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WELLINGTON EDITION.

N.Z. BUILDING PROGRESS

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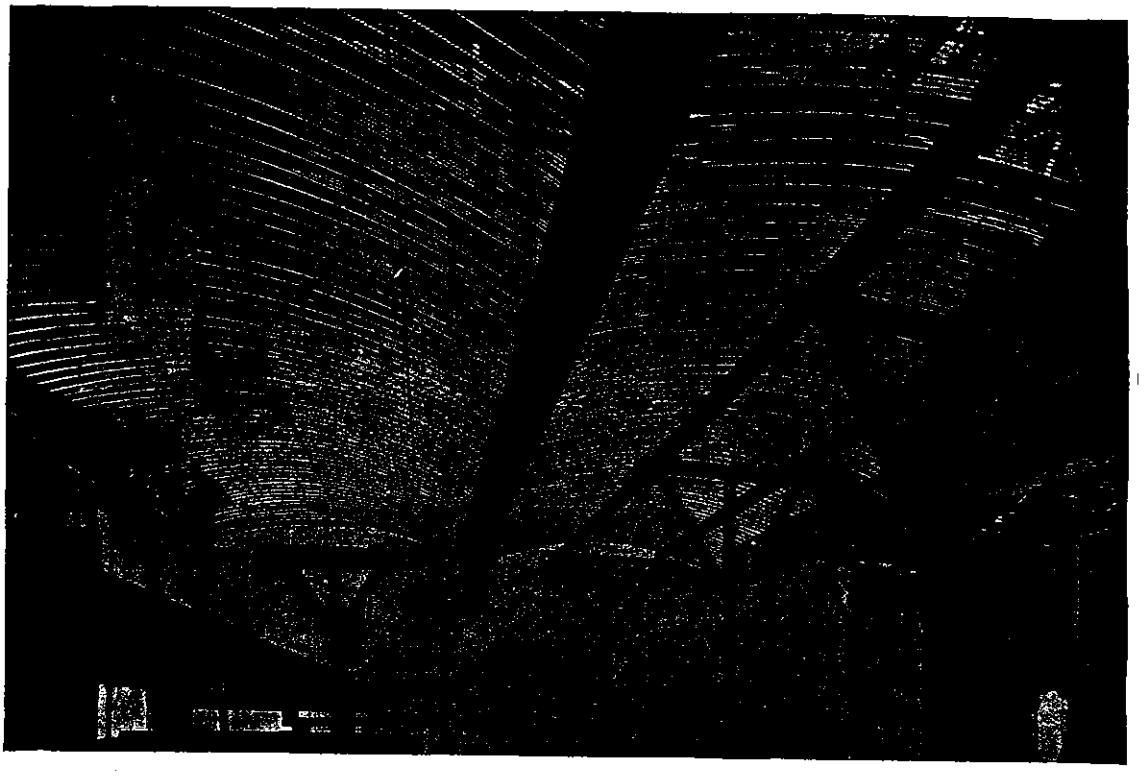

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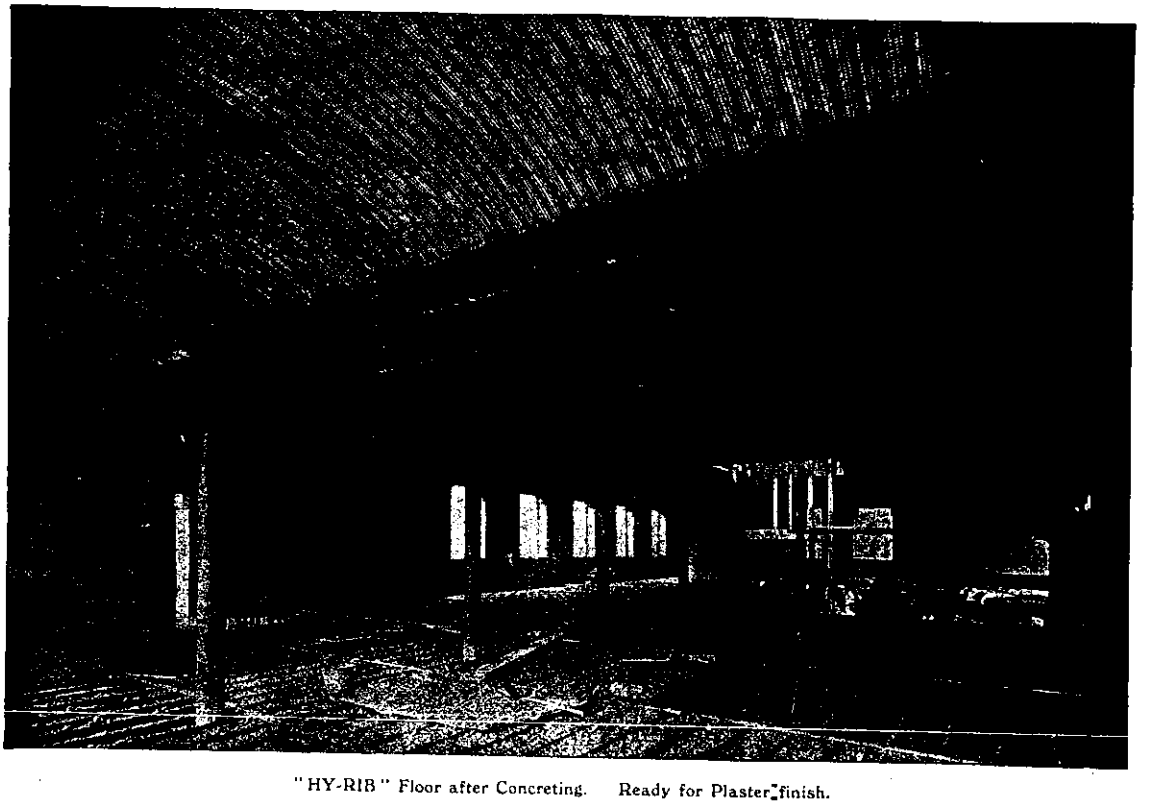

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Publisher's Announcements.

Our 46th Competition

We offer a prize of £1 1 0 for the design adjudged to be the best for a

Seaside Bungalow.

To be built on level land of unlimited width, facing the water which is due north of the site. The water supply to be from the rain fall. 1800 gallons storage being provided for. Drainage into septic tank the effluent of which can spread in the sand.

Choice of materials left with competitor.

The accommodation shall be:—Living room 200 sq. ft., bedroom 170 sq. ft., 2nd ditto 120 sq. ft., 3rd ditto 100 sq. ft., kitchen 160 sq. ft. The areas given are approximate. There shall be good verandah or verandahs. Bathroom, W.C., small scullery, (this may be designed in combination with the kitchen), pantry, etc. Cost need not be considered.

Mr. F. de J. Clere, F.R.I.B.A., of Wellington, has kindly set this subject.

Designs must be sent in, finished as above, under a nom-de-plume, addressed to **Progress,** 8 Farish Street, Wellington, and marked clearly "Forty-fifth Prize Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by September 10th.

Our 47th Competition

We offer a prize of £1 1 0 for the design adjudged to be the best for a

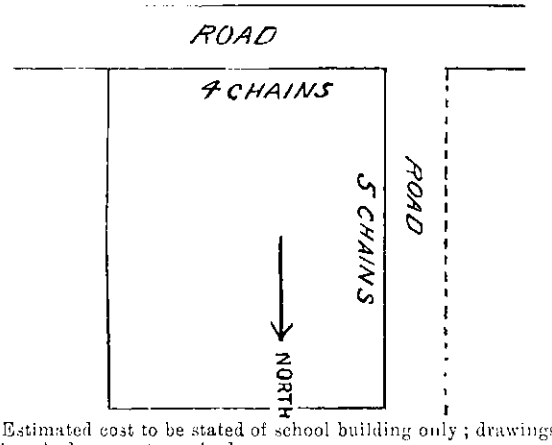
Country School

for a maximum of a 160 boys and girls of various ages.

Accommodation required:—1.—Infant room and 1st standard. 2.—2nd and 3rd standard's room. 3.—4th standard's room. 4.—5th standard's room. 5.—6th form. 6.—Small room for teachers with fire place; ample cloak accommodation; lavatory accommodation; playing sheds for boys, girls and infants.

Heating need not be provided for; walls to be of brick or concrete; drainage to Septic tank; ventilation to be indicated; ample provision to be made for insuring abundance of fresh air from the windows; a short index specification of materials to accompany the drawings; drawings to be finished in pencil and coloured.

Drawings required:—Block plan of whole site showing lay out of sheds and playing areas, scale twenty feet to the inch; ground floor plan to ⅛inch scale; 2 elevations ⅛inch scale; 2 sections ⅛inch scale; ½inch detail of some feature of building.



Estimated cost to be stated of school building only; drawings of playing sheds are not required.

Mr. H. Mandeno of Dunedin has kindly set this subject.

Designs must be sent in, finished as above, under a nom-de-plume, addressed to **Progress,** 8 Farish Street Wellington, and marked clearly, "Forty-seventh Prize Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by October 10th.

Our 48th Competition.

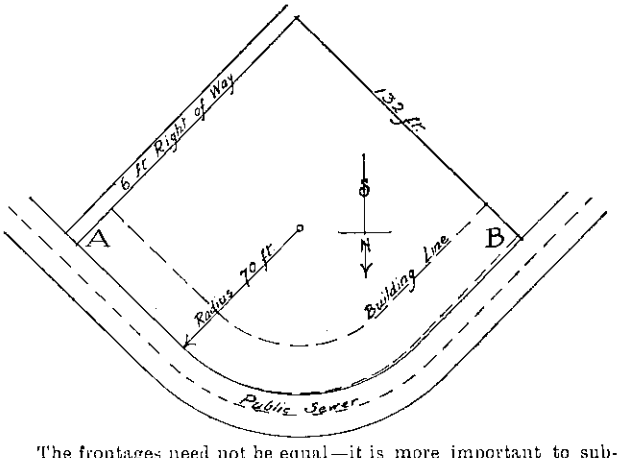
We offer a prize of £1 1 0 for the design adjudged to be the best for a

Block of Three Cottages

to be part of a Workmen's Housing Scheme.

The site is at the bend of a road and contains 1 rood 20 perches which is to be divided approximately between the three cottages in such a way as to give about an equal portion of flower and vegetable garden to each.

There is a building line 20 ft. from road boundary which must not be impinged upon by any building, all building must be kept behind this line but need not be brought up to it. The cottages must be in one block with party walls where they are attached (to save walling).



The frontages need not be equal—it is more important to subdivide the land so as to make the best use of it for garden purposes.

The plan of the cottages must be similar, but need not be an exact replica of each other. They will be two storeys in height.

The accommodation to be provided for each must be as follows: 1.—A Living room, with 3 feet kitchen range, about 200 feet super. 2.—A Scullery-Wash house, with bath handy to copper, stairs leading up to upper floor, and small store, and wood and coal shed, and be approached from outside—the two latter may be in a lean-to addition.

(*Continued on page 704*)

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WELLINGTON, AUCKLAND, CHRISTCHURCH, AND DUNEDIN, NEW ZEALAND, AUGUST, 1916.

Contents for August

Editorial Comment

Rent Regulation

Parliament's efforts to restrict high rents—the trouble seems to be confined to Wellington—seem likely to end in a provision that the rent must not exceed 8 per cent. gross on the capital value of the property. That is the conclusion of the Prime Minister after listening to numerous suggestions from labour members and others, proposals so difficult to put into practice that he almost lost patience, threatening to throw the Bill overboard. This 8 per cent. proposal will suit some landlords splendidly. It will actually favour the most undeserving class, those who permit wretched little shacks to remain on high-priced city allotments. They can charge 8 per cent. on the gross value. The house might be worth £200 and the land £1000. So far as the tenant is concerned, his chief advantage lies in the house-room he gets for his rent. The landlord, regarding the inadequate dwelling only as a means to an end—a little assistance in holding on for high land values—can legally charge up to £96 per annum for the shack, which if it stood on a £200 suburban section, would only carry a legal maximum rent of £32 per annum. It seems to us that this belated attempt of the National Government to deal with war profits is not going to give much satisfaction even to the class they seek to assist.

Farmers' Economics

We would have imagined that the last people in the world to condemn importations of American motor cars would be the farming community, yet a resolution on those lines was brought before the recent annual conference of the Farmers' Union. If New Zealand was running into bankruptcy as a consequence of the war, something could be said for such a motion, but the plain fact is we are prospering to an unexampled extent through the part we are able to play in assisting to feed the Allied Army. Some of our profits go in motor cars, most of which are used as much for business as for pleasure. Who will seriously argue that because farmers blossom

out with a smart, but moderate-priced Canadian or American car, that they are indulging in wasteful extravagance? The possession of a motor car increases the facility of the farmer for doing business. He covers a wider area in his stock-buying journeys, and sees a lot more country than he could from the old-time gig. This object lesson regarding other people's methods is not lost upon the average farmer, consequently the nation benefits from his increased efficiency. A good deal of ignorant nonsense is talked about these American importations. Farmers were immensely pleased when the American Congress reduced the import duty upon wool, throwing open the great market of the United States to our wool-growers. Frozen meat and butter are allowed to pass the American Customs' barrier on better terms to-day than when Sir Joseph Ward, returning from a Premier's Conference in London ten years ago, interviewed President Roosevelt on the question of trade relations between the United States and New Zealand. They discussed reciprocity, and Sir Joseph Ward's opinion at that time was that it would not be to the disadvantage of this country if such an arrangement could be made. To put the matter into concrete shape, he suggested that New Zealand should exchange wool and kauri gum for American fish and paper. He pointed out that the Americans sent to London to buy their wool, and had to go to the expense of re-shipping it to the States. The progress made in trade relations between the two countries has been even better than Sir Joseph Ward hoped for, but if the critics of imported American motor cars imagine that they can do business on the one-sided principle of American encouragement for our products, and New Zealand discouragement in regard to their's, they fail to grasp the first principle of international trade, and commercial fair-dealing. If Parliament had taken notice of some enthusiastic but short-sighted people and adopted a heavy import tax on goods from neutral countries as soon as the war began, we would have felt more severely the lack of supplies which have to be imported. Farming and general business in New Zealand has been kept going in all branches in a remarkable way, thanks to the wise policy of drawing on a wide area for our necessaries.

The Coming Age of Research

Members of the New Zealand Institute recently listened to some well founded criticism, by Professor Easterfield, of the unenlightened, short-sighted attitude of many manufacturers towards scientific research. The critic, however, made the mistake of over-doing the dark side, hence his condemnation fails to stir the commercial mind, which is much too busy to be troubled with a tirade. Perhaps Professor Easterfield could tell us what result has been secured from the research scholarships set up by the New Zealand Government some years ago. The idea was to encourage post-graduate work of a research nature, but the whole thing has been kept out of the public eye, so that if the average New Zealander where asked about this valuable feature of our education system he would reply that he had never heard a word about it. A very handsome bonus £10,000 awaits the discoverer of an improved method of treating New Zealand flax—an official encouragement to science which ought not to be overlooked by the critics. However, the scientific men have every reason to be proud of the practical recognition they are to receive henceforth, consequent upon the realisation that the organisation of brain-power is of infinitely greater value and security to a nation than even standing armies. That which science has especially gained from the war is prestige. Neglect of science in certain quarters has brought such retribution to the negligent ones that the lesson will probably never need to be repeated. That is true not only of science as applicable to military purposes, but also of science as applicable to industry.

World-wide Science Organisation

The war has given an impetus to scientific research, the material and intellectual fruits of which cannot yet be estimated. Is it too sanguine a hope that they may actually indemnify the world for all that the struggle has cost? This impetus has manifested itself in two ways: first, in the increased attention which various manufacturers have been forced by recent circumstances to devote to the scientific side of their own industries; second, and especially, in the elaborate plans adopted by various governments for the promotion of research on a national scale. The international position of scientific organisation is outlined by the "Scientific American." The British government, besides organising research on behalf of the army and navy, has developed a scheme for an "advisory council on industrial research," which will control all goverment activities under this head. This means, among other things, that the universities and other educational establishments will be encouraged by the government—if necessary by means of state subvention—to train even specifically for particular lines of research. In Australia steps have been taken to form a new official body which is to be known as "the Commonwealth Institute of Science and Industry," and which will exercise much more extensive powers than those entrusted to the British organisation, since its duties will not be merely advisory; but it will assume direct control of a vast amount of research and practical work in behalf of Australian industries. In Japan a national laboratory for physical and chemical research has just been established. Other government undertakings of analogus character are reported to be in prospect in various foreign countries. Lastly in America an interesting scheme for scientific industrial research under government auspices has recently been envolved along lines differing considerably from those of the projects above mentioned. It is proposed to establish experiment stations in engineering and in other branches of the mechanic arts in connnection with the land grant colleges throughout the country. These stations are designed to do for industrial research what the agricultural experiment stations are doing for agricultural research. Water supplies, as to potability and economic distribution; sewage purification, and its ultimate inoffensive disposal; economic disposal of urban and manufacturing wastes; flood protection; architecture; road building; are some of the items which fall within the field of this undertaking engineering problems connected with transportation, manufacturing and public utilities. So widespread is the movement to encourage scientific research that the "Scientific American" hopefully asks: "Are we not upon the threshold of an Age of Research such as the world has never before known?"

A Fair Rents Bill for New Zealand.

Some notes on the working of the Australian Act.

In the Australian cable messages early last month was a statement attributed to Mr. Griffiths to the effect that he could not trust the ordinary jury to give a fair decision on the question of fair rent.

This is a strange statement to make in a free country where the essence of our justice is that a man should be accorded a jury of uninterested men to hear the evidence and judge according to the facts of a case. One is forced to the conclusion that Mr. Griffiths is disappointed with the operation of this new act, and is venting his ire on the poor jurymen.

The Act has only been in operation a few months, and was of course purely experimental. It is one of the results of the clamour of the "poor" working man against the exhorbitant rents demanded by the "wicked" landlord.

It is of course too early to judge of the full effects of the Act yet, but it is obvious from the number of protests voiced in Australia that the ultimate result is problematical.

We in New Zealand are getting a similar outcry against the shortage of houses and the exhorbitant rents charged by landlords, and a deputation of the Tenant's Association of Wellington to the Prime Minister recently asked that a Fair Rents Bill should be introduced into New Zealand. Mr. Massey assured the Association that the matter would be "dealt with." What this means probably Mr. Massey himself only knows, but in case the Prime Minister really has serious intentions of trying a similar Act here, it is just as well to consider whether if such an Act were put upon the Statute Book, any good would result.

One of the first complaints to be made against the Act came from the Builders and Estate Agents of Sydney, who stated that the Act would seriously affect the Building trade, and that a considerable amount of money intended for dwellings was immediately withdrawn when the Act became law.

The main objection seems to have been that the Act fixed the net return to the owner at 6%, and they pointed out that money for this class of building cannot be obtained below this figure, that being so rent must advance in proportion to the ratio of increase in the cost of building.

Another protest came from the Architets at a recent meeting of the N.S.W. Institute. One Architect (Mr. Morrow) referred to the Act as the "Unfair Rents Act" and described it as "an inequitable law that was predestined to failure." We understand from a Sydney paper that he went on to explain that, in the first place the tenant, who occupied the position of plaintiff, had a valuator—the Government valuator. It might be claimed that that official appeared for the landlord, the defendant, also. Not so. They knew from practical experience and from the working of the Court that the values were understated.

After the flood of talk about rapacious landlords, it was expected that rents would be reduced 4/- a week at least. The greatest reduction was 2/-, and that in the case of an application by a politician.

Proceeding, Mr. Morrow said that he had had that particular dwelling described to him. From what he heard it had been under-valued compared to what it would cost to erect the same dwelling to-day; and that was what the landlord was entitled to, less depreciation.

Depreciation was another ticklish question. He took it that a house, from the letting standpoint, was just as valuable to a tenant as on the day of its completion. Depreciation was reckoned on an incorrect basis altogether.

"If it were not for these under-valuations, the Court would not justify itself at all," said Mr. Morrow. "It is costing the country an enormous amount of money to conduct, and the rent reductions vary between 6d. and 1/- weekly in the majority of cases."

In further remarks, Mr. Morrow said that rents must be regulated by the law of supply and demand. There was no questioning the detrimental effect the Court was exerting on the building trade as regards the class of building it covered. Was it likely that any man would risk borrowing at 6 per cent. to secure a problematical return of 6 per cent.? No, and as a consequence, the supply would not be up to the demand. It would be found that the tenant would finally break away from the law and approach the agent with offers of bonuses.

Mr. A. W. Anderson said the Act was not only confined to dwelling houses. A client for whom he had built a building twenty-five years ago, and which was used as a dwelling and a shop, informed him that the building came under the provisions of the Act. The rent had been reduced by the Court.

Mr. Anderson considered the incidence of the Act would revive the overcrowded conditions of other times, and its repeal was necessary in the interests of morality and humanity.

As regards depreciation, he quite agreed with Mr. Morrow, that a dwelling kept in good repair, was just as valuable from a tenant's point of view as a new house. It might lack certain "modern conveniences"; but as a dwelling it was just as valuable.

It is then fairly obvious that the Act is not working too smoothly in Australia and apparently very little good result has accrued to the penalised tenant. It behoves us therefore to profit by Australia's example and either wait a bit or seek some other method of overcoming the undoubted scarcity that exists in some of our cities, notably Wellington, for suitable dwelling houses at reasonable rents.

Cathedral Square Improvements Competition.

Criticism by the Tramway Board.

Last month we described and illustrated the winning design in the Improvement Scheme for the Christchurch Beautifying Society. This scheme was submitted to a committee of the Tramway Board which drew attention to several points. Since then a meeting has been held of the Christchurch Beautifying Society, the City Council and the Tramway Board to consider the question of adopting the plans for the improvement of the Square that were allotted first place in the recent competition assessed by Mr. Hurst-Seager, F.R.I.B.A.

Dr. Chilton requested the Mayor to preside over the conference, and asked him and the chairman of the Tramway Board to accept the winning plans of the suggested improvements to the Square.

Mr. Hurst Seager, referring to the care taken by Mr. F. Thompson, of the Tramway Board, in his report on the Beautifying Association's plan, said that the suggestion made in one of the Christchurch papers that the Tramway Board had "turned down" the Society's plan was not in accordance with fact. As a matter of fact anyone who read Mr. Thompson's report would realise that he had thought very highly of the first prize plan, which in nearly all points met the necessities of the case. The few points in which the Tramway Board's officials did not see eye to eye with the designers of the prize plan could be, the speaker thought, easily modified. In the main the prize plan was excellent, and was spoken of very highly by Mr. Thompson and his confreres.

Mr. Seager, who was aided by a good series of slides, explained in a most interesting manner, the good points of the prize plan, and painstakingly compared it with the B and C schemes as submitted by the officials of the Tramway Board. The main objections which the Board had to the Society's plan were firstly, that passengers from cars would have to be educated to enter and leave a car on opposite sides, and secondly, that the existing bars and gates on the trams were usually closed on the proposed shelter sides, and could not be conveniently operated because the conductor was busy on other more important duties. The speaker thought that it was within the skill of the engineers of the Dominion to design bars that could be more easily handled and trolly poles that would not leave the wires and do damage. He then moved:—

> "(1) That as the object of bringing the cars into the Square is that passengers may conveniently change from the cars of one line to those of any other, the central shelter shown in the Beautifying Association's plan (scheme A) is the best and it therefore be recommended for adoption, providing that the present defects in the car equipment which alone prevent its adoption be overcome."
>
> "(2) That in order that the present defective car equipment may not influence the selection of a scheme, the Tramway Board be asked to offer substantial prizes for—
>
> "(*a*) Improved self-acting safety trolly poles.
>
> "(*b*) For improved methods of manipulating the bars and gates at the sides of the cars."

Mr. J. A. Frostick seconded the motions.

Mr. C. M. Gray said he would like to point out that the Tramway Board had not yet formerly committed itself to any particular scheme. The members of the Board might personally approve of the Society's proposals, but the Board had to think of a good many points. There was the question of finance, and after all, why did they want to change? It would cost a great deal of money for a benefit which, in his opinion, was problematical. Mr. Seagar talked lightly of the difficulties which had been put forward, such as altering Orders-in-Council, etc. He thought that if the people were allowed to get off on the wrong side of a car there would be many accidents and a constant danger to life and limb. The Board had received many designs for safety trolley-poles, but so far the suggested improvements had not found favour with the Board, which considered that its present equipment was good enough. He made these remarks just to show those present that the Board was not entirely unanimous on the question.

Mr. Reynolds asked if it was not true that in any case the Board would have to expend a considerable sum of money in track renovation and alterations.

Mr. Gray said that some expenditure would be necessary in the near future.

His Lordship Bishop Julius said that with regard to the removal of the Godley statue, he could not guarantee that the position marked in Mr. Seager's plan—right in the middle of the plot on the north side of the Cathedral—would be approved by the Chapter, but a site on the north side could be depended upon.

Mr. G. T. Booth said it was evident that neither the Board nor the City Council had properly considered the scheme proposed, and he thought the resolution should hardly be put to the vote at present. With regard to the schemes, he felt that they hardly went far enough, and he considered that the point as to whether it was not possible to deflect all the traffic from the Square instead of attracting it to it had not been given proper thought and consideration.

Mr. J. A. Flesher supported the view taken by Mr. Booth. He, too thought that there might be even better and more expansive schemes to be considered which might relieve traffic in the Square.

Mr. Seager said he would ask permission to withdraw his motion, and would propose:—

> "That the prize plan of the Beautifying Society be submitted to the Christchurch City Council and the Tramway Board for favourable consideration."

He pointed out that it was not fair to estimate the cost of the scheme at £12,000. The actual shelter would cost £2800, and the necessary alterations to the track would cost possibly £1000 more. Mr. Thompson in his £12,000 estimate, had allowed for a complete renewal and alteration of all the tracks in the Square.

Mr. J. R. Hayward supported Mr. Booth's view of the whole subject.

It was eventually decided to form a committee of members of the Tramway Board, City Council, and Beautifying Society to consider the matter and report.

The meeting terminated with a hearty vote of thanks to Mr. Seager for his address.

Architecture & Building.

[Note—The Articles appearing on pages 693 to 700 are supplied to us by the Editors of the "Journal" of the N.Z. Institute of Architects—Messrs. W. Gray Young, F.N.Z.I.A. and Will Lawson.]

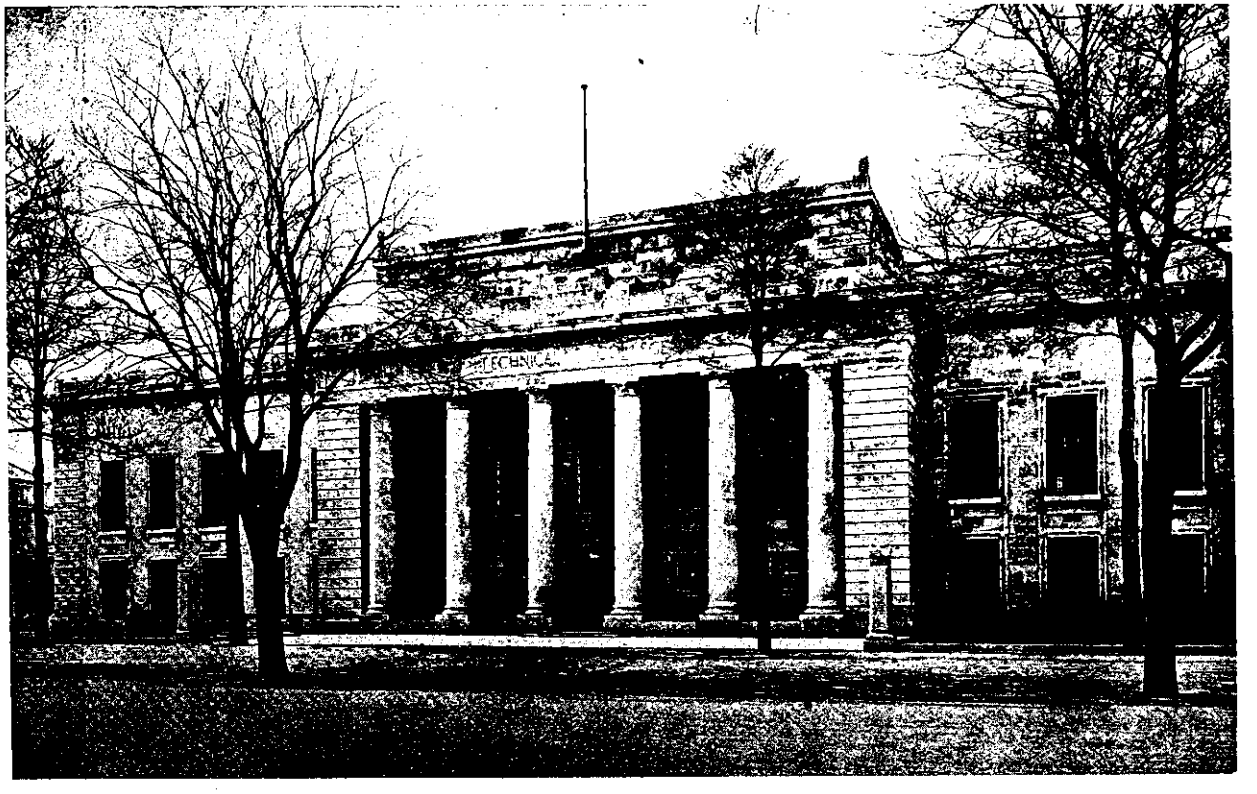
"What is Art, and who are Artists?"

By S. HURST SEAGER, F.R.I.B.A.

In the following series of articles, it will be my pleasing task to endeavour to answer the questions I long since put to my self, "What is Art, and who are Artists?" I do not intend to add another definition to those already written, for these convey as clearly as the art of literature can, the object and scope of Art, and the qualifications which must be held by those laying claim to the honourable title of artist. It is only necessary therefore, that I should lay these before you, and point out the difference in them.

To find their true value we will consider the relations existing between Nature and Art on the one hand, and Art and Science on the other. We shall then have a clear idea of what is meant by the term "Art." And, after showing how the fine arts are distinguished from the mechanical, we can pass on to the study of the principals which govern all art productions.

Müller has said, "Art is a representation; that is, an activity by means of which something internal or spiritual is revealed to sense. Its only object is to represent, and it is distinguished by its being satisfied therewith from all practical activities, which are directed to some particular purpose of external life."



New Technical Institute, Cardiff, England. Ivor Jones and Percy Thomas, Architects.—*Architectural Review.*

And Ruskin tells us that he has sought for a definition of art wide enough to include all its aims. "I do not say, therefore," he continues, "that the art is greatest which gives most pleasure, because, perhaps, there is some art whose end is to teach and not to please. I do not say that art is the greatest which teaches us the most, because, perhaps, there is some art whose end is to please and not to teach. I do not say that art is the greatest which imitates best, because, perhaps, there is some art whose end is to create and not to imitate. But, I say that the art is the greatest which conveys to the mind of the spectator, by any

means whatsoever, the greatest number of the greatest ideas; and I call an idea great in proportion as it is received by a higher faculty of the mind, and as it more fully occupies, and in occupying, exercises and exalts the faculty by which it is received." And from this, the definition of the greatest artist naturally follows, that it is he who has embodied, in the sum of his works, the greatest number of the greatest ideas. Again, it has been written: Art is the outcome and the evidence of man's higher being, the creation of his mind and the language of his soul in form. These definitions narrow the term of art, so that it includes only the fine, or according to the Germans, beautiful arts of Paintings, Sculpture, Architecture, Music and Poetry; they leave undefined the whole range of useful or mechanical arts, which should be considered in the generic term—Art.

Dr. Johnson's definition is more comprehensive, but still incomplete:—"Art is the power of doing something that is not taught by Nature or Instinct." This emphasises the distinction which is to be drawn between Nature and Art, but limits art to the *power* of doing something; but the abstract word art whether we use it for one branch or for them all collectively, is a name not only for the power of effecting, but for the exercise of that power, for the rules which regulate it, and for the result. Thus, when we speak of the art of Sculpture the idea includes, as well as the power to carve, the art of carving, the laws which must rule the artist in performing the art rightly, and for the material consequent of the art or the thing carved.

There are some philosophers who fail to distinguish between Nature and Art, thinking that all Art is but a part of Nature, and that art workers are but nature's means of effecting her ends. You remember that scene between Perdita and Polixenes in the 'Winter's Tale,' where Perdita tells Polixenes that she cares not to have carnations and streaked gillyflowers in her garden, because she has heard it said:—

> There is an art, which in their piedness, shares
> With great creating Nature.

And Polixenes replies:

> Say there be;
> Yet Nature is made better by no mean,
> But Nature makes that mean; so o'er that art,
> Which, you say adds to nature, is an art
> That Nature makes . . . .
> This is an art
> Which does mend Nature—change it rather: but
> The art itself is Nature.

John Stewart Mill also views Art in this light, for he defines Nature as all the powers existing in either the inner or the outer world, and everything which exists by means of those powers. Thus, he would have us consider Art as included under Nature, for in his essay on Nature he defines the mode of regarding the relations of Nature and Art, by saying "even the volition which designs, the intelligence which contrives, and the muscular force which executes these movements, are themselves powers of Nature. Granted that this is so, then how are we to distinguish between the productions of animals and insects and those of man? A honeycomb would be as much a work of art as a piece of Indian carving: a spider's web as the finest piece of Brussels lace; and a coral reef as the most delicate and intricate piece of pottery that could be produced. Fontenelle answers, "that most animals, as for instance, bees, spiders, and beavers, have a kind of art peculiar to themselves, but each race of animals has no more than one art, and this one has had no first inventor among the race. Man, on the other hand, has an infinity of different arts, which were not born with his race, and of which the glory is his own."

There is a wide expense of debateable ground here, which to traverse would lead me too far from the path I wish to follow; for is it not a fact that primitive races in all parts of the world practice their arts instinctively? Quite unconscious of their power, they produce work of high merit, those of each race being of one form of art, and that, quite apart and distinct from the productions of every other race; their expression in form came as naturally to them, and can be as readily distinguished, as their modes of speech, or expressions in sounds. The works of the early civilized races were influenced in some measure by the inspirations, or spiritual element with which some members of the community were endowed, but those also were natural expressions peculiar to the people who produced them. In the high state of civilization to-day, there is, it is true, an infinity of arts or modes of producing which were not born with the race, but of which there has been a first inventor or discoverer to whom succeeding generations are indebted.

It is necessary that we should clearly distinguish between those things which are produced without man's aid, and those which he is instrumental in producing. I am, therefore, at one with the writer who has said, "It is enough that when we apply the term art to any action, it is because we are thinking of properties in the action from which we infer, whether justly or not, that the agent voluntarily and designedly puts forth skill for known ends, and by regular and uniform methods:" and the definition which results from this view allows for every accepted usage of the word art—it is: "Every regulated operation or dexterity by which organised beings pursue ends which they know before-hand, together with the rules and the result of every such operation." This embraces the whole range of arts both fine and mechanical, and makes that distinction which is to be noted between activities which are natural to the person displaying them, and those which are the result of cultivation. The first come under the head of Nature, the second under Art. Thus, though the pleasure to be derived from a flow in pure diction and perfect intonation proceeding from one who is quite untutored in the art, is as great and akin to that derived from listening to the same thing when it is the result of study and forethought, and is put forth for known ends, yet it cannot be classed among the pleasures derived from art. Eloquence, graceful and charming manners, and also the manifestation of any passion, are artistic only when they are exhibited for the studied purpose of giving pleasure to others, quite apart from the feeling of those in whom they are seen. Thus it is with the actor. The most powerful representations are those in which he has his own nature under control, when every movement, every look, every intonation is the result of study and thought. We might perhaps be roused to enthusiasm by a display of

his own feelings, but if so, the pleasure derived from such display would lead us to think of the artist, and not of his art, the artistic conception of the part which he is enacting would be drowned in the flood of feelings and emotions by which he is carried away.

In addition to the line which is to be drawn between Nature and Art, there is one much broader to be drawn between Art and Science. Science is knowledge; Art is power or skill in the use of knowledge. There is no art which does not depend upon science, and only in proportion as it conforms to its laws whether knowingly or not, can the work convey the pleasure it is intended to give. But the acquisition of knowledge is quite distinct from the power to make use of it, and thus it is that so very many youths who have run a brilliant college course, or who have taken a foremost place in their training-schools or academies, fail to maintain their high position when fighting the battle of life, and this even when their studies have borne directly upon the path they wish to follow. They find then that there are many who, *knowing* less can *do* far more, because they have learned to make the best use of the knowledge they possess, to advance in some way or other either the beautiful or useful activities of life which are indispensable to the welfare of the community, or the comfort and pleasure of its individual members.

Is it not Dr. Johnson who said, in reference to the conversational powers of many very learned men, "that they are like persons with an enormous amount in the Bank, but who carry no small change. Their riches can only be drawn upon by cheques, which are never ready for the occasion." This is also applicable in thinking of the relations of Science and Art, for though it is absolutely imperative that artists should be very wealthy in the knowledge of the principles of science, still this, for the purpose of Art, is of no value unless the person possessing it has studied hard to learn how it may be applied.

The work, then, of the man of Science as such,—the man who strives to *know*—is quite distinct from the work of the artist, or the man who strives to *do*. Oftentimes the man of science departs from the philosophical research into the Secrets of Nature to apply in some one of the mechanical arts a principle he has discovered; and with those of the community who cannot enter into the spirit of his labours, his fame will date from that time. But it is not in proportion to the use which the patient investigator of Nature's laws makes of the knowledge he acquires, that his laurels should be awarded. The whole aim and object of his life is to discover facts of nature which have not been observed before, and to deduce therefrom the principles upon which they are based; and it behoves every worker in any art, however humble, to learn from him every principle which will in any help him to attain greater perfection in the work he has to do. Without such knowledge all workers must labour on in a purely mechanical way, repeating over and over again, they know not why, the methods their forefathers used to attain their given ends. If any new problem is presented to them, they are at a loss to solve it, because they know nothing of the materials with which they work, nor of those forces of Science upon which it should be carried into the region of Art. This region of Art is, according to art, every handicraft, and every industry to which man can apply his intelligence and skill. In common language the word art is not used to denote so wide a field; that it was so used in past ages is to be gathered our definition, wide indeed; for within it stands every from the fact that all workers in any craft that required trained hands and intelligence were then known as *artisans* or artificers Writers on political economy of to-day, as well as Parlimentary orators, speak of the "artisan classes;" but the word has long since fallen into disuse to denote any individual member of those classes; they are always spoken of as workmen or tradesmen, and any one who excels is not considered to have raised himself into a higher class, he simply remains a good workman or a good tradesman.

And is there not, unfortunately, a good reason for this? Was it not felt that, when the mechanical or lesser arts were no longer practised by those who would give individual expression to their work; when the product of their hands had to be conceived and carefully delineated by others more gifted than themselves, that it was inconsistent to longer speak of them as artizans—those skilled in an art—when they merely dealt or traded in the muscular force which is necessary to give effect to the creations of those whose directions they had to follow.

It has given me pleasure to meet workmen who by their skill and intelligence were in every way worthy of the disused title; but the average British workman is not noted for the study he gives to his work; he fails to make the best use of the power with which he has been endowed; and so long as this is the case, so long as he is content to labour without a full knowledge of the materials he uses, and of the principles which govern their use, will the term artizan be denied him. But when, to skill in manipulation, he adds an intelligent appreciation of the laws which regulate his productions, of the rules and precepts by which he should be guided; and of the reasons for all his actions; when to these he adds the skill in inventing and designing such as is to be seen in the productions of the workers in the art epochs of past times, then and then only, can the term be rightly applied and the numerous handicrafts and industries, be gathered with general accord under the canopy of Art.

Sydney Building.

In Sydney the building trade is very dull. The high price of material, the unsettled labour market, and the general feeling of unrest is militating against speculative building or the erection of large city premises. As the tendency of prices is to harden all round, many big jobs will be postponed indefinitely. Nevertheless, the applications for permission to make alterations and erect new premises are well up to the average, while many city architects have a good deal of work in hand in the shape of suburban residences and alterations to city premises.

The other large centres have a similar story to tell. Few big building contracts are being let, and as it is such structures and not residential houses that absorb cement, the stores are full of that article.

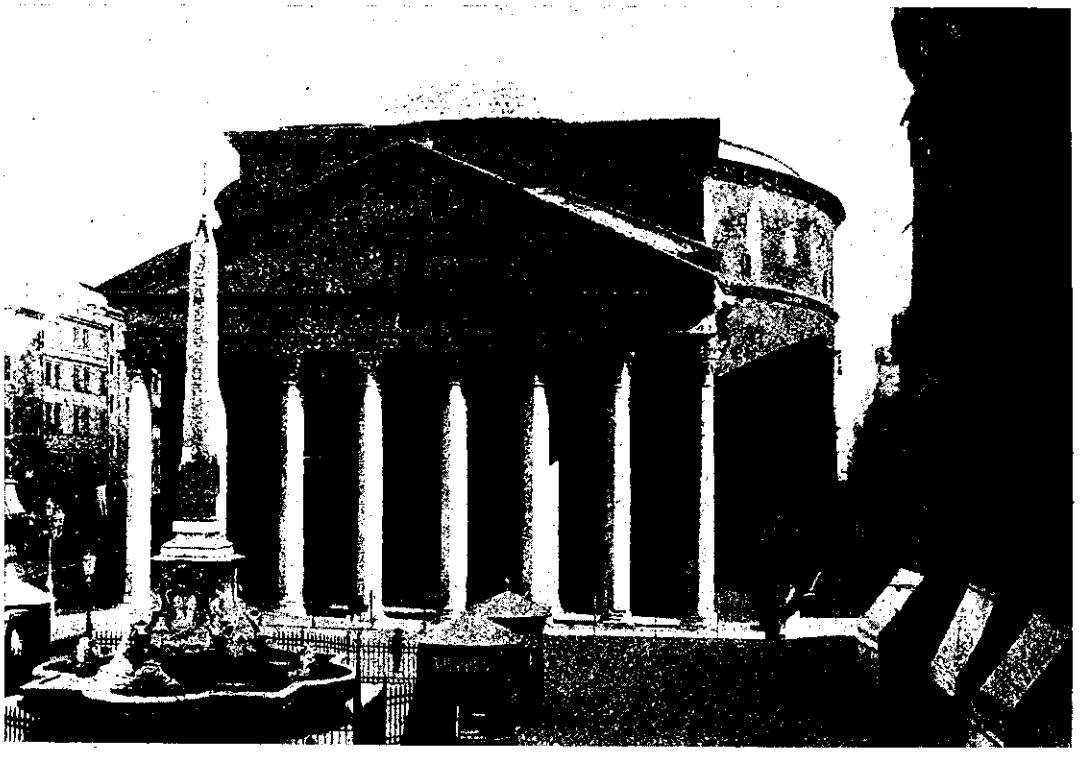
The Styles of Architecture

A short paper read by Mr. Leslie D. Coombs, A.R.I.B.A., before the Otago Branch of the New Zealand Institute of Architects, May 24th, 1916.

Judging by the number of buildings, of various styles, that are now erected, it is evident that a great number of we modern architects, if not all of us, have considerable trouble on determining on what may be the best style or styles for our purposes. It is noticeable that many architects have altered their style, not once but several times during their career. Why? Is it because they have never given the matter serious thought, but have let various whims rule? Is it because they have been slaves to fashion? In either case they have been guilty of a crime against architecture. Our art is too serious to be governed by whims, and is based too much on reason and sense to be tossed about for unlimited time by fickle fashion. Unfortunately it is certainly being tossed about now —to our disgrace— but it has not always been so treated in the past, and in that thought we feel confident of the future.

Let us go back to mediaeval days, say to the 14th century. At that date our Gothic style was at its best. Were the architects of that period worried about styles? No. They just designed to the best of their ability. Did they copy what had been done before? No. They made use of what had been done before but they did not copy it. They improved on it. The same may be said of the ancient Greeks of the 5th century B.C. Why do not we improve on what has been done before without merely copying it?

If we look back we find that as inventions were made in construction, so alterations were made in design. The Greeks had large blocks of marble for their lintels. They therefore did not require the arch. The Romans were less fortunate, in many instances they had to build their erections with comparatively small stones. They were therefore forced, if they required to bridge even medium spans, to copy the Etruscans, and adopt the arch. It was soon found that very large spans indeed could so be crossed. Hence the development of those large arches, vaults and domes for which Roman architecture is famous. The Romans did not play with various styles as we moderns do. There was enough life in their architecture, and they themselves were clever enough, to obtain all the required variety of design from the one style. Their architecture was by no means a copy of Grecian, for in construction and variety of conception it is a great improvement. In refinement only did the Greeks excel, and there is a very good reason—a constructional reason—why that should be. The Greeks in having the finest white marble to work with were at a great advantage. Such a pure close grained material, capable of being worked to a fine arris, or of being given a polished surface, naturally led, if anything would, to refinement. Refinement becoming general we find that when coarser stone than marble was used, or when the marble was not of the purest quality, that the



The Parthenon, Rome

Greeks plastered their surfaces with a very fine white plaster that took a high polish. In Rome, much marble was undoubtedly used, but its use was not so general. Tufa, a coarse volcanic stone, and bricks were used for even most important buildings. Another material the Romans made much use of was concrete. Concrete that could be made by comparatively unskilled labour. I think the Romans who added so much to our knowledge of construction and architectural conceptions should be excused if they did not quite reach the refinement of the Greeks.

Now we shall take the Italian Renaissance period. For our purposes we can pass over the Early Christian and Romanesque periods—the dark periods of architecture when construction was nearly always bad and ornamentation not much better—barbarous, I think, explains them. When we come to the Gothic period we find that the builders were limited in construction to small stones, and consequently, the arch greatly developed, but the surface finish and decoration was rough to suit the, what may be termed "rustic" materials. About the year 1400, it became apparent that the Italian Gothic then in vogue did not express, was incapable of expressing, the national spirit. A wave of learning had spread over Italy. Refinement and culture held sway, as did also religious enthusiasm. How could Gothic with its grotesque gargoyles and other crude features be tolerated? It could not. It was too much to expect educated Italians, who had examples of Classical refinement in front of them, and who wished to design ideal Madonnas and angels, to carve the conventional Gothic figures. Hence we find among statuary and ornamentation the earliest traces of the Renaissance.

For example the figures on the Ghiberti's first door to the Baptistery at Florence, and those over an entrance doorway at the Doges' Palace at Venice, may be mentioned. Brunelleschi, the great architect whom we look upon as the founder of Renaissance architecture, realised what was required. He made full use of the work of the Romans, and he studied and practiced Roman technique. He did not copy Roman architecture. Other and later men of the Renaissance made that mistake, but he did not. He utilised Roman features and ornaments, but he adapted them to the requirements of his time in most original ways. For instance, there is little similarity between a Roman temple and a Renaissance church, and buildings similar to the early Florentine Renaissance Palazzi did not exist in ancient Rome. Unfortunately all the Italian Renaissance architects did not have the genius of Brunelleschi. For awhile, as the style developed, Roman features were merely copied and not even used in original ways, but later when the Barocco or Rococo was in vogue, originality again was evident. Unfortunately, with the Barocco nearly every decorative feature was used as a sham, as an imitation of something else, and so this late form of the Renaissance has been generally condemned.

Hatfield House, Herts, England.—An example of a famous Jacobean Mansion.

About 1420 Brunelleschi designed the Pazzi Chapel at Florence. It was not till 1620 that Inigo Jones followed with the Banquetting House at Whitehall. It may therefore be said that the English were two hundred years behind the Italians in having a pure Renaissance building. The picturesque Elizabethian and Jacobean styles were the transition in England from Gothic to pure Renaissance. Inigo Jones had studied under Palladio at Vicenza. Inigo Jones was

our English Brunelleschi. He was another genius. He adapted Palladio's style to suit England. We have never had an architect since, to strike such a true note. Wren is commonly spoken of as the greatest English architect, but it is remarkable that the nearer Wren's work approached that of Jones the better it was. From the time of Inigo Jones till quite recently, very little improvement was made in construction, and it is remarkable as something more than a coincidence, that design did not improve to any extent. I consider that it is purely on account of this want of improvement that caused the great unrest during the nineteenth century. As we all know the last century was full of revivals of some sort or other—Classic, Gothic, Byzantine—in fact, examples of practically every style were erected.

During the last few years we have made use of what may be considered as new materials—steel and ferro-concrete. Surely we can invent a suitable finish for these materials—a finish that will not only be suitable for the construction, but suitable also as an indication of the times! Is our culture less than that of the Greeks, that we should be content with lines not more refined, or our inventive genius such that we cannot think of new forms without going to either the absurd or to the ugly? Let us do more than copy old work. Let us improve on what we have had handed down to us, and in course of time a new style, better for our purposes than anything we at present have, will develop. To me it is absurd to think that we cannot improve on our architecture, that new forms and improvement will never come, in spite of what many eminent architects have written and said on the subject.

Report from Canterbury Branch N.Z. Institute of Architects

The Canterbury Branch of the New Zealand Institute of Architects' and the District Committee each held two meetings, during the present session, at which matters affecting the Branch were discussed.

The Students' Association held three meetings, the drawings for subjects set being criticised by members as follows:—

A Small Sports Pavilion—M. J. Guthrie.

A Week-end Cottage—J. G. Collins.

A Tea Kiosk in a Public Park—A. D. Reese.

Despite the loss by members who have enlisted, the membership remains about the same and the students continue to take a keen interest in the doings of the Association.

On the 24th June, Mr. Herdman Smith, Director of the School of Art, read a paper upon Historic ornament, before a good attendance of students and members of the branch. The paper dealt with the subject from the earliest times up to the present day and Mr. Herdman Smith illustrated his remarks by means of blackboard sketches, which in themselves were an education in drawing. At the conclusion of the reading, a hearty vote of thanks was accorded the lecturer.

On July 29th, Mr. R. Speight, Curator of the Canterbury Museum read a paper upon the building stones of Canterbury.

Auckland Architect's Claim

Supreme Court Judgment

"Soltar" on Flat Roofs

A judgment of interest to architects was delivered by Judge Cooper, sitting in the Supreme Court at Auckland on March 8th, 1916. The action was one in which A. B. Herrold, architect, claimed from the defendant, Frank Ross, the sum of £67 6s. for services rendered to, and money paid for, the defendant in connection with the erection of a residence for the defendant at Kohimarama, the defendant admitted that the plaintiff was employed by him as architect but denied that the roof of the residence referred to was duly erected and completed; and also disputed the accuracy of a claim for £7 travelling expenses claimed by the plaintiff. By counter claim, the defendant claimed from the plaintiff the sum of £120 for damages alleged to have been sustained by the defendant, in connection with the roof of the house. The contest between the parties was substantially upon this counterclaim.

The roof of the residence was a flat one. The specifications for the work provided for a "flat roof, the whole of the flat roof portion to be covered with Soltar a quarter of an inch thick, by the Soltar Company and the contractor to allow the sum of 1/9 per square yard for the work, in his tender, which includes the usual 10 per cent. for contractor."

The defendant alleged that after the erection of the house was completed, the Soltar on the roof oozed through the ceilings and that the plaintiff remedied this defect by having Malthoid nailed over it with clout nails, which were driven through the Soltar into the decking underneath. Even then the roof was not, and had not remained, watertight, water having, on several occasions, found its way into the house through the roof. He claimed that Herrold was guilty of negligence and a breach of duty and contract in specifying Soltar, also in covering the Soltar with Malthoid and using clout nails. The cost of removing the Soltar and other coverings and efficiently covering the roof, he estimated at £120.

The plaintiff's defence to the counter claim was a denial of any alleged negligence or breach of duty or contract.

In reviewing the evidence His Honour said that the evidence of both Ross and Herrold showed that Ross took a keen interest, when the plans and specifications were being prepared, in the details of the house, but there was a sharp contradiction between them in reference to the roof. Ross stated that he desired to have a flat roof and that, on reading the specifications, he was surprised that Soltar was specified; that he asked Herrold what Soltar was and that Herrold replied that it was a very good thing for the purpose and he had a guarantee from the Soltar Co. in regard to it. Ross's evidence

showed that he then said to Herrold, "I am very pleased, because it happens that I have shares in the Soltar Company."

In cross-examination, he said he never suggested any material for the flat roof but left the choice to Herrold. As a guarantee had been given by the company he felt that he was safe in using Soltar.

The plaintiff Herrold's account of the matter was that the question of roof coverings was discussed; concrete, lead or re-inforced malthoid were too costly, in view of the amount of money Ross wished to spend on the house. Ross then said,

"What about Soltar?"

Herrold's reply was that he knew nothing about Soltar but would make enquiry from the managing director of the company. He did so and got a written guarantee from the company. Afterwards he told Ross, and Ross said, "I am glad Soltar is to be used as I am Soltar."

The letter from the Soltar Co. to Herrold was signed by the managing director, Mr. Friend, and the material portion of it read as follows: —

"We are perfectly satisfied that you will have no trouble at all in regard to the Soltar running through the joints in the boarding and although we have never done work on a flat roof, we have done such satisfactory work in a great many other instances that we feel sure there is no risk of us making otherwise than a success of your building."

In evidence Friend had said that Ross told him Herrold was thinking of putting Soltar on the roof and asked witness what he thought of it. Friend's reply was the company had never done it before but there was no reason why it should not be a success. This conversation was not admitted by Ross.

In due course Soltar was put on the roof by the Soltar Co.'s expert. It was not a success and, after a time, the tar found its way through the joints and caused damage which the defendant had to incur expenses in remedying.

"In determining what I may term the first branch of the case or the counter-claim," said Judge Cooper," the principle to be applied is that the onus of proof admittedly rests on Mr. Ross. The three witnesses—plaintiff, defendant, and Mr. Friend are all of high reputation and the question is whether in the face of the plaintiff's and Mr. Friend's evidence I can assume that the defendant's account is necessarily correct. All the witnesses are speaking of what occurred in conversations nearly two years ago. I believe each witness to have given honestly his recollection of the conversation. I have come to the conclusion, weighing the evidence as a jury would, that Mr. Herrold's account is at least as reasonable as that given by Mr. Ross. The evidence does show that Mr. Ross desired to keep the cost of the building as far as possible within certain limits. His original intention was to spend £800 on the building but the contract price exceeded that amount. It is clear that he did not desire that the more costly form of covering, such as concrete or re-inforced malthoid should be used and I think that Mr. Herrold's evidence supported as it is by the guarantee, and by Mr. Friend's testimony justifies me in concluding that the suggestion that Soltar should be used came in the first instance from Mr. Ross, who was admittedly a shareholder in the Soltar Company and not from Herrold, and that Herrold informed Ross that he (Herrold) had no personal knowledge of the efficiency of Soltar, and that, if the company was prepared to give a guarantee, Mr. Ross was willing to take the risk of Soltar being used. I am therefore, unable to hold that Mr. Ross has established negligence, or breach of duty or contract, on the part of Herrold in specifying Soltar as the covering for the roof.

What may be termed the second branch of the case on the counterclaim may be stated thus. It is submitted that Mr. Herrold, under any circumstances, ought to have specified that some impervious material should have been used as a covering to the roof before the application of Soltar, that he did not do so, and that this omission was the real cause of the leakage of the tar through the roof.

Architects, like other professional men, are bound to possess a reasonable amount of care and diligence in the carrying out of the work which they undertake, including the preparation of plans and specifications. The question whether an architect or engineer has used a reasonable and proper amount of skill is one of fact, and appears to rest on the consideration whether other persons exercising the same profession, and being men of experience and skill therein, would or would not have acted in the same way as the architect in question: but he is not necessarily liable for a mere error of judgment: Halsbury's Laws of England, Vol. 3, pp. 292, 295. There is a case of *Turner v. Garland and Christopher* reported in Hudson on Building Contracts 4th edn., Vol. 2, p. 1, which is very like the present case. The defendants were architects employed by the plaintiff to prepare plans and specifications for a model boardinghouse. The plaintiff instructed them to put in a new patent concrete roofing, which cost only a quarter of what a lead or slate roof would have cost. The concrete roof proved a failure, let in water, and had to be removed and replaced, and the plaintiff sued the architect for negligence. Erle J. directed the jury that though failure in an ordinary building was evidence of want of competent skill, yet, if the new roof was out of the ordinary course, and a novel thing to the architect, about which he had little or no experience, failure was not, necessarily, evidence of negligence. Now, in the present case, I have already held that the balance of evidence indicates that Soltar was used at the request of Mr. Ross, and it is clear that he read and approved of the specifications which contained the clause that the Soltar Company were to cover the roof with Soltar. In my opinion, also, the guarantee and its terms were known at the time to Mr. Ross, and he knew that Mr. Herrold had had no experience in the application of Soltar, and that the Soltar Company employed their expert specialist to do the work. Applying then the principle, which, in my opinion is well established, namely, whether other persons, exercising the same profession, and being men of

experience and skill, would or would not have acted in the same way as the architect in question, I proceed to shortly examine the evidence of the professional men called on each side. There were three architects examined on behalf of Mr. Ross—Messrs Currie, Ferneyhough, and Wilson. Mr. Currie's evidence is entirely in favour of Mr. Ross. Mr. Ferneyhough in his examination in chief said "if the owner said he wished the material to be used, I should consider it my duty to put an impervious material over the P.T. & G. boarding to prevent, if it melted, the material going through the joints of the boarding." In his cross-examination he stated "I should consider if a specialist was doing the work that I as architect, would have the right to interfere if he was not doing the work properly. If I had sufficient knowledge of the material I would interfere if he was not doing the work properly. If I had no knowledge of it I would interfere if the specialist was not doing it in the manner in which he stated he would undertake to do it. This applies to work of which I could judge myself whether it was being done properly or not." It is clear that Herrold had no knowledge of the constituents of Soltar, or of its previous use as a roofing material, or of the method in which it should be applied. The method was left to the specialist, the company having represented that it could be applied by them successfully and without risk.

Mr. Wilson considered that Soltar, as it had not previously been used for a flat roof should not have been specified, and he also "suggested" that it would have been better if some material had been put on the boarding before the application of the Soltar. In cross-examination he stated that assuming that the roof would not carry a heavy covering, that Mr. Ross had discussed the matter with the architect, and that the architect had made enquiries from the Soltar Company and had obtained from them a guarantee, and had informed the owner that he had the guarantee, and that on it he was prepared to specify the use of Soltar he (Wilson) would consider the architect was justified in using it if the owner agreed to it and would take the responsibility.

The architects called for Herrold were Messrs Daw, Ashley-Hunter, and Goldsboro, all men of good standing. They all thought that, assuming Herrold's evidence to be correct as to what took place between him and Ross, that he was justified in specifying the Soltar, and that as the material was unknown to him and was to be put on by an expert specialist, he was justified in leaving the matter to the specialist, and was under no duty to control the method adopted by the specialist.

In my opinion, I cannot, therefore, viewing the evidence as a whole, find that Mr. Ross has established his counterclaim.

The only item in dispute at the trial upon the plaintiffs claim was the sum of £7 claimed for travelling expenses. In his account rendered to the defendant on December 17, 1914, he did not claim this amount. His claim was limited to the sum of £60 6s. 0d. In his letter of the 1st February, 1915 he only claimed the £60 6s. 0d. It was not until the 22nd February, 1915 that he amended his claim. I think he must be held to his original demand. I give judgment for the plaintiff for £60 6s. 0d. on his claim.

I think the proper judgment to enter upon the counterclaim is a judgment of nonsuit, and the plaintiff by counterclaim is accordingly nonsuited. The plaintiff in the action must have his costs of the statement of claim on the lower scale and, as defendant by counterclaim, his costs of nonsuit, which will be also on the lower scale, and will be statement of defence £3 3s. 0d., preparing for trial £4 4s. 0d., costs of trial £7 7s. 0d., and extra day £15 15s. 0d., witnesses expenses and disbursements to be ascertained by the Registrar.

Among the Sky-Scrapers

Reprinted from "Building" in the "Architects and Builders Journal"

The Australians strolled down Broadway and the wonder of the Woolworth Building burst upon their vision with all the suddenness of the first glimpse of the Grand Canyon. It was inspiring to see its sixty storeys, and its green copper-capped tower rising 780 ft. above the street level. Entering its main hall they stepped into the elevator; it was an express for fifty-four storeys; and having arrived at that level they entered a second elevator that continued the journey to the tower top. What a vision! Looking up Broadway beyond the beautiful tower of the Civic Hall, the white tower of the Metropolitan building stood above the encircling peaks of giant structures. Looking down Broadway the Singer Building disputed pride of place with the Liberty Building; whilst beyond was the Bankers' Trust Building with a cloud of steam escaping from the apex of its pyramidal top, like sacrificial incense from an Egytian temple. They turned to descend. A card caught their glance. It read: "This building has forty acres of floor space, twenty-eight lifts, 3,000 windows, 80,000 electric lights, 7,000,000 bricks, and ——." But simple figures lose their expression. The height is sufficient. It is high enough to look over an area of three thousand square miles. "And yet," said the Editor, as they descended in the lift, "the most wonderful thing about this building is that, as a building, it is a financial failure. You will note that only one-third of it is occupied, and most of the upper offices are tenantless. I am told that the rule is the higher you rise the higher the rent. Yet the owner can afford to keep the place empty as he only built it as an advertisement. In almost every city and town in America is a 'Woolworth' shop. It is a 'five and ten cent' store; nothing is quoted higher. It sells what are known as 'fancy goods,' and as it is a cash business the turnover is very great. Woolworth put his money into bricks and steel. He wanted 'the highest building in America, sure.' He realised that very newspaper would talk about it and that this continual advertising of the Woolworth Building would be worth millions of dollars to his shops.

Our 44th Competition.

A Country Residence.

Only four designs were sent in for this competition, viz.:—"Sans Peur," by L. H. Charlton, with Mr. A. Garnett, Architect, Hastings; "Zam," by F. G. Broadley, C/o Public Works Department, Wellington; "It," by F. Horinbrook, with Messrs Crichton and McKay, Wellington; and "Bank," by R. Osten, with Anscombe and Smith, Invercargill.

The judge, Mr. J. C. Charlesworth of Wellington, who kindly set this subject (and gave a special prize for the best draughtsmanship) reports as follows:—

"ZAM" placed first shows quite an artistic production of simple design and good arrangement of plan, and the cost is well within the amount stated.

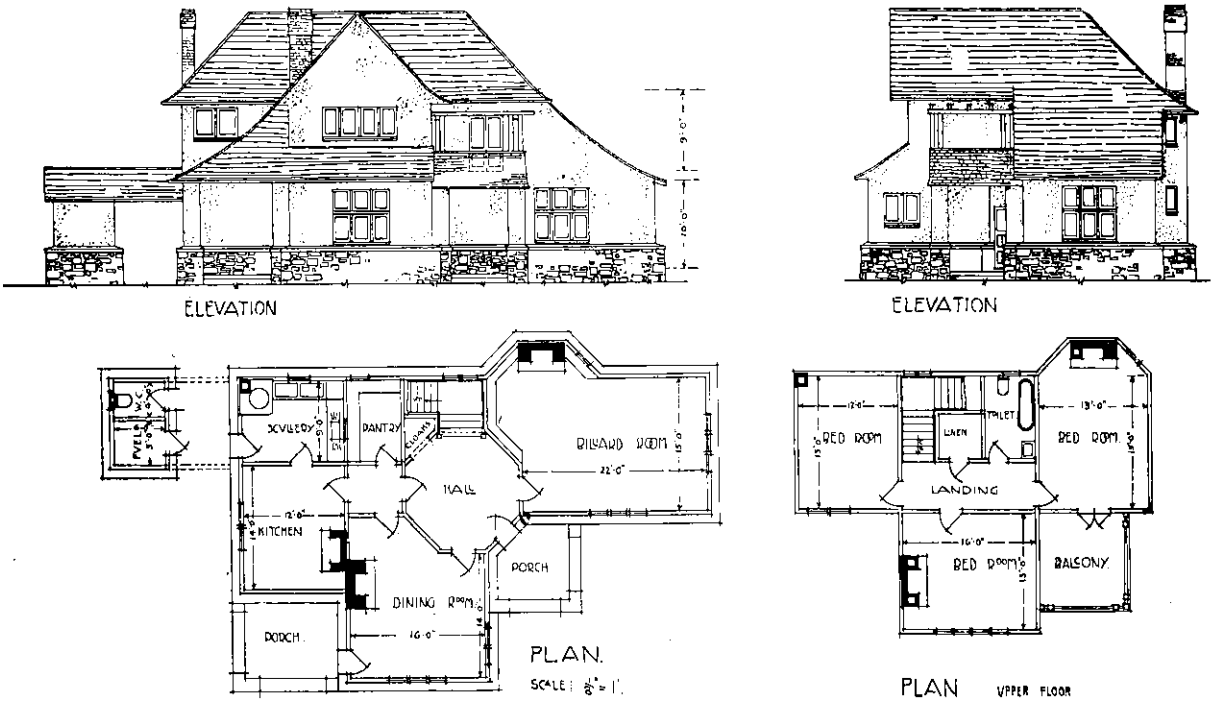
"IT" has given a good example of planning, but the design is marred by waste space in roof and height of balcony roof over portico being too low.

"SANS PEUR" has exhibited an intelligent knowledge of the subject, plan well arranged but the cost far in excess of the limit.

"BANK." The plan is well thought out, billiard room too narrow, but the elevations and draughtsmanship weak.

None of the designs has exhibited in my opinion first class draughtsmanship, the best sent in is by "ZAM" who is entitled to the extra prize.

J. C. CHARLESWORTH.



Winning Design in our 44th Competition ("Zam") by F. G. Broadley, Public Works Dept., Wellington.

Municipal Housing.

Wellington City Council considering it.

The question of the City Council's undertaking a municipal housing scheme was briefly before the council last month, when the following two motions were agreed to:—

By Councillor W. T. Hildreth:—"That this council take into consideration the question of acquiring land at Lyall Bay for the purpose of building cottages for such of the corporation employees as may be desirous of taking advantage of this scheme."

By Councillor J. Hutcheson:—"That a select committee, consisting of His Worship the Mayor, Councillors Hildreth, Bennett, Frost, Wright, and the mover, be set up to inquire into and report on the following matters:—(1) Location, area, and estimated values of suitable available sites; (2) class, size, and structural description, and design of buildings; (3) estimated cost of different types of suitable buildings; (4) (*a*) method of allocation of dwellings amongst applicants, (*b*) order of eligibility of applicants; (5) description of tenure or variations thereof; and (6) financial arrangements to give effect to scheme.

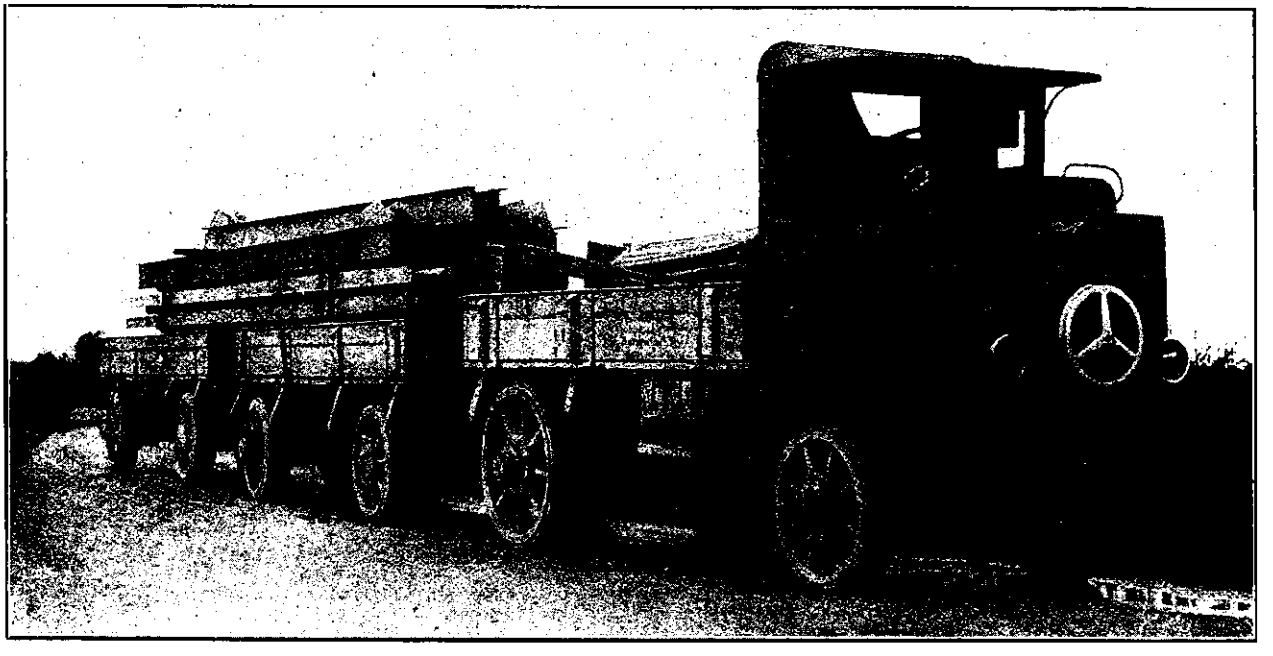
It is one of the affectations of architects to speak of overcharged ornament. Ornament cannot be overcharged if it be good, and is always overcharged when it is bad.—*Ruskin.*

The Thomas Transmission Road Train.

A New Transport Unit.

Well known as the Thomas Transmission principle has become in motor traction circles during the last few years, both as a means of propulsion for road vehicles, and as a helpful factor in solving the difficulties of light suburban traffic on the railways, there has taken place still another development that is not as yet so generally known. This is the road train.

Our photograph shows one of these new units "Somewhere in France," and reports to hand indicate that the performance of these trains has more than justified their employment.



A Road Train—Thomas Transmission Principle.

We are of course all familiar with the ordinary tractors and trailers, and know the immense loads these machines can and do handle wherever even a moderate road surface is available. It is on the war worn roads of France, however, that the trailer has lost a great part of its usefulness, for such is the condition of the road surface, that in many instances the tractor has the greatest possible difficulty in making its objective, even after the trailer has been detached and side-tracked, to wait indefinitely for future transport.

Broadly stated, the road-train may be described as a tractor with one, two, or three trailers attached, each trailer being in itself motor propelled by power generated on the main tractor. It is of course the principle of gasoline and electrical propulsion by which the Thomas Transmission unit is worked that makes this possible.

Briefly described the action of the train is as follows:—The tractor proper starts up and operates in the ordinary Thomas Transmission way, i.e., both mechanically and electrically, and it is so arranged that not only is an infinitely fine gradation of speeds possible, but that by far the largest proportion of the running shall be by direct mechanical drive.

The novelty of the whole unit lies in the trailers which are by their own motors more or less self-propelled. The method is simple. Power is transmitted from the gasoline motor to an electrical machine mounted on the tractor, and this in turn drives the motors mounted on the trailers. At will, the auxiliary drive on the trailers can be cut out, and only used when it is desirable that on hills and bad sections of road, the tractive effort should be divided as equally as possible between the several vehicles.

The steering of the first trailer is governed by the position of the rear axle of the tractor, and the steering of the second trailer, by the position of the rear axle of the first, and so on.

The tractor and trailers are capable of driving equally well in either direction, and of being coupled together in any order. To obtain this result there is mounted on each trailer a reversing switch to change over the connections to the armatures of the motors, and when travelling "astern" special provision is made for steering the train from the then leading axle of the trailer.

The ease with which this machine and its trailers can be operated is stated to be remarkable, and its adoption is considered to be a great advance towards the solution of some of the transport difficulties at the front.

We are indebted to Messrs A. D. Riley & Co., the New Zealand Thomas Transmission Agents, for the advance photograph shown above.

The Differential Gear.

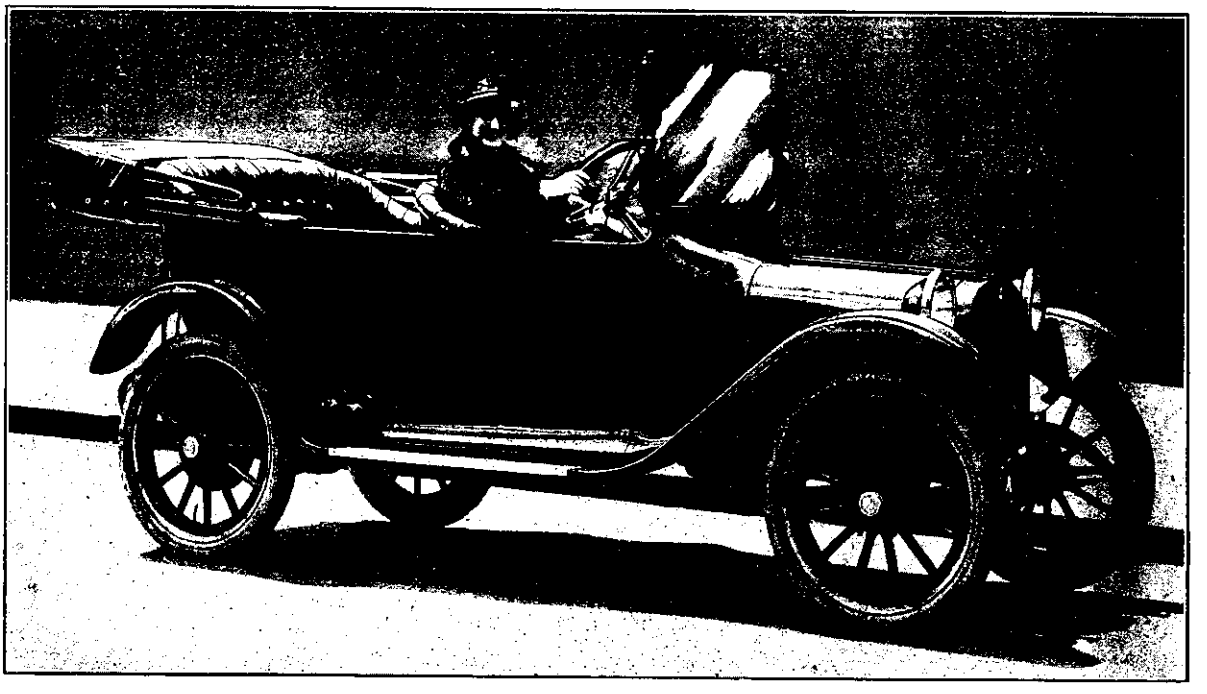
Will it be Retained?

The suggestion that a modern car can be put on the road without a differential gear comes almost as a shock. We have become so used to the passive acceptance of the gear as a necessary piece of car equipment that the idea of its abandonment is almost as startling as would be the suggestion that the car should be run without tires. It is a safe statement that not one driver in twenty knows just how a differential acts, and it is an extremely doubtful point as to whether one motor mechanic in five could draw the gear on paper and explain its action to the uninitiated. However, expert and amateur alike all know and have accepted the fact that the prime duty of the differential is to equalize the drive on the rear wheels when taking curves, the outer wheel of the radius of the curve having to travel the maximum distance while the inner one more or less "marks time" while the movement is completed.

The effect of the differential gear is of course to allow the difference of speed of rotation of the two wheels, for were they both fixtures on the same axle the inner or outer wheel would have to skid over the ground in order to equalize.

To demonstrate how absurdly the duty of the differential has been exaggerated in our minds, merely from having accepted it blindly as a necessary fitment on a car, take a motor swinging round an ordinary street corner. We will suppose the outer wheel to be moving round an imaginary point at a radius of say 40-ft. which is quite normal. The inner wheel will travel a circle some four feet inside this, but the total difference in the distance travelled by the two wheels is only as about 40 is to 37. That means that while the outer wheel covers 40-ft. of ground the inner only covers 37 and the odd three feet is taken up by the differential. If the two wheels were fixtures on the same axle it follows that in order to round the curve, skiding to cover the 3-ft. of distance travel must take place, and at first glance this seems repulsive to any driver who cares for his tires. A little thought, however, shows that the proportion of curve driving to straight ahead work is infinitesimal in an ordinary day's run.

Again it is questionable whether the differential does not take more out of the rear tires on a straight away run than it saves in rounding curves. On an ordinary paved or country road, every time either back wheel leaves the road surface (and we know how often that happens) due to inequalities in the road, the differential comes into play, speeding up the wheel that has momentarily lost contact with the surface, and letting it descend on the road again revolving at too fast a pace, which is to all intents and purposes a miniature skid with a wearing effect on the cover. This may happen many hundreds of times during a long day's run and the total tire wear may be considerable, depending largely on the class of road surface. This perpetual skidding would be entirely cut out with a solid drive. Again on heavy roads, in starting, how often does one see one wheel of a car stuck fast while the other tears round endeavouring to start the load? This is a disastrous thing for a tire and could not possibly happen but for the differential.



A Dodge Car and a Fair Driver!

It honestly seems as though for the sake of compensation round curves and corners we have been carrying round a set of gears that have not only been the source of endless trouble, but have in actual fact been the perpetrators of the actual evil they were designed to avoid, that is, tire skid and wear. From reliable sources we learn that tests have already been carried out along these lines. Two axles, one fitted with the conventional differential, and the other a plain solid axle, were fitted with exactly similar tires, pumped to the same pressure, and driven over just the same course, with the result that the tires on the solid axle showed a decidedly longer life than those on the differential axle. There is going to be a great deal of argument from both sides before this matter is finally settled, but after all it must be settled on the road, for the finest and soundest theories are apt to fall down badly when put to practical test. At present the only tests available seem to point to the discarding of the differential in the near future, at any rate for the lighter class of car, and any small deficiencies the solid axle may exhibit, will probably be more than compensated for by the gain in cheapness of first cost and mechanical strength.

Municipal Motors.

In referring to municipal motors we are for the moment not concerned with passenger carrying vehicles. These may safely be left for the present, for their time is surely coming after the return of peace conditions.

As mechanical units nothing can be said against the efficiency of motors generally in the fact of their war performances, and the adoption of motors for passenger traffic will be fought out eventually, not on the units of the machines themselves, but on the basis of the distance it will be possible to convey passengers profitably for a penny fare. Municipalities have, however, in our opinion been unwarrantably slow in availing themselves of the motor possibilities offering for the efficient carrying out of city work. We still have the old road sweeping machines and the horse drawn water waggons, while the one horse garbage carts toddle slowly from door to door taking their unlimited time to poison the atmosphere with their vile odours.

All these duties and many others can be better and more cheaply done by motor, and although the present is not perhaps an opportune time to purchase, seeing that we all desire to buy only British made goods, it is certainly the duty of every councillor and municipal officer to watch the development of these mechanical aids to city cleanliness and efficiency that is taking place in oversea cities, against the time when it will be possible to bring our municipal departments somewhere into line with modern progress.

Our 48th Competition—*continued.*

There must be a hob fire on which simple cooking may be done. 3.—The upper floor may be partly in the roof, and must contain one large bedroom, about 160 ft. super., and two smaller ones.

There is supposed to be public water supply and sewerage, but hot water service is not intended. The design must be studied to give a good appearance from every side, especially from any point in the road.

The materials allowed are red brick (9in. and 4½in. walls) which may be rough cast at author's discretion, Marseilles tile roof. The upper storey may be timber framing weather-boarded at author's discretion, and if needed for accommodation may overhang about 1 ft. but this is not necessarily implied. Upper storey partitions may be timber framing. The height of lower storey must be 8 ft. clear, and upper 8 ft. to ceiling, and not less than 4 ft. of vertical wall at any point.

Points to be specially studied are:—(a) Uniformity and economy in structure; (b) Convenience of accommodation; (c) External appearance; (d) Equitable subdivision of site, so that every corner may be utilized for garden or other useful purpose.

The design must be illustrated by:—(a) A site plan to 1/16 inch scale, shewing block of buildings, paths, posts for drying lines, &c.; (b) ⅛in. scale plan of each floor; (c) ⅛inch scale plan of roofs; (d) Cross section of one cottage to ¼inch scale; (e) All dissimilar elevations. A Sketch Perspective taken from a point in the road may also be submitted.

The ground falls towards the North with a gradient of about 1 in 20, and the road, level with the site at "A" falls 8ft. from "A" to "B" where there is an 8ft. cutting. It is necessary to contrive an entrance to each garden plot without steps, so that a barrow may be run in. There must be no lights on any party or boundary line.

Messrs. Atkins & Bacon, Wellington have kindly set this subject.

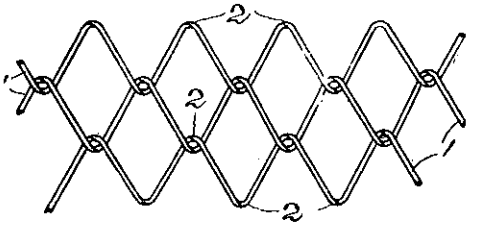
Designs must be sent in, in black and white under a nom-de-plume, addressed to **Progress**, 8 Farish Street, Wellington, and marked clearly "Forty-eighth Prize Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by November 10th.

Conditions of "Progress" Competitions

The Editor reserves the right of publishing any or all the designs submitted, and while every care will be taken of drawings, no responsibility is accepted should any loss or damage be sustained. Those desiring their designs returned must send postage to cover cost of same. No award will be made unless at least three designs are sent in for any one competition. Unless otherwise stated drawings are to be in black and white only.

Recent Building Patents

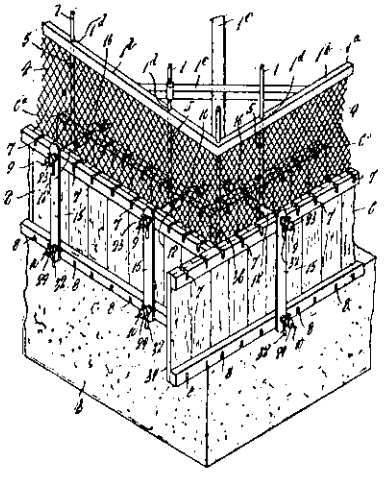
Plaster, Foundation for.—Jas. L. Owen, of Christchurch has taken out a patent (No. 36013) consisting of a mesh comprising a series of galvanised-iron or steel wires 1 of sufficient gauge to ensure rigidity, and which wires are bent to flat open spiral form so as to constitute a series of trian-



gular loops 2. The loops are interlaced chain-wise so as to produce a continuous mesh of diamond form. This construction allows of the wires hinging one upon the other and so being conveniently drawn taut and secured upon the framework.

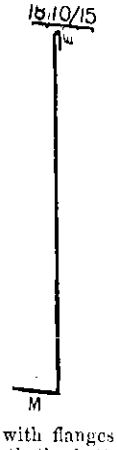
Reinforced Concrete Building Construction.—Pierce Lanigan of 258 Jervois Road, Auckland (No. 37246).

The invention comprises a framework shaped to correspond to the structure to be built, and slidable upon uprights consisting of vertical rods, tubes, or the like, having their ends provided with feet or dish-plates embedded in a foundation of concrete; the securing wire netting or the like to the uprights; the holding forms, shutters, or panels in position by means of wires having loops at their middle part surrounding the uprights, the ends of the wires passing through distance-pieces or ferrules having a total length corresponding to the thickness of the wall to be formed; and collars secured to the wires by set-screws, thereby forming stops against which press nuts screwed upon brackets fixed to plates, which hold the



forms against the distance-pieces. The framework is stayed by struts, and has holes or is otherwise formed for holding the upper part of the vertical uprights in position while the building of the walls is proceeding, is made to slide vertically on the uprights, and is raised from time to time as the height of the wall increases. The uprights can be used in short or long lengths, and can be lengthened by the use of sockets or pipe-unions screwed upon either or both ends of the uprights. The lower ends of the uprights are held in position by feet set in the foundation, and by the wall itself as the work proceeds, while the upper ends of the uprights are held vertical and in proper position by the framework, thus keeping the wire netting taut longitudinally while the work of filling in the concrete between the form is proceeding.

Facing Weatherboards.—J. A. Hooppell of Victoria, Australia has taken out a patent (No. 18110). To protect the outside surface of weather-board buildings, facing strips



of sheet iron are formed with flanges along their lower edges which are turned in beneath the bottoms of the boards, while their upper edges are strengthened by rolls E and fit beneath the flanges of the covering for the boards immediately above.

Loew Victor Motors 1 to 6 Cylinders 6 to 137 Horse Power

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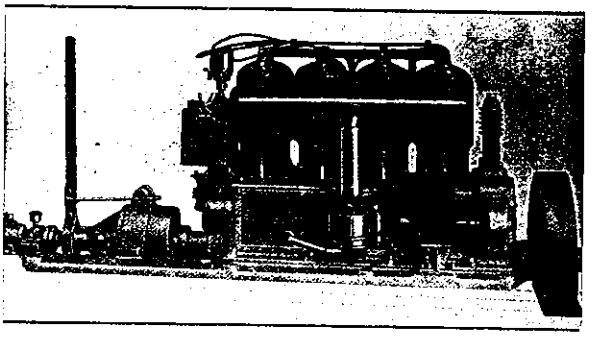

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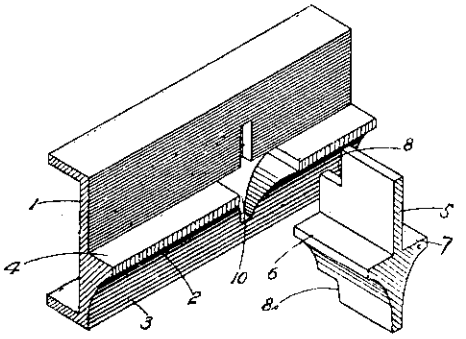
Window-Sash-Frame Joint, Steel.—Alfred Woolnough of Willis Street, Dunedin, has taken out a patent (No. 36436). It comprises, in combination with the outside members of the frame, an astragal-member, consisting of a bar having filleted



lateral projections and a dowel formed by cutting a shoulder at the end of the astragal-member, the said dowel including the filleted lateral projections thereon, being adapted to be housed within a correspondingly shaped hole punched in the outside rail-member of the sash.

Notice to Subscribers

"N.Z. Building Progress" is posted each month through the G.P.O. at Wellington. If any subscriber should not get his copy, another will be sent him if we are notified in good time. The paper is supplied from year to year only, and if subscribers continue to receive the paper after expiry of the current year, we shall accept it as an intimation of their desire to continue for another twelve months. We undertake to supply the paper for such further term. Notice of discontinuance must be sent to the Manager, 8 Farish Street, Wellington in writing, as no Agent has authority to receive notice of discontinuance on our behalf. The subscription is 7/6 per annum. A discount of 1/- will be allowed off this amount if subscription is paid in advance.

Building Notes

AUCKLAND.

The fine new building for the New Zealand Insurance Coy. in Queen Street which is being erected to the designs of Messrs. Hoggard, Prouse and Gummer is progressing well. The steel framing is all up and a good deal of the concrete work is finished. The building is to be faced with Kairuru marble from Nelson district (the same marble that is being used to face the New Parliamentary buildings in Wellington).

The stone varies in colour from almost pure white to a dark bluish-grey, and it is hoped to utilise this feature so as to produce a unique effect in the building's appearance. The darkest shades will be employed in the lower storeys and the lighter shades in the upper portion of the facade. A central portico entrance will be the main feature of the lower part of the building. It will be 40ft. wide and 27ft. high, passing upwards between two storeys. Two fine white marble columns will tower in the foreground, having bronze bases and caps, the former bearing the monogram of the company. The pillars will be 3ft thick and their shining whiteness will form an effective contrast against the darker shadows of the portico.

A great deal of delay has been caused in the building of the Myers Kindergarten by the difficulty experienced in obtaining the steel frames for the casements, but these have now come to hand, and the carpentry work is now practically finished, with the exception of putting in the doors. There yet remains a great deal of plastering to be done, as all the downstairs ceilings and walls have to be finished, in addition to some outside work on the rear portion of the building. It is now possible to gain a fair idea of the appearance the rooms will present when finished, these being fitted with accordeon collapsible doors in such a way that they can be practically converted into open-air balconies in fine weather. It is expected that the building will be completed this month.

CHRISTCHURCH.

A new wing has just been added to St. Saviour's Orphanage, Richmond. It is substantially built of brick, roofed with slates,

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and is electrically lighted throughout. It is a one-storeyed building, in a splendidly sunny position. Along almost the whole front runs a deep and sheltered verandah, which can be fully protected from the wind by sliding glass screens and folding doors if necessary. At each end are spacious wards for the children, each being capable of holding about 30 beds without crowding. The wards are furnished in first-rate style, and the rows of neat little iron beds and cots, with their spotless white counterpanes look very well indeed. Besides the children's wards are bedrooms for the sisters, a large playroom in which dolls' houses are a prominent feature, a sitting room for the sisters, a home-work room, splendidly-fitted-up bathrooms, and every opportunity has been taken to use up available space with cupboards, pantries, and other useful conveniences for rendering the working of the wing easy.

Mr. Righton at the dedication ceremony said that they had secured land for a boy's home at Timaru. The combined homes when furnished would cost about £30,000.

The Crystal Palace Limited are about to erect what they term the most up-to-date theatre in Christchurch, which is to be "a distinct advance on any picture theatre in New Zealand at present" according to the Manager of the Company. The site gives access to the theatre from two directions, viz:—Gloucester Street and Cathedral Square. On the mezzanine floor will be an electrical fountain, palm alcoves, promenade, retiring rooms, and lounge. The company intends building similar theatres in the other main centres.

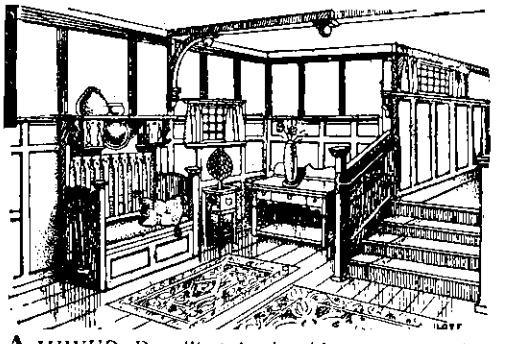
DUNEDIN.

The number of permits issued from June 16th to July 17th, was 31, representing £12,006 in value. The business premises included N.Z. Government Telephone Exchange Offices at South Dunedin. Branch Station for Dunedin Fire Board at South Dunedin. 6 brick buildings. 8 wooden buildings. 17 additions and alterations.

Messrs. J. Barton & Son, Architects have let contracts for a five-roomed residence in Oxford Street and two seaside residences at Warrington each of five rooms with large verandah.

Mr. E. W. Walden, Architect has in hand the following work:—Extensive additions to Messrs Donaghy & Co's. rope factory in South Dunedin; Contractor Mr. J. S. White. Shops with offices above are being erected in George Street in connection with Lang's estate; the shop fronts will be completed in oak; the stall boards, piers, and ingoings to be tiled. A five-roomed brick residence has just been completed in Campbell Street; contractor W. H. Mills. The same contractor has lately completed another five-roomed wooden residence in Eglinton Road for Mr. R. Walden. The Metropole private hotel, St. Clair is undergoing extensive additions and is being renovated inside and out, the balcony is to be replaced and extended. When this work is completed the building will contain some 30 rooms. The work is being carried out by Messrs Robson & Crawford, contractors.

Mr. Leslie D. Coombs. A.R.I.B.A., has in hand additions to the Oban hotel, Stuart Street, Messrs Wood & McCormack, contractors. Alterations and improvements have lately been made to the arrangement of the offices and to the front of the Waitaki Dairy Company's building in Castle Street, Messrs. Robert & Co., contractors. Messrs. Shank & Fountain's tender



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has been accepted for the erection of the Paretai Co-operative Dairy Company's building at Paretai.

On July 18th Mr. Leslie D. Coombs, A.R.I.B.A., lectured before the Technological Branch of the Otago Institute on "The Architecture of the Renaissance," and on July 19th Mr. H. Mandeno read a paper before the Otago Branch, N.Z.I.A. on "Architectural Competitions." The paper was much appreciated and led to a lively discussion.

Mr. Vanes, of Messrs Salmond and Vanes, architects, anticipates having his plans ready this month so as to be able to call for tenders for the alterations and renovations of Trinity Methodist Church.

According to a reporter of the "Evening Star," Mr. Basil Hooper, the supervising architect for the new Anglican Cathedral says the work is progressing satisfactory. This is the biggest stone job going on in New Zealand at present, and the contractor Mr. W. McLellan is having a busy time. Oamaru stone is used mainly. The part being completed (about one third) will seat 1,000 people. The walls are up about 6 feet above the floor, but owing to the slope of the ground the floor at the Octagon front is well overhead.

The Dunedin "Star" understands that four promises have been made to subscribe to the fund now being raised for the completion of St. Margaret's Residential College building (Presbyterian) scheme—viz., one of £1000, two of £500, and one of £200.

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At the Synod Annual Meeting which took place last month the question of a site for an Anglican Cathedral was brought up and a committee was appointed to report to next years meeting on the question of the ultimate site for the cathedral, and the best method of dealing with the Taranaki Street property.

Mr. Shirtcliffe said that the object was to hurry on the construction of the cathedral if possible. At the present rate it did not look as if the cathedral would be started for the next 40 or 50 years. At present the trust was in a more or less moribund condition. As the two acres in Taranaki Street were deteriorating in value they were only earning one and a half to two per cent. He did not know if the site was bought for the purpose of erecting a cathedral thereon, and there was bound to be a divergence of opinion as to where the structure should be erected. That was the primary question which had to be considered. The taxation on the unimproved value was very heavy, and the rentals they could hope to get would be far too small. In the event of Synod deciding that the cathedral should be erected elsewhere, it would be wise to consider the sale of the property and the investment of the proceeds at at least 5 per cent. This would give a much better return than at present. He wished that the committee should be given full power to investigate the present or any proposed site. The cost would not be heavy, and it would be a small price to pay for having the project thoroughly considered.

Mr. T. F. Martin expressed the opinion that the committee should be given power to obtain the views of an architect on the subject.

This suggestion was agreed to and Mr. Shirtcliffe said that at the rate of progress Wellington had made during the last twenty years there would be no sites available in fifty years' time except at a prohibitive price. If the site was fixed there would be a better chance of obtaining big donations. He was quite satisfied that funds would come in as soon as a start was made.

The motion was carried unanimously.

Messrs. Swan & Swan have in hand the plans for a new private hotel. The new building, which will have a 70ft. frontage to Plimmer's Steps, is to be of three stories, with a concrete promenade roof. The ground floor will be taken up by a large lounge, billiard and smoking rooms, and a dining-room to seat 100 persons, with kitchen accommodation, etc., in addition. The first and second floors will contain forty-five bedrooms, with several bathrooms and two large sitting-rooms. A feature will be that provision for escape in the event of fire will be made in each of the upstairs rooms, thus obviating the necessity for occupants to flock to some central place of escape, as is so often the case. The new building promises to be a plain and substantial one, and work will be commenced almost immediately.

The foundations for the new officers' mess building at Featherston have been put down, on a site opposite the camp gates. The building will be very much larger than the present one, which has been found to be quite inadequate.

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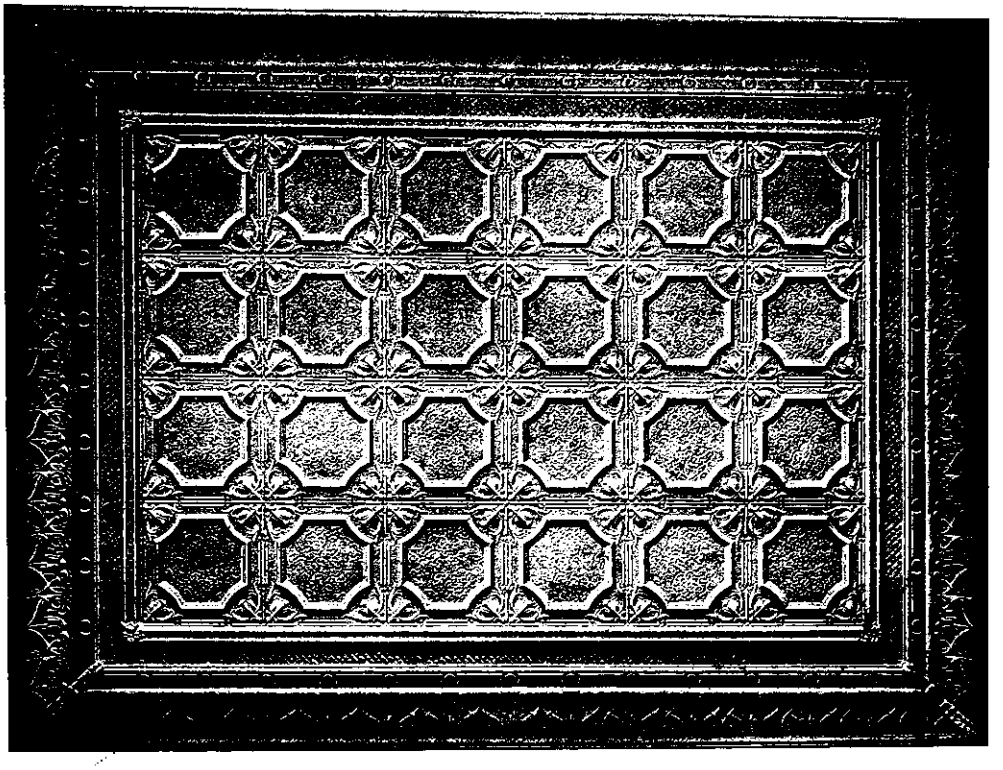

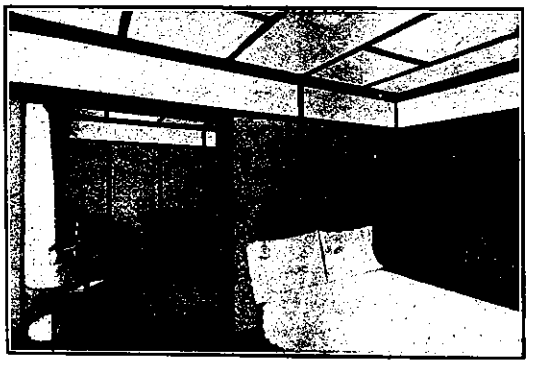

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