities themselves, are allowed to continue their destructive activities. And this is not the worst of it: an appeal, such as the architect successfully made in this case, is only possible when the district is part of an *interim* development scheme. When a town-planning scheme has been finally accepted, no appeal against the Council's verdict is possible. More of the country comes under a final town-planning scheme every year; so that, as matters now stand, local councils, on which incidentally speculative builders are strongly represented, are being brought into the position of dictators of design in an increasing area of the countryside. Their word is becoming law on æsthetic matters about which they have hitherto shown themselves singularly lacking in judgment. The house that is illustrated on the following pages was a particularly unsuitable subject for this kind of attack as it was one where the architect had tackled with rare seriousness the problem of modern architecture's relationship with its landscape setting. It may be added that the Chairman of the Council's Building Committee saw the house after it was finished and acknowledged that the Council's fears had been unfounded.

Site Planning

The original site was fully wooded to the west, sloping gently towards the south-west commanding views south, south-west and north. The house had to be placed to make the best of these views, and to sit naturally on the slope of the land.

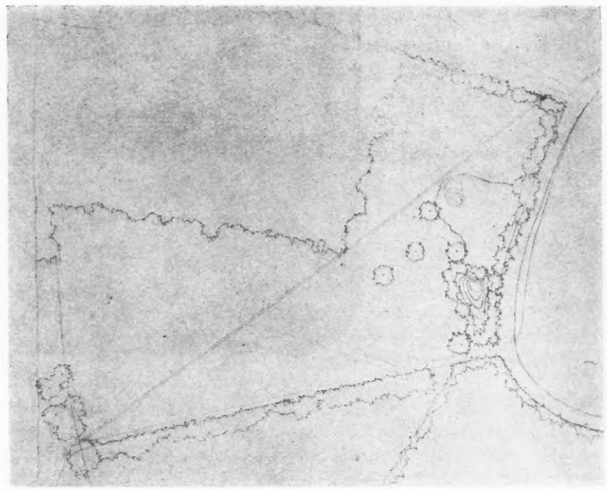
All living-rooms and bedrooms face due south. The prevailing south-west wind is largely broken by the wood. It was decided that the view and the roll of the ground from the house was worth preserving even with the disadvantage of a relatively exposed position to the southerly warm winds, a sheltering wall to the east forming the more important protection to the terrace.

It was considered essential to preserve the natural character of the landscape and to design the house to be in perfect harmony with it. With this in view the wood was thinned leaving shaded lawns and sheltered glades leading naturally up to the house and gave possibilities of enrichment by daffodil and evergreen planting, without in any way attempting to make a formal garden. Trees either attractive in themselves or to form groups in the garden, especially in relation to the architecture of the house, were carefully considered and preserved. The house was finally sited after the tree pattern had been established. A year's work was done on the garden before the house was begun: see headpiece.* The countryside comes right up to the house. Flower beds are confined to flower windows in the house itself and the immediate surroundings, a low foreground bed in the terrace and a rich border along the protective east wall. In order to create a foreground to the long distance view of Downs, a timber trellis finishes the terrace in which the Downs are framed.

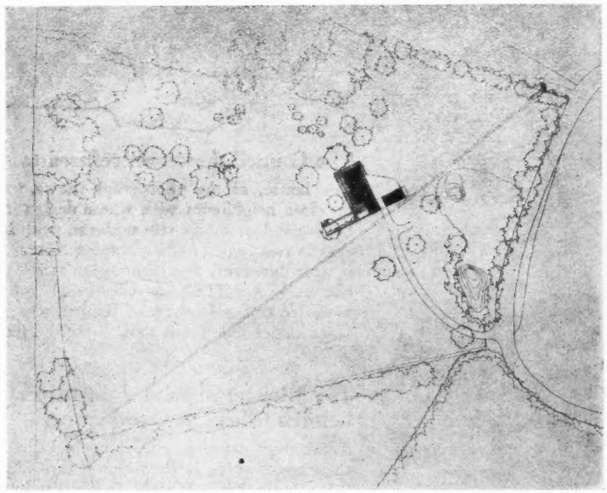
It was particularly desired to have the minimal separation between the living quarters of the house and the garden proper. This has been limited to large sheets of plate glass in sliding screens. The effect of continuity has been emphasized by the identical texture of the outside brick walls and the chimney-breast in the living-room. The exterior terrace paving is carried into the ground floor living-room. The various pergolas on the north side of the house linking out-buildings and the main block, and the open trelliswork of the balcony, are designed for creepers which will further link the house and garden.

As the three plans alongside show the actual process of building up the garden, once its character and contents had been determined, consisted first in clearing portions of the thick wood, leaving occasional trees as considerations of design demanded; secondly, in cultivating the grass between these trees so that walks of mown grass form a pattern among areas of grass left scythed and bearing bulbs in the spring (see headpiece); thirdly, in carrying out such minimal new planting as was necessary, mostly round the house. This planting is shown on the third plan, together with a scheme (not yet carried out) for additional buildings in distant parts of the estate, including a garden pavilion adjoining a tennis court on the sheltered low-lying portion between the house and the road and a guest-house with its own small formal garden behind the plantation on the east. The guest-house would be planned for sleeping purposes only as the living-rooms of the house itself have been made large enough to serve an additional number of people.

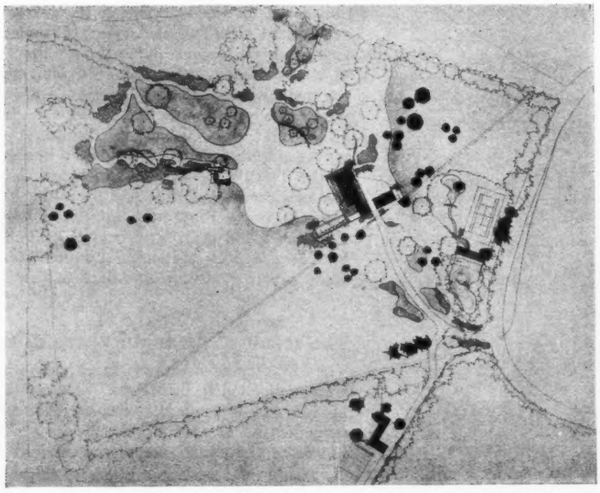
*A photograph taken in spring showing the house partially built but the garden in a mature state.



The site before work began.



The site showing the position of the house, and the clearing of the wood to extend the garden.



The site showing newly planted trees (dark), and replanted areas (grey); also a scheme for future building. *(See adjoining article.)*

HOUSE NEAR HALLAND, SUSSEX

SERGE CHERMAYEFF, ARCHITECT

Above, the house and its background of woods, photographed from the platform of the wind-pump which raises water from a deep bore-hole. The house itself is seen rising above the brick wall that shelters the terrace and the fore-court from the east. Left, a portion of the site showing the vegetation in its wild condition and the distant view, and another portion of the site after taming into a garden landscape. The garden architect was Christopher Tunnard.

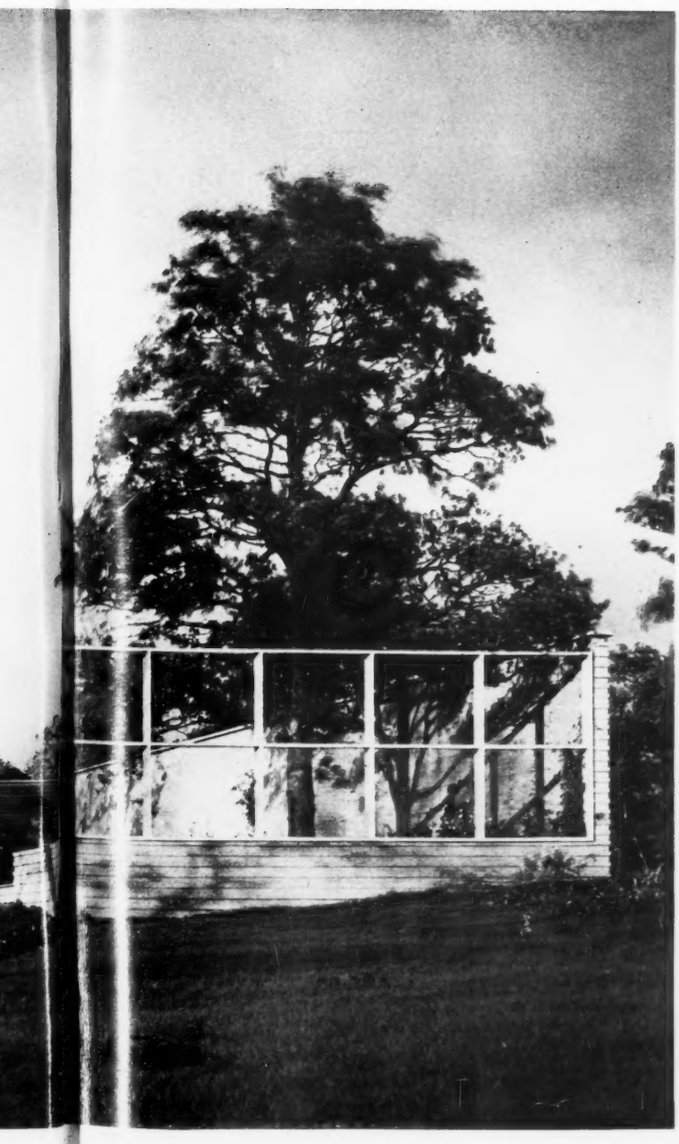
The photographs on these pages are a series specially taken for THE ARCHITECTURAL REVIEW by M. O. Dell and H. L. Wainwright, its official photographers.

The Garden Exterior

The whole structure of the house is in timber, conforming with the strong Sussex tradition. It is faced on all but the garden side with horizontal weather boarding of cedar, unpainted. On the garden front, below, the structural framework is painted cream. Large windows to the living-rooms occupy all the space within the framework on the ground floor. On the upper floor the windows are set back to provide a balcony along the whole width of the house. The photograph shows also the long terrace on the east side of the house, running at right angles to it and terminating in a trellis that echoes the design of the façade. The terrace is protected by a brick wall, which is yellow in colour and of different bonds to give variety of texture.

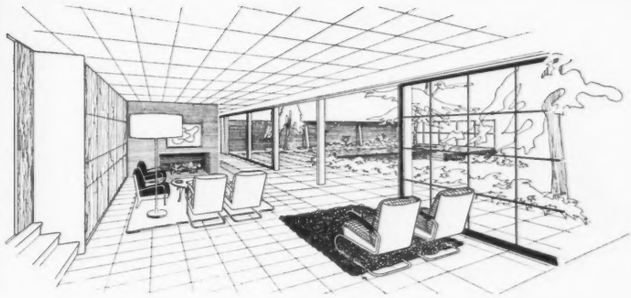
HOUSE NEAR HALLAND, SUSSEX

Right, four photographs that illustrate the close connexion between the interior and exterior design of the house : top, the house and terrace from the lower part of the garden, showing a stone-flagged path leading from the wood to the open lawn in front of the house ; second, a view looking along the terrace showing the distant view of the Downs partly framed in a white-painted trellis ; third, a corner of the house from the terrace that runs along the garden front, with the sliding window of the study open ; bottom, a view from the entrance hall looking across one end of the living-room through the large windows into the garden.

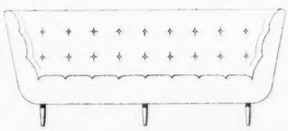


The Terrace

The distant view to the south over the Downs is seen from the terrace, through a large white-painted wood trellis, above, whose lower compartments are filled with plate glass as a screen from the wind. The end of the terrace is marked by a stone carving by Henry Moore, specially designed for this setting. Below, a detail of the carving from the garden side and a view of the terrace at night through the open living-room windows.



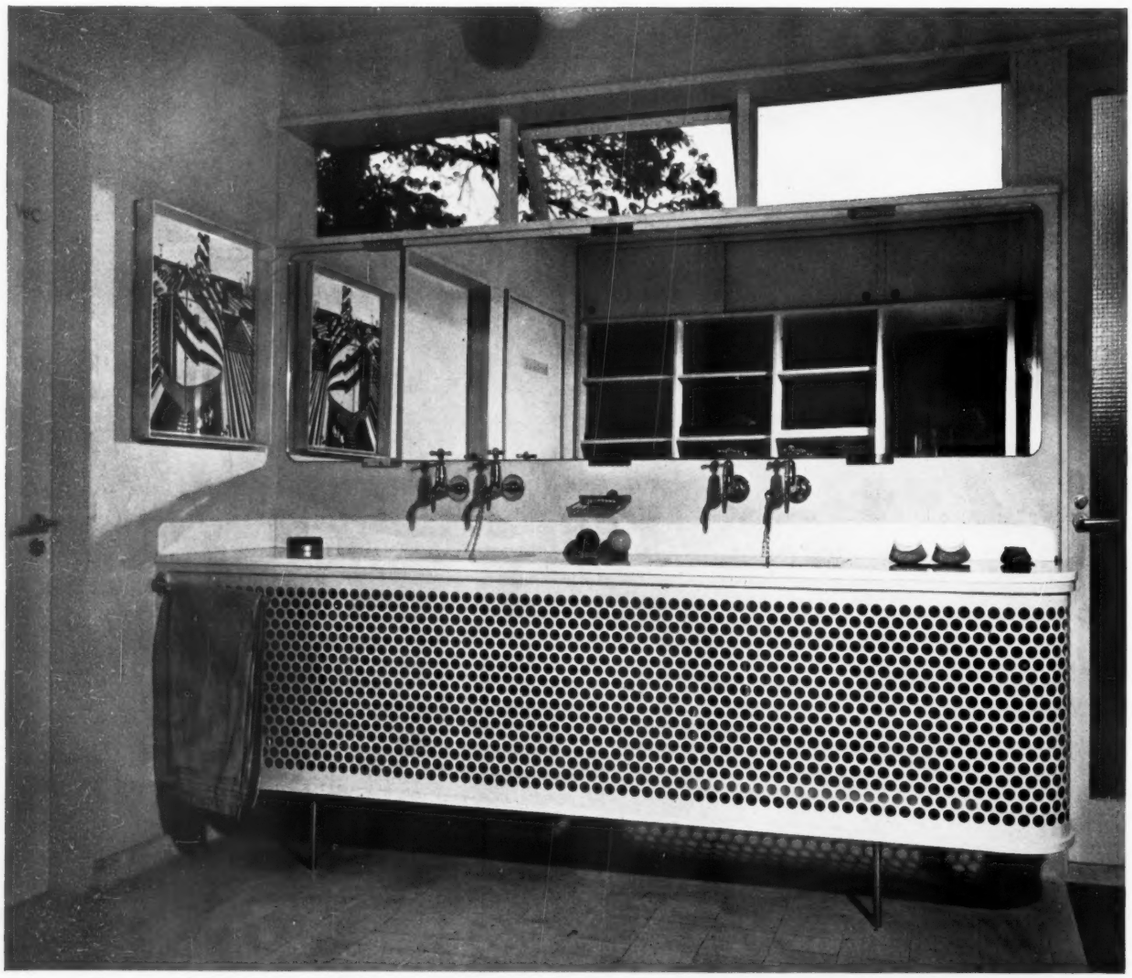
The Living-Room



The main living-room in the centre of the garden front occupies three out of the six bays into which the front is divided by the structural framework. The other bays are occupied by the study and dining-room, but there is direct communication between all three rooms. Above, a view from the study end of the living-room showing at the far end the way through to the dining-room: and the reverse view looking from the dining-room. Note in the former photograph the fireplace wall of the same bricks as the terrace wall outside. Left, the specially designed fireside settee, upholstered in blue. Below, a detail of the living-room showing the sliding windows open to the terrace. The paintings are by Ben Nicholson and John Piper.

The Dining-Room

Left, looking across the dining-room showing one wall (which backs the living-room fireplace) of yellow brick, and the other composed of a cupboard fitment with a hatch through to the kitchen (see page 73). The other two walls consist of a large sliding window giving on to the terrace, and a smaller double window containing tropical plants, specially heated and ventilated. Right, the dining-room from the terrace, showing also the door to the garden-chair store.

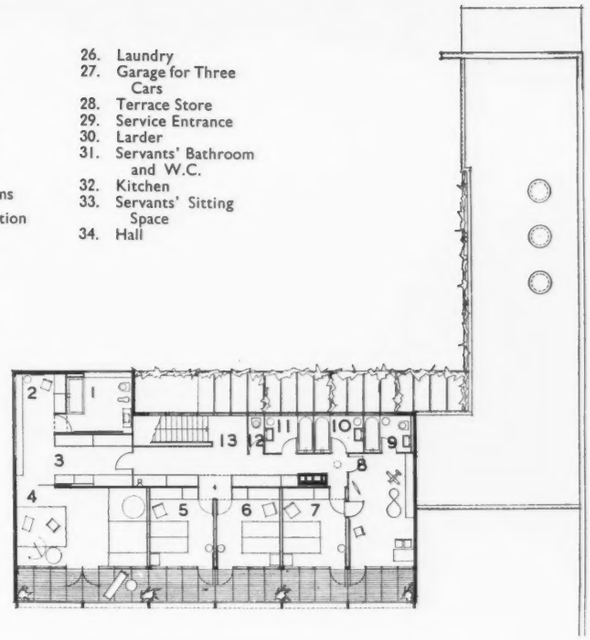


The Ground Floor Cloak-Room

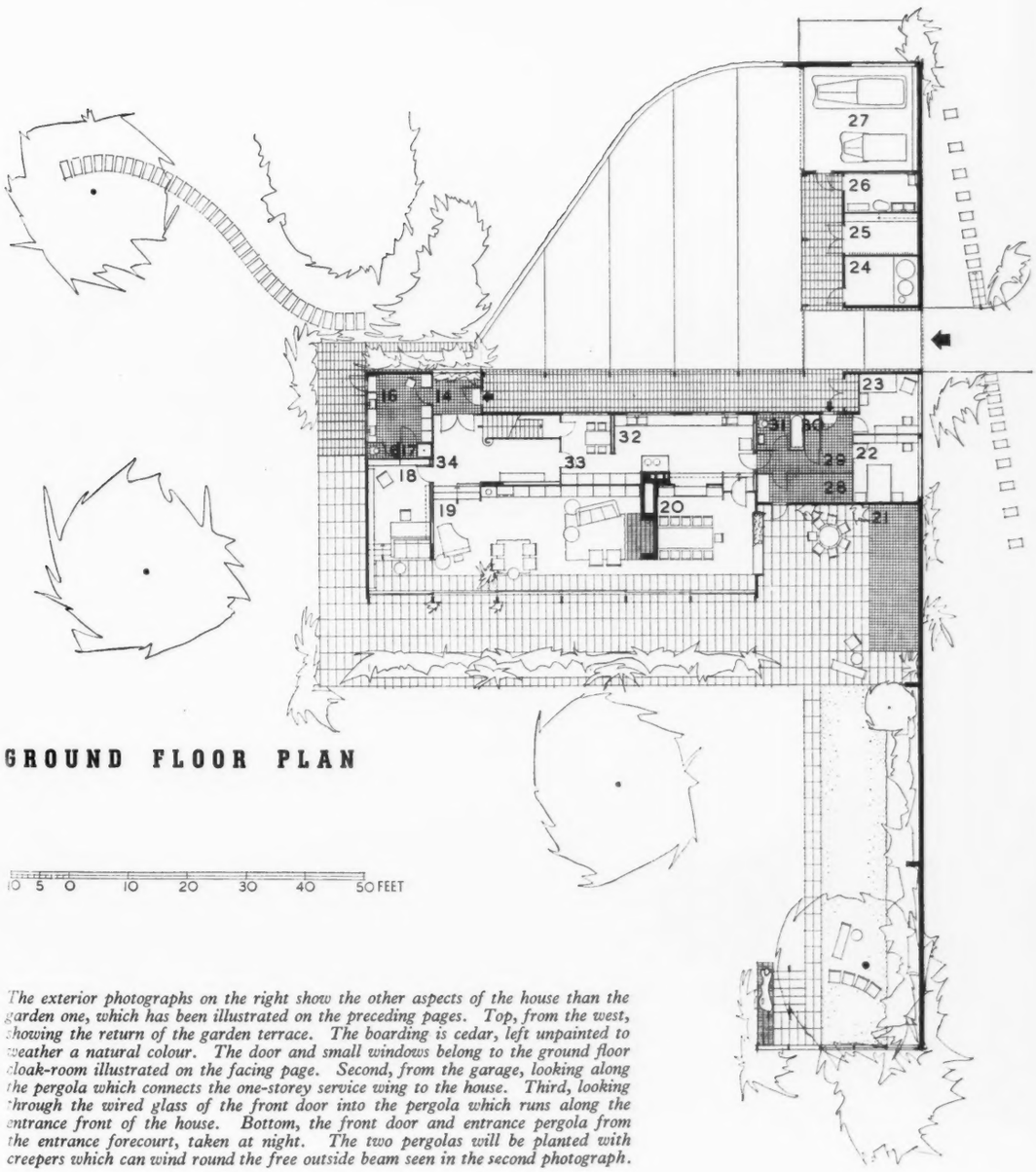
The house can be entered direct from the garden through the glazed door on the right of the photograph above. This cloak-room serves at the same time as a flower room, and is equipped with a deep sink. This and the wash-basin are screened in front by perforated metal sheeting, painted white. On the left are a shower cabinet and w.c.

KEY TO PLANS

1. Owner's Bathroom
2. Owner's Dressing Room
3. Owner's Dressing Room
4. Owners' Bedroom
5. Guests' Rooms
6. Guests' Rooms
7. Night Nursery
8. Day Nursery
9. Nursery Bathrooms
10. Guests' Bathrooms
11. Guests' Bathrooms
12. W.C.
13. Stair Hall
14. Vestibule
15. Cloak-room
16. W.C.
17. Shower
18. Study
19. Living-Room
20. Dining-Room
21. Pool
22. Servants' Rooms
23. Servants' Rooms
24. Water Purification Plant
25. Garden Store
26. Laundry
27. Garage for Three Cars
28. Terrace Store
29. Service Entrance
30. Larder
31. Servants' Bathroom and W.C.
32. Kitchen
33. Servants' Sitting Space
34. Hall



FIRST FLOOR PLAN

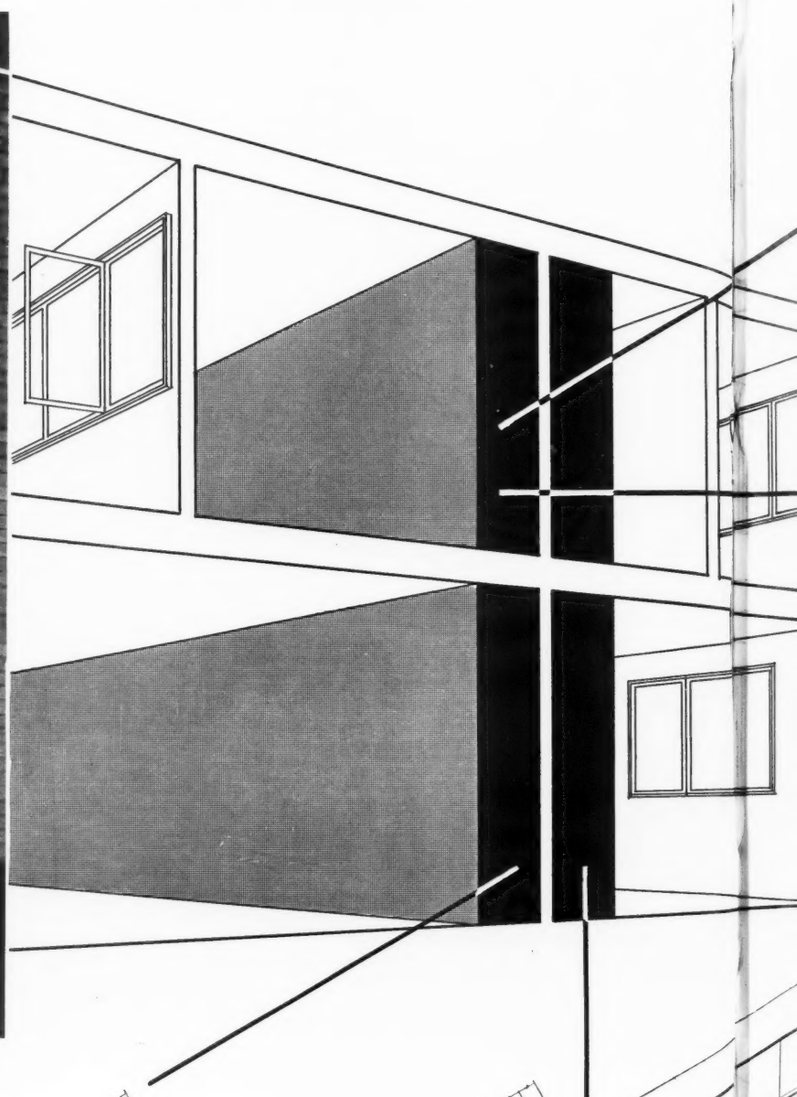


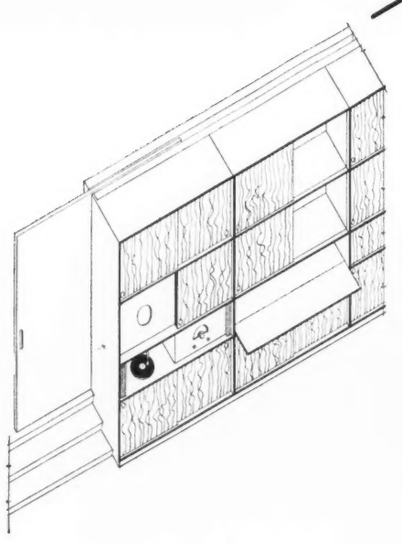
GROUND FLOOR PLAN

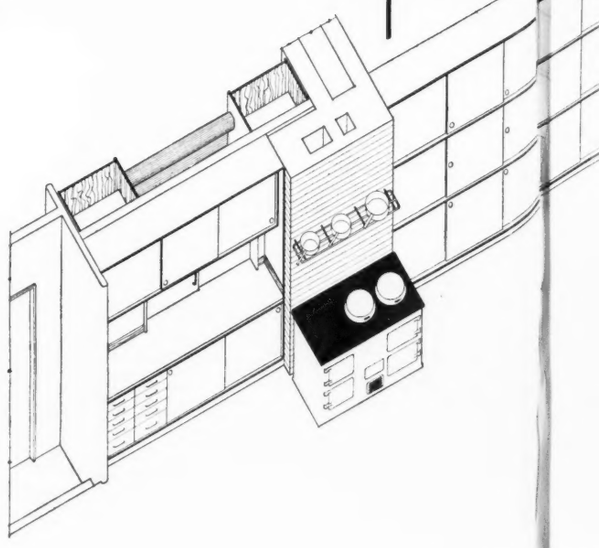
The exterior photographs on the right show the other aspects of the house than the garden one, which has been illustrated on the preceding pages. Top, from the west, showing the return of the garden terrace. The boarding is cedar, left unpainted to weather a natural colour. The door and small windows belong to the ground floor cloak-room illustrated on the facing page. Second, from the garage, looking along the pergola which connects the one-storey service wing to the house. Third, looking through the wired glass of the front door into the pergola which runs along the entrance front of the house. Bottom, the front door and entrance pergola from the entrance forecourt, taken at night. The two pergolas will be planted with creepers which can wind round the free outside beam seen in the second photograph.

The Basis of the Plan

The accommodation of the house can be divided (as in the diagram on the right) into zones, which are separated from one another for acoustic as well as for planning reasons. The method used is to plan the living and sleeping quarters on the south, and services, kitchens, bathrooms, etc., parallel with them on the north, dividing the two by a cupboard spine, running the whole length of the house. This provides, as shown in the drawing below, generous storage space in every room and ideal sound insulation at the same time. The whole of the living quarters on the ground floor can be thrown together as one free space and can also be thrown wide open to the garden, the effect being one of remarkable spaciousness. All the living interiors are designed as a simple background, sober in colour, for the display of contemporary works of art. The latter, and the bright colours of upholstery etc., provide the points of decorative emphasis.

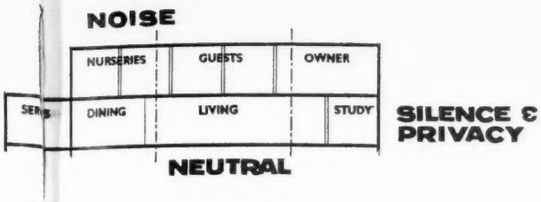


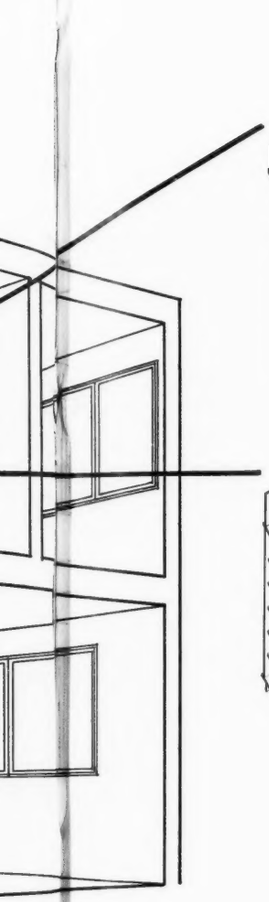


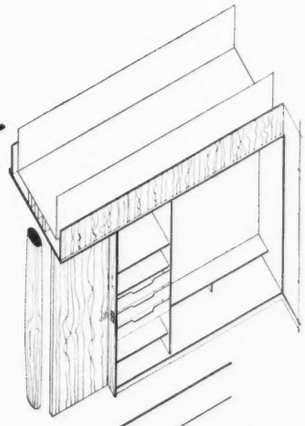


Living Room side of central cupboard in walnut: loud-speaker: radiogram behind horizontal action tambour shutters: Drop-down flaps for record storage and drinks with lino tops. Storage cupboards and drawers under: display niches over.

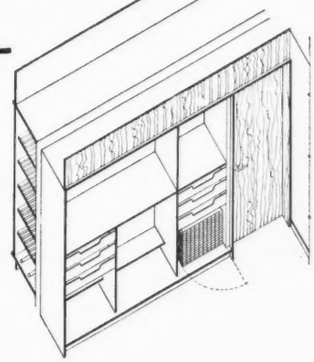
HOUSE NEAR HALLAND, SUSSEX



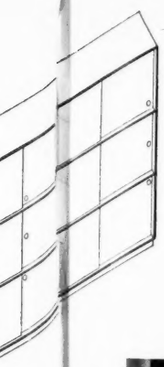




Standard bedroom cupboard: doors veneered in a different wood in each room, viz. sycamore, birch, chestnut, elm.



Nursery variant for two small children: swivelling laundry basket: convertible to standard: airing cupboards opening to landing.

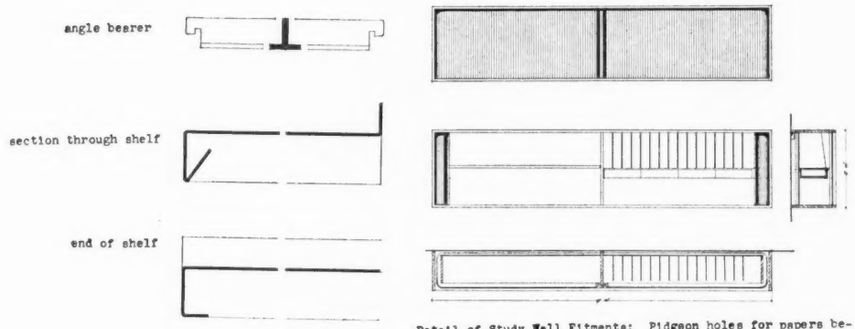


Kitchen side of ground floor cupboard tract: sliding doors to standard units of storage space: spray enamelled.

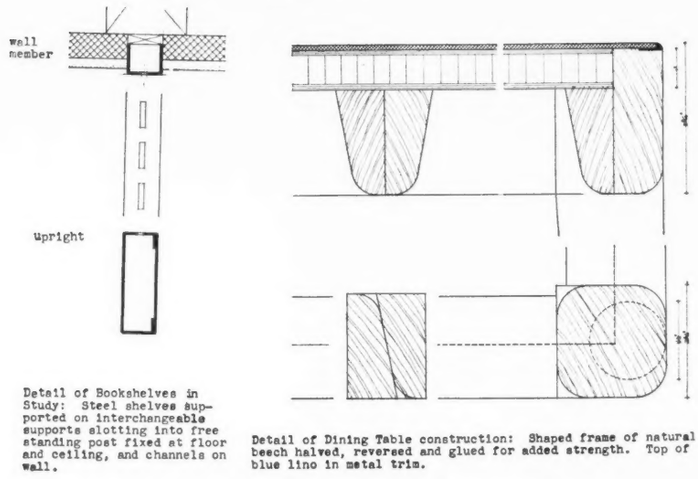
Above, interiors of a typical guest-bedroom, of the owner's dressing-room on the first floor and of the kitchen, showing in each case the range of cupboards that forms a continuous spine along the centre of the house.

Below, the living-room side of the same cupboard spine, designed to display works of art in a series of compartments with sliding fronts. The centre photograph shows the whole width of cupboard with one variation of display, that on the left shows the end portion with the radio-cabinet open, and that on the right shows the other end with a possible alternative arrangement of display compartments and with the cocktail-cabinet open.

Although the living-rooms generally, running along the south side of the house, are treated as one free space, the study, which occupies the end bay, can be closed off for privacy by a sliding door and can also be entered direct from the hall. Below are sketches of some of the specially designed furniture. The steel shelving occupies the whole of one wall and is adjustable in height, between free standing uprights spaced at equal intervals. The shelves are cellulose enamelled ivory and the uprights blue. The other two walls are panelled in walnut. The table is of similar construction to that in the dining-room, also illustrated on this page. The end of the navy blue upholstered settee on the lower level, shown in the photograph below, opens to form a storage cabinet for drawings. A heating panel is placed beneath the stone paving that continues from the terrace outside into the front portion of the study.

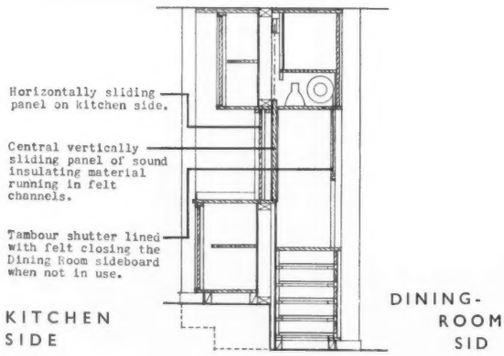


Detail of Study Wall Fitments: Pidgeon holes for papers behind horizontally sliding tambour shutters. Walnut lined sapele.



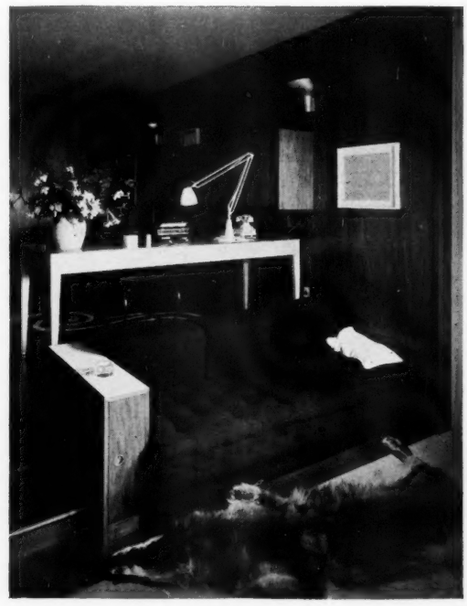
Detail of Bookshelves in Study: Steel shelves supported on interchangeable supports slotting into free standing post fixed at floor and ceiling, and channels on wall.

Detail of Dining Table construction: Shaped frame of natural beech halved, reversed and glued for added strength. Top of blue lino in metal trim.



Dining-Room Fitment

The open type of planning on which the design of the house is based demands that special care be given to insulation. Between the dining-room and the kitchen a service hatch fitment has been designed with triple protection against noise and cooking smells. This fitment forms part of the continuous spine of cupboards that runs the whole length of the house. The dining-room and kitchen sides are illustrated above, together with a sketch of the construction.

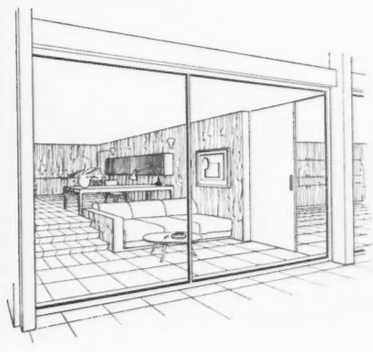


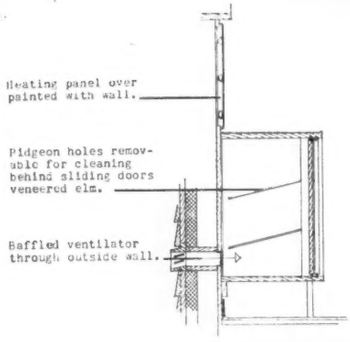
The Entrance Hall

Above, the entrance hall from the door to the living-room looking across to the entrance vestibule, whose window, screened at night by a Venetian blind of natural pine, has a large internal flower box, lined with lead and drained to the outside. The front door is to the right of this window and the door to the ground floor cloak-room to the left. The vestibule floor is of pale buff tiles, with an inset mat and ceiling of red. The hall floor is of polished cork. The staircase treads and risers are also in cork with balustrade of Australian silky oak.

The Study

The study is planned on two levels so that the back portion, which contains a writing table and built-in storage cabinets, has a view of the garden over the front portion connecting with the living-room. The side wall is covered by adjustable steel bookshelves.



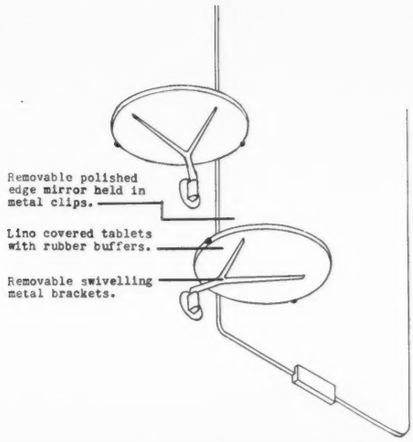


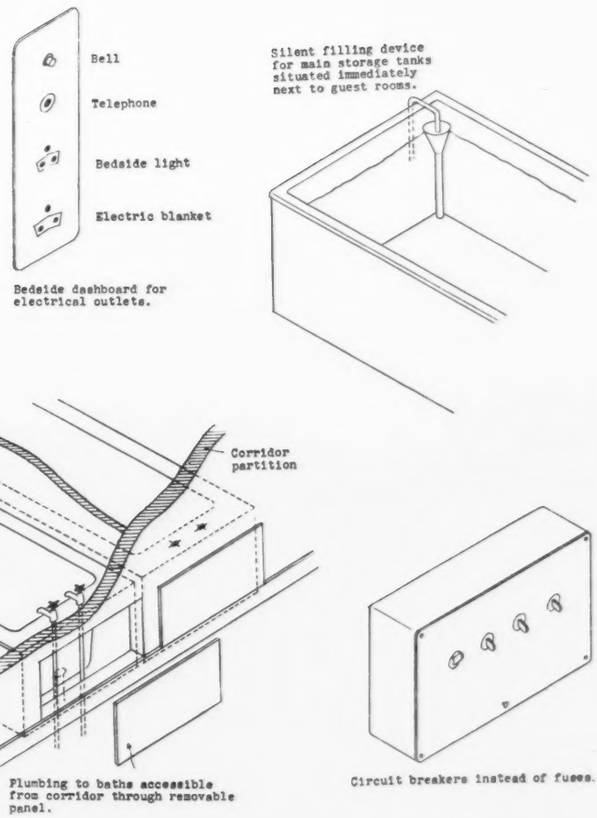
The Main Bedroom Suite

The owner's bedroom occupies two bays of the façade and is reached through a dressing-room at right angles to it, from which is also reached the owner's bathroom at the back of the house. This whole suite is planned round a vestibule containing built-in wardrobes (see pages 70 and 71). Above, the bedroom, showing the windows covered at night by a Venetian blind and the two inner walls faced with elm veneer. Left, a detail of the shoe cupboard in the dressing-room. Below, the other end of the bedroom showing the balcony and a swivelling mirror with cosmetic table on wheels; the dressing-room, seen from the bedroom with the man's dressing equipment at the end; and (on the facing page) the owner's bathroom.

The Bedroom Floor

The bedroom accommodation, like the living-room accommodation, occupies the whole of the south side of the house and is separated from the corridors and bathrooms etc. on the north side by a continuous cupboard (see pages 70 and 71) which provides both insulation and wardrobe space in bedrooms and linen and other storage space accessible from the corridor. The guest bedrooms are of minimum size as they are only intended for occupation over short periods, but their built-in wardrobes leave adequate floor space. Their standardized built-in furniture includes the dressing-table mirror fitting sketched below. Each guest bedroom, and the nursery, occupy one of the structural bays. The owner's bedroom occupies two and forms part of a suite as described on the facing page. All the bedrooms give on to a balcony, right, overlooking the garden. The balcony deck, in order to make it usable immediately after rain, is finished with teak slats allowing the water to run away beneath them.





The sketches above show four points of technical interest in the equipment on the bedroom floor. The " dashboard " illustrated, which occurs in each bedroom, can be seen beside the owner's bed in the upper photograph on the facing page. The circuit-breakers installed on each floor replace the usual fuses and are automatic in action and quickly identifiable.

Construction and Services

1. Construction

The whole building has been designed on a structural unit of 2 ft. 9 ins., which was found to be the most convenient integral unit within which available standard pre-fabricated materials and structural timber would fit. The east wall, terrace retaining walls, foundations and basement are of brickwork. The house proper is entirely of timber construction. Large members of jarrah have been used like steelwork, giving large spans in order to allow for the freedom of sub-division of the interior space and large openings to the south; only the west, east and north walls being of stud framing 5 ins. by 2 ins. Jarrah was selected because of its hardness, giving a good finish, lack of movement and freedom from fault. The assembling of this framework is of considerable interest. In order to eliminate as largely as possible labour on the site, special erection drawings were prepared and set out at the factory to provide accurate dimensions from which schedules were prepared, the various items being indexed to read with the drawings. A special system of assembling was devised by means of steel angles and specially designed stirrups enabling main structural members to be pulled together gradually as the timber dried out, on a series of bolts which were afterwards covered with wood pellets. The result has been very fine fitting and lack of movement with possibility of squeak. The floor boards, laid diagonally, act as a bracing beam against lateral movement.

2. Insulation

To obtain the maximum thermal insulation and the consequent low maintenance cost of heating in the winter and for coolness in the summer, the timber of the outer wall was in addition insulated with 1½ ins. of wallboard between studs. The outer walls consist of 4 in. Western Red Cedar siding, asphalt paper, 1 in. thick diagonal boarding on 5 in. by 2 in. studs and 1½ in. wallboard between studs, the inner face of the wall being finished with ⅜ in. wallboard, plastered. The roof is also insulated with 1½ in. wallboard. The sound insulation, extremely important in so compact a plan, was obtained by isolating all inner partitions from floors and ceilings with building board strips and forming them of two independent membranes with the space between lined with an acoustic blanket. The elimination of sound at source was obtained by using cork floors throughout the house, with the exception of the two entrances and garden store room. Additional insulation against air borne sound is of course provided by the large air space of the main cupboard spine. Acoustic correction necessitated by the large glass area in the living quarters was obtained by absorbent tiling on the ceiling which has the additional advantage of further insulating the living quarters from impact or air borne sound from the rooms above.

3. Services

The house is centrally heated with radiators in passages and stairways, and radiant panels in living-rooms and bedrooms. In the living-rooms the panels are situated under the paving and immediately over in the ceiling to compensate for heat loss through the large glass area. The radiant panels in bedrooms cover the whole of the apron under the windows. Both the central heating and domestic hot water is supplied by a gravity feed boiler, with a thermostatically controlled blower, burning fuel automatically fed to the boiler room down the sloping floor of the fuel store. A particularly large hot cupboard is provided having medium heat storage for linen and a high temperature cupboard for quick drying and airing.

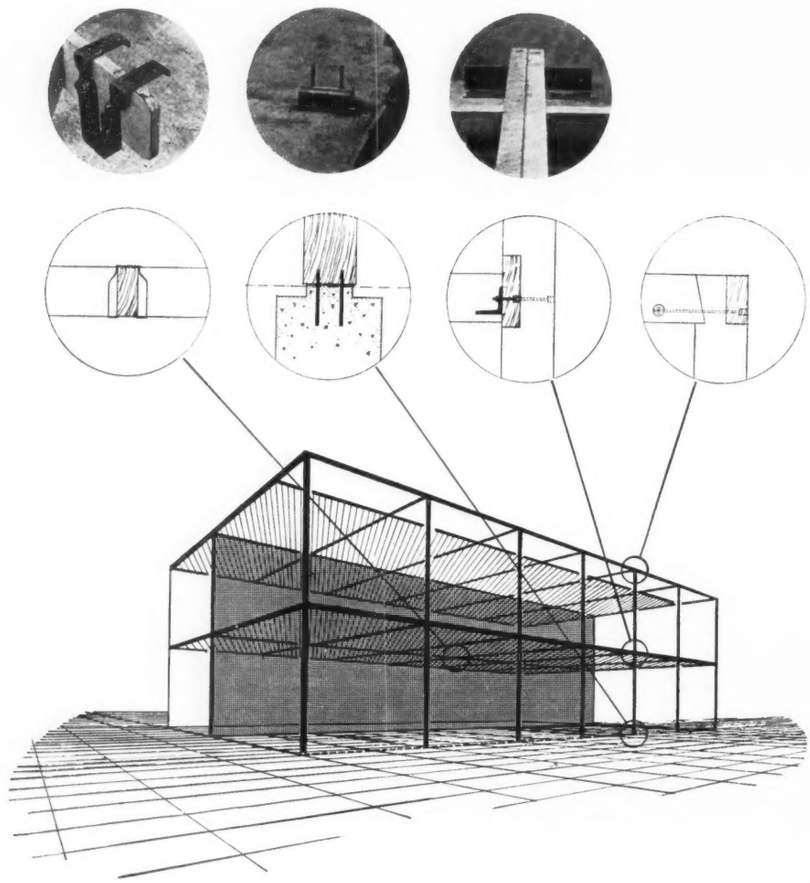
The only fireplace (to burn large logs off the estate), is in the living-room, and has a flue specially designed against down draught. The fireplace interior and hearth is in teapot brown engineering bricks with white pointing and a stainless steel log bar.

The cooking range has its own independent fuel storage. An electrical point is provided in the kitchen for an auxiliary electric cooker or grill. The main flue stack incorporates a vertical vent duct to the cooker.

The laundry is all electric, and is equipped with a Rotary Washer and Spin Dryer, and Rotary Ironer, in which all the laundry of the house can be done without resort to clothes lines.

The vegetable sink in the kitchen has been fitted to receive at a later date a refuse disposal unit. Kitchen dustbins are housed in an easily accessible cupboard under the stainless steel top running the whole length of the kitchen, larger dustbins being housed in a special cupboard outside the service entrance, with special ventilation.

The built-in radio in the living-room with an automatic change gramophone turntable, has an extension loudspeaker to the owner's bedroom with a local volume control and switch which can be operated from the bed. A special aerial conduit is provided and a horizontal aerial with an interference eliminator installed as part of the essential equipment of the house



The diagram above shows the house reduced to its bare structural framework. The important constructional details, which are also described in the article on this page, are illustrated by the small circular sketches and photographs.

Roof: gravel on threeply bituminous roofing felt laid to a single fall on screeded 2" insulating material.
Coping: lead with flush joints lead dotted on to painted deal.

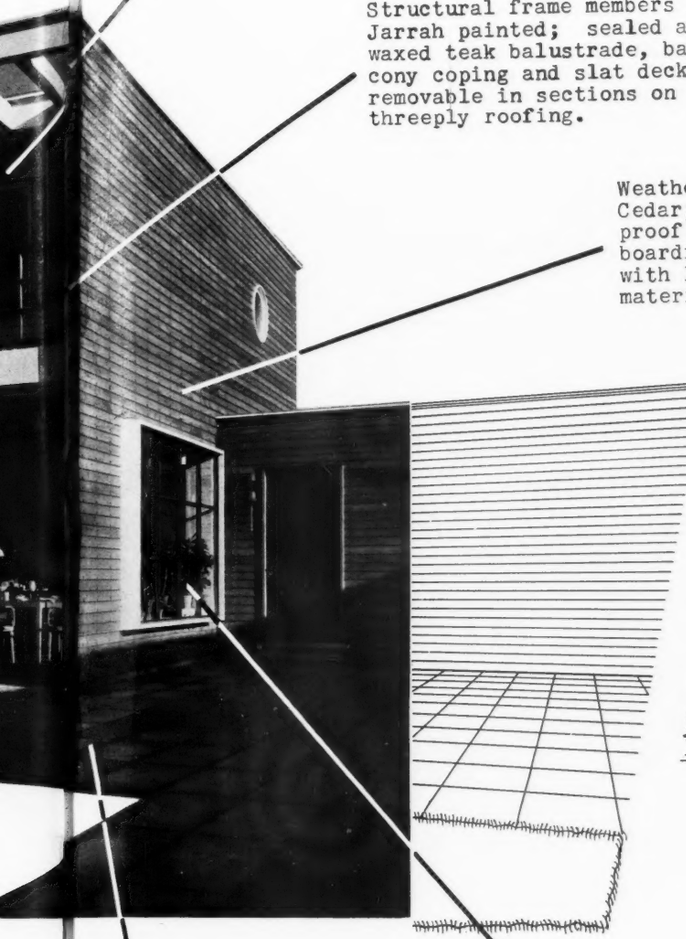
Sliding windows with ¼" plate glass cemented into a teak frame for additional strength, running on a bottom track of bronze with bronze spring weather checks top and bottom.

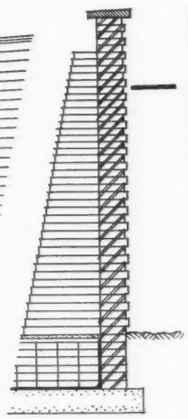
Wood louvre ventilators for permament ventilation baffled in wall thickness against direct draught and whistle. Window frames and linings in teak painted.

Structural frame members of Jarrah painted; sealed and waxed teak balustrade, balcony coping and slat deck removable in sections on threeply roofing.

Weather board of Western Red Cedar, copper nailed on waterproof paper; T & G diagonal boarding on 5" x 2" studding with 1½" additional insulating material between studs.

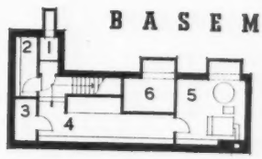
Cold water storage tanks of wood lined with lead occupy the free space above guest room cupboards. A solid sycamore post with skirting of stainless steel partially takes their weight. It is shaped as below.





Buttressed wall of buff brick with alternate courses recessed and horizontal joints raked out. Cream coloured artificial stone coping. Pool lining of 6" x 3" blue frost-resisting tiles.

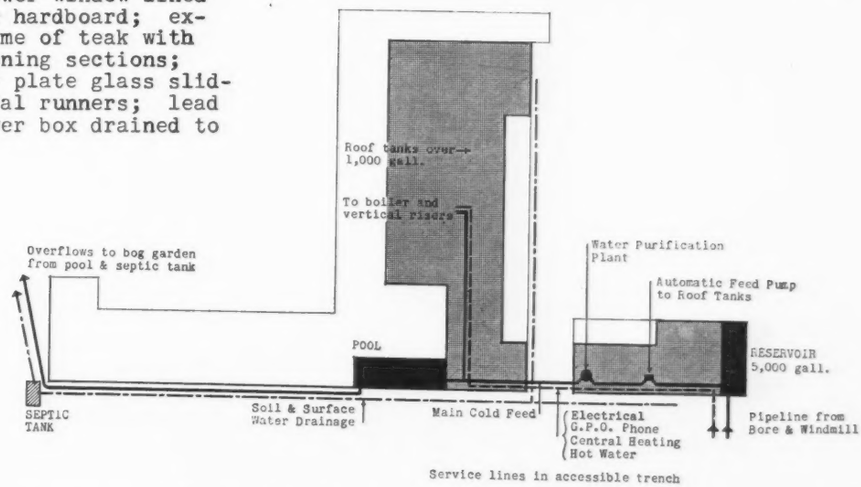
BASEMENT PLAN



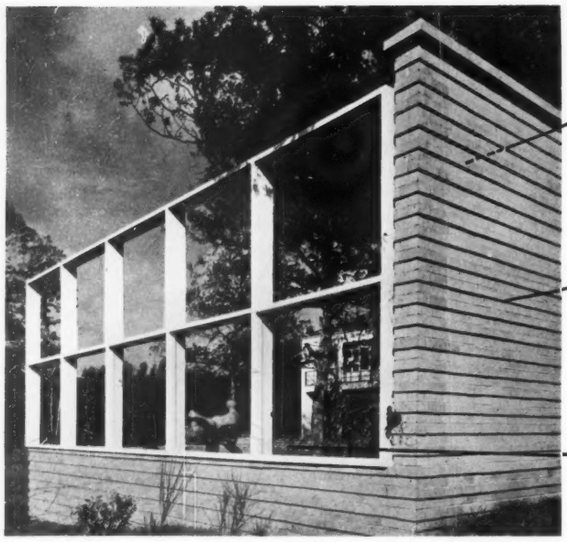
1. Fuel Store
2. Wine Cellar
3. Trunk Store
4. Corridor
5. Boiler Room
6. Fuel Store

Buff artificial stone paving of uniform size laid on a bed of ashes with 1" open joints for planting; edging stones cemented to terrace retaining walls.

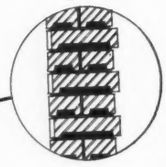
Double flower window lined with super hardboard; external frame of teak with bronze opening sections; internally plate glass sliding in metal runners; lead lined flower box drained to outside.



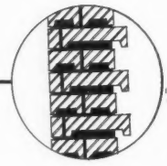
The service lay-out plan above shows the main services coming into the house through the outbuildings in a trench duct with removable covers feeding straight into the basement, from where the vertical ducts rise in accessible positions. An abundant water supply was found on the site and is pumped from a bore hole by a windmill which raises the water to a five thousand gallon underground reservoir next to the garage; from there an electric pump controlled by an automatic float switch in the house-tanks pumps the water through a conditioner plant. The overflow is taken to the ornamental pool on the terrace, from there in its turn through a system of land drains into the bog garden to the south, so that no water is wasted. In order to get an ample and quick supply of bath water, large bore pipes and wastes are installed. The whole of the plumbing has been carried out in copper with welded joints.



West side of the wall showing recessed headers acting as ties: projecting bricks for rock plants and retaining buttresses.



Section of wall with ⅛" projecting alternate courses on the east side: horizontal joints raked out.



Terrace retaining wall section. 1" projection of alternate courses to give a more pronounced texture

The Terrace Wall

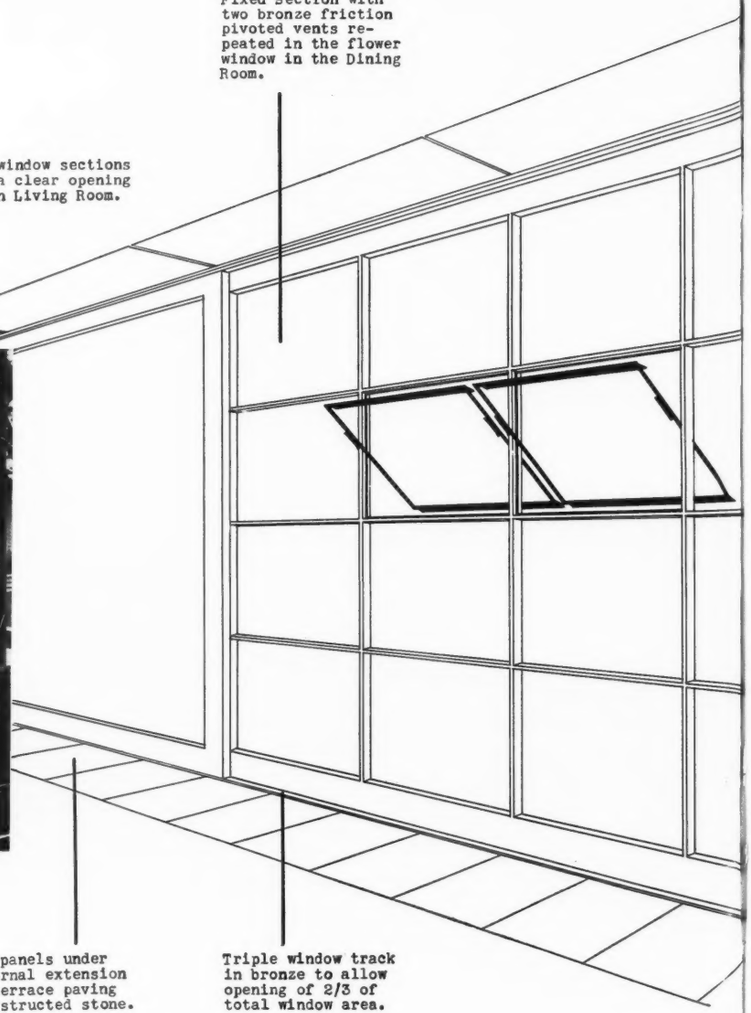
The long wall, at right angles to the house and sheltering the terrace from the east, is designed in several bonds to give variety of texture. The outside (or eastern) face is ribbed with every alternate course projecting horizontally. Recessed headers act as ties and at the same time give an interesting diagonal texture on the inside face (see the small circular photograph). This face is also relieved by sloping buttresses.

Fixed Section with two bronze friction pivoted vents repeated in the flower window in the Dining Room.

Bevel-edged tiles for acoustic correction left untreated.

Flush heating panels with expansion joints at 5'6" centres.

Sliding window sections leaving a clear opening of 22' in Living Room.



Heating panels under the internal extension of the terrace paving of reconstructed stone.

Triple window track in bronze to allow opening of 2/3 of total window area.

Sliding Windows

Although all the windows are of wood, the use of teak for window-frames has enabled the sections to be fined down to almost steel-frame dimension. The large sliding doors to the living-room are particularly interesting, each sliding section being 11 ft. by 9 ft., divided into two sheets of ¼ in. plate glass, cemented to the frame, the glass acting as a stiffener to the whole which runs on a bronze track. The whole range of living-room windows slides away to open the room to the terrace and garden, except for one fixed bay opposite the door, which contains hinged ventilation panes.

A NOTE ON J. N. COMPER

HEIR TO BUTTERFIELD* AND BODLEY

Although J. N. Comper, the pupil of Bodley, is probably the most distinguished and the most original of living ecclesiastical architects, and over a period of exactly fifty years has executed important work in many parts of England and Scotland, this is the first article on his work that has appeared in any architectural magazine.

By John Betjeman

No English architect is better known in cathedral close and distant rectory than J. N. Comper, few architects are less known to what has come to be called "the profession." Indeed I doubt whether many of the younger architects have even heard of him. Nor can they be expected to have heard of an architect whose work, though he has been in practice for fifty years, has been confined almost entirely to churches. Had he designed flats, town halls, libraries and banks his name would probably be more familiar to them and to the general public, for would he not have received a knighthood on the strength of his extensive output alone?

But then Mr. Comper has always been an independent architect. No letters appear after his name. The modest address in S.E.27 in the London telephone book, instead of the usual string of letters and businesslike partnership in the Bedford Square district, might lead even those who admire his work and love it, to doubt whether *that* J. N. Comper in the directory can be the great J. N. Comper whose influence has been deeper on ecclesiastical architecture than any English architect since Bodley.

When I come to discuss the personal quality of Comper's work, I will explain this modesty of address and absence of professional certificates. For the moment let us examine the development of his work. Comper is, in the opinion of many, the only considerable living architect of churches, with the exception of one or two. Supposing G. F. Bodley, George G. Scott or Butterfield had continued alive and in practice until today and supposing their minds had continued fluid, there is a possibility that they would be producing work not dissimilar from Comper's. For Comper is the logical outcome of the Gothic Revival. He has gone on from where Bodley, his master and to whom he was articled, left off. Voysey turned the domestic architecture of the Morris Movement into something which is now identified with what is genuinely modern. What Voysey did for small houses, Comper has done for churches. But the small house has varying requirements with every decade: the church—at least the Catholic Church—remains the same. So Comper's work appears less obviously "modern." Attempts at "modernism" in a church which is used for the Tabernacling of the Presence of God rather than for preaching or stunts, result only in the "modernistic." Many of our new suburban Church of England churches which are considered so daring, are, alas, for the purposes of Catholic worship only disconcerting. Contemplation is not aided by a jazz lighting fixture or spotlights on the altar or a Crucifixion in a minor New Deutsch manner.

So I fear that Comper may have had one influence in a negative direction. He may have driven less competent and more flashy architects who doubt their own ability at proportion and detail, to disregard the purpose of an English Catholic Church and to strive after obvious effect rather than mystery. When someone says of an eighteenth century church "but it's more like a ballroom" the criticism is not so destructive as was the intention of the critic. Many churches of the late seventeenth and eighteenth centuries were designed primarily as preaching houses, and a noble ballroom turned church is not distracting for listening to sermons. But when someone says of an English Catholic Church "It is more like a cinema," then the criticism goes deeper.

From all this you might conclude that Comper is an out-and-out medievalist. As such he started. But he has moved on as a result of his own convictions. "English architecture of the fourteenth and fifteenth centuries and one may add the sixteenth is, it is true, the culmination of Gothic in this country, but it is not the rock from which we were hewn, nor yet the end beyond which we cannot go. The fountain of beauty is eternal and its springs—for us equally with the whole Christian world—have their sources in the lands of the Mediterranean . . . At first [a man] seeks in youth for unity in beauty by exclusion and he ends by finding it in inclusion."* Comper goes on to describe the great influence on him derived from foreign travel. "It was the discovery that here by the Mediterranean in the museums of Rome and Sicily and amongst the ruins of Greece are to be found the same mouldings of architecture, the same turn of folds in the draperies of statues and the identical lines of decoration as in East Anglia."

So certain buildings stand out for Comper as they do for all of us, beyond mere "styles." Nor are all these buildings he admires "Gothic."

In the tabulated list of Comper's chief buildings I have tried to trace his growth, by dividing his work into dated sections according to the method of Mr. Peter Anson in his able article on Comper's work in *Pax*, a Benedictine Magazine.

As to Comper's own churches, it is hard to judge them even by the best photographs, for so much depends on their colour and atmosphere. There is a quality of reverence about them which makes a materialist lower his voice and brings the agnostic to his knees.

One's first impression on entering a Comper church is that, though this is "Gothic Revival," this is the work of an *architect*. The whole church hangs together, it is clearly planned, and the plan, but not the beauty, unfolds itself at once. "Indeed the whole church has become a lantern and the altar is the flame within it."* Everything in the design must concentrate on the altar of the Covenanted Presence. The church is designed from the altar outwards. Every detail and every colour takes its heightening from the altar. Proportion within proportion grades delicately down from nave arcades and vaulting to the ciborium, to the altar, the pyx or tabernacle seen, more than likely, through a screen. As in a medieval church, the mystery is veiled. Vista opens upon vista.

A fault of the Anglican Liverpool Cathedral is that it tells all its story at once. You see the whole interior so soon as you are in the building and it does not seem so vast as the exterior would lead you to believe.

A Comper church is more subtle. Its exterior is often unobtrusive. But on entering, the eye is held up by a blaze of gold among the whiteness. It is the screen which makes it easy for the eye to turn from the majesty of the greater proportion, to the delicate proportion of some detail related to it. In fact the process of æsthetic appreciation seems to proceed by stages accompanying, almost, the process of meditation. This sense of proportion and the purpose of a church is, I think, the reason of Comper's lasting success as an architect among the religious-minded.

This sense of purpose leads him too to write the surprising paragraph which will meet with the commendation of those whose enjoyment of architecture is more secular: "There will be no wholesomeness for architecture till, abandoning all this talk about self-expression and the expression of the age, we settle down again to real work and the concentration of all our time and energies, and especially of all our time, on meeting our real needs by beauty of proportion, and detail in whatever style we build. No one expresses the age better than the engineer who designs an aeroplane, and no one is further from any set intention of doing so. His sole preoccupation is to make it fly."†

Comper's work is so personal, that

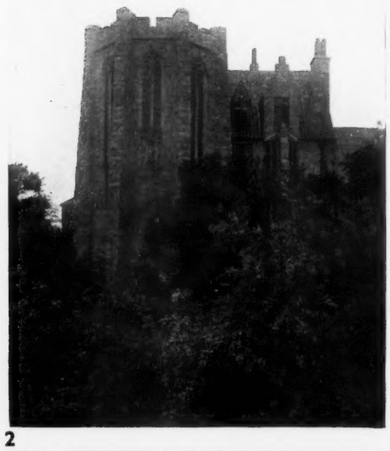
* *The headpiece shows the font cover designed by Comper in Butterfield's church of St. Alban's, Holborn.*

* *Further Thoughts on the English Altar or Practical Considerations on the Planning of a Modern Church*, 1932. Read before the St. Paul's Ecclesiological Society, being a continuation of a paper read before the Society in 1893.

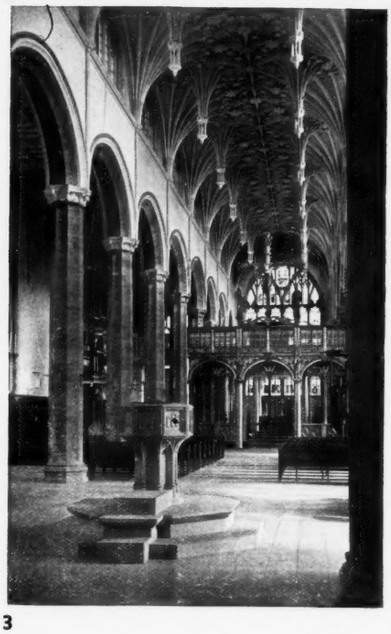
* From an accompaniment to the Service Paper, 1903, of St. Cyprian's, Clarence Gate, Baker Street, London, entitled *On the Significance of the Building*.

† *Further Thoughts, etc.*, vide supra.

1



2



3

1, *The interior of St. Cyprian's, Clarence Gate*, 1903, *one of the earliest of Comper's complete churches.* 2, *the west end of the Chapel of St. Margaret, Aberdeen*, 1891, *typical of Comper's Scottish style.* 3, *the interior of St. Mary's,*

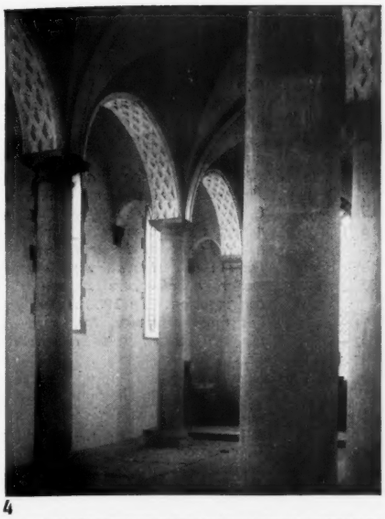
some reference must be made to him as a man. This personality is neither arrogant nor timid. Where Comper has had to add to the work of a good architect like Butterfield at St. Alban's Holborn and All Saints, Margaret Street, he has not attempted to "improve" or touch the Butterfield work. He has left it alone and deliberately designed in his own manner so as to throw up, by contrast, the differing but not conflicting genius of Butterfield.

John Ninian Comper was born in Aberdeen in 1864. His father was a priest of the Scottish Episcopal Church and a leader of the Catholic Revival in that country. Catholicism was therefore the earliest as it is still the primary influence in his life. John Mason Neale was the architect's godfather.

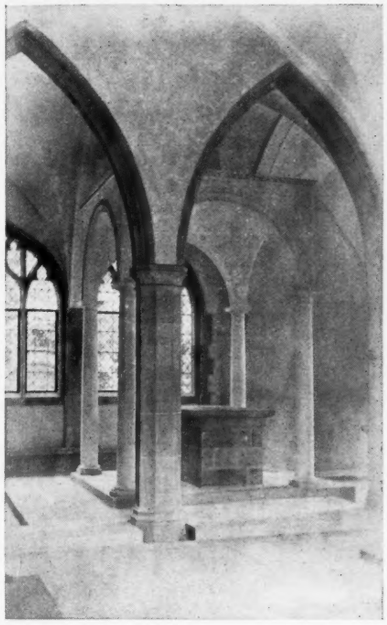
He was educated at Trinity College, Glenalmond and, after drawing for a term in Ruskin's School at Oxford and then a year spent between South Kensington and C. E. Kempe, he was articled in to Messrs. Bodley & Garner. Bodley was a great opponent of professionalism and so is Comper. Both have refused to belong to the R.I.B.A. Comper advocates the system of apprenticeship and has no faith in the system of schools. "Schools of Art have been a complete failure. They give their pupils a smattering of everything and proficiency in nothing." . . . And of examinations in architecture he says "It is an acknowledged fact that some of the best modern architects could not have passed such examinations and it may be added that, had they been trained in order to do so, they would not have given us what they did." He is also an opponent of Diocesan Advisory Boards, fearing that their restraining influence will tend to further mediocrity more than to the correction of mistakes.

Comper carries out the apprenticeship system in his own workshop. There you will find, in the long greenhouse-like room which extends down one side of a South London garden and looks over apple trees, young men at work on heraldry, stained glass, plans, elevations and ecclesiastical ornament. A regency house shuts off all noise from the main road: budgerigars twitter in a cage in the studio.

Some years ago Mr. Martin Travers, a former pupil, took me to dinner with Mr. Comper. The house was a Georgian Gothic building, set among trees in a large garden with a lake and a view over miles of Surrey from Beulah Hill. There I learned the catholicity of Comper's taste, his admiration for the English Regency, his learning in ecclesiastical art: there I saw those careful note books, full of sketches and photographs, records of his journeys in Italy, Greece, North Africa and Spain and motor-caravan tours in France, with his nephew Mr. Arthur Bucknall, who has



4



5

Wellingborough, begun in 1906 *and only recently completed; probably Comper's most important church.* 4, *St. Helena's Chapel, Ealing,* 1912, *in Comper's very personal Sicilian Gothic style.* 5, *the Chapel of The House of Prayer at Burnham,* 1935.

worked with him since 1891. We went on talking about architecture, literature and people till the lights twinkled out over Croydon in the summer evening. From that conversation, and from many subsequent ones, I realized how the youthfulness, enthusiasm and learning of Comper have given a quality to his work which makes it so outstanding: how his originality has been the source of endless borrowing by church furnishers and fellow architects: how he himself has held so high a reputation for so long.

Three of his sons inherit their father's bent for architecture. One designs aeroplanes. It was a Comper machine which was the first light aeroplane to make a record flight to

6 and 7, the Chapel for All Saints Sister-Hood, London Colney, Herts, 1927*: the exterior from the east and the chancel interior.* 8, *the Warrior's Chapel in Westminster Abbey,* 1931. 9, *St. Philip's Cosham, near Portsmouth,* 1937, *looking west. The altar is under a ciborium and almost in the middle of the nave, with a Lady Chapel behind it.*

6

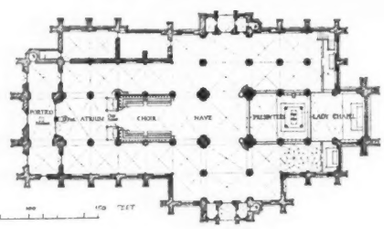
7

8

9

10

10, *Comper's design for a cathedral at Aberdeen, and its plan, made in* 1930. *The Cathedral was to have been financed from America and the depression of* 1931 *caused the scheme to be abandoned.*



Australia. Another designs hospital apparatus in America. The eldest is an architect who is following in his father's footsteps.

Comper's additions to existing churches in glass, metalwork, screens, statues and altars are too many to be chronicled in detail. Vestments and the frontal designed by him were used at the Coronation. He has done some work for Roman Catholics, mainly altars and glass at Downside, and the Archbishop's vestments used on great feast days at Notre Dame, Paris and other work has gone abroad, notably his statue of St. Joan at Domremy and other work farther afield. This list contains some of his major work, divided into the stages of his development.

ENGLISH MEDIEVAL: UNITY BY EXCLUSION

1889 *Vaulted chapel at St. Margarets, Aberdeen, for his father who was Rector.*
1891 *Chapel for the Community of St. Margaret, Aberdeen.*
1892 *Altar with suspended Tabernacle in the Chapel at St. Matthew's Clergy House, Westminster.*
1893 *Restoration at Cantley, Doncaster. Here the first "English Altar" appeared. Now travestied into what Comper calls a "box bed" in almost every church in the country.*
1895 *Crypt chapel at St. Mary Magdalene's, Paddington.*
1895 *Burgh College Chapel, Lincolnshire.*
1897 *Restorations at Egmanton and East Markham, Notts.*
1898 *Braemar, definitely Scottish.*
1898 *St. Peter Mancroft, Norwich — restored chancel levels, etc.*
1899 *New Hinksey, Oxford (still unfinished at the east end).*
1900 *St. George's, Mexborough (still unfinished at the west end).*
1900 *St. Barnabas, Pimlico, Lady Chapel and decoration in chancel.*
1902 *Hearse and funeral trappings for Requiem for Queen Victoria, St. Matthews, Westminster; and for Edward VII and Queen Alexandra at All Saints, Margaret Street.*
1903 *St. Cyprian's, Clarence Gate, Baker Street.*
1903 *Kirriemuir, definitely Scottish.*
1903 *Yerendawna, India. Designed to suit its conditions and surroundings. The 4-centre pointed arches and internal domes are heightened in the Indian manner.*
1903 *Gosberton, Lincs. Half-timber nave with stone chancel.*
1905 *Stockcross, Berkshire, altar, etc., designed as parts of a new church which was never built. Similar altar at Brinsop,* 1913.
1906 *Chapel at St. John's Hospital, Cowley, Oxford. Possibly the inspiration for Temple Moore's chapel at Pusey House, Oxford.*
1906 *Southchurch. Addition of Nave to the old church of the Holy Trinity.*
1907 *East Meon, extensive restoration.*
1907 *Melton. Screen, altar, etc.*
1908 *St. Alban's, Holborn, Font cover.*

UNITY BY INCLUSION

1906 *St. Mary's, Wellingborough, Northants. Comper's chief work. The first part built, but designed in* 1904, *and not yet entirely completed. Choir over the screen. High altar beneath ciborium. Octagonal columns of ironstone with a Greek entasis. Comper capitals and lierne vaulting with pendants.*
1907 *Half timber chapel of Wantage Sisters at Spelthorne St. Mary, rebuilt* 1931 *at Thorpe.*
1910 *Wimborne St. Giles. A fine eighteenth-century church, Gothicized by Bodley. After a fire Comper redesigned it, preserving the eighteenth-century work.*
1911 *St. Mary's Rochdale. A new church incorporating some details of a poor* 18*th-century church which it replaced.*
1911 *St. Michael's, Newquay, Cornwall.*
1911 *Oriel, Oxford. New screen panelling and glass in Hall. Also altar at Merton.*
1911 *Mundford. Organ loft, chancel roof, etc.*
1911 *St. Ethelburga's, Bishopsgate. Screen, organ, etc.*
1912 *The Grosvenor Chapel, London. New high altar and other additions.*
1913 *Sprotborough, near Doncaster. Complete restoration of the eastern part of the church.*
1913 *Wymondham altar screen. Decorated* 1934.
1913 *Chapel of St. Helena's Home of the Wantage Sisters at Ealing. The first to blend Greek and Gothic together in one structure in the manner of the* 12*th and* 13*th centuries in the two Sicilies, as in his unachieved shrine for St. Thomas at Canterbury in* 1930, *and later at Cosham. The details in none of these are Sicilian. This ideal of "the fusion of styles 'under one controlling thought'" is to be found in "Further Thoughts." Mr. Anson bases upon it a third period.*
1913 *Heritage Craft Schools' Chapel, Chailey, and later adjoining buildings.*
1914 *Lound, near Lowestoft. Altar and screen, organ, etc.*
1916 *Checkley. Restoration.*
1917 *Stanton Chantrey, St. Alban's, Holborn.*
1918 *Plans for enlarging Gibbs' All Saint's, Derby, and in* 1927 *its internal conversion to Cathedral use.*
1919 *New church of Rosyth, the easternmost part only built.*
1924 *St. John's, Waterloo Road, London. A Doric Revival Commissioner's Church by F. Bedford. The galleries are retained. The high altar has been brought forward from the east wall and stands under a ciborium among the congregation. In* 1930 *a similar, but more extensive, treatment of the similar Waterloo church of St. John, Workington.*
1927 *Conventional Church of the All Saints' Sisters, London Colney, Herts. Addition to buildings by Leonard Stokes. Also a house by Comper is here. It is part of a hospital building which will open into the church when both are completed. Only half of the church is built. It is lofty and has a concrete vault of* 26 *ft. span. It is designed to fit and dominate its surroundings in a simple Gothic of the comprehensive character of Avignon, except for its windows which antiquarians would call "debased."*
1928 *Welsh National War Memorial in the Park at Cardiff. An original composition of Corinthian columns suggested by Hadrian's revival of pure Greek in North Africa. The bronze sculptures are equally Comper's design but modelled by Mr. Bertram Pegram.*
1930 *Rothiemurchus. Small church in a pine forest in Scotland.*
1930 *Haywards Heath County Hospital Chapel.*
1930 *Plans and elevation for Seabury Memorial Cathedral, Aberdeen, Scottish Gothic. The American slump ended the project and the cathedral was never built. The high altar was to be placed east of the crossing between the sanctuary and choir stalls so as to be visible from four sides. The choir stalls were in the western part of the building and the congregation were to occupy a large space in the centre, with the choir behind it in stalls and the high altar divided from it only by the presbytery.*
1931 *Warriors' Chapel, Westminster Abbey, and seven painted windows from* 1909–1927.
1935 *House of Prayer Chapel, Burnham, Bucks. The building is a mingling of a very simple Gothic and Greek, particularly externally, being designed to suit its surroundings. Here, too, the high altar under a classic ciborium is visible to the public from the west and to the community from a south transept. A chapel extends to the east of it.*
1937 *Lady Altar, etc., for Pusey House Chapel.*
1937 *St. Philip's, Cosham, Portsmouth. Corinthian columns support Gothic vaulting. The capitals blend the two styles. Plan as at Aberdeen.*
1938 *Addition to Private Chapel of the Society of St. John the Evangelist, Oxford, and a more ornate ciborium in their church at Poona.*

Comper has done important restoration since 1922 at Southwark Cathedral, where in 1931 he whitened the walls of the choir aisles and eastern chapels, coloured the monument of Bishop Andrews, and furnished the altars and screens with his own special crimson and blue and gold. He has carried out Renaissance restoration at St. Clement, Eastcheap, London, and at Carshalton, Surrey.

1

CURRENT ARCHITECTURE

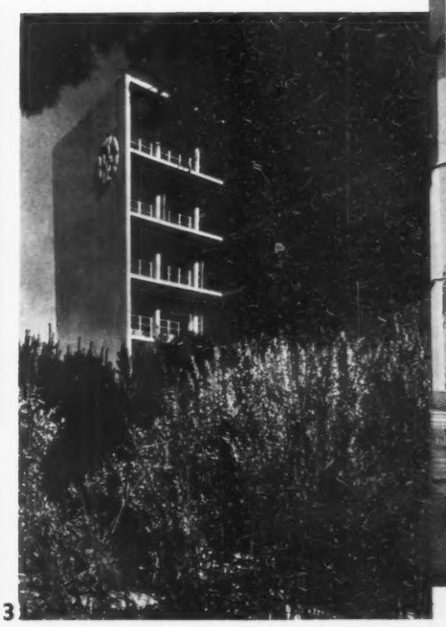
HOSPITALS

ERICH MENDELSOHN

THE SITE

Overlooking Haifa Bay, Palestine. The new Government hospital is part of a town-planning scheme which will occupy a peninsular between Haifa Harbour and Mount Carmel, and is surrounded by a new semi-circular sea road. The site is that of an old Carmelite convent, the hospital being sited to disturb as little as possible the existing trees and plantations. The prevailing wind being from the west, all wards are planned to open in that direction, while at the same time the main ward block running from south-west to north-east breaks the force of the winter gales.

2

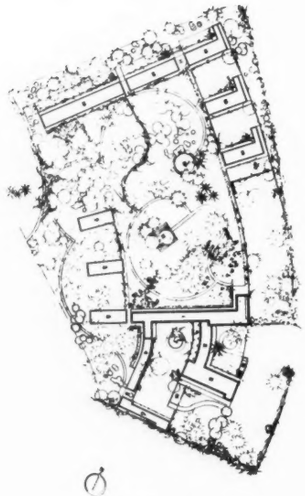


3

1, a general view from the north-east, showing in the right foreground the end elevation of the main ward wing with, to the left, the two-storey operating theatre block connected by staff and service rooms to the ward wing. 2, the main ward wing from the south-west. 3, the same wing showing the symbolic relief by Eric Gill on the blank return wall.

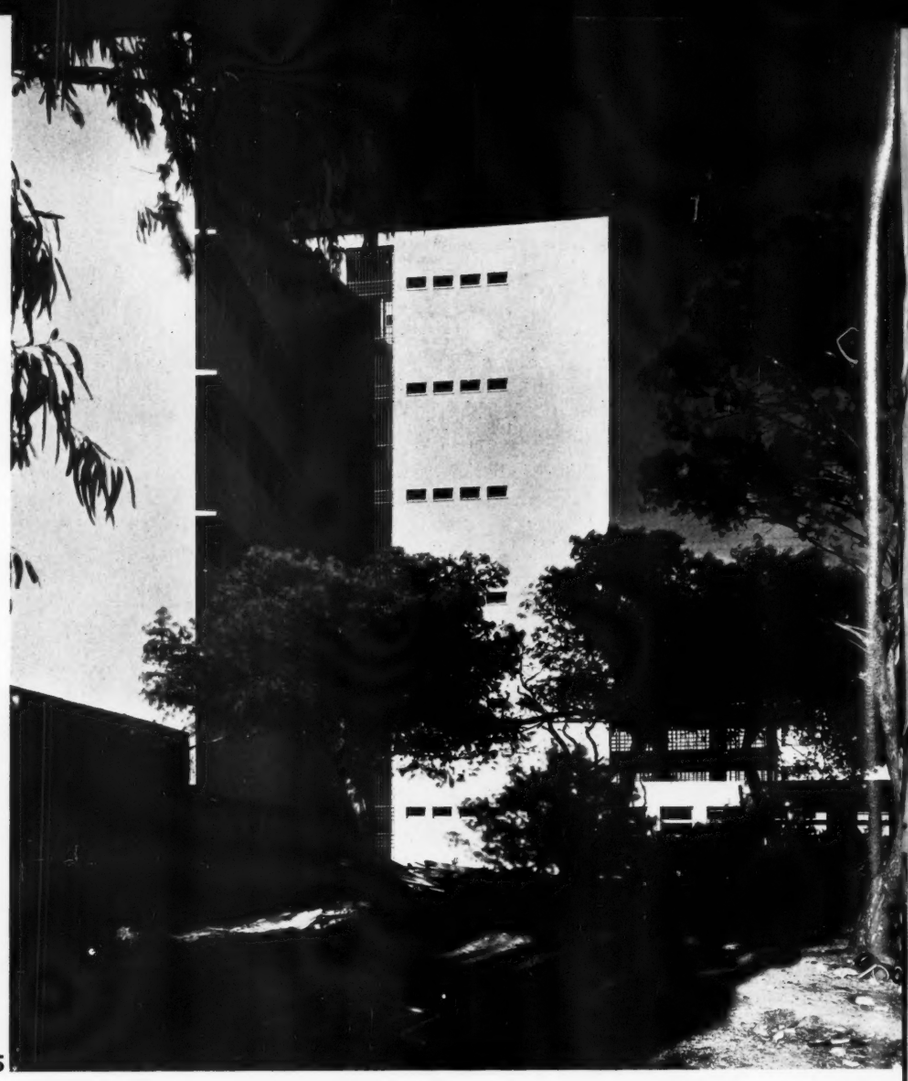
HOSPITALS

ERICH MENDELSOHN



SITE PLAN

KEY: 1, main hospital. 2, bridge. 3, out-patients' department and operating theatres. 4, services. 5, chapel. 6, garages and attendants' quarters. 7, cistern. 8, nurses' quarters. 9, doctors' quarters. 10, fever pavilions. 11, pergola, 12, an ancient pyramid. 13, pool. 14, caretaker's lodge. 15, transformer station.



5

PLANNING

The scheme comprises a main hospital building of 250 beds, five pavilion wards for cases of infectious disease and for prisoners, a dispensary and out-patients' department, doctors' and nurses' quarters, garages, a chapel and the various services including a transformer station.

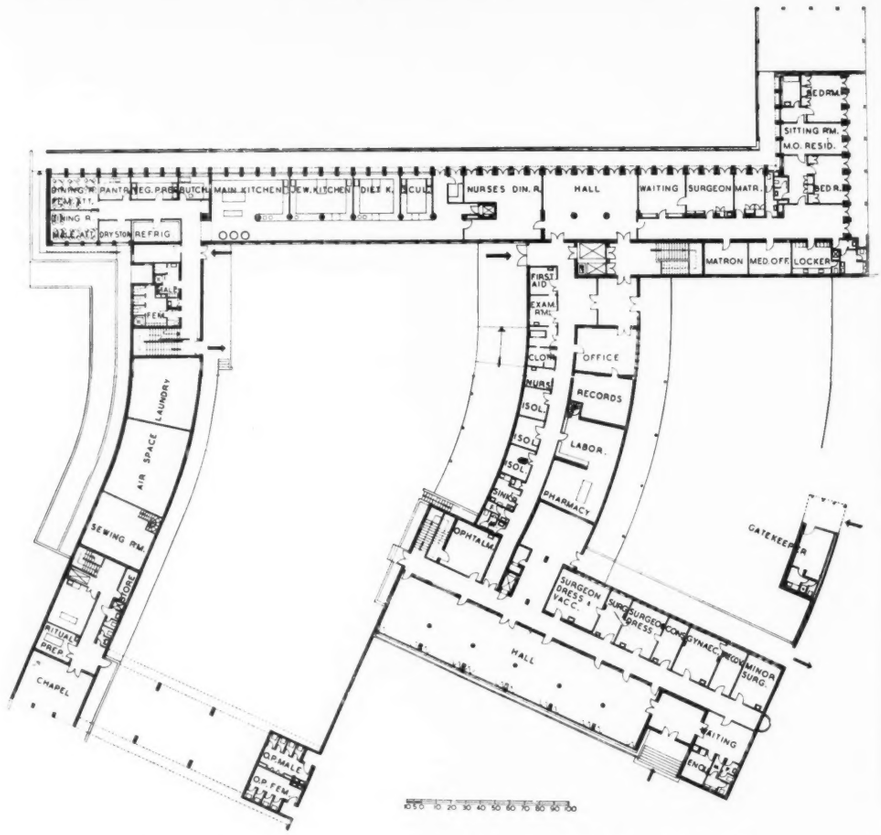
STRUCTURE AND MATERIALS

The whole of the structure is in reinforced concrete with cavity walls. Partition walls are of double breeze block, window-frames are of Syrian hard pinewood, doors flush and hung on steel frames. Cork was used throughout as a heat insulator.

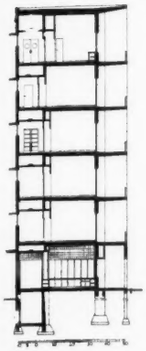
EQUIPMENT AND FINISHES

Externally the finish is of white cement with a crushed Haifa marble aggregate. The roof finish is of tiles laid on asphalt. Heating is by electricity, the hot-water supply being provided from oil heaters. All plumbing has been arranged in easily accessible vertical and horizontal ducts. An indirect method of lighting has been adopted in all wards and staff rooms.

4



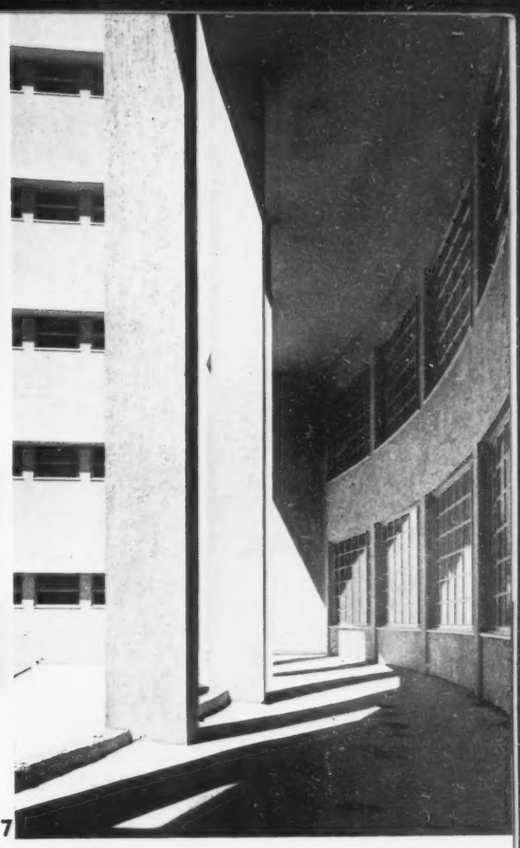
GROUND FLOOR PLAN OF MAIN BLOCK



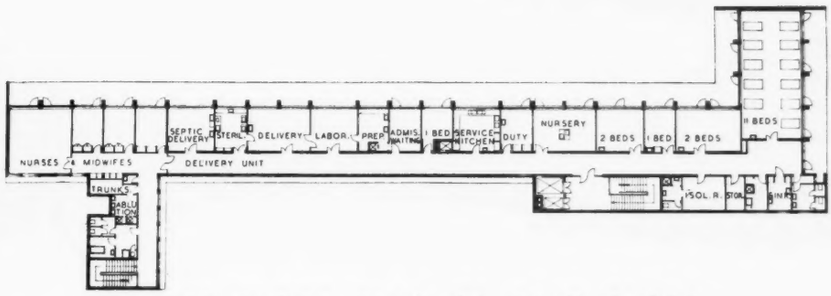
SECTION THROUGH MAIN BLOCK

4, a general view of the hospital group from the Mediterranean beyond Haifa Harbour. 5, a view from the west of the main block, the vertical grille encloses a pipe duct and light well, the small windows being to offices serving the ward wing on the left. 6, the small service windows of the main ward wing seen from one corner of the entrance courtyard. The covered walk shades the laboratory, pharmacy and records offices which connect with the operating theatre block to the south. 7, the colonnade in the main courtyard. 8, the entrance gates. 9, the patients' waiting hall.

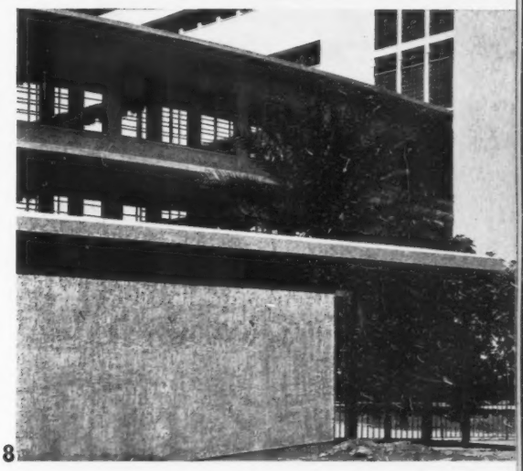
6



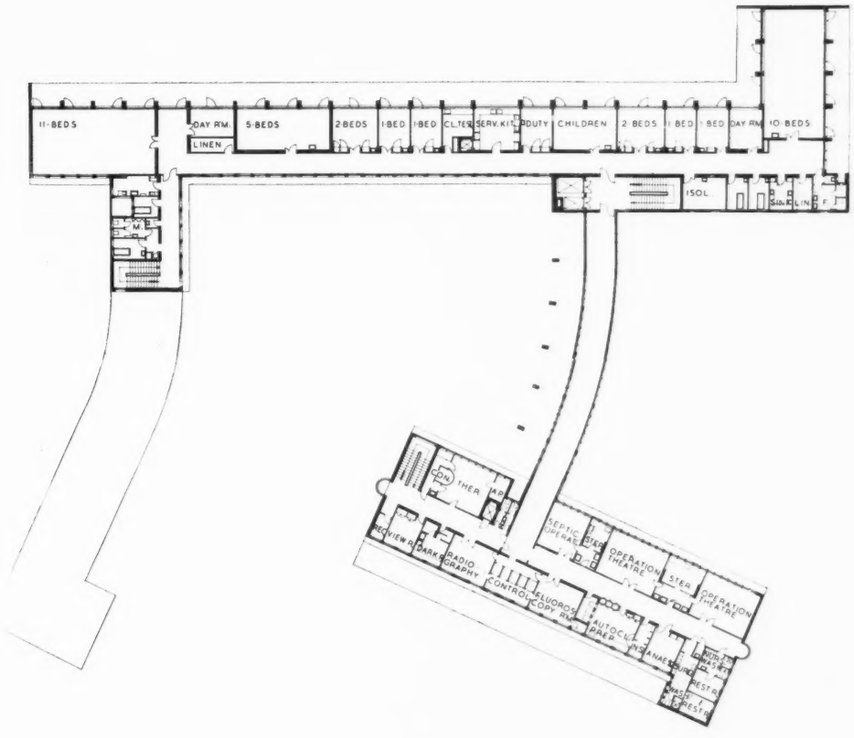
7



UPPER FLOOR PLAN OF MAIN BLOCK



8

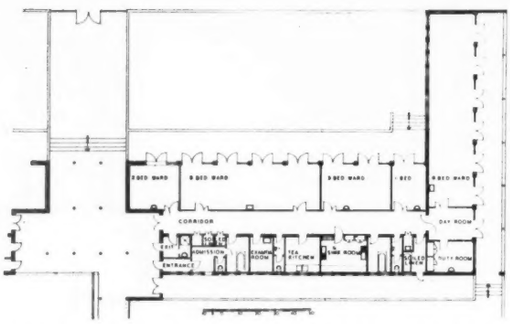


FIRST FLOOR PLAN OF MAIN BLOCK

9

HOSPITALS

ERICH MENDELSOHN

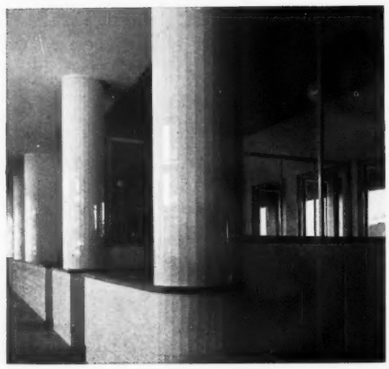


TYPICAL FEVER PAVILION PLAN

THE VIEWS ILLUSTRATED

10, a view from the nursery ward on an upper floor. All ward wings are sited so that the fenestrated side is screened from sunlight. Through the balcony rail can be seen the isolated, single-storey fever pavilions connected to the main block by covered ways. 11, the main kitchen showing the flues concealed alongside the structural stanchions and tiled. 12, the cooking equipment in the main kitchen.

10



11

12

MUNICIPAL DEPOTS

G. GREY WORNUM

THE SITE

Westminster, to provide a centralized depot for refuse collection and disposal throughout the City Council's area. Refuse is received in lorries and transferred by moving belt conveyors to barges for disposal. The prevention of nuisance by dust, both inside the building and to the surrounding property was a factor of major importance in the design.

1

2

PLANNING

The necessary accommodation included a garage for both petrol and electric vehicles, the majority being 24 ft. long, stockrooms for all materials and equipment for cleaning and servicing the streets, space for washing and servicing vehicles, together with a fitter's shop, smith's shop, wheelwright's and carpenter's shop, painters' bays, etc. In addition, administrative offices, clothing stores, staff rooms and, when the building was nearing completion, an A.R.P. shelter, were incorporated.

STRUCTURE & MATERIALS

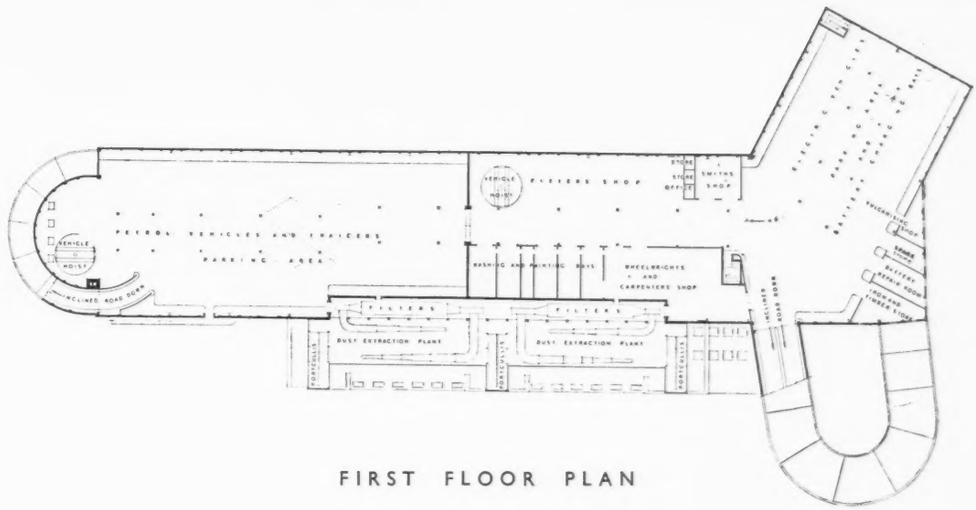
Steel frame with brick panel-wall infilling. The floors are of reinforced concrete and the roof is covered with light steel sheeting and glazing, supported on welded roof trusses. The steel frame consists of main beams running across the width of the building, and between them secondary beams which support the floor. To carry the roof of the barge berths and the dust extraction chamber over, three pairs of main beams have been extended over the dock as cantilevers. Between each pair of cantilevers is a deep lattice girder spanning the refuse conveyor batteries and supporting the uncased steel framework of the dust extraction chamber. To the underneath of the lattice girders are attached steel joists which support the ceiling of the barge berths and are cantilevered forwards and downwards to meet the top of the jetty wall. At this point there is a continuous gap which allows the jetty wall to move without affecting the structure of the building. The ramp roads are supported by stanchions and beams fairly closely spaced. The gradient of the ramps is 1 in 10 and they are surfaced with 2-in. granolithic, having a special aggregate and surface. They are enclosed within brick walls and have concrete roofs which are stepped to provide clerestory lighting.

EQUIPMENT & FINISHES

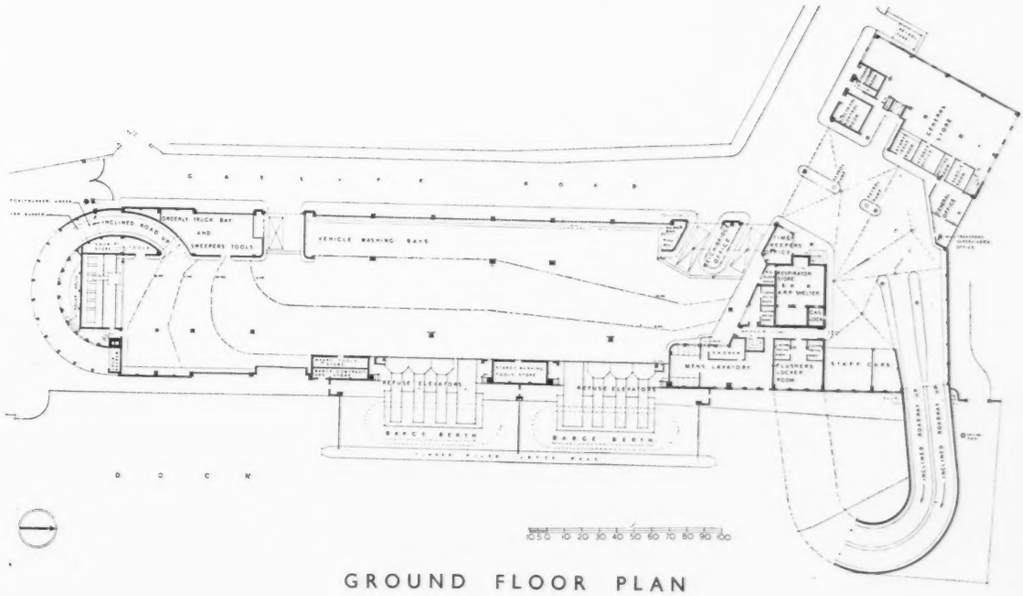
In the barge berths, where refuse is loaded from a conveyor, a form of cantilevered *tunnel* is used to prevent the dispersion of dust during the loading process. All external wall finishes are of flint and lime bricks, window frames are of steel, floors generally of hardened granolithic.

THE VIEWS ILLUSTRATED

1, the elevation to Gatliff Road showing the use of blue faience facings to entrance and window reveals, and the City coats-of-arms by Bainbridge Copnall. 2, the barge dock.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

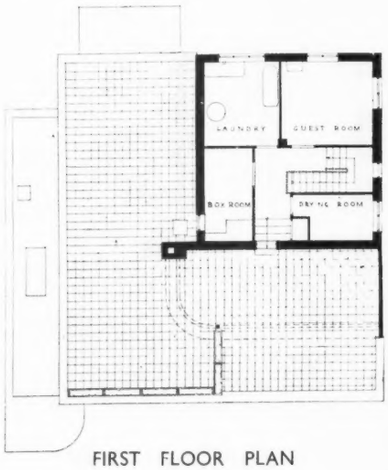
HOUSES

MICHAEL DUGDALE
AND FRITZ RUHEMANN

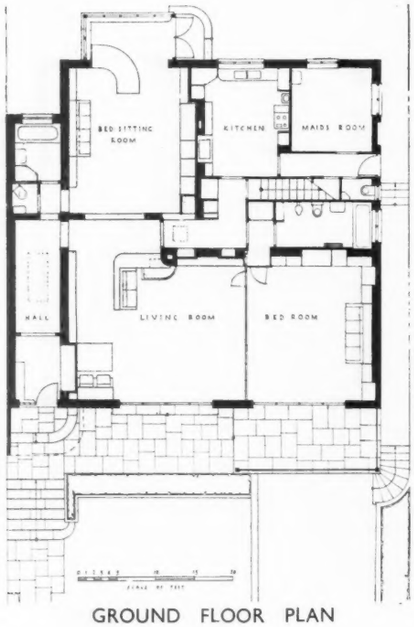
1

THE SITE

Chiswick, the plot including some 50 ft. of garden back and front which is reflected in the open nature of the elevational treatment adopted. On the garden front, terraces, and on the north front a deep bay, extend the plan as much as possible into the grounds.



FIRST FLOOR PLAN

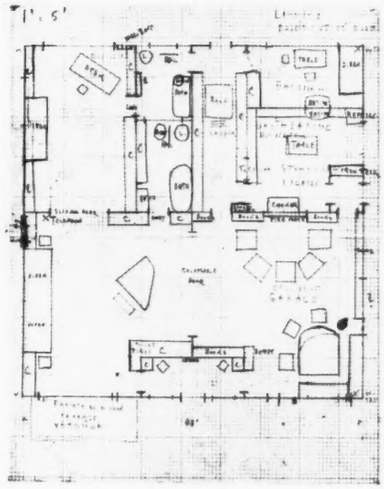


GROUND FLOOR PLAN

2

PLANNING

The client's requirements were precise and indicated on a rough plan made by himself which, though much modified by the architects, was retained in its essentials. There are three main rooms, all of which can be opened into one for entertaining by means of sliding folding partitions. The reason for this grouping of the main rooms of the house was the client's desire for the possibility of one very large room when necessary, while, at the same time, insisting that the accommodation should effectively be all on one floor.



THE CLIENT'S SKETCH PLAN

STRUCTURE AND MATERIALS

The construction is of brick with a concrete ground floor and reinforced concrete slabs over the garage space. The upper floor and roof are of timber.

EQUIPMENT AND FINISHES

There are several points of interest in the equipment design of the living space. In the fireplace a panel of fire-resisting glass can be slid out from behind a marble panel to the left, to act as a draughter or to close up the chimney when not in use. The dining table is extensible and the light-fitting over it can be slid forward so as to be always in the centre of the table. A panel above the settee can be pulled forward and down in one movement to form the end of a bed, which is already made up beneath. The seat disappears under the mattress. At the side are two bedside tables on wheels which can be drawn forward at night.

THE VIEWS ILLUSTRATED

1, the south front. 2, a detail of the roof terrace. 3, the entrance hall. 4, 5 and 6, show views of the main living space. 7, the settee convertible at night into an extra bed.

3

4

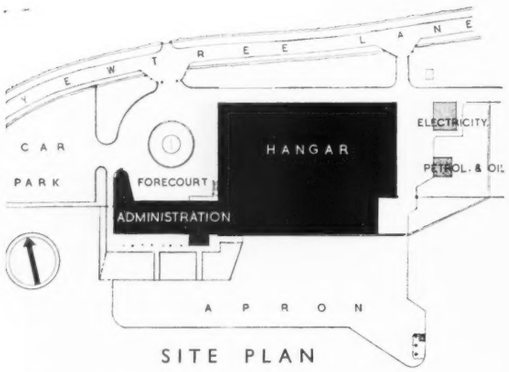
5

6

7

AIRPORTS, 1

G. NOEL HILL
GRAHAM DAWBARN, CONSULTANT



SITE PLAN

THE SITE

Air terminal and control building with hangar for the Manchester (Ringway) Airport.

PLANNING

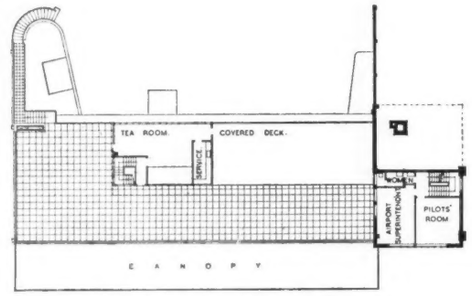
In addition to the main hall and public rooms, accommodation was required for the airline companies together with semi-permanent provision for Customs and Air Ministry control departments.

STRUCTURE AND MATERIALS

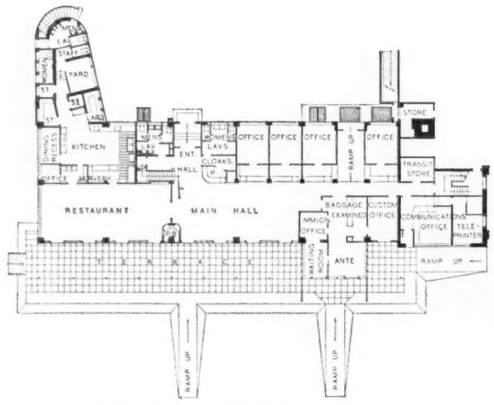
The hangar and workshops are of steel frame with reinforced concrete panel walls to the height of 22 ft. The foundations are of concrete piers on mass concrete bases. The offices and control tower are in brickwork carried on steel joists.

EQUIPMENT AND FINISHES

Externally both brick and concrete walls have a white cement finish, the higher portion of the control tower, the overhangs generally, and the hangar and workshop doors being painted blue.

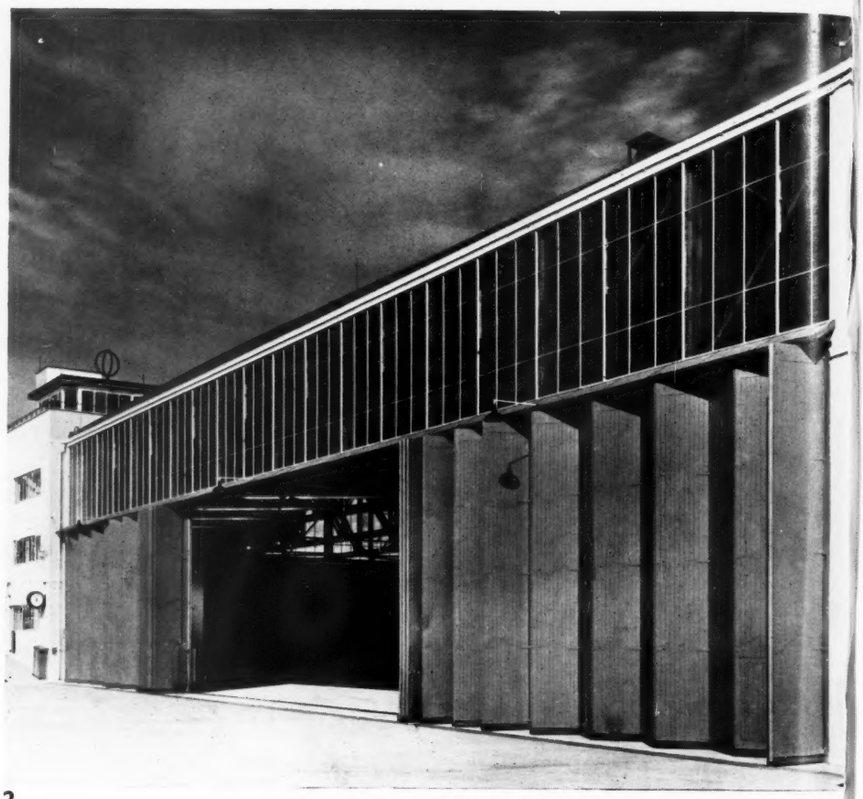


UPPER FLOOR PLAN



GROUND FLOOR PLAN

1



2

THE VIEWS ILLUSTRATED

1, a general view of the airport from the airfield. 2, the hangar, showing the continuous top-lighting above the sliding, folding hangar doors. 3, the main hall with its booking counters for the airline companies and, beyond, the restaurant.

3

AIRPORTS, 2

GEORGES LABRO

THE SITE

Le Bourget, Paris, the site giving great possibilities for extension in the future.

PLANNING

The scheme centres round the main concourse, with accommodation spread deliberately along the flying field in order to give a minimum depth of building through which passengers and goods must pass from rail or road to airplane. A second consideration was that of height, which has been kept to 13 metres for the whole of the main structure. The control tower floor rises to a height of 14 metres.

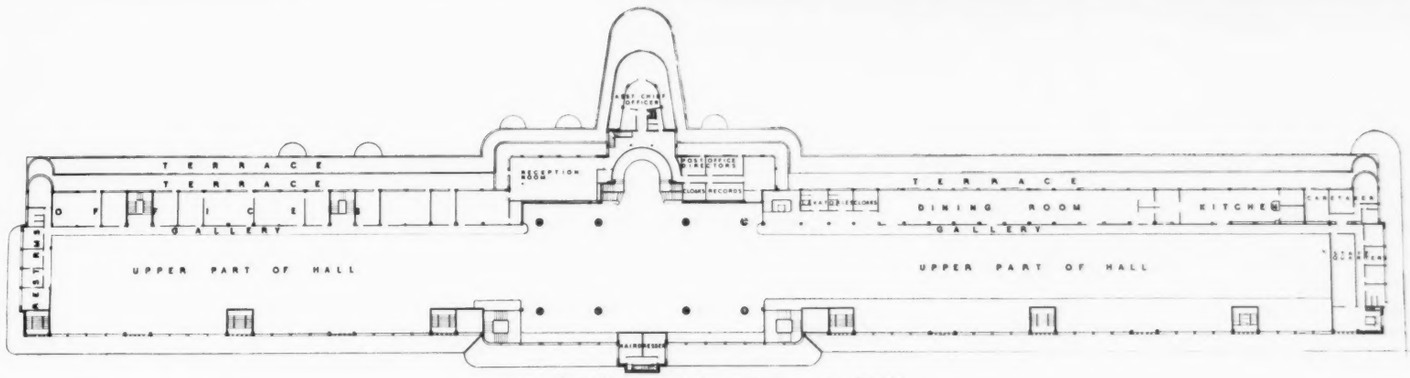
STRUCTURE AND MATERIALS

The main structure is carried out in reinforced concrete frame, the fenestration being sub-divided by reinforced concrete mullions.

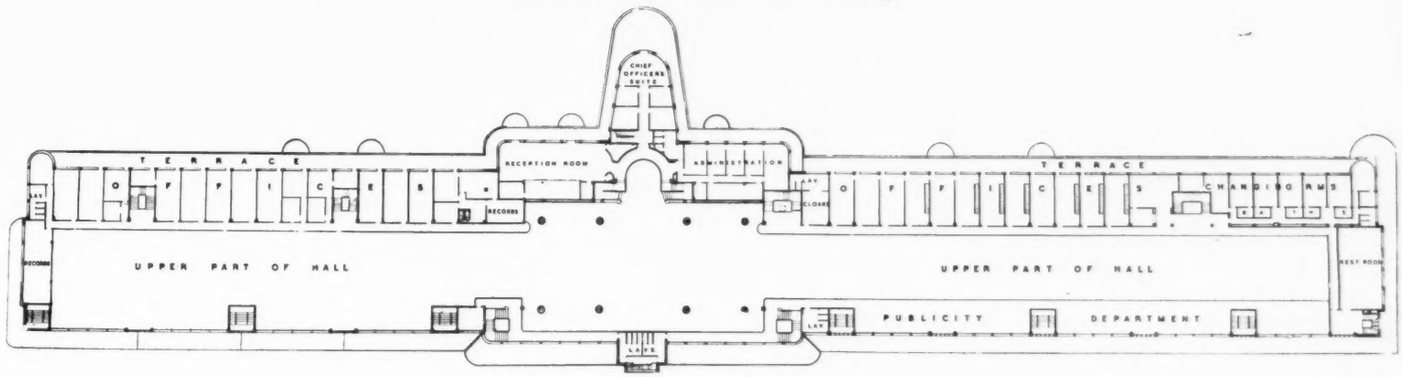
1, a general view of the airport showing approach layout and car park. 2, the centre portion of the main flying field elevation showing the control tower.

1

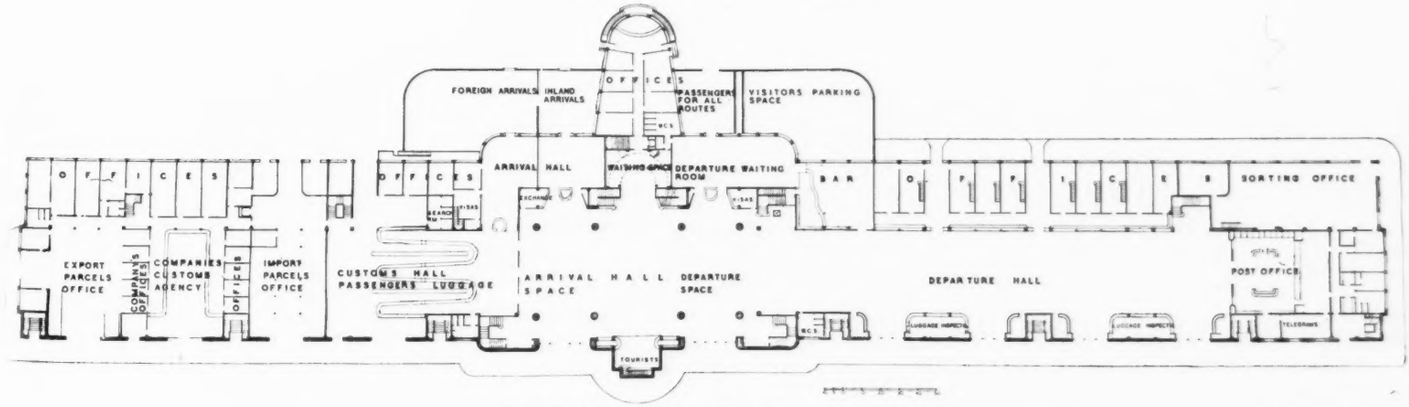
2



SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

AIRPORTS, 2

GEORGES LABRO

EQUIPMENT AND FINISHES

The general decorative scheme adopts as its principal motif, propaganda for air travel. Externally the reception centre, consisting of the main hall, round which are grouped rest rooms, lavatories, hairdressers', tobacconists', newsagents and information bureaux, is symbolized by a decorative panel bearing the coats of arms of the principal European capitals; this appears on the tower of the main road façade, which is flanked by the entrance and the exit vestibules.

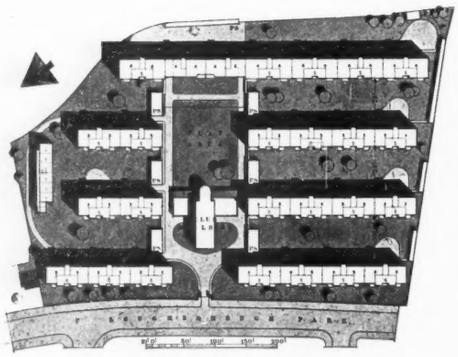
THE VIEW ILLUSTRATED

3, the main concourse looking towards the flying field.

3

FLATS

EDWARD ARMSTRONG



SITE PLAN

THE SITE

Loughborough Park, Brixton, for the Guinness Trust. The site comprises an area of about 6½ acres conveniently situated for local shopping and moderately near the occupational districts of most of the tenants.

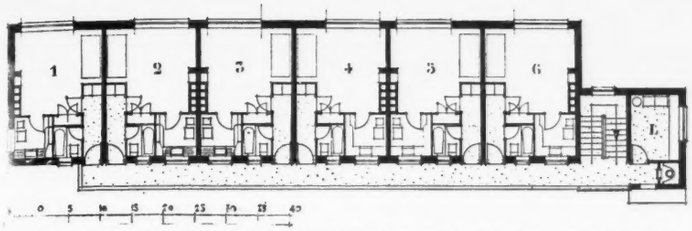
PLANNING

All flats, with the exception of those for old people, are grouped in building units of five storeys in height, with internal access stairs serving three flats per floor. Four-, three-, and two-room flats are provided, each flat including kitchen, bathroom, and a private balcony facing west. One-room flats intended for old people are grouped in a three storey block with balcony access. Each flat comprises a lobby, living-room with a bed alcove, kitchen and bathroom.

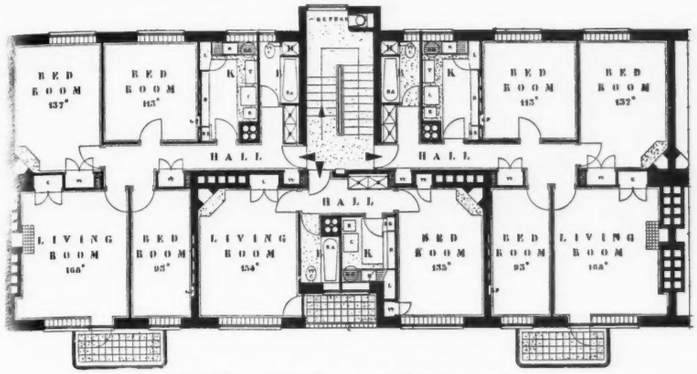
1

2

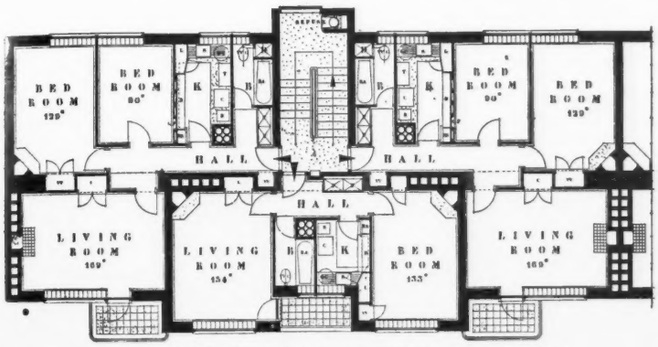
3



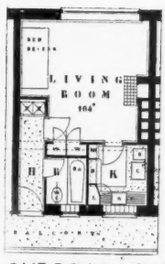
TYPICAL FLOOR, ONE-ROOM FLAT BLOCK



2-ROOM AND 4-ROOM FLATS



2-ROOM AND 3-ROOM FLATS



ONE-ROOM FLAT

4

5

6

THE VIEWS ILLUSTRATED

1, an air view of the Loughborough estate. 2, a typical east façade, showing the semi-circular end of the club building and the three-storey one-room flats in the distance. 3, a west-facing façade. 4, a detail view of the club building. 5, balcony treatment to the four- and two-bedroom flats. 6, a detail view of the one-room flats for old people.

STRUCTURE AND MATERIALS

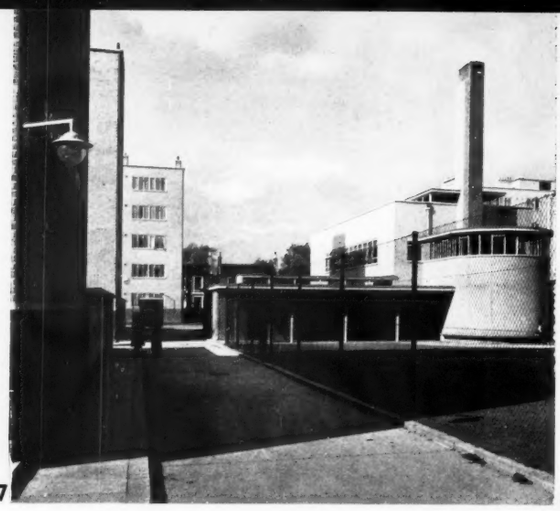
Reinforced concrete internal frame, floors, and balconies. The external walls are of 13½-inch brick. The reinforced concrete balconies are struck direct from smooth shuttering and finished in one operation. Party and staircase walls are in 9-inch brick with internal partitions of 2-inch hollow-tile. Asphalt roofs are laid on foamed slag screeding and covered with white marble chippings.

EQUIPMENT AND FINISHES

Light buff facings are used to external walls with a cill-high plinth of darker brickwork. Window-frames are of steel with solid wood frames and quarry tile cills. Doors are flush and hung on pressed steel frames. Floors generally are of wood block finishing against a quarry tile skirting, with bathroom floors in quarry tiles. Baths are built-in on three sides with a metal panel front. Staircase walls are in cold-glaze to their full height. Living-rooms and principal bedrooms are provided with coal fires, secondary bedrooms with gas fires. Kitchens are equipped with gas cookers and slow combustion solid-fuel boilers capable of burning a certain amount of refuse and supplying copper, sink and bath with hot water. One-room flats are equipped on similar lines, with the exception that communal laundries are provided in place of individual coppers. All buildings are wired for electric power in case it should be desirable to install electric heating and cooking in the future.

FLATS

EDWARD ARMSTRONG



7

8

THE VIEWS ILLUSTRATED

7, a rear view of the centrally placed club building, designed to serve the estate as a communal centre. The view shows a playground shelter and part of playground. 8, an interior detail of the club building showing the first floor foyer.

OFFICES

GORDON JEEVES AND HECTOR HAMILTON

THE SITE

Berkeley Square, bounded by Bruton Street and South Bruton Mews.

PLANNING

An office building combining the greatest possible floorspace with the maximum amount of natural light was required. Ground floor and basement being potentially lettable, most of the services were placed in a sub-basement.

STRUCTURE AND MATERIALS.

Reinforced concrete frame faced with a 13½-inch brick skin and 9-inch brick panels beneath window openings.

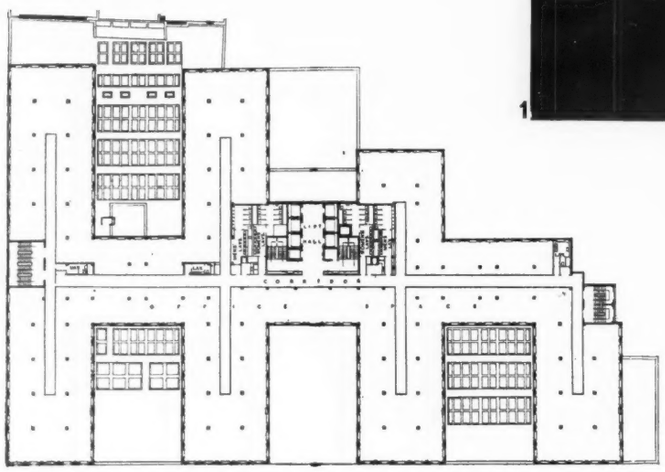
EQUIPMENT AND FINISHES

Externally, the base of the building is faced in Portland stone with buff-coloured brickwork above, pointed with a white cement mortar.

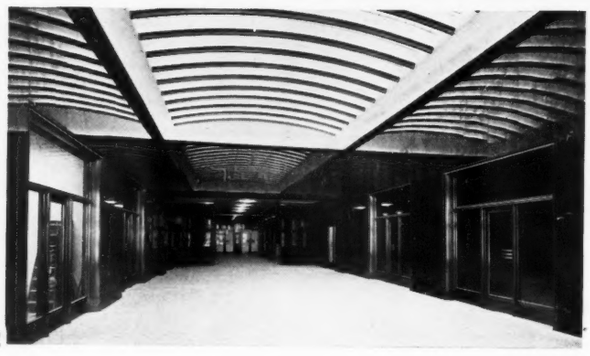
THE VIEWS ILLUSTRATED

1, a general view of the Berkeley Square elevation. 2, the entrance vestibule.

1



TYPICAL FLOOR PLAN



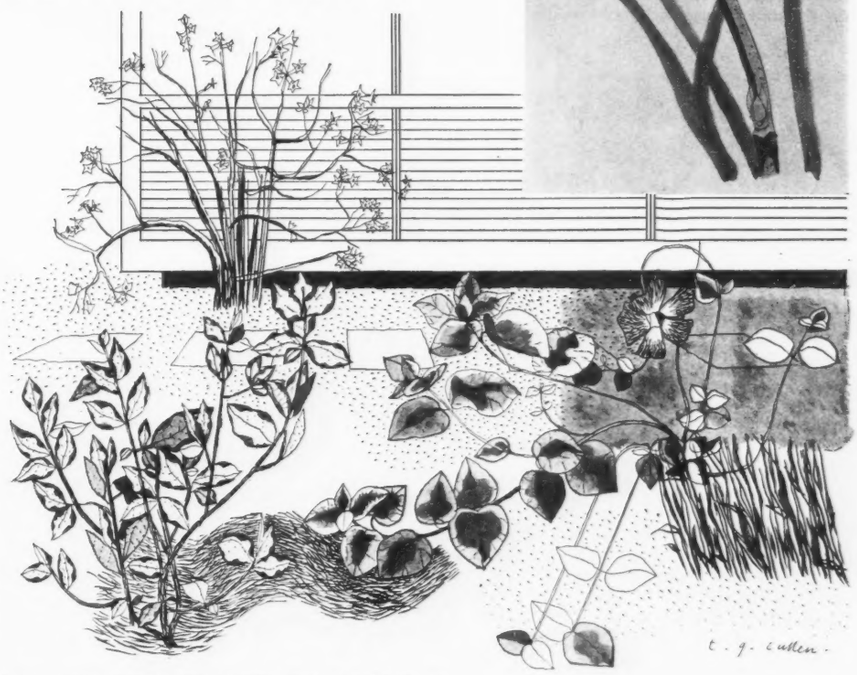
2

ARCHITECTS' PLANTS

The plants illustrated are intended as examples of useful structural material and have not been chosen especially for their interest when in flower. Nor are they strictly the formes architecturales ***which M. Correvon, the Swiss plantsman, has taken pains to identify, but are rather a selection from those subjects which in various ways can be employed to contribute to the shape or atmosphere of certain familiar settings. No claim is made for the botanical accuracy of the sketches.***

2. Variegated Evergreens

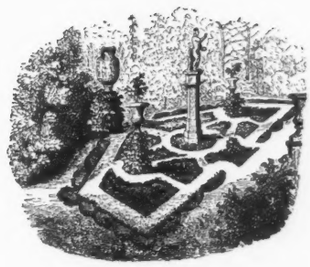
Vinca major elegantissima (golden periwinkle); *Elaeagnus pungens aureo-variegata* (golden oleaster).



This is a class of shrubs valuable in winter, when their leaves make a cheerful garden decoration, and towards the end of the summer, after the majority of shrubs have finished flowering. Varieties should be chosen with care, however; only those with bright, well-defined variegation are really effective out-of-doors. This characteristic is possessed by the two examples shown, and the golden periwinkle, known by nurserymen as *Vinca major elegantissima*, has the additional advantage of producing porcelain blue flowers from May to December. This is the small trailing subject drawn to a larger scale on the right of the sketch. Next to it is *Elaeagnus pungens aureo-variegata* which also has golden variegation, arranged in broad irregular bands down the centre of the leaf, and is probably the most highly coloured of all. Its growth is thick and spreading. For those who prefer white or cream-coloured variegation, the creeping *Euonymus radicans variegata* and the upright-growing variety Silver Queen are useful and attractive. These and the periwinkle will grow under the drip of trees.

The twiggy deciduous shrub in the background of the sketch is *Viburnum fragrans*, not long introduced from North China. It makes a pleasant foil to the evergreens, is perfectly hardy, and is valuable in blooming from October until early April. Its whitish flowers have a heliotrope scent, which on warm winter days carries for many yards. The inset illustration shows a detail of the flower.

All the plants mentioned are accommodating as to soil and position.



A HORTICULTURAL COLOUR CHART

The first volume of The Royal Horticultural Society's colour chart contains "a complete Spectrum range of Full Hues in correct sequence," together with three graduated tints of each. In addition are included certain lighter tints and deeper full hues, the whole comprising a folder of 100 sheets. The compilers, in conjunction with The British Colour Council, claim that the chart is more accurate than its predecessors, and they state that it is authoritative because the colours and their names are in accordance with accepted trade standards, suggesting that it will have "a use and value far outside its horticultural scope."

Wherever available, horticultural examples have been indicated. Owing to the time of year it will be some months before the accuracy of these can be ascertained, but comparisons made by the writer with out-of-season flowers of *Senecio Greyi*, *Ulex europæus*, and *Mahonia japonica* (possibly an unfair test), yielded very good results. It is perhaps unnecessary to remind users of the chart (which the introductory pamphlet does not) that flower petals, in addition to carrying sometimes two or more "shot" colours are frequently overlaid by a bright lustre, and many fruits by a dusky bloom, which make colour definition an uncertain and relative process.

The colour printing on the whole is uniform and good; among the purples, violets and greens, however, there is sometimes a darker shade than the one intended around the edges of the block. The use of the black isolating mask helps to dissipate this.

The chart may prove valuable in imposing restraint on those nursery-

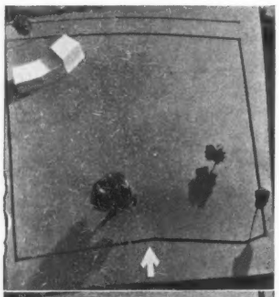
men, plant hybridists and horticultural journalists, whose misuse of the terms hue, tone, tint and shade have made colour nomenclature confusing and inexact. It will undoubtedly be very useful to all these and many others as well, if not to botanists, who have always wisely eschewed colour for identification purposes.

C. T.

THE COUNTRY ACRE

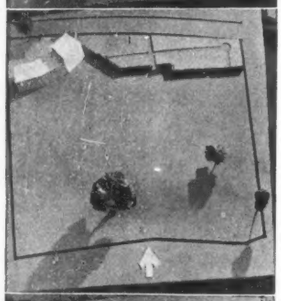
A TYPICAL GARDEN PROBLEM

Last month we illustrated in model form, by a series of progressive photographs, a simple lay-out for the standard suburban garden plot of about 120 feet by 40 feet. Below a similar series illustrates another typical problem, that of the garden to a small country house of a total extent of about one acre.



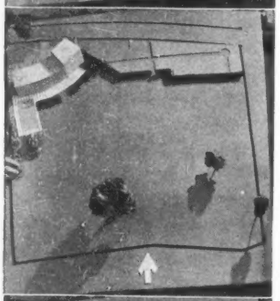
1

It is assumed that the site is fairly flat, but has a slight rise forming a mound near the south-east corner. The road runs along the north side. There are a few existing trees, mostly along the south boundary and on the mound. The house has been placed on the north-west corner, in order that access from the road shall not spoil the privacy of the garden and to give it a south-east aspect with the principal rooms overlooking the garden.



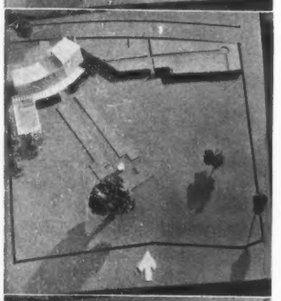
2

The house is planned with an open shape to take advantage of the diagonal views. A small entrance forecourt occupies the space between it and the road. The remainder of this (the north) side of the site, with access to the service quarters, is set aside as the kitchen garden, which is separated from the pleasure garden by a hedge that serves also to keep out noises from the road.



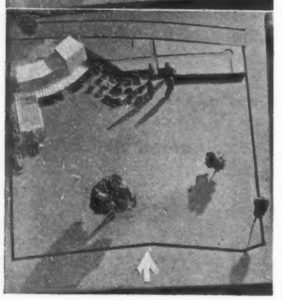
3

In front of the house a wide paved terrace is provided, on to which the main living-rooms would open. It is separated from the rest of the garden by some formal planting which, however, is kept low so as not to interrupt the views. Extending beyond the terrace, and linked with it by more paving, is a pool. The pool is protected on two sides from the prevailing south-west winds by a fairly dense plantation of flowering shrubs.



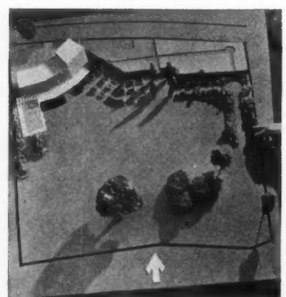
4

The lay-out of the immediate surroundings of the house having been decided upon, the designer turns his attention to the main portion of the garden. A scheme such as is commonly carried out by garden owners would be to extend from the terrace a straight path on the axis of the façade of the house, terminating in a formal arrangement of, perhaps, rose-garden and sundial. The disadvantages of this, however, are that the open effect of the site is lost by breaking up the centre, the new axis created finishes at no strong point and the portion of the garden seen directly from the house would be that most liable to untidiness.



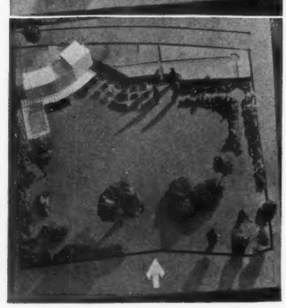
5

Abandoning this scheme, the designer adopts a less formal plan which comprises, in effect, a series of independent gardens, each with its own character, arranged round the perimeter of the site, the centre being left free. First is the formal rose-garden that the owner required, divided into small geometrical beds to facilitate cultivation and the constant cutting that roses need. Next is a grove of cypress trees, as a foil to the rose-garden.



6

As we get further from the house the planting in this series of gardens becomes less formal. After the cypress trees, in the north-east corner of the site, is an herbaceous garden, mixed with flowering shrubs. The mound near the south-east corner is treated as an essay in scenic landscaping, as it is the most prominent object in the view from the house. It is planted principally with rhododendrons.



7

The southern boundary of the site, farthest from the house, is planted with additional deciduous trees, through which a winding walk is planned. Finally the south-west corner contains a specialized garden such as a heather-garden or a bog-garden (if land-drainage allows). The end of this brings us back to the pool and terrace. The centre of the site is planted as a lawn for walking and recreation, from which (as well as from the terrace of the house) the series of gardens round the edge provide a great variety of views.

BOOKS

A Monument to Architecture

THE ART OF ARCHITECTURE. By Professor A. E. Richardson and H. O. Corfiato. London: The English Universities Press Ltd. Price 42s.

A NINETEENTH-CENTURY philosopher suggested that the only general principles were tautological—so general as to be valueless. The authors of *The Art of Architecture* having provided in the bulk of their book a descriptive and straightforward history of architectural styles, beginning with a summary of historical composition in the past, and continuing with Romanesque and early medieval architecture, the Renaissance in Europe, Scandinavian and Russian architecture, American, Non-European and picturesque architecture, go on to say that "the principles of architecture already described and discussed constitute the very basis of architectural devisement, and are, in fact, inseparable from the practice of architecture. Summarized they group into five main divisions, namely, disposition of masses, structural sympathy, sequence of contrasts or harmony, axial formation and finally dramatized characterization. Further, each and several of these divisions form the nucleus of design and in themselves are the entity of the law of continuity." One is inclined to believe that the nineteenth-century philosopher was right, and that when extracted from its context "the very basis of architectural devisement" is so broad that almost anything can be read into it. What the authors prefer to read into it is made clear by its antithesis in the curiously lonely six pages on "picturesque architecture"—or as they define it, "those peculiar forms of composition . . . which are apparent in the vernacular architecture of every country," and which "seem to be independent of definite rules"; in all countries, irrespective of national groupings, they display "one common feature, namely, the logical assembling of material." It would indeed destroy their thesis if they examined these humble structures in terms of their general principles (for it can, of course, be done if anyone thinks it worth doing); they evade the point by

putting a relatively unsophisticated form of building in a class by itself.

A real dilemma seems to be reached in the chapter on the development of contemporary architecture, where an extremely eclectic selection of buildings is examined in the same general terms, and where the authors appear to be not a little embarrassed by the difficulty of reconciling such an examination with the clearly different attitudes to architecture displayed in their various examples. This chapter is filled with an extraordinarily sketchy selection of remarks about contemporary building requirements, such as the sizes and depths of swimming baths, strange mixtures of generalization and data on acoustics, and sentences like: "The planning of a ward calls for exceptional skill"—symptoms of the difficulty they find in uniting into a workmanlike approach the two aspects, mind and material. Whatever the concessions they may make to the materialists, ("The mind of the designer itself is susceptible to current events, political, social and intellectual") their outlook remains fundamentally idealist and static. ("There is no denying the fact that architecture, while primarily related to considerations of purpose, reserves to itself the right of independence.") Their architectural principles are isolated in the Platonic sense, and they seem to see architectural effort throughout history as a series of approximations to the ideal, expressed in different ways by force of circumstance. The book might be a better argument for such an outlook if the ideal was anywhere clearly expounded, but, as has been said before, it is given such a general expression that it is tautological. Yet the mind, in their opinion, rises serene above the ages, "rigidly subordinating material to imaginative thought." At no point in the book do they (intentionally) encourage the opinion that the mind is conditioned by its context, and that its aspirations necessarily spring from what it has known and experienced, and are expressed in terms appropriate to such experience. Nor do they suggest the corollary to this; that the sweep of history is regarded from one point in time, and is necessarily seen through tinted spectacles; that complete objectivity is never a reality, since assessments are made ultimately in terms of the age in which the observer is living, and in terms of the values associated with that age; that the emotive aspects of architecture cannot be disassociated from the environment which produced them, and that if we today react pleasurably to the Pont du Gard at Nimes, for instance, it is no guarantee that the Romans experienced the same reaction, or that their reaction signified to them what our reaction may signify to us. Certain basic human characteristics may be common to all known ages, but they are surely overlaid with a very great deal that is transitory, and that modifies and shapes their expression?

It is easy to sweep aside a book in a short review, particularly with the help of a few quotations; it would be grossly unfair to do that here, particularly when dealing with such a massive and significant work. The book should certainly be read, it cannot fail to stimulate in one way or another. A word of thanks should be given for the line illustrations in the text, though they may sometime irritate by their intentional wobble, and for the magnificent three hundred pages of photographs at the end of the book.

ANTHONY COX

Dwarf and Genius

TOULOUSE-LAUTREC. By Gerstle Mack. London: Jonathan Cape. Price 25s. net.

IN the whole history of painting there is no more extraordinary figure than Henri de Toulouse-Lautrec. The grotesque jester in the bars and cabarets of Montmartre, the painter of dance halls and brothels, was the lineal descendant of the Counts of Toulouse and an admirer of Ingres, Piero della Francesca and the Elgin Marbles.

A series of unfortunate accidents transformed a well proportioned boy into a frail dwarf with misshapen legs and ugly head. They did not, however, prevent his becoming a virile and ardent lover of women. Nor did his dissipations under the gas flares of urban Paris preclude the passionate enjoyment at times of an open-air life—yachting, swimming and sun bathing—or interfere with hard and sustained work as an artist. The fabric of his character was complex, but running through it were the consistent threads of more than ordinary intelligence and vitality, great sensibility, courage in face of physical deformity and uncompromising honesty in his art. He is a fascinating subject for a psychologist.

Henri de Toulouse - Lautrec, a double photograph (by Forest) reproduced from "Toulouse-Lautrec" by Gerstle Mack, reviewed on this page.

Mr. Gerstle Mack's study of Lautrec—the first full-length portrait of the artist in English—is factual rather than interpretive. It does not attempt a critical appraisal of the painter's genius and makes neither psychological nor sociological deductions. Mr. Mack lays great stress, however, on the importance of considering Lautrec's work in relation to the environment which inspired it, and devotes a considerable proportion of this book to the background of the "gay nineties." He gives the history of Montmartre and the *cabarets artistiques* and relates the varying fortunes of the characters whose antics made those resorts famous: La Goulue, Jane Avril, Valentin le Dèsossé, Chocolat, Footit and other celebrities who appear in Lautrec's paintings.

It is sad to learn from Mr. Mack that the two most outstanding dancers at the Moulin Rouge—La Goulue and Jane Avril—both ended their days in poverty and obscurity. La Goulue was, perhaps the most striking of all Lautrec's models. Her character made a special appeal to him, and her vulpine features appear in some of his best pictures. In her hey-day she was afraid of nothing. She was capable of greeting the Prince of Wales (afterwards Edward the Seventh) with "Hi, Wales, aren't you going to treat us to champagne"? At sixty, however, poor and embittered, she was ekeing out a miserable existence peddling candy and oranges from one café to another. She died a charity patient.

The kaleidoscopic world in which these women moved was observed by Lautrec with a merciless eye. Far from moralising about it he seems to have taken a positive delight in depicting the viciousness he found there. His vision is always dead honest; his means of expression a direct and uncompromising realism. He is too cynical to show any sentiment but he does not hate his models. Indeed his penetration is such that here and there he actually evokes sympathy.

The sordid side of life inspired some of Lautrec's finest works. It represented, however, only one aspect of an interest which was many sided. Sport, the theatre, the circus, athletics, and even surgery attracted him. In the theatre it was not the play which held his attention. He was fascinated by the colour, movement, and costumes of both actors and audience. These stirred him more than the acted drama. He was interested, too, in the personality of the players and made an astonishing series of theatrical portraits.

Students of painting may not find in Mr. Mack's book all they would like to know about Lautrec's technique, but they will be grateful for valuable information bearing on the artist's development. Mr. Mack gives an illuminating account of his pupillage, first under Princetau, a friend and neighbour of his boyhood, who encouraged him but was distressed by his "lack of form"; next under Bonnat, who thought his drawing atrocious and from whom he rebelled, and finally with the tolerant Corman, from whom he learned nothing.

In Corman's studio he made the acquaintance of a group of students, among them Anquetin and Emile Bernard, who were in revolt against academic teaching. Contact with their lively minds helped to broaden his outlook. He learned to admire Delacroix, Manet, the Impressionists, Degas and the Japanese.

This was a turning point in his development. Perhaps Impressionism counted least although it no doubt helped him to clean from his palette the mud of Bonnat's and Corman's studios. The most enduring influence was that of Degas and the Japanese. For Lautrec, Degas was the greatest of all the moderns and he would allow no discussion on this point. The influence of the Japanese print comes out in the painter's later works and in his posters. According to Mr. Mack the posters, too, played as big a part as Impressionism in the clarifying of his colour.

Mr. Mack is right in recognizing the importance of Lautrec as a poster artist. Although as a painter he founded no school, his influence on the design of pictorial advertisements has been profound. He rightly recognized no distinction between "commercial" and "fine" art but gave to both posters and paintings the very best of which he was capable.

To the contemporary eye the posters are marred by one thing only—the *art nouveau* lettering. But unlike living artists, Lautrec was not the fortunate inheritor of a revived tradition.

One thing emerges most unmistakably from Mr. Mack's book: the prolific nature of Lautrec's genius. Neither his physical disabilities nor his chronic alcoholism were a bar to constant activity as an artist. What is no less remarkable is the consistently high level he maintained right up to the end. A combination of dissipation and hard work certainly led to his serious breakdown in February 1899 but it did not affect the quality of his output.

Towards the end of his life it is true he produced fewer paintings, but he was then preoccupied with lithography. In 1890 alone he executed no fewer than one hundred superb lithographs. Even after the crash came and he had been moved to an asylum, he was soon writing for lithographic material to be sent him. In 1901, when it was clear that his death

was near, he insisted on being lifted up to work on a portrait, but he was obliged to give up the struggle. He died on September the 9th, 1901, in his thirty-seventh year.

PERCY HORTON

Complete Men

THE BRUNELS: FATHER AND SON. By Celia Brunel Noble. London: Cobden-Sanderson. Price 15s. net.

So familiar are we with the nature of the engineering profession as it is today, that it is a little difficult to realize what a different matter engineering was in the days about which this book is written. Today the premises on which an engineer bases his calculations are known: it is a question of balancing one sure method against another. But in the pioneer days of civil engineering, everything was a matter of experiment. Calculation from base principles—as opposed to the use of tried formulæ—encouraged the use of the imagination. The Menai Bridge, for example, which is one of the greatest monuments of the nineteenth century, becomes even more stupendous when we realize that nothing like it had been known before. In every case it was probably the scope that was given to the imagination of their designers that produced in these engineering works the æsthetic vitality of architecture.

Moreover these engineers were complete men. Not being slaves to their formulæ or, like the consulting engineer of today, to the predetermined forms of an irrelevant architecture, they were in a position to exercise their imaginations in any direction in which their inventive purpose could apply. Telford was harbour-maker, bridge-builder, planner of roads and canals; the two Brunels, whose life story this admirable book describes, planned ships, railways and tunnels (and, what is consistent with their empirical method of work, often invented the machinery for the carrying out of their designs); Paxton cultivated strawberries, edited magazines and built greenhouses such as the world had never seen. An heroic age produced heroic figures.

Of course this period had its failures as well as its triumphs. But the former were noble failures, and the most moving passages in this book describe the noblest failure of all: the *Great Eastern* steamship, the building of which, and the struggles it involved against misfortune and misjudgement, dominated the latter part of the younger Brunel's life and distracted him to the grave. The *Great Eastern* was not ill-conceived; it was only before its time. It is evidence of Brunel's optimism that he expected a vessel many times the size of anything that had previously been built (its displacement was 27,000 tons, as compared with the less than 3,000 of the *Great Britain*) to be an easy success. Necessity is seldom born of invention. Only when the *Oceanic*, the first liner to exceed the *Great Eastern* in size, was launched 35 years after were the public and the Atlantic ready. But successful or not as an undertaking the *Great Eastern* deserved a better fate than to lie plastered with advertisements as a show-boat for holiday-makers at Blackpool until she was finally broken up only 30 years after she had been launched.

The younger Brunel, Isambard Kingdom, is better remembered for his energetic and inventive career as engineer to the Great Western Railway and for the many minor achievements that this book recalls and that are very little known; as for example for his design of hospitals in prefabricated sections to be exported to the Crimea and assembled where required behind the line. He must be given an important place, on this account, among the pioneers of modern architectural technique.

The author of the book is I. K. Brunel's granddaughter, and her study of his life and that of his father is of course made from the domestic angle and not from the engineering angle. The father, an *emigré* from the French Revolution, was more abstractly an inventor; the son was part of his particular epoch of material progress, but in either case it will surprise anyone who knows the quantity of work for which the two were responsible that they had any domestic life for a biography to record. Domestic relaxation indeed meant little to two men for whom the whole world of applied science was a playground.

JAMES MACQUEDY

The Styles of English Architecture.

The two books that are reviewed below appeared at approximately the same time and are in many ways complementary to one another. It has been their repeated experience to be reviewed together; in this case the opportunity has been taken of getting the rival authors to review each other's book.

A MINIATURE HISTORY OF THE ENGLISH HOUSE. By J. M. Richards. London: The Architectural Press. Price 3s. 6d.

It is strange but nevertheless true that one can say with complete conviction that this quite admirable little book "fulfils a long-felt need." For years the bookstalls have groaned beneath the weight of innumerable handbooks, of varying merit, dealing with the history of the English church, the English cathedral, the English castle and the English cottage, but to obtain any reliable information about the development of the English house one had either to spend at least a couple of guineas, or else go to the museum libraries. This is all the more extraordinary in that our architectural reputation as a nation is almost exclusively bound up with the house; with the exception of Wren, our builders have all scored their greatest triumphs in the realm of domestic architecture. France could provide far finer material for a volume dealing with cathedrals or castles, Germany for a book on flats, Italy for one on palaces, and any country can produce examples of equal quantity and merit for a tome on cottages; but the invention and development of the private house remains the peculiar achievement of English architecture.

It is the great merit of the present work that this long tradition and constant development receive at last their proper emphasis; the subjects of the innumerable and on the whole excellent illustrations are never treated by the author as isolated phenomena, works of art existing in a vacuum, but as the various stages of a long and, until a century ago, remarkably triumphant progress. Moreover the illustrations have been chosen, most of them from the late Nathaniel Lloyd's great work, not so much on account of the intrinsic excellence of the houses shown but rather with an eye to those features which best illustrate the changes and modifications of the various periods.

Throughout the book the author maintains a most praiseworthy, indeed almost clinical, detachment. The house is treated as an organism and its growth recorded and explained but seldom criticized. And after a spate of olde-worlde-human-interest writing about architecture this is something for which to be devoutly thankful. When he is occasionally moved to comment it is by implication rather than direct statement; after describing and drawing attention to the merits of the movement back to simplicity initiated by Morris he is careful to add the bare but eminently practical sentence "The Red House had no bathroom." And after giving Pugin his due for "advocating a return to structural design as distinct from the design of façades" he states quite simply "He designed the elaborate Gothic composition illustrated"; a building in which structural design is even more notably absent than anything which could possibly be described as a façade.

Only once does Mr. Richards's detachment desert him; when he allows himself to employ the epithet "debased" in connexion with the taste exemplified in the furniture and decoration of the Prince Consort's sitting-room. That the taste of 1860 was debased I am not, at the moment, prepared to dispute but that this particular illustration exemplifies that taste is, to say the least, hypothetical. All the furniture visible appears to be Regency, as do the door mouldings. The wall-paper and heavy gilding to which Mr. Richards takes exception are probably early Victorian and to me, inoffensive. But then in the words of the late Mr. Henry James "I can stand a lot of gilt." Anyhow both Regency and early Victorian are now on the crest of a highly menacing wave and a harsh word in season will do more good than harm.

If you live in a house you should purchase this book in order better to understand how your home came to possess its shape and character; if you live in a flat you should purchase this book just to see what you have rashly abandoned.

OSBERT LANCASTER

PILLAR TO POST: OR THE POCKET LAMP OF ARCHITECTURE. By Osbert Lancaster. London: John Murray. Price 5s. net.

It is possible that Mr. Lancaster is being too lenient with the Man in the Street when he ascribes our present deplorable standards of architectural taste to his failure to be bold enough to express his opinions. The Man in the Street seldom, according to other people's observations, fails to make it clear that he knows exactly what he likes. Ask any of the more intelligent speculative builders—for such do exist—and he will say that however anxious he may be to put up houses of better design than the average, he knows from experience that the public will not look at them. The public wants to live in a Tudor house and vociferously refuses anything else; and even if an architect designs anything else at the request of a client the representative of public opinion, in the shape of the local Council that has to pass the plans, generally feels that there is something going on that ought to be put a stop to.

However this possibility does not diminish the value of Mr. Lancaster's book; in fact it makes its educational aspect all the more important and its critical method all the more appropriate. For a public that insists on regarding architecture as a succession of fancy-dress costumes, no criticism could be more effective than that which enters into the same spirit with ghoulish delight, and flashes its pocket lamp on all the strange costumes that architects, ancient and modern, have chosen to deck their buildings in; examining without mercy the styles that are commonly accepted as admirable because they are ancient, dissecting without flinching the styles that have never been classified before because they are comparatively modern.

In comparison with this method all other kinds of criticism simply beg the question. They say, "you must think of a building from the point of view of the purpose it has to serve"; or, "you must think of style only as the ornamentation of structure." But Mr. Lancaster says, in effect, "planning and structure may be the architect's duty, but the trappings of style, for better or worse, constitute his public achievement; so let us see what his pretentions amount to in terms of fancy costumes."

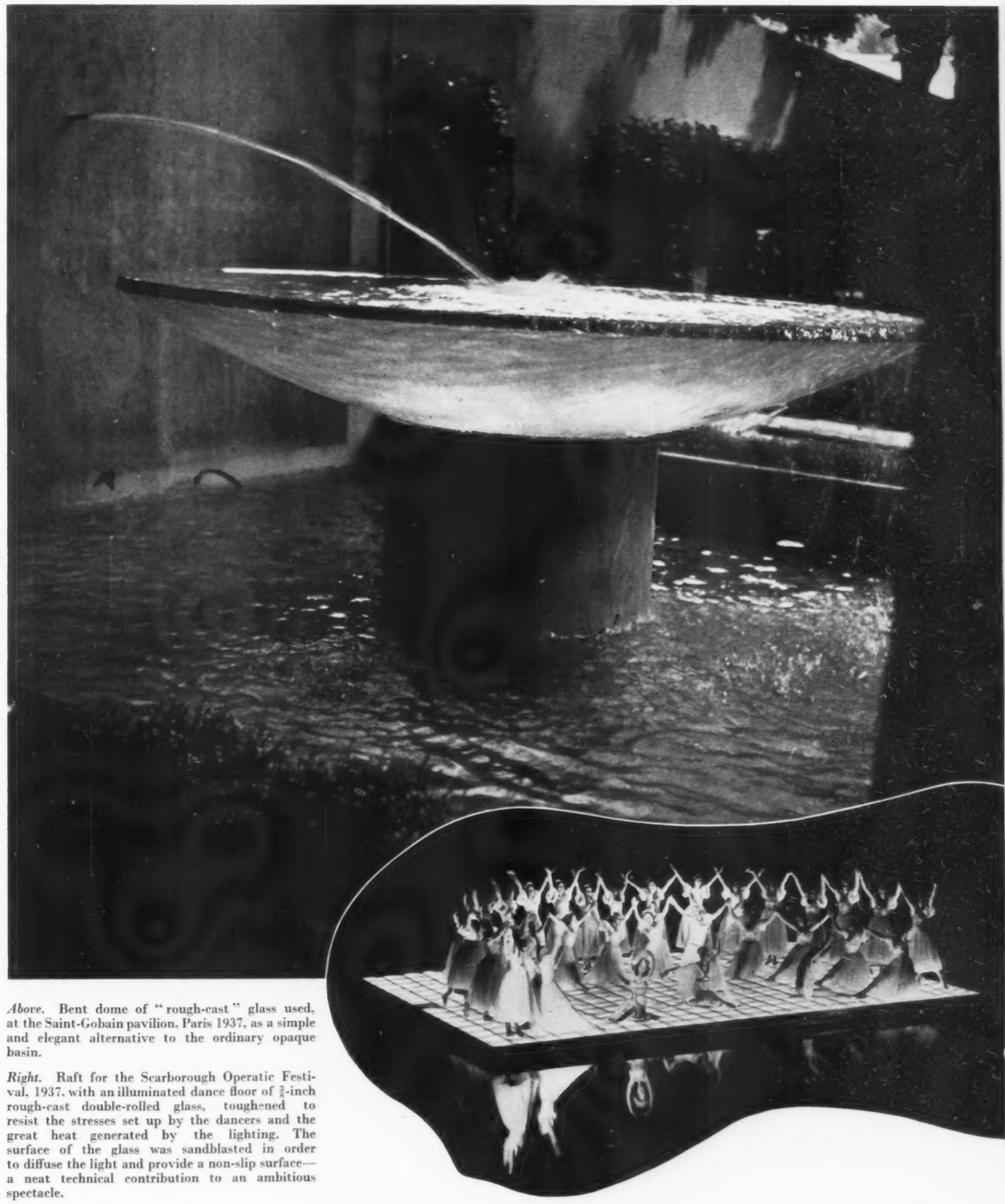
Mr. Lancaster, like most effective critics, derives his success, one suspects, largely from the fact that he is really very fond even of the objects of his disparagement. The more "debased" and despicable the object of his attention the more accurately his pen and his pencil pin down its characteristics with doting care. He skims lightly over those centuries that constitute what are usually known as the historical periods. It is when he reaches the beginning of the nineteenth century that he finds himself on the ground he relishes, that his drawings take on a new, more than mere comic vitality and his services to architectural nomenclature become really apparent. He illuminates his pioneer path through the jungle of nineteenth and twentieth century styles: Municipal Gothic, Kensington Italianate, Second Empire Renaissance, Pont St. Dutch, Banker's Georgian and many others, concluding with Twentieth Century Functional.

The criticism that is implicit in the whole procedure makes this book one that should be read by Mayors, Councillors and Committee-men (and, indeed, architects) everywhere. It can also be regarded, of course, simply as a book of drawings. As such it is a *tour-de-force* of accurate observation and dashing craftsmanship, the best drawings in the book, such as those of Municipal Gothic and Public House Classic, being as good of their kind as one could imagine. That, indeed, is the book's only weakness as a piece of satire: that under Mr. Lancaster's pen even the buildings that would be nastiest in the flesh acquire a deceptive charm.

J. M. RICHARDS

This is the first of a series of supplements each dealing with a different material. Emphasis is laid on decorative possibilities, but the supplements are also planned as a continuation of the special issues on materials that have been periodically published by THE ARCHITECTURAL REVIEW during recent years.

GLASS



Above. Bent dome of "rough-cast" glass used, at the Saint-Gobain pavilion, Paris 1937, as a simple and elegant alternative to the ordinary opaque basin.

Right. Raft for the Scarborough Operatic Festival, 1937, with an illuminated dance floor of ⅜-inch rough-cast double-rolled glass, toughened to resist the stresses set up by the dancers and the great heat generated by the lighting. The surface of the glass was sandblasted in order to diffuse the light and provide a non-slip surface—a neat technical contribution to an ambitious spectacle.

GLASS IN CONSTRUCTION AND DECORATION

A review of recent developments by Raymond McGrath

Just over a year ago, when the ink was hardly dry on the proofs of "Glass in Architecture and Decoration," the Crystal Palace was destroyed overnight by fire. We had written: "It was perhaps the first expression in architecture of mechanization, and was certainly the first considerable example of prefabrication." We begin to realize what the machine means to architecture: "The elegance of a mathematical equation, the inevitability of a series of physical interrelations, the naked quality of the material itself, the tight logic of the whole—these are the ingredients that go into the design of machines: and they go equally into products that have been properly designed for machine production" (Lewis Mumford). These products are the stuff of modern building. New architects are in the making who appreciate the logic required of them and who can create beauty out of it. They are in no danger from the sentimental reactions which are symptomatic of these unsettled times. The future is theirs—and so, to misquote the commentator, glass marches on. The fourth wall of glass, which a few years ago was scoffed at, has arrived in the English house. And it succeeds. The early development of glass "changed the aspect of indoor life." That change goes on. Standards of research into the properties of glass and of manufacture were never higher. The biggest gaps are between the knowledge and its application to the finished building. In the medium of glass, art seldom reaches beyond the humble bounds of decoration. There is certainly an increasing appreciation of the technique demanded by glass processes but, probably because so few serious designers apply themselves to glass, the possibilities are rarely realized. There is still a dearth of good decoration in glass, but fortunately the "naked quality of the material" has its own beauty.

1 DECORATION PROCESSES

The principal methods of working glass are Edge-work or Bevelling; the Cutting Processes (Brilliant-cutting and Engraving); the Obscuring Processes (Sandblasting, Grinding, Aciding or Embossing and Stippling); Silvering, Metallizing, Gilding and Staining; and Bending.

BRILLIANT-CUTTING is the principal decorative cutting process. Various types of cuts—V cuts, edge cuts, panel cuts, round cuts, punts and hollows—are produced by bringing the plate to bear on a sandstone wheel of the required section. The illustration shows the engraver at work on a plate on which a figure design has already been sandblasted.

ENGRAVING is a more delicate cutting process. The illustration shows the engraver handling a small plate on the copper wheel which is fed with oil and pulverized emery powder.

ACID EMBOSSING, showing the first stage in this obscuring process. On a plate laid over the design the artist is applying with a camel hair "pencil" the Brunswick black resist which will protect the glass in the acid bath.

ACID EMBOSSING, showing the hydrofluoric acid being poured over the plate. A wall of tallow has been built up along the edge of the glass to retain the acid. The degree of obscurity and the character of the surface produced depends upon the number of acid treatments. Stippling is produced by treatment with a mixture of acid and some inert substance, such as ground mica.

SANDBLASTING, showing the sandblaster directing the sand-gun on to the work to be obscured, visible through the observation window in the operating cabin. The sand or other abrasive is propelled by a stream of compressed air and the parts of the glass which are to remain clear are protected by a resist or stencil of suitable material.

SANDBLASTING, showing the sandblaster stripping the resist from the surface of the glass. Sandblasting is of two types—Deep, Gravé or Modelled Sandblast and Shaded Sandblast.

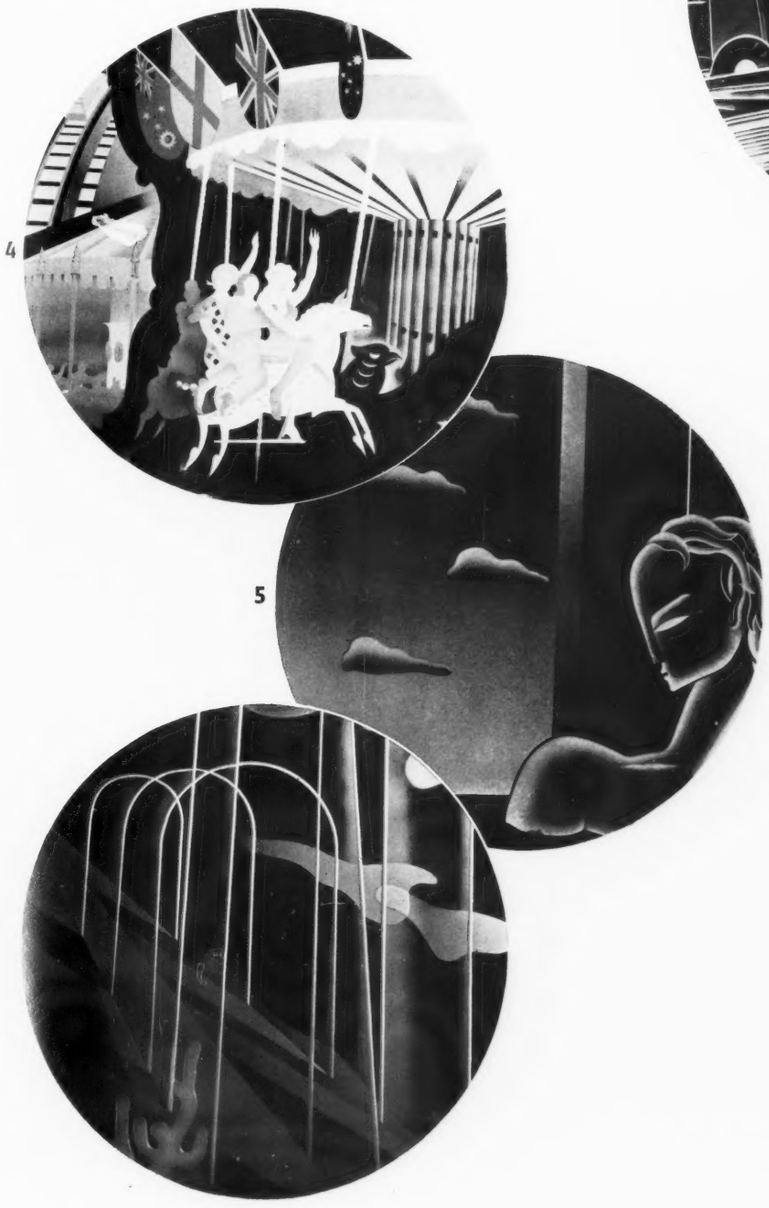
DECORATIVE COLOUR, illustrating a recent decorative process—the cutting to shape and fitting of the various coloured areas of the glass silk interlayer of a thermolux panel. The illustration numbered 12 on page 103 is an example of this technique.

2 DECORATIVE TECHNIQUE

1, *Brilliant-cutting.* This detail of a design executed on plain rolled glass, "silvered," indicates clearly the flowing, precise character of brilliant-cutting. The design is accentuated by polishing away in places the surface ribbed pattern of the glass.

2, *Brilliant-cutting, sandblasting and acid work.* Detail of a panel by Suddaby and Fryer in Poplar Town Hall, on clear plate with edge illumination and line borders in deep clear acid, silvered.

3, *Wheel engraving.* Detail of an Orrefors engraving, "North Wind," by Simon Gate. Very delicate modelling, such as this exemplifies, is only made possible by the use of the engraver's small copper wheels.



4, *Acid embossing.* Detail of a decorative mirror. The revolving canopy of the merry-go-round and its suspension rods, figures and animals are in three tones of acid appearing as white, grey and a darker tone respectively. There is additional sandblast shading to emphasize form. Organ pipes and background horse are entirely in shaded sandblast. The flags are painted in colour after brushing away the silvering.

5, *Shaded sandblast.* Detail of a panel by Sigmund Pollitzer, on polished black glass, using a fine aerograph-type sand-gun nozzle which enables the sandblaster to direct the blast accurately and, by reducing the pressure, obtain gradations of tone.

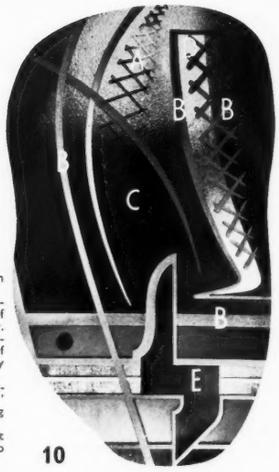
6, *Deep sandblasting.* Detail of a panel by Raymond McGrath, executed on $\frac{1}{4}$-inch neutral-tinted transparent plate by sandblasting to various depths. Such a technique is ineffective unless in a window or a lighting panel.

2 DECORATIVE TECHNIQUE

7 and **8**, decorative panels in the Poplar Town Hall (architects, Culpin and Son), designed by Suddaby and Fryer. The panels are clear plate with edge illumination by the "phantom sign" principle. The decorative symbols, Father Thames, and arms of Bow, Poplar and Bromley are in a combination of brilliant-cutting, sandblasting and acid-embossing. The line borders are deep clear acid, silvered. These are in every way decorations showing an unusual appreciation of the possibilities and appropriateness of glass technique.

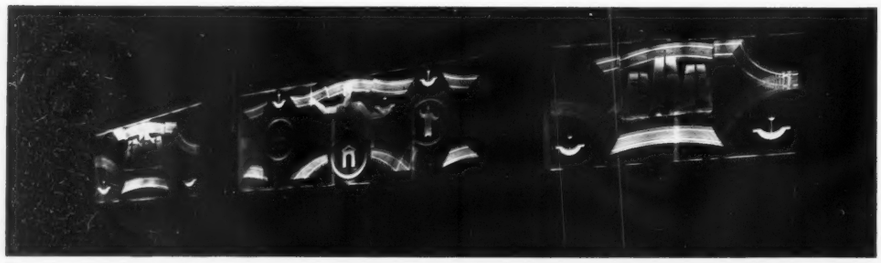
9, a glass mural, designed by Raymond McGrath for the Paris Exhibition of 1937. It is too seldom realized, since the decline of mosaic, that glass offers the liveliest possibilities for large-scale wall decoration. This mural (subject: *Modern Profiles*) was 24 feet high by 21 feet 9 inches wide, built up of 42 panels of ¼-inch plate glass. These panels were bedded on mastic and supported by clips at their corners. A special channel section supported the lower edge of the design.

10, shows a trial plate made at the outset to study various techniques and their effect. The selected processes covered almost the whole range available. Generally speaking the glass was pale grey silvered, and the surface acid stippled. The grey silvering gave the design its background colour and brightness. The stippling softened both. Most of the linear parts of the design were deep acid-embossed and laid with silver or gold leaf transparent-lacquered to produce blues or greens. Otherwise the embossed lines were painted with opaque white, yellow or red. Elsewhere sandblasting or brilliant-cutting was introduced—for example, the rivets along the plate girder were brilliant-cut "punts." In places part of the grey silvering was brushed out and replaced by copper leaf.

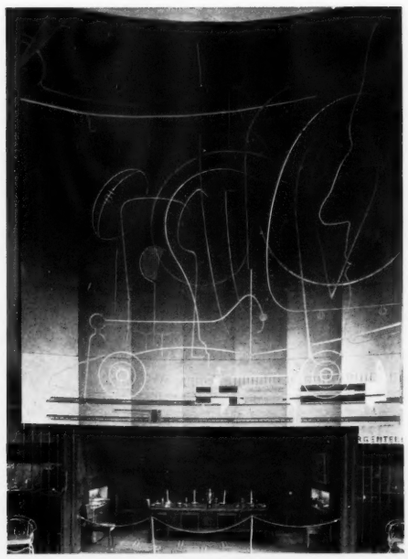


A. Brilliant-cutting on surface of plate.
B. Acid-embossed designs on surface of plate filled with colour.
C. Acid-stippled surface of plate back of which is pale grey silvered.
D. Part of grey silvering "brushed off" and ordinary silvering substituted.
E. Acid-stippling left off surface of plate to allow full reflection.

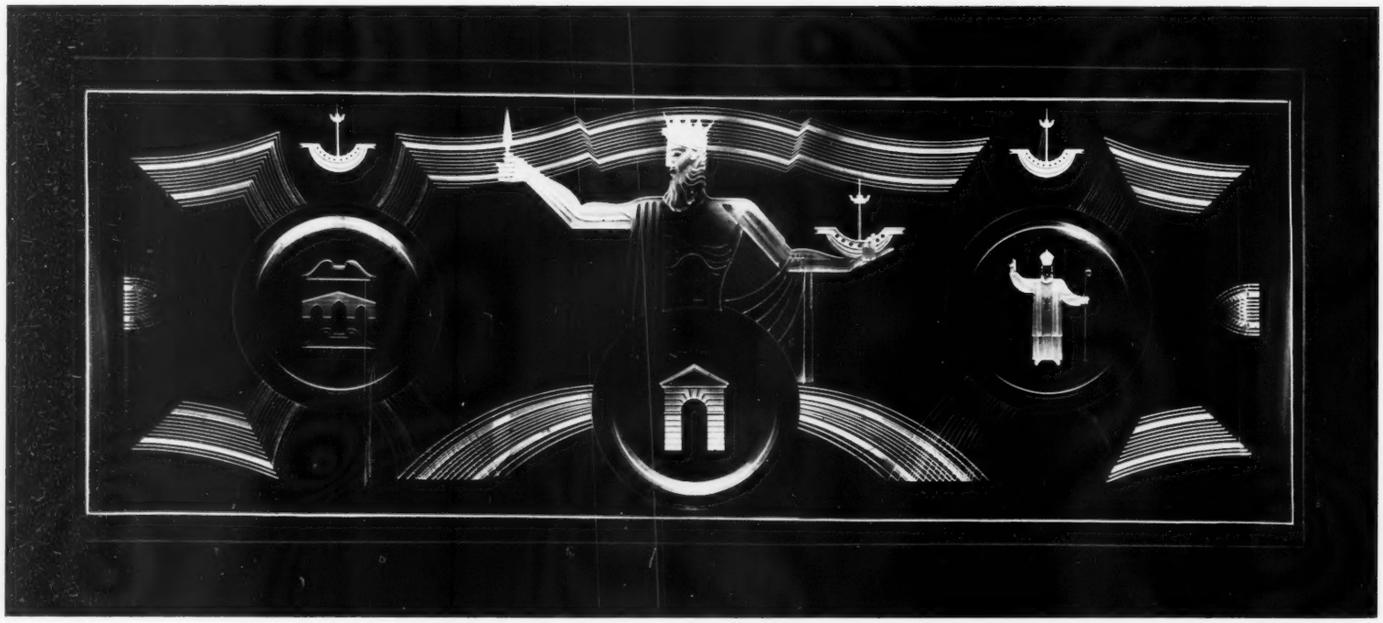
10



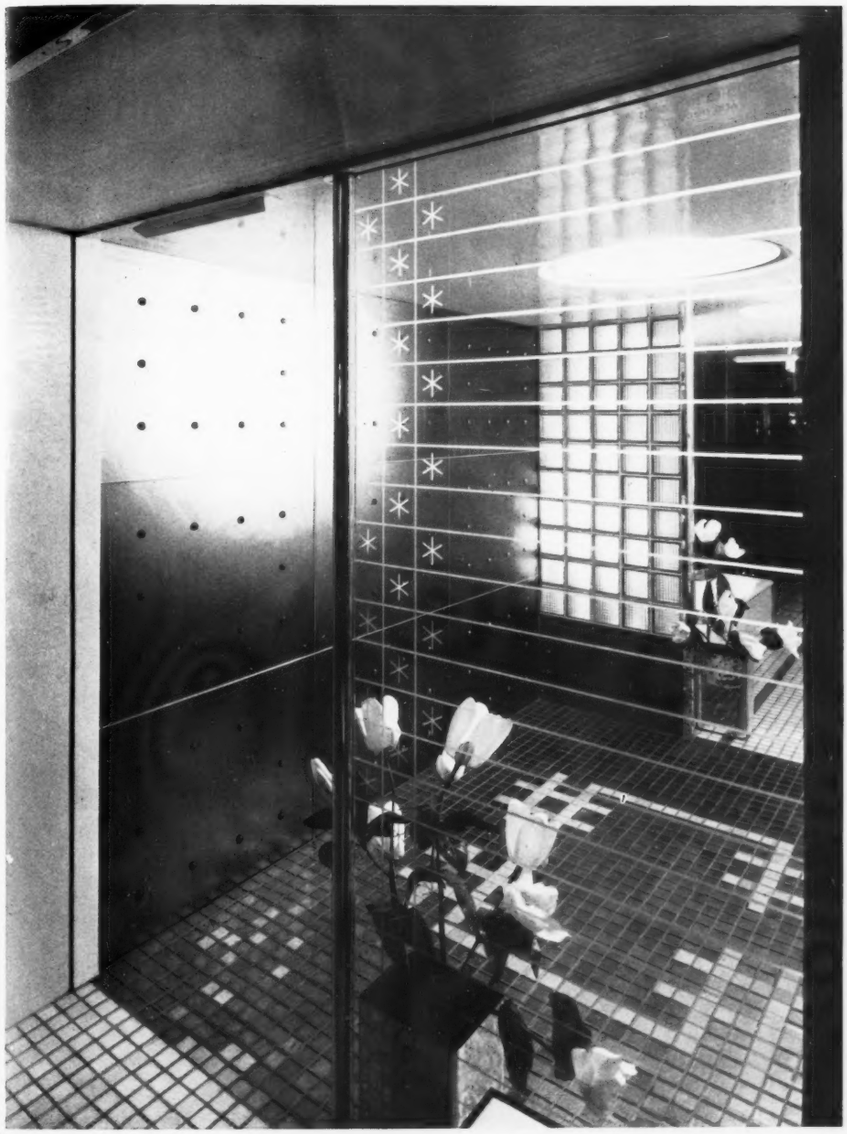
7



9



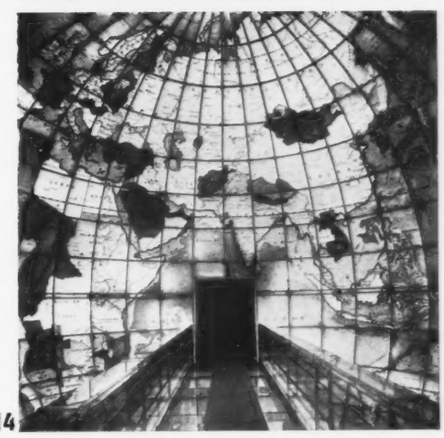
8



11

12

13



14

"Whether glass is embossed, engraved, painted, sandblasted, mirrored, impressed with any pattern we choose, moulded, blown, flashed and so on — there is almost no limit to what it will endure or to the possible permutations and combinations of different treatments — its vitreous qualities remain its decorative raison d'être. *This is not to say that any exploitation is justified — there are as many crimes committed in the name of glass as would have killed a less reputable material."* (*Glass in Architecture and Decoration. p.* 291.)

11, an interior of the "Glass-Age" showroom train, designed by Kenneth Cheeseman. The plate glass screen in the foreground has an acid-embossed decoration. The left-hand far wall is faced with plate glass acid-stippled and dull-grey silvered. The floor tiles are of clear glass silvered with a pattern in coloured opal.

12, a decorative thermolux lighting panel by Raymond McGrath at Olympia, 1938.

13, a corner of a glass manufacturer's showroom. Wall linings of plain rolled, silvered; a mirror with acid-embossed figures; a floor of glass tiles.

14, the "Mapparium" of the Christian Science Publishing Society. Boston, designed by Chester Lindsay Churchill. An accurate map of the world has been painted and fired on embossed plate, glazed in a bronze framework forming latitudinal and longitudinal divisions. Through this translucent sphere runs a glass spectators' bridge.

3 ROLLED OPAL AND IMPROVED PLATE

Twin-plate has arrived to supersede ordinary plate glass. Readers of *Glass in Architecture and Decoration*, section 1, will remember the description of the continuous method of grinding and polishing plate glass. By this method the glass was ground and polished on each surface separately. New plant has now been devised which enables the glass to be ground and polished on both surfaces simultaneously. The result is a great improvement in the planeness of the glass. Silvered it makes possible mirrors giving almost perfect reflection, as witness the reflected figures in **15**.

The use of coloured rolled opal glass has increased enormously during the past few years. The walls of the operating theatre at Chorley Hospital were lined full-length with green rolled opal with black strips, **16**.

17, the external walls of the Kingstone Building at Leicester (architect : Raymond McGrath), are faced with shell-pink opal glass. The sheets are bedded on mastic and secured top and bottom with horizontal copper cover-strips. The yard wall is built in pink-glazed brickwork to match the glass. Both materials introduce a sparkling freshness into a dark industrial atmosphere.

15

4 PLATE AND TOUGHENED GLASS

18 and **19**, wherever there are exhibitions an architect's fancy lightly turns to thoughts of glass. This was particularly true of Paris, 1937, and the Saint-Gobain Pavilion was an exciting example. Designed by R. Coulon and J. Adnet, it showed glass in all its aspects. The stairways were the parents of the succession of toughened glass stairways which we have since climbed at Olympia and elsewhere. At Paris the toughened treads were 2 metres long and 22 millimetres thick, tested for three times their maximum normal load (200 kilogrammes per lineal metre). The plate glass façade of the pavilion clearly exposes the rest of its chiefly glass-and-concrete epidermis.

20, at Hastings the borough engineer, Mr. Sidney Little, has made excellent use of plate glass windscreens in bronze frames and dwarf walls faced with black and coloured opal glass.

21, at Coronado, California, the architect, Donald McMurray, has designed a windscreen with a real sea-view.

22, the screen-wall of the staircase at Middlesex House (architect : Ernst Schaufelberg) is constructed with slender reinforced-concrete mullions. The thin horizontal glazing bars are bronze. A rolled glass is used with a ribbed pattern.

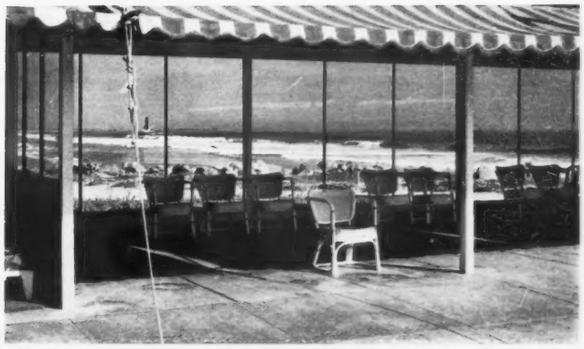
16

17

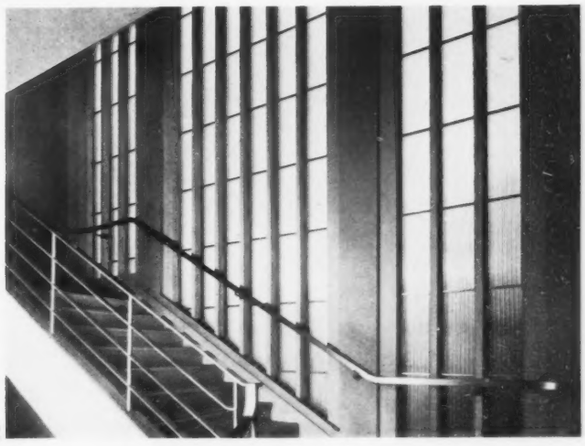
18

9

20

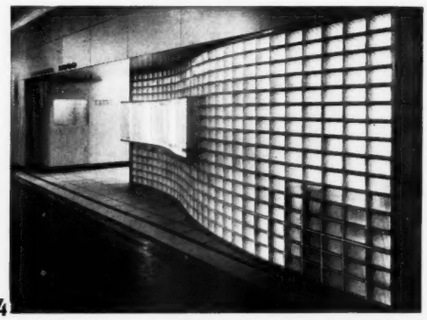


21



22

23



24

5 GLASS BRICKS

Glass bricks are coming of " glass age." For years their promise has lured architects and glass-makers into splintery paths. And now we may begin to use glass bricks—and the translucent, insulating hollow-walls which they provide—with some certainty of their behaviour. For the English manufacturers the Building Research Station has now produced a series of reports of its investigations on *Insulight Glass Masonry*. These reports cover light transmission and distribution, transmission of heat (with comparative data), transmission of air-borne sound, compressive strength and stability, fire resistance.

25

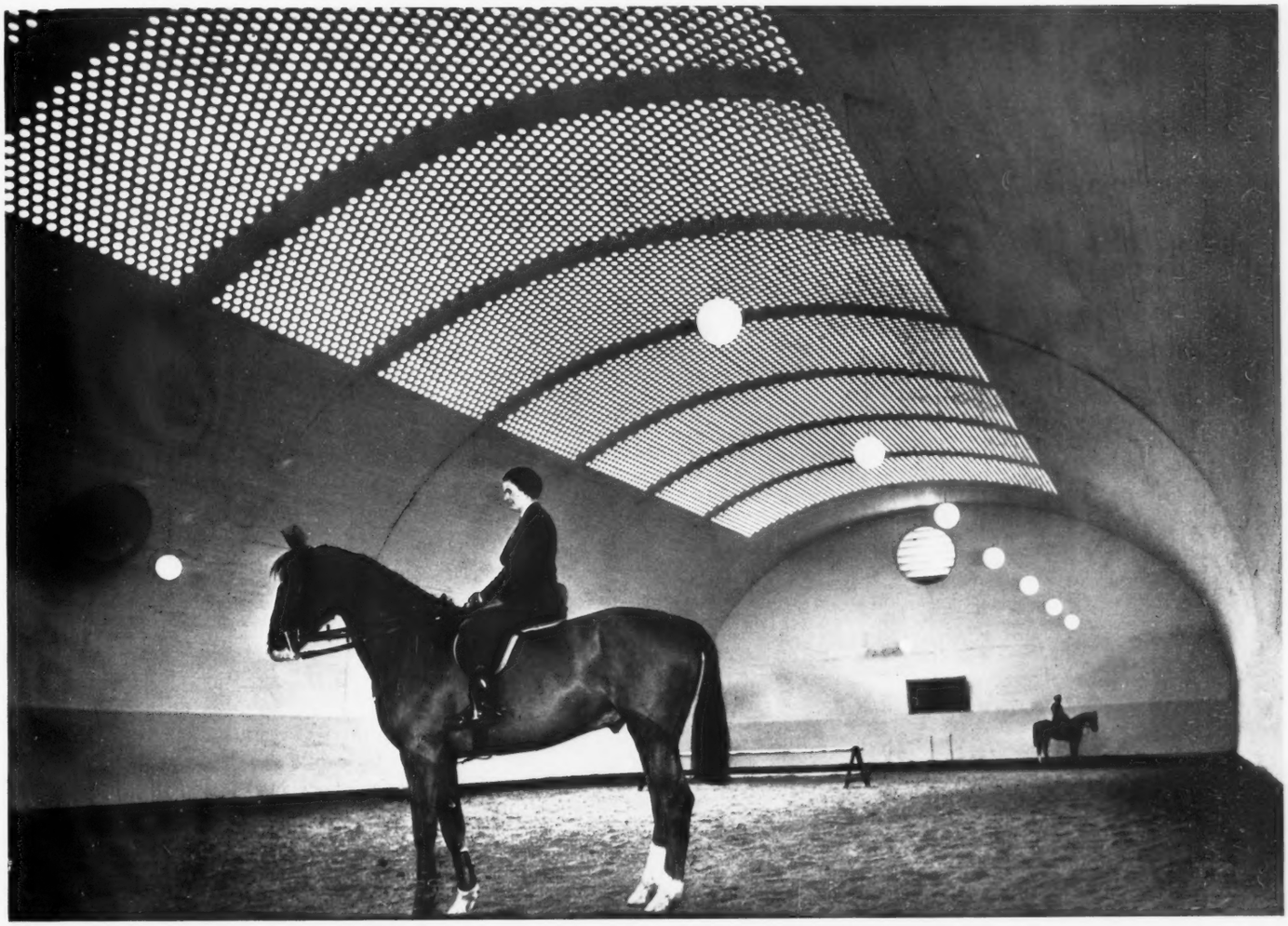
23, the new American Education Press Building, Columbus, Ohio (architects: Richards, McCarty and Butford) where the Owens-Illinois type of block (similar to that now manufactured here), has been used for external walling and partitions.

24, the barbers' shop in the Lewis building, Glasgow, a form of glass masonry being employed for the screen wall.

25, an interior of the new surgery of the Swedish Hospital at Seattle (architects : Smith, Carroll and Johanson) where the large 12-inch Corning-Steuben glass construction unit has been used.

26, a further example of the use of glass masonry in the staircase hall of a factory at Welwyn (associated architects : O. R. Salvisbury, Zurich, and C. Stanley Brown, London).

29

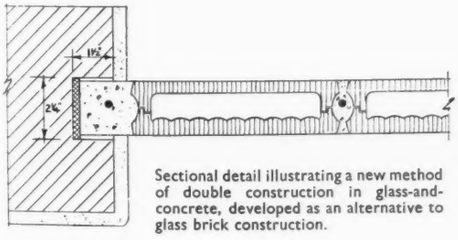


27

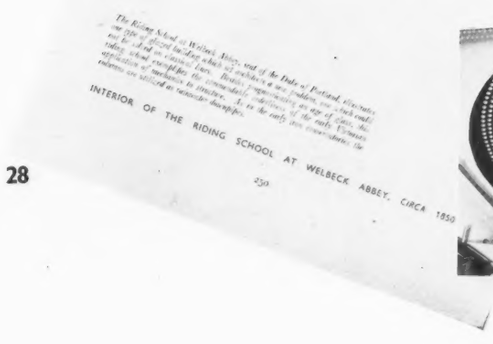
6 GLASS AND CONCRETE

Methods of glass-and-concrete construction make steady progress. The vast increase in reinforced concrete construction has led to a plastic union between concrete and glass, the latest development of which is the use of tempered lenses, which are at least as strong as the concrete in which they are embedded. **27**, a particularly happy example comes from Denmark (architect: Arne Jacobsen). Contrast this riding school with the Welbeck Abbey example, circa 1850 (**28**), taken from page 250 of *Glass in Architecture and Decoration*.

29, the glass-and-concrete dome of the Czechoslovakian pavilion at the Paris Exhibition, the exhibition swan-song of a once great State.

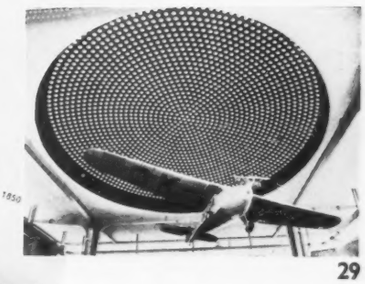


Sectional detail illustrating a new method of double construction in glass-and-concrete, developed as an alternative to glass brick construction.



INTERIOR OF THE RIDING SCHOOL AT WELBECK ABBEY, CIRCA 1850

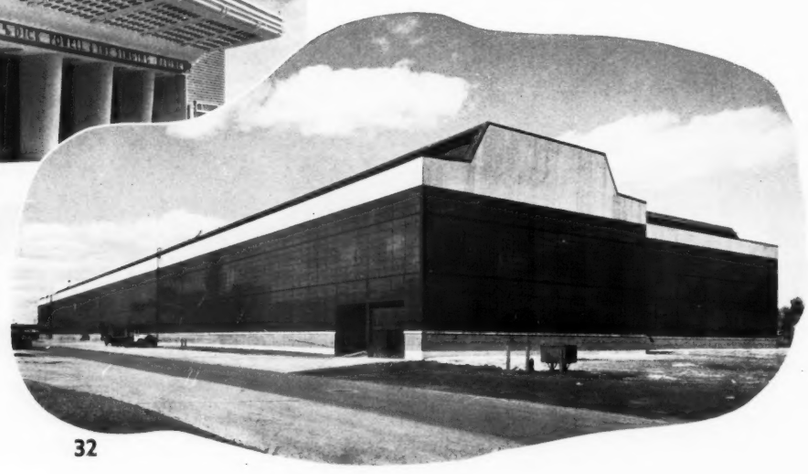
28



29

30

31



32

7 GLASS AND CONCRETE, GLASS AND STEEL

These and the foregoing examples illustrate the fact that modern elements of architecture must be expressive of contemporary materials and their appropriate constructions. The extensive use of glass could not help but bring about a revolution in design. Steel and glass and glass and concrete are undoubtedly the prime movers of this movement in architecture.

The cantilevered canopy is fast becoming an important feature of the contemporary street. On a recent Oxford Street store (architects : Gunton and Gunton), **30,** the usual heaviness is relieved by the architects' use of Georgian-wired glass which transmits the light rather like the enormous membrane of a dragon-fly.

31, the canopy of the Regal Cinema, Walton-on-Thames (architect : C. Edmund Wilford), is a more monumental treatment of the canopy in glass-and-concrete. 8-inch circular lenses have been employed. This and the Oxford Street example are structures which lend themselves to interesting decorative lighting effects.

32, a glimpse of the glass age in the industrial scene. The press shop of the Chrysler Corporation's Desoto plant, Detroit (architect : Albert Kahn) awarded first prize in the annual competition of the Pittsburgh Glass Institute for the best use of glass in the construction of an industrial building.

A Victorian on his own time

Those who erected the great works which are still our admiration, knew little of, and cared even less for, the works of their predecessors. The artist is essentially the man of the present, and an extended knowledge of the history of art and a sympathy with its various manifestations is not, as a rule, found in conjunction with real artistic power. Certainly those ages which have been the most fruitful in great works of architecture have been, as a rule, singularly ignorant of architectural history.

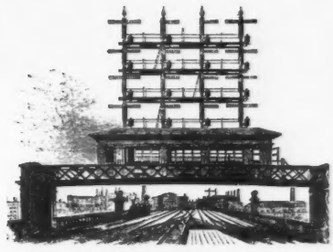
. . . . The great period of the classic Renaissance may seem in some sort an exception to this rule. There was undoubtedly then *some* antiquarian knowledge, but the ruthless manner in which the remains of classic antiquity were destroyed by the very men who were engaged in reviving the classic style, shows how lightly they valued these priceless treasures. The ruins of the Coliseum served as a quarry from which Michel Angelo obtained the materials for the Farnese Palace, and the dome of the Pantheon was stripped of the bronze which ornamented its coffers to supply Bernini with metal for the construction of the baldachin of St. Peter's.

In the successive periods of the history of art, as in the character of the individual artist, the critical faculty, and the creative are distinct, and even opposed. But seldom are the two combined in the same person or the same age, and never in an equal proportion.

Nothing is more striking at the present day than the absence of true creative power in architectural art. I am not speaking of individual artists. We have many men who, under more favourable conditions, would have produced great and even original works. It is even remarkable how much is accomplished under existing circumstances by individual men of genius. But we have produced no national style, nor do we seem likely at present to do so. We have broken the tradition which maintained the continuity of art history, and made each successive style the natural outcome of its predecessor. Everywhere we meet with reproductions of ancient styles, attempted revivals of lost traditions, nowhere with any genuine power of creating new forms of beauty united to new requirements. Indeed, it is difficult to see how, when tradition is broken up, or has exhausted itself, a new and genuine architecture is to be originated. We must look for this among the unknown possibilities of the future. But for the present we may well console ourselves for the deadness of the creative power in the vigour of the critical faculty. Our age is, in matters of art, eminently antiquarian, and in the minute acquaintance with the history of past styles which we possess, we may find some amends for the want of one of our own.

GEORGE GILBERT SCOTT, F.S.A. [a son of Sir Gilbert Scott].

("An Essay on the History of English Church Architecture," Simpkin, Marshall & Co., 1881.)



CANNON STREET STATION SIGNALS.

MARGINALIA

Beaumont Street, Oxford

Recent developments in Oxford seem likely to destroy one of the fondest and most generally accepted illusions of our time—namely that the fight to preserve what is best worth preserving of the buildings and architecture of the past is selflessly waged by a small and disinterested band of intellectuals, the guardians of culture, against the vast unlettered horde of speculative builders, tired business men and obstinate local authorities. This happy myth is now deprived of every shred of vitality by the spectacle of the University authorities preparing to wreck Beaumont Street in face of the strenuous opposition of the citizens of Oxford. Gown wins a last unworthy victory over Town and bang goes all the poppycock about guardians of culture.

The plain facts of the matter are as follows: the Ashmolean Museum, built in about 1840 by Cockerell in his neo-Greek manner, is a splendid building which, as Professor Richardson has recently pointed out, achieves by contrast a harmony with the rest of Beaumont Street that a slavish adaptation of the style of the remainder of the street would never have achieved. It is now (like another Museum) about to burst its bounds and seems equally intent on destroying much of the surrounding architecture in the process. Beaumont Street itself is remarkable for being one of the last good pieces of street planning ever carried out in this country. Built in the third decade of the nineteenth century the individual houses are pleasant if not outstanding specimens of the late eighteenth century tradition of urban architecture, attaining in stone an effect of dignity and good manners which similar streets and terraces in London and Brighton achieve in stucco.

What however singles them out from half a hundred similar groups of houses which are daily falling before the housebreaker's pick all over England is not any particular excellence in the actual houses themselves, but the quite remarkable skill displayed in their disposition. The whole street is planned on a slight but subtle curve leading the eye inevitably towards the admirable, although creeper-disfigured, Georgian front of Worcester College, and once the long continuous façade is broken the whole effect is irretrievably ruined.

Now the authorities in charge of the Ashmolean wish to enlarge the premises of the Museum and propose to pull down three of the houses at once and in due time three more. In their place they intend to erect a new wing in a restrained neo-Georgian style, which, although comparatively inoffensive in itself, is bound to spoil the subtle and extremely successful relationship at present existing between Cockerell's Ashmolean and its immediate neighbours.

So far Beaumont Street, almost alone of Oxford streets, has survived practically unscathed; a few months ago, it is true, the new Oxford Playhouse was erected in the street, but with a praiseworthy consideration for the architectural amenities of the neighbourhood, those responsible put up a building which, as far as the upper stories go, conforms exactly to the style and proportions of the rest of the street. (It is true that this enlightened attitude rather breaks down on the ground floor where there is an outbreak of modernistic emerald green and plate glass doors, but anyhow the spirit was willing even if the ironwork was weak.) We have it on Professor Richardson's authority that it would be perfectly possible from a structural point of view for those responsible for the Ashmolean extension to display a similar enlightenment and incorporate in the new wing the existing façades of the houses it is at the moment proposed to pull down; but they refuse to make any such gesture. If, one may well ask, a so problematically profitable undertaking as a repertory theatre can afford to display a modicum of architectural good manners, surely there is no sound reason why the University authorities should be so obstinately barbarian, for the structural problems involved in the erection of a theatre are certainly not a whit less tricky than those which the designer of an art gallery has to face?

However, this is not all; there is yet another and still more disturbing aspect of the question. What, one may well ask, is the attitude of the Oxford Preservation Trust? Here is a society existing with the sole object of preserving what remains of Oxford from the encroachments of the speculative builder and the cancer of unrestrained commercial development; surely, one would be justified in supposing that, in the case of Beaumont Street, it would be in the very forefront of the ranks of the defenders? Not a bit of it. Until a couple of months ago the Oxford Preservation Trust had taken no cognizance whatever of the proposals, although the fact that these plans had been maturing for some years had been a matter of common knowledge.

On the 16th of December last, however, a letter from the Chairman of the Central Oxford Committee appeared in the *Oxford Mail*, reporting that a sub-committee had been appointed to inspect the plans and saw "no reason for the Town-Planning Committee rejecting the scheme." Now the question arises as to what precise function the Oxford Preservation Trust imagine they actually fulfil? One had naturally assumed that they existed to preserve what remains of good and characteristic architecture in Oxford, and even after the sack of the Broad to make a Bodleian holiday, which one charitably attributed to *force majeure*, one still clung to a belief that they were prepared to fulfil the functions implied in their name. Now one knows better, and one may well ask oneself why one

e

HOUSES IN OXFORD
THREATENED WITH DESTRUCTION

Above is a drawing (by Thomas Rayson) of the early nineteenth century houses in Beaumont St., Oxford, adjoining the Ashmolean Museum, which the latter wishes to destroy to make room for an extension. See the note beginning on the preceding page.

should continue to subscribe or urge others to subscribe, or provide them with the publicity which hitherto this paper among many others has been only too pleased to afford them.

The Town Planning Committee are powerless, for however much they may dislike the scheme they cannot ignore the fact that if they turn it down and insist on the incorporation of the existing façades they will be faced with a bill for compensation. And why should the Oxford ratepayers be forced to pay for the University authorities lapses of taste?*

So far, apart from the local authorities the chief protests have come from the residents of Beaumont Street acting in a body, the *Oxford Mail*, whose attitude throughout the whole affair has been consistent and enlightened, and the Georgian Group. A letter of protest signed by some fifty one-time undergraduates of the University, including Lord Methuen, Sir John Murray, Dr. St. John Gogarty, Mr. Max Beerbohm, Mr. Sacheverell Sitwell and Mr. Robert Byron, has also been sent to the Vice-Chancellor.

* We learn as we go to press that at a meeting of the Hebdominal Council, to whose notice the petition had been brought by the Vice-Chancellor, it was decided to hold a conference on the whole matter, attended by three representatives of the University, three members of the Town Planning Committee of the Oxford City Council and three representatives of the petitioners.

RUGBY ROAD BRIDGE.

We may add the following interview with Professor Richardson on the subject of Beaumont Street, which appeared in the *Oxford Mail* on December 15th :—

Prof. A. E. Richardson, A.R.A., vice-chairman of the Georgian Group (for the Preservation of Ancient Buildings), today told me of his suggestions for the preservation of the houses in Beaumont Street, Oxford, which are threatened by the extensions of the Ashmolean Museum.

" Some efforts should be made to preserve the contrast between the Ashmolean and these houses," he said.

" It is important to keep it because it is so characteristic of this corner of Oxford. One is late George IV., and the other very early Victorian.

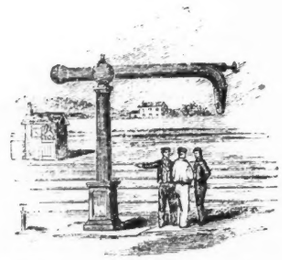
" They are so interesting and so good that to have modern additions would destroy the beauty of both of them. It would do no good to either.

" A good architect could arrange the necessary buildings behind the screen of the reconstructed façade. This seems to us to be a good way of dealing with them.

" Then, in these buildings, there would be splendid scope for arranging Oxford exhibitions. The windows of the façade, which would have been preserved, would lend these exhibitions a typically Oxford atmosphere.

" The theatre nearby shows what can be done. It is well built and it fits in with its surroundings.

" In the case of these Beaumont Street houses we feel that the architect should make use of the good things that he already has on the site."



WATER CRANE.

Museums

That the greatest riches are frequently concealed in the most unpromising hideouts is a time-honoured truism that has recently received additional confirmation. *A report on the Museums and Art Galleries of the British Isles* (*other than the national Museums*), compiled by S. F. Markham for the benefit of the Carnegie United Kingdom Trustees (which has just appeared) does not constitute the most inviting of title pages but nevertheless the 177 pages that follow are packed with fascinating information. In the days of one's youth the kind aunt who proposed a visit to the museum could never hope to compete with the kind uncle who suggested a visit to the pantomime or even the Zoo, but now even if she has not overtaken her rival they are almost neck and neck—or should be, had children a grain of sense. The enormous improvement in the majority of museums in the last few years has been quite astonishing; at last the authorities have realized that a museum, whether it be of art, archæology or natural history, should appeal to the eye, and that long and complicated descriptive labels in inferior type although they do indeed reach the mind through the eye are not strictly speaking making any visual appeal. The whole attitude at the back of the new ideals in museum arrangement was very ably stated in a speech by Sir Harry Lindsay to the Museums Association in 1936 :

" The ' Art of Visual Instruction ' may be described as the art of arranging and displaying an instructional exhibit in such a way that the attention of the visitor is not merely arrested but held, not merely held but intrigued, and so intrigued that, like Oliver Twist, he asks for more. In fact, the exhibit should induce an interest not solely in itself, but also in the idea behind it, and therefore in the possibility that the other exhibits also are worth studying on the chance that the ideas behind them, too, may be equally novel and intriguing. Each exhibit :

(*a*) Must have a story to tell, and
(*b*) must tell that story simply and yet also purposefully.

Each stage or chapter of the story must lead convincingly from its predecessor to its successor; and the final *denouement* must carry conviction . . .

" Many different kinds of ' story ' are possible in a variety of *media* as wide as the range of human experience."

However, notable has been the advance made in this direction it has not been universal. Take for instance the following list of exhibits (quoted by Mr. Markham) all discovered recently in a single case 8 ft. by 2 ft. in a Scottish Museum :

" A miscellaneous group of fossils; Greek and Roman lamps; ' Belemnite attenuatus, Gault Clay, Folkestone, Kent '; Necklace from the neck of an Egyptian Mummy; ' Insence used in Mohammedan Mosques '; Unlabelled photo of native; (Rock from?) Mount Zion, Jerusalem; Picture postcard of the Colosseum; Mounted hedgehog; African idol; Assyrian brick tablet; Bride's marriage dress (complete), Congo River; Piece of ornamental brick from the Roman occupation of Britain; Bottles of water (in some of which the water has completely evaporated) labelled : Grand Canal, Venice, Bonny Doon, Rhine; an Umbrella, and a whalebone ribbed ' gamp '; ' Bible complete ' (Label only, Bible missing); Bill of Albatross; Portions of the pulpit and Baptistery of Spurgeon's Tabernacle, burnt in 1898; ' Besum—Central Africa '; One Hundred Common British Beetles (many beetles missing); ' Box made from the wood of the first carriage raised from the River Tay after the fall of the Bridge during the storm on the evening of the last Sunday of December, 1879 '; ' String of beads worn by Cetewayo, King of the Zulus, when captured '; Two religious tracts."

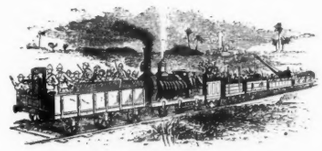
Moreover, Mr. Markham has several criticisms to make on such matters as the slowness of educational authorities to appreciate the possibilities of co-operation with museums and the present condition of certain of the University Museums. In view of the

CENTENARY

January 30th was the centenary of the birth (at Doncaster) of J. F. Bentley, best known as the architect of Westminster (Roman Catholic) Cathedral. His most notable early work was to design a house for Coventry Patmore. He also designed the Church of the Holy Rood, Watford. The Byzantine style of Westminster Cathedral was the wish of Archbishop Vaughan, by whom Bentley was appointed and with whom he made a tour of Italy before preparing the plans. Bentley died in 1902. The portrait above is from a painting by René de l'Hôpital.

Ashmolean's activities discussed in the preceding paragraph it is interesting to read, " At present it cannot be said that University Museums are quite such effective institutions as they might be," and further, " It is an extraordinary thing that, although the Oxford University are now appealing for £15,000 for the Ashmolean Museum, no mention is made of the other university museums."

In his final summary of the major defects of the existing system the author places first " the entire absence of any authoritative central body charged with the oversight of all public museums and art galleries," a conclusion which no one, one fancies, will be inclined to dispute.



BRITISH IRON-CLAD TRAIN IN EGYPT.

See how they fly

Although so many museums have made such strides in recent years in the improvement of the presentation of their exhibits the fact that they still have something to learn from commerce is proved by the current exhibition tracing the history of flight to be seen at Shell Mex House. This display touches a new high level in lay-out and design, beating the Science Museum, the Paris Exhibition and even the recent Mars Group show, excellent as they all were Even if one had not the remotest interest in aviation or mechanics one found oneself compelled willy-nilly to go right round and was left at the end with the impression that one understood more about the problems of flight than one had ever thought oneself capable of assimilating after years of study. Moreover the dioramas, if that is the correct name, and this is a point which all museum directors should note, were on an altogether different plane from the usual examples of this form of display. Normally they fall into two classes; the realistic and efficient and the realistic and inefficient. Those at Shell Mex House, owing to the fact that they have been designed and carried out by an artist, Mr. Barnett Freedman, are not only realistic and efficient but are minor works of art into the bargain.

A MIDLAND TRAIN SNOWED UP, NEAR DENT.

Art on Tour

Another aspect of the museum facilities in this country, the value of which is fully recognized by those in a position to judge but of which the general public is profoundly ignorant, is the Circulations Department at the Victoria and Albert. Here, hidden away behind that part of the museum into which the public usually penetrates, lies a vast reservoir of applied and fine art which any art school, secondary school or provincial museum

A LONDON SPECIALITY

MEWS ARCHWAYS

Few architectural forms lend more character to the residential areas of West London than the numerous dramatic archways leading to Mews. Their survival until the present day is something of a miracle, and the following photographs form a brief record of the more notable examples of a feature of London streets whose final disappearance, as the photograph on the left indicates, may well be not long retarded.

1

2

3

4

1, the south entrance to the Royal Mews, Buckingham Palace. 2, the plain stucco type of the eighteen-thirties, off Chesham Place. 3, a South Kensington example that still retains its original lamp. 4, Kynance Mews, near Gloucester Road, dating from the late 'fifties.

MEWS ARCHWAYS continued

5, The Grand Manner : a mews entrance off Queen's Gate. 6, Pont St. Mews boasts the only Gothic mews arch in West London. 7 and 8, two examples from the Gloucester Road neighbourhood. 9, An almost unique example of plain lintel construction—behind Brompton Churchyard.

5

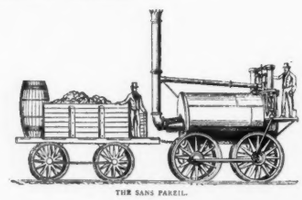
6

7

8

9

in the country is at liberty to tap. Recently the activities of this Department, which in the last few years has taken a new and admirable vitality, have been brought to the public notice by an excellently arranged display in Leicester Square Underground Station, but even those who stopped before this display and pondered can have obtained little idea of the extent and organization of the Circulations Department's work. Briefly it offers to any art school or secondary school that cares to pay half the cost of transport an assorted selection from the Museum's exhibits on loan for a year. A typical hamper of art will consist of a couple of good modern posters, three frames of textiles, both ancient and modern, a portfolio of first-class photographs of old master drawings, an electrotype of an eighteenth century silver tea-pot and a dozen photographs of architecture and a nineteenth century water-colour. The various objects are scientifically packed by the Museum free of charge and the art master of the school in question is not only allowed but encouraged to come and make his own selection. What it is particularly gratifying to notice is the very large proportion of good modern work which the museum is now eagerly circulating, including a number of panels bearing photographs of lettering especially drawn for this purpose by Eric Gill and other great modern typographers. Where the facilities for display are limited the majority of the exhibits are naturally in frames, but art schools and museums can also be provided with specially designed standard cases in which the various objects will be arranged by a museum expert who retains the key, thus enormously increasing the range of display. Of all the services which the Victoria and Albert renders to the public none one fancies would have made a stronger appeal to the Prince Consort himself.



THE SANS PAREIL.

A Hint to lovers of Stockbroker's Tudor

He saw a cottage with a double coach-house
A cottage of gentility !
And the Devil did grin, for his darling sin
Is pride that apes humility.

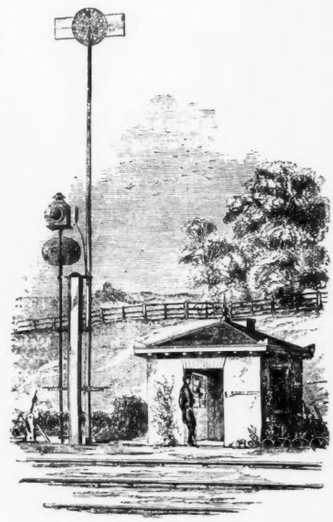
SAMUEL TAYLOR COLERIDGE.
" *The Devil's Thoughts.*"

PULLMAN CARS.

Scottish Art

That the current Exhibition at Burlington House is either as exciting or as interesting as the majority of its predecessors it would be idle to pretend. But nevertheless to give it a miss would be the gravest of errors, if only for the sake of the Allan Ramsays. There is a whole room of the works of this enchanting artist which will come as a revelation to the majority of visitors. Apart from him the great names are, on the whole, rather disappointingly represented. There are a great many specimens of Raeburn's histrionic genius, but, one fancies, not the very best. Of Wilkie, that typical example of the great artist *manqué* there is no picture here that comes up to the standard of the unfinished sketch of the Village School in the Victoria and Albert Museum.

However, it is exceedingly pleasant to renew acquaintance with Sir Noel Paton's Freudian fantasy, A Midsummer Night's Dream.



HOME SIGNAL.

The Engravings

The vignettes that separate the various paragraphs on these pages are taken this month from a volume entitled *Our Iron Roads*, by Frederick S. Williams, published by Richard Bentley (" publisher in ordinary to Her Majesty the Queen ") in 1888.

This compact but encyclopaedic work not only gives an account of railway history up to the time it was written—and railway history is more full of surprising incidents and sensational controversy than that of probably any other enterprise—but it describes in great detail and illustrates with charming if discursive anecdotes the working of a contemporary railway system and the duties and customs of the various personnel.

Acknowledgements

We are indebted to Messrs. Alinari and W. F. Mansell for permission to reproduce the photograph at the bottom of page 57, and to Messrs. Luigi Chiovato for several more of the photographs in the same article.

Glass Supplement

We are indebted to the London Sandblast Company, to James Clark and Son, and to Messrs. Eaton, Parr and Gibson for the photographs illustrating decoration processes on page 100; also to the above and to Pilkington Brothers, for several other photographs in the Supplement.