N.Z. BUILDING PROGRESS.

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N.Z. BUILDING PROGRESS

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The Editor will at all times be glad to receive Illustrated Articles on subjects of interest for consideration, provided the articles are short and to the point, and the facts authentic.

Should subscribers continue to receive copies of this journal after expiry of current year, it will be accepted as an intimation that they are desirous of subscribing for a further period of twelve months.

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Publisher's Announcements.

Our 63rd Competition

We offer a prize of £1 1s. for the design adjudged to be the best for A Model Dining Room, which is to be suitable for a five or six-roomed cottage, and is to have any area of not more than 300 square feet, including any bay or ingle-nook. It is to be presumed that the room is at a corner of the cottage, and that there is a wide verandah on one side. All fittings and furniture are to be shown. The drawings are to comprise one plain and two interior elevations, all to the scale of ½ inch to 1 foot, and all to be in black and white and not shaded. Marks will be given for draughtsmanship as well as for design.

Mr. Leslie D. Coombs, A.R.I.B.A., 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 "Sixty-third Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by May 21st.

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.

Our 64th Competition.

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

A Six-Roomed House

with ground and first floor to be built on a flat suburban section with 150 feet frontage to a road running along its southern side. The materials to be used for outside walls to be any of the following:—Entirely brick; Brick covered with plaster or finished in any suitable manner; Brick plastered (rough or smooth) with quoins or facings of brick; Concrete plastered or finished in any other suitable manner; Concrete and brick combined. Hanging tiles or slates may be used in the gables or elsewhere. Partitions to be shown 6 inches thick. Roof to be covered with tiles or slates. The rooms, etc., to be approximately of the areas given below. Heights of ground floor to be 10 feet for main rooms, for first floor they are not to be less than 9 feet over half their area.

Drainage into sewers (public), rain water into pits. The design for front fence, or wall, with gates (single and double) to be shown. Verandah on North side only. Bay windows or portico at the option of the designer.

Sizes:—Hall not less than 7 feet wide. Staircase not less than 3 feet wide. Drawing room about 300 square feet exclusive of window recesses. Dining room about 144 square feet. Kitchen 120 square feet. Scullery about 100 square feet. Bed room No. 1 same size as drawing room. Other two bed rooms not less than 170 square feet each. There must also be a safe, store room, bath room, W.C. (separate from the bath room), linen closet, etc. The laundry and out-building need not be included. Drawings to be to ¼inch scale, finished in ink.

Mr. P. 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 "Sixty-fourth Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by July 21st.

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REGISTERED AS A NEWSPAPER

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WELLINGTON, AUCKLAND, CHRISTCHURCH, AND DUNEDIN, NEW ZEALAND, MAY, 1918.

Contents for May

Editorial Comment

Otira Tunnel Nearing Completion.

A great national work, the Otira Tunnel, has at last reached a stage within measurable distance of completion. Sir William Fraser, Minister of Public Works, on a recent visit to Otira, reports that the district engineer at the Bealey, or eastern end, was in the tunnel at night, when the engines had stopped and all was silent. He heard distinctly the sound of blasting in the Otira section, eleven and a half chains away. Upon telephoning his report to the Otira engineer, giving the time and the number of shots heard, he obtained confirmation of the interesting fact that the approaching ends of the five mile tunnel are now within reach of each other. Some labour difficulties which held up the work for a few weeks seem to have been settled, and we hope that operations will now go on to a successful issue. The tunnel has already had an eventful history. Started by a firm of private contractors under bond to complete it several years ago, it had to be taken over by the Public Works Department, as private enterprise did not appear to be able to cope with the difficulties, the most important of which comprised labour troubles. It will take some time, of course, after the headings meet, before the lining can be constructed and permanent way laid. Once the headings connect, the problem of drainage will disappear, as there is a gradient down from the Bealey to the Otira end. The engineers will have to begin to decide what form of mechanical traction is to be used in this tunnel, one of the world's longest. Experiments on the New Zealand railways with petrol electric locomotives indicated that this would probably be the power source. Obviously steam is out of the question, as the fumes in so long a tunnel would make it impracticable for much traffic. The petrol-electric tractor, discharging its exhaust through a cleansing screen of water, may provide the solution of the power problem, and our readers, interested as they are in all forms of engineering progress, will watch the developments closely. We shall endeavour to keep them well posted on this important question.

National Service "Hangs Fire."

National service has come in New Zealand, on paper, and the community are awaiting action from the Government to bring the ideal into actual practice. We gather, however, that the National Government is in no hurry over the matter. No doubt a radical scheme for the State control of essential industries, the reorganisation of labour by diverting it from unnecessary occupations, would have to be well thought out beforehand, and the need become thoroughly apparent before any complete scheme, upsetting ordinary business activities, would be acceptable to the public. The Government, by showing no haste, is admitting, it seems to us, that the conditions do not call for anything drastic just at present, so that worried business men may breathe a little longer, free from State interference. While on this point of State control, we would like to bring under the notice of our professional readers an illuminating little episode which occurred at a sitting of the Defence Expenditure Commission. The dentists of New Zealand, thoroughly organised under the aegis of the New Zealand Dental Association, patriotically volunteered at an early stage of the war to undertake dental treatment of recruits on a scale little, if anything, above "cost." They were officially recognised by the Government, their services resulted in hundreds of men who would otherwise have been classed unfit, being made dentally perfect, and suited for active service. Out of this grew the Dental Corps, an institution which has won golden opinions from those who know the value of its work. When the Director of Dental Services, Lieut-Colonel Hunter, appeared before the Commission, he was duly congratulated on the efficiency of the dental services, but was asked why dentists called up under the Military Service Act, and taken out of the ranks of private soldiers for the work of dentistry in camp and at the front, were paid ten shillings a day "professional allowance," as well as given commissions. The Director's answer was that they were professional men, and as national service was not truly national—in that it did not cover men of all ages—it was unfair to dentists to take them away from practice, giving their confreres who remained an unrestricted scope for private work owing to their absence. "Yes," said the very alert Chairman of the Commission, "but we found eminent lawyers, and eminent engineers in the ranks, and they were not getting the professional allowance!" Colonel Hunter could only suggest in reply that these eminent professional men had not had their special services utilised by the military. The Commission, however, had instances in which these professional qualifications had been utilised, but not paid for at the special rate, and the Chairman summed up the position in words which should strike home to the professional men who read these columns: "Does it not show that there are energetic people at the head of the doctors and dentists who have got something for their people?" A word to the wise is sufficient!

Hutt Concrete Road.

The Wellington City Council has informed local bodies interested, like itself, in the proposal to form a concrete track on the Hutt Road, that its engineer will go ahead with this important work as soon as finances can be arranged. We are glad that this experiment is not to be held over until the war comes to an end, as it is in the highest degree necessary that a start should be made in up-to-date roading in New Zealand. The development problem will at once become vital when the country begins to commence to recover from the troubles of the war—troubles due in New Zealand mostly to the suspended activities of development in a young country. The existence of such an object lesson as the Hutt concrete road will be immensely valuable. The war has thrown into great prominence the tremendous national value of efficient transport, nowhere of course, more than in the areas close to or included in the war zone. England had commenced, prior to the war, a splendid national system of maintaining and improving arterial roads, but moneys earmarked for the upkeep of the roads have been taken for other purposes during the war. Big sums are still being spent on their upkeep, but because of the wear to which they are being subjected and the shortage of labour, raw materials for repair, and money, they are deteriorating very quickly, and it is now recognised that millions of pounds must be spent in order that the roads may be put in passably good condition after the war in the interests of commerce and industry. In Germany and Austria the situation is said to be very acute, and in the United States the roads are being used to an increasing extent to relieve the congestion on the railways and to economise coal. The British Government and the Board of Trade have recently appointed a Road Transport Board to consider the working of the British roads in wartime, and a transport Committee has also been appointed for Scotland. The motor industry must welcome this new interest in the road problem.

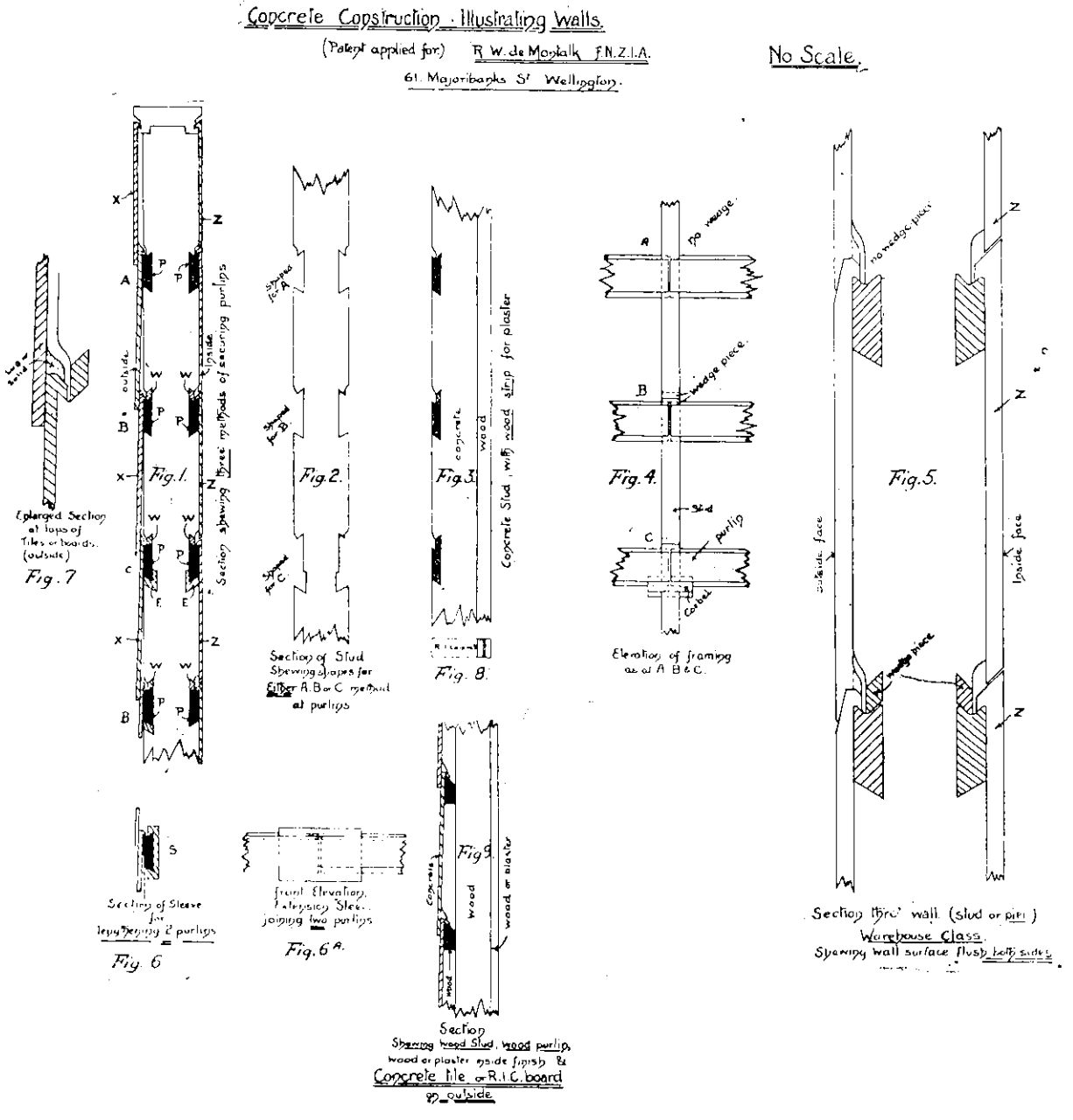
Trading After the War.

The amount of attention given in English trade journals to discussion of after-the-war development of business within the Empire is a refreshing sign of a wakeful and receptive attitude. Before the war, it was hard to get an English pleasure car fully suited to all colonial conditions. In luxury, mechanical perfection and reliability English vehicles reached a high standard, but on muddy colonial roads, luxury of finish and completeness of equipment involving heavy weight are out of place. However, the war must have given English makers an idea of how bad roads may become, so that it will now be possible for a colonial agent to adequately picture to his principals the sort of ordeals a car must stand in the Dominion if it is to command wide acceptance. Leading English manufacturers are considering a comprehensive scheme for catering to the colonial buyer. They propose to adopt standardisation in cars, enabling spares to be cheaply provided.

A New Method of Concrete Building.

Building in concrete or reinforced concrete in place of wood, in particular, and even in lieu of brickwork, is the inevitable. It has been coming during late decades, and has advanced much these recent years, both in factory cast parts and in work done in situ.

In factory made concrete block work a great variety of solid, hollow and shaped blocks have been tried. Factory made reinforced studs and beams have been employed with much success, but so far a complete system of factory-made parts for complete buildings has been lacking. However, the patentee



of the system described below claims that this objection can be easily overcome.

This system, of which the wall construction only is described in this article, is for use in any class of building—whether it be a dwelling house, factory, warehouse or church, or only a shed or small motor garage. It gives facilities for making any of the parts of any size (in reason) in length or thickness of section, and for any degree of strength required. For the warehouse or any very large or very high building, the structural parts, such as piers, columns and beams may be built in situ. In such erections it is quite as valuable as for use in a shed or dwelling. The method is elastic, in that factory-made parts can be extended. It also permits of any kind of adornment, that is to say, it may be used in the fashioning of any design, though it were better, in such as applies to any special material, whether wood, brick, stone, etc., that designs should be made to suit the material. In this there is great scope for breadth of effect and originality. Exposed parts will be made in multi-colours, such as grey, terra cotta, black, blue, pink and yellow.

In cost—this is a very important item—the dwelling house will certainly not exceed the present cost of a good wooden building, and the concrete building will be lasting, and will not need repairs. Fire insurance will be reduced to a minimum, whilst in the congested areas of towns and cities there will be no risk of life from fire. As to the cost of buildings of the warehouse class, this will be less than brick, probably much less. In damp-proofness this method of building resembles that of wood construction, there being studs and plates, weatherboards and lining. The difference is that the parts are all concrete or reinforced concrete in place of wood. The following illustrates and describes the walls only. Reinforced concrete is referred to as "R.I.C."

Fig. 1. Section through a wall shows part of an R.I.C. stud, in which P (blocked in black) are horizontal pieces or purlins; X are concrete tiles or slabs or R.I.C. boards, on outside of wall, whilst Z are corresponding parts in concrete or R.I.C. There are several ways of putting purlins in or on and securing same as shown opposite A B and C. When style A is employed, the stud is shaped to fit the purlin—the latter is thus keyed in because its shape is the same as the stud and the purlin cannot move or fall out. In this style (A) the purlin is put in from a horizontal position. At B (a different style), is W, a wedge. This was designed to enable the purlin being placed on the studs by putting in the purlin "face on" (this operation being both easier to effect or more rapid than the style as at A); the purlin is placed in position on the studs, then the wedge W is pushed home, sliding same into position on top of the purlin; the void in stud is left for the wedge, giving ample room to enable the placing of the purlin. It is thought that this (B) is the method which will be generally adopted. C is in all respects similar to B with the exception that E being a corbel, is added. This corbel is for use in conjunction with methods A and B, and is used in order to provide a greater bearing for the purlin should a stud of very thin face measurement be employed (say in studs of less than 2 inch face width, when the corbel may be of any required length). Generally B will be adopted. It will be seen that it is impossible for the purlins to become displaced. At X are shown concrete tiles or slabs or R.I.C. boards, which are the outer covering of the walls. These pieces are formed at the head with a projection on the inside shaped as shown in Fig. 7, and are "hung on" to the corresponding shaped part of the purlin, whilst near the bottom (to fit on top of under tile, etc.), is a part corresponding to the shape of the head of the lower course. This projection may be solid through the length of the tile, or R.I.C. board as the case may be, or may be made as lugs, if so desired. It will be seen that the outer covering cannot be displaced. The X pieces may be made as shown in figures 6 and 7—that is, canted outwards like weatherboards, or may be laid with flush surface as shown in figure 5, and may have different shapes or rebate. The X pieces are lapped, rebated and grooved on the vertical edges to render these joints also weatherproof. Tiles, slabs or R.I.C. boards are shown at Z, forming the inner lining. They will be made rough where it is intended to plaster on same, as in housework, office work and the like, and made with a good smooth surface for warehouse and factory walls, where it is not necessary to cover joints, but where still a good surface and appearance are desired. These Z pieces are hung on the purlin (like the X pieces) but the bottom edges are differently made to the X pieces, as weatherproofing is not needed. Still again it is clear that Z pieces cannot be dislodged. These Z pieces will be rebated at horizontal joints too, if so required.

To go into further detail—Fig. 2 represents a stud showing the different shapes at purlin rests—either A, B or C will be the shape, depending as to whether it is intended to place and hold the purlins as shown in Fig. 1, and either as at A, B or C. The sleeve is shown at S. Figs. 6 and 6a. This is intended for use in lengthening purlins between stud supports, the distance between the abutting points of the purlins within the sleeve being regulated as the extension of the length is required. It will be noted that the sleeve is a three-sided piece, and is left open on the outside to allow the tiles or R.I.C. boards to hang close to the purlin.

Fig. 4 is an elevation of the framing, looking at it from the outside, and shows at A, B, C in elevation, that corresponding to A, B, C, in section in Fig. 1, i.e., it shows styles without wedge pieces, with wedge pieces, and with wedge pieces and corbels. The foregoing finishes the description of walls entirely made of concrete or R.I.C.

The author of this method of construction (an architect of long standing) has had much experience in concrete building, and knows the difficulties attending transport in country districts. He is also aware of the peculiarities of the public mind born of the long use of building in wood, and believes there are many who would like a concrete outer covering with wood lining or plaster inside, in order to reduce insurance, do away with painting and repairs, etc. Hence he has devised his scheme to meet these re-

quirements. In the following description Fig. 8 is an elevation (or section) of a R.I.C. stud, with a wood strip (see sectional plan) on the inside face. This wood strip is cast with the concrete stud and forms part of same, and enables the use of wood lining, any of the compo boards, asbestos sheeting or lath and plaster on the inside, the outside being all concrete as before described in Figures 1 to 7, both inclusive. Again, in order to provide all concrete outside, including the stud, and to permit the use of plaster on metal mesh or other metal keyings on the inside, metal ties are cast in the concrete stud and are left standing out on the inside face for fastening the metal meshwork. In this last described, wood pieces may be cast on the stud at places necessary for the fixing of skirtings, cornices, etc. Arrangements are also provided so that the building owner may have the ordinary wood studded house, wood lined or plastered on the inside, and yet have concrete tiles or boards on the outside—see Fig. 9—where shaped wood purlins (blocked black) are nailed on to the wood studs. On these purlins are hung concrete tiles or R.I.C. boards just as described in the first section hereof. From this it will be seen that those who already own wooden houses may, at small cost, cover the same either over the weatherboards or by taking off the weatherboards, cover straight on to the studs by merely nailing shaped purlins on to the studs or weatherboards as the case may be, and finishing with concrete tiles or R.I.C. boards. This concrete covering would pay handsomely, as it would render the usual recurring paintwork and repairs unnecessary, reduce fire insurance, give some measure of protection from fire from the outside (say adjoining house or grass fire), permit the growing of creepers on the walls, and greatly add to the appearance and character of the house so treated. The author is of opinion that of the systems described herein, that shown in Fig. 8 is the style which in all probability will be commonly adopted for the residence. The reader will remember that this system comprises the concrete stud with the wood strip on the inside, giving facility for wood finish or plaster inside, whilst the outside is all concrete. For the warehouse class of building perhaps that shown in Fig. 5 is the more suitable, with the piers and beams built in situ. This style should prove most valuable in warehouses, hotels, large residential flats and the like, giving as it does an absolutely hollow wall of great strength, ensuring a dry interior and other obvious benefits due to the hollow wall.

In conclusion, it can be fairly said that all the disabilities attending concrete building have been overcome by this system. The builder will be able to order from the factory so many hundred feet of concrete studs, plates, and weatherboards, just as is done with timber. The fact of the parts being factory made, will be a guarantee of the faithfulness of the material, as the work will be made by experts, and the success of the manufacturer will wholly depend on the turning out of only a first class article. In erection the method is simple, and rapid. It is also elastic. Different lengths of tiles or R.I.C. boards will be available, and these, with the sleeved purlin, will allow of any measurement being worked to. Special angle and quoin pieces, frieze, base and other parts will be moulded, and customers will be able to obtain tiles or boards giving such projection and ornamental reliefs as the designing architect may require. Though it will not be necessary to bed and point joints, this may be done should the builder prefer it. It would seem that everything necessary to ensure a first class construction and finish is provided, and we venture to say that here is an opportunity where capital will not be found lacking in sufficient quantity, to place this means of substantial building at the disposal of the residents of this Dominion.

The patentee is Mr. R. W. de Montalk, architect, F.N.Z.I.A., erstwhile of Auckland, and now of 61 Majoribanks Street, Wellington. Mr. de Montalk has always been in the forefront in concrete and reinforced concrete work. He is a student of this medium—the designer of the first reinforced concrete house and the first reinforced concrete roof, and of some of the largest concrete buildings in New Zealand. Mr. de Montalk has experimented largely at his own cost and patented many parts, such as reinforced concrete weatherboards, and also flooring pieces of remarkably small section, his avowed aim being to provide the people of this Dominion with better and more substantial homes.

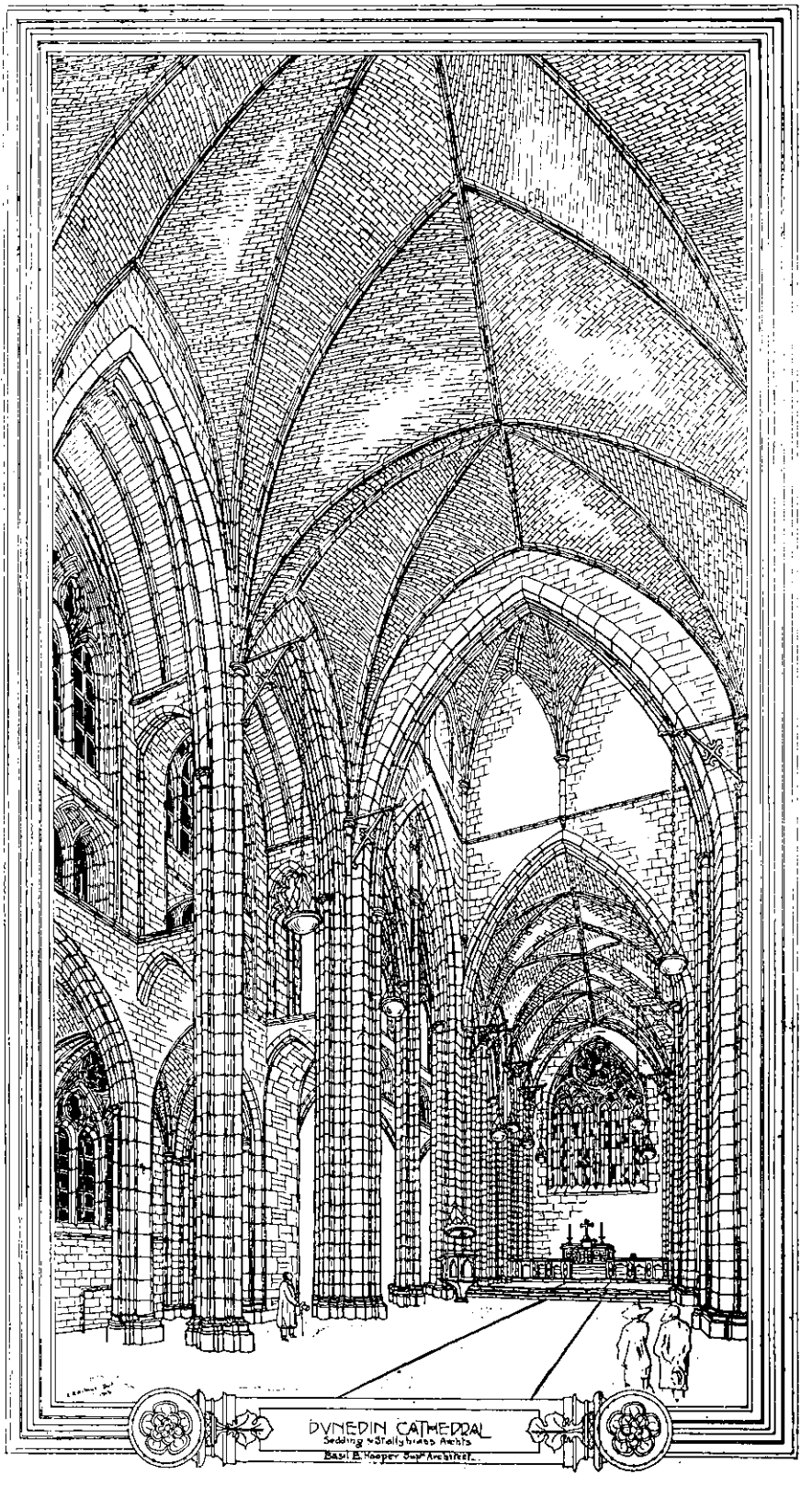
Erosion of Marble.

The erosion of marble used for the exterior decoration of buildings in Melbourne has been attributed to attrition by dust particles impinging against the exposed surfaces. Although this may, to some small extent, be the cause, the wasting, according to a contribution by Mr. John Gibson to the "Proceedings" of the Royal Victorian Institute of Architects, is probably attributable to more potent chemical reactions. It is well known that water containing carbonic acid gas has a solvent action upon carbonate of lime, the component of marble. Rain, in its descent through the air, collects large quantities of this gas, more particularly in cities, and it is, therefore, to be reasonably assumed that this is the principal destructive agent. Again, the air in all cities contains a quantity of sulphurous and sulphuric acid which, likewise, attacks the carbonate of lime (marble), forming sulphate of lime. The probabilities are that, in the first instance, the softer portions of the marble are dissolved by rain water and sulphuric acid, leaving fragile serrated or pulverulent surfaces, which are afterwards removed by the attrition of dust particles carried by strong winds.

* * * *

THE NATURALISM OF GOTHIC.—

There is one direction in which the Naturalism of the Gothic workmen is peculiarly manifested; and this direction is even more characteristic of the school than the Naturalism itself; I mean their peculiar fondness for the forms of Vegetation.—*Ruskin.*



A PERSPECTIVE OF THE NEW DUNEDIN CATHEDRAL

By Eric Arthur, in the office of the Supervising Architect, Mr. Basil Hooper, A.R.I.B.A. Mr. Arthur is now in camp.

The Principles of Town Planning

By BASIL HOOPER, A.R.I.B.A.

The following Paper was read before a meeting of the Town Planning Branch of the Dunedin Amenities Society last month.

This brief paper is written with the object of putting before our members, in a short and compact way, the position of town planning and some of its main principles. I take it that many of us still have a somewhat hazy idea of our objects, and perhaps these few remarks may make them a little clearer. I trust they will also provoke some discussion. I am indebted to Mr. W. R. Davidge, A.R.I.B.A., of London, for a great deal of the matter contained therein.

1. **The Need for Town Planning.**—The first principle will be accepted by all who have thought about the subject in any way. Whether the special need is to sweep away the slums or provide for the future growth of the town, whether parks and open spaces are called for or roads to give rapid transit and business facilities, all are agreed that, if it is reasonable to plan the alterations to a house, it is still more desirable to plan the town and its extensions.

2. **Individuality.**—A town is not a stock article, but must be made to the measure of the district. Localities differ very widely in their special needs and views as to development, therefore a town's plan must be its own.

3. **Community Control.**—This is essential if any real good is to be done, and it is quite evident that authority, in the form of a comprehensive Town Planning Act, is absolutely necessary.

4. **The Zone System and Commercial Districts.**—From the point of view of protection of property-owners in residential districts some form of restraint as to the location of commercial buildings is clearly necessary. Separate areas for factories and other commercial purposes should be clearly defined, but there must be ample space provided for expansion, or the business side of the town will overflow into the residential quarters. This alteration of use is continually before our eyes. Even in our own town we find factories, shops, etc., mixed up with dwellings in very unpleasant ways. It is interesting to notice that in nearly all towns, even the oldest, the heart of the business community is centred in the areas of the original settlement. This has caused an endeavour to crowd as many office buildings as possible near this commercial centre, and hence the great increase in the height of business premises.

5. **Control of Building Heights.**—It is most important in the interests of traffic facilities, public health, and public economy that the height of buildings should be kept within reasonable limits. This limit is now usually determined by the width of the thoroughfare, buildings on wide streets being allowed greater height.

6. **Limitations of Houses Per Acre.**—A limitation of this kind tends first to spread the town, and consequently the values, over a larger area, and, by restricting the use to which land is put, must to that extent decrease the value per acre of land which is already ripe for building. At the same time, it will tend to give corresponding increase of value to land further from the town. Its effect on the already overbuilt city areas cannot fail to be beneficial, for by fixing a standard of suburban development, a high standard of amenity, and a comparatively low standard of price, it will be financially impracticable to force up values in the built-up areas above a reasonable limit, and for the same reason it will not pay to increase unduly the congestion of building. It is difficult to fix a suitable "land unit," but 12 houses to the acre seems to be accepted as a reasonable maximum.

7. **The Influence of Geographical Position.**—Private residents will not be attracted to a town which is a blot on the landscape, and businesses will not come unless there is business to be done. Any town plan, therefore, for the development of the town must aim first at making the utmost of all natural and geographical advantages, and then at guiding the development into the most advantageous lines for the benefit of the town and its residents.

8. **Transit Facilities.**—It is certain that, in the absence of any special commercial or natural advantages, or of facilities for the easy communication with existing centres, a community cannot expect development. Rapid transit, therefore, is all-important to the success of any town.

9. **Arterial Roads.**—The most important parts of a town plan are the main roads into and out of the town. This really is the skeleton on which the plan will hang together. The routes for arterial roads should be laid down at an early stage in the town plan, and definitely secured from other uses. Many of the large towns in England are now considering this problem, and also there is a tendency towards circular or ring roads of special width encircling the town. It is generally agreed, however, that main roads are the property of the nation, and should be a national matter

10. **Roads and Road Widths.**—Two general principles must be borne in mind. It is necessary (1) to secure easy and rapid transit by making provision for fast and slow traffic, sufficient width, etc.; (2) to secure the amenities by preserving view-

points and vistas, planting trees and grass, etc. While it is desirable to have a minimum distance between the building lines, a hard-and-fast by-law width is undesirable. The width of roadway should be dictated by the use to which the street is put, and in residential streets the remaining width can be devoted to grass and trees.

11. **American Ideals.**—These may be divided into four phases: (1) Rapid transit; (2) the civic centre; (3) the provision of diagonal avenues and parkways; (4) the provision and linking up of parks, and the scientific distribution of children's playgrounds.

12. With regard to the third item, the rectangular system of lay-out has generally proved quite satisfactory so long as the town remains a limited size; but once the town develops beyond the original square mile or so some form of diagonal communication becomes a necessity, and plans have been prepared for scores of cities showing the now generally appreciated need for diagonal routes.

13. The provision of new parks in the outskirts to provide for the growth which must come is a need that is realised in America, but not in New Zealand, unfortunately. It has also been found that the betterment in the value of the property in the neighbourhood of the parks more than recoups the owners for a special rate that they are asked to pay. There is therefore nothing but advantage to be gained by securing further and larger breathing-places around the built-up area of our towns.

14. River banks and valleys should, as far as possible, be preserved for park purposes, and viewpoints and hilltops should be similarly preserved. Such a course is desirable not only for the sake of amenity, but to secure the stream from contamination, and at the same time utilise land which, in ordinary circumstances, would be unsuitable for building purposes.

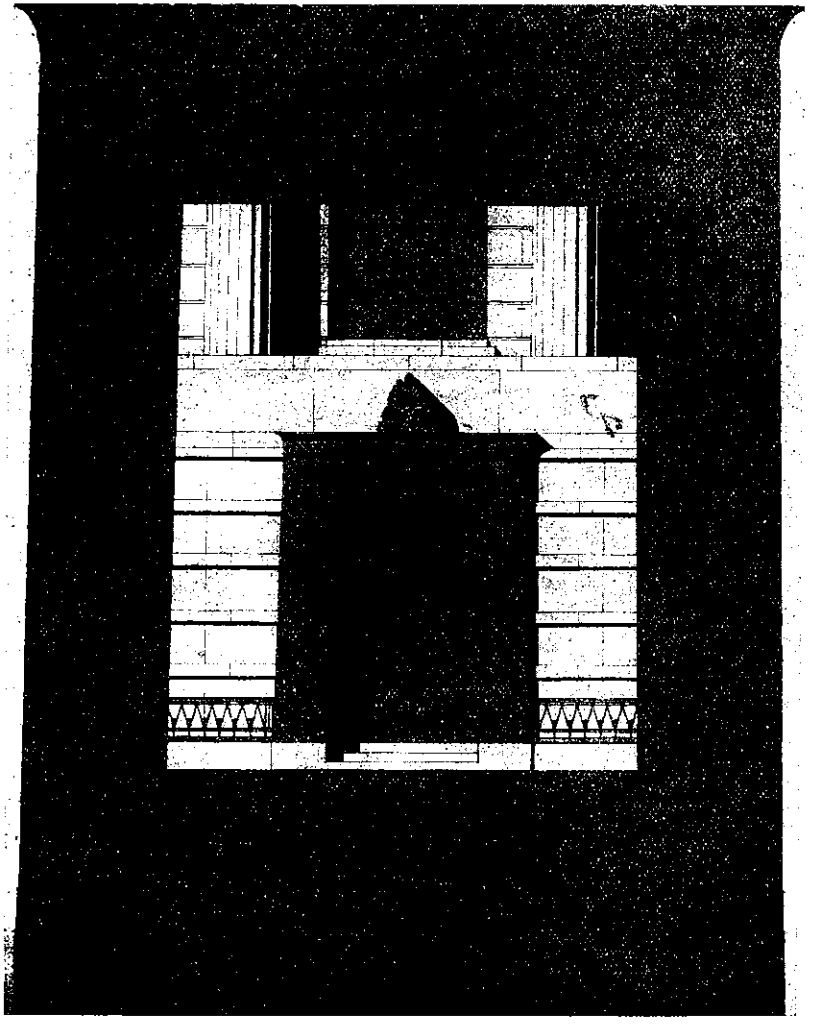
15. **Control of Advertisement Hoardings.**—This is a most important point, as too often the whole aspect of a district and the beauties of a landscape are ruined by some awful monstrosities. It is quite possible for even advertisements to be attractive, but the advertisers must be under some control, and should pay a stiff license fee per square foot.

A successful town plan must be the result of the whole-hearted co-operation between the surveyor, the engineer, and the architect. There are too many interests involved for it to be possible for one man to foresee and provide for the whole future growth of our towns. An attractive site is of little good without proper means of communication and efficient buildings. The most prefect of communications by rail, by road, or by water will be unsatisfactory unless the site is wisely chosen, properly surveyed, properly drained, and properly built. The most attractive design or grouping of buildings will be of no avail unless the site is first of all suitable, the roads are properly graded, and the means of communication the very best that can be obtained. Co-operation, therefore, between the professions is necessary from the earliest stages of a town-planning scheme.

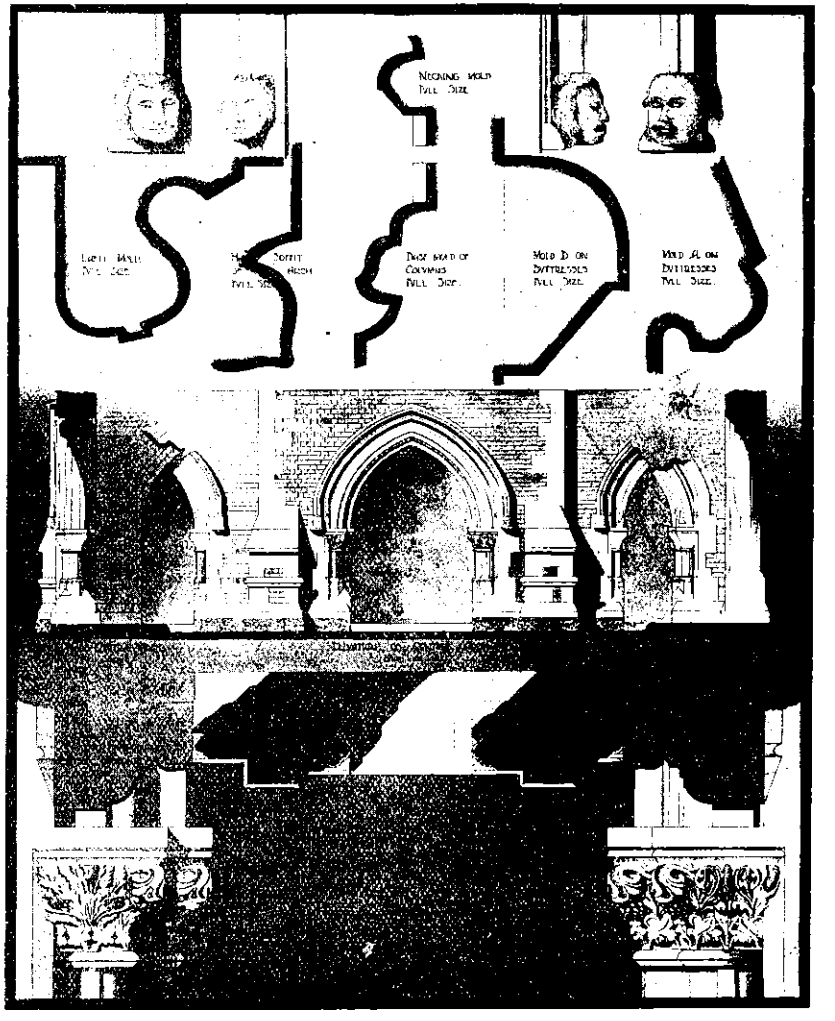
Revised Perspective Drawing of Dunedin Cathedral, showing fine entrance steps, with statuary, flying buttresses and other features not shown in the original perspective.

"Typographical errors," said William Dean Howells, "are always amusing. When I was a boy in my father's printing office in Martin's Ferry, I once made a good typographical error. My father had written, 'The showers last week, though copious, were not sufficient for the millmen.' I set it up 'milkmen.' "—"Christian Register."

Auckland Architectural Students' Association.



Design for Bronze Doorway to Bank, by J. O. Owen.
First Mention.

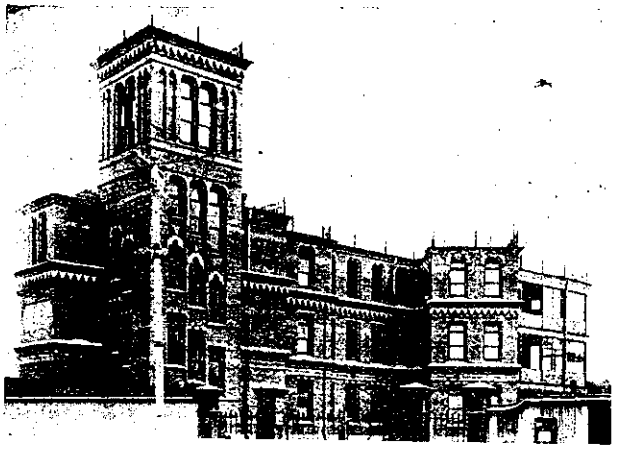


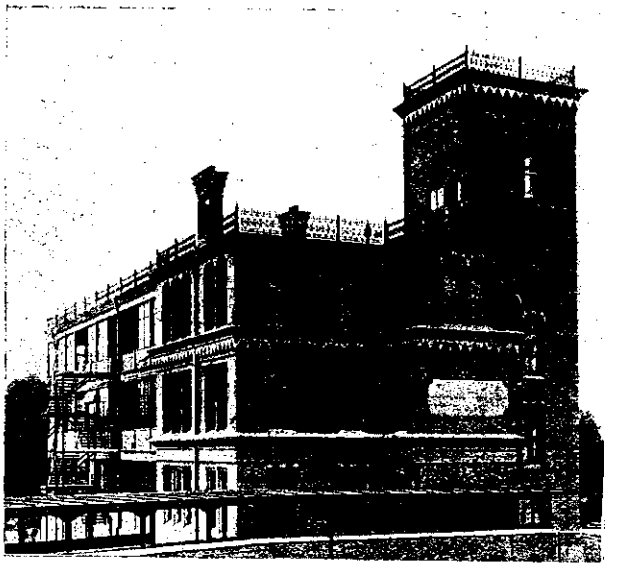
Measured Drawing, by G. F. Peek.
Second Mention.

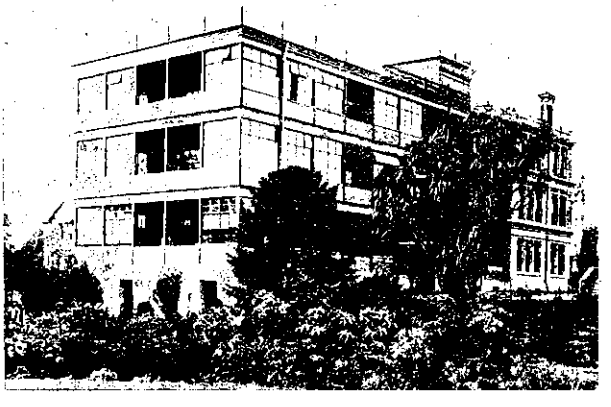
Christchurch Hospital Additional Wing.

THE CHALMERS WARD.

Some time back the Hospital Board had a gift of £8,000 from Miss Jean Chalmers, which was to be devoted to the building of a new ward as a memorial to Messrs. John and Peter Chalmers, of Ashburton, natives of Perth, Scotland. The building is now finished, and is illustrated on this page, Miss Chalmers having laid the foundation stone in Feb., 1916.







Four Views of the New Chalmers Ward of the Christchurch Hospital
(Messrs. Collins and Harman, Architects)

The plans were entrusted to Messrs. Collins and Harman, architects, Christchurch, and the building was carried out by Messrs. W. Greig and Sons under contract.

The Chalmers building is of the most modern type. Characterised by an extreme simplicity in design, it is obviously built to obtain the maximum amount of light and air, and to ensure the comfort and convenience of both patients and nurses. It is three storeyed, and contains three main wards besides a number of smaller rooms. Each of the main wards is 73 feet long by 24 feet wide, and allows ample space for 18 beds. In addition there are two smaller wards on each floor, one to hold one bed and the other two beds. All the wards are lofty and well lighted rooms, with big windows and white plastered walls. The walls are everywhere plastered except in the sanitary block, where they are tiled to a height of six feet from the ground. The floors are of polished wood, and all the ward fittings are of oiled rimu. Electricity is employed in lighting throughout the building. A comfortable sitting-room is provided on each floor, as well as duty rooms, sisters' rooms, and pantries. Store-rooms of a useful size and design are also provided on the first and second floors.

Commodious verandahs and balconies are a feature of the Chalmers building. These run completely round the west and north and most of the east sides of the wards. They are 10 feet wide and have moveable glass windows. In addition there is a flat roof, whence a beautiful view over Hagley

Park and the Gardens can be obtained. An electric lift will enable patients to be taken up and downstairs without the necessity for removing them from their beds, the comfortable size of the lift permitting of the beds being wheeled into and out of it. A covered way connects the new wards with the main Hospital buildings. A sub-way running underneath this carries the steam pipes, etc., to the new wards.

World's Timber Famine Prophesied.

GOVERNOR-GENERAL'S WARNING.

The Governor-General of Australia, Sir Ronald Munro Ferguson, in an interview granted to the Hobart "Mercury" early this year, gave Australians an unqualified warning of the sure approach of a timber famine.

"The timber reserves," said his Excellency, "are being rapidly exhausted. We cannot depend on continued supplies from the Baltic, because the forests of Russia and Scandinavia are being exhausted more rapidly than they are being reproduced. In North America the losses by fire are so great that it is estimated that for every one tree used ten are destroyed by fire. It is, therefore, certain that no dependence can be placed on continued supplies from that country. Moreover, it is to be remembered that the local demand in all those countries is enormous in any case. *It is as certain as anything can be that within a generation there will be a timber famine throughout the world.* It is, then, not too soon to get our house in order, so that we may preserve our natural forests of unrivalled hardwoods, and at the same time establish those forests of Pinus Insignis and of other families of the coniferous species which will in due course replace our imports from the Baltic and North America.

A brief sketch of the present condition of forestry in Australia was added. "Great advances are being made in Western Australia and South Australia by reason of the Ministers concerned with forestry taking a deep interest in it and having at their elbows trained advice. In Western Australia the revenue from timber is a very considerable item. In South Australia the natural timber resources are very small, and as, on the other hand, the need is considerable, the State has been stimulated into many activities. The theory of forestry has been well taught for a considerable time in South Australia, at the University as well as in the State forests. The growth of exotic conifers, such as Pinius Insignis, has a peculiar value in that State, where there is a great demand for cheap timber for fruit boxes, and for other industrial purposes, for which most of the native timbers may be regarded as much too valuable. Similar progress is being made in the other States, while the Federal Government is taking an interest in the forests of Papua.

"It would, however, be a great advantage if a properly selected party from Australia would visit South Africa and India. In South Africa valuable object-lessons in afforestation could be studied, and in India the constitution of forest schools, and the whole method of training foresters would be seen. The conditions in South Africa are somewhat similar to those in the southern parts of Australia, and in India they approximate to those of the northern coast districts.

Forest Reserves.

"Two or three considerations," continued the Governor-General, "are very apparent to Australians. One of these is the importance of allocating land respectively for forestry, and for agricultural or pastoral settlement, a process which can be accomplished by a rational compromise between the representatives of forestry and of agriculture. But to determine the boundaries of forest lands the advice of expert foresters is necessary, and so, also, in regard to the treatment of forest areas. Australian forests have suffered most of all from fires, and next to fires come indiscriminate felling. To check the waste that results, we are dependent always on expert advice from the trained forester, whose presence in sufficient numbers is essential. With that advice, there should be no difficulty in creating forest reserves, and there can be none in laying down forest plans under which the produce from the forest, and its regeneration, will be controlled. For various reasons, the returns from the timber resources of Australia have been very small, partly owing to the fact that the crop is so thin and scattered, and partly because access is frequently difficult, and extraction of the timber very costly. There is no reason why much heavier crops should not be secured, and the rapidity of growth of most of the Eucalypts and other species, as compared with Europe, should be a great incentive to take the necessary steps to secure more profitable yields.

Valuable Australian Timbers.

"Undoubtedly the Australian hardwoods are among the most valuable in the world, many of them ranking with the highest class of cabinet timber. In time they will become better known in Europe, and command prices which will more fully represent their value. Hitherto these timbers have been indifferently made known, and owing to the lack of classification they are heavily handicapped in the chief markets of the world. Some of the Tasmanian timbers, like Blackwood, are unique, while others, like Huon Pine and Celery Top, can hardly be replaced when the supply is exhausted. It is true that the return from a timber crop is not garnered within a few weeks, or months, or even years, but the prospective value of a well-managed forest is sufficient to justify the exercise of forethought in planning and expenditure. Most of the Australian varieties can be easily produced by the process of natural regeneration, so long as there is adequate protection against fire, and because of that, a great part of Tasmania should rank among the richest of the timber-producing districts of the world. The returns from the cheapest kinds of timber grown in Europe should give sufficient encouragement to pro-

duce the far more valuable timber of this country. For example, land in Saxony, worth 3s. 6d. a year for pasture, has been made to yield 50s. a year in growing Spruce for paper pulp, and this over areas of thousands of acres. In the United Kingdom, where forestry is comparatively neglected, Larch woods of thirty to forty years old, grown on land worth only a shilling or two a year, are being sold at a rate which realises £100 to £150 an acre, by far the greater proportion of this representing net profit to the grower. The fact is that, just as some land may be worth £50 an acre for agriculture, owing to its natural suitability for farm crops, so other land, which has comparatively no value for agriculture, will give a return, under silviculture, equal to that of the best agricultural land.

Tasmania's Opportunity.

"Germany," concluded his Excellency, "had a population of four millions dependent on the growth and manufacture of timber, and there can be no doubt that if the science of forestry is developed here, as on the continent of Europe, hundreds of thousands of our people will find occupation in the same way; an occupation which is among the healthiest and most remunerative of them all. It is obvious that, with the prospective development of industries in Tasmania, through the use of cheap electrical power, the local consumption of timber is likely to increase largely. And in addition to the local consumption, there is the fact that Tasmania can produce timbers unrivalled in the world where the wants of hundreds of millions of people are to be supplied."

WAR WORKERS.

A Group of Women Loggers in the employ of an American Lumber Company.

Sand-Lime Bricks.

The strength of sand-lime brick, states the *Canadian Engineer*, depends upon a firm bonding of the sand grains through the agency of lime. A mixture of sand and lime is pressed into bricks, which are then subjected to the action of steam under pressure for several hours. A chemical union takes place between the lime and the quartz of the sand, forming hydrated calcium silicate. The sand used should not be too coarse. That passing through a twenty-mesh screen and composed of grains ranging in size down to minute particules is desirable. In other words, the sand grains should be so graded in size as to leave very little interstitial space. The strongest bricks are made from sharp sand which is free from inert minerals, such as clay, iron oxide, mica, etc. The clay and iron oxide are particularly objectionable, since they are liable to mask the grains of quartz and thus prevent the union of the lime and quartz. Ten per cent. of clay substance should be set as the extreme limit. Feldspar is less objectionable, but in large proportions is undesirable, as it reduces the strength of the brick.

Soldiers' Garden Villages

What is being done in England.

The Board of Agriculture, London announce that they have concluded the purchase of 1,400 acres of land at Pembrey, in Carmarthenshire, near Llanelly, for use as small holdings for soldiers. The property has been bought from Lord Ashburnham, and when possession is obtained it will be equipped at once. This completes the 6,000 acres which the Board were empowered by the Small Holdings (Colonies) Act to acquire for land settlement, the other colonies being at Patrington, Yorkshire (2,200 acres), Holbeach, Lincolnshire (1,000 acres), these two being Crown lands leased for the purpose; and one in Shropshire (about 1,300 acres).

Sir Richard Winfrey, Parliamentary Secretary to the Board of Agriculture, writing on the subject, says: "We have now got to the end of our scheme for providing colonies for discharged soldiers under the Small Holdings (Colonies) Act. This Act empowered the Board of Agriculture to make an experiment in this direction, and to lease or purchase in the open market 4,500 acres of land in England and 1,500 acres in Wales for this purpose, and the Scotch Board of Agriculture was also enabled to acquire 2,000 acres in the same way.

"The Act called upon us to start schemes within these limits, to acquire the land, and to equip it for small holdings. We were to be guided by the recommendations of the Verney Report, as laid down by the Departmental Committee of which Sir Harry Verney, M.P., was chairman. No man was to be allowed to take up a holding unless he had the necessary experience; the holdings were to be on a basis of tenancy; expert guidance was to be provided for the settlers; co-operation was to be encouraged; the rents were to be sufficient to recoup the capital outlay, but no sinking fund for the repayment of the purchase price was to be charged.

"We have been actively at work on the scheme since last autumn, and we have now established two colonies, and we are on the point of establishing two others, the total area of the four being over 6,000 acres.

"Our first colony will be at Patrington, in Yorkshire, where we have leased 2,200 acres of agricultural land from the Crown. A director has been appointed, who is now in control of the central farm, and the estate is being equipped by the erection of sixty cottages and homesteads. The plan to be adopted there will be to place the discharged soldiers on the land as ordinary workers for a probation period of twelve months. They will receive full wages current and a share in the profits as an encouragement. At the expiration of that time, if they show the skill and aptitude necessary for the management of a small holding, one will be provided for them on the estate.

"The land at Patrington is good corn-growing land, and it is proposed to divide it into holdings of thirty or forty acres each. It is situated about twelve miles from Hull, which offers an excellent market for farm produce, dairy produce, and poultry.

"Our next colony is at Holbeach, in Lincolnshire, where we have secured about 1,200 acres of Crown land. In this case, the land is probably among the best and most fertile of any in the British Isles, and is admirably adapted for the growth of market-garden produce. It will grow all kinds of vegetables, and lies in the midst of the great potato-growing area in Lincolnshire. This being the case, it is intended to make the holdings about ten acres in size, as it is thought that a properly trained man could get a good living off such a holding by means of intensive culture and the growth of fruit. We got possession of the land at Michaelmas last, and Captain Boddy, the director, is now in charge of it.

"There, again, the ex-soldiers will go through a year's training under Captain Boddy's guidance. Already tractors are at work on the land, and it is intended to plant a large area with corn and potatoes for the coming year. The building of houses and homesteads will in the meantime be pressed forward in readiness for those tenants who may be found equal to the task of managing a small holding.

"Our third colony will be in the centre of England. The Board has purchased an estate from the Duke of Sutherland which lies in a ring fence about midway between Wellington and Newport, in Shropshire. It is situated in delightful country, and the soil is very suitable for small-holding purposes. The estate is already well equipped with farmsteads and thirty-five houses, and the expense of providing the further equipment to make the estate suitable for small holdings will be small. In this case the colony is considered to be specially adapted for dairy farming, and a co-operative creamery will be set up for the production of butter, milk, and cheese. Possession of the estate will be obtained next Lady Day, when a director will be appointed and operations at once commenced.

"So far as Wales is concerned, the Board of Agriculture is now in negotiation with a landowner in South Wales for the acquisition of a very suitable estate. The negotiations are not yet completed, but, if the purchase is carried out, it is proposed to carry on the colony on the same lines as that in Shropshire. The estate is 1,500 acres in extent, and lies close to the Welsh coalfield, where the large industrial population assures a good market for dairy produce and vegetables.

"Before any further schemes can be started it will be necessary for the Board of Agriculture to obtain further powers. A large number of applications have been received, and, if they are to be satisfactorily dealt with, it will be necessary to acquire much more land. As the scheme has now passed beyond the experimental stage, it is to be hoped that the Government will find time to pass the further legislation necessary to furnish the Board with more land, and, also, more money to equip it with."

Rebuilding French Towns.

A silver lining to the cloud overhanging devastated France appears in the plans already making for rebuilding ruined towns and villages along lines which will notably benefit their inhabitants in convenience, comfort, and health.

It is proposed not to be content with the hasty shelters erected in recovered territory to meet the immediate needs of the repatriated population, but to encourage permanent rebuilding along improved lines, which shall assume the collective interest of the community. The essential improvements demanded are increased facility of traffic, a plentiful supply of uncontaminated water, and sanitary methods of disposing of all varieties of waste and sewage. Mr. G. Espitallier outlines the requirements of the situation in a Paris paper as follows:—

"Good streets are the chief essential, and the smallest hamlet should have a rational plan for them that will do away with the chaos of the former maze of roads laid out at the mercy of chance and the caprice of each proprietor. . . . Where only ruins are left there is nothing to prevent the adoption of a methodical and rational route for this principal roadway. . . . .: but must we not have an eye also to all the little streets that lead into it—those narrow, tortuous, ill-paved little streets, which a downpour of water transforms into muddy sewers?

"And to begin with, there must be no more infected ponds, no more sewage running outside into blind pits, and spreading even to the middle of the road. This is the proper moment to examine into hygienic necessities and to impose their benefits upon the rural populations, whose deplorable habits often render them refractory in this respect. . . .

"What, then, are the essentials demended in a rural community? They comprise, before everything, the whole collective hygiene: provision of drinking-water, disposal of waste, the suppression of harmful germs, together with the observation of the rules of health involved in planning and building the dwellings themselves—rooms big enough to prevent crowding, large windows admitting the air and light, which are the worst enemies of infectious microbes. . . . floors high enough above ground to avoid dampness. . . . There is nothing more important in particular than to guard rural populations from tuberculosis, much more frequent in the country than is often supposed, from too great crowding in damp and airless rooms."

Disease germs infest the whole battle-area—on the earth and in the waters which penetrate it. The water of wells and streams is everywhere suspect. It is impossible, therefore, to insist too strongly on so treating all drinking-water as to make it harmless. Mr. Estipallier goes into methods of destroying waste in considerable detail and recommends to his readers the example of the British troops, who have small furnaces for burning up matter that might become a menace to health. His plans for village improvement sketched above by no means imply a determination to lay out rural villages on the stiff rectilinear lines so general in America. Historical development and esthetic values are to be taken into consideration. After mentioning the "garden cities" of England with approval, he says:—

"It is in this direction that the reorganisation of our villages should tend. There is, of course, a great difference to be observed between farm communities and factory towns, where the people have a solidarity due to common occupations. The farm village will doubtless derive a greater freedom of action and a more necessary variety from the individualism of each of its inhabitants. But it is very desirable, too, that these little groups to be reborn should preserve that regional character which in some sort gives each of our provinces its own personality. . . . 'It is needful,' writes Mr. Vaillat, 'that the house should belong truly to its province, like the lace headdress to the Boulognaise.' . . .

"It is not by chance that particular styles of construction are implanted and perpetuated. They are the result of an infinity of influences, some material and others imponderable. The materials of the region doubtless play an important part, but the character of the race, the manners, and even the mentality of the inhabitants have also had a part in the foramtion of the local style."

Good Reason.

My Tuesdays are meatless,
My Wednesdays are wheatless,
I am getting more eatless each day.
My home it is heatless,
My bed it is sheetless—
They're sent to the Y.M.C.A.

The barrooms are treatless,
My coffee is sweetless,
Each day I get poorer and wiser.
My stockings are feetless,
My trousers are seatless,
My word, how I *do* hate the Kaiser!

—"Detroit News."

The local pawnbroker's shop was on fire, and among the crowd of spectators was an old woman who attracted much attention by her sobs and cries of despair.

"What is the matter with you?" a fireman said. "You don't own the shop, do you?"

"No," she wailed, "but my old man's suit is pawned there and he don't know it."—"The Argonaut."

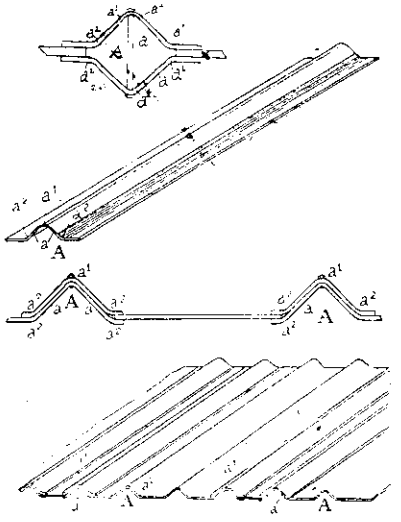
* * *

Young Widow: Did you have any trouble getting Jack to propose?

Girl Friend: No, dear, I told him you were after him.—"Boston Transcript."

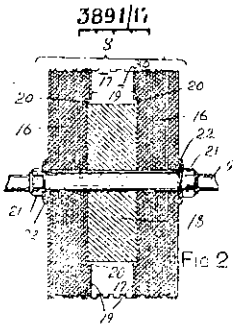
Patents of Interest to Builders.

Tiles and Sheets, Corrugated.—A patent, No. 39658, has been taken out by Turner Bros., Asbestos Ltd., of Rochdale, England. The invention consists in the particular form of the corrugations to enable or permit of the overlapping edges at the corrugations to meet properly and fit closely, bedded one upon the other with a perfectly weather-proof joint



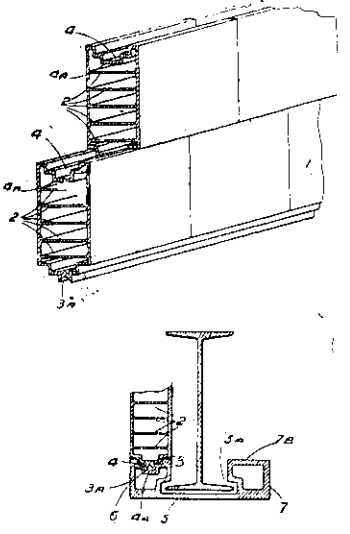
whilst maintaining the thickness of the material constant. This form comprises a large corrugation with straight sides at an angle of preferably about 45° to the horizontal and 90° to one another, and the apex and base curved or rounded off to permit one to bed or lie flat upon another (or any modification thereof between 30° to 60° to the horizontal and 60° to 120° to one another), and with each corrugation tapering and decreasing in height from the lower edge to the upper edge of the tile or sheet to an extent equal to the difference between the length of the diagonal and of the side of a square corresponding to the thickness of the material when the sides of the corrugations are at right angles to one another and to a corresponding extent when the sides are at a greater or less angle to one another.

Graining Timber.—A patent, No. 3891 has been taken out by A. J. Bull, of N.S. Wales. To facilitate the indenting of the surface of wood with permanent figured markings in imitation of the natural grain of a desired timber, a number of disks with interrupted cutting edges are clamped side by side on a spindle to form a pressure roller having the required peripheral pattern which may represent the graining of parquetry, parallel strips, or a single plank. A roller, built up entirely of metal disks 16 having interrupted cutting



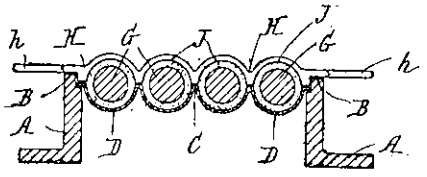
edges, will imitate the longitudinal graining of a single piece of timber. To give the effect of parallel strips a central core 18 is completely surrounded by laterally arranged radial blades 17 which are retained in place by the rings 19. The roller may be mounted above an abutment roller in a machine frame, or it may be mounted in a frame adapted for manual use. In modifications the cutting edges may be formed integral with a solid roller, or the disks 16 may be replaced by rings fitting on to the core 18 which then extends the full length of the roller.

Building-Block-Interlocking.—A patent, No. 39771, has been taken out by Constance M. Houston, of Knowles Street, Papanui, Christchurch. It consists of a hollow interlocking-block having integral cross-supports, and having

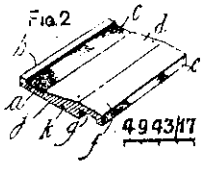


on one edge of the block a tongue, and on the other edge a groove of approximately corresponding design, the groove being substantially larger than the tongue to provide extra room for cement.

Concrete Pipe Moulding Machine.—A patent, No. 39516, has been taken out by C. H. Chamberlain and C. P. Stannard, of Nelson. The machine devised is an adaptation of the known machine now in use for the moulding of concrete roofing-tiles and in which a pallet is arranged to fit within a table-top and to constitute the lower portion of the moulding-die, and a strickler is provided and shaped to conform to the upper surface of the moulded article, and is arranged on side guide-bars so as to be reciprocated up and down above the pallet with a clearance of a height equal to the thickness of the tile between them. The present invention adopts the said method of moulding in the moulding of a number of pipes at the same time, and it consists in the provision of means whereby cores or mandrils around which the pipes are formed may be positioned above the pallet during the moulding operation, and may then be removed from the moulded pipes, leaving the pallet with the pipes thereon free to be lifted out of the machine.



Roof Covering.—A patent, No. 4,943, has been taken out by G. Tennant, Western Australia. It provides for expansion



in weathered timber roof-covering, the boards are milled with a lip b and a wide rabbet g to engage with the lip of the adjoining board, while the flat undersurface j is provided with a groove k to minimise warping.

Building Notes.

AUCKLAND.

New premises are about to be built to designs by Messrs. Chilwell and Trevithick, A.A.R.I.B.A., for Messrs. Shaw, Savill and Albion Co., to be used as a wool store, The Strand. The building is to be in re-inforced concrete.

Mr. J. T. D. Lloyd called for tenders for the erection of a residence at Te Kauwhata. Messrs. May and Morran called for tenders for additions in brick to Messrs. J. J. Craig's Exhibition Building, King's Wharf.

The Waimarino County Council asked for competitive plans for the County Council buildings in re-inforced concrete.

The Education Board, through its architect, Mr. J. Farrell, called for tenders early this month for additions to school at Ngongotaha (near Rotorua), and also for the erection in brick of a school building at Otahuhu.

The proposed erection of a chapel at the Papatoetoe Orphans' Home was discussed at the annual meeting of subscribers recently. The annual report showed that plans and specifications were being prepared, and that sufficient money was in hand for the building and equipment of the chapel. Bishop Averill stated that people who were opposed to the building of the chapel urged that at the present time materials were too expensive to carry out the project. He had learned from architects that prices would not be lowered for several years after the war. All institutions such as the home should be under the shadow of the Church. He opposed the suggestion that the chapel should be used as a parish church for Papatoetoe, and urged the immediate commencement of the work. The foundation stone for the proposed chapel, it was mentioned, had been obtained by Bishop Neligan from the famous Bell Harry Tower of Canterbury Cathedral.

At the Hospital Board's recent meeting reference was made to the projected additions to the Nurses' Home. Mr. J. Rowe drew attention to the increase in the price of timber since the estimates for the new building had been prepared. He said that the increase in price of much of the timber that would be used in the building amounted to about 6s. per 100ft., and, as the estimated cost of the building was £22,000, it was probable the estimate would be considerably exceeded. The matter was referred to the architect for report.

CHRISTCHURCH.

New premises are about to be erected for Messrs. Campbell Bros., Ltd., for use as shops and offices. The architects, Messrs. Ellis and Hall, announced that tenders closed on 10th April.

Messrs. England Bros. called for tenders for the erection in brick of a Vicarage at Merivale, and Mr. J. S. Guthrie called for tenders for the erection of a house at Little Pigeon Bay.

The joint architects, Messrs. Clarkson, Ballantyne, Hart and Reese, for the addition and alterations to the Baby's Home, Cashmere Hills, called for tenders recently.

Messrs. Collins and Harman called for tenders for a new room at St. Andrew's College.

It is expected that tenders for the re-erection of the Canterbury Hall buildings (His Majesty's Theatre and Alexandra Hall) will be called for this month. The work of preparing the specifications is being pushed on, and is almost completed.

The proposal to erect a Memorial Hall and Returned Soldiers' Clubrooms, was discussed at the annual meeting of the Returned Soldiers' Association. The chairman (Mr. H. M. Cotton) detailed the steps that had been already taken, and assured his hearers that everything was now in working order. With the money that had been voted to the trust fund, some £2,000 was now in hand, which should be sufficient to pay a deposit on any site that might be selected. To put up a proper memorial would involve the expenditure of about £20,000, for which the Association did not wish to approach the public at present. It was hoped to put up a large memorial hall, open to returned men and the public alike, in which an Honours Board, containing the name of every Canterbury man who had fallen would be placed. It was an elaborate idea, and one which could hardly be carried out immediately, but one which, when carried out, should be a credit to Canterbury, and a lasting tribute to those who had fallen. Rough plans had been drawn by Mr. J. S. Guthrie, not with the idea of erecting the building immediately, but of securing a suitable site as soon as possible. After the war the public would be asked to subscribe towards a memorial for those who had died, if they thought it necessary, but at present the chief object was to provide for the living.

The subscription list for the Nurse Maude Hospital, which aims at raising £2,500 for the new building, is filling rapidly. At the end of last month nearly £1,000 had been collected.

Tenders were called for the erection of workshops at Hamner for the Military Hospital recently.

As in other centres the main cry at the present time is for new schools and hospital extensions. The Minister of Education, when in Christchurch early this month, received several deputations for new school accommodation. One from New Brighton did not get much encouragement, being referred to the Education Board. A Culverden deputation wanted a building costing £982, which the Minister stated he would ask Government for the money if plans were approved. The Creché and Kindergarten Association requested a new school at Phillipstown costing about £1,400, to which the Minister replied that a subsidy of £ for £ only was available up to £500.

The Education Board called for tenders for four new class rooms at Sydenham School, the tender of Mr. H. Hinkey for £3,429 was accepted. Another new school is to be built at Spreydon.

The West Christchurch District High School Committee passed the following resolution at its recent meeting:—"That this meeting of householders of the West Christchurch District High School are gratified to find by the committee's report that initial steps have been taken to replace the present very unsatisfactory buildings now in use, and urges the Board of Education to facilitate as quickly as possible the object in view of building an up-to-date school, suitable for primary and secondary education, and would remind the Board that the present buildings, having been in existence for 44 years, are now quite inadequate for the important position of a district high school."

Building permits issued in April were as follows:—Central Ward (Inner) 2 permits, value £7,100; (outer) 3 permits, value £7,100; St. Albans, 7 permits, value £3,000; Linwood, 1 permit, value £400; Sydenham, 3 permits, value £900. Total, 16 permits, valued at £18,500.

Tenders were invited by Messrs. England Bros. for additions and alterations to premises for the Marble Bar, Ltd., in Hereford Street.

DUNEDIN.

A new soldiers' ward is to be erected at the Dunedin Hospital, to accommodate 60 beds, at an estimated cost of £3,500.

The proposal to purchase the Gladstone House property in Moray Place for use as a soldiers' club has been

abandoned, and arrangements are just about completed for the fusion of the present Anzac Club House Committee and the Soldiers' Club Committee. The present Anzac Club House, opposite the First Church, will now be utilised as a club for the soldiers, but as it is far too small to accommodate all the members, it is understood that as soon as sufficient funds are forthcoming arrangements will be made to add substantial additions to the building.

The much discussed and much delayed question of the construction of the hospital on the Waikari site has at last assumed definite form. The site was purchased in 1914. Now after much caustic criticism of the purchase, Ministerial advice, inquiry by commission, and the altering and realtering of plans, finality is to be reached. Tenders will be called this month for the construction of the hospital, which will comprise two separate buildings. One will be a consumptive block, the other an infectious diseases block, consisting of a fever ward, a case isolation ward, and a nurses' home.

Messrs. Mason and Wales call for tenders for additions to King Edward Pavilion, Dunedin Hospital, and the Education Board desire tenders for a new school at Tawhiti.

HAMILTON.

A public meeting was held last month to consider the matter of the proposed Waikato soldiers' memorial at Hamilton. The scheme was explained by Mr. J. W. Ellis, Mayor of Hamilton, and Messrs. W. Fow and W. Goodfellow. A discussion followed, and finally it was decided that while the meeting was in sympathy with the proposal, the time was not opportune for going on with the matter.

KAIKOURA.

At the monthly meeting of the Kaikoura County Council Cr. Renner moved, in accordance with notice of motion, an amendment of the by-laws in the direction of making it compulsory to erect new buildings or additions to existing buildings within the business area of fireproof materials. Most councillors considered the proposed alteration too drastic in its nature, and Cr. Renner finally consented to move: "That the by-law regulating the erection of new buildings or making additions to existing premises, within the Peninsula Riding, be amended to read, 'That no building shall be

erected or addition made to others without plans and specifications of such proposed work being first submitted to and approved by the Council of the County, and a permit to proceed obtained after payment of the prescribed fee.'' The amended motion was seconded by Cr. Boyd and carried.

MARTON.

Mr. W. T. Higgins is calling for tenders for the erection of brick buildings for Messrs. Abraham and Williams at Taumarunui.

NELSON.

The Nelson Hospital and Charitable Aid Board are calling for tenders for the erection of a new Public Hospital. Tenders are to be sent in by June 4th to the Hospital Board, Nelson. Mr. A. R. Griffen is the Board's architect.

ROTORUA.

The contractors for the Church of England Soldiers' Institute in Rotorua, have begun operations on the selected site, opposite the main entrance to the Government Gardens. The building, which is expected to be completed early in June, will be 50 feet square, and is to contain a billiard-room, lounge, cardroom, reading and writing-room, chaplain's room, and kitchen. There are to be a wide verandah and porch, and the fittings and appointments are to be of a thoroughly up-to-date character. The institute is to be for the benefit of soldiers of all denominations.

WANGANUI.

The contract for the building designed by Messrs. Chrichton and McKay for the Perrett Estate, Wanganui, has been let to Mr. A. G. Bignell at £16,000. The building is a 3-storey block of shops and show rooms at the corner of Maria Place and the Avenue.

WELLINGTON.

Mr. J. M. Dawson, architect, called for tenders last month for the erection in brick and timber of a residence at Oriental Bay.

During the month tenders were invited for the erection of a workshop and billiard room at Victoria Ward, Wellington Hospital, and the erection of additions and alterations at Tauranga Military Hospital, Lowry Bay.

A new church, St. Michael's, is about to be built in Kelburn, plans for which were shown to the parishioners in Wellington, by the architect, Mr. E. F. Wilson, of Invercargill. Adopting the late early-English style and depending upon a general massing rather than detail for his effects, Mr. Wilson has projected a structure which will be a credit to the Church and the district. The church will easily accommodate 330 adults. It is to be carried out in brick, with stone copings, weatherings, and mullions. A tower has been included in the design. The building will occupy the site at the corner of Upland Road and Upland Crescent. A motion was passed urging the incoming vestry to further efforts towards raising funds to enable a commencement to be made with the new building as early as possible.

Messrs. Clere and Williams invited tenders last month for the erection of a residence at Wadestown.

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