SOUTH AFRICAN ARCHITECTURAL RECORD

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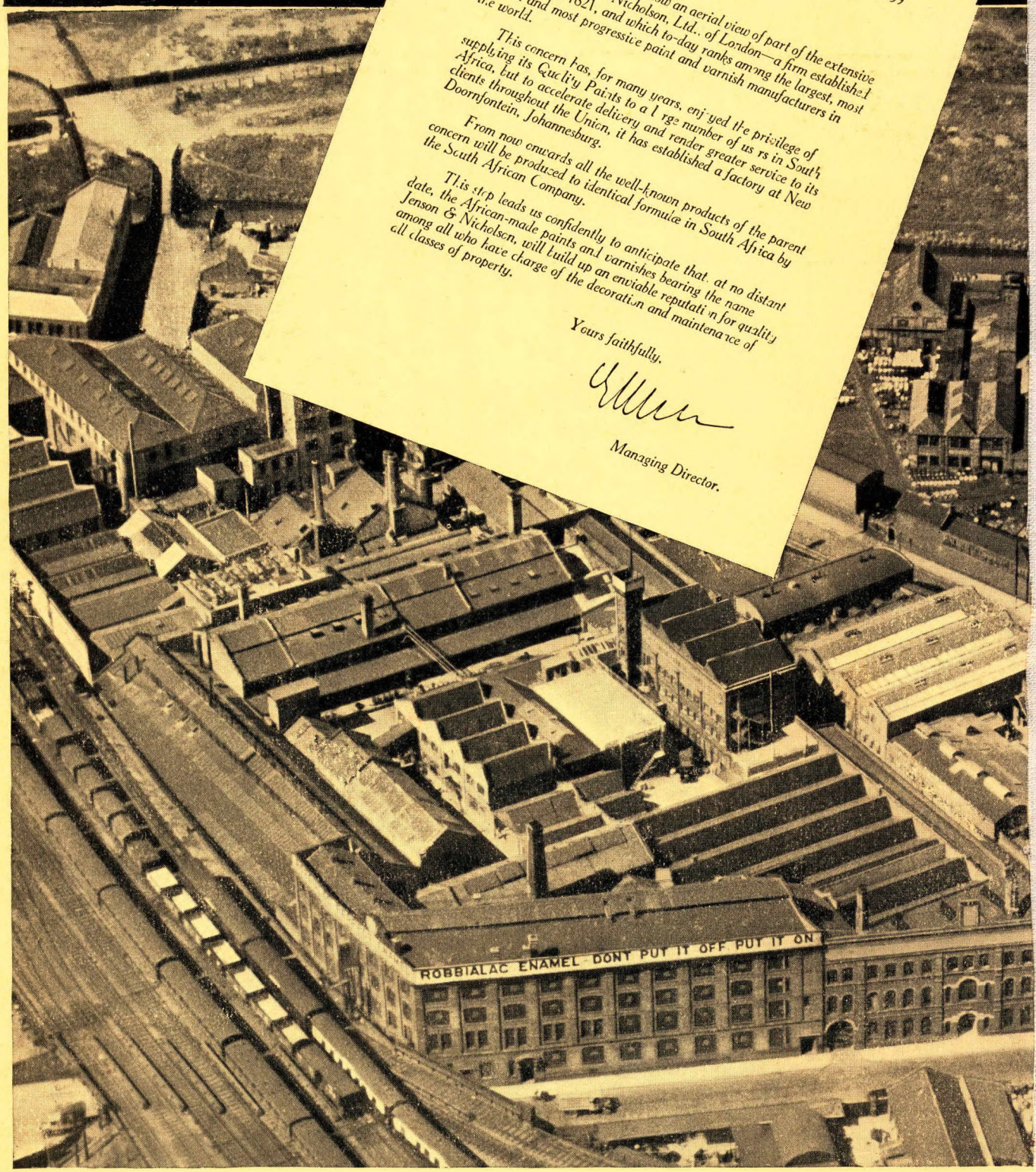

C O N T E N T S

THE SOUTH AFRICAN ARCHITECTURAL RECORD

The Journal of the Cape, Natal, Orange Free State and Transvaal Provincial Institutes of South African Architects and the Chapter of South African Quantity Surveyors.

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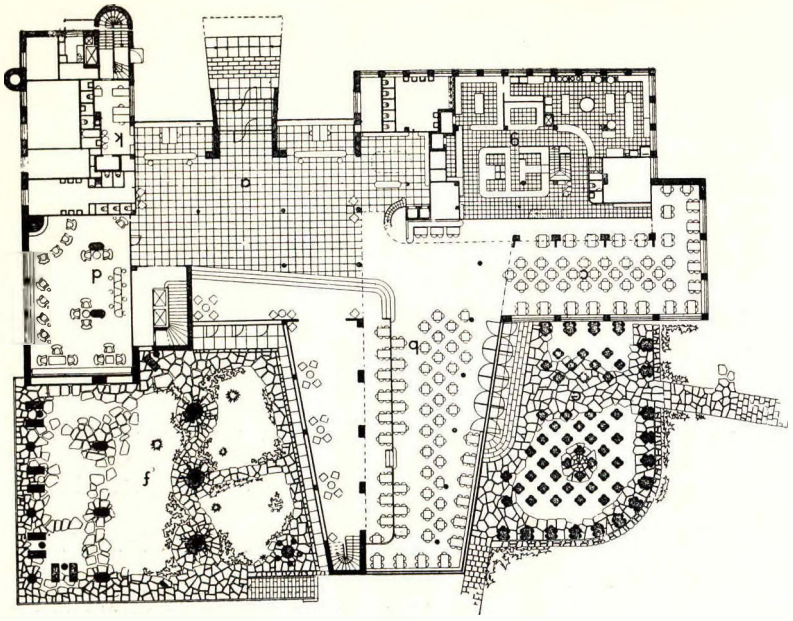
AULANKO, FINLAND
A HOTEL DESIGNED BY A WOMAN

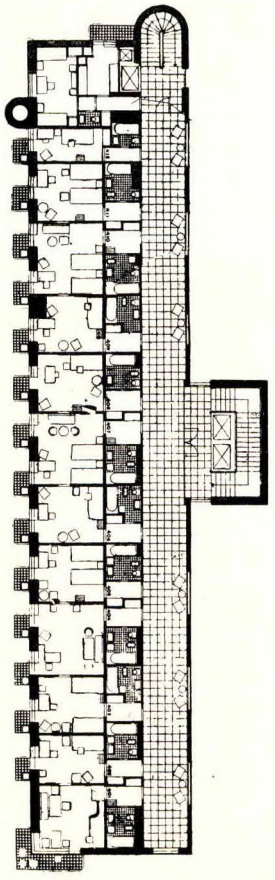
described by CLARICE MOFFAT

Aulanko, the first hotel to be designed by a woman architect, should be of special interest to those women who have complained, and rightly, that in the past hotels were designed by and for men, without much regard to the needs of the solitary woman traveller. This hotel is the design of Marta Blomstedt, a leading Finnish woman architect, assisted by Matti Lampen, and was finished towards the end of 1938. It is situated near Hameenlinna, a park which is one of the most famous in Scandinavia, about an hour and a half journey from Helsinki, and in the heart of a ski-ing district, so that visitors are generally of the "winter sports" type, that is to say, people who, after a day's hard exercise in the open, ask for a high standard of comfort to relax in during the evening.

The architect, herself a woman accustomed to supervising every detail of the household, asked herself what most women demand of hotel surroundings, and decided that it was less luxury than perfection of detail that was wanted. The average woman does not ask that the mirror in the bedroom should be gold-framed, but she does expect it to have an adjustable electric light for make-up purposes, and, though she may be content to eliminate the caviare and game which appeal to the stronger sex in the dinner menu, she expects perfection in the table linen and cutlery. Mme. Blomstedt did not set out to build a monster hotel, for Aulanko has only 56 bedrooms (with 35 bathrooms), but there are no "back" rooms, and none looking on inner courtyards such as beset the tourist in some continental hotels. The lake Vanajavesi, a well known beauty spot, lies close to the hotel, and in order that this view might be utilised to the utmost every bedroom looks out on to it, and every one has a balcony so that the visitor may stand and admire for as long as he wishes. (Incidentally, lingering over views, though ideal in the summer, is not to be recommended when the Finnish winter really sets in, as the temperature can get dangerously low for those not accustomed to Northern cold.)



GROUND FLOOR PLAN

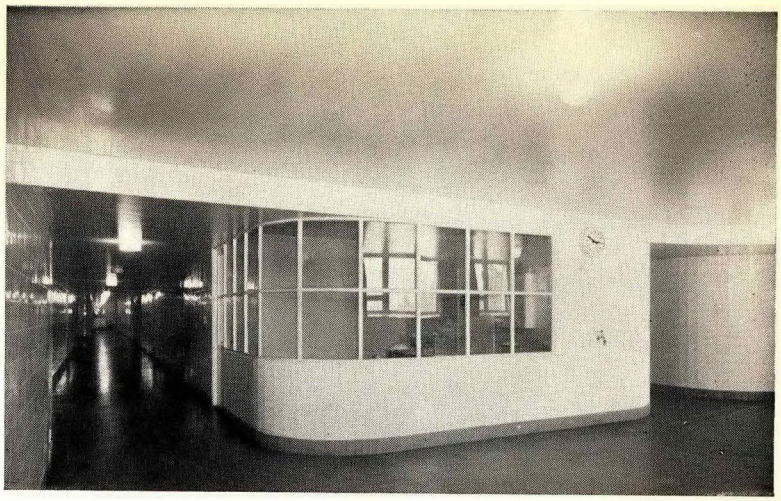


A BEDROOM FLOOR
(to a larger scale)

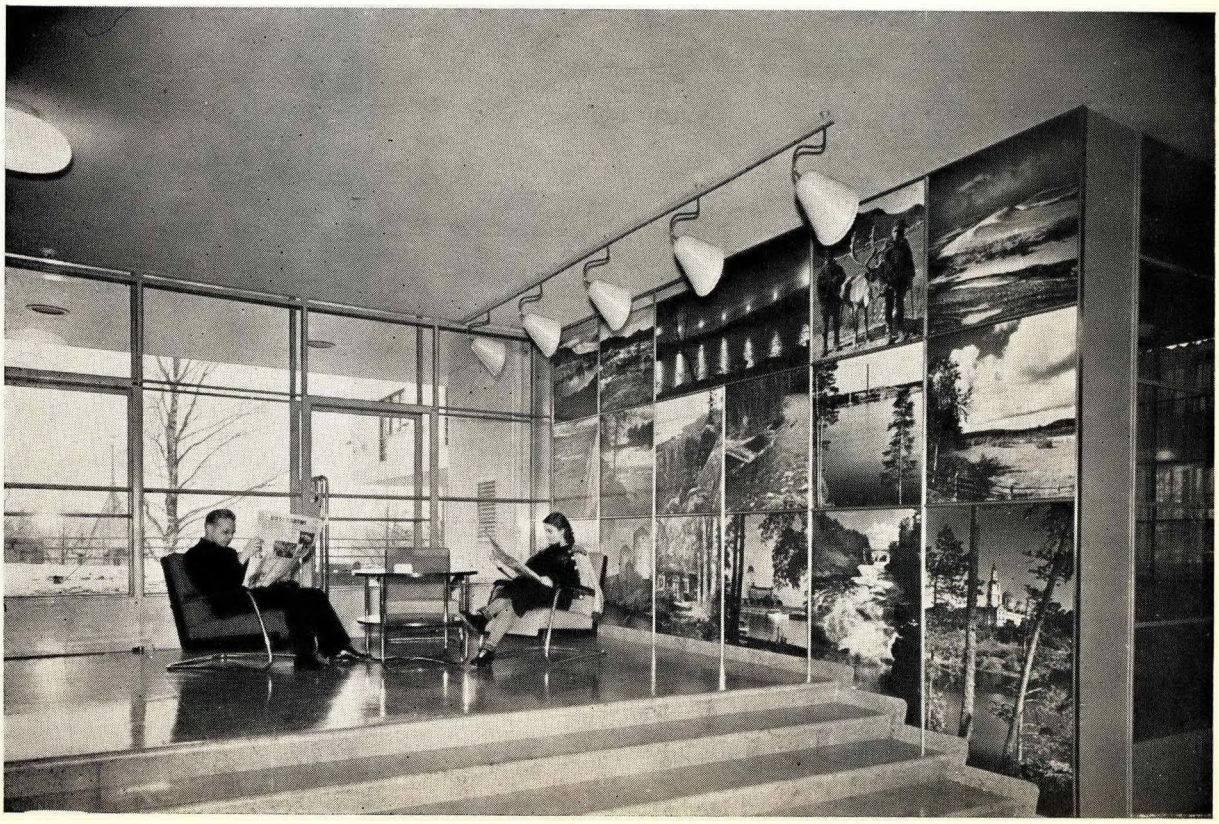
THE BEDROOM WING

In order to preserve even temperature and to eliminate noise, the walls of bedrooms and public rooms have been insulated with sawdust bricks, a form of insulation which is specially popular in Finland as being both effective in use and moderate in cost.

Knowing how much the noise of an orchestra or the chatter of a dining hall can disturb visitors who want a really restful holiday, the architect designed the hotel in two parts, the bedrooms forming one wing, whilst the restaurant wing, of a single storey, is separated from the first part by a wide entrance hall. The restaurant itself is in two parts, a coffee hall for a couple of hundred people, and the dining room proper taking another five hundred, plus those who can, if they wish, sit out on the adjoining terrace or the roof garden above the restaurant. The all-electric kitchens are separated from the restaurant by a glass wall, and most of the dividing walls of pantries, store rooms, etc., are also in glass brick, to give the maximum of light and hygiene. Beyond the kitchens again lie the separate buildings in which are housed the hotel staff, the laundry, darning rooms, etc., all of which can be inspected by visitors if it interests them.



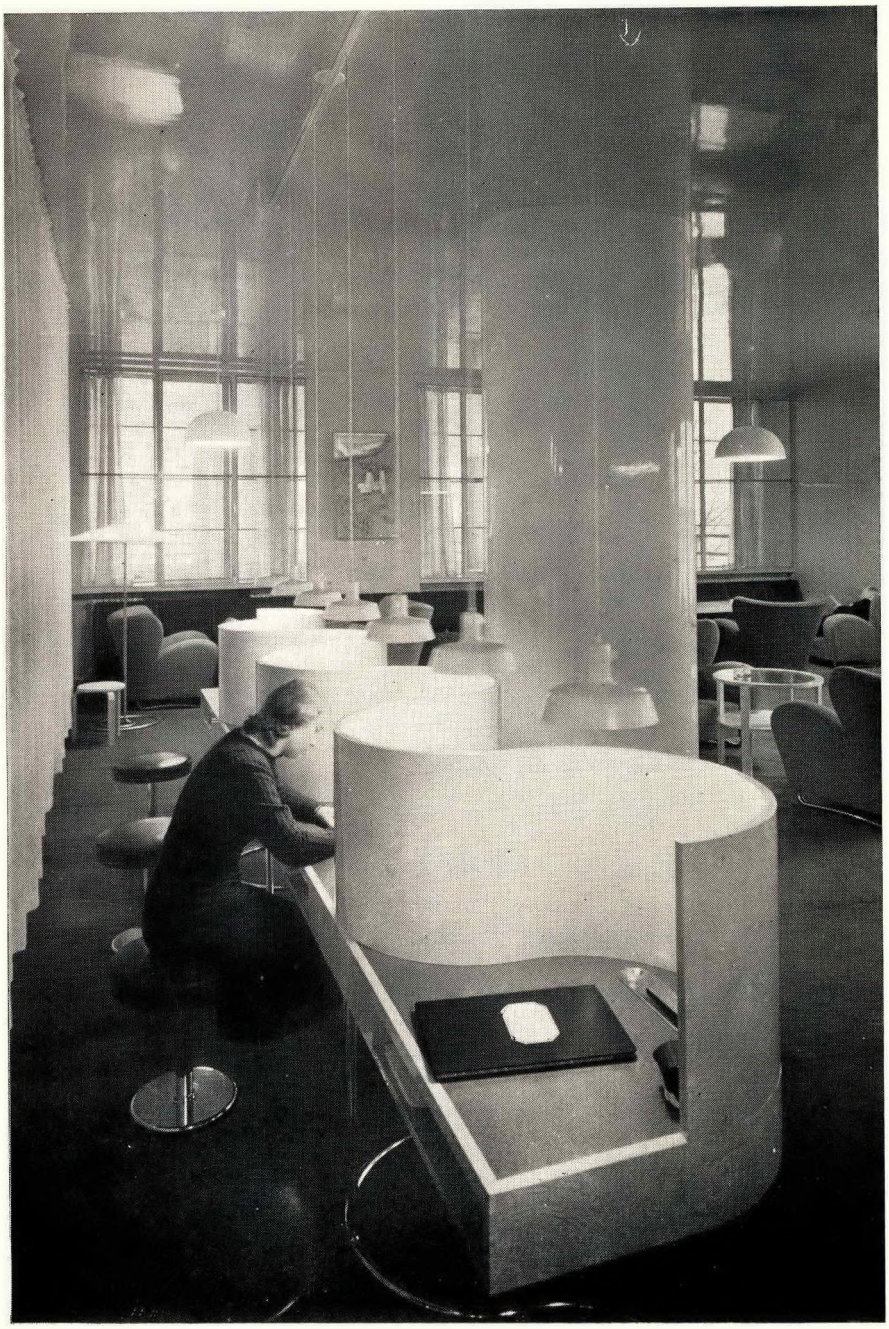
AULANKO
INTERIORS



Judging purely by casual comments, the most effective thing in this hotel is the entrance lounge hall, in which an entire wall is devoted to photographic panels of Finnish beauty spots, types of costume, historic towns, etc. This " picture gallery " is lit at night by a special row of flood lamps with ovoid fan shades, seen in the accompanying illustration. Next to the display wall in favour comes the " serial " writing desk in the hotel drawing room, also illustrated. This desk—one cannot call it " desks " because it forms a single unit—takes seven people, and the snaky partition wall which divides each section is made of polished Finnish bentwood. One may query the backless stools of the desks as being a shade too austere, but the whole effect is one of pleasant and simple efficiency. Here again the lighting is an interesting point; in addition to the general room lighting, each section of the desk has an adjustable hanging lamp above it, so that the light can be thrown directly on to the writing pad.

We have just mentioned the dangers of winter cold in the Northern countries; central heating and double doors and windows are necessities, not luxuries in lands which verge on the Arctic Circle, but heating must be carefully graded to avoid sudden changes which might induce chill, and to obviate this the stoker's room in the hotel heating system has thermometers recording the temperature in every room, public and private, throughout the building. Asbestos panelling for walls, fabric covers on ceilings, are all used in order to make the heating system as near perfect as possible, so that those who have sat miserably in draughty lounge halls, shivering at the cold air which whisks through the swing doors at every entry or departure, will wonder whether it might not be a good thing to have all hotels designed by women in future !

Finland is so rich in wood of every kind (next to Russia she is the largest wood exporting country in Europe) that wood was the obvious medium to use for wall coverings in reception rooms, and pine wood veneer, birch wood veneer, and the newly " discovered " fir foot veneer, have all been used in turn, their different colours and warm polishes giving a background which is neither monotonous nor noisy. Plain vivid colours were used for the upholstery of chairs and sofas, in fact patterned fabrics have not been employed at all, the only variation on the single colour upholstered chairs being in the form of contrast buttons and pipings. No pictures, with the exception of the photographs in the hall, no ornamental light shades, very few mirrors, break the smooth surfaces of the walls, designers and proprietors having taken a census amongst hotel guests, and found that the vast majority voted for



THE WRITING ROOM

simplicity, saying that they found it far easier to relax in surroundings with as little detail as possible. Finland has for many years given women a place of equality with men; there are women professors, women railway employees, women dentists, and in Helsinki many hundreds of women taxi drivers, and her belief that, given the opportunity, a woman is just as capable of carrying out large scale architectural design as a man, seems to have been fully justified by this hotel. The only other European country which has given the architectural design of public buildings into the hands of women equally with those of men is the nearby country of Poland, and under present circumstances it seems probable that architecture by women in Northern Europe is likely to rest in the hands of the Finns until more peaceful conditions are restored.

PAINT by B. H. E. GATES

A Lecture delivered to the Architectural Society, University of the Witwatersrand, June 8th, 1939.

"Paint," according to my dictionary, is "a substance used to give colour to a surface," and it is with the desire that we may regard with a more careful intent that substance, that these few remarks are made.

There is a lack of the old-type painter, particularly in South Africa, who mixed up his own paints, both oil and water, and who knew when and how to use them. With that and the growing demand for paints in ready mixed form, it is necessary that the architect should be in a position to judge the merits of various prepared paints for particular surfaces or functions.

It is said that "paint saves much more than it costs," and the truth can easily be seen when we consider that the average thickness of a good paint film as results from the use of three coats is .008 of an inch.

For outside protection, an equal thickness of material such as wood, cement or fabrics of paper, cotton, wool, linen, etc., are worthless, and even an equal thickness of steel or iron would be completely consumed of rust in an incredibly short time.

I do not propose to submit paint formulae, but treat the subject on a broad scale, and here is a diagram of the composition of paint.

The mediums may consist of a treated oil or gum varnish, and, if the latter, the gum will be one of three types:—

1. GUMS.

(a) FOSSIL OR COPAL GUMS, which consist of the sap of trees that have been buried thousands of years. The fossilised resins are dug up, washed and graded, and sold to the varnish manufacturer as Congo, Kauri or Zanzibar copal, according to the origin of the gum.

(b) RECENT RESINS : That is, sap or exudation from living trees such as rosin and spirit manilla.

(c) SYNTHETIC RESINS, which are materials chemically made from a variety of components varying from solvent naptha or glycerine to cresol and casein.

2. OIL.

The two main oils in use to-day are linseed oil and tung or China wood oil.

(a) Linseed oil is obtained from the seed of the flax plant.

(b) Tung oil from crushing the nuts of the tung tree.

3. THINNERS are mainly turpentine, turpentine substitute or white spirit. White spirit is obtained by distilling crude petroleum.

4. DRIERS. These mainly consist of lead, manganese and cobalt in some form which is soluble in turpentine, usually combined with rosin or oil at a high temperature.

DRY COLOURS. The pigments, we can lightly skip over—the base of the paint, depending upon its function, will vary from an opaque pigment like white lead, zinc, white, lithopone, etc., to one which depends upon its colouring properties like the earth pigments of ochres, umbers and siennas.

The fillers (or extenders as they sometimes are called) are used to improve the brushing qualities of the paint, and to spread the colour effectively through the medium.

Believing that you have little time to devote to the actual manufacturing of paint, I shall leave it now, turning to some more practical aspects.

The function of paint can be said to be twofold :

(1) Preservation; and

(2) Decoration.

Leaving aside the aesthetic point of view, which will have more attention in a future lecture, we concern ourselves with the first named. And in painting—one cannot too strongly press for a good foundation—that starts with good preparation.

Forgive me if I seem to wander a little, but as a painter I find myself so much concerned with application that, believe me, I could lecture on that alone. However, let us start on

PRIMING.

Its function over woodwork is :

(1) To stop the abnormal suction for succeeding coats.

(2) To provide a key or grip for these succeeding coats.

Thus, for soft woods, priming should contain sufficient oil to feed the wood and, of course, over hardwoods, the primer should contain less oil and more turpentine.

Originally red lead was used because of its preserving and drying properties, but the tendency dropped into merely adding a little red lead to a white priming paint, making it pink. This has led to the so-called "pink primers" where the colouring might be a little red oxide and the basis of the paint heavily overloaded with a whiting or barytes compound which by its cheapness holds a certain market. From the priming coat, whether a gloss, eggshell or flat finish is required, the proportions of oil and turpentine in succeeding coats should vary.

An old rule which still holds good is : Never apply flat on flat or gloss on gloss.

I have seen instances of flat oil painted ceilings flaking because so many times they have received just one coat of flat paint over the old work.

The only exception to the rule I have mentioned is that of the newer synthetic or cellulose materials where the principle is entirely different.

Broadly these principles are :—

OIL PAINTS (that is, any paints of an oil or treated oil basis). One coat of paint adheres to the surface of the paint underneath, providing a key or grip is obtained.

SYNTHETIC OR CELLULOSE paints contain in their composition a liquid or thinner which dissolves the material underneath, and thus forms a complete whole.

I must digress a moment here. Over new woodwork there are usually many knots that require attention. The procedure is to dab knotting over them (this should be made from shellac and not rosin), but there seems to be a preference to-day for primers, if not wholly aluminium then of an aluminium basis, and it appears that for resinous woods such as Columbian or Oregon pine, these metal basis paints may be best.

PAINTING OF CEMENTS AND PLASTER WORK. This is a very debatable topic. Until recently the I.I.B.D. and the Oil and Colour Chemists' Association held a yearly debate over this subject with never any conclusive findings for treatment. But generally, a priming with a mixture of equal turpentine

and oil is satisfactory, although the prepared primers contain treated tung oil, which is less subject to mild attacks of condensed moisture or moist alkalies. The chief disturbing reaction to paint on plaster is likely to be alkalies and moistures—not, mark you, merely lime, but the small quantities of sodium or potassium salts which readily combine with lime, forming the caustic alkali which are destructive to oil paints.

Often, after an oil paint has dried, one gets a patchy change of colour with sometimes a "stickiness." Technically the alkali reacts upon the oil in the paint film, changing it into glycerine and soap known as "saponification." If cement plaster is the foundation and is quite dry, a varnish type of primer may be used which effectively stops suction and provides a body or thickness away from the surface, helping to fill it.

Whenever the plastered surfaces are damp, yet it is necessary to colour them, a water paint is advisable. This allows the surface to breathe. I am not prepared to say that these will not discolour, for water paints that are called washable contain some oil in their composition. On the other hand, casein distempers (dry distempers), although not affected by alkalies, are subject to crystallic deposits which often create flaking of the material. Yet I feel that if some insistence was made that water paints should be thinned with their special thinners, sometimes called petrifying liquid, many "patchy" effects would be avoided.

IRONWORK and its primer.

Here the main function is not of stopping suction, but of a preserving or protective nature.

For this reason, red or orange lead is frequently used with the medium—a boiled linseed oil. This dries better than raw linseed, being more elastic. You would be surprised at the problems which ironwork painting can produce. The amount of paint supplied annually to engineering firms for the purpose of first coating ironwork would shock many of you. Much of the material is poor—merely to make the ironwork look presentable from factory to job. Yet, unless such paint is removed, it can interfere greatly with the finish subsequently applied, and as long as certain engineers expect to obtain paint at ridiculous prices, that state of affairs will remain. I must, of course, point out that there are fortunately many reliable engineers who give some thought to the question of protecting their products.

It was thought at one time that red oxide and/or graphite formed good priming coats, but modern

research has proved that the most reliable primers are, first, lead chromates, and secondly, red lead.

In this heading of ironwork and primers, we must consider rust. It is obvious that all rust should be removed before painting, either with wire brushes and/or scrapers or rust removing solutions.

Of course, there are some occasions when to remove all the rust is impracticable, and for these instances there are certain preparations known as rust neutralisers. These chemical solutions change the rust into a hard insoluble compound of iron which assures the adhesion of paint subsequently applied.

PAINT FINISHES.

The essential object of the final coat, whatever the particular finish employed, is the establishment of a good surface capable of resisting fair wear and tear, and possessing a texture consistent with artistic requirements.

I must emphasise that this finishing coat should not be made to do too much.

All the powers of presentation and opacity should not have to be concentrated on this coat. I have seen jobs where the specification should read one coat undercoat and one coat finishing merged into what I can only say is " two coats on the same brushful."

Generally you are only concerned with the following finishes :

1. Distempers.
2. Flat oil paints.
3. Eggshell.
4. Gloss oil.
5. Enamel paints and enamels.
6. Decorative finishes.

DISTEMPERS.

We have two classes here—what is called the " dry distempers range," and what the trade calls " water paints." The first is of a white base having as its binding medium either glue or casein, or in some cases plaster of paris, while the water paints have as their vehicle an emulsion containing oil and yet permit of thinning or adulteration with water.

I have already referred to the fact that more use of the emulsion should be made, both as a suction sealer and regular thinner.

These water paints dry by oxidisation, and after about a fortnight or so exposure are insoluble in water.

One point to remember is that the distempers have a limited range of colours due to the restriction of pigments that may be used in a water medium and lime resistant.

We come to the flat oil paints which are superior to the water paints and/or distempers only for interior

use, though most washable distempers offer a fair resistance to water—matt oil paints excel in that respect and of course they maintain a fresh appearance longer than distemper, are more effectively cleaned after a long period of service, and there is no limit to the colours. Most of these matt oil paints have as their base lithopone, titanim white, and mediums of rubber solutions, wood oil varnishes.

EGGSHELL.

Similar materials in manufacture as the matt oil paints, yet containing more binding material in the form of varnish or treated oil. We can say that their wearing properties are better than any yet mentioned as the surface is harder and stands more rubbing than, say, "matt paints," which, when washed irregularly, can produce an uneven "sheen."

The term "Eggshell" is somewhat elastic, because, according to one's individual desire or taste, the degree of sheen may vary, and, if ordered from a manufacturer, agreement should be reached upon the exact finish required.

GLOSS OIL PAINTS.

In these linseed oil predominates, being used as the means of obtaining the gloss. Has good wearing qualities.

ENAMEL PAINTS.

Varnish or treated oils largely take the place of linseed oil as the medium, and the proportion of vehicle to pigment is much greater than for oil paints. This, of course, gives more flow to the finish and demands less from the person applying it in the skill of brushwork.

DECORATIVE FINISHES.

I class among these plastic paint and glaze effects, and because their purpose is mainly decorative, I propose to say little about them.

I can, however, assert that the manufacturers' composition known as plastic paint is superior to that made or mixed by the painter. These last are often compounds of water paints and plaster or plasters and marshmallow root—plaster and rice, treacle, etc., and they are most susceptible to flaking or peeling, being very brittle.

In using framed structures with infilling active materials side by side with the inert, cracks are bound to occur. Even with the most expert plasterer, no amount of care will achieve a perfect finish on the kind

of cut price partitions which are common practice to-day. And in cases like these, architects turn to plastic paint to break up the surface.

So you have to rely upon manufactured products, and I would say—if you trust the paint manufacturers more—you will be assured of the right materials being used for the right purpose.

Perhaps from my remarks you will see that the manufacture of paint is a highly technical business, and it will be obvious to you that those best able to produce the right goods are those who not only manufacture their own chemical pigment colours, but also produce treated oils, varnishes, etc., needed in the production of the finished article. There are few paint manufacturers in the Union in this position, and naturally those who are have a far better knowledge of what to put in and what not to use in their materials.

Manufacturers generally are not merely concerned with getting more paint on anywhere. There is one rule which should guide all decision of paint selection: "The fitness of the material to the surface and function desired," and less disappointment will be received if you consult them, particularly those who cater for your profession with a technical department.

NEW CATHOLIC CHURCH OF THE HOLY TRINITY BRAAMFONTEIN

Architect: J. BRENDAN CLINCH

PHOTOGRAPHS BY ARCHITECTURAL & ENGINEERING PHOTOGRAPHIC SERVICE

The structure of this building is Romanesque in character, with one or two relieving touches of the Renaissance.

The good proportion and detail of the facade are apparent, while the spacious entrance, with its coffered arch and clustered columns, embracing deep-set niches, is reminiscent of Roman art.

Over the portico a great tracery Rose window gives prominence to the composition of masonry forming the main facade. The aisles are annexed to the nave by means of a blind triforium spanning the whole front, while draped buttresses give a balanced tone.

On the length of either side, tracery clear storey and nave windows are set in panels between buttresses, assisted by rich mouldings and a pedamental belfry on the north-east corner.

The whole exterior is executed in synthetic stone, the aggregate used being pink South African marble, which successfully harmonises with the red tiled roof.

A large cross is placed over the main pedament.

The interior is planned symbolically, and, like the early church or Basilica, has a central nave supported by aisles on either side.

Symbolical of the Divine Head is the sanctuary, the holes in the hands and feet, the portals, while the door is the "Porta Coeli."

The corner stone of the church is Christ, while the Apostles, Doctors and Bishops are the pillars, the rôle of the faithful being played by the small stones.

There are twelve arches, supported by pillars. Over each is a stained glass window portraying an