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the elimination of reflections of glazed pictures in galleries

by Robert Howden. F.R.I.B.A.

In 1911 Sir Edwin Lutyens was commissioned by the Johannesburg Municipality to design an art gallery for their town, and in due course I was appointed his collaborating architect in South Africa.

The major part of the building was duly erected, and stands as an architectural gem in the beautiful setting of Joubert Park.

An eminent London architect recently visiting South Africa remarked "That of all the buildings he saw in South Africa, he was most impressed with the Johannesburg Art Gallery."

Although perfect as an architectural conception this building, in the opinion of the Art Gallery Committee, was not so perfect as an art gallery, because the pictures, which are all glazed, reflected not only the observer but the pictures on the opposite wall of the gallery.

The municipality therefore requested me while on a visit to England to make a thorough investigation into the matter, in

be taken, when adding to the building, that such reflections should not occur again.

After spending three months on this investigation and as a result of visits to every art gallery in London and those of relevant interest in the provinces, I was able to congratulate Sir Edwin and to cable to Johannesburg that, in my opinion, the reflections in the Johannesburg Gallery were less serious than in most of the galleries I had visited.

This conclusion was satisfactory and true so far as then available knowledge of the subject was concerned, but it did not comply with their request to provide means by which not only existing reflections should be eliminated, but a guarantee to them that no reflections would occur in their contemplated additions for the completion of the building.

Having therefore explored every possible avenue available in England I was preparing to visit the Continent and America, when I came across an invention by Mr. Gerald Brown for the elimination of reflections from shop windows. I immediately got in touch with Mr. Brown, and after several interviews and by drawing several diagrams he was able to convince me that the principles of his invention could easily be applied to the elimination of reflections from glazed pictures.

In due course a full sized model was made. I am sure when you see it at the end of my lecture you will agree with me that the problem of reflections is not only solved, but the designer of art galleries will be free to plan and light his building regardless of the usual precautions taken by him in his attempts to reduce reflections on the picture glass.

Before dealing with this matter in detail it will be necessary to consider the general principles of art gallery planning and design. Then it will be seen that the application of this principle meets all the recognised requirements of a perfectly equipped art gallery.

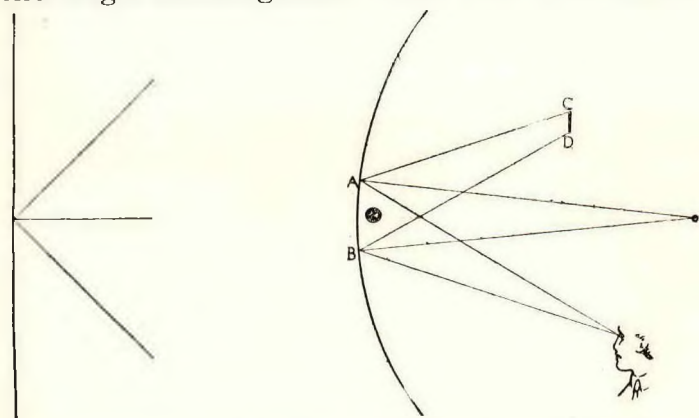


Fig. 1.—In the left is a diagram showing that angles of incidence and reflection are equal and opposite where they meet on a flat plane

On the right the space between AB on the curved plane is shown reflected to a light-absorbing surface C.D. This is to show that if the surface CD is black the space AB on the curved plane will have a black reflection from the observer's point of view. This, in little, describes the whole theory.

order that the existing building could be so modified as to eliminate the reflections, and, further, to ascertain what precautions should

Reflections.

Regarding the particular question of reflections I was surprised to find certain art gallery experts who were prepared to maintain that reflections do not cause any great inconvenience, and that the visiting public do not find reason to make any complaint about them.

It is difficult to agree with this outlook when one considers the amount of literature that exists in papers, lectures, etc., dealing with this subject. May I here quote an extract from the Illumination Research Committee's Report of 1926*?

"In most galleries in large cities all the pictures exhibited, whether oil or water-colour paintings, are covered with glass. From this fact arises one of the most difficult problems confronting the designer of an art gallery, for it is a matter of common observation that any light object, either on the opposite wall or in the centre of the gallery, is brilliantly reflected in the glass of the pictures. Accordingly the eye of a visitor who is viewing a picture is constantly disturbed by these images, and the effort of attention required to ignore them is probably one of the chief causes contributory to the condition often known as 'museum headache.'

"In addition, this distraction of the attention naturally interferes very much with the proper appreciation of the picture and diminishes the pleasure which it should give to the spectator. Hence, the avoidance, or at any rate the reduction, of the reflections of extraneous objects in the picture glass plays an important part in determining the suitability of any system of gallery lighting. It may be mentioned in passing that the same principle makes it almost invariably necessary to light a picture gallery from the top. Otherwise the windows themselves and the sky seen through them are brilliantly reflected by the picture glass, with the result that often in some positions the picture cannot be seen at all."

In any competition to-day for a new art gallery building one of the requirements always mentioned in the conditions is that the building must be designed with due consider-

ation to the lighting so that reflection on the picture glass will be reduced to a minimum.

As a matter of fact, one would be safe in saying that the whole of the modifications in art gallery design for the last twenty years have been made with a view to minimising, if not entirely eliminating, reflections.

Glazing of Pictures

Having satisfied ourselves on this point, the next question that arises is, why cannot the glass be removed entirely from the pictures and so free them from all reflections?

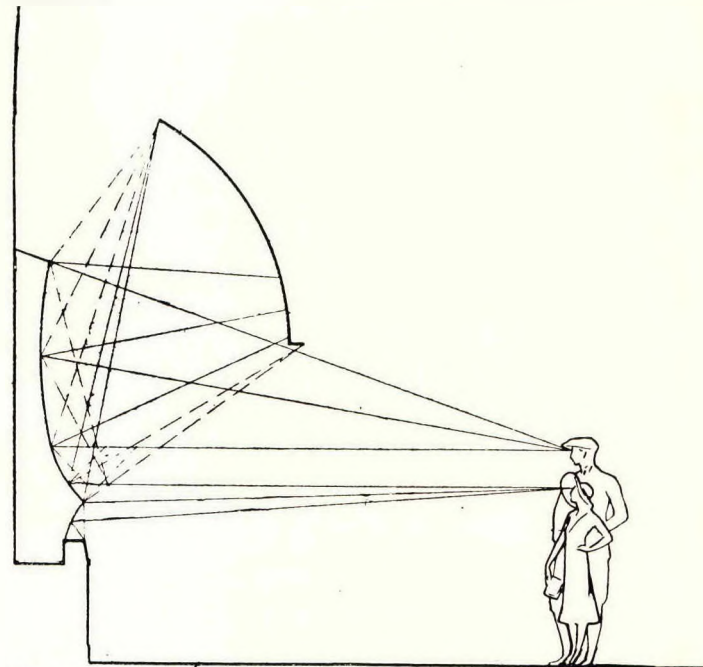


Fig. 2.—A diagram section of the model shown. The rays drawn with a firm line are those from a tall and short person's viewpoints at long range. The dotted lines show the ray angles at close range. The only rays shown on this and the following diagrams are those reflected to the limits of the light-absorbing surface, and as all intermediate rays are reflected more into the centre part of it, it is not necessary to show them.

If you consult a London expert he will unhesitatingly say that pictures are glazed to prevent them from being injured by the deleterious atmosphere of London.

This, of course, cannot apply to the clean districts of the provinces, Europe and America, and particularly to Australia and South Africa, where practically all pictures are glazed, and therefore one must look further for some other reason.

• Technical Paper No. 6 of the Illumination Research Committee (1926), p. 7, the natural lighting of Picture galleries Published by H.M. Stationery Office, Adastral House, Kingsway, W.C. 2. Price 1s. 6d.

From information I have obtained the main reason given to me is that pictures are glazed to protect them from injuries caused by the public, and especially by students when copying the canvases.

When it was fashionable for women to wear hats with protruding pins, which, by the way, I am informed are coming into fashion again, several scratches and in some cases distinct cuts were found on the canvases due to a too close observation of a lady with such appendages.

It is noticeable how difficult it is for some enthusiasts when expounding on a picture to avoid touching it.

Also any attendant will tell you that after a student has copied a picture he has to wash from the glass the student's finger prints and paint brush marks, which, if the picture had not been glazed, would have caused it possibly irreparable damage.

And only quite recently we read in the papers that a lunatic at the Louvre Museum slashed with a penknife a picture valued at £24,000 ; that would have been impossible if the picture had been glazed.

Remarking that in certain galleries some pictures were still unglazed I was informed on each occasion that this was due to lack of money and that immediately funds were forthcoming all pictures would be glazed.

As a further illustration of the recognised safeguard of glazing pictures, I found in more than one gallery it was considered that, since their pictures were glazed, it was quite unnecessary to enforce people to leave their sticks and umbrellas at the entrance.

The suggestion therefore of avoiding reflections by reverting to the old method of exhibiting pictures unglazed is out of the question, and the designer of the future must be prepared to find ways and means to deal with all the difficulties that glazed pictures bring to him. That is the main subject of this lecture, and I will submit for your consideration this afternoon the practical solution I have already referred to.

Preservation of Pictures.

The deterioration of paintings arises from several causes, but whatever the cause and whatever the conditions of the painting to-

day, a grave responsibility rests on the shoulders of the present generation to provide, regardless of expense, the necessary means to preserve these valuable public assets for posterity.

Future generations will never forgive us if they discovered that we, during our lifetime, neglected to use all means at our disposal to prevent the deterioration of their property.

The reasons for deterioration can always be traced to two distinct causes. Firstly, from the materials used by the artist, and secondly, from the treatment the picture has received since it left his hands.

The materials used sometimes make it quite evident that some artists of the past were casual, in that they painted for their own time and not for future generations.

One has only to visit the National Gallery and examine such pictures as "Venus, Cupid, Folly and Time," by Bronzino, to realise the truth of this statement and the great responsibility thrown on the shoulders of the picture restorers to-day.

In considering the case of pictures after they come into our possession and for which we are responsible, two subjects must be considered.

Firstly, the provision necessary so that the pictures are in the right atmosphere, and secondly, that they have sufficient but not injurious lighting.

Regarding atmosphere ; in the days of unglazed pictures attempts by artificial heating to obtain uniform and the right temperature in a room were successful so far as they went, but the demands of the research worker to-day are not satisfied by such means.

From investigations made by Messrs. MacIntyre and Buckley* conclusions were arrived at "that pictures should be displayed in cases or frames which were reasonably gas tight and under very slight pressure, the interior being in tube contact with a reservoir of dry inert gas such as nitrogen or even carbon dioxide." This therefore, implies that pictures should not only be glazed, but that the glass should be so distant from the frame that a definite reservoir of gas exists. The usual method of placing the glass of the picture within a quarter or half an inch of the picture is hardly enough

and a space sufficiently large to hold the necessary gas at a required temperature should be provided for the picture itself, regardless of any attempt to control the atmosphere in the building.

As for the amount of light necessary for the display of pictures, and the injury resulting from an excess of it, I feel I must express my astonishment at the little consideration given to this subject in Great Britain.

Authorities have informed us that the "rate of fading in a picture is nearly proportional to the intensity of the light absorbed," so that the "life" of pictures will be increased by the extent to which the illumination is reduced, but so far I have not seen a single gallery where any serious attempt is made to obtain reasonably uniform lighting.

It is true that blinds are drawn across the ceiling lights when, in the opinion of the attendant, it is necessary, but in a country such as England, where the sun's appearance and disappearance are so intermittent it is practically impossible to obtain a uniform and harmless light by such poor resources. If the blinds are so opaque as to be a protection against the sun's rays, then they must be too dense when the sun is obscured by cloud, while if they are sufficient for a medium light they cannot be sufficient to check its powerful and dangerous direct rays.

It must be evident that any painting with fugitive colouring cannot stand such strain.

The anxiety to obtain as much natural light as possible seems to have outweighed the danger of the picture being exposed to brilliant sunlight such as we have had during the last few months. It is quite impossible for even an expert so to regulate the existing precautionary methods to procure a satisfactory and harmless light, but when one considers that this duty is left to an attendant, whose knowledge and training can at the best only be that of a rather untrained amateur, then the danger is really a serious one.

I am quite prepared to admit that every safe method should be considered before giving up natural for artificial light, but when you have authorities such as Commissions reporting in favour of adhering to natural light, and such statements as "we are psychologically inclined to favour natural lighting, because natural lighting is not only cheaper but is also pleasanter" then it is difficult for

the advocate of artificial lighting to make much headway: nevertheless, without taking up the cudgels of the advocates of artificial light, it must be admitted that by using daylight lamps, which cut out ultra violet rays, and having such light properly distributed, more desirable, more uniform and infinitely less dangerous lighting for the pictures can be obtained by artificial than by natural means.

Some of the principal picture galleries in America have no provision for natural light at all, and as one authority has declared, "the introduction of electric light has made artificial lighting almost universally practicable."

At this stage I would point out that, in my opinion, all galleries in England are over-lighted, and due consideration is not given to the fact that our eyes can easily accommodate themselves to a much lower scale of lighting and see the pictures quite well, even when coming in from bright sunshine outside.

So far as reflections are concerned, however, from experiments I have made and information I have obtained in either artificial or natural light, the same problem arises—they are both light and any light is equally easily reflected from a surface of glass. But if the psychological sense just referred to must outweigh the known facts of the dangers of improper lighting, then that must remain another subject into which we need not go more deeply to-day.

Hanging of Pictures

With regard to the hanging of pictures, very little research work seems to have been done. The two main considerations on this point seem to be protection from fire and protection from theft. The old-fashioned method of hanging a picture by cords or chains seems in many cases to be resorted to, though attempts are made to camouflage the chains by painting them the same colour as the wall.

In most cases the pictures in their frames are screwed as one unit to the wall. Sometimes the picture itself is a fixture on the wall and the movable frame or glass is fixed over it.

The most notable attempt to meet the requirements of fire and theft is that in which the frame itself is fixed to the wall and the

picture secured and released by a secret bullet catch, while the glass is fixed in a separate frame hinged to the main frame and under lock and key.

None of these methods allow for the ideal requirements of the picture expert by providing an air-tight space between the glass and picture.

It may be interesting at this stage to mention the varied colouring used in the walls of galleries, ranging from greys and beiges to crimsons and bright reds, cloth brocade and three-ply boarding; it is noticeable that the colours of the walls have had great consideration, with a view to reducing reflection, there being no doubt that the darker the colour used the more successful it is in providing only dark reflections in the picture glass opposite to it and so enabling the dark tones of a picture behind it to be clearly seen.

Reflections.

When we consider the attempts to eliminate reflections altogether, we find only partially successful results have been possible in the one-sided gallery; such galleries place the pictures in the light and the observer in a shadowed space; therefore, if the observer were placed in entire darkness and wore very dark clothes and blacked his face and hands, the darkness absorbing all light rays and reflecting itself in the picture glass, such a scheme, so far as reflections were concerned, would be 100 per cent. perfect.

The Duveen extension at the Tate Gallery is the best example of this theory in England, and demonstrates the fact clearly that if that part of the room occupied by the observer were still darker the result would be still more perfect.

This method, however, has the serious disadvantage of a gloomy and unattractive appearance, and I am informed that the public do not find it at all pleasant and pass through hurriedly to the more cheerful and brightly-lighted rooms.

One authority referring to it aptly states that "you have got, in fact, a condition which is incompatible with what we may term the ordinary amenities of the picture gallery," while the evidence of the Office of Works, who made exhaustive investigations into this particular gallery, is that they appreciate having

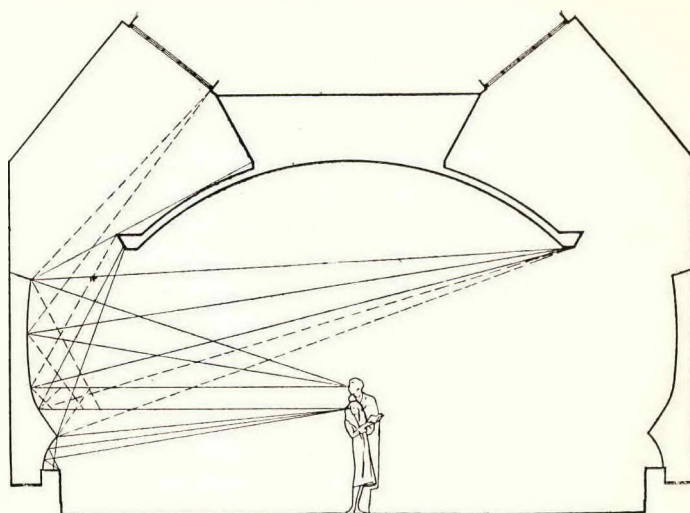


Fig. 3.—A diagram section showing the application of the principle to the FitzWilliam Gallery at Cambridge. It is clear that the existing ceiling and sloping walls could be used as light-absorbing surfaces, but they would be unequally lighted and therefore the reflection from them would not be even unless the inclined ceiling were coloured proportionately darker than the horizontal ceiling.

one such gallery but do not care to accept the design as a standard. Further, as to the practicability of the system, it is acknowledged that most, if not all, galleries are short of space for hanging pictures, and the temptation to utilise a bare wall has been too much even for the Directors of the Tate Gallery and they have defeated the very object for which the Duveen Gallery was built by hanging pictures on the back wall of the observer's corridor and lighting them with artificial light.

A specially interesting and nearly completely successful arrangement of lighting is to be seen at the National Portrait Gallery. I refer to the magnificent picture of the War Cabinet by Sir James Guthrie.

This great work, great in every sense, is in a rather small room by itself and its successful showing is to be weighed against some sacrifice of space, for there is nothing else in the room except a few small bronzes.

The space sacrifice is well worth while for such a work and the great reduction of reflection in the picture glass is due to the walls surrounding the observer being very dark and the ceiling jet black.

Light is reflected by outside mirrors into that end only of the room where the picture

is, and so on to the picture itself, by other mirrors ; therefore, though the critical eye is still aware of them, the reflections in the picture glass are very dim.

In stating that the only partially successful results have been those of the one-sided gallery the failure of the two-sided gallery is implied, and I unhesitatingly state that, in spite of all the experiments made and precautions taken, no two-sided gallery exists the pictures in which do not reflect the pictures on the opposite walls and other objects, and, further, although endeavours of every kind have been made to prevent reflections of the observer in such a gallery, the results have been negligible.

Other interesting attempts have been made by the adoption of a theory, now named "top-side lighting," which aims at the placing of the pictures in light and the observer in shadow, but it is quite evident that the more the pictures on the wall are illuminated the more they will be reflected in the glass of the pictures on the opposite wall, and the more he is in shadow the more will the observer be aware of reflections of light and light objects in the glass of the pictures that he is trying to see.

This particular method of lighting galleries, in spite of the fact that it gives little, if any, assistance in minimising reflections, has numbers of adherents, and the majority of art galleries recently erected in Great Britain have been on this principle.

In adopting the "top-side light" system it is imperative that the window should be so placed that the light directed on to the pictures is as horizontal as possible, and not vertical as is the case in many galleries where this system is used.

The danger of casting a shadow from the frame, in addition to shadow from the painting itself if in high relief, must be avoided.

An example of such is found in the lovely Carlo Crivelli painting of the Madonna and Child enthroned with Saints to be seen in the National Gallery; the light for the picture is obtained from a side vertical source, and the bold relief of certain parts of the picture throws shadows where possibly they were never intended.

Very few pictures painted either in studios or in the open air were painted under vertical

light such as is found in some of the top-sided lighted galleries to-day.

From all these observations it will be evident to you that, in my opinion, no gallery exists which meets all the requirements demanded by the expert in such matters, the painter and the public.

The ideal art gallery should have bright, cheerful and attractive rooms, well lighted, well ventilated and free from the least suggestion of gloom. The lighting of such galleries should be uniform, the pictures must be guarded from the sun's direct rays and from variations of light, the light itself must be free from any ultra violet or other rays dangerous to colour. Each picture should be under such control that, individually, a dark picture could be given more light and a light picture enough, and so on. The pictures should be so arranged for that the air in contact with them could be controlled entirely apart from the air in the gallery itself. The lighting of the pictures should approximate as nearly as possible to open-air conditions. All reflections in picture glass should be absolutely eliminated so that the observer can see the picture he wishes to in

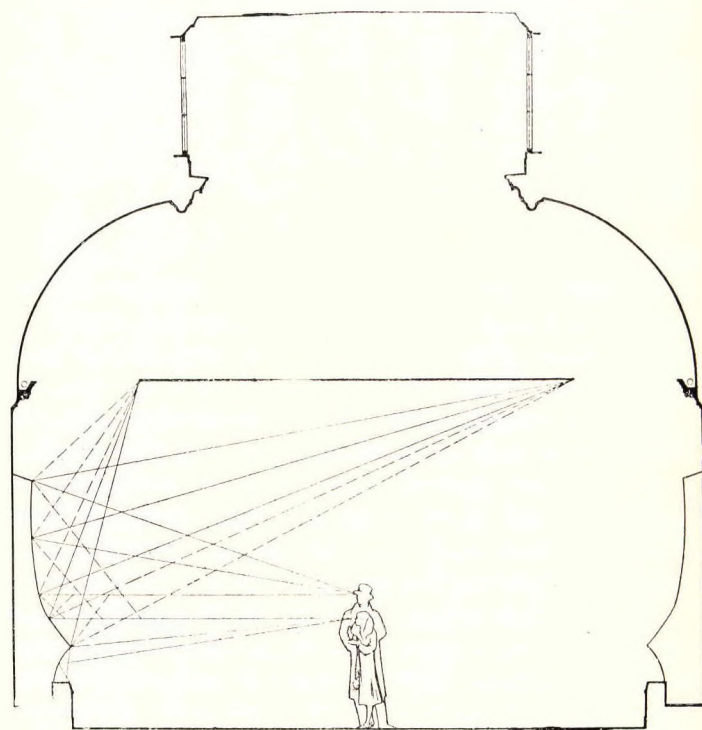


Fig. 4.—A section of a gallery in the Johannesburg Art Gallery. Here a horizontal surface would absorb undesirable reflections.

a calm peace without worrying to escape the reflection of extraneous things and tiring his eyes thereby.

This gallery of the future cannot be conceived until the riddle of reflections is satisfactorily solved. It is astonishing to find how other difficulties fall away when once you have banished reflection from picture glass.

Then it matters little where your light comes from, whether it is vertical or horizontal, top-side light or any other light, so long as you get sufficient into the rooms, either by natural or artificial means. The brighter the walls and floor are, the more they will help to obtain the necessary horizontal light. Light observers will help as well, at least to appreciate the fact! The orientation of the building itself is of small concern providing arrangements are made to keep the direct rays of the sun from entering the rooms. All attention now paid to the colour of walls, floors and ceilings with a view to reducing reflections needs no longer any but artistic consideration. Ventilation and the control of air, and so on—such questions solve themselves. The lighting of each picture can be controlled individually. And so the architect is freed from the difficulties that clustered round him and the monumental treatment of his subject needs no longer be sacrificed to the requirements of the light specialist.

Remedy.

On analysing the method adopted at the Duveen extension of the Tate Gallery and in the room housing the Sir James Guthrie painting at the National Portrait Gallery, I repeat that the success is due to arranging the pictures in the light and the observer in shadow, and therein a very important scientific principle is made plain, which is that there are no undesirable light rays coming back to the eye of the beholder from the shadow behind him. This, I venture to submit, contains the nucleus of the solution of our problem, and it means that if some method can be devised by which the rays of reflection can be directed to and absorbed by a dark surface which will still permit the whole room to be well lighted and cheerful then we have solved the problem, for the reflection of that dark surface will be seen unknown to the observer—I say unknown, because he will not see the glass at all.

Therefore I introduce to you the device of Mr. Gerald Brown. The principle of this invention is the curving of the glass covering of the picture in such a way that the rays of reflection are directed to a light-absorbing surface suitably positioned so as not to interfere with the ordinary amenities of a picture gallery. All undesirable reflections are entirely eliminated by this simple mechanism, and I think you will agree with me when you have seen it that the effect is such that one is inclined to believe that no glass is there at all.

In arranging for very large pictures it is obvious that such must be glazed individually, but, speaking generally, for pictures of average size they can be housed in a structure of any length composed of this device in sections of ten to fourteen feet long, forming a continuous compartment containing an atmosphere of any dryness or humidity, gas or any temperature the experts may decide upon.

The accompanying diagrams explain the simple optical law governing this new idea.

These diagrams are worked out from the curve of the glass on the demonstration model. It is apparent that by slightly altering the curve of glass more suitable baffles, either vertical or horizontal, might be obtained to fit each particular building.

As a simple illustration of this device, we all know that ordinary shop window glass is made clear for small areas by placing the hand against it and looking through the dark reflection of the shadow of that.

I hope I have made it clear to you that this device, in a larger way, diverts undesirable rays to an absorbing region of low luminosity

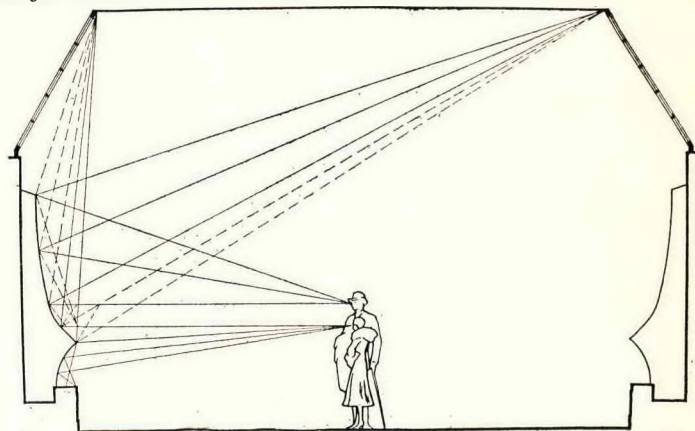


Fig. 5.—A section through an imagined room provided with a velarium, showing that the ceiling itself could act as the necessary trap, so enabling the entire room to be flooded with light.

and that the dark reflection of that region is, so to speak, spread over the complete area of the curved glass and comes back to the eye by angles of reflection, rendering the glass invisible.

With a view to satisfying myself that this invention could be applied to all types of galleries, however lighted, I classified the different ones I had visited into three variations: firstly, those having the latest development in lighting pictures, known as the top-side lighting; secondly, any room below a top floor and side lighted; and thirdly, all those having ceiling lights more or less in the centres of the rooms, whether vertical or horizontal in section.

Assuming that the experts in the lighting of art galleries are correct in declaring that the most successful way of lighting pictures is by the top-side light system, as now applied to the FitzWilliam Gallery at Cambridge, the Williamson Art Gallery, Birkenhead, Walker Gallery extension at Liverpool, Duveen extensions at the National Gallery, The Hill, Hampstead, The Old Spring Gardens Gallery and others and as designed for the Southampton and Manchester and other new galleries, then the application of this principle is very simple, for the opaque ceiling provided in these galleries above the heads of the public acts, suitably coloured, as an ideal light-absorbing surface for both sides of the gallery.

A similar surface is also provided for in all rooms with side lighting, that is, the ordinary ceiling of the room can be used without any difficulty. The third type, with centre light, will, however, in each case have to be treated specially and a suitable surface provided which will best fit in with the particular way in which the light enters the room; in some cases a vertical and in others a horizontal baffle will have to be provided. But in many rooms of this type there are opaque horizontal ceilings transforming them practically into top-side light galleries, as at the Prado in Madrid, the Rijks at Amsterdam, Viscount Lee's Gallery, Richmond Park, and elsewhere. In all cases, however, the baffle surface can be so designed as to allow for the entry of as much light as there is at present in the rooms, and in some cases it would act as a means of directing the light more on to the pictures.

I regret that, owing to my limited time in England, I must read this paper before any art gallery has been equipped with this device, but taking into consideration the danger of placing one's faith in diagrams or drawings and even in demonstrations, I nevertheless feel that from the actual facts before us and the satisfactory results of the demonstration model I am now about to show you that we are justified in accepting the theory of this new principle as a satisfactory solution for a universal and very important difficulty.

In conclusion, I beg to state that it is my opinion, for I have been deeply into the subject, that the application of the principles of this invention will not only solve the problem of reflections but revolutionise the designing and lighting of art galleries throughout the world.

Discussion.

Sir Richard Allison, C.B.E., F.R.I.B.A. (Chief Architect, H.M. Office of Works) at the invitation of the Chairman opened the discussion, and in doing so expressed the great pleasure it had given him to listen to the lecturer's most interesting address. He had had an opportunity of seeing Mr. Brown's device some months ago, and he had been greatly impressed by his scientific knowledge of the subject and the extremely interesting work he was doing. He was not at all certain, however, that the introduction of this method, while getting over what a good many people thought were minor distractions in a picture gallery, would not create a much greater distraction from the point of view of the architectural treatment of a Gallery. Personally he could not quite see how the device could be applied to any extent in a collection such as existed at the National Gallery, where there were pictures of all sizes and shapes, although possibly in an embayed room, such as Duveen Gallery, the difficulty might be less serious. Again, what would happen in the case of students and others who desired to copy pictures in a gallery? They would not be able to do so successfully with the suggested arrangement which would not permit of close up inspection of pictures. There were other objections which might be mentioned, but the main difficulty, as it appeared to him, was in

applying the system and at the same time producing a successful gallery from the architectural point of view. There was no doubt that the great majority of people who went to art galleries looked for fine rooms and did not appreciate a highly scientifically designed structure. Some years ago, H.M. Office of Works had put forward a scheme for a Gallery designed on what they considered to be strictly scientific lighting lines, but experts had come to the conclusion that the structure would be unsuitable from the point of view of appearance and that it was quite impossible to accept it. To some extent he was inclined to think that difficulties of that sort would arise in any attempt to introduce in public galleries the system which had been explained that afternoon, interesting as it was. Apparently the device did get over the difficulty of reflection, but, in looking at the model, he wondered whether the colour of the picture was not changed as a result of looking through glass of curved form. It did seem to him that there was some change in the general effect.

Sir Raymond Unwin (President of the Royal Institute of British Architects) thought it must be admitted that Mr. Howden had introduced an entirely new point of view. He endeavoured to meet the problem by collecting the reflections and diverting them into some place where they would be harmless. One saw certain obvious difficulties in the invention, such as those to which Sir Richard Allison had already referred; but it ought not to be too readily assumed that the end of the invention had been seen. It had brought to their minds an entirely new line of approach to the problem, and it was a little too soon, he thought, to assume that some of the difficulties would not be overcome after further thought and investigation. He considered it was extremely interesting that an artist like Mr. Howden was able to take a "wrinkle" from a shop-window and apply it in the way he had. It was an entirely new principle, and should be recognised as such, and they ought to be ready to go forward and explore it further and not be too soon daunted at initial difficulties.

The Rt. Hon. the Earl of Crawford and Balcarres, K.T., remarked that he was glad in the first place that Mr. Howden did not suggest that glass should be done away with.

Glass did give rise to the nuisance of reflections, but it was necessary not merely in order to protect a picture from carelessness or stupidity or malice, but in order to protect a picture from the spectators themselves—as was proved, for instance, by the emanation which was left behind by a big crowd in the National Gallery on a damp August Bank Holiday!

Then the idea of entirely artificial light, which he thought the lecturer rather favoured, was open to objection. It was too uniform. One did not want necessarily to study a work of art in complete uniformity. It was not painted in uniformity, and it was always expected by its author to be subject to the variations of light, sunshine, and so on; and he, for his own part, in the National Gallery liked to see on a bright day a passing cloud in the firmament throwing upon a landscape precisely those gradations and variations which could only come from the changing light of the heavens. He did not want too much science to be applied to a work of art—which was a very human thing, subject to all human frailties, greatnesses and aspirations, and which, he thought, would be injured by the dull uniformity of artificial daylight (so called). No one had any idea yet of what technical effect, extended over forty or fifty years, that lighting might have upon the canvas.

Then again he was rather inclined to protest against the objection so often stated that our Galleries were too light. The more light the better, in his opinion. The more the lighting in our Galleries conformed, in the case of the Italian pictures, to the brilliant illumination of Italy itself, the better he was pleased. He was not afraid of too much light. On the other hand, he was afraid of too much darkness, and the public also was afraid of too much darkness. Taking those new Galleries where the centre was closed and where the light was thrown laterally down on to either wall, and where people were expected to stand in the dark and to look out of the dark across the intervening bright space and to see a picture without being embarrassed by their own reflections, one had only to go into such Galleries to see that the public did not want to stay in the dark, and would not do so—in the Duveen room, for instance. In the gallery in the



Tate building, which Mr. Howden had mentioned, the public would not stay in that dark corridor; they wanted to get near to the picture even at the risk of seeing their own reflections. Personally he did not mind reflections in a picture. He never "cut" anybody in the street, but he had no difficulty whatever in "cutting" himself when looking at a picture. He saw through himself. It did not worry him, but he knew that reflections did worry a good many people, and the problem therefore had to be tackled.

He might have misheard the lecturer, but he thought Mr. Howden had said that there was to be some atmospheric treatment between the face of the canvas and the glass covering. That was possible in a confined space, but when one was dealing with a great wall it became very difficult indeed. By the present device people were taken away a con-

siderable distance from the pictures. Personally he liked to be able to put his eyes into a picture, and in a Gallery one constantly saw people right up against a picture carefully studying its details through a magnifying glass. With such a device as that shown that afternoon that would be impossible; a person would have to stand some distance away from the picture.

Then there arose the question, how was one going to move the pictures if the device described was adopted? For many years past it had been the practice of the Director of the National Gallery constantly to move pictures, not only in order to introduce new ones as they arrived, but to exhibit to the public pictures in rotation on the well-declared policy of not showing too much at a time. With the present invention, how was one going to take down a number of pictures and make

experiments in re-hanging ? It seemed to him that the enclosing glass partition would make such a thing quite impossible, especially when big pictures were concerned. The difficulty arose in connection with the cleaning of the pictures.

However, the device was most interesting. It solved the actual physical difficulty. He himself hoped that perhaps a simpler solution could be found. The chief province of science to-day was that of elimination, and he submitted to those who made glass that it ought to be possible to make a glass which would not throw a shadow or reflection.

Dr. S. C. Cockerell (Director, FitzWilliam Museum, Cambridge) said he had been impressed by the surprisingly successful solution of a particular problem. The whole question was how it could be applied. He did not desire to make any more remarks until he had seen the invention practically applied to some actual Gallery. Reflections were undoubtedly eliminated to an extent far beyond anything which he had thought possible, but he could not but feel the weight of a great many of Lord Crawford's criticisms.

Mr. H. M. Hake (Director, National Portrait Gallery) said the device was of particular interest to him at this moment, appearing, as it did, just after the extension which had been made to the National Portrait Gallery. There the authorities had faced the problem in terms of minimising the reflections, and not of abolishing them. He still felt, looking at the present device, that both the problem of abolishing reflections and of minimising them had not been fully explored. He could not help thinking that out of the two ideas together much more would come. He did not believe it had been sufficiently realised how much one could do to minimise reflections if one tried. The invention described was an extraordinarily interesting one, although he must say that its physical presence was rather alarming !

The Chairman, on behalf of the audience, expressed their warmest thanks to Mr. Howden not only for the very clear way in which he had described such an interesting scheme, but for the immense trouble he had obviously taken in preparing the lecture.

Personally he was very much impressed by the actual elimination of reflections which resulted from the device, but science sometimes could do things which were not easily

applicable to every-day life and to ordinary conditions ; and, speaking on the present occasion as an individual who had a small private Gallery of his own and who also happened to be a Trustee of the National Gallery, he must confess that he saw very grave practical difficulties in applying this most ingenious and effective device to the actual business of lighting a Gallery. Lord Crawford had pointed out one great defect, and that was that access to a picture for all practical purposes was denied once it was put in this hermetically-sealed continuous chamber running right round the walls of the Gallery.

Lord Crawford had spoken of the difficulties of approaching a picture which would face those students who wished to examine the details of it closely, or with a magnifying glass. Obviously, if the device described was adopted, one would not be able to get near enough to examine the details. There were persons whose eyesight had got to such a stage that glasses did not function effectively, when reading or examining the surface of a picture, if they were more than a certain distance away from it ; and certainly, at the distance which was shown in the model (some two feet from the picture), he himself for one, even with his glasses, would not be able properly to see the details, or to examine them. That would be a serious defect ; but, after all, one must consider the greatest good for the greatest number, and therefore if the average person could see better he was prepared to waive his right to see as well as he would wish.

There were, however, other and much graver difficulties in connection with a national Gallery. For example, there was the case of fire. In case of fire, the authorities at the National Gallery had arranged the most elaborate system for immediately removing from the Gallery, in the least number of seconds possible, the most valuable pictures. That could only be done if one was able to seize them instantly and carry them straight out of the room. Obviously that would not be possible if they were imprisoned in the hermetically-sealed cases displayed before the audience that afternoon. He thought that was a defect of the invention which would present the greatest possible difficulty to the authorities of any Gallery adopting it.



The lecturer had spoken of methods of hanging, and had rather deprecated the method of hanging by chains. That really was a method which had been adopted very largely for the purpose of safety, because it was possible immediately to lift a picture off the chains and remove it; the chains did not have to be visible at all; they were concealed behind the picture. Most of the pictures in the National Gallery were thus hung on chains which were not seen at all. The very elaborate device mentioned by the lecturer of having the frame secured to the wall, and a "secret" catch by which the picture could be released, made one wonder how long that catch would remain secret. Presumably it would be a trade article, and in any case on many occasions the public would see it in operation, and the evilly-disposed thief would have no difficulty in solving the mystery and removing the picture.

On the question of artificial and natural light, he entirely agreed with Lord Crawford. Artificial light, whether produced by means of patent day-light lamps or by any other means, was not satisfactory except as an alternative to be used after dark. Natural light meant everything to a Gallery—and changing light also, as Lord Crawford had said. How many of the audience had sat opposite a great landscape painting in a Gallery and had watched, whilst the clouds passed over the sun, the changes in the picture—the marvellous effects which were obtained, interpreting the artist's vision in a way which was quite impossible in a fixed and unchanging artificial light!

He was entirely in favour of the removal of reflections; in fact, he had himself experimented on trying to remove them, but he thought there were higher interests in arranging a picture Gallery than the complete removal of reflections.

There was one matter which had been left out of account altogether that afternoon—the expense involved, and, even supposing this was an ideal system, he was frankly alarmed at the cost. He had made some rough calculations from information which had been provisionally supplied to him, and to alter the National Gallery alone in order to apply the system would, he gathered, cost something in the neighbourhood of one hundred and fifty thousand pounds—and money was scarce these days! For his own little Gallery it would cost something between twelve thousand and fifteen thousand pounds to adopt the system. That was a very serious matter which had to be taken into consideration.

He had no desire whatever to deprecate the ingenuity of Mr. Brown's device, and still less Mr. Howden's most able exposition of it, but speaking as one who had to deal with Galleries practically, he could not believe yet that the system was applicable except for experimental purposes. He could well understand, for example, that a picture dealer might have a chamber on such a principle, in which he could exhibit to the greatest possible advantage to intending purchasers any given work, but permanently to demobilise something like two feet of floor space the whole way round every room in every Gallery, and to



have a limitation which would make it impossible to apply the system to the larger pictures in the larger Galleries, made, he thought, the scheme at its present stage of development, inapplicable to a public Gallery.

Mr. Howden, in reply, said it gave him great pleasure to feel that the general opinion expressed by the speakers was that a solution of some nature had been found to eliminate reflections. It was quite evident that in the opinion of those gentlemen who had spoken there was a doubt in their minds as to whether some of the side-issues in connection with the device were as perfect as they should be. It was true that people had different opinions regarding most matters in connection with Galleries. It was a very debatable point as to which was the best planned Gallery—that which was fully lit or that (as on the Continent) in which the observers were in the shade. That might be a debatable point, but on one point he was very emphatic, namely, that no system adopted up to the present would permit of a room being flooded with light without giving very considerable reflections. With the particular system which he had described that afternoon, a room could be flooded to any extent with light and yet there would be no reflections.

It was quite evident that, in connection with a new invention of the type he had mentioned, everything could not be solved at the

outset. He had read the paper with a view to interesting the members of the Society in the subject of reflections from glazed pictures. Many points would have to be threshed out, among them the particular ones which had been mentioned that afternoon, such as easy access to the pictures. He admitted that, with the device, it would be impossible for a person to get close enough to a picture to examine it with a magnifying glass, but he submitted that ninety-five per cent. of the people who visited Galleries were more concerned about the pictures without reflections than about seeing them with a magnifying glass.

He appreciated very much the kind way in which his paper had been received, and he appreciated still more the criticisms which had been made. They were of such a nature that they would have to be faced, and sooner or later the process would have to be amended to meet them. That was one of the reasons for reading the paper—in order to get to know exactly what should be done with the apparatus so as to make it as perfect as possible.

A hearty vote of thanks to the lecturer for his address was passed unanimously, and, on the motion of Mr. J. A. Milne, C.B.E., Chairman of the Council, a cordial vote of thanks was accorded to the Chairman for presiding.

Reprinted from the *Journal of the Royal Society of Arts* October 14 1932.

the south african national gallery, capetown.

(In Cooperation with the National Academy of S.A. 1933.)

Second Annual Exhibition of Contemporary Art.

The Trustees S.A. National Gallery, in Co-operation with the National Academy of Arts, S.A., propose to hold the 2nd Annual Exhibition of pictures and other works of Art, in January, 1933, in the National Gallery, Capetown.

Exhibits from artists throughout the Sub-Continent, are invited, and all works sent in, will be submitted to the judgment of a Selection Committee appointed by the Trustees.

Time and Mode for Sending in Works:—The Exhibition will be opened on Wednesday, 4th January, 1933.

All works for exhibition must be delivered, carriage paid, on or before Thursday the 22nd, December, 1932. No work will be accepted unless carriage is prepaid.

Mode of Describing Works:—Particulars of all works must be entered on a printed form (in duplicate), duly filled in with the full name and address of the artist and signed, together with the titles and descriptions of the works as intended for insertion in the Catalogue, and the prices (in guineas), if for sale. These forms must be sent to the Secretary, S.A. National Gallery, and

must reach him on or before Thursday the 22nd December, 1932. At the back of each frame must be written the name and address of the artist, with the title and description of the picture and the number to which it refers in the artist's list. This information must also be repeated with great distinctness and accuracy on a label securely attached by string to the top of each frame, and made to hang over in front, as also to each piece of sculpture.

The forms and labels can be procured on application to the Secretary. Each application for these made by letter, must state the number of labels required and be accompanied by a stamped and addressed envelope.

An artist using a name not ordinarily borne, is expected to sign the ENTRY FORM with his proper name.

Number of Works Allowed :—No artist is allowed to submit more than six different works.

Frames, Margins, etc. :—Each picture or drawing must, if possible, be in a gilded frame separately. A set of drawings illustrating a story or series, must be enumerated separately.

Oil paintings must not be sent in under glaze, but pictures hung on the line may be glazed afterwards at the discretion of the artist.

Work Inadmissible :—No works which have been publicly exhibited, or which have not been executed within the last ten years: no copies of any kind: no mere transcripts of objects of natural history: no realistic models of ships or other inanimate objects, and no engravings or etchings published over twelve months previously, can be accepted.

Works by deceased artists are admissible only within twelve months of their death.

Selection of Works :—All works sent in for exhibition will be submitted to the judgment of a Selection Committee, whose decision will

be final and will be inserted in the duplicate form originally submitted by the exhibitor to the Secretary. Works sent in but not included in the Exhibition must be removed within fourteen days of the receipt of the official notice. The Keeper of the National Gallery, will not undertake to store unclaimed works for more than six months from the opening day.

Sale of Works :—The prices of works will be entered in the Catalogue in terms of guineas.

All purchases will be registered, but the Committee can undertake no responsibility with regard either to the payment for the works purchased, or for delivery to the purchaser.

Close of the Exhibition and Removal of Works :—Each exhibitor will be provided with a printed order for the return of work exhibited. This order must be properly completed and signed by the artist and presented by the person sent to claim the work, who in turn must sign a receipt for delivery in good order and condition, or otherwise, at the Gallery. No work will be delivered without this order. The Committee will not undertake to forward any work. All works must be removed within ten days of the closing of the Exhibition. Works unclaimed after six months will be liable to be sold by the Committee.

Care of Works :—Every possible care will be taken of works sent in for exhibition but the Committee will not be responsible in any case of injury or loss.

Agency :—The official agents are Messrs. W. Derry, 101, Plein Street, Capetown, who will receive, unpack (mount and frame if necessary) and deliver any works consigned to them carriage prepaid. Exhibitors will be responsible to that firm for all agency charges. Works forwarded carriage prepaid, by the S.A. Railways, are returned if unsold free of charge by the S.A. Railways.

town planning association (transvaal.)

COUNCIL'S ANNUAL REPORT FOR THE YEAR 1931-32.

Your Council has pleasure in submitting this, the Thirteenth Annual Report, of the Associations proceedings for the past year, together with the Annual Accounts.

COUNCIL PERSONNEL.

The annual meeting which was called for the 12th November last year was adjourned to December owing to the want of a quorum, and consequently the election of the Committee did not take place until the 3rd December. Following the annual meeting your council met and elected Mr. F. K. Webber as President and Mr. Andrew Allen as Vice-President for the ensuing year.

MEETINGS.

Ten Ordinary meetings of Council and several meetings of Sub-committees have been held since the last annual meeting and copies of minutes have been circulated to all members of the Association throughout the year.

ELECTION OF MEMBERS OF COUNCIL.

In terms of the Constitution nominations for membership of the Council for the ensuing year are invited.

FINANCE.

From the Financial Statement attached it will be noted that the revenue for the year ended 30th June, 1932, amounted to £144 2s. 0d. which amount, added to the balance from last year, viz., £88 17s. 3d., made a total of £232 19s. 3d. Expenditure totalled £185 8s. 6d. leaving a balance on hand at the 30th June this year of £47 10s. 9d.

Your Council records its appreciation of the generous grant from the City of Johannesburg of £100 for the financial year 1931-32. It is regretted, however, that the City Council has intimated that no grant has been voted for the year 1932-33, but representations have been made to the City Council and it is hoped some grant will be provided in the supplementary estimates at the end of the year.

Representations have also been made to the Provincial Administration and the Provincial Secretary has advised your Council that His Honour the Administrator is prepared to con-

sider favourably the question of recommending that provision for this service be made in the estimates for next year.

Without these grants-in-aid the activities of this Association would be considerably curtailed.

TOWN PLANNING ORDINANCE (TRANSVAAL).

This ordinance came into operation on the 1st April, 1932.

A new Townships Board was appointed in February last and Mr. E. H. Waugh, a member of your Council, has been appointed a member of that Board.

On the 27th June last the Mayor of Johannesburg convened a conference of representatives of Witwatersrand Town Councils, Pretoria and Potchefstroom to discuss joint action in connection with the town planning schemes to be introduced under the Transvaal Town Planning Ordinance. Messrs. F. K. Webber and A. Allen attended that conference as representatives of this Association.

A comprehensive memorandum, submitted by Mr. E. H. Waugh, was read.

Your Council records its appreciation of this valuable contribution.

The appointment of a joint Town Planning Committee, under Section 37 of the Ordinance, was unanimously agreed to and it is expected that members of this Association will be invited to join the Committee.

BROCHURE.

The Brochure published by this Association last year met with appreciation throughout the Union and Rhodesia and many applications for copies were received from various centres.

LECTURES AND ADDRESSES.

Members of your Council have addressed meetings and given lectures in Pretoria, Johannesburg, Durban, Bloemfontein and other towns in the Union during the year and the Council records its appreciation of the time and labour given by Messrs. Allen, Furner and Porter in this connection.

TRAFFIC ADVISORY COMMITTEE JOHANNESBURG.

An invitation was received from this Committee in January last to appoint a represen-

tative thereon from this Association and your President, Mr. F. K. Webber, was duly appointed with Mr. A. S. Furner as his alternate.

AERIAL SURVEY.

A most interesting lecture on this subject was given by Major Cochran-Patrick at Kelvin House on the 18th March last. Invitations were sent to all members of this Association, and those who attended the lecture expressed great appreciation of the most interesting information and data placed before them.

TOWN PLANNING INSTITUTE (ENGLAND).

Further correspondence has been exchanged with this Institute and when in London Professor Pearse interviewed members of the Committee and reported to your Council on his return.

The difficulties regarding proposed affiliation at the present time were fully appreciated and the English Institute has communicated with those of its members in South Africa suggesting the formation of a branch of the Institute in this country.

TOWN PLANNING ASSOCIATION CAPETOWN.

Your Council is pleased to note that an active Association has been formed in Capetown. In July last your Council had the pleasure of welcoming Mr. A. H. Cornish Bowden and Professor Snape to the ordinary monthly meeting and the question of co-ordination or co-operation with this new body was fully discussed with the idea of the formation of a South African Town Planning Association at a later date.

VEREENIGING HOSPITAL SITE.

At the invitation of the Municipality of Vereeniging your Council appointed Messrs. Fitzsimons and Porter to report on the two sites proposed for a new hospital. These members duly visited Vereeniging and submitted a report on this matter.

NEW TOWNSHIPS.

Plans for the following proposed new townships were considered and reported on by the Townships Sub-Committee:

Brits Extension, Approved, 23/12/31; Westgate, Approved, 13/7/32; Bedford Park, Mayfair West, Duivelskloof Extension, Sophiatown Extension, Grandvaal, Geduld Extension, The Village, Malvern Extension, Krugersdorp Extension No. 1, Rynfield, Aero-

ton, Dunswart, Regents Park, Northmead, Grootvaly.

MEMBERS.

The following new members were duly elected during the year:—Institutional, O.F.S. Municipal Association, Municipality of Nigel; Ordinary, H. F. Carter, S. C. Dowsett, W. Gordon McIntosh, Major Cochran Patrick, John Riley.

GENERAL.

Amongst many other matters dealt with by your Council may be mentioned:

Suggested acquisition of Ferreira Deep and Mayfair Dump Sites; Regulations under New Town Planning Ordinance; New Magistrates' Courts, Johannesburg; Kazerne Scheme; Access across Railway at Jeppestown; Alterations to Building By-laws; Wanderers Bridge Traffic; General Post Office and Old Tin Temple Sites; Indigenous Timbers; Widening of Streets; Zoning; Parking of Buses; Island Site in Louis Botha Avenue (Pretoria Road) Approach to Brixton Cemetery; Johannesburg Railway Station.

SECRETARY.

Your Council again wishes to place on record its appreciation of the services rendered by your Secretary whose untiring devotion to the interests of your Association has done much towards the success attained.

Annual General Meeting.

Minutes of the Thirteenth Annual General Meeting of members of the Association held in the office, 67, Exploration Building, Johannesburg, on Thursday, the 3rd November, 1932, at 5 p.m.

Present:—The President, Mr. F. K. Webber, in the Chair, Messrs. A. Allen, A. S. Furner, A. Leitch, W. E. S. Lewis, W. G. McIntosh, Rex. Martienssen, C. K. Cochran Patrick, Professor G. E. Pearse, Harold Porter, J. Riley, W. E. Russel, C. P. Tompkins, J. Wertheim, and A. S. Pearse, Secretary.

Apologies for inability to attend were received from Messrs. W. Maxwell Edwards, T. S. Fitzsimons and E. H. Waugh.

The Chairman read the following letter from Mr. Maxwell Edwards, Surveyor General of the Transvaal:—

"I much regret that I shall not be able to attend the annual general meeting of your Association on the 3rd instant.

"I should like to take this opportunity of conveying to the Association my appreciation of the help given by the Association in township and town planning matters and your courtesy in sending me copies of the Minutes of the monthly meetings of the Council.

"The criticisms of the Association assist very considerably in bringing about improvements in the lay-outs of new townships and its scope of usefulness will be greatly extended when the new town planning provisions come into operation. Its help then can be of very great assistance in the preparation of town planning schemes."

Notice of meeting was taken as read.

Council's Annual Report and Statement of Accounts which had been circulated to members were taken as read.

In moving the adoption of the report and accounts the President, Mr. F. K. Webber, said :

Gentlemen :

The past year has been one of great importance in the history of Town Planning marked as it has been by the coming into force of the Townships and Town Planning Ordinance, 1931, a very definite step in the progress of town planning in the Transvaal. We take credit to ourselves that the propaganda work that we have carried out has helped materially in the advancement to the stage that we have now reached. For years we have impressed upon the public and the authorities the urgent necessity of dealing with Town Planning under legislation giving very wide powers to a Town Planning Board ; in our endeavours we have been fortunate in having the support of the Surveyor-General who was Chairman of the Townships Board created under the Townships Act of 1907 and who remains Chairman of the new Board.

The powers given to the new Board under the Ordinance furnish ample machinery to carry out the reforms we all so desire and probably no one more than our local bodies who have in the past been unable to prevent things being done owing to legislative restrictions.

But, gentlemen, no law can be forced on an unwilling people and any reform, especially one of this nature, which under certain circumstances may become very drastic in its application, must be supported by the goodwill and sympathy of the people. To obtain

that support and goodwill it is necessary that the real meaning and intentions and ultimate result of the application of town planning under this ordinance be very thoroughly understood. A drastic reform of this nature cannot be expected to meet with universal approval ; in fact direct antagonism may be expected from those whose interests may be affected.

No far sighted movement of this nature is understood by the ordinary citizen who has never given the subject a thought and still talks of Town Planners as faddists who are of no use to him or to the community in general.

To many people the objects of Town Planning are achieved by :

(1) Comprehensive planning of main arteries making provision for future development : admittedly the most important problem in the layout of a new town, for main roads into and out of a town are the framework on which the plan will hang together and these routes should be laid down and secured at an early date.

(2) The planning of streets with varying widths and with due regard to the contours of the land.

(3) The provision of open spaces for recreation and parks.

(4) A system of zoning to divide the town into districts in order to regulate the location of trades and industries and to separate them from residential areas thus preventing the building of a butcher shop in a residential area.

But these, gentlemen, are not the aims and objects of Town Planning. The whole layout of a township with its network of streets, its open spaces and parks, is but the means to an end.

The chief aims and objects of Town Planning—which by the way is I think a misnomer—are to add to the health and happiness of the citizen, to develop a higher civic pride ; to beautify our towns ; to provide healthy homes amid garden surroundings. It ensures a growth in accordance with general convenience and the development of trade and industry ; in other words its object is so to develop a town that its citizens may enjoy the greatest possible comfort, convenience and happiness in living in a town in which as far as possible the discontent created by sordid surroundings will be eliminated. These

aims, it surely will be admitted, are of national importance.

Even as far back as 1924 the following resolution was passed by the Council of Public Health in an endeavour to impress upon the Union Authorities the national aspect and the importance of Town Planning.

"This Council places on record its deliberate opinion that there is urgent need for the taking of immediate steps to prevent the indiscriminate cutting up of land in disregard of public health and Town Planning considerations.

"It further considers that legislative powers should be obtained to deal with land which has been laid out on unsatisfactory lines."

To any one who has studied the question it is evident that this world wide movement in favour of Town Planning is one of the most important movements of our time for the advancement of humanity, and a great responsibility rests on the newly created Townships Board that full advantage be taken of the powers that have been conferred on it and that we do not lag behind in this movement which is so long overdue in South Africa.

In order that the community should reap the full benefit of the powers conferred on the Town Planning Board it appears to me to be imperative that active steps be taken to keep the subject of Town Planning before the public notice. It will be necessary that we continue by propaganda work of various kinds to educate the public to the real national meaning of Town Planning and all our energies will be required to explain the object and the scope of the various Town Planning Schemes which we hope to see introduced, and to emphasise the benefit they will confer on the community.

It is most unfortunate at a crucial point in the progress of Town Planning, such as that at which we have now arrived, that our activities should be so seriously handicapped for want of funds when funds have never been so urgently needed as they are to-day.

Our City Council has considered that our period of usefulness ceased with the passing of the ordinance and I can only appeal to our Councillors to reconsider this decision and continue the subsidy so generously given to us in past years.

There is one serious omission from the ordinance which I think might be considered by our Provincial Legislators and that is the omission from the ordinance of a Betterment Clause. Ample provision is made for compensation for any loss incurred by an owner, but no provision is made for any quid pro quo by the owner for any increase in the value of his property, directly attributable to the carrying out of a scheme by the local authority. In this connection I would like to refer our legislators to the Town Planning Ordinance of Western Australia in which provision is made that the owner, when his land is increased in value by the carrying out of a Town Planning Scheme, shall pay to the local authority one half of such increase.

In conclusion I should like to emphasise that the objects with which this association was formed have not yet been fully obtained. Our work has not been completed and we believe that for many years to come it is essential that a body such as ours should exist; with its help and co-operation we think a greater success could be achieved under the ordinance than would be the case if we ceased our activities.

Mr. A. S. Furner in seconding the adoption of the report moved a hearty vote of thanks to the President for his most interesting address, which was received with applause.

Mr. Riley suggested that this Association might be posted up regarding developments taking place in various municipalities under the new ordinance.

The President explained that the regulations under the ordinance were only just published and local authorities had been awaiting these before commencing their several schemes.

The Secretary. The President emphasised the few remarks in the Council's report regarding the work done by the Secretary which was very much appreciated, but the remuneration for which he thought was most inadequate. He added that in view of the financial position it was not possible to vote a bonus to the Secretary at this meeting and proposed that the new Council be authorised to vote such a bonus as soon as funds permitted. This was agreed to.

Council for 1932/33. The President submitted the following nominations to the Council for the ensuing year:—Messrs. A.

Allen, T. S. Fitzsimons, A. S. Furner, A. Leitch, W. E. S. Lewis, Professor G. E. Pearse, Dr. Chas. Porter, Harold Porter, W. E. Russe, C. P. Tompkins, E. H. Waugh, J. Wertheim with Messrs. S. C. Dowsett and Rex Martienssen representing the Transvaal Institute of Architects; Mr. F. K. Webber and Professor Watermeyer, representing the Surveyors Institute; two representatives of the Johannesburg City Council and the Mayor of Vereeniging.

The following additional nominations were submitted at the meeting.

Dr. E. J. Hamlin, Mr. W. G. McIntosh and Major Cochran Patrick.

The above were all duly elected as the Council for the ensuing year.

Date of Monthly Council Meetings. It was agreed to hold the usual monthly meetings of Council on the first Tuesday in each month.

Mr. Harold Porter moved a hearty vote of thanks to the retiring president for the very able manner in which he had carried out his duties during the past year. This was seconded by Mr. Allen and carried with applause.

This concluded the business of the annual meeting.

At the ordinary monthly meeting of the Council, held immediately after the annual meeting on the 3rd November, 1932, Mr. Andrew Allen was elected President and Professor G. E. Pearse Vice-President for the ensuing year.

On taking the Chair, Mr. Allen said:—
Gentlemen,

You have conferred upon me a very great honour by electing me as your President for the ensuing year, and it will be my endeavour during my year of office, with your co-operation, to advance as much as possible the best interests of Town Planning generally, and our Association in particular.

The ensuing year will be a year of some importance for this Association inasmuch as we hope to see the preparation of the new town plans for Johannesburg and neighbouring towns in accordance with the new ordinance.

The Transvaal Town Planning Association has in the past been a very active body and its efforts are now about to bear visible fruit. It will be my endeavour to maintain the good relations that have existed in the past between this Association and the Townships

Board, and Municipal Councils in the Transvaal; and I would like to assure these public bodies that this Association exists for the purpose of giving assistance and support for any of their schemes of improvement which are for the wellbeing of the community generally, and if criticism is offered by our Association it will be on constructive and helpful lines.

Town Planners should be men of vision and I would very much like to see the members of this Association giving more thought to the future of town planning by taking a deeper interest in our young Architects and Surveyors and in some practical way endeavouring to get these young men to take a greater interest in the art of Town Planning. With this object in view I intend in the near future to put a suggestion before you for your consideration.

I should also like to see an effort made to inculcate into the minds of the rising generation, by means of periodical lectures to the advanced students in our local schools, the benefits and advantages of proper town planning. These boys will be the men of tomorrow, and if the work we are doing to-day is not to be allowed to languish we must see to it that the community not only properly understands the true meaning of town planning but that there should be new men coming forward to carry on the good work in the future when we are gone.

It will be my endeavour also during my year of office to take every opportunity of pointing out to our public bodies and the public generally that town planning properly conducted is of the greatest importance in the building up of the nation, that proper environment created by the exercise of vision in town planning has an enormous influence for good on the character of the people.

I often feel that the public generally are apathetic and unsympathetic towards town planning because they do not rightly understand its true meaning. And I feel that we should make it more clear that proper town planning means development, that development on proper lines means progress and progress means prosperity.

I am sure you will all agree that the great need at the moment in South Africa is a measure of prosperity, and I am convinced that this can be more rapidly brought about by carefully planned reconstruction works of

a public nature, works designed upon lines which would effect much desired and needed improvements, repay the cost and provide employment for large numbers of our unfortunate workless.

It must be quite apparent to any one of an observant nature, who knows South Africa, that large areas of valuable City land are being unnecessarily held up by obsolete railway premises, land that is urgently required for City developments in nearly all of our principal towns and that in nearly all centres progress and prosperity are being held up in a most unbusinesslike manner.

It is my intention to take every opportunity of bringing these matters prominently to the notice of the authorities and the public with a view to having these areas re-planned and opened up for development and improvements which are long overdue, and I trust in doing so I shall have the support and assistance of every member of this Association.

There is just one more matter that I would like to touch upon. Town Planning Associations I am pleased to note have been formed in the other Provinces of the Union, and I hope during the present year to see a unification of these interests take place so that we may have an executive representing Town Planning interests in the whole of the Union,

and that we shall grow in sufficient strength to enable us to secure a representative in the Government of the Country.

I would also like to see the planning and construction of all works of a public nature divorced from politics and placed in the hands of an unbiased Board of Engineers and business men, who would decide the plan of such works on lines which would be in the best interests of the community as a whole, and who would take into consideration the safeguarding and development of our natural amenities for the benefit of the nation.

These are a few suggestions that have occurred to me for guidance in our work in the coming year, and I hope they will appeal to you and be given earnest consideration.

In undertaking the duties of this important office I realize that I shall have some difficulty in following in the footsteps of my predecessor in office and while I do not hope to attain to his standard of efficiency I will do my best and trust at the end of the year we may be able to report progress in some measure equal to the progress made during the past year under the very able guidance of our retiring president.

I again thank you for the honour you have conferred upon me.

durban town planning

As a result of a meeting this morning between representatives of the Greater Durban Town Planning Association and the Municipal Town Planning Board Committee, there is every probability that a Durban Advisory Town Planning Board, consisting of Town Councillors and co-opted members, will shortly be formed.

Councillors, it is learned, gave a very sympathetic hearing to the case presented by the association's delegates, after which the sub-committee recommended that the Town Council agree to the formation of a Town Planning Board to be composed of Town Councillors and of delegates nominated by the Association. The Association's delegates will be drawn from responsible bodies linked up with the association's activities. It is pro-

posed that the Board's term of reference shall prescribe that it advise the Council on all matters concerning town planning.

The association's delegation was headed by Mr. C. T. Schelin (president), and included Messrs. H. Middlebrook, Lewis Byron, A. L. Forbes and J. E. Borain. Its representations were supported by delegates of many other bodies, namely:—Professor Oxley (Natal University Council), Mr. John Williams (Technical College Council), and Messrs. R. Butcher (Chamber of Commerce), F. Goodall and J. T. Lea (Chamber of Industries), Colonel Hurst (Natal Provincial Institute of Architects), J. McNally (Trades and Labour Council), Dr. Copley (Natal Coastal Branch, Medical Society of South Africa), R. Okell (Natal Institute of Engineers), Walter Short

(Natal Institute of Land Surveyors), and H. L. Buzzard and F. I. Ing (Rotary Club), and Mesdames Robson Pearce (National Council of Women), and E. Kilmister (Durban Women's Municipal Association).

The Town Council sub-committee is comprised of Councillors P. Osborn, S. K. Elgie, Fleming Johnson, W. E. Langton, G. Reyburn, G. A. Riches and W. Wanless. Other Councillors who attended the meeting included the Mayor (Councillor O. Lea), Captain Rainnie and Mr. Westgate.

IN OTHER COUNTRIES.

Mr. Schelin presented a statement drawing attention to the Rotary Club's strong advocacy of a Town Planning Board, and recapitulating the association's negotiations on this matter with the Town Council. The statement proceeded:—

"The necessity for having town planning boards is generally accepted throughout the world, where planning of any magnitude is contemplated. For example, there are hundreds of town planning committees and commissions in the United Kingdom (statutory or advisory). There are nearly one thousand town planning commissions in the United States, a large number in Canada, the other Dominions and in foreign countries.

"We have never in our researches found that town planning committees have been appointed after the planning had been done. The suggestion to leave the creation of a town planning board until the Borough Engineering Department has completed its schemes, is to leave such schemes open to severe criticism if they do not meet with the approval of the general public, and criticism at this stage is apt to be futile and is often resented. Constructive co-operation is more readily accepted in the early stages of the preparation of a scheme. In fact, the first duty of a town planning board is to report on the extent and scope of the planning to be included, let alone the actual planning itself.

TOO BIG FOR ONE MAN.

"The scope and complex character of real town planning (not merely street planning) in its many aspects call for such a range and depth of experience, knowledge and ability, that no local authority need hesitate to enlist the services and co-operation of an advisory body such as suggested. The co-operation of such a board has the added advantage, that when, eventually, the plan is agreed upon, no

criticism of any magnitude or importance is at all likely. It is not likely to become a shuttlecock and a basis for prolonged controversies. We submit that the preparation of the planning of Greater Durban is too great a responsibility for any one single man."

Local town planning was complicated, Mr. Schelin urged, by these factors:—

- (1) The presence of three to four different races.
- (2) That the new areas are almost entirely privately owned.
- (3) That about 80 per cent. of the newly incorporated areas is scandalously planned.
- (4) The absence of proper legal powers.
- (5) That no machinery exists for co-operation with adjacent local authorities.

"The last thing we have in mind," he continued, "is to introduce anything that might clog the wheels of the municipal machinery. We are convinced that the bodies that are likely to be invited to send representatives to the Advisory Town Planning Committee will select persons with a largeness of mind in keeping with the size of the problem. We shall resolutely set our face against any attempt to waste the Town Council's and municipal officers' time with unimportant or futile pettinesses."

AVOIDING CONTROVERSY.

Mr. Schelin added that the association wished to work along constitutional lines and had at all times tried to avoid a controversy on this important matter. They were here simply to present the need for a Town Planning Board representative of responsible opinion and to support their case by usages and facts related to other countries and the Union provinces outside Natal.

Many other members of the delegation and spokesmen of bodies represented supported Mr. Schelin's plea for the establishment of the board, Mrs. Kilmister particularly emphasising the need for co-operation with local authorities outside the enlarged borough, to prevent the growth of slum conditions beyond the civic boundaries.

The delegation, as stated, was accorded a sympathetic reception, the sub-committee then recommending that the Town Council establishes the board as an advisory body, on the lines suggested.

From the "Natal Advertiser," 28/10/32.

professional notes and news.

British Architects' Conference, Cambridge 1933.

The date of this Conference has just been settled. It will take place from the 21st to the 24th June, 1933. I shall be obliged if you will kindly bring the matter to the notice of your Council and of your members generally, and ask them to make a note of the date and do their utmost to arrange to be present.

Ian MacAlister, Secretary, R.I.B.A.

Port Elizabeth Building Collapse Case.

In this case, heard at Port Elizabeth during November, Mr. R. G. McClelland and Mr. F. Owen Eaton, who were associated together as contractor and architect respectively in the task of demolishing certain shop premises in Main Street, were accused of culpable homicide following the deaths of several persons through the collapse of the building. After a hearing lasting nine days the court, without calling on Counsel for the defence, held that these accusations were not justified. A full report of the Case will appear in the December issue.

Drainage By-Laws.

The following notification has been received from the City Engineer, Johannesburg.

I beg to draw your attention to the provisions of Clause 56 of the Drainage By-Laws, particularly in regard to the information required to be shown on plans submitted for the Council's approval.

It will be observed that the By-Laws provide in connection with such plans that :

"Sections shall also be supplied along the line of every pipe showing the gradients and datum lines and fall of ground, etc."

A growing tendency has been noticed for the submission of plans omitting some of these essential particulars, or showing them incorrectly, and this practice has led to very considerable trouble. It has therefore been found necessary to issue instructions that no plans are to be approved in future unless the provisions of Drainage By-Law 56 are strictly and correctly complied with.

I should be glad if you would kindly bring this to the notice of members of your body.



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