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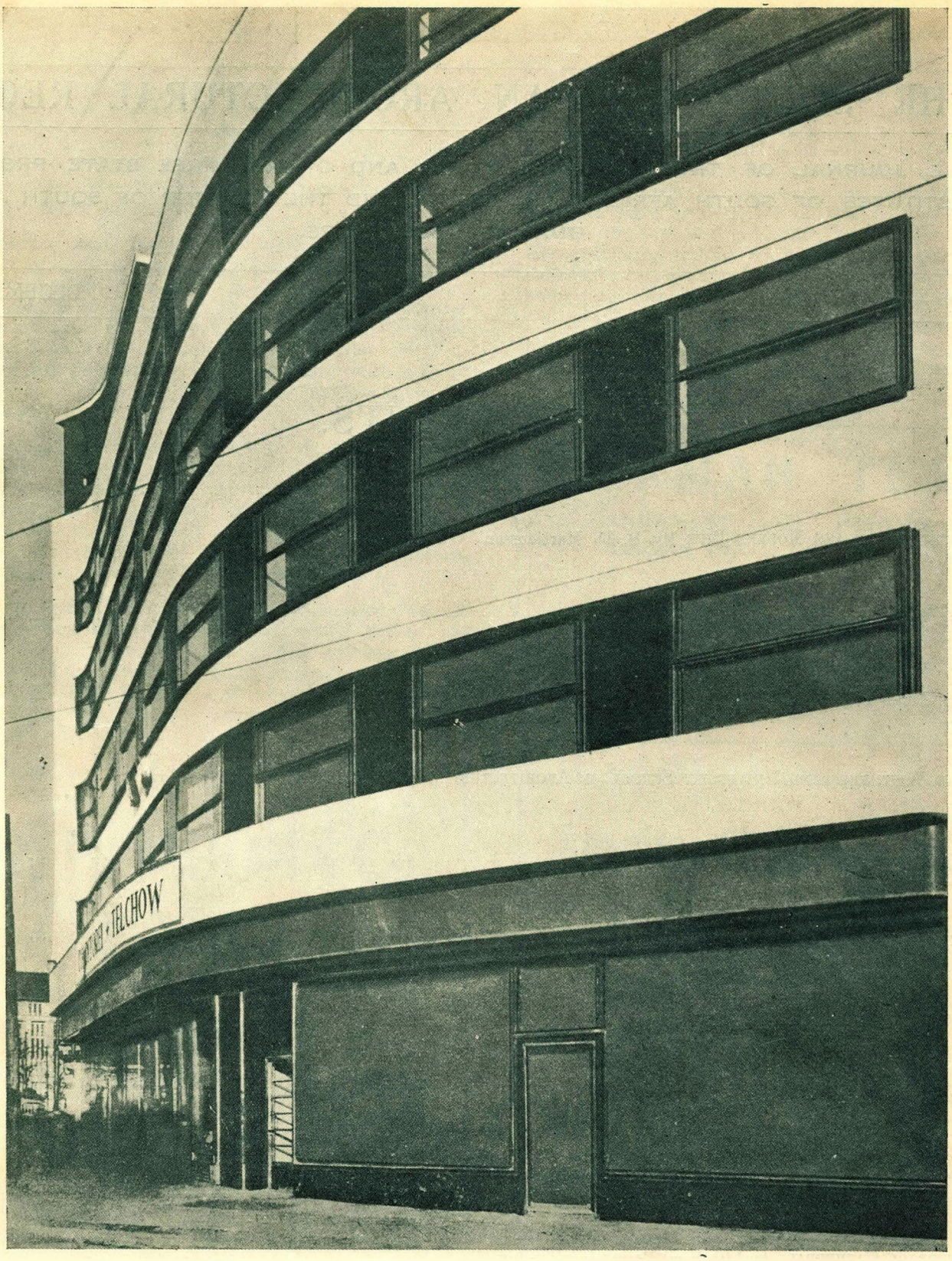

Architects:
Luckhardt and Anker.

The Telchowhaus,
Potsdamer Platz, Berlin.

THE SOUTH AFRICAN ARCHITECTURAL RECORD

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ARCHITECTURE AND MODERN LIFE. *

By R. D. MARTIENSSEN.

My intention this evening, is to bring the art of architecture into relationship with the other arts, and with our every day activities, in order to show that the arts do not necessarily lose any of their aesthetic value by fulfilling a functional need.

Life is a complex arrangement of ordered movements and interdependent functions.

To correlate these complexities with our mode of living is to achieve a unified expression of life.

The fulfilment of this unity is the basis of the great epochs of the past.

Consider Greece in the fourth century B.C. Greek art is the first wholly to embrace the ideals and the every day life of the people. Here for the first time in history the humanist values had complete expression. The people lived in their philosophy—in their theatre—in their sculpture—in their music. The arts were one with their daily life. In their poetry and sculpture they expressed their deepest emotions. The joy of living. In their games they found the poetry of rhythm. In philosophy they discovered the power and range of the intellect. And between their architecture and these arts there was harmony. The qualities which we find in the work of Praxiteles—in the work of Theocritus, or in the work of Euripides, are present in their buildings. The quality of fitness for purpose. The quality of simplicity and strength. The quality of unity which results from a complete spiritual and ethical affinity. Architecture is not an entity that can exist in vacuo. It is a function of life. It is part of the organic whole which we call living. And if that life is beautiful, the embracing architecture cannot but reflect it. It is impossible in the scope of this lecture to trace the development of architecture through the ages. I have mentioned Greek art in relation to life—I would like now to consider a later epoch. The nineteenth century. The nineteenth century is particularly interesting to us because the present grew directly out of it. Its conditions approximate ours most closely, because, in a sense, we had our beginnings in the new possibilities which first found expression during the last hundred years. The problems of the nineteenth century were substantially ours. That is, the reconciliation and unification of new developments into a social system which hitherto had had no place or need for them.

By 1800 all development in a rational direction in art was at an end. Simply because the artists would not accept the prevailing conditions dependent on the new uses of machinery, they stifled progress in art by working inwards and backwards—they struggled to envelop themselves in a romantic atmosphere that would protect them from the encroaching machine. They imitated wildly. There was no organic style that *was* the 19th century. The style was a mixture of everything that had gone before. But Gothic found its exponent in Mr. Ruskin. Mr. Ruskin had no doubt that Gothic would do everything required of it. He lost all sense of time place values. He ignored all considerations of fitness for purpose. His reason for adopting Gothic was that the forms of Gothic appealed to him, while the forms of Renaissance repelled him. His starting point was quite fortuitous. Quite arbitrary. And in the imitation of Gothic the Victorian architects made the mistake of all imitators, they missed the essence of the style they were copying. They did not realise that there was no contact point between the spirit of Gothic and the spirit of the nineteenth century. The charm of Gothic for Ruskin lay in its unevenness. The unevenness which resulted from craftsmanship. He did not appreciate the essential beauty—the repose and order of the best Gothic. He argued for adaptation. Had he stopped to consider architecture in the light of rationalism he would have realised that adaptation was impossible. There is only one significant style of architecture—the style of organic development.

The public clamoured for picturesque architecture. They tried to forget that such things as factories existed. Machinery was considered the blemish of an otherwise perfect age. Regardless of function, all activities—social or mechanical, were housed in Gothic shells, Gothic railway stations, Gothic schools, Gothic houses and delightful oxymoron Gothic factories. But the public were fickle. The reiterated Gothic forms wearied them. They looked for another well established style. They played a little with Romanesque—with Egyptian—but for the same flippant reason that they chose Gothic in the first place they now chose Renaissance as the medium of their building art.

The result was confusion.

* *A lecture given to the Architectural Students Society, University of the Witwatersrand.*

Let us examine the essential differences between a unified architecture and an imitative architecture. A beautiful architecture is expressive of function. The Greek temple with its breadth and rugged simplicity was the embodiment of the religious spirit of a free, athletic and clear-thinking people.

The Gothic cathedral expressed a religious aspiration which excluded all thoughts of self. Everything was sacrificed for the exaltation of the spirit. The body was degraded. Where the statues of Praxiteles inspired the onlookers with a divine sense of beauty, the figures of the Gothic church expressed nothing of physical well-being—but only spiritual anguish.

The horizontal repose of the Greeks was converted into vertical unrest.

This expression of spirit was not fortuitous, but the result of an indestructible unity between life and art. To-day any attempt to imitate these past styles must be fruitless, because we cannot sustain this unity between life and architecture, when our conditions of life are so radically changed.

Let us consider now the purely structural aspect of the best buildings of the greatest periods. That is the structural form as dictated by the available materials and the prevailing knowledge of statics.

Fig. 1.

Fig. 2.

The Greek architect knew only the use of the beam and column.

The Roman developed his architecture on the basis of the newly-discovered use of the arch. This discovery was the keynote of the new style, and later the Gothic church builder used his increased knowledge of statics to construct the typical slender forms of the mediaeval cathedral.

To-day we have almost unlimited possibilities in structure. We see the liberation of modern architecture in a trinity of three materials—steel, concrete, glass.

Before we examine some examples of modern buildings, let us consider the fundamental quality of good art. The quality of unity. The complete and full expression of an idea. That is the essential difference between craftsmanship and art. Art is the embodiment of a central idea. Craftsmanship is the working out of a pattern without knowing the end to which it is directed.

This expression of a central idea in a work of art is, so to speak, the organic centre from which the finished work grows.

Let us consider this book wrapper (Fig. 1). The title is obviously ironic. The book is one of horror, of destruction and decay. It is the story of days and nights in rat-ridden dugouts, of the strain of protracted suspense, of the actions of puppets in a grim struggle which was beyond their comprehension,

Fig. 3.

Let us examine the design of this cover, and consider its function. The cover is an advertisement. It must attract. It must have a wide appeal, and everything in the design must tend towards that appeal. The forms, the lettering, the colour, must combine in a unity which compels attention. The wrapper succeeds. It fulfils its function as an advertisement, and expresses the central idea of the book with a powerful economy. The whole pattern is symbolic of horror. The green suggests decay and poison, and the effect is heightened by the contrast of the red and black. In this small unified pattern we have a picture of the whole war.

Here is another wrapper (Fig. 2), this time for a book of completely different character. The story of St. Christopher's Day is the picture of a day of retrospection in the life of a disillusioned man. By the nature of its story the book has a limited appeal. Where over half a million copies of "All Quiet" were printed—of St. Christopher's Day there were only 6,000.

For this reason the design can afford to be more subtle—less sensational. But again it conveys the essential atmosphere of the story. The figure in the boat is of a man lost in thought, and drifting down a quiet canal. It suggests the essence and repose of his life. And again in a simple unified pattern.

Let us consider the question of the expression of a central idea in sculpture. I have mentioned the Greek ideal of a unified life in which the arts were part of the daily existence. In the finest Greek sculpture we find the expression of the deepest emotions. Of agony—or of joy in life. This Hermes of Praxiteles (Fig. 3) conveys to us the complete idea of delight in physical well-being. It is the essence of the Greek ideal.

Naturally we would not expect to find a similar expression in Gothic sculpture. The ethical and moral values of life were completely changed. In the best sculpture of a period we find the ideals and the outlook of the people clearly expressed. There is an organic development outwards from the dominating idea of the life which it portrays.

The spirit of Gothic lay in the exaltation of the soul and in the subordination of the body. Where the Greeks rejoiced in the beauty of the body, the mediaeval church forbade the nude in sculpture. They sought to express the development of the spirit—to express only the spiritual experiences of man, and not to consider in any way the material aspect of his life.

In this head of Christ (Fig. 4) we see the whole spirit of Gothic reflected. The idea of suffering and aspiration—it is the counterpart of the Gothic cathedral.

Once the strength of a central idea is dissipated sculpture will be devoid of meaning. In the confusion of his approach to the subject, the sculptor destroys the entire unity of his work.

Landseer's lions on the Nelson Monument illustrate what I mean.

As representations of lions they are moderately successful. But they are puny, drooping lions. They are domesticated to fit into the Victorian atmosphere.

How much better are the essential qualities of the lion expressed in the example from Tutankhamen's tomb.

Here creative invention in the selection and treatment of significant forms shows itself at its best.

Fig. 4.

And in an example of modern sculpture let us see how the artist has expressed the dominant or central idea in his mind without dissipating the strength by emphasis on non-essentials.

Take this statue of Balzac, by Rodin (Fig. 5). It is the expression of the spirit of Balzac not of his outward figure. The important thing to the sculptor was the mind of his subject, not his bodily shape. Therefore he strove to express this within the powers of his genius in terms of the outward form of Balzac. For forms in sculpture and painting are symbols with which we are all familiar. To express the mind of Balzac in abstract terms would fail as art. The medium must be understood by the onlooker before he can translate the idea, just as the alphabet must be known before we can read. Hence the medium of Rodin's art was the human form. It is the physical aspect of man which we see and understand—if we wish to show the spirit we must suggest it or express it in terms of the body.

Fig. 5.

Fig. 6.

Character is expressed in the head. When the sculptor tries to suggest the man himself, the face is the centre of interest. Rodin subdued the body to heighten the interest of the face. Everything in the composition strengthens the unity of the presentation. Nothing detracts from the major issue—which is Balzac. We do not speculate idly when we behold the figure. We are consumed by the force of genius which is conveyed —the oneness of the idea of Balzac.

Rodin worked outwards from an idea. His work grew organically. It developed rationally until his idea found complete expression in the ultimate forms. To copy is to work inwards to confusion and sterility.

Representational sculpture can, at its best, give us a lifeless picture of the subject—at its worst a travesty of naturalistic form. We cannot infuse life into art by copying.

We realise this now—but not so the critics of Rodin's Balzac. The critics screamed—and the public screamed with them. Just as they scream at the work of Epstein to-day.

Great art is seldom recognised at the time of its creation. Because the public prefers not to think. It accepted the smooth nudity of the Baiser—the Balzac was too much to grasp.

It is interesting and significant to note that when Rodin saw the two statues being carried off to the salon he noticed that against the open sky the Baiser in its smooth perfection fell short of the Balzac with its great and rugged simplicity. He remarked "To polish the curls of the hair compromises the main idea, the soul of what I seek."

Fig. 7.

The extent of beauty lies not in the smoothness of a piece of sculpture but in its strength. Smoothness can be produced by craftsmanship—but strength and unity only by conviction.

Another example of sculpture (Fig. 6), this time a relief carved in stone. It is the work of Eric Gill, to-day the greatest glyptic artist in England. This relief expresses a simple idea—a simple but fundamental relationship—that of a mother and child. It is treated with strength but also with repose. There is no conflict, no flame to express—but only love and the eternal bond of motherhood. And Gill has used every line in his composition to strengthen this unity.

The curve of the child's arm—the secure enclosure of the mother's hand—the simple lines of drapery and hair all combine to knit the two in one. And there is simplification also. The principle of economy in art which we have found in the Balzac, the Hermes, and the head of Christ. The emotion is expressed without distraction. There is complete harmony.

Let us examine also the embodiment of these fundamental principles in painting. As a parallel to the Balzac of Rodin I would like to show you the Paysage of Corot (Fig. 7). To-day it is appreciated for the exquisite suggestion of tranquillity in nature which we expect from Corot. For Corot is essentially a painter of ideas—a rebel against the lifeless classicism which stifled the expression of fundamental beauty. The critics of his time found no joy in his work—no strength or beauty, but only vagueness. The painting of ideas could not be understood. If an artist painted a tree the public expected a photographic likeness—they did not want to see expressed the whole idea of the tree. They did not expect to see its branches stir in the evening breeze, or to see the tree merge imperceptibly into the unity which is nature. They clamoured for representational painting—painting which conveys as much of the spirit of nature as a dried leaf in a Victorian album conveys the idea of a living green leaf in the sun shine. And Corot worked under a heavy fire of hostile criticism. But it is safe to recognize him to-day—he is securely pigeon-holed.

It is for the same reason that the public are hostile to the expression of ideas which are new to them. The first train—the first steamship—the first aeroplane. What sobbings about the beautiful old coaching days—the beautiful old sailing ships. What an outcry against the deliberate sacrilege of attempted flight. But the train and the steamer and the aeroplane have all been comfortably digested by now, and we turn our attention to repulsing the new developments of science and art forms. We will fight television and talkies, until they batter us into submission. But if we would have our lives more efficient, more reposeful, we must accept innovations into the system, and try to unify the complexities into an organic whole.

And so the greatest painting of to-day will not be accepted at once. The careful, painstaking academicians will bridge the intermediate space with safe and conventional portraits—representational pictures of Cornish fishermen, and insipid excerpts from classical mythology. They will keep the walls covered sufficiently for private views and official openings, while the real work is being done almost unnoticed.

Of significant painters of the non-classical school the young Frenchmen Jean Dupas, and an Englishwoman, Dod Proctor, are typical. "The Girl Asleep," by Dod Proctor (Fig. 8), has in it those qualities which express the ideals common to the arts to-day. The expression of a central idea. And the portrayal of that idea with the greatest economy.

There is a rhythm in the forms. They flow in curves suggestive of repose and quiet. They encircle the head, the centre of the subject. There are no flaws in the pattern—no discords. The whole idea of sleep has been conveyed by the most direct means—by the right handling of the forms of the body, the clothing and the hair.

Fig. 8.

In her "David" also, Dod Proctor has created beauty. The whole thing is full of the beauty of young boyhood. The alert face—the firmly moulded body, the rounded arms, are handled with wonderful simplicity, and with an essential sense of order and pattern. For the unity of the idea conveyed is destroyed if the harmony of the pattern is not complete.

In the "Judgment of Paris," by Dupas, we see the same feeling for form—the same economy. It is another "Paysage"—but expressing essentially the spirit of to-day. In these paintings of quiet colours and lovely forms, there are no formulae, no cliches. They have achieved beauty because they have started from the common starting point of all great works of art. From the starting point of the Balzac—the "Paysage" —the Hermes of Praxiteles. But they are of our time, they are not translatable into other periods. Just as the Hermes is the apotheosis of Greek idealism—and the Head of Christ the spirit of Gothic.

And lastly before examining some examples of modern architecture let us note some significant developments in engineering. We will consider as far as possible those developments which are associated with our every day life. The bridge, the motor car, the aeroplane, the ship.

This bridge across the Rhone (Fig 9) is beautiful. it is essentially of our own time, just as the Roman aqueducts expressed the highest achievements of structure possible in the Roman age. They both serve the same purpose—to carry across.

The Roman aqueduct stretched a succession of arches from point to point. The limitation of Roman construction necessitated the intermediate supports. The Roman aqueduct was beautiful because it conveyed the idea of carrying across with the greatest simplicity and directness which the engineer could bring to his problem. Our range is greater to-day. To span with a succession of arches is not to use the simplest and most direct method. We utilise our materials and knowledge of statics to the full, and employ reinforced concrete. We cross the river at one bound. It is the highest expression of bridge building in history. We want to cross from side to side. We do not want to experiment with insecure river beds, to calculate the effect of water continually washing against the bridge supports. The logical solution is

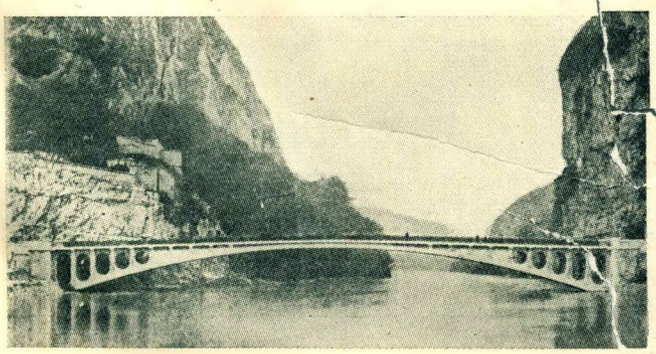


Fig. 9.

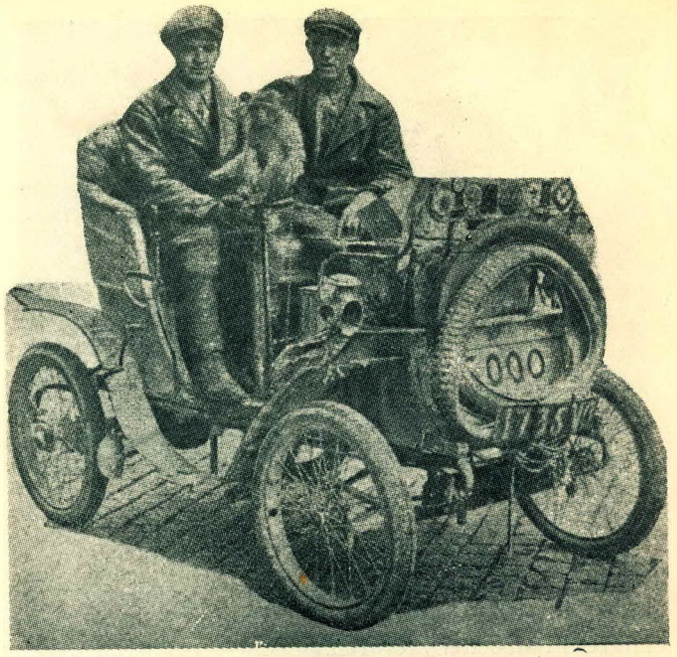


Fig. 10.

to span the river in the true sense. When we can do this it is obviously the expression of an untruth to sink supports into the river to carry our bridge. Just as it would have been an untruth for the Romans to construct their aqueducts on the column and lintel system. The arch went further than the lintel. Reinforced concrete goes further than the arch.

The bridge also expresses the true nature of concrete. It has elegance and grace. It shows the strong economy of using steel and concrete in conjunction with one another. To imitate the forms of the Roman aqueduct in reinforced concrete would also be an untruth.

For the material dictates the essential line and character of the structure. Stone is the material of the Greek system, of the Roman system, and the Gothic. Steel and concrete are our materials. To imitate is to ignore the fundamentals, and destroy the unity of the ultimate forms of construction.

The bridge has developed through the ages. The motor car was quicker. This shows that the rate of development is dependent upon external factors and the extent of current scientific knowledge. If we com-

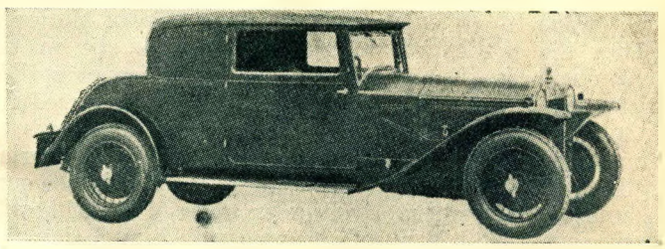


Fig. 11.

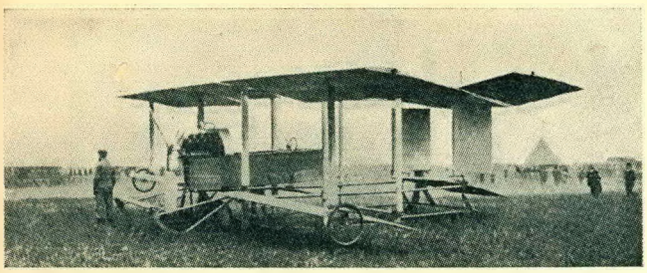


Fig. 12

pare the De Dion, of 1897 (Fig. 10), with the Lancia, of 1929 (Fig. 11), we are struck by the tremendous development which has taken place. The De Dion was the expression of an idea—and one idea only. To use the energy derived from a petrol engine to propel a vehicle. The engineer was engrossed with one problem —the development of the petrol engine. To increase its efficiency, it's reliability. He was on new ground, his knowledge was incomplete.

And it is just where his knowledge failed him that the unity of the machine as a whole broke down. His prepossession with the power unit excluded all considerations of the function of the machine as a whole. The rest of the machine followed carriage and bicycle practice, where it is obvious to us now that new forms of construction were necessary for successful functioning.

But the ideas of comfort and speed and silence gradually came into their proper place with the functioning of the power unit.

The motor car was designed as a whole. To carry people in comfort over varying road surfaces. To carry them at speed and in safety in a machine that would be economical to operate and reliable over long periods. The De Dion has slowly developed into the Lancia, of 1929. The adapted carriage frame with crude unprotected body resting on it has given place to the unified construction of the Lancia. The body and frame are one. We expect our car to-day to embody all that engineering science can put into it. Its efficiency in performing its work is its criterion.

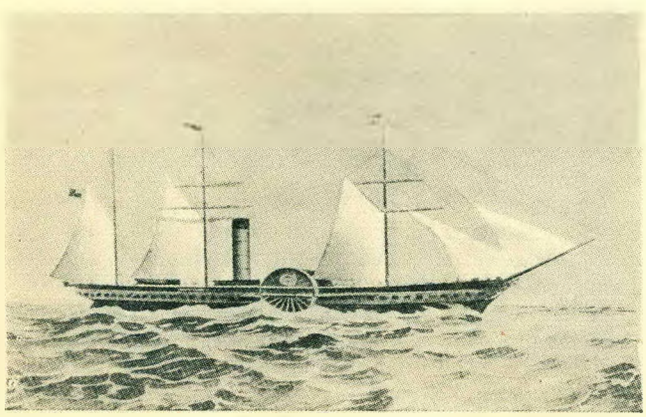


Fig. 14.

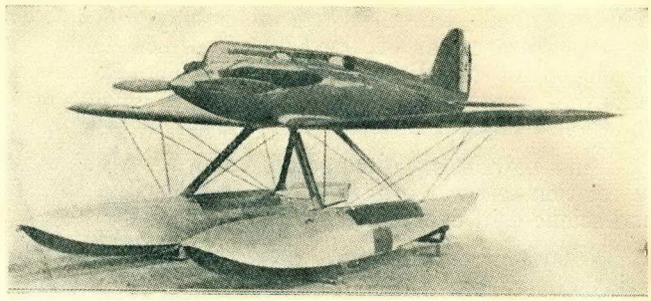


Fig. 13.

The development of the aeroplane is even more rapid. In 1910, Breguet flew one of the first successful monoplanes (Fig. 12). It was successful to a point. It flew. But in the light of our technical knowledge to-day—how crude the whole thing appears. But it fulfilled its purpose—to lift itself into the air under its own power and cover a distance in a horizontal direction. But gradually the idea of speed was the dominating factor in aeronautical engineering. The air was recognised as the ideal roadway. And the machines which competed in this year Schneider Cup (Fig. 13) are the ultimate expression of this idea of speed. Everything has been utilised to produce speed. There is no consideration of independent beauty. But the Gloster is the finest proof that a machine which fulfils its function completely within the limits of science and material is a work of art. Breguet's machine of 1910 was not a work of art, because it did not perform its work efficiently. Through an incomplete knowledge of aeronautics and mechanics the designer employed large wing areas and low power. The reverse is the practice to-day. He had no knowledge of the calculation of resistance and streamlining. He had the most unsuitable materials to work with. Where we use Duralumin to-day, he used steel tubes of two and a half inch diameter. Science has made possible the beautiful machine we know to-day.

And science has made possible also the development of the steamship.

The first steamship was an adapted sailing vessel (Fig. 14). When Charles Dickens sailed to America on the Britannia, in 1842, he preferred the comforts obtainable on shore.

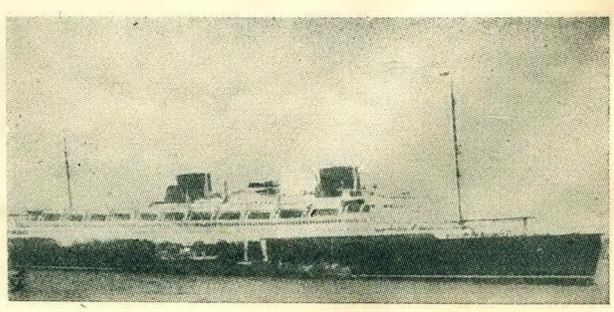


Fig. 15.

We would expect more comfort to-day than his cabin provided. But the Britannia was significant. It was the forerunner of the Olympic which to-day has developed into the Bremen (Fig. 15). The Bremen has achieved beauty by the complete fulfilment of its function.

And now let us discuss contemporary architecture in relation to these different manifestations of the arts and sciences in every day life.

What new functions are there which are characteristic of our age. The distribution of electric power over big distances from a central power producing plant. The transmission of Hertzian waves through the ether at 186,000 miles per second in place of the normal propagation of sound through the air at 1,100 feet per second. The tremendous development in self contained power units. New methods of standardised production in all branches of engineering and everyday equipment. The use of the kinematograph for amusement. The almost universal adoption of the motor car for individual transportation. The gradual replacement of the railway train by commercial aircraft for long distance journeys. The reconciliation of these varying complexities is the mode of our life. They condition our life—if we accept them, then we can strengthen the unity of our existence, and order the course of it. But to turn our backs on modern conditions and bury ourselves in a mock-romantic atmosphere of Tudor houses is to refuse to live in the present, to acknowledge it. Which is palpably absurd. The present is the present—we are not at liberty in the space mass time system to project ourselves into the past or future. So that to resist changes in architecture is as foolish as resisting improvements in the motor car or the printing machine. To live in a mock past is to live under a permanent illusion—with a grudging acceptance of what modern science has to offer.

On the continent the house is considered a modern problem to be solved on a rational basis. If light is required in abundance it is supplied by windows that will give it. The client does not choose between Tudor lattices or sliding sashes of an antique pattern. The Tudor window suited the Tudor client. The sash window suited the Georgian client. It was only in the perversion of architectural forms that the Victorian architect decided that the Tudor window suited the Victorian client. The mediaeval fireplace heated the mediaeval hall—the Adams fireplace sheltered an elegant grate. But to build Tudor and Adams fireplaces for show, and hide hot water radiators behind elaborate grilles is to undermine the whole basis of a beautiful contemporary architecture.

Fig. 16.

Fig. 17.

To build a modern country house like a seventeenth century vicarage, or a block of flats like a succession of Petit Trianons is as absurd as to play golf to-day in the clothes of a William St. Clair. It is as absurd as building motor cars in the style of the carriages of Louis XIV. To build in the style of the Petit Trianon is as ridiculous as to disguise a radio set as a spinet. "No work," as a critic remarked, "may justify a claim to permanent significance which does not reflect the spirit of its own times." And that is the test I would like to apply to the buildings I am going to show you.

Of the first three, one is the Palazzo Pitti, at Florence (Fig. 16), built in 1435. The second is a post war building in Regent Street by Sir Reginald Blomfield (Fig. 17). The third a post war building in the Potsdamer Platz, Berlin, by Luckhardt and Anker (Frontispiece). I would like to analyse these buildings in the light of their functions, that is:

The time at which they were built.

The possibilities of materials and science which were at the disposal of their designers.

The purpose which the building had to fulfil.

The Palazzo Pitti reflects the spirit of its own time. It is the palace of an Italian nobleman. It is noble architecture, and belongs without doubt to the 15th century. The material at the disposal of its architect was stone. It is used rightly to the limits of its possibilities. The stones are large and used in arch formation. The disposition of the building is dictated by its function. In those days of warring factions a palace was always liable to attack. Consequently the ground floor was given up to the servants and soldiers.

The openings were small—not from an abstract aesthetic point of view—but for additional protection. The nobleman's apartments were on the upper floors, and are at once expressed by more generous windows. The whole is reposeful and rugged. A great house of beautiful simplicity. And let us remember the problem. A palace in the 15th century.

And now let us consider a modern problem. The shop, on a busy thoroughfare in a large city. I have two examples of how this problem has been attacked in recent years. Only one has solved it. The building shown in Fig. 17 aims at being a modern shop. Our characteristic available materials are concrete and steel. The function of the building is to exhibit goods for sale as attractively as possible. A close examination of the building does not convince us that the problem has been worked outwards from a central idea. The idea that it is a modern building, to display modern goods to modern people in modern clothes, and surrounded by modern motor cars and steeped in modern atmosphere. No—the problem has been worked the fatal way inwards from arbitrary starting points. The whole thing is an adaptation—when there was no need to adapt. We have noticed in the Pitti the treatment of the ground floor. It was dictated by need. Therefore we have come to associate that treatment with the Italian palace of the 15th century.

It is characteristic. But in a modern shop building the function of the ground floor is radically different. We do not require a closed character. The openings must be as large as possible. By substituting these large openings in the ground floor the whole unity of the building has been destroyed. But had the architect taken the necessity for large openings as the starting point of his design he could have unified the whole. In this Regent Street building there is no sympathy, no uniformity between the ground floor and upper floor treatment. The adaptation has failed. Just as the adaptation of Gothic failed in the nineteenth century. And just as Ruskin missed the essential beauty of Gothic and imitated the irregularities—so the copyist of Renaissance facades misses the essential simplicity and repose of the Renaissance palace, and builds in its place a meaningless and restless rechauffe of misused forms.

Fig. 18.

Fig. 19.

This time let us examine a solution that succeeded.

The Telchowhaus, in the Potsdamer Platz, Berlin. The problem, a modern shop. The materials available, concrete steel and glass. The function—to display and sell goods.

The shop is modern. There is no doubt of that. Just as there is no doubt that the Pitti belongs to the 15th century.

No work may justify a claim to permanent significance, which does not reflect the spirit of its own time. And the Telchowhaus is modern and significant. Just as the Pitti was modern and significant in the 15th century.

And the materials. Steel—but steel used structually. Not used to carry the structural forms of a past age which to-day have no significance. There is something wrong with an architecture which erects great steel structures, and then goes through the elaborate pantomime of tying on to that steel, architectural forms of the past.

No, the Telschowhaus needs glass for exhibition purposes—so the windows dominate. But there is a strong unity throughout the building—because the large windows are a fundamental in the design. The building developed organically from this requirement. The fact that it is primarily a shop dictates its forms.

And in the classification of great architecture it will stand, because it has beauty and strength. In the aesthetic classification it has more in common with the Pitti which it did not seek to copy, than the Regent Street building which copied without understanding. The

Pitti and the Telschowhaus have unity of treatment. They have order and repose. They are expressive of their purpose and of their age. They are one with the society which embraces them. The Regent Street building has nothing in common with the other two. It is not a shop. It is not a palace. It is not of the past. It is not of the present. Let us consider another group of buildings. Again a building from the 15th century, and two contemporary buildings which had to fulfil specific purposes. The 15th century building is the Great House at Stratford-upon-Avon (Fig. 18). It has the qualities of significant architecture. The quality of belonging to its age. It is not a copy. It is a development. It has the qualities of order and repose and dignity. And it has the unity which results from these qualities.

The ordered rhythm of equal gables—the strong accent of the vertical posts, used structually, combine to produce a feeling of horizontal repose. Repose is the quality of the Tudor House which delights us to-day.

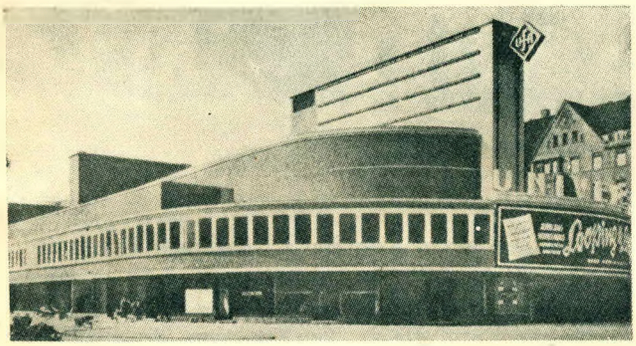


Fig. 20.

But the copyist does not notice these qualities. He appreciates the Tudor house for its picturesqueness—and interprets the picturesqueness in terms of disorder and restlessness.

The building which I show is a modern shop (Fig. 19). The word shop is rather ironic—since the building gives no clue of its function. It is Ruskin all over again. The building is a travesty—a backcloth in a musical comedy—but not architecture. It sought to copy and produced nothing.

Let us turn to Erich Mendelsohn's kinema which has recently been completed in Berlin (Fig. 20). Its function dictates its form and it belongs to to-day. It is very doubtful whether Mendelsohn has ever heard of the Great House at Stratford-Upon-Avon. But his kinema has more in common with it than the "Liberty Building," which sought to copy it. They are both the outcome of a central idea. They had a common starting point, function. They have the same qualities, repose and order and fitness for purpose. The qualities of the Parthenon, of the Pitti, and of the Telschowhaus —the essential qualities of the beautiful buildings of all periods.

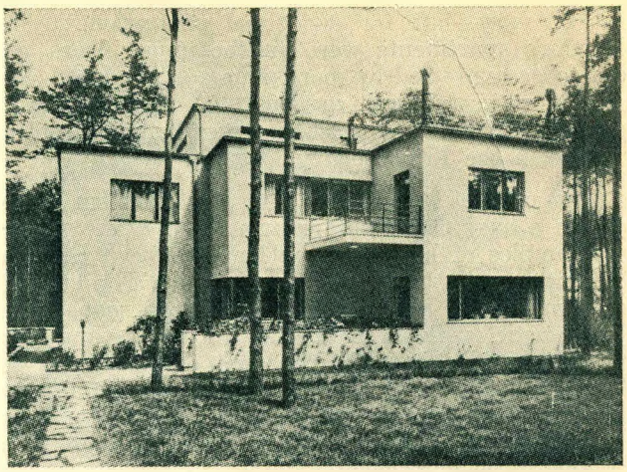


Fig. 21.

And now that we have seen what is meant by significant architecture, I would like to show you some examples of contemporary work which embody the principles which I have discussed. I would like you to consider them in the light of modern significant developments, in relation to the developments in engineering and painting and sculpture, so that you picture the whole as an organic unity of related functions. Our life is not made up of separate entities, but of interdependent functions. And architecture is one of these functions.

At this stage the lecturer exhibited a large number of photographs showing clearly the modern tendencies in architecture in Northern Europe, both in exterior and interior design and treatment. Two of these photographs are illustrated in Figs. 21 and 22.

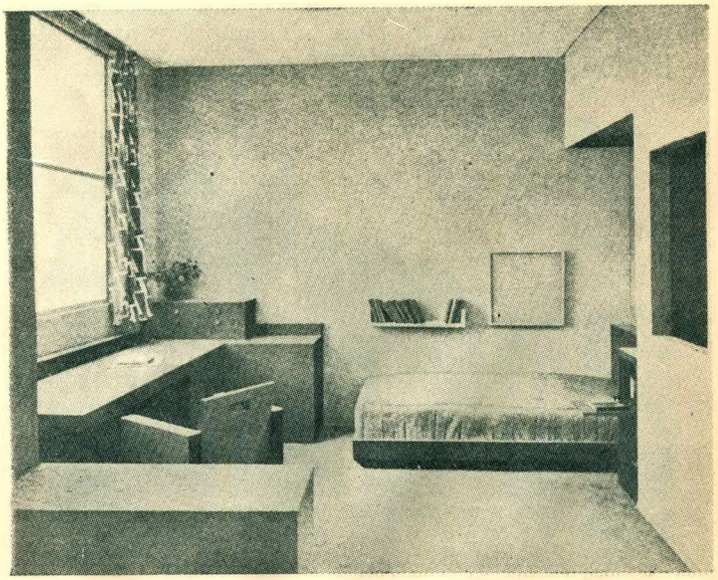


Fig. 22.

In conclusion I would like to quote a few words from one of the significant architects to-day—Erich Mendelsohn. It is the message which he reads into our age, and which he formulates into an architectural credo:

"Even as the pyramid stems itself slantingly against the desert, so that the slumbers of its dead may be protected to all eternity . . . Even as the Greek temple erected its lanes of columns with such gay serenity because they led up to the throne of its gods . . Even as the pagoda unfolds its ecstasy of forms so that the world may revel in the jungle fecundity of its life . . . Even as the Gothic cathedral anchors its tower in the centre of the earth, so that with the greatest assurity it may point with its spire to the beyond . . . Even so must our iron halls be built, even so express the spirit of the builders, must be built so spaciously and so crystalline that out of its vortices of light the house of labour shall arise out of the ruins of the houses of thralldom . . . As a symbol of our human longing to reduce the infinitude of the cosmos to something finite by means of form, and to adjust the incommensurable to the scale of our earthly existence."

THE TOWN PLANNING ASSOCIATION.

Minutes of the Tenth Annual General Meeting of Members of the Association held in the Office 67, Exploration Building, Johannesburg, on Thursday, the 19th September, 1929, at 5 p.m.

Present:—The President, Mr. A. Stanley Furner (in the Chair), Professor W. G. Sutton (Vice-President), Messrs. P. T. Easton, T. S. Fitzsimons, A. Leitch, W. E. S. Lewis, Professor G. E. Pearse, Messrs. Harold Porter, C. P. Tompkins, W. H. Visser, E. H. Waugh, J. Wertheim, Allen Wilson and A. S. Pearse, Secretary.

Minutes.—The minutes of the Ninth Annual General Meeting, held on the 6th September, 1928, which had been circulated to Members, were taken as read and confirmed.

Council's Annual Report.—The Tenth Annual Report of the Council for the past year and Statement of Account of Revenue and Expenditure, which had been circulated to Members, were taken as read and adopted.

Auditors.—On the motion of Mr. Lewis, seconded by Mr. Waugh, Messrs. Alex. Aiken and Carter were appointed Auditors for the ensuing year.

Election of Council.—The President reported that since the issue of the Committee's Annual Report the Institute of Land Surveyors had nominated Mr. F. K. Webber as one of its representatives on the Council in place of Mr. J. B. Tucker.

He thereupon declared the following Members, who had been duly nominated, as the Council for the ensuing year:—

Messrs. B. W. Brayshaw, P. T. Easton, T. S. Fitzsimons, A. S. Furner, W. E. S. Lewis, Professor G. E. Pearse, Mr. Harold Porter, Dr. Chas. Porter, Mr. H. Sharp, Professor W. G. Sutton, Messrs. C. P. Tompkins, F. K. Webber, J. Wertheim, F. Williamson, Allen Wilson and the Mayor of Vereeniging.

Valedictory Address.—The Retiring President, Mr. A. Stanley Furner, then addressed Members and said:—

"After many years of continuous work, Town Planning in South Africa, at last, appears to be entering upon the threshold of a brighter future. There are distinct signs of increasing interest in Public Opinion.

"Johannesburg has now made a start upon a Civic Survey, and the public of Durban is showing considerable interest in the future development of its town.

"Fresh Town Planning Legislation has been dealt with in the Cape Province—apparently not very successfully—and further legislation is being considered in the Transvaal.

"The unfortunate history of South African Town Planning with its fatal lost opportunities, the monotony of its uniform rectangular planning so strongly criticised by H. V. Lanchester in his recent book upon the subject are, we all hope and trust, left behind us. But much more remains to be done. The slowly awakening interest on the part of the Public must be helped. The education of our citizens must be the first aim of all those interested in Town Planning. Further, a civic pride must be developed and with it a public conscience.

"Even to-day, schemes for new roads and for the elimination of dangerous corners are being frustrated by selfish land owners who require compensation for land sacrificed, out of all proportion to its value, while arbitration is a long and troublesome path to take. It is pleasant, however, to hear of isolated cases where this sacrifice is willingly made to benefit the town as a whole and to reduce the terrible string of accidents in our larger towns.

" It is to be hoped that this Association will be able, in the future, to do something to make our citizens realise the value of good town planning by lectures, competitions and any other means at our disposal.

"One thing is quite certain—that until we can get more public support, we shall be labouring under an impossible handicap and that a really big improvement in the development of our towns and cities will have to be postponed indefinitely.

"An excellent example of the results of lack of public interest can be found in the attitude of Johannesburg as a whole to the Gaol Site. I feel confident that if only a big campaign were undertaken in this direction, strongly supported by Public Opinion, this wonderful site in the centre of the City would once

again become public property and would in some small degree compensate the City for its lost squares.

"But I am equally confident that, until Public Opinion upon this question is expressed forcibly and wholeheartedly, we must continue to allow one of our finest sites to be used for a purpose which could not be tolerated by any town which possesses a real sense of civic pride.

"One way in which I hope we shall be able to improve our position and about which I feel very optimistic is a closer collaboration between those interested in Town Planning and the various Town Councils.

"The Johannesburg City Council has been in many ways very sympathetic to us the last few months and I have great hopes that the future will bring closer contact. A clear understanding between the two bodies can only be of enormous assistance to the City and its development.

"It is to be hoped that the excellent work now begun upon the Civic Survey of Johannesburg will be continued beyond the stage of merely tabulating existing conditions and that a big scheme of gradual development and improvement for the City will be put forward and fully discussed.

"Is it too much to hope that in the near future a big comprehensive Regional Survey of the whole of the Rand will be undertaken and that some attempt will be made to unite the scattered townships and divergent ideas of the various districts along the Reef? A sense of rivalry and competition between the various communities of the Rand is all to the good, but a stronger sense of unity is essential to future prosperity. Such a question as the placing of a central aerodrome is one which can only be satisfactorily settled by the Reef as a whole. No individual town can possibly decide which will be the most convenient point. If the Rand is to develop wisely and economically, some such survey will have to be made. Let it be made before it is too late.

"The seed for success has undoubtedly germinated, but before the tree can bear fruit, much more has to be done. The signs are encouraging, but Town Planning is still a weakly plant.

"Our chief difficulty in the past has been the lack of funds. That difficulty has now been removed, at least for some time, by the Johannesburg City Council's generous grant-in-aid and I am quite confident that the most important duty before the new Council is that of the education of the Public and of the creation of a real civic pride. It will be no easy task, but the work must be done if good town planning is to be obtained. Closer co-operation between this Association and the City Council must be fostered and further work upon the Civic Survey encouraged.

"That the work of the Association has been appreciated in the past is shown very clearly by the aid given by the Johannesburg City Council and by the following letter received only a few days ago from the Townships Board:

> "'I am directed to convey the thanks and sincere appreciation of the Townships Board to your Association for the valuable assistance rendered by its comments on plans of proposed townships which are submitted for its consideration. I am to inform you that your Association's criticisms and suggestions are invariably given careful and full consideration. It will, however, naturally be realised that it is not always practicable or possible to bring into effect the ideas submitted, but I would state that the comments of your Association have in a large number of instances considerably strengthened the hands of the Board when asking applicants to amend what are in many cases very crudely conceived plans.'

"Thus I feel sure that this Association can now look forward to the future with more definite hope and optimism than has been justified for some time past, and it only remains to us to make the most of the opportunities offered."

Mr. Waugh moved a hearty vote of thanks to the President for his interesting address and expressed the appreciation of Members for his services to the Association during the past few years and particularly during the year just terminated during which it was noted that Mr. Furner had presided at every Meeting of the Council.

He hoped the Town Planning Association would continue to help matters along and devise some machinery to meet the increasing interest, which was being shown by the Public, in this movement.

Professor Pearse, in seconding the motion of thanks referred to the Gaol Site and expressed the hope that the incoming Council would strongly take up the matter and endeavour to secure that site as an additional open space for the City. He said it was well known that the City Council had worked strenuously for the opening up of a new main artery to the North through a portion of this site, but he felt that if the matter was left too long, there was a risk that the whole area might be covered with Government Buildings. He thought that this Association should continue to press to get the area cleared as an open site on the top of the hill, where the Old Fort could be retained as a historic monument and as a point from which visitors could get a magnificent view of the City.

Professor Pearse also took the opportunity of congratulating the City Council on what had been done in connection with the Civic Survey of Johannesburg and Mr. E. H. Waugh on his appointment as a Member of the Town Planning Commission.

He referred to the keen interest Mr. Waugh had always taken in Town Planning matters and voiced the opinion that the result of his work on this Commission would be of ultimate benefit to Town Planning.

The vote of thanks to the Retiring President was carried with acclamation.

Other matters dealt with at the Meeting were "The Discomfort and Unsightliness of Smoking Chimneys at the Hospital," "An Aerial Survey of the City" and "Propaganda."

The President in returning thanks to Members said all the matters referred to would be brought before the incoming Council for attention.

It was reported that an interesting article on "The Uncontrolled Development of Cities and the Larger Towns in the Union," by Mr. J. S. Cleland, was appearing in the current issue of the *S.A. Architectural Record* and it was decided that this Association obtain and send a copy of the Record to each of its Members.

The Meeting then terminated.

TOWN PLANNING ASSOCIATION.

THE TENTH ANNUAL REPORT.

To the Members of the Association,

Your Council submits this, the Tenth Annual Report of the Association's proceedings for the past year, together with the Annual Accounts.

COUNCIL PERSONNEL.

At the Meeting of the Council, held in October last year, following the Annual General Meeting, Mr. A. Stanley Furner was unanimously elected President for the year, and Professor W. G. Sutton was elected Vice-President.

SECRETARY.

Mr. M. K. Carpenter, who had ably carried out the duties as Secretary of your Association since the year 1919, resigned this position in September last, and your Council appointed Mr. A. S. Pearse as Secretary in his stead.

ELECTION OF MEMBERS TO COUNCIL.

In terms of the constitution, nominations for membership of the Council for the ensuing year have been invited and nine persons have been duly nominated.

No election, therefore, will be necessitated and, with the additional nominations from Institutional Members, the full Council for the year will be :—Messrs. B. W. Brayshaw, P. T. Easton, T. S. Fitzsimons, A. S. Furner, W. E. S. Lewis, G. E. Pearse, H. Porter, Dr. Chas. Porter, H. Sharp, W. G. Sutton, C. P. Tompkins, J. B. Tucker, J. Wertheim, Allen Wilson, F. Williamson and the Mayor of Vereeniging.

NEW TOWNSHIPS.

During the past year the Townships Board has submitted plans of eight new townships for your Council's consideration and report. These were duly dealt with and amendments and improvements proposed by your Council have in most cases been adopted by the Board and the promoters of the Townships. Your Council feels that the time and labour devoted to the consideration of these plans deserves greater recognition from the Board and promoters of new townships and it is proposed to approach the Provincial Administration for a grant-in-aid towards the funds of this Association.

ACTIVITIES.

During the year, apart from the consideration of new townships, your Council has discussed and dealt with the following matters :—

Town Planning Legislation :—Following on the position reported at your last Meeting, your Council submitted a memorandum on this subject to the Administrator of the Transvaal.

In February last a draft Townships Ordinance was published in the Provincial Gazette, and the Administrator appointed a Town Planning Commission to prepare a report for consideration by the Provincial Administration.

A Sub-Committee of your Council was appointed and subsequently gave evidence before this Commission. This evidence was well received and favourably commented upon by Members of the Commission. The chief points raised were the advisability of representation on the Townships Board of Architects and Surveyors with experience in Town Planning.

Your Council is now awaiting the report of this Commission.

Papers on Town Planning.—Very interesting papers on Town Planning were read by Mr. H. Porter at a Meeting at the Scientific and Technical Club on the 30th November last and at the Architects' Congress at the University of the Witwatersrand in December. These papers were fully reported in the S.A. Architectural Record and aroused considerable interest throughout the Union.

Your Council is now considering a series of lectures on Town Planning, which it is expected will be inaugurated next March.

New Magistrate's Courts, Johannesburg.—Representations have again been made to the Ministers of Justice and Finance, pointing out the urgent necessity for the provision of new premises and it is expected that funds will be voted for this purpose in the near future.

Pan-African Exhibition.—Representatives of your Council have attended meetings of the Council of this proposed exhibition during the past year. It has been agreed that the Exhibition shall be held at Johannesburg, possibly in the year 1932.

Library Site, Johannesburg.—Strong opposition has been made by your Council to the proposal to build a new Library on the site West of the City Hall. Such opposition was of no avail and the City Council decided to proceed with the scheme. In an endeavour to prevent this measure being too hastily carried out, your Council has requested the Administrator to refuse his consent to a loan being raised by the City for this purpose. The Johannesburg Chamber of Commerce and the Federation of Ratepayers' Associations have made similar representations and it is understood that the Administration is still considering the matter.

Widening of Streets, Link Roads, Tree Planting.—All these measures have had the serious consideration of your Council and representations made are bearing fruit and will result in the general improvement of the lay-out of the City.

Civic Survey of Johannesburg.—This is now in hand and your Council has been invited to inspect the preliminary plans.

Publicity.—The question of publicity and propaganda with the object of drawing the attention of the public to the valuable work being done by your Association is having the serious attention of your Council. An announcement regarding the programme suggested will be made by your President at the Annual Meeting.

Finance.—The Income from Subscriptions from Members is barely sufficient to meet the Secretarial and Office expenses of the Association and Members are urged to make every effort to increase the Membership.

Your Council is pleased to report the receipt of a grant-in-aid of £100 from the City of Johannesburg and a Sub-Committee is now dealing with the question of expenditure on propaganda and other means of bringing the valuable activities of the Association before the public.

THE NEED FOR TOWN PLANNING.

By A. STANLEY FURNER, A.R.I.B.A.

A PAPER READ TO THE MUNICIPAL ASSOCIATION OF THE TRANSVAAL, AT VEREENIGING OCTOBER, 1929.

South Africa in the past has been singularly unfortunate in its Town Planning schemes. As a young country full of the enthusiasm of youth we should have expected that a very definite attempt would have been made to develop beautiful, efficient and economical towns. A very cursory glance at the majority of the South African towns, however, unfortunately dispels our expectations. It is true that there are certain notable exceptions, but it is with considerable regret that we find in one of the most recent books upon the subject that South African Town Planning is dismissed in two lines referring to the "monotony of the uniform rectangular plan which has dominated practice" in this Dominion.

South Africa has had in the past wonderful opportunities which have been lost, but the future, we all hope, offers greater opportunities which must not be allowed to pass by without making a great effort to redeem our loss.

TOWN PLANNING NOT A LUXURY.

Town planning is not an aesthetic luxury to be enjoyed by the promotors of garden suburbs, nor the vision of a dreamer who can only visualize the ideal, but is a real, live, economic necessity.

The art of Town Planning has been studied and practised since the dawn of history, and cities have been built in the past which even in their ruined magnificence of to-day give pleasure to all who live or wander within their ancient walls.

The industrial revolution of the early days of last century stamped civilization into that amazing rush for wealth and progress which played havoc with the old order. Towns sprang up all over Western Europe. Rows of drab houses for the swelling population of factory hands were built regardless of amenity, convenience or health. Railways were laid without careful thought and roads were constructed only for the needs of the moment. Factory areas were so placed that they were shut off by housing or business districts from the railways that served them. Valuable residential and shopping areas were ruined by the ill considered erection of factories and stores. Amenity, convenience and economy were disregarded as if they had never needed consideration.

To-day we are reaping the whirlwind.

The enormous increase of road transport, the demand of the worker for reasonable conditions of life have made civilisation realise at last the chaos in which it has been living. Towns have had to be patched and replanned in order to keep the wheels of industry moving, and new districts are being laid out with a far greater care and consideration for future development than has been the case for many long years.

South Africa is still behind the times, although there are distinct signs of improvement. That much maligned individual—the man in the street—is awaking to the importance of good planning although he is still nervous about the cost, is still afraid that he will see no return for his money, and is still more frightened if he imagines his own property has to be sacrificed for the common good.

It is really an astonishing position that in a civilized community one man can so easily ruin some town development or some new road scheme which would benefit the whole community, by a preposterous demand for compensation out of all proportion to the sacrifice he is asked to make. Vested interests and the narrow-minded selfishness of certain property owners can do more damage to a town by the obstruction of proposed schemes than is generally realized.

Carefully considered town planning is a necessity to a successful and prosperous town, and a town which ignores this axiom is bound to suffer. Piecemeal development, haphazard zoning, badly designed arterial and ring roads bring their own punishment upon the town that allows them to exist.

MODERN CITIES.

A modern city, one of the most complex organizations of modern life must not be allowed to grow uncontrolled and ill-considered into an inefficient machine which hampers the life and property of its citizens. *Let us take an example:*

Johannesburg has been in many ways singularly unfortunate. The business area of the town lies between the industrial area and Kazerne, the market is so placed that transport from it to the suburbs has perforce to pass through the heart of the city. Ring roads are noticeable by their almost complete absence, with the result that the centre of the city is crowded with traffic. the business area is, in fact, far more congested than is justified by the population, trade is hampered and accidents are of almost hourly occurrence.

Further, the city is cut in half by its railway, so placed that level crossings and dangerous subways cause an endless waste of time and sense of irritation.

It is interesting to compare this position with that in Manchester where in a report upon the city's traffic it is stated that "A careful examination of the causes of traffic congestion reveals that the state of affairs in the central area is due partly to the haphazard siting of industrial and commercial premises and to the lack

of circumfluent road facilities and indicates that the localization of industrial expansion in predetermined areas will assist local authorities in dealing with traffic movement and in economically improving road facilities. In the past, the lack of control over the siting of industrial premises and the growth of new residential areas, has necessitated, and still necessitates, local authorities expending large sums of public money in widening and improving innumerable streets, *without effectively producing the facility of movement which is now so necessary.*"

Every citizen in Johannesburg realizes its disabilities, yet even to-day schemes for new roads are being frustrated by individual owners who refuse to sell their property at anything less than at least double its value, knowing that arbitration is a clumsy and prolonged process.

CIVIC PRIDE NEEDED.

Until a sense of civic pride is developed in the minds of the public, and until a desire for, and an understanding of the value of a well planned town is realized, the work of the town planner in remodelling a defective plan is rendered almost impossible.

That such modification is possible and economical can easily be illustrated by examples such as the construction of Kingsway, in London, only just completed. The increased rateable value of the properties in it, the resulting simplification of traffic problems and the greater beauty of the city, have well paid for the expense of its construction.

EXAMPLE OF PARIS.

An even more remarkable example is the work of Baron Hausmann, in Paris. "Paris," to quote Prof. Abercrombie, "is the great example of the economic value and use which skilful town planning extracts out of every inch of the city and of the way in which it can be worked into an effect of civic beauty." Under the instructions of Napoleon III., in 1853, Hausmann remodelled Paris, at a cost of nearly fifty million sterling. Certainly, though at the time of Napoleon's downfall he appeared to have indulged in hopeless extravagance, he has since been fully justified, and the city at large has recouped itself many times over for the enormous outlay.

The work carried out by Hausmann, in Paris, is almost incredible. It is true that all the great landmarks of Paris existed before his day, but there was no big scheme uniting them into a great composition.

Before his work was carried out the courtyard of the Louvre was full of houses, the Arc de Triomphe was set in an irregularly shaped place half cut off by a shabby Barriere wall with a few gaunt trees, and dubious houses in proximity.

Paris affords us an example of town planning principles consistently applied to its growth during the last three centuries. It is moreover the strongest argument for bold foresight and drastic action in dealing with existing parts of a city and bringing them up to continually increasing requirements of expansion.

LONDON.

London lost its great opportunity after the great fire, when owing to vested interests and private property owners Wren's great scheme for the newly built city was abandoned, and in consequence London of to-day is a pale shadow of what it might have been. That this difficulty can be overcome has been illustrated very clearly by the reconstruction of Salonika after the recent fire, where a very successful scheme of expropriation and redistribution of property has been evolved.

Owing to the difficulties previously explained and many others too complicated and numerous to mention in a paper of this character, the amount of work to be done by the town planner in an existing city is somewhat limited under present conditions. Dangerous corners can gradually be eliminated as opportunity offers, streets can be widened, zoning laws can gradually be enforced. But this can only be satisfactorily achieved if the requirements of the town are already known and if a general comprehensive scheme of development and modification is prepared.

CIVIC SURVEYS.

It is for this reason that Civic Surveys have been or are being made by all the leading cities in England. A Civic Survey is *firstly* a careful study of existing conditions, such as a traffic census in all the principal streets, a survey of existing arterial roads, housing conditions, available open spaces, and children's playing grounds, natural zoning of industrial, business and residential areas, and *secondly* a study based upon the preliminary work showing the most desirable way of developing the town. For example, which streets will in the future need widening, where future open spaces will be required, which districts are to be confined to residential or factory or commercial buildings and where additional arterial roads will be required.

I am glad to say that work on a civic survey for Johannesburg has been recently started and it is to be hoped that a very full and complete scheme for future development will be indicated.

A survey of the Manchester district has recently been made and in their introduction to the final publication its promoters say:—

> ". . . the ultimate aim that the Committee has had in view has been to prepare an advisory plan in broad outline which will facilitate the progressive development of every part of this important region, so that the most may be made of its vast resources, the enterprise of its citizens, and to bring about the best possible conditions of life."
>
> "The Committee do not suggest that all their proposals, as embodied in this report, should be put in hand immediately. On the contrary, their proposals comprise a progressive programme of development for many years ahead . . . In this way all future development in the region, whether by private enterprise or by a public body, will be guided and controlled on predetermined lines; a common aim (directed towards the advancement of the prosperity and well-being of all the inhabitants) secured, and waste, congestion and confusion avoided."

A further quotation from the Civic Survey of Dublin will further illustrate the point:—

> "With this plan before the citizens of Dublin, it should be impossible for them to sanction any of the piecemeal tinkerings which have been allowed in the past, tinkerings which are of two sorts—firstly, a single aspect, such as housing, which is pursued with great thoroughness throughout the city while neglecting the inter-related problems of

work, transport and recreation; secondly that equally dangerous sort of tinkering which consists in taking a part of the area and preparing for it a complete plan covering every aspect of civic life, but without the possibility of relating to it the whole city and its surrounding region."

This question of a civic survey is of such great importance in modern town-planning that I feel a fuller consideration of it is essential if I am to make clear the more recent ideas upon town-planning.

FACTORS TO BE STUDIED.

Let us consider in more detail some of the more important factors which have to be studied before a satisfactory scheme can be evolved.

Surface features require examination, the presence of trees, the hills and valleys, ground suitable for farming and marshy ground unsuitable for residential districts. The climate often has an important bearing on the life of the inhabitants, thus dust, dust-producing areas and prevalent winds have a considerable importance for Johannesburg, smoke and prevalent winds for Sheffield, and rainfall in the Manchester district, for there is a close connection between the abundant supply of pure soft water from the grits and coal measure sandstones in the district, and the bleaching, dyeing and finishing processes of the textile industry. Thus large catchment areas over ground of this geological formation have to be kept free from buildings in order to ensure an ample supply of the water needed in the local industry. I need hardly point out the great difficulty in achieving this without some central control and knowledge of existing and future developments.

The geological formation in mining towns is of the utmost importance particularly where subsidence is probable. In towns such as Sheffield and Johannesburg, and districts such as Manchester and Doncaster, this question is a dominating factor in the final scheme.

The historical aspect is considered particularly in relation to ancient monuments. But many lessons can be learned from the way in which a town has grown.

Bus and tramway services would have to be considered in relation to other factors. It might be necessary to give serious consideration to the question of the co-ordination of the passenger services in order to avoid over-lapping and secure services upon routes which at present may not produce an economic return.

The whole question of the distribution of the population would have to be most carefully considered. This is one of the most complicated features of a survey and it is not possible for me in the time at my disposal to go into the question with any completeness.

The destruction of slums, the reconstruction of housing areas for the workers in relation to the factories and transport, the difficulty of finance, and housing the population during the periods of reconstruction, death rates in various districts, and health conditions, are some of the problems before the town-planner.

The provision and distribution of open spaces such as parks, squares and recreation grounds, parkways and the accessibility of children's playgrounds would be examined, and a future policy suggested to enable the town to purchase land while it is still available at a reasonable figure.

Finally, the siting and accessibility of business areas, public buildings, schools, and Municipal services would be examined and suggestions made,

NECESSITY FOR A TOWN PLAN.

The re-building of towns is constantly taking place, and unless town plans are prepared in conjunction with town-planning schemes, a repetition may occur of many of the evils which town-planning is designed to remedy or prevent. Such town plans for developed areas would provide for new streets, and the improvement of existing ones; prescription of new building lines; open spaces; the siting of civic centres where such do not already exist; restrictions as to heights of and space about buildings; zoning and other matters which may be necessary to bring any particular part or parts of the towns into proper relationship and general convenience, or into architectural setting and harmony, and for the improvement of the towns generally.

I must again emphasise the fact that a city plan is not a grandiose scheme for immediate and costly civic improvements. On the contrary, as opposed to the present planless and haphazard growth, squalor and extravagance, a city plan would mean a well reasoned scheme, outlining an economic system of scientific, artistic and hygienic municipal reconstruction and development, providing specially for the conservation of citizen life and natural resources, and the total abolition of slum conditions.

In addition to civic surveys, many regional surveys have been undertaken during the past few years.

REGIONAL SURVEYS.

Certain districts need to be considered as as economic whole such as the Manchester and Doncaster districts and the new coal fields in the South of England. One district which calls aloud for unity of treatment is the reef and it is to be hoped that a regional survey for the whole of the Witwatersrand will be undertaken in the not far distant future.

Competition between the various communities is certainly desirable and no one can wish for the loss of local initiative, but some control of the district as a whole is surely an economic necessity.

Unless the prosperity of the Rand is to decline some such scheme must be evolved. Let us hope that it will not be too late.

SMALLER TOWNSHIPS.

In the case of smaller townships which constitute the greater part of the town-planning problem of the Transvaal, the future naturally looms larger on the horizon than does the past. The task, if attacked in the right way, is easier and will produce better results. The mistakes made by the older communities must be noted and avoided.

It is quite unnecessary to spend vast sums of money in monumental schemes. Town-planning means a saving of money. It is far cheaper to build a road or a square in the right place than to reconstruct it when land has become valuable and expensive buildings have to be destroyed. A well considered plan for future development is essential. Town Councils come and go and without some definite scheme to work upon the policy of the various councils is bound to be inconsistent.

It is for this reason that in England a Town Planning Act has recently been passed compelling all towns over a certain population to prepare plans for their future development.

A plan such as suggested requires very careful consideration, wide experience and considerable skill in design. If only such plans had been prepared for the

average township in the Transvaal what desolation could have been saved, what inconvenient and uneconomical mistakes could have been avoided.

The whole question of development has to be carefully watched. It is not sufficient to make a plan ; the growth of the township must be continuously controlled. Plots on the outskirts of the town should not be sold at random before the centre plots are developed, otherwise the cost of road-making becomes too heavy to be carried out. Some simple form of zoning should be adopted at the start. This question of zoning is so important that I am quoting the explanation of zoning given by the Manchester Committee in their report which I have already mentioned :—

ZONING.

"The term 'zoning' as applied to town planning, is generally understood to mean the allocation of areas to the uses for which they are best suited, and the distribution of those areas in such a way that they will bear proper relationship with one another.

"The principal uses are : Business, Industrial, Residential and Recreational.

"Zoning, in a broad sense, also has reference to such matters as density of buildings, space about buildings, and heights of buildings, provisions regarding the regulation of which must be inserted in every town-planning scheme.

"In the matter of zoning, as with all other aspects of town-planning, it should be recognised that there is no intention to ignore the rights of owners, to inflict hardships or to make any provisions which will cause depreciation of property values ; on the contrary, under a scientific system of zoning, land and property values will be largely stabilized and the result will be to the mutual advantage of all concerned. Under a system of zoning property owners are afforded protection against many injuries in respect of which they have no remedy at present. For example a desirable residential area may be spoilt and its value depreciated, by the establishment therein of a factory or some undesirable buildings, whereas under a system of zoning this would not be permitted.

"Protection would in a similar way be afforded to a commercial or industrial area ; it would not be permissible for land in such an area to be used for any purpose which would be detrimental to the businesses or undertakings established therein, or occupied to the detriment of industrial expansion.

"Generally, the principle is that land should be put to the most convenient uses having regard to the requirements of the district as a whole.

"In the preparation of a town-planning scheme there may arise questions of compensation owing to some restrictions as to the use of land and other matters, but the question of betterment, i.e., the increased value of land due to the making of a town-planning scheme, must also be taken into consideration, and the general opinion is held that by setting one claim against the other betterment assists in balancing any claim for compensation. For example, a local authority might reasonably establish a claim for betterment by the provision of a public open space, the permanent amenities so provided materially improving the value of the adjacent lands."

Thus a prospective home builder will know that his house and property will not be ruined by the construction of a factory at his side. Intending factory owners will be sure of convenient access to the railway. Smoke producing industries will not be allowed in the track of prevailing winds. A well designed town square will form the centre of the town and ample facilities for recreation will be provided.

The long, straggling winding main street with public buildings dotted along its length, so familiar to us all, must no longer be tolerated. Tree planting must be decided upon and carried out at an early date in the life of a new community. Native areas must be given very careful consideration and some attempt must be made to avoid corrugated iron, chess boards and Alexandra townships.

These and a hundred other points have to be carefully handled if a town is to grow well and beautifully and be an inspiration to its inhabitants. Money must not be wasted in useless and ineffective schemes often only to be destroyed and reconstructed at a later date.

We have outlined a big programme, it will take many years to fulfil, but work must proceed steadily to a pre-conceived end—modified from year to year it may be by new and unexpected conditions.

To achieve it, as to achieve any great success, must need some sacrifice, some expenditure of thought, labour and capital. The public is gradually awakening to its civic sense, and its civic pride. Without a vigorous public opinion no town council can give its citizens a beautiful town ; a people get the architecture and the town they deserve. The public must be educated, it must realize the value of a well designed town and a pride in its development. It must cultivate a sense of unity, a desire to make its own town the best town and be capable of compelling by public opinion a willing sacrifice for a great purpose.

THE CRYING NEED.

The crying need of the moment is the education of public opinion :—

"Too much emphasis cannot be laid upon the main feature, that town-planning is preventive action by virtue of control of development on proper lines, *and* that by proper and far-sighted planning a repetition of many of the evils associated with past uncontrolled town growth and development can be avoided, thereby also obviating the expenditure of large sums of money in remedial measures or schemes which are so necessary in every large town due in a very great degree to a misunderstanding or the impossibility of our forbears, to conceive of the requirements of modern life."

I have tried to emphasise the value, commercial and aesthetic, of town-planning, I have attempted to explain a few of its main principles. The time has been short and I have been able to do no more than touch upon the fringe of the subject and I have left unsaid much that is of importance. I feel rather like the young enthusiastic but inexperienced artist who tried to paint the soul of Switzerland upon a fan. But in closing I would remind you of the old saying that "where there is no vision the people perish."

THE WITWATERSRAND UNIVERSITY SCHOOL OF ARCHITECTURE.

ANNUAL EXHIBITION AND PRIZE GIVING.

The fifth annual exhibition of students' work and prize giving was held at the University on Friday, September 20th, and was well attended by practitioners and students.

Professor Pearse in welcoming those present briefly reported on the work of the school as follows: The progress of the school generally, during the year, has been very satisfactory. Last year we had forty three students, twenty of whom were taking the degree course. This year the numbers have increased to fifty-four with twenty-five full time students. No degrees were conferred during the past year. One student, Mr. L. R. F. Bustin, completed his course and obtained the Diploma in Architecture.

One of our fourth year Diploma students, Mr. R. G. Porter, left last year to complete his final year at the Architectural Association School in London.

Towards the end of last year the first Union Congress of Architects and Quantity Surveyors was held in Johannesburg and we were glad to offer them the use of our Department for some of their discussions and show them over our University buildings.

An exhibition of students' work, which was held during the Congress, was very favourably commented upon by many of the visiting delegates.

The discussions on Architectural and Quantity Surveying education were most useful and it is hoped that there will be many more to follow.

This year many changes and new developments have taken place.

Mr. J. T. Lloyd arrived from England in February, as successor to Mr. A. S. Furner, and I take this opportunity of welcoming him on your behalf. Naturally he finds conditions here very different from those in the old country, but I have no doubt he will soon settle down among us. Under the Architects and Quantity Surveyors Act this University has been appointed jointly with the University of Capetown, as the examining authority for the Union.

This, to my mind, is a step in the right direction, as it forms a connecting link between the two established schools of Architecture in South Africa.

Splendid work is being done in Pretoria as a result of the combined efforts of the Architects, Quantity Surveyors and Students, and, more especially owing to the efforts of Mr. Cleland and Col. Puntis, of the P.W.D., and Mr. T. Moore and Mr. H. Bell-John, late Chief Engineer of the P.W.D.

The Transvaal University College, in collaboration with this University, is now providing facilities for the training of Architects and Quantity Surveyors and has appointed Mr. H. Bell-John as lecturer in charge of the new department.

The students, who are now registered students of this University, are eligible for our Diplomas in Architecture and Quantity Surveying.

An excellent staff of part time lecturers are working splendidly under severe handicaps and with little or no equipment.

I should like particularly to congratulate Mr. Bell-John on the splendid work he has done in this uphill task. Not only does he take many of the classes over there but he also comes over here once a week to take three classes in Quantity Surveying.

The other lecturers assisting him are Miss G. Anderson, of the Normal College, who takes Freehand drawing; Mr. A. F. Lawrie, Design; Mr. W. G. McIntosh, one of our Degree students, Geometrical Drawing and History; Messrs. G. Eddy and N. Harvey, Construction; Mr. E. Dohse, Theory of Structures; Mr. G. R. Whale, Hygiene; Mr. van Tonder, of the T.U.C., Surveying.

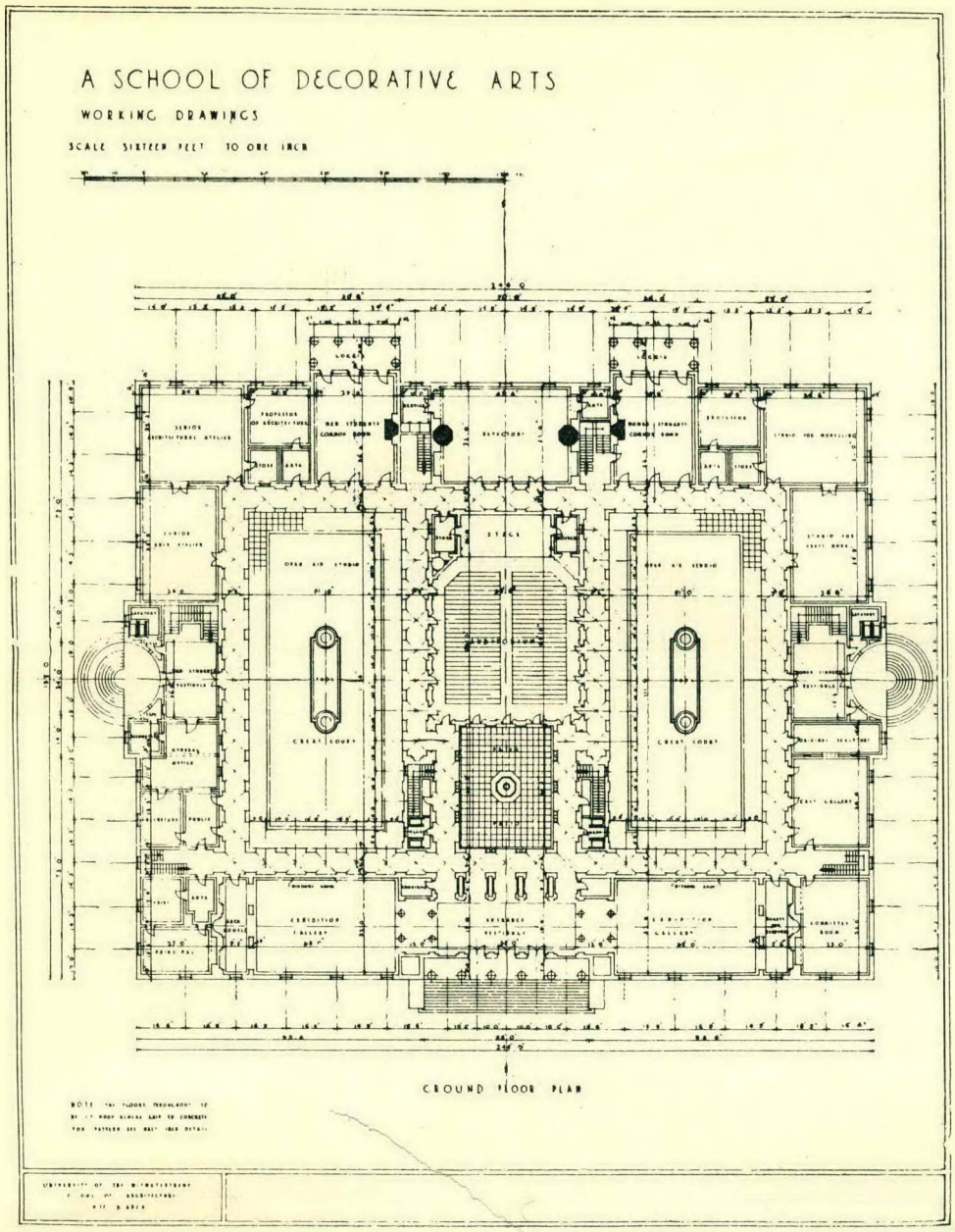
Assistance in other subjects is obtained from members of the Staff of the Transvaal University College.

In the past classes were held at the Pretoria Technical College and we are very much indebted to the Principal, Mr. Reindorp, for the enormous amount of time and assistance he gave us in establishing these classes.

I should also like to take this opportunity of thanking Professor Armstrong and members of his staff at the School of Arts and Crafts, Witwatersrand Technical Institute for their assistance this year in lecturing and instructing in the various art subjects, and to Mr. R. A. Bruce, who assists us in the Diploma Course by taking first and second year design students. Mr. H. C. Tully, our first degree student, returned from Spain early this year and has given us two illustrated lectures, on Moorish and early Christian Art in Spain. These he hopes to publish at a later date.

Two of our students, Mr. A. V. Nunn, of Pretoria, and Mr. Stegmann, left last month for Europe, to continue their studies at the A.A. School of Architecture, London. We wish them the best of luck.

Last year I referred to the wonderful gift presented to us by the Carnegie Corporation, of New York. This has now arrived and we shall be very pleased to show it to visiting Architects and others interested at any time and trust they will make the fullest use of it. The gift consists of an Art Library of some three to four hundred books on Architecture and the Fine Arts, nearly two thousand mounted photos and reproductions of the most celebrated works of Architecture, Painting and Sculpture and portfolios of etchings, engravings and textiles.



Fourth Year Work. *N. L. Hanson,*

The whole constitutes a complete art teaching collection which will enable us to more fully develop the Fine Arts side of our course. We were fortunate in securing, through our Principal, Mr. H. R. Raikes, a fine collection of lantern slides and lectures on Italian Art, the property of the late Mr. B. W. Henderson, of Exeter College, Oxford.

Another welcome gift, presented by Mr. D. M. Burton, is a copy of Mr. Brooke Greaves' remarkable isometric drawing of St. Paul's Cathedral, which has been ordered and should be here in the near future.

We have also had lent to us the library of the Transvaal Provincial Institute of Architects for reference purposes. Many of the books which are duplicated in our own collection have recently been transferred to Pretoria to assist the newly formed classes there.

Other donors to the Library are Messrs. A. S. Furner and W. A. McKechnie.

I might say again that the whole of our Library is open every day and is available for the use of practitioners and students.

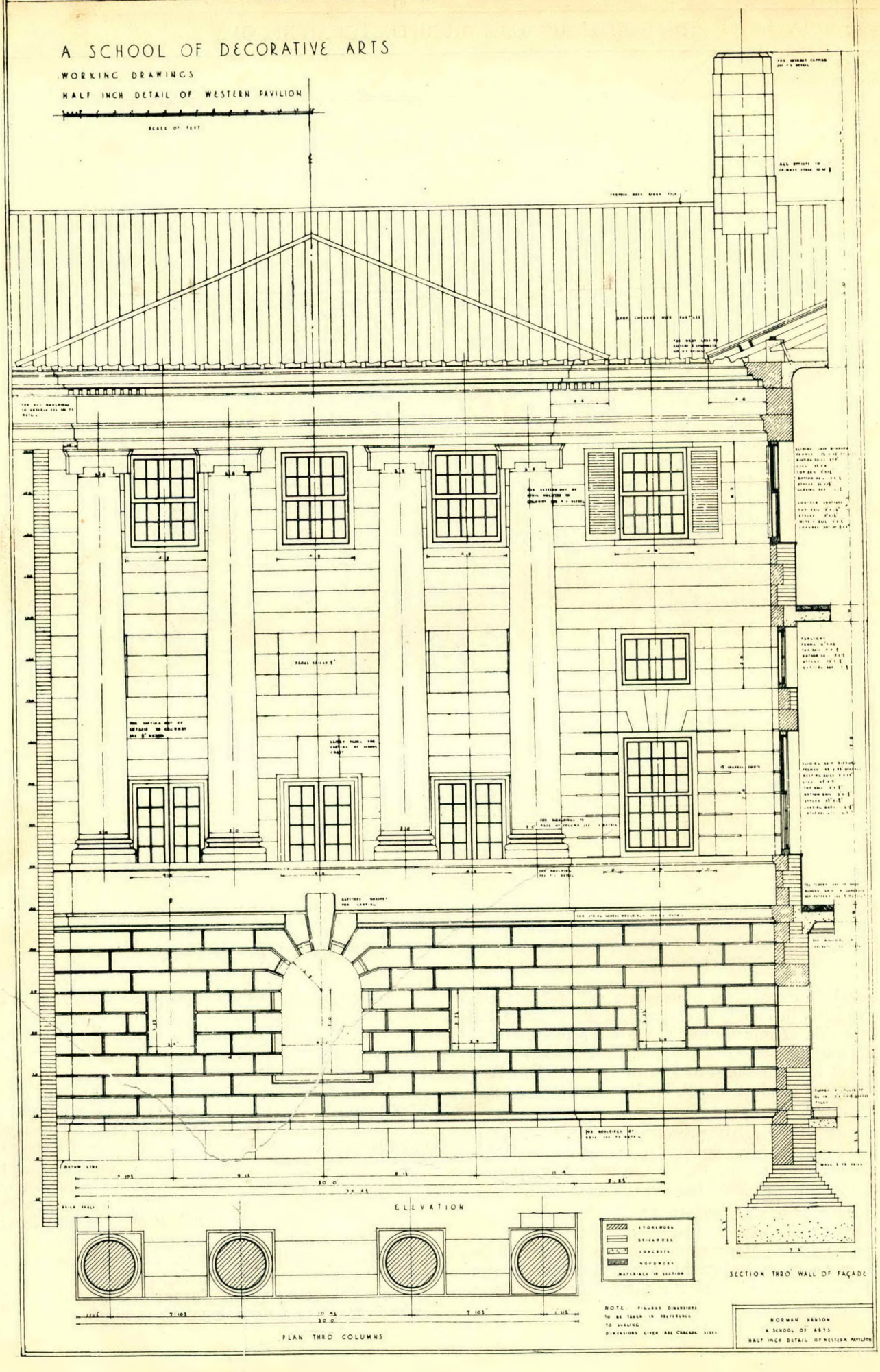
Coming now to the most important part of our programme, our President's speech and the presentation of prizes, I should like, on behalf of the University and our Department, to heartily thank those who have donated the prizes, namely, Mr. Burton, our most enthusiastic supporter, to whom for a large measure of our success we owe so much, Mr. Howden, our President-in-Chief, the Transvaal Provincial Institute of Architects, Mr. Gorden Leith and Mr. Furner, who is giving an annual special prize for the best and most original design produced during the year. This prize forms a link between Mr. Furner and this school, which owes so much of its development to him.

A SCHOOL OF DECORATIVE ARTS

WORKING DRAWINGS

HALF INCH DETAIL OF WESTERN PAVILION

SCALE OF FEET



ELEVATION

PLAN THRO COLUMNS

NOTE FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALING
DIMENSIONS GIVEN ARE CRACKAL SIZES

SECTION THRO WALL OF FAÇADE

NORMAN HANSON
A SCHOOL OF ARTS
HALF INCH DETAIL OF WESTERN PAVILION

Finally I would like to thank, on your behalf, Mr. Harold Porter, our President, who has so kindly come here this afternoon to present the prizes.

The prizes were then awarded as follows:

First year: First, J. Fassler; Second, B. S. Cooke.

Second year: First, J. Posthuma; Second, N. Finkelstein.

Third year: N. Hanson.

Fourth year: C. J. Slade.

Fifth year: Special Prize, R. D. Martienssen.

Mr. Porter, after presenting the prizes, addressed the students in a few well chosen words. After congratulating the students on the work exhibited he particularly emphasised the value of research and specialisation. He drew attention to the fact that whilst other professions did so much in this respect, the Architectural profession lagged behind. In our work, owing to the innumerable types of buildings to be erected, all calling for specialised requirements such as hospitals, schools, libraries, etc., the need for specialists was very great and he urged the students to take the opportunity now and do as much research as possible.

A hearty vote of thanks to the President concluded the proceedings.

ARCHITECTURAL EDUCATION.

A CIRCULAR ADDRESSED TO PRACTISING MEMBERS OF THE INSTITUTE AND CHAPTER.

The Central Council of the Institute, having had under consideration recently: (1) the professional training and the educational welfare of pupil-assistants, and (2) the entering into of articles between practitioners and such pupil-assistants, decided to address all practising members of the Institute and the Chapter hereon.

1. *Entrance Qualification required of Pupil-Assistants.*

The qualification required for entrance to the professions is the matriculation, or its equivalent, or a certificate of exemption from the Central Council. (Particulars can be obtained on application to the Registrars of either the Witwatersrand or Capetown Universities).

Architecture.

Pupils or assistants may be classified in three ways:

(a) Those studying and working for a *Degree* in Architecture, which means full-time attendance at a University.

(b) Those studying and working for a *Diploma* in Architecture, which means part-time attendance at a University, in the case of the University of the Witwatersrand and full time attendance in the case of the University of Capetown.

(c) Those working in an Architect's office and studying privately, seeking a *Certificate* with which to obtain registration as a member of the Institute.

Quantity Surveying.

(d) Those working in a Quantity Surveyor's office and studying for either a University *Diploma* in Quantity Surveying or a *Certificate* to obtain enrolment as a member of the Chapter.

Students under (a) must be matriculated.

Students under (b) must be either matriculated or obtain a certificate of exemption from the Central Council.

Students, pupils or assistants under (c) must, before they can sit for the examination for the *Certicate*, be either matriculated or granted exemption from matriculation. (N.B. Practitioners will especially note Item five of this circular, which emphasises that they must consult the Central Council in every instance before entering into articles with a pupil or student.)

Students, pupils or assistants under (d) for the *Diploma* or for the *Certificate* must be either matriculated or obtain exemption from matriculation. (The Note in the previous paragraph is equally applicable here.)

The Central Council looks to each practitioner for the fullest measure of assistance and consideration in the selection and handling of pupils or assistants.

2. *Educational Facilities Available.*

(a) *Johannesburg.*

Architecture.—The University of the Witwatersrand offers full-time courses in Architecture leading to the Degree of Bachelor of Architecture; also a part-time course leading to a Diploma in Architecture.

Quantity Surveying.—The University of the Witwatersrand offers part-time courses leading to a Diploma in Quantity Surveying.

(b) *Pretoria.* Courses leading to the Diplomas (of the Witwatersrand University) in Architecture and Quantity Surveying, are available at the Transvaal University College, Pretoria.

(c) *Capetown.*

Architecture.—The University of Capetown offers courses leading (a) to a Degree of Bachelor of Arts in Architecture, and (b) to a Diploma in Architecture.
Quantity Surveying.—The University of Capetown has under consideration the provision of courses in Quantity Surveying leading to its Diploma.

(d) *Durban.*

Courses in Architecture are available at the Natal Technical College.

N.B.—Full particulars of these courses may be obtained on application to the Registrars of the Universities of the Witwatersrand or Capetown; or to the Registrar of the Natal Technical College, Durban.

Students in any other centre who wish to obtain registration under the Act as architects or quantity surveyors, may take the Examinations conducted by either the University of the Witwatersrand or the University of Capetown. Particulars of the syllabuses and examinations, and the centres at which the examinations may be conducted, can be obtained on application to the Registrar of either University. (N.B.—External students will not be eligible for such Examinations until they have either matriculated or, through the Central Council, obtained special exemption from matriculation.

3. *Registration of Students, Pupils and Assistants.*

The Central Council agreed, unanimously, that in the interests of architectural and quantity surveying Students, Pupils and Assistants, a complete Register should be opened and kept by the Institute, in which is to appear the fullest information available from time to time as to the Students' qualifications and educational and professional progress. The following eloquent comment hereon from the Cape Provincial Institute of Architects is especially quoted:

> "It is considered that the register would be beneficial in that (1) it would create a tangible bond between the students and the Institute and become, as it were, the stepping stone to membership; (2) it would stimulate an early interest in the affairs and welfare of the Institute; and (3) by thus keeping in touch with students, Provincial Committees would be able to admit them to participation in any lectures or addresses upon matters of interest to the profession that may from time to time be arranged."

If was felt that there should be a nominal charge for such registration of students, the moneys so collected to be applied solely to educational and students' matters.

You are invited, therefore, to discuss this question with such pupils or students as are known to you, and thereafter to advise the Central Council.

It is especially desired, also, that you will, without delay, advise the Central Council of the names of all pupils or assistants in your office, with the fullest particulars available as to age, educational qualifications and the courses of study being pursued.

4. *Provision of Practical Facilities.*

It is the earnest wish of the Central Council that, when circumstances permit, facilities should be provided by practitioners for the acquisition of practical office experience by students (attending full-time courses at the Universities) during their vacation periods, particularly in their third and fourth years of training.

Your co-operation herein is sincerely sought.

5. *Approval of Pupils Necessary before being Articled.*

The Central Council decided, unanimously, to recommend, and has since recommended, to the Minister of Education the following addition to the Institute's Unprofessional Conduct Regulations:

Regulation 89 (x):

> ("Unprofessional conduct on the part of an architect or quantity surveyor shall include, *inter alia*")
>
> (x) To enter into articles with pupils or students until those pupils or students have been approved by the Central Council."

Practising architects and quantity surveyors must, therefore, consult the Central Council in every instance before entering into articles with a pupil or student.

THE TRANSVAAL PROVINCIAL INSTITUTE.

SPECIAL GENERAL MEETING.

The adjourned meeting of the Special General Meeting, a report of which was published in our last issue, was held in the Chamber of Commerce Board Room on Thursday, 10th October, at 8 p.m.

The President, Mr. Harold Porter, was in the Chair.

The general impresssion gained from the discussion on the questions submitted, was that most of the solutions were to be found in legal rather than Architectural practice, and further, that although most of the questions had at some time or another confronted some member of the profession, no definite and satisfactory ruling had been obtained.

This in itself is not too satisfactory and seems to indicate a demand for some legal expert or specialist in Building matters who by devoting his whole time to the law of Building could not only be of great service to the Profession but could certainly make a name for himself.

It was surprising to find how many Architects had during their professional career found it necessary to obtain legal advice on many of the questions put up and in not one single instance was it unanimously agreed that any particular opinion was the correct one.

In a report of proceedings of this kind one can best give the reader what took place by quoting the two sides of each question as it was discussed with a hope that some solution may be forthcoming at a future date.

One of the most interesting questions was that relating to the rights of the owner of a building lot in this country. Has he any rights at all and if so what rights? The general feeling was that he had certain rights and if an adjoining owner interfered with those rights, he must compensate or make good for any damage done, but it was found on discussing this matter that this assumption was based on English law where a

Building Act is in force, which lays down the respective rights of property owners and the obligations of adjoining owners.

For instance, to quote only one of the most outstanding rights, the right of a property owner who for twenty years had derived benefit of light from an adjoining owner and who could thenceforth claim such right in perpetuity.

In this country no such Building Act exists and the question arises: has the building owner any rights at all, can a property owner erect a building which will prevent the adjoining owner from obtaining any light, air, draught for chimneys and so forth from his lot, even though he has received the benefit of same for years gone by, and if so, then by what right can the same owner claim lateral support from the adjoining owner? If he cannot claim one right how can he claim any right.

It is very evident that there are legal principles embodied in this question which require thoroughly ventilating and some sound ruling given.

Apropos of the question of lateral support a case was quoted where a building owner refused to allow the adjoining owner to underpin his building, the result of which led to disaster and subsequent court proceedings, but the information available was not sufficient to arrive at any definite ruling on the matter.

Another question of particular interest was that relating to the storm water passing from an upper stand over that on a lower level. It was recognised that the only solution to this difficulty was that of a sanitary passage or storm water furrow between the properties, but as most of the townships to-day, including Johannesburg itself, were laid out with back to back stands, this problem is and will be always with us.

The general impression gained, and arrived at after considerable discussion and the experiences of many of the practitioners had been given, was as follows:—If the upper stand be undisturbed the owner of the lower must, at his own expense, allow the water falling on the upper to flow through his, the lower stand, but if it be once disturbed, then the owner of the lower stand must still let the water through, but the owner of the upper must pay for channelling or piping to convey the water across the lower to the street below.

The question of liability when water runs down between two buildings was discussed, taking as an example a six storied building built up against a two storied building. How was the water which beat against the tall building and ran down its walls to be disposed of? Had the owner of the tall building the right to flash over the parapet wall of the lower building and discharge his water into the box gutter of the lower building and, if not, how was he to dispose of it, or was it the duty of the owner of the lower building to do the flashing as above described?

This question evidently gave some food for thought, and it was no doubt due to its complicated nature that one or two members thought the best thing to do was to leave it alone and let the adjoining owners settle the question amicably, but that is only evading the issue. Each Architect should be prepared, when asked by his client "what is my liability in the matter," to give him a considered answer. It is regrettable that no one was able to give a definite answer at the meeting, and the question is still open for any member interested to find and submit some solution.

Certain questions regarding the liability of an Architect in his professional work were particularly interesting and especially his liability regarding any servitudes or building restrictions existing on the lot on which he was building. It was contended that, unless the owner disclosed such servitudes or building restrictions which were contained in his title deeds, the Architect was not responsible, but the general consensus of opinion, which was confirmed by that of Hudson, the English specialist on the law of Building, was that the Architect was the responsible party. It may not be out of place to quote Hudson's opinion here as follows:

"Unless the architect is entitled to assume that his employer would inform him if necessary of any rights affecting the land to be built upon, he ought to ask to see the conveyance, or contract of purchase, or building agreement relating to the land upon which the building is to stand, and also to enquire as to any easements or provisions, either restricting the use of the land, or defining the class of building to be erected, whether with reference to its plan, height, or value, or the purpose for which it is to be built or used, or specifying the time within which it is to be completed, or giving rights to the freeholder to approve or disapprove or interfere with the building.

"The architect should also ascertain the tenure of the land. Even if it be freehold, it may still be necessary to learn whether it is subject to restrictive covenants, and by whom they are enforceable. If it be leasehold, perusal of the lease is necessary to ascertain whether there are any stipulations of the kind already indicated, or any estate rules or other requirements affecting the building owner. These inquiries are obviously a professional duty."

The position of the Architect who, owing to the relationship between himself and his client having become strained during the progress of the work, desires to be relieved of his commission and paid up to date, was discussed from all sides and it was generally accepted that unless the client was willing to release the Architect the latter could not give up the work but must see it through.

An interesting debate took place regarding the reduction of open spaces on corner stands and many members were prepared to submit that they had always allowed and contended the correct interpretation of the bye law to be that the open space applied to the whole lot, whether 100ft. x 50ft. or 100ft. x 100ft. The municipal authorities were, however, very strong in their contention that it only applied to the 50ft. x 50ft. corner stand of the whole block of whatever size, but that the total amount of air space required could be arranged on any part of the whole block.

The question of Architectural Copyright apparently depends on whether the Copyright law in this country is the same as the Copyright law in England. If so, then it is very evident that there is such a thing as Architectural Copyright. The R.I.B.A. employed special counsel to go into this matter and *inter alia* his opinion is as follows:—

Counsel was asked to lay down any general principles as to the protection afforded to Architects under the Act. Counsel submitted. "In my opinion the Copyright in an Architect's plans is absolute and any copying of the plans is an infringement.

"If there be some original artistic character or design in the building, then the Architect may obtain an injunction to restrain their use for such construction."

Certain cases were quoted, subsequent to the above opinion, in which judgments had been given in favour of the Architects and their Copyright.

Dalgleish *v.* Sandown District Council. The Defendants solicitor admitted infringement, delivered up the copies of plans, paid damages and costs.

Alan Fortesque *v.* Jones & Co. A perpetual injunction in terms of the motion, an order for delivering up of the infringing designs and plans and the defendants to pay all costs.

The contention of Builders that in a percentage contract there should be no retention money was fully discussed but no decision was arrived at, there being as many for as against, and this is one of the questions that evidently requires further ventilating. The chief argument in favour of the contention was that the owner is himself the Contractor and if there be any shrinkage or defect in the future the owner has taken this responsibility upon himself, which, of course, ignores the fact that there is a Builder who receives a commission for carrying out the work according to plans and specification just as much as in an ordinary contract.

This concluded a very interesting and instructive evening and it is hoped much good may result. It is only by one professional man giving his experience to another that full benefit can be derived by all, and it is hoped that those in a position to authoritatively state from experience what has happened in their case may help to solve many of the unsolved problems.

The Editor would welcome any opinions or digests of cases concerning problems arising in Architectural practice more particularly in this country. Any question that are submitted will be placed before a competent Committee, and the question and replies thereto will be published for the benefit of the profession.

PROFESSIONAL NOTES AND NEWS.

Mr. W. Gordon McIntosh, who obtained the Degree of Bachelor of Architecture, at the University of the Witwatersrand, and has now been admitted a member of the South African Institute of Architects, has commenced practice in Pretoria.

Mr. K. E. F. Gardiner A.R.I.B.A., who was recently admitted a member of the S.A. Institute of Architects has commenced practice at 66, Permanent Buildings, Johannesburg, in partnership with Mr. W. S. Payne, of Durban.

The Central Council has resolved to adopt the relevant portions of the R.I.B.A., "Suggestions governing the Professional Conduct and Practice of Architects" which read as follows:

"An Architect must not publicly advertise nor offer his services by means of circulars. He may, however, sign his buildings when completed, publish illustrations or descriptions of his work, and exhibit his name on buildings in course of execution, including those where he is acting as Architect for alterations and additions, provided it is done in an unostentatious manner, and the lettering of his name does not exceed two inches in height."

In this connection it was resolved that the notice permitted contain the name and title only of the Architect. It was further resolved that the name of an Architect shall only appear on the window or door of his office, or on the nameplate, and that the size of the lettering on such notice shall not exceed three inches.

A very interesting point has been referred to the Central Council by the Transvaal Provincial Institute. Certain members of the Transvaal Provincial Institute have been, or wish to be, associated with the shopfitting or allied trades; such association is expressly prohibited under Regulation 89 (a). These members then wished to know what their position would be, as regards re-admission to the Institute, if they resigned.

The Central Council is advised that the legal position, briefly, of Architects is that if a member of the Institute resigns and later seeks re-admission, he is to be treated as an entirely fresh applicant, and must therefore qualify under Section 11 (1) (a) or (b) or (c) of the Act. Section 10 (2) (a), which permitted of inaugural registration for a period of six months after the commencement of the Act, is no longer operative.

In the case of those members who belonged to the old Association of Transvaal Architects, a solution to the difficulty has been found, in that, on the representation of the Central Council, the Minister has declared the Association of Transvaal Architects "a society of equivalent standing," in terms of Section 11 (1) (b). *But in the case of those Architects whose only qualification for admission to the Institute was Section 10 (2) (a), there is no provision whereby they can resign and later be re-admitted.*

The Central Council has decided, unanimously, (1) to adopt Counsel's advice on this matter, and (2) not to change Regulation 89 (a).

Discussions have taken place recently in the Provincial Institutes, with regard to the amendment or deletion of Regulation 89 (L) of the Regulations under the Act. The Central Council considered this regulation in conjunction with Regulations 89 (N) and 89 (S) and resolved that Regulation 89 (L) shall not be deleted and further has ruled that the words "the extent of such deviation" virtually means "the extent of each such deviation."

At a recent meeting of the Council of the Town Planning Association (Transvaal), it was resolved to place on record that this Association views with disfavour the common adoption of the Chess-Board or Grid-Iron system of layout of townships in the absence of special surveying or engineering reasons to the contrary—such as unsuitability of contour, etc.—and that steps be taken to have this view made known.

At the recent congress of the National Federation of Building Trade Employers of South Africa held in Bloemfontein it was resolved:

"That members be permitted to tender for work, without Quantities, up to £1,500 net."

Further we are informed that:

"It is naturally clearly understood that no contract may be broken up into sections with a view to bringing the main section under the above limit."

SOUTH AFRICAN ACADEMY.

The Eleventh Annual Exhibition of Pictures and Objects of Art and the Crafts will be held in the Selborne Hall, Johannesburg, from Monday, the 31st March, to Saturday, the 12th April, 1930, both dates inclusive.

The City Council of Johannesburg has made an annual grant of £150 for the purchase of a picture or pictures at this exhibition for the local Art Gallery, if considered of sufficient merit by the Art Gallery Committee.

LAWYERS WON'T DO IT

WHY SHOULD ARCHITECTS?

The Lawyer dropped into the Architect's office, as many other lawyers have been dropping into many other Architects' offices for many years. The lawyer was the Chairman of the Building Committee of The Bank . . . and The Bank proposed to erect a new building.

The Lawyer explained his mission. The Bank wanted to "spend not more than $500,000" and wanted an ideal bank building for the price. Wherefore, the Lawyer explained, The Bank had thought up a big idea . . . big, but NOT new. It was—Guess what? To ask several Architects to submit sketches and from those The Bank would select the one it liked best and choose an Architect.

"Fine!" agreed the Architect. "And I'm glad you came in, for our firm has found itself up against a legal problem and we need some legal advice and service. The problem is very important . . . to us, at least.

"We want to make sure we get the best possible handling of the case and so we have decided to submit the facts to several attorneys and ask them to give us their suggestions as to how to proceed. We will then go over the suggestions and out of them will select what seems to be the best plan and engage an attorney.

"We would very much like to have your firm submit its suggestions."

"No! No!" the Lawyer said, "I can't do that!"

The Architect smiled, and said . . . ?

From *The American Architect*, October, 1929.

RECENT BOOKS.

The Romance of Architecture, by Sir Banister Fletcher
B. T. Batsford, London. Price One Shilling.

A brief outline of the Historical Styles of Architecture, which was published in John O' London's Weekly, giving a popular account of the system in which the development of architecture is treated in the author's well known "History of Architecture on the Comparative method." This is now published in pamphlet form with illustrations.

Modern School Buildings, by Sir Felix Clay.
B. T. Batsford, London. Price Twenty Five Shillings.

This work, which is very well known to practising Architects, has just been republished in a third edition. Part one deals with general information regarding Costs, Sites, Ventilation, Heating and Lighting, Sanitary Arrangements, Class Rooms. Part two deals with Elemenary Schools and part three with Secondary Schools.

The text has been completely rewritten in the light of modern knowledge and the book, which contains much useful data, is well illustrated with diagrams and photographs. A useful reference work which has been brought up-to-date and should prove a valuable addition to an Architect's library.

Mechanical Equipment of Buildings. Vol. 1 Heating and Ventilation, by L. A. Harding and A. C. Willard Chapman & Hall, London. Fifty Shillings.

This publication is a second edition of the previous edition of 1916, which, for all practical purposes has been rewritten from end to end.

The opening chapters consist of a summary of relevant physical concepts and laws together with a statement of the physical properties of water, steam and air, the laws of flow of these substances and the methods of measuring their discharge through pipes and ducts. Then follows a comprehensive treatment of the properties of various heat producing substances such as coal and oil, an analysis of the factors controlling efficient and complete combustion and the principles underlying the control of the draught of furnaces. The concluding portion of the introductory chapter consists largely of a review of types of boilers and a complete statement of the questions of fuel consumption. In dealing with the building itself the authors treat in a comprehensive manner the heat transmission properties of building materials and buildings and present a series of specimen calculations. Hot water and steam heating systems are dealt with in great detail and full information is given of practically every known type of such installation including a precise treatment of vapour and vacuum systems of steam heating.

The chapters on ventilation include a review of fundamental physiological factors associated with ventilation, they present the most up-to-date information in a concise and attractive manner. There then follows a comprehensive treatment of principles controlling the designing of ventilating systems and the methods of assessing the adequacy of ventilation including the applicaton of the Kata-thermometer to the problem. The concluding portion of the chapters on ventilation include an investigation of natural and artificial methods of ventilation, systems of combined heating and ventilation, a short treatment of the design of air ducts together with information regarding the characteristic curve of ventilating fans and a survey of the ventilating laws of various cities and states of the U.S.A.

The final chapters deal with air-conditioning plants including processes for heating, cooling, drying and filtering air and methods of automatic temperature and humidity control.

The publication consists of approximately 1,000 pages of valuable information attractively arranged and concisely and coherently presented. It is profusely illustrated, contains numerous charts and reference tables and, while adequately treating with essential principles, includes a wealth of detailed information available in a convenient form.

The authors have produced a reference book for engineers and architects which shows, not only a rational treatment of the relation between theoretical principles and their practical application, but also contains all the essential data required in practical design.

W.G.S.

BUILDING MATERIALS OF SOUTH AFRICA.

II. SLATES.

The quarries and works of the Mazista Slate Quarries, Ltd., are situated in the Western Transvaal, two miles West of Mazista Halt, on the Johannesburg-Mafeking Line, about halfway between Koster and Zwartruggens.

The geological formation belongs to the Pretoria horizon of shales which generally do not possess the splitting properties of slate. It is only in that particular part of the Country that the rock cleaves readily along its bedding-planes and that these planes are frequent and close enough to allow the slate to be split into sheets thin enough for roofing slates. Layers of non-splitting material, bedded successively in between the beds of splitting material are used for the manufacture of Slab Slate.

Mineralogical Composition of Slates. Slates have originated from sedimentary deposits consisting largely of clay. Other minerals originally present with the clay in limited quantities include quartz, mica, compounds of iron, lime and magnesia, carbonaceous matter and other silicates. Such materials were deposited in water and other materials such as lime-carbonate or sand and gravel may have been deposited over the clays and the pressure of the superimposed materials may have gradually consolidated the clays into bedded deposits of shale. A shale is a laminated rock, consisting essentially of clay but not possessing the splitting properties of slate.

Many shales, however, have been subjected to intense metamorphism. The mountain-building forces ever at work in the earth's crust may crumple and fold the shales, under the influence of intense pressure and high temperature. By such processes shales are transformed into slates. High temperature acting with the pressure tends to alter the constituent minerals, changing them into new minerals such as mica, quartz, chlorides, magnetite, graphite and various others, mica, quartz and chlorides usually predominating. The process of alteration of the original minerals may be only partial, resulting in a slate having as its chief consittuents clay, mica and chloride. Such a slate is termed "clay slate." The process may, however, be carried