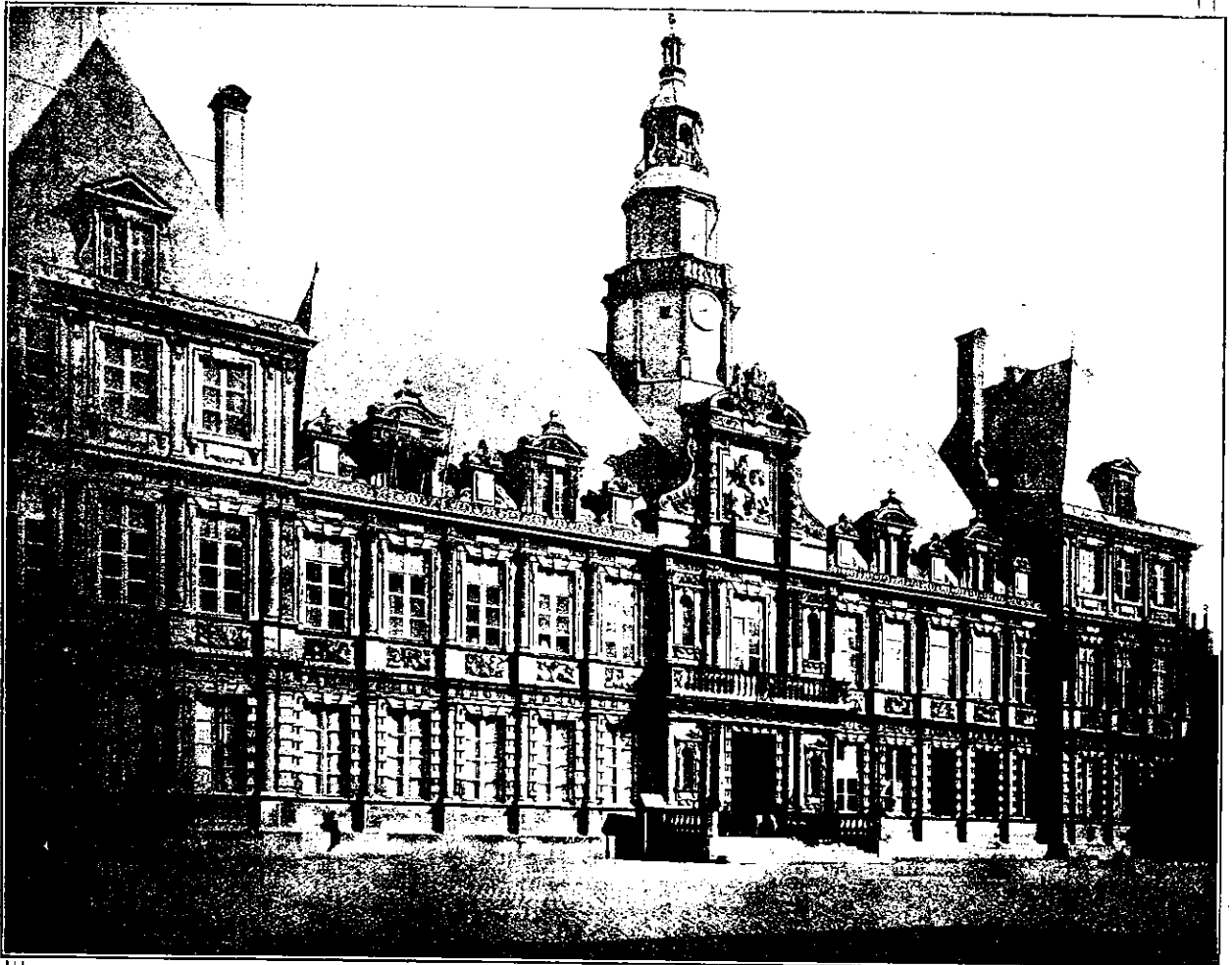
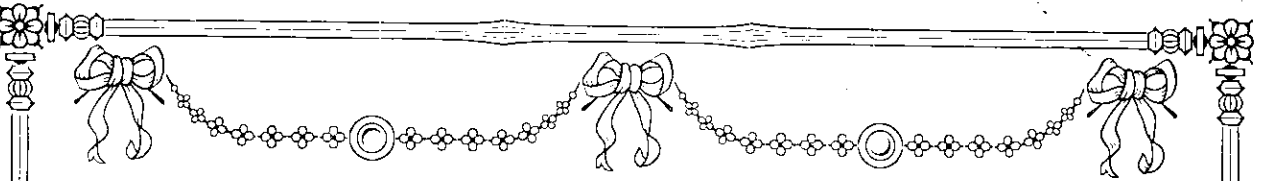


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To Our Advertisers—All copy for advertising matter must be in our hands by the 1st of the month preceding publication, otherwise no responsibility with regard to insertion will be undertaken.

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.

In case of change of address, or irregularity of this paper's delivery, subscribers should send immediate notice.

Publisher's Announcements

OUR DECEMBER ISSUE

This issue will be a special building number, and will contain examples of recently erected churches throughout New Zealand.

Our 27th Competition for Architectural Students

We offer a prize of £1 1s. 0d. for the design awarded first place for a

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with Newspaper Stall, &c.

The adjudicators make the following remarks re this competition:—"In selecting this subject we have endeavoured to set your student readers the task of designing, in cheap, durable, and readily obtainable materials, such as would be employed by any City Authority, a very common desideratum for the convenience of the citizen, in such a way that it may be an ornament and not a disfigurement to its surroundings. We venture to think that our City Authorities might pay more attention to the artistic side of their erections and trust that the outcome of this competition may excite the interest of some of your numerous readers in the subject and show them what might be done towards the improvement of their Cities in this direction.

This may also be regarded as an item in the Town Planning movement in which, like yourself, we are deeply interested."

The building is supposed to be situated facing on one side a principal thoroughfare with tramway and on the other a public reserve, and is to contain the following accommodation:—
1. About 120 feet run of seating, including a portion facing the reserve to be so arranged that from whichever direction the wind may come some of the seating will be in the shelter.
2. Gentlemen's toilet room containing two w.c.'s., four urinals and one hand basin.
3. Ladies toilet room containing four

w.c.'s., two hand basins, towel closet, and space for custodian.
4. "Lock up" newspaper stall, with counter in sheltered position, and so placed that attendant can supply towels etc., to gentlemen's toilet room without leaving his stall.
5. Two telephone cabinets.

Strict attention must be paid to hygienic arrangements of sanitary fittings and the privacy of them. Provision must be made to enable a City Council official to inspect and clean out the plumbing and drainage conveniently at any time.

Competitors are restricted to the following materials, viz.—brickwork, concrete, reinforced concrete, roughcast, plaster, asphalt, slates, roofing and other tiles, jarrah timber, glass, any or all of which may be used, and the necessary plumbing, and finishing materials.

The drawings required are: (1). Ground plan showing drainage; (2). Roof plan. (3). Elevations and sections to fully set out the design. The foregoing to be to 1/4 in. scale. (4). A perspective sketch.

A skeleton specification describing the details of construction and finishings, and an estimate of the probable cost must accompany the design.

Messrs. Atkins & Bacon, Architects of Wellington have kindly consented to adjudicate in this competition.

Designs must be sent in, finished as above, under a non-de-plume, address to Progress, 10 Willis Street, Wellington, and marked clearly "Twenty-seventh Prize Competition" on outside, with a covering letter giving competitor's name and address and employer. Designs to be sent in by November 21st.

Our 28th Competition

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

GOLF CLUB HOUSE

to be erected for a club consisting of about 150 members (100 men, and 50 ladies). The site is open, and unrestricted, and the building is to be placed on a slight rise overlooking the links and facing North. The ladies', and mens' apartments, also the caretaker's rooms, are to be kept separate, but of easy access to one another.

Accommodation—MEN'S—One large Tea Room, two Dressing Rooms, one Sitting Room, two Lavatories, two W.C.'s., large Verandah.

LADIES.—One Tea Room, one Dressing Room, one Sitting Room, one Lavatory, two W.C.'s., Verandah.

CARETAKER.—One large Kitchen convenient to both Tea Rooms, large Scullery, one small Sitting Room; three Bedrooms, Bathroom, W.C., large Pantry, Store Room, Larder, Large Workshop, etc.

The building to be two-storeyed, the Ladies', and Men's Sitting Rooms up-stairs, opening on to a common Balcony, and with a Common Room between. The Caretaker's bedrooms etc., also on the first floor. Separate stairs to each. The whole to form one block, but the different portions—Ladies', Mens', and Caretaker's, to be marked, and apparent, from the exterior. A low, broad effect is desired, the upper rooms will therefore be better to be partly in the roof. The Balcony need not be covered. The materials to be brick, and rough-cast, with tiled roof. Cost about £1,500.

The sizes of rooms and other details are left to the competitors to decide, and to consider what is necessary for the purposes of the building and the sum allowed.

Drawings to be 1/4 in. to one foot, and to consist of a plan of each floor, three elevations, and one transverse section. To be inked in, and shaded in Sepia, but not coloured.

Mr. Basil Hooper, A.R.I.B.A., of Dunedin, has kindly consented to adjudicate.

Designs must be sent in, finished as above, under a non-de-plume, address to Progress, 10 Willis Street, Wellington, and marked clearly, "Twenty-eighth Prize Competition" on outside, with a covering letter giving competitor's name and address and employer. Designs to be sent in by December 21st.

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.

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WELLINGTON, AUCKLAND, CHRISTCHURCH, AND DUNEDIN, NEW ZEALAND, NOVEMBER, 1914

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Editorial Comment

"It is the duty of everyone of us who has an opportunity of making his influence felt, to avoid any action which would have the effect of aggravating in any way the general alarm and uneasiness which must inevitably prevail at such a moment as this" says Lord Landsdowne in a recent speech. If such words are taken to heart in this Country as they have been in England there will be a minimum of unemployment for us to deal with. The British Government have issued the following notice regarding the building trade:—"It appears from various enquiries addressed to the Commissioners of Works that there exists some apprehension lest unemployment should be increased in the building and other trades by suspension during the present crisis, of building and engineering operations provided for in the estimates of the Office of Works recently approved by Parliament. It is, therefore, desirable to state publicly at once that it is the intention of the Commissioner of Works to proceed with all services in their charge, to employ as many men as possible to carry out such services, and to develop and expedite their building programme in any way practicable. As the Minister mainly responsible for Government building, the First Commissioner of Works would wish to take this opportunity of expressing his sincere hope that private individuals, companies, firms, and contractors will spare no effort to follow the policy of the Government in this matter, as far as circumstances admit."

The British Government at the same time announce that they are going to spend no less than £4,000,000 on housing in suburban and rural districts. The recent trouble between the master builders and the men has been satisfactorily fixed up, and every effort is being made to minimise the distress likely to accrue as a result of the present campaign. The level headed appeal to private individuals by the British Government quoted above, and the announcement of their intention to spend such a huge sum on building is an example that will appeal to the whole Empire, and we hope will be acted upon in this Dominion as much as practicable.

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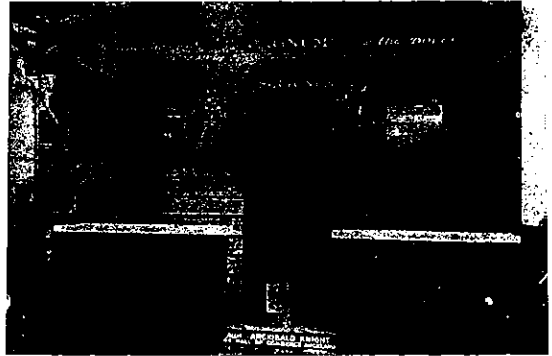
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In the Dominion where there are yet immense tracts of country only sparsely settled, the so-called "light" railway should prove the solution of a problem that is not only giving our legislators much food for thought, but is proving a serious drawback to those who have taken up land at present unserved by any direct means of communication with the market centres. In this connection the report by Mr. F. W. Furket, Inspecting Engineer to the Public Works Department on the Belgian Light Railways, appearing in the Public Works Statement published last month, is of great interest.

Belgium is perhaps the most thickly populated country in the world, and the light railway system has covered the face of the country with a complete network of light lines which connect up the main lines traversing the state. While all main lines are directly under the State Railways Department the secondary or light lines are under the separate administration of the National Society for Vicinal Railways though of course the systems work in conjunction with each other and the light lines are as feeders to the State lines.

In going over the report one is inclined to criticise the wisdom of adopting varying gauges, for while the State lines are of standard 4ft. 8½ins. gauge, most of the light railways are built on the 1-metre gauge (3ft. 3½ins.) This must of course mean a great deal of handling of freight at all junctions, and must add very much to the delay and expense of working transport. This, however, does not affect the question of the excellence of the principle involved.

By all means let us have these light railways as soon as possible. Let them be as light as may be, built to our standard gauge, and traversed if need be by the lightest of steam or petrol-electric locomotives. Then at any rate we shall have the foundations of a railway system laid apart from the main arterial lines, and it will quickly become only a matter of revenue from at present virgin country, when successively heavier construction will be necessary and the light railways will develop into standard lines.

* * * * *

It is interesting to hear the reason given by General von Lutwitz, Military Commander of the German troops in Louvain at the time of the burning of that city.

Mr. R. H. Davis who writes in the New York "Tribune," and who witnessed the vandalism of the Germans as a prisoner from a railway carriage says:—"The Germans sentenced Louvain on Wednesday to become a wilderness, and with the German system and love of thoroughness, they left Louvain an empty, blackened shell. The reason for this appeal to the torch and the execution of non-combatants, as given to me on Thursday morning by General von Lutwitz, military governor of Brussels, was this: On Wednesday, while the German military commander of the troops in Louvain was at the Hotel de Ville talking to the burgomaster, a son of the burgomaster with an automatic pistol shot the chief of staff and German staff surgeons.

Lutwitz claims that this was the signal for the Civil Guard, in civilian clothes on roofs, to fire upon the German soldiers in the open square below. He said also, the Belgians had quickfiring guns, brought from Antwerp. As for a week the Germans had occupied Louvain and closely guarded all approaches the story that there was any gun-running is absurd.

Fifty Germans were killed and wounded. For that, said Lutwitz, Louvain must be wiped out."

Assuming that this was true, that fifty German soldiers were killed or wounded, is this sufficient reason for a civilized nation to perpetrate such a shameless outrage as the wilful destruction of a whole city? There were enough German soldiers there to punish the Belgian civilians for firing from the houses after having been warned by their own Burgomaster that they were to refrain from any hostile action.

Louvain possessed a priceless library in the Clothworker's Hall; four colleges; the Hotel de Ville on the public square with its three stories of pointed windows one of the most elaborate examples of pointed Gothic in existence, the work of a master mason named Mathien de Lavens who laboured from 1448 to 1463; the church of St. Pierre, the church of St. Michael built by the Jesuits; the church of St. Gertrude with its wood carvings; and numerous other historical buildings which made Louvain such a feast for all lovers of the beauties of architecture. Definite information as to how many of these buildings escaped the vandals' torch is not yet to hand, but in any case Louvain can never again be what it was. No money can replace the loss suffered by civilisation through the destruction of Louvain's art treasures, and nothing the Germans could do will encourage the animosity of neutral powers so much as such brutal exhibitions of force. The Kaiser will find that the good feelings of neutral powers, especially America (whose goodwill the Kaiser seems so concerned about), will turn a deaf ear to entreaties emanating from a belligerent who practices such barbarous methods under cloak of civilized warfare.

* * * * *

A cable, short but to the point appeared lately in the daily papers, and tucked away as it was in an obscure corner, it probably escaped the notice of most of our readers. It was to the effect that another bad slide had occurred in the Culebra Cut of the Panama Canal, and that the Canal was blocked to all traffic. A later cable stated that the damage had been repaired.

To understand the difficulty being met with here, it must be remembered that the whole portion of the high land covered by the Culebra Cut was at some time raised from the bed of the ocean by volcanic agency. When these volcanic agencies quieted down many centuries ago, the dry land thus formed consisted of ridges of hard igneous rock, between which lay masses of softer marine deposit in various stages of hardness but possessing very little resistance to crushing or sliding movements. Through these softer deposits the engineers have laid their canal bed, setting out to obtain a batter of one to two.

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Architecture and Building

Notre Dame Cathedral—Rheims

This notable cathedral which we illustrate in this issue has the three-fold distinction of being the metropolitan church of France, the place of coronation of its kings, and one of the finest specimens of Gothic architecture in the world.

The present edifice was designed by Robert de Courcy in the thirteenth century, but its foundations date back to the fourth century. In the cathedrals which have succeeded each other upon this site nearly all the kings of France have been consecrated, from the time of Clovis in the sixth century to that of Charles X. in the nineteenth. The coronation of Philip Augustus took place in 1179, and the only later sovereigns who were crowned elsewhere were Henry IV. and Napoleon. Louis Philippe was not crowned at all, and abolished the ceremony altogether.

According to the tradition, when the Archbishop St. Remy was about to baptize Clovis a dove flew down from the sky, bringing a flask of oil in its beak; and it was with this holy oil, *la sainte ampoule*, that the kings from that time forward were anointed. The baptismal font of Clovis, the first Christian king, is still preserved in the edifice. The second monarch consecrated under the present roof was St. Louis.

Richard Tomes, in his work on "The Champagne Country," says of the architectural decorations of the cathedral of Rheims as it now stands:—

"It is remarkable above all other structures of its nature. The harmony of parts and proportions in so large a structure is indeed marvellous, and is undoubtedly one of the essential causes of its effect as a work of art.

"The magnitude of the cathedral is remarked by the passing observer, not so much from the impression which it makes from its own massiveness, as from the littleness of which every object exposed to its contrast is reduced. . . . It is three times as long as the wide front of the Astor House; and three Trinity churches placed in a line one after another would not extend so far. . . . The two towers, nearly three hundred feet high which crown the front, though not completed, are models of aerial grace.

"The grand entrance of the church is universally conceded to be the finest in the world. It is composed of three lofty-arched portals, each at least a hundred feet high, and so deep and spacious that many hundred people might easily find refuge within them without entering the cathedral. These porches are crowded so full with figures and decorations, as in fact is almost every other part of the cathedral, that the building seems built of statues, flowers and ornaments."

More than four thousand figures are sculptured upon the exterior of this cathedral, and many hundreds of these, some of them of colossal size, adorn the principal portals.

In a recent article on the Cathedrals of France by Mr. Barr Ferree, occurs the following description of these wonderful doorways:—

"The interior surfaces of the high portal arches are filled with innumerable figures of the heavenly hosts, each with its own base and canopy. Strangely enough, tympanums over the doorways have no sculptured scenes; the Last Judgment, which should accompany the figures in the arches of the central doorway, was never carved. The space over all three doorways is filled with glass; an unusual arrangement in itself, but especially so in a church which, like that of Rheims, is so richly and marvelously carved. . . . The whole of Christian theology, and life, and hope might almost be said to be carved upon these doorways, and in language that needed no schooling to understand, in words that needed no preacher to utter them, in symbols that required no mystic meaning to adapt them to their place and their work."

Above the porch, in the midst of the profusion of statues, bas-reliefs, carven flowers and other architectural ornaments which extend to the very summit of the graceful towers, is a magnificent rose window, one of the very finest in the world. The rest of the cathedral, both without and within, is worthy of this magnificent front. In the words of Miss Costello: "All round the building in every direction the same magnificent aspect is presented all is solemn, grand and rich, all is executed in the highest style of ornamental art, all is graceful, delicate, finished and elaborate, yet the whole is filled with majesty and boldness. The mind is filled with wonder at the perseverance which could devote so much time to adorning every nook and corner to such advantage; the eye is dazzled in tracing the exquisite pattern of the open galleries, the buttresses, the finials, the crochets, the canopies and *couvres*. . . . The interior is imposingly vast and grand, immensely long, of enormous width, the pillars and arches stupendous, the painted glass magnificent and the forms of the windows exquisite; their numbers extraordinary, and their colours gorgeous. A lantern of rich glass extends along the whole length of the aisles and to the choir; at the back of the choir is an outer series still finer, and the whole expanse is one rainbow of the most glorious hues. The great rose, however, eclipses all the rest by its dazzling radiance. Molten rubies, emeralds and sapphires seen glowing through the rich stonework, and when the setting sun shines full upon that window it is impossible to conceive anything so mysterious and so splendid. Beneath this splendid rose is a line of small pointed

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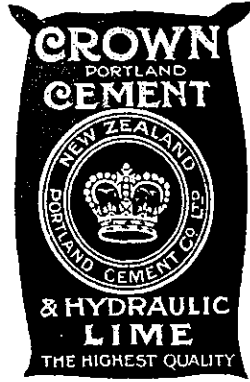
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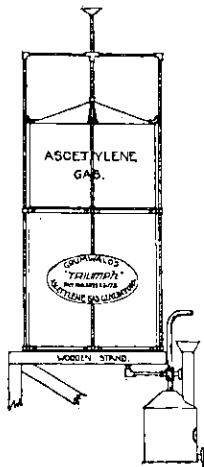
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arches filled with painted glass of equal gorgeousness, representing a row of Christianized kings in regal robes of crimson, purple and gold; and all below from that height to the very floor the wall is covered with niches filled with delicately wrought figures, all perfect and of the most exquisite symmetry."

The Rheims cathedral has many interesting historical reminiscences, besides the simple fact of its association with the royal coronation. It was the scene of the crowning triumph of the venerable Joan of Arc, and the house in which her mother was lodged stands opposite to it. Fortunately this statue was not damaged by the bombardment by the Germans. Recent cables lead us to understand that the facade is practically intact though one of the towers is considerably damaged, and fire has swept the interior. The whole civilized world stands aghast at this piece of vandalism, which will stain Germany's name for the rest of her history.

The Art of Brickwork

By R. NEWTON VANES, A.R.I.B.A., of Dunedin

(Continued from October issue.)

POINTING

The colour and style of the pointing is closely allied to "Bonding." The same principles which applied under the previous heading being equally applicable here. Tuck pointing is, very fortunately, at last going out of date in this part of the world, and not before it has ruined the appearance of many a brick wall. In my opinion, nothing can be said in its favour. Some would argue perhaps that it is very neat and tidy—so is a stuccoed wall painted red and with black or white joints lined upon it. The better tuck pointing is done and the newer it is, the more it resembles a painted imitation brick wall. If it is not done well, and as it becomes older, the true joints begin to show up and the false joints to fall off, resulting in a piebald conglomeration of truth and sham. Other methods of jointing are by weathering, striking, keying or flushing, and this, of course, can be done in various colours. In the case of cleaned down and pointed work, there is a diversity of opinion as to the best colour to use. Personally, I much prefer a white or cream coloured joint. A grey cement coloured stopping is cold, and does not go with the red colour of the brick. A black joint is, I think, rather heavy and sombre, though it seems to give a good solid appearance to the wall. It certainly has this advantage that, where bricks are uneven in size and have the arrises somewhat chipped, the uneven and ragged joint is not so noticeable; whereas, with a light joint, these defects show up rather badly. The colour of the joint depends largely both on the above conditions and on the adjoining materials and surfaces, and, naturally, on the colour of the brick itself. In domestic work it is very usual to have a fair expanse of white and cream-coloured rough cast adjoining the brickwork. Personally, I think that black pointing in this case is most unsightly, there being no uniformity between the two materials. Now,

if the jointing is about the same colour as the rough cast, the two surfaces blend together very much better and do not give that objectionable cast iron effect. In the same way, I think nothing is nicer for residential work than a crisp red brick jointed in white with white painted wood-work. In all wall treatments, I think we should aim at making one surface or material melt into another, and so obtain solidity and unity—two highly important factors which seem to be totally ignored in the designing of many of our buildings.

SIZE OF INDIVIDUAL BRICK AND THICKNESS OF JOINT

The remaining two points are so very closely allied that I shall not endeavour to treat them under their separate heads, but rather group them together. The thickness of the joint depends very largely on the size of the brick, and it is this latter point which I think requires our very careful attention. I consider that, apart from the extreme irregularity of our ordinary Dunedin clay brick, the standard size—if the word "standard" can be applied to such a varying quantity—is fundamentally wrong, and it is time that this Institute moved in the matter of establishing a good workable standard size of brick. Not only does the size of brick vary for each of the main centres in the Dominion, but the size adopted by each of the manufacturers in each town varies. Evidently, the same state of affairs existed in England, for in 1904 the R.I.B.A. and the Civil Engineers had a conference with the Brickmakers' Association, and a standard size of brick was agreed upon. This is an age of standardization, and it seems only reasonable that the size of the most used of all building materials should be standardized. As things are at present, it is impossible to prepare stone details with any degree of accuracy, until the job is let and the contractor has made up his mind from which yard he will obtain his bricks. Even when this is settled, there is considerable speculation as to the size of brick that will really arrive on the job. The other day I measured a few bricks at random out of a cart-load from one maker, and found that there was just on $\frac{1}{4}$ inch variation in the thickness of a few samples. The English standard allows only $\frac{1}{16}$ inch variation. Apart from the variation, the average size is, in my opinion, too large. The brickwork here runs somewhere about $12\frac{3}{4}$ inches to the four courses, while in Christchurch for instance it is about $13\frac{3}{4}$ inches. It is quite an arithmetical problem to determine where the joints will come, and the setting out of all heights becomes quite a complicated business. Standard English brickwork runs 4 courses to the foot, and therefore not only is a great deal of unnecessary work saved in the preparation of details, but every opportunity is afforded of making a better job, as once the brickwork is started the architects and contractor know exactly at what height any course will come.

The following is the R.I.B.A. standard:—

Length	Minimum	...	$8\frac{1}{2}$	...	Maximum	...	9
Height	"	...	$2\frac{3}{4}$	...	"	...	$2\frac{1}{2}$
Width	"	...	$4\frac{5}{16}$	...	"	...	$4\frac{3}{8}$
Joint	Maximum	...	$\frac{1}{8}$	...	Minimum	...	$\frac{1}{16}$

This makes a total of 4 bricks and 4 joints to the foot.

DO NOT GET LEFT BEHIND!

WHILST the Dominion is passing through the present crisis, we would impress on all Manufacturers and Traders, who have in normal times found "PROGRESS" so profitable an Advertising Medium, the importance of publicity at the present time. We urge them all to

KEEP THE FLAG FLYING

With the quality of bricks we have here, I do not think that such a thin joint is practicable, except, of course, with sand bricks. In the matter of uniformity of size, the local sand brick is unquestionably superior to our clay brick, and one is very favourably impressed with the readiness of the makers of the sand brick to meet architects as far as possible in their ideas of size and colour.

It is a pity that the sand brick is not a better colour, for, as far as regularity is concerned, it is far ahead of the clay brick. With the even sized sand brick, the English $\frac{5}{16}$ inch joint would be quite practicable, but the size of our clay bricks varies to such an abnormal extent that the $\frac{5}{16}$ inch joint would be reduced to next to nothing in places. I think the width of joint depends on the class of brick being used, just as in setting tiles it is usual to make a thin joint when using a neatly shaped ordinary enamelled tile, whereas fire-clay tiles look much better set with a wide joint.

In deciding what size our stock brick should be, all these things must be considered. I think that the idea of having four courses to the foot is a splendid one, but for this setting out the first thing to settle is the thickness of the joint, as of course the thickness of the actual brick depends on this. I recall a new brick building in London designed by Mr. Lutyens in which he used 2 inch thick bricks with a flush joint about 1 inch thick, and the effect was very fine indeed. This, and many other examples which I have seen of good work with thick joints, has given me the impression that we would get a much better effect with our ordinary wire-cut if we used a much thicker joint than is generally the case. I see no constructional objection to a thick joint if the mortar is good, and we are well supplied in Dunedin with all the materials that are required to make excellent mortar. Without uneven bricks and a thin joint it is almost impossible to keep the perpend directly above one another, and the variation in the thickness of the joint caused by the difference in the thickness of the bricks is much more marked with a thin joint than it would be with a thick one.

Another way in which the irregularity of the arris may be to a certain extent hidden, is by recessing the joint. In much old work, the joints are worn away, and this, I think, rather enhances the appearance. It is open to argument as to whether this would make a good weather-proof job, but there are many examples of this class of jointing in America, where the climate is quite as rigorous as our own. I have also noticed that many of our Dunedin brick buildings that are now pointed, looked very much better when the mortar was raked out than they do now with all the joints flushed up. The slovenly appearance of a considerable portion of Dunedin brickwork, is, I think, largely attributable to the jointing. The bricks as supplied by the manufacturers are certainly not what they should be, but, nevertheless, I think more might be made of them than is being done at present. I think you will all agree that it is time that this Institute seriously considered the question of bricklaying as far as Dunedin, if not the whole of the Dominion, is concerned, with the object of standardizing the size

of the bricks and reviewing the whole procedure of laying them, and in the words of MacBeth "If it were done when 'tis done, then 'twere well it were done quickly."

Residence In Dunedin

The residence illustrated on page 89 will be built with brick walls and partitions, the external walls being cement rough-casted and lime-whitened, while the internal walls will be plastered with one coat of plaster brought to an approximately even surface, but with the trowel marks left showing. The sand for the plaster will be of a light straw colour and not too fine. The woodwork will be of Tasmanian Blackwood, hand-dressed, but not sand-papered.

There are no unusual features about the plan, but it will be noted that all the rooms except the kitchen will have the sun during some portion of the day, (the frontage to the street faces East), that the design is economical, there being the minimum of waste space, and that for convenience of working the rooms could hardly be better located.

The elevations are of the usual English cottage type, devoid of all unnecessary features, and dependent on the simple disposition of the parts to give the effect obtained. The residence was designed by Mr. Leslie Coombs, architect, Dunedin.

Review

We have received a copy of a most interesting book entitled "New Zealand—Its History, Commerce, & Industrial Resources" which comes from Messrs. Unwin Bros. Ltd. of London. The book is compiled by Mr. Somerset Plaync, F.R.G.S., who, with his assistants, spent some fifteen months in this country gathering his information. It is one of a series dealing with outlying portions of the Empire, and it follows volumes referring respectively to British East Africa and Uganda, Cape Colony, and the Orange Free State. Its general purpose, like that of its predecessors, is to give a complete literary and pictorial survey of the commercial, industrial, and agricultural resources of the territory dealt with, together with an account of the notable physical features of the country and of its social life. In the case of New Zealand the compilers have had a particularly rich field for their operations as the Dominion is one of the most beautiful and interesting portions of the Empire—its magnificent scenery and its splendid agricultural development supplying innumerable points of interest which the compiler has used to good advantage.

The literary matter has been carefully prepared with the advice and the active assistance of local experts. An authentic record has been provided of the diversified life of New Zealand which must of necessity take a high place amongst standard works dealing with the Empire.

The book is illustrated with 2,000 pictures altogether, all of which are thoroughly characteristic and interesting. The price, well bound in cloth is 25/6, and the books can be purchased in Wellington from Mr. Geo. Nathan.

"'Ere, Bill wot's the matter? You're looking worrid."
 "Work—nothing but work from morning till night."
 "'Ow long 'ave you been at it?'"
 "'I begin ti-morrow."

London Opinion.

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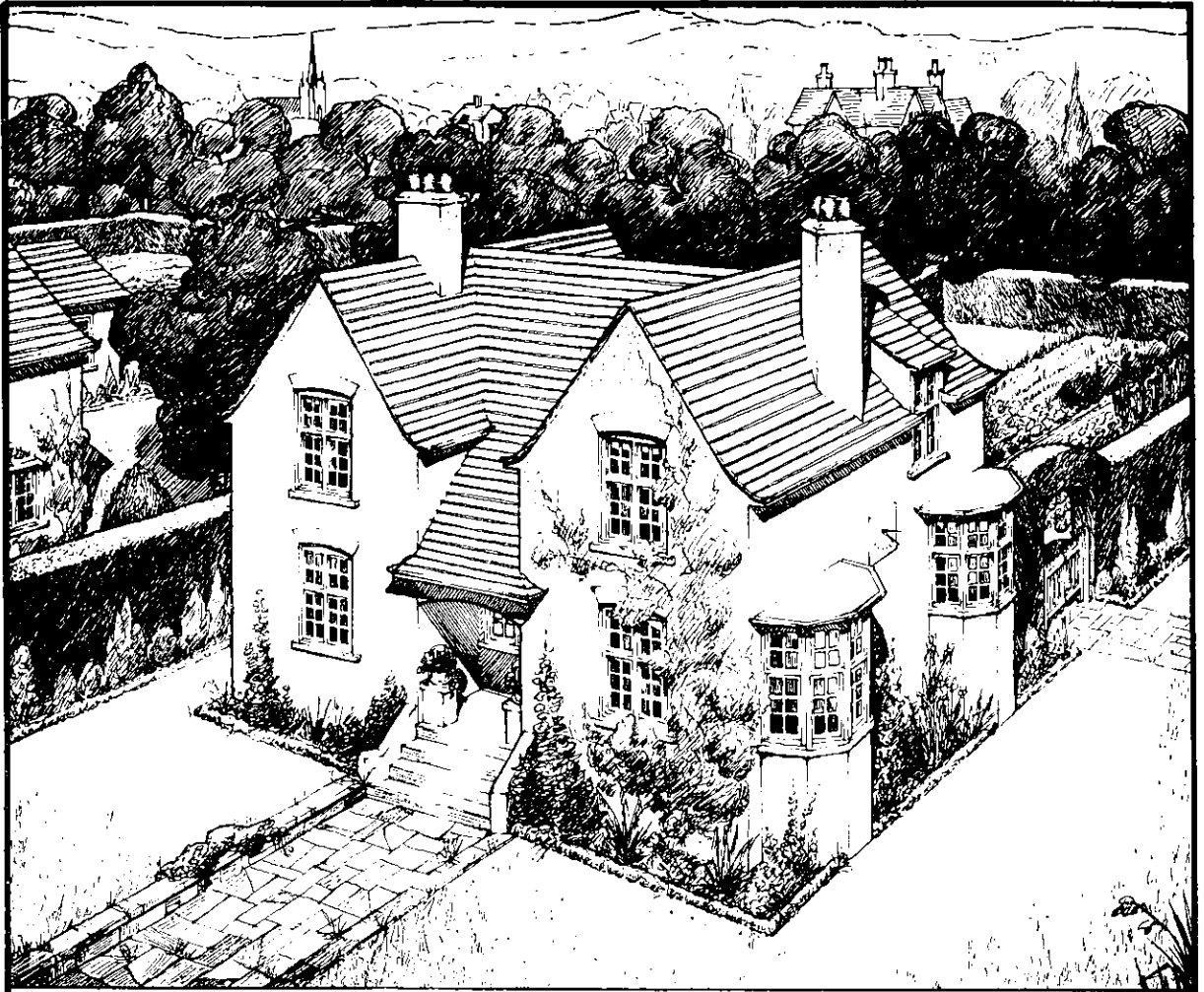
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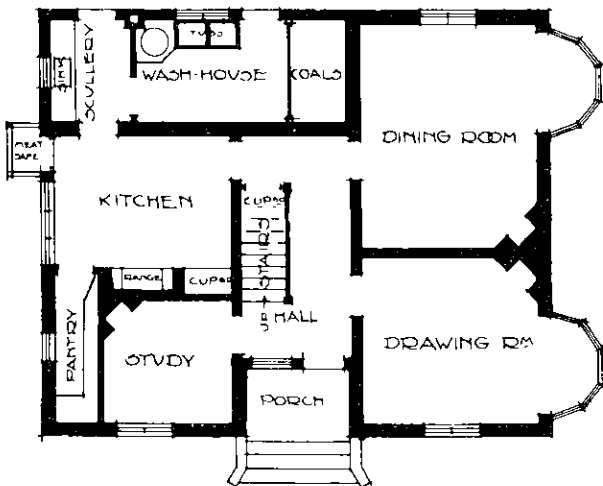
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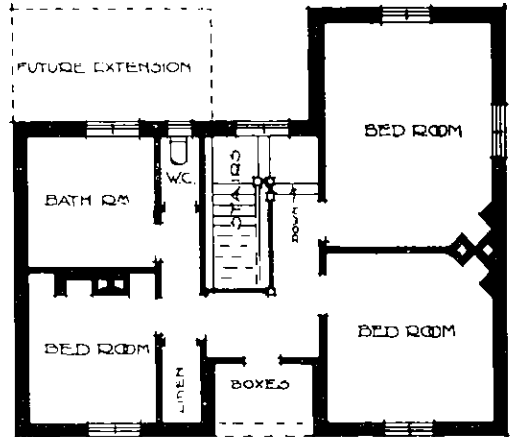
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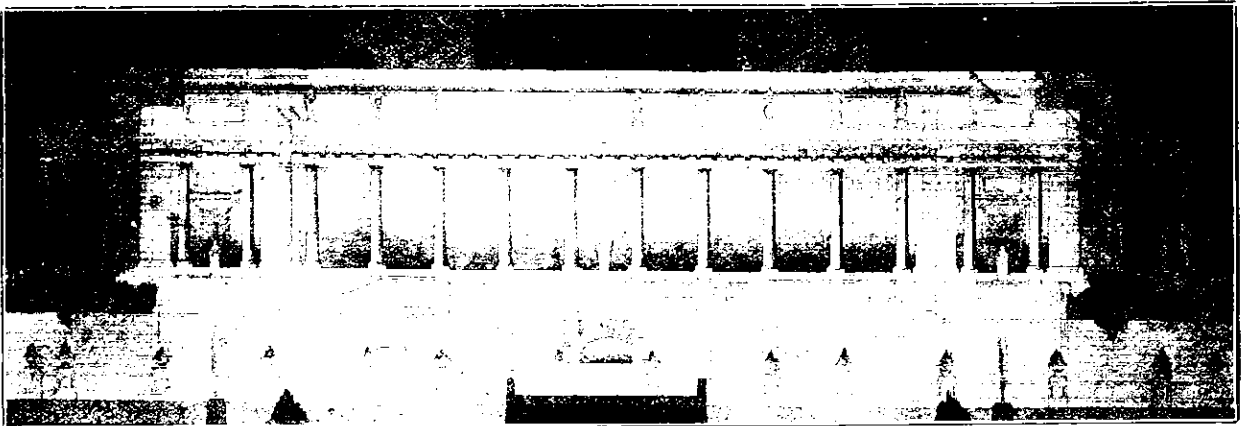
The Auckland Architectural Students' Association

First Subject set by F. N. Bamford, Esq., A.R.I.B.A.,
Visitor-in-charge.

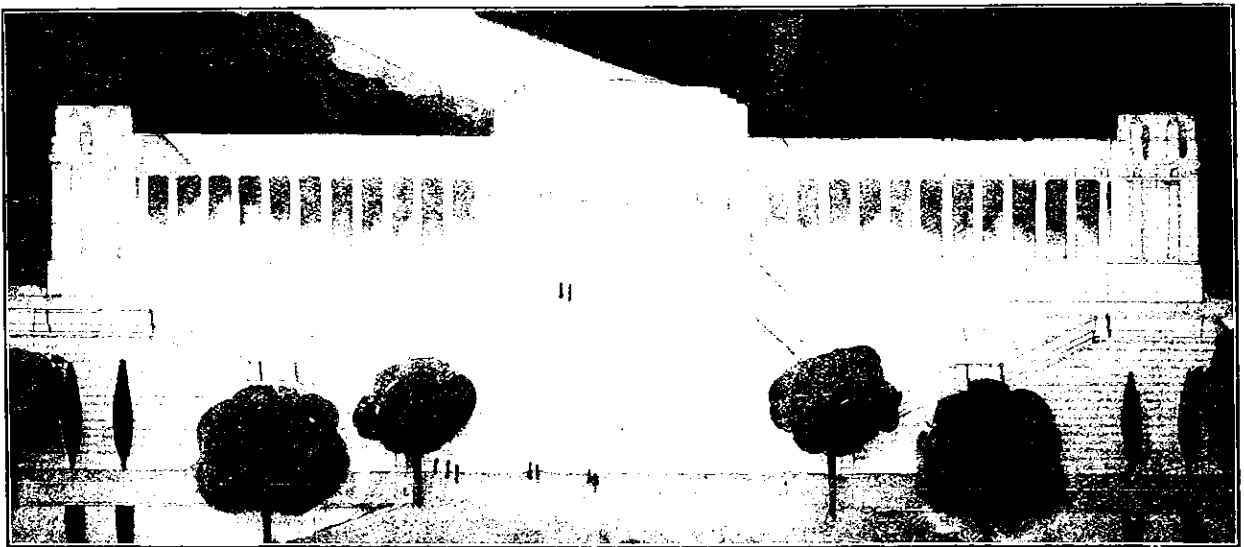
The Auckland Student's Association is not to be a club in name only. The members have asked different architects to act as "Visiting Architects"

"A" SUBJECT

General.—It is supposed that the New Zealand Government has decided to erect a public Bath House in a thermal district. The site chosen is at the back of a lofty hill covered with scrub, with a heavy planting of pine trees about the foot. The spring from which the supply will be obtained is at the foot of a small rocky spur about sixty feet above the site.



First mention "A" Subject Bath House in a Thermal District, by R. B. Owen



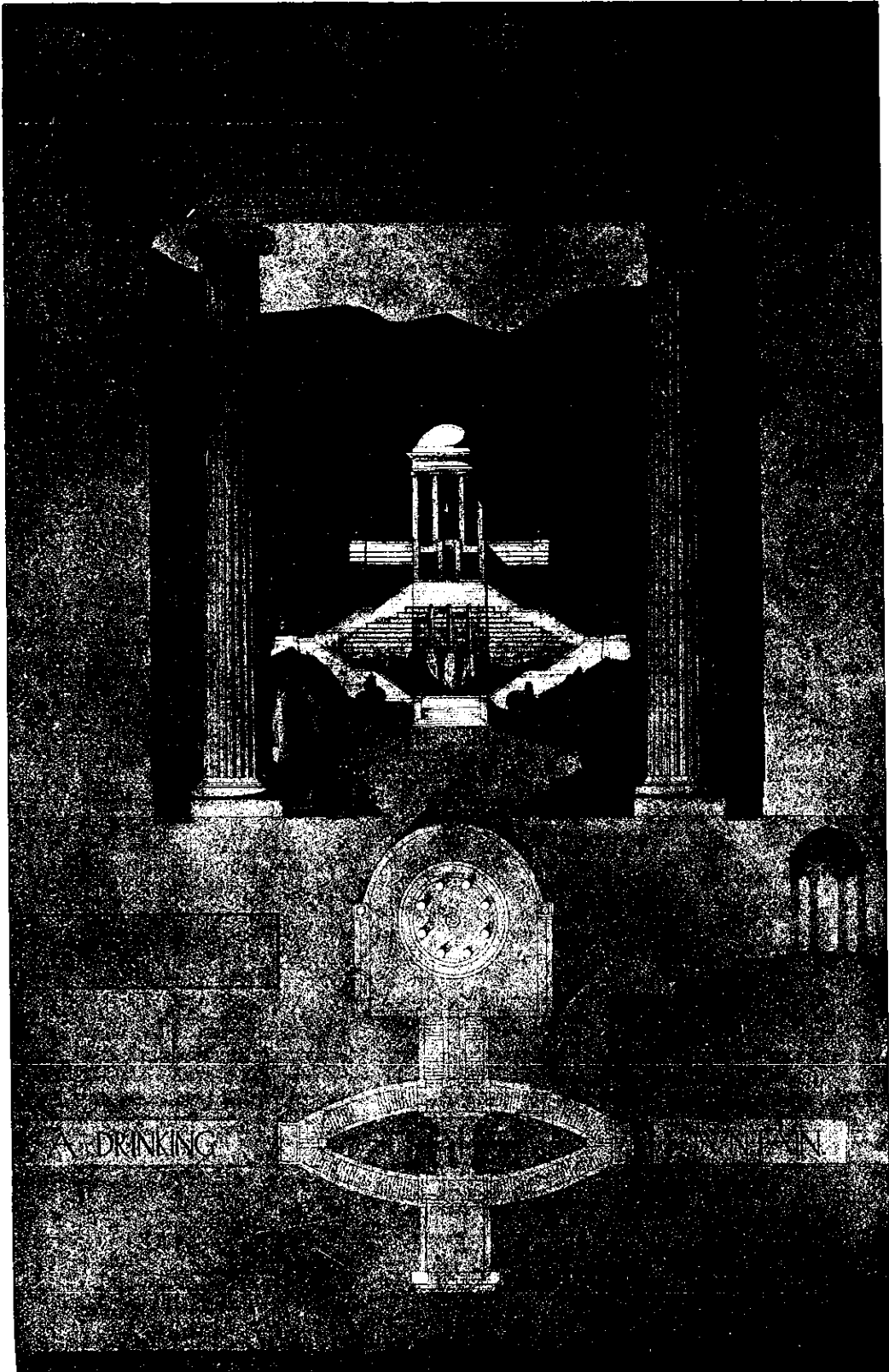
Second mention "A" Subject—Bath House in a Thermal District, by A. B. Morgan.

whose duties shall be to set a subject for students to work at.

The first "Visitor" is Mr. F. N. Bamford A.R.I.B.A., and he set two subjects, viz. (A) "An Open Air Swimming Bath in a Thermal District" (problem in design) and (B) "Some Architectural Feature to mark the Source of the above."

Ten designs were submitted viz:—6 for "A" subject and 4 for "B" subject. We illustrate the two first of "A" subject, and the third mention of "B" subject, (there being no first or second).

Site & Dimensions.—The site is a natural terrace 25 feet above the park level and roughly 150 feet long. At the rear of the terrace the ground rises sharply at an angle of 45 degrees. It is suggested that the overflow from the bath should find outlets in front of an open pond or ponds. The approach is from the centre of the town through the park, and it is required that the approach and the terracing and intermediate surroundings of the bath house should form part of the design.



Pavilion marking source of water supply for Bath. Third mention "B" subject by J. O. Owen

The building may take any form desired but must contain or have as part of the general scheme:— (a) An open swimming pool not less than 20 feet x 40 feet. (b) Dressing rooms for 50 bathers. (c) Two lounges where bathers may rest and cool. (d) Attendant's room and small office.

A spacious loggia is also required across at least some portion of the front.

Drawings required (to be $\frac{1}{4}$ inch scale) as follows:—Ground plan showing layout. Two sections. Sufficient elevations to explain the scheme. Also $\frac{1}{2}$ inch detail of some portion of the building. The whole of the work to be in stone.

"B" SUBJECT—"Some Architectural Feature to mark the Source of Above."

It is suggested that this should take the form of a simple pavilion containing a drinking fountain.

Drawings required (to $\frac{1}{8}$ inch scale) as follows.—Ground plan showing approach. One section. One elevation. Also a $\frac{1}{2}$ inch detail of some portion of the design.

The visitor in charge reported as follows:—

"A" SUBJECT

"The subject of an open air bath and its approaches was given with the idea of affording the students an opportunity of dealing with composition and expression of character in a somewhat broader manner than usual.

Only an outline of the requirements was given, as it was desired that the students should approach the subject with open minds and by assembling each his own elements, give that distinctive character to his design, for which the subject gives so great an opportunity.

The most serious fault in the designs submitted was a general disregard of the fact that the bath was to be an open air one; and that any elaboration of roofs to the covered portions must result in loss to its principal characteristic.

The draughtsmanship was in many cases excellent and the rendering effective.

"B" SUBJECT

In order that the students should be working in unison, a portion of "A" subject was set as a "B" subject. The work in this case was satisfactory as although the opportunities afforded by the site were not made the most of, yet the work sent in was in each case a useful exercise in Architectural design.

F. N. Bamford A.R.I.B.A., Visitor in charge."

Gisborne Bricklayers Hustled!

We understand that there is likely to be a strike of brickies up Gisborne way owing to the rate they are being hustled to build chimneys knocked down by the recent earthquakes. According to a press Association:—"At Pauriki, Mr. George Busby's station, a bricklayer had just finished rebuilding three chimneys shaken down in the last earthquake, and

was having a smoke preparatory to leaving the job, when the chimneys were again thrown down."

Our "brickies" don't mind doing a job or two now and again these hard times, but they think it is a bit too much that they should not be allowed a "smoke-oh" between jobs!

The Masterton Borough Council Competition

The Masterton Borough Council have compiled a set of "Conditions" for a competition for new Municipal Buildings. The conditions stipulate for buildings of brick or ferro-concrete, which must contain a Town Hall to seat 1,000 people, on ground floor, together with stage for concerts or public meetings, supper room and kitchen, ladies and gentlemen's cloak rooms; a Council Chamber; a public office for 6 clerks, five other offices; a gas showroom; a public library and a reference library; 6 other rooms (for Mayor, Engineer, and other officers); caretaker's accommodation, and lavatories, etc., all for the sum of £7,500.

A first prize of £50 is offered, a second prize of £30, and a third prize of £20. The Council does not bind itself to accept any of the designs sent in, but should it do so the architect must supply a complete set of working drawings, specifications, etc., for which effort he will receive $2\frac{1}{2}\%$ commission (including the prize money). The conditions suggest that the Council is desirous of getting the drawings from the prizewinner and supervising the erection themselves thereby saving some commission, for it is stated in the conditions that "should the successful competitor be appointed to supervise the erection of the buildings the first prize money shall not be paid to him, but it will be included in the commission paid to him in terms to be agreed upon. No professional Assessor is to be called in to assist the Borough Council in deciding on the merits of the designs submitted, as it is clearly stated that "the members of the Masterton Borough Council will be the adjudicators of the plans."

Competitors have also to send in a tender with their designs which must be within 10 % of the estimate of the building. Surely this is an extraordinary request to make! Is a competitor to prepare working drawings for tender purposes and get tenders for the same on the off chance of being awarded a £50 prize adjudicated upon by laymen? When will Local Bodies learn that their interests can be best served by getting the assistance of a professional architect of standing to draw up their conditions in a businesslike and satisfactory manner? Competitions drawn up by laymen however well-meant cannot possibly cover the ground adequately. Architects of standing will not compete in a competition the conditions of which are so loosely drawn up, and if this be the case how are the Council going to get the best possible return for the public money they are spending?

Our 26th Competition

FOR ALTERATIONS AND ADDITIONS.

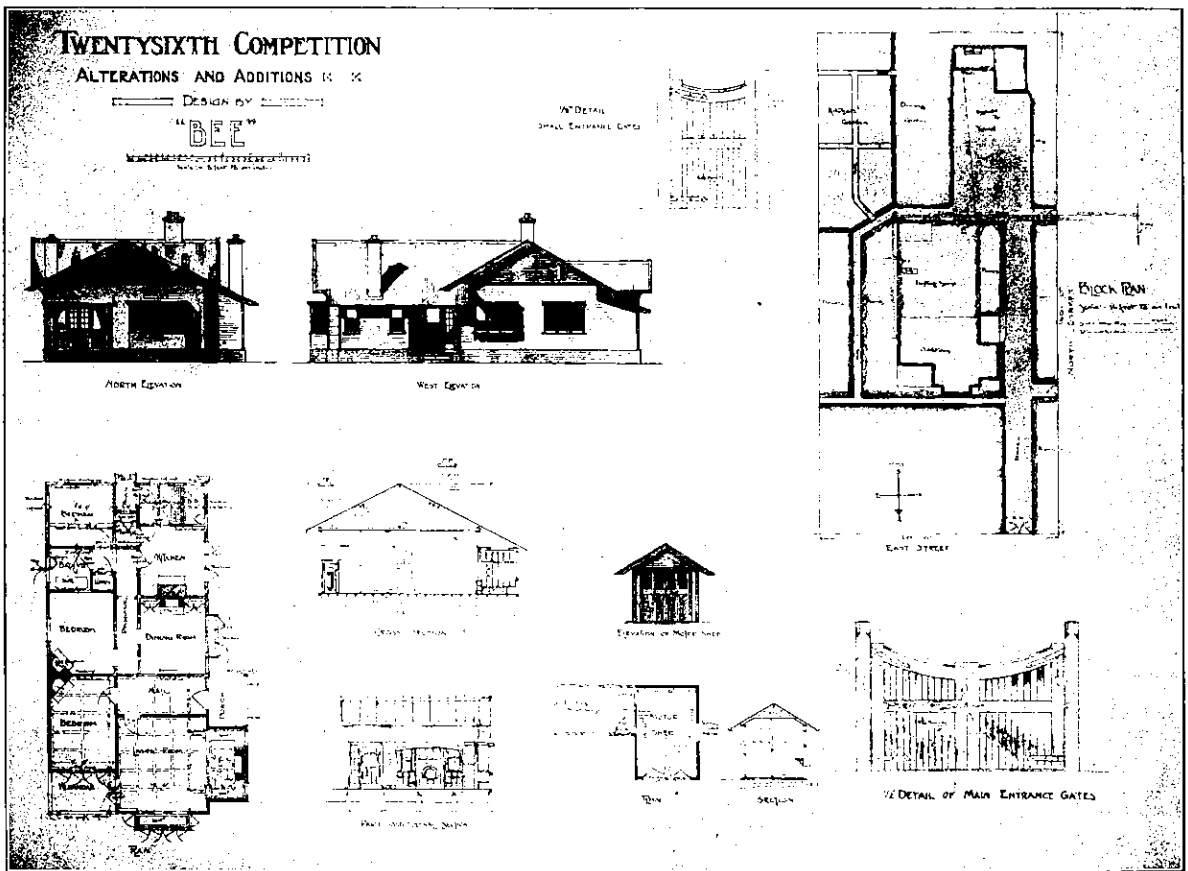
Won by "Bee"—Charles B. McArthur, Wellington.

This competition has brought forward the record number of drawings sent in since the Progress Competitions started, eleven competitors having sent in designs, viz:—"Bee," by Chas. B. McArthur, with Mr. W. Gray Young, Wellington; "Gobo," by Gordon Haines, with Mr. J. S. Guthrie, Christchurch; "Sketch," by Neville H. Arden, with Mr. Frank

very creditable indeed for young students in architecture.

I have pleasure in stating that, after careful consideration, the design submitted by "Bee" is the one I place first, while that of "Gobo" comes second.

My reasons for placing "Bee" first are the following:—The planning is good and carefully thought out. A splendid living room has been designed which makes a good architectural feature to the house, the inglo and porch giving an attractive bungalow effect. The entrance on the west side is a good arrangement, breaking up an otherwise long front; the bedrooms being on the east, catching



Winning Design in our 26th Competition by "Bee"—Charles B. McArthur, with Mr. W. Gray Young, Architect, Wellington

Messenger, New Plymouth; "Heim," by P. C. Garrett, with Mr. W. A. Holman, Auckland; "Kauri," by Harold L. White, with Mr. A. H. White, Auckland; "Rover," by R. F. Campbell, Hastings; "Pen," by Geo. F. Penlington, Government Architect's Office; "Iris," by R. C. Hall, with Mr. F. de J. Clere, Wellington; "Smoke," by J. H. White, with Salmond & Vanes, Dunedin; "Addenda," by C. B. Watkins, with Mr. W. A. Holman, Auckland; "Tile," by H. Brooks, Dunedin.

Mr. A. Wiseman, Architect, of Auckland, who kindly set this subject writes as follows:—

"The designs received from you number 11 altogether which at the outset I am pleased to say are

the morning sun; also the bathroom which is in a very convenient position. The elevations show good architectural treatment, the old roof and ridge being maintained and the existing lean-to nicely treated without much alteration, while the verandah facing the north makes a good feature for this front. The grounds are laid out in a straightforward manner. The gates also are strong and suitably designed. Good light is obtained for kitchen and dining room, a point lacking in several other designs. Altogether this is an excellent work, and could in my opinion be executed for £300.

With respect to "Gobo's" design I consider the planning arrangement, from the point of view of

simplicity, is the best; the existing building having been left in its entirety; the bathroom being construed into a scullery, and the sellery re-organised to form a lavatory, etc.; a new bathroom being added with the lean-to roof continued from old work. This plan saves a great amount of labour—a thing very essential in alteration work. A fine living room is shown, also good best bedroom, each accessible to verandah, as in the case of "Bee." The elevations are simple, but the west elevation lacks in dignity, and is rather spoilt by leaving the lean-to unimproved. Nevertheless the work on the whole is good, and has gained second place largely on account of its simplicity of design—thus bringing it within the limit of cost.

With regard to the design submitted by "Sketch," I may say that this plan shows much intelligence in the matter of planning and taste in design of elevations. This is a splendid work, but I consider it would be too costly and could not be executed for the stipulated sum. The balanced chimney effect (ingle and wash-house) is a happy

idea, also communication between kitchen and living room.

"Pen" has also transfigured the old fashioned cottage into a thing of beauty—the elevations being bold—having good architectural effect. The only adverse comments I would make are that the cost of effecting additions and alterations would go beyond the limit allowed and that the verandah on west front would rather block the light for kitchen and dining room—the windows also being rather small.

Before closing I should not omit to mention an excellent design with an effective pencil perspective sketch by "Addenda," the elevations being particularly attractive, well designed and suited to domestic work, but here again too costly, the existing walls being too much altered and old rooms re-arranged.

The reports and outline specifications on the whole are very explicit, and the work of the eleven students is very encouraging.

Yours faithfully,
A. WISEMAN."



Wanganui Club House Competition - Sketch by Mr. Alex. Wiseman (Auckland) of Billiard Room

The Hands - Around - the - Pacific - Movement

BY ALEXANDER HUME FORD

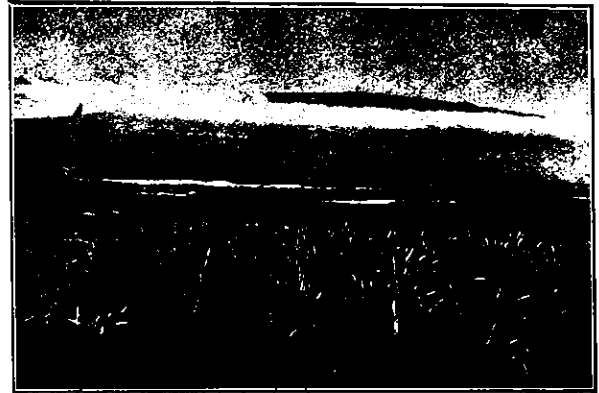
[Our readers will remember an article in our March issue on the "Ad" Club of Honolulu by Mr. Ford. This further article gives an account of the growth of the movement which Mr. Ford is advocating and was written before there any thought of war.]

At a luncheon of the "New Zealand Club" in Wellington, I was commissioned to carry around the Great Ocean a message that New Zealand believed in the Hands-Around-the-Pacific Movement, and that it would do its part in creating a Pacific Patriotism. Since then, I have encircled the Great Ocean, and the message from New Zealand has done much to cement the other lands of the Pacific with this great movement, which is headed to-day by the chief executives of most of the Pacific countries.

In a way, the ideals of the "New Zealand Club" are the ideals of the Hands-Around-the-Pacific Movement. The "New Zealand Club" meets at luncheon whenever there is a distinguished visitor in Wellington whom they wish to hear from. The Hands-Around-the-Pacific branches about the Pacific are similar organisations save that they meet weekly, and when there is no distinguished visitor from abroad to address the meeting, they lunch together, meet each other and hear from one of their own members. In this way they develop a local as well as a Pacific patriotism, both of which are absolutely necessary in the furtherance of the Hands-Around-the-Pacific Movement.

In Honolulu, Hawaii, a "Hundred-thousand-Club" was organised and was supposed to represent the desire of the people to reach a hundred thousand population, but this was not really the desire of Hawaii. Our real desire was to make Hawaii known to the world as a place where tourists and distinguished visitors would be gladly welcomed. So the "Hundred-Thousand-Club" gave way to the "AD" or "Advertisement" Club, which meets weekly at lunch, and has five hundred members who recently raised \$30,000 gold in a single day for promotion and publicity work in Hawaii. But during the life of the "Hundred-Thousand-Club" in Hawaii, the head of the tourist bureau of New South Wales was entertained at a joint banquet of this club and the "Hands-Around-the-Pacific" club. He grasped the idea and organised in Sydney the "Millions Club," consolidating it with the Hands-Around-the-Pacific organisation in that city. The "Millions Club" of Sydney holds fortnightly lunches, and has a membership of over a thousand, but it is not as closely woven together, however, as those organisations that hold regular weekly lunches. The Honolulu "AD" Club for instance, for three years has never missed meeting together every Wednesday noon at lunch; the first twenty minutes being given to the officers to make reports, the second twenty minutes to the speaker of the day, and the third twenty minutes for discussion between the speaker and the members. The minutes, the death knell to so many organisations, are never read. But the weekly lunch is never omitted.

In Perth, West Australia, the branch of the Hands-Around-the-Pacific Movement is called the "Millions Club of Western Australia" and it is the desire of the people of West Australia to gain a million population for their State. The Premier, (Mr. John Seaddan) is the presiding officer, always present at the weekly luncheon to the distinguished guest of the day, while Sir Harry Barron the Governor General is the Patron of the club, and receives the distinguished guest who is provided with an automobile by the Government Tourist Bureau. This organisation has brought about the splendid co-operation in West Australia of the Railways, the Roads Department, the Government Tourist Bureau, the Government officials, and private transportation



The Rich District of the Island of Mani extending up the sides of Haleakala, Hawaiian Group

companies. The leader of the Opposition is vice-president, and the Mayor of the City, second vice-president, while the active head of the Chamber of Commerce is treasurer, and the directorate numbers in its fold, the most active editors and business men of the city. Usually a hundred or more sit down together at the weekly luncheons. As the constitution and bye-laws of the Perth organization have been adopted by the different Hands-Around-the-Pacific clubs around the Pacific, it might be well to present them.

The objects of this club shall be:—

(1). To establish and maintain an organization, membership in which shall be open to any respectable male citizen of the State of Western Australia, who is interested in securing a million people for this State.

(2). To get its members together at luncheon on Tuesdays of every week in the city of Perth to conduct its business, listen to the address of some prominent speaker, and to discuss matters of interest to the club and to the State.

(3). To co-operate with the local and State Government in the special entertainment of distinguished visitors to Western Australia.

(4). To study the best methods of advertising to the world the splendid opportunities Western Australia has to offer to the tourist, immigrant, or investor.

(5). To induce other towns and communities of Western Australia to establish branches of the "Million Club" to induce population to those local centres.

(6). To study the art of speaking well of the efforts of individuals or communities that are working for the welfare of Western Australia.

(7). To bring together in friendly gathering and co-operative work, all those of the community who wish to do something to make the city or State better because they have lived in it.

(8). To hold a gathering around the banquet table once a year of all peoples and nationalities of Pacific lands, resident in Perth, who wish to attend and express their willingness to co-operate in the movement to make Western Australia better known to the world.

(9). To co-operate with the Hands-Around-the-Pacific Movement, to have all of the countries of the Pacific work together to make the advantages of Pacific lands better known to the world.

(10). To eschew all politics at the gatherings of the club, and to work earnestly for the attainment of any object that is for the good of Western Australia.

(11). To discover and develop speakers and workers in the club whose gratuitous services might be of benefit to the community and the State.

(12). To keep in touch with similar luncheon clubs throughout Australasia and the Pacific, to exchange speakers with these, and promote the bringing about of annual conventions of delegates from these bodies.

The "City Club" of Manila has exactly the same objects as that of the "Million Club" of Western Australia, and this constitution is also being adopted by the "Saturday Club" of Shanghai, the "Progress Club" of China, and the weekly luncheon club of Seoul, while other organizations along these lines are being perfected in Japan and other parts of the Pacific. In Manila, Governor-General Harrison is President, and the head of the Government Tourist Bureau Secretary, while the heads of the Chamber of Commerce, the street Railway system, the Manila Railways, and steamship companies are the directors who actually direct. The Filipinos, Spanish, British and Americans have been brought together to work together, with the result that the Filipino Assembly has recently promised a hundred thousand pesos annually for building trails and rest houses, and for opening up the country to the tourist, as well as for the rest of the Phillipines who wish to know their own country, and the Government and the Manila Merchants Association jointly guarantee another twenty thousand dollars gold for publicity work at home and abroad to make the attractions of the islands known to the world.

The work of the "Progress Club" in Peking, with the President of China as the Honorary President, with the head of the Imperial Railways and others as active officers, is to bring China up to a point where she will take part in the publicity about the Pacific, supporting Official Tourist Bureaux are expected to co-operate with them.

Tokyo is soon to have her weekly luncheon club, along the same lines as the others, and now nearly every great city of the Pacific has its weekly luncheon club, and these are all affiliated with the Hands-Around-the-Pacific Movement.

At the first luncheon of the "City Club" of Manila, there was a speaker who had addressed forty luncheon clubs throughout America on the subject of the Phillipines, and there were several present who had been induced to visit the Phillipines through his eloquence at some of these luncheons. It is the constant meeting together week after week that compels the citizen to realize the fact that even his business rival has the interest of his city at heart, and there is a common ground somewhere on which they can work together, and soon they do begin to work together, and the only question ever asked about any new movement is the one question, "Is it good for the Community?" If it is, let us assist in it, without asking who is making a profit, for after all, the honest profit of one man in the community is reflected directly or indirectly all down the line, and when all of the communities of the Pacific are studying each other's methods along progressive lines, they become good friends and work together instead of against each other, and everyone benefits by the prosperity to all that follows.

At the "Hands-Around-the-Pacific" annual banquets in Honolulu, the speeches from the orators of each of the tables representing different nationalities of the Pacific, have been along the line of telling how the community has been bettered by the fact of the residence of the people of the speaker's nationality, and in this way a friendly rivalry has sprung up between the people of all races and nationalities of Hawaii to make Honolulu and Hawaii better because they have lived in it.

At present the Hands-Around-the-Pacific organization is urging the various Official Tourist Bureaux about the Pacific to unite together in the support of a "Pan-Pacific Pavilion" at the Panama Exposition, where the heads of each of the Pacific tourist bureaux will meet each other and work together for the eight months of Exposition, disseminating information and knowledge about their respective countries, and learning from each other the methods which have proved most successful in attracting the tourist, the investor and the immigrant. It is probable that before the opening of the Exposition, that a convention will be held in Honolulu at the cross-roads of the Pacific, of delegates from all organizations about the Pacific interested in securing the tourist, immigrant or investor, and then some definite plans for co-operative work will be agreed upon, so that the whole Pacific may work together as a united force to draw travel to, and around the Pacific.

The transportation companies have guaranteed a pound-a-day rate for eight months of the year around-the-Pacific, and arrangements are being made with the several government and Official tourist Bureaux to take care, or see that visitors are taken care of, in their respective countries at this rate for a month's stop-over. The wealthy visitor will also be welcomed, but the object of the Hands-around-the-Pacific Movement is largely to educate the great masses in a desire for knowledge of the Pacific, and to create among the people an earnest desire to know the lands of the Pacific even if it is necessary for them to make some sacrifices to become acquainted.

From the New Zealand Government Tourist Bureau, five years ago, came the first encouragement to the Hands-Around-the-Pacific Movement, and again it is earnestly supporting the movement, while in Napier there is a local "Thirty Thousand" Club working along the same lines, in Otago, the "Dunedin Expansion League," and on the west coast, the "New Plymouth Tourist and Expansion League." These promotion clubs, the Government Tourist Bureau, the Government Railways, and the Private tourist bureaux of New Zealand should be brought together to work together for New Zealand, as a united force to attract and welcome the visitor. Here is some splendid work that the "New Zealand Club" could undertake. Its weekly luncheons might easily bring the heads of all these organizations together, or they can deliver a series of talks one after another at weekly lunches, until they begin to realize that one and all are working for New Zealand, and that they should work together as a unit, with the one great object, "THE PROGRESS OF NEW ZEALAND," and this accomplished they will find the work of pulling together for New Zealand, and with all the countries of the Pacific, second nature, for they will have learned team work at home. Then they will be able to take an active part in bringing about the rapidly-approaching day when the Pacific Ocean will become the great Commercial Theatre of the world, and everyone of the countries about its borders enriched and benefited many times over.

And now let us have a real Patriotism of the Pacific, and a real "Hands-Around-the-Pacific" feeling of friendship and unity.

The Architects' Credentials

We came across the following advt. in a New Zealand paper the other day:—

A. D. J.—

ARCHITECT AND COMMISSION AGENT.

Connected with the district for 27 years, Mr. J— has erected many buildings, and as an Architect during recent years, has designed many. He has served as Mayor of the Borough, acted on many public bodies, and is Deputy Official Assignee for the District.

Now that the Architect's Bill has become law, this gentleman will have to omit the profession of "architecture" from his numerous callings, in spite of the fact that he has been 27 years in the district, and has been "an architect during recent years."

Australia

REGISTRATION OF ARCHITECTS

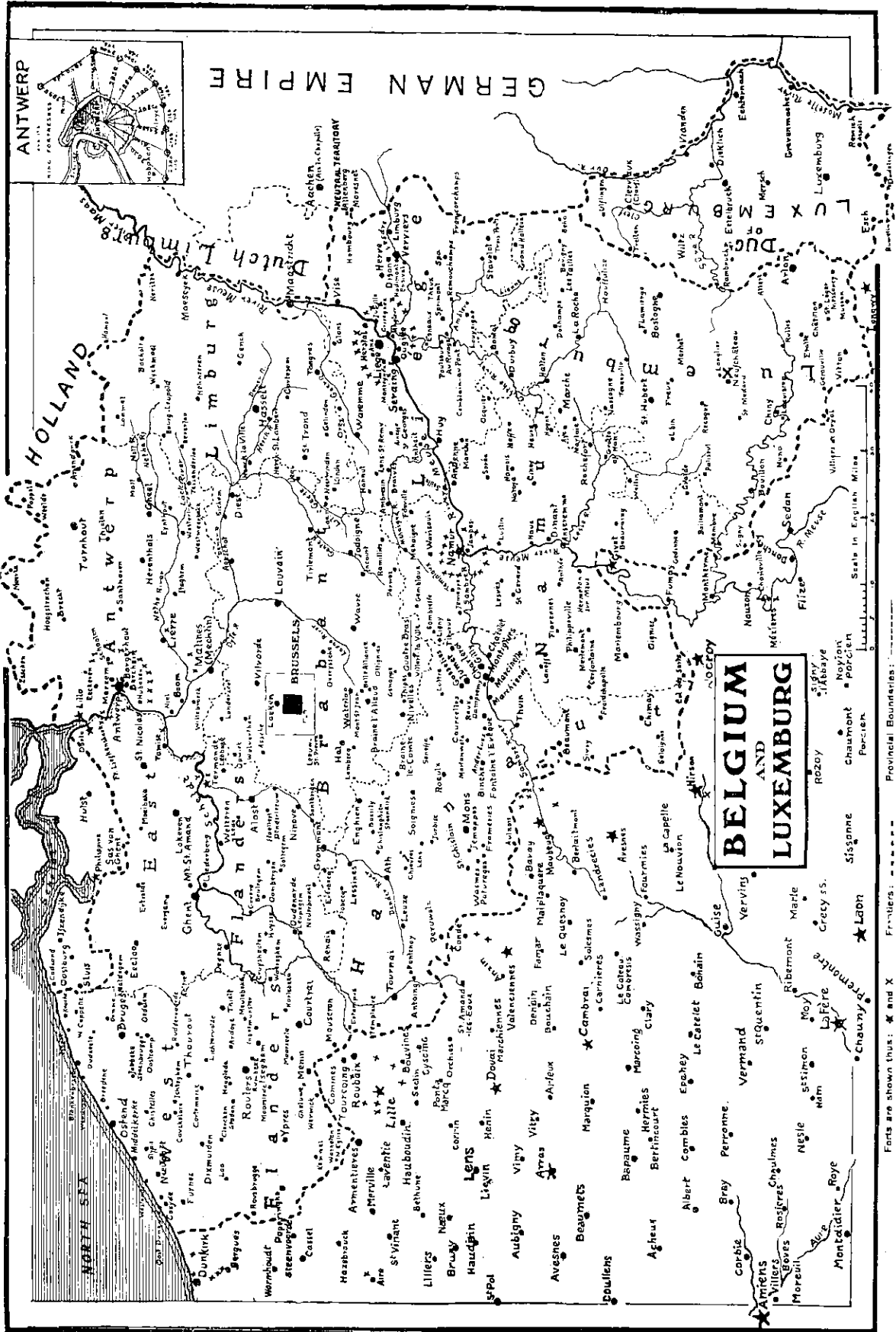
The draft of a proposed bill for the registration of architects was read before the meeting of the Royal Victorian Institute of Architects last evening, and unanimously approved. The President (Mr. H. W. Tompkins) remarked that the bill was entirely in the interests of the public, and that no member present would benefit in any way, because they would have to admit all architects or persons practising architecture at the passing of the Act. He also stated that at the present time there was nothing to prevent anyone from practising as an architect, in many cases at the expense of his client, whereas under the bill a man would in future have to be duly qualified, thereby raising the status of the profession. The measure provides for a registration board, for examinations to be held, for the appointment of registrar and other officers, and the other requisite machinery. The registration fee is fixed at £3 3s.

The bill, it is stated, is identical with one being introduced in the New South Wales Parliament, and probably in Tasmania and South Australia. The Institute has invited the Chamber of Commerce, Chamber of Manufactures, Municipal Association, Property Owners' Association, Health Society, Medical Association, the Master Builders' Association, and other bodies to join in a deputation to the Minister of Public Works, urging the passing of the proposed bill into law.—*Building.*

FEDERAL CAPITAL

Two years ago it was officially promised that the new Australian capital at Canberra, New South Wales, would be ready for occupation in five years. That promise is steadily fading away, and only a very rash person would now predict the time of completion of what we have been told is designed to be a magnificent "capital of a continent." Some preliminary work, not very much, has been done, and although some 300 workmen are officially stated to be still engaged on preparatory operations no essential progress has been made with the laying out of the capital itself. A struggle is going on between a departmental board which drew up a design for the capital and Mr. Griffin, the Chicago architect, who was engaged by the Federal Government to design and watch the construction of the city. Mr. Griffin considerably revised the board's design. The board is clamouring for the revision of Mr. Griffin's design, and was instrumental in getting the competition postponed because of the war. At this rate nobody can say when the plan of the Federal city will be settled. The protracted delay is not at all displeasing to Melbourne, which thereby remains the Commonwealth seat of Government for an indefinite period.

'Progress' War Map



This map is one of a series of five special maps appearing in our Special War Supplement, "The Great European War of 1914," price 1/7, postage free

Engineering

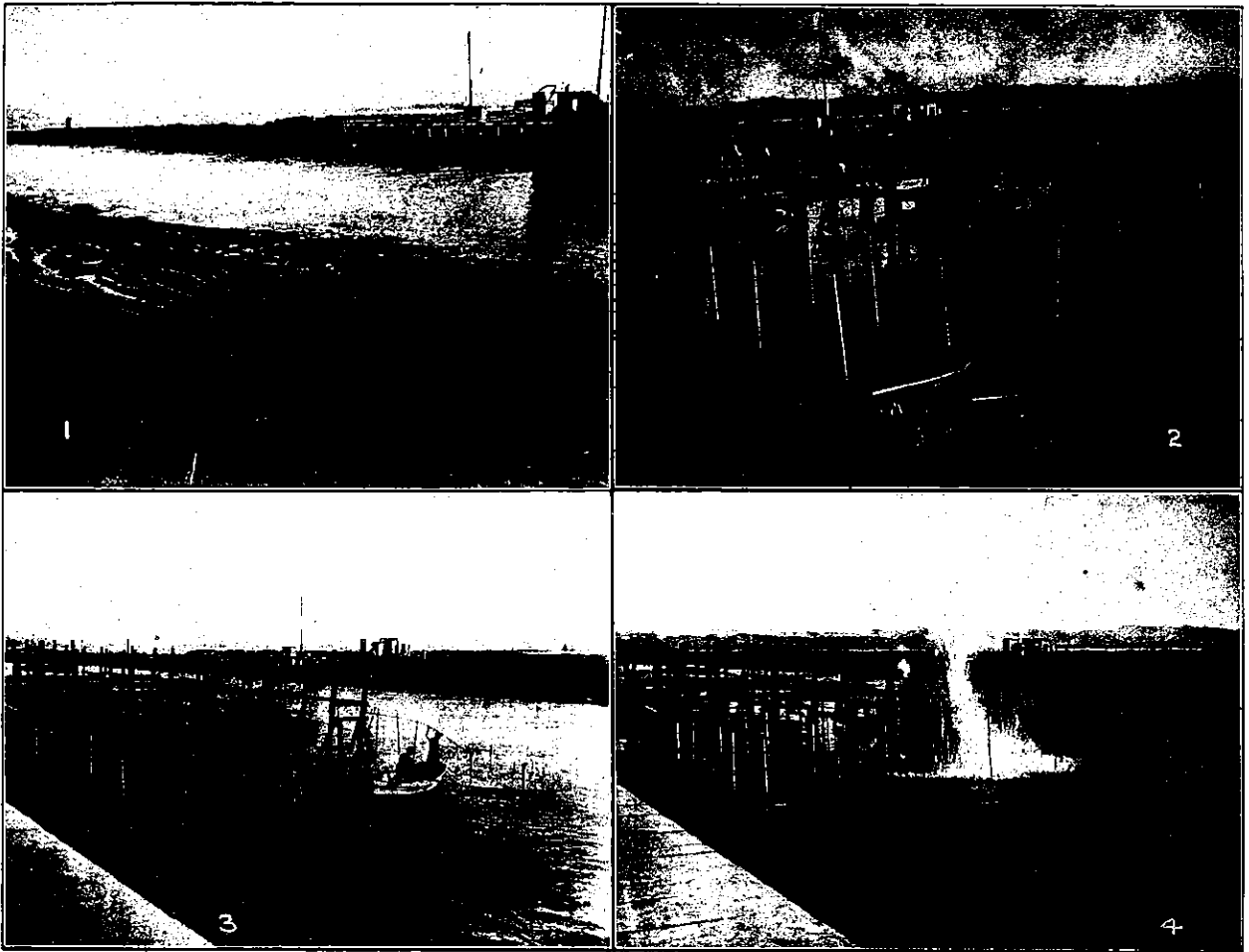
The Use of Explosives Under Water

Methods in use at Gisborne

The subject of explosives and explosions has always more or less a fascination for the ordinary man, and although most have a vague idea as to how

latest methods employed in this class of work, we have secured photographs and a detailed description of the extensive works now being carried out at Gisborne.

The work here consists of removing a papa reef which at present seriously impedes the easy working of the port, and without dwelling on the magnitude



1—The Reef at Low Tide before Blasting. 2—Drilling on the Stage. 3—Placing Primer in Bore-Hole. 4—A Shot Fired

explosions are brought about during the course of mining work on dry land, few individuals, otherwise well informed, have the remotest idea as to how the same results are brought about when the work has to be carried out, not only under water, but out of sight.

In order that those of our readers who are interested in such subjects may be informed as to the

of the undertaking we will confine ourselves to a description of the methods employed.

In the first place the problem presented was a more or less unusual one, for the reef to be operated upon was neither dry nor was it always water covered, in fact it was a tidal reef.

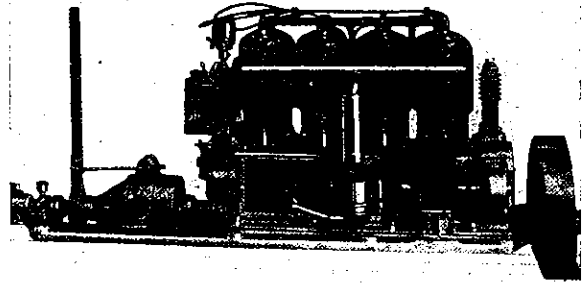
This meant that the usual method of working, viz: from floating pontoons was impracticable, and

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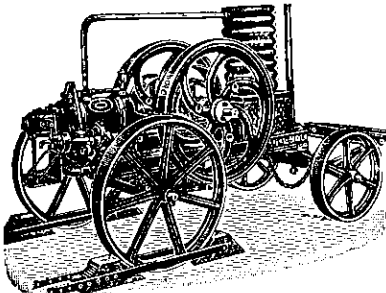


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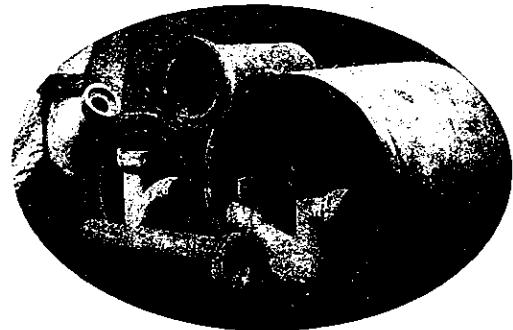
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as an alternative the Engineer to the Board, Mr. J. A. McDonald, devised the scheme of carrying out the work from staging (see illustration No. 2) erected on trestles. Illustration No. 1 gives an excellent idea of the reef as it appeared at low tide before blasting.

To take events in their proper sequence it is necessary to begin where the charge is prepared for the actual work. This takes place in a series of three buildings known collectively as the "magazine," situated on reclaimed land, away from all surroundings, and well apart from the working party. As a precaution against accident it may be mentioned that in the construction of these buildings

The detonator, which is the medium by which the gelignite is actually exploded is entered on a tube and water-proofed. A length of fuse is then carefully fitted inside the detonator and the latter forced into a plug of gelignite, the whole being tied on to a long wooden lath.

On the actual works, drilling holes in the reef to take the charges is first of all necessary. This work is carried out from staging as shown in illustration No. 2, the uprights shown in the foreground being tubes projecting from finished "bores."

First of all a hollow iron cylinder is put down to the reef which prevents sand from getting into the drill hole, and the drill is kept working inside this



THE NEW ZEALAND SOCIETY OF CIVIL ENGINEERS (Incorp.)
A Group taken at the Annual Meeting held at Auckland this year.

no iron of any description is employed, the whole throughout being fastened with copper or brass nails.

The first building contains the store of gelignite which is the explosive employed, and is designed to contain 300 lbs. The second building is the factory in which the tin "torpedoes" are made. These have a sharp pointed end, and differ in length according to the charge required, which varies from 1lb. to 10 lbs. The torpedoes are of 2in. diameter, and the gelignite which is put up in 1lb. plugs is rammed into these with a wooden rammer. The next building of the magazine is the "fuse house" in which is stored the miles of fuse employed in the blasting, and the store of fuses used for lighting the charges, though this does not count as one of the main buildings. The "primer house" is the building in which the primers are made for firing the charges.

cylinder, while every now and then a steam pump is put on to clean out the silt and water. When the holes are drilled to the required depth lengths of galvanised piping, closed at the lower end are inserted in each hole. While placing these in position they are filled with water to ensure that they should reach the bottom of the holes. The torpedoes charged with gelignite are then dropped to the bottom of the tubes, and then the primer attached to the wooden lath is sent down after it, (see illustration No. 3) the end of the lath being pushed down into the charge contained in the torpedo, while the long fuse attached protrudes from the top of the tube ready for lighting.

The times for firing all charges are lunch time and "Knock off" time, so ensuring safety for all the hands. Illustration No. 4 shows well the ultimate result of the operations described, and a careful in-

spection of the print will show one of the primer rods mentioned, flying skyward as a result of the explosion. The rods and tubes are of course destroyed, but the expenditure entailed is considered cheap, owing to the safety guaranteed to all hands by these methods.

The Motor in Warfare

ITS USES IN THE PRESENT CAMPAIGN

No event that could possibly have happened in the world's history could have forced the superiority of the motor and motor traction so prominently into the limelight as the present European War. Although this is a big statement to make, every individual reading the daily war news who has thought deeply enough to get even slightly below the surface of things, must admit that some wonderful results have already been obtained on the Continent that would have been beyond conception but for its employment.

The flexibility of this new unit in warfare was first evidenced by the rapidity with which the mobilisation of the various fleets of motors was carried out throughout England and Scotland. The English Army Service Corps had at the beginning of this year only nineteen Mechanical Transport Companies as a standing strength, and a large proportion of these companies consisted of steam tractors, admirably suited for the haulage of heavy supplies from a near base, but at a tremendous discount in situations where the active line extends for a distance of perhaps 60 miles from the nearest railhead.

Such a situation was of course practically impossible in any series of army manoeuvres carried out in England, but fortunately the War Office authorities foresaw the possibility of such an occasion arising, and realizing that the only type of vehicle that could hope to cope with the situation would be the self-contained petrol motor, they took steps to ensure that these vehicles should be available when occasion arose.

With this in view a scheme of subsidisation was carefully worked out which was available to all those owners of fleets of motors, whose machines came within the Army standards, and who cared to avail themselves of it. Needless to say, as events have proved, every mercantile firm of any importance in the British Isles came into line and placed their motors under War Office orders.

This subsidy idea was an excellent one, for although in times of stress such as the present, the War Office have of course the power to commandeer any vehicle, yet the acceptance of the subsidy, small as it was, made it imperative that the owner of the vehicles should keep his motors in serviceable condition, should have certain spares and equipment, and should be subject to War Office inspection, at any and every unexpected moment.

As an illustration of the smoothness with which this Army scheme worked when put to the test we quote one or two examples of efficiency at the time of mobilisation. Messrs. Waring and Gillow Ltd.,

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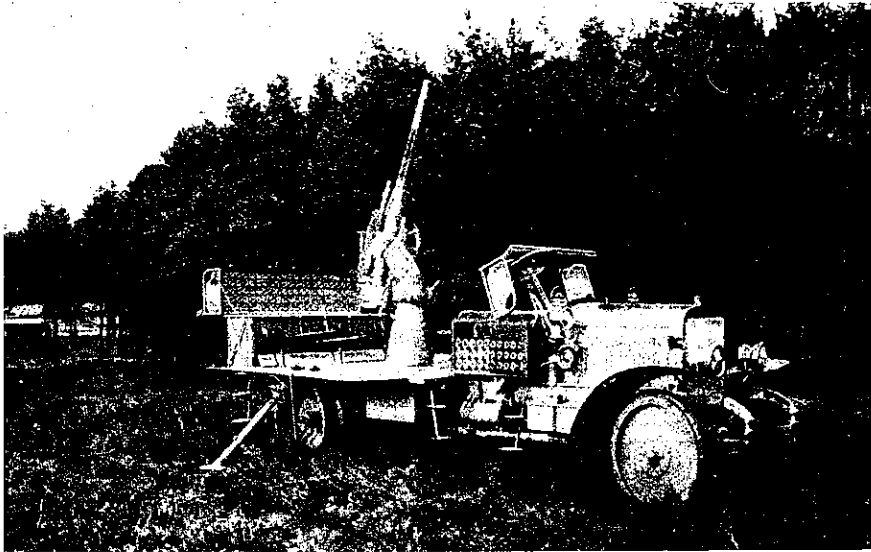
are a large firm of house furnishers in London, who make a boast that every load of furniture purchased, is delivered in any part of the Provinces by their own motors without rehandling. This meant of course that on the night of August 4th last their large fleet was scattered all over the provinces as usual delivering goods.

Within 20 hours of the receipt of notice from the War Office every machine had been recalled, altered to Army requirements, fully equipped, and despatched to its appointed rendezvous. One machine incidentally had to make a non-stop run of 102 miles to get to its base in order to leave with the other machines. Messrs. Carter Paterson the large London carriers were equally prompt, and delivered no less than 57 motor vehicles to the rendezvous in an equally short time, though as they operate mostly within London, they were nearer their base when the order

Already we know that but for the employment of these machines it would have been impossible to rush our men to just where they were wanted at the right time, and naturally it would have been equally impossible to keep them supplied with ammunition and food while in those advanced positions, for it must be remembered that the fighting has been carried out along a line of immense length, and at a distance from the main base that would have made horse service impossible even had the horses survived.

But these are after all what might be called more or less legitimate duties for motors on the field and it is only when one realizes the extraordinary duties motors are performing that the wonder grows.

Many of the transport motors have been covered with armoured bodies and carry both light field guns and machine quick-firing guns, and the value of



A German Motor Aeroplane Gun

was received. Thirty-five single decker motor busses were converted to ambulances and despatched to Chatham within 26 hours of their being stopped on the road. With such capable handling as this, it is not to be wondered at that the transport service on the continent has been so admirably handled.

There would seem to be no use in warfare that the motor has been put to, where it has not acquitted itself better than the horse, except for actual cavalry purposes, and even in this connection it is said that never have horses in the field been so well cared for, owing to the facility with which fodder is taken up to the lines.

Of the actual many uses that have been found for the motors at the front it is of course impossible to enumerate the whole, for apart from its recognised uses it must be remembered that some of the finest motor designers and mechanics in England are at the front, and doubtless motors will be put at unique duties unpictured by us at home, but even so, the recognised duties that we do know of are numerous enough.

these may be pictured when a dash has to be made to hold a position against foot and horse troops.

Then for night work there is the invaluable type of motor that runs into position, couples up the motor to a dynamo, and runs a powerful searchlight mounted on the rear end of the chassis.

Aerial guns also are universally mounted on motors in order that the movements of air craft may be followed as far as possible, and even on occasion where the roads are good, the horses are unlimbered and the field guns hitched on behind the motors, and rushed to new positions at a pace that the ordnance factory surely never anticipated.

Then there are the wireless telegraph outfits for use in the field, each driven with the motor that propels the car, and last but not most important, the travelling workshops and armourer's shops, fully equipped with all machine tools for necessary repairs, and each in itself a self-contained unit depending on no outside agency for either its operating or propelling power.

The Government's Building Programme for 1914-5

The Minister of Public Works in his Public Works Statement announced last month that it was proposed to expend £3,402,758 on public works for the current year, provided conditions are satisfactory for raising the proposed new loan of £3,000,000. Of this sum £538,000 are to be spent on new buildings.

The most important building provided for under this heading is the new Parliament Buildings, for the first and major portion of which the tender of Messrs. Hansford, Mills, and Hardie, for £151,639, was accepted on December 12th last. The principal item on the current year's vote is for the continuation of this work, but substantial sums are also provided for the completion of the Gisborne building and the Public Works workshop and store in Wellington. Smaller items are for a new fireproof departmental building in Wellington, for a new building at Tauranga, for new magazines at Dunedin, for the acquisition of much needed additional land at Blenheim, for additions to the Government Printing Office, and for new Public Works stores at Auckland and Dunedin.

JUDICIAL

For the current year votes are proposed for new courthouses at Waipu, Te Puke, Wairoa, Waipukurau, Ractihi, Motueka, Kumara, Amberley, Balclutha, Wyndham, and Chatham Islands; and for additions at Whangarei, Hikurangi, Wellington, and Lawrence.

Gaols.—Appropriations are provided this year for new buildings at Auckland, Waikeria, Wellington, Pieton, Templeton, and Invercargill; for additions at Addington, and sundry minor works.

Police Stations.—For the current year votes are provided for new stations at Freeman's Bay, Tuakau, Hamilton, Ohura, Putaruru, Waikare, Wairoa, Waipukurau, Hawera, Inglewood, Kaponga, Marton, Martinborough, Riccarton, Geraldine, Hokitika, Port Chalmers, Roslyn, St. Clair, St. Kilda, Woodhaugh, Portobello, Queenstown, and Stewart Island. In addition to the above, votes are renewed (and in some cases increased in amount) for stations at Herekino, Houhora, Patutahi, Auckland, Epsom, Ponsonby, Devonport, Northcote, Ngaruawahia, Hamilton, Raurimu, Opotiki, Tokomaru Bay, Motu, Whangamomona, Wanganui, Wellington, Brooklyn, Eastbourne, Island Bay, Karori, Wellington (Mount Cook), Wellington (Taranaki Street), Charleston, Ahaura, Stafford, Fendalton, Darfield, Coalgate, Clyde, Middlemarch, Waitati, Dunedin (King Street), Caversham, Morningson, North-East Valley, Kaitangata, Gladstone, and Invercargill North. Votes are also provided for the purchase of properties at Mount Eden road (Auckland), Mount Roskill, and Nightcaps; and for additions at Dunedin, and minor works at other places.

POST AND TELEGRAPH

Under this head the vote of £115,000 provides for quite a large number of buildings, of which the following are the more important: Dargaville, Auckland (Wellesley Street), Gisborne (additions),

Napier, Christchurch (alterations and additions), and Dunedin. New buildings are also provided for at Hikurangi, Ponsonby, (telephone exchange), Mount Eden, Northcote, Remuera, Stratford, Ross, St. Albans, Alexandra, and Milton; and last year's votes are renewed and some cases are considerably increased for the following: Mount Albert, Takapuna, Papatoetoe, Raglan, Hamilton, Raurimu, Owango, Patea, Ractihi, Kimbolton, Palmerston North, Havelock North, Ormondville, Masterton (exchange), Island Bay, Nelson (Port), Blenheim, Reefton, Seddon, Papanui, Oxford, Akaroa, Methven, Timaru, South Dunedin, Anderson Bay, Mataura, Edendale, Orepuki, and Riversdale. There are also numerous other items of smaller magnitude.

MENTAL HOSPITALS

The erection of one substantial auxiliary building at Auckland is just completed, and a second similar building is now well in hand. At Tokanui electric-lighting plant is being installed, and a mess-room provided. Minor improvements have been effected at Porirua, Seacliff, and Waitati, and the damage caused by fire at Sunnyside has been repaired. Works in progress or contemplated include two separate blocks of buildings at Tokanui, each of which will accommodate 50 persons; day rooms for male and female patients at Porirua; dormitory and single rooms, and an annexe with quarters at Sunnyside. A male admission block is in progress at Seacliff, and additional accommodation for female patients is proposed.

HOSPITALS

On the current year's vote provision is made for the St. Helens Hospitals at Auckland and Christchurch, and one or two other minor works.

AGRICULTURAL

Better accommodation is to be provided at the live stock quarantine stations at Auckland, Wellington, and Lyttelton, the present buildings being more or less out of date. Improved accommodation is specially needed in view of the probable influx of live stock from Great Britain as soon as the present embargo on account of foot-and-mouth disease can be removed.

SCHOOL BUILDINGS

New buildings are being provided for the Auckland Grammar School, and a grant has been made towards the cost. An extension to the Medical School buildings at Otago University is being erected, and in this case, too, a grant towards the cost has been made. By reason of the increase in the number of children at industrial schools additional accommodation is necessary. At the Special School, Otekaieke, the buildings for which preparations have been made must be put in hand, and this will require considerable expenditure.

WORKERS' DWELLINGS

The expenditure under this head during the past year amounted to £41,741, as compared with £46,455 expended during the preceding year. The demand for dwellings is increasing, and in order to meet the requirements an authorisation of £100,000 and a vote on account of same of £92,000, is proposed for the acquisition of land, road formation, and erection of dwellings.

Our 23rd Competition

FOR SIDEBOARD

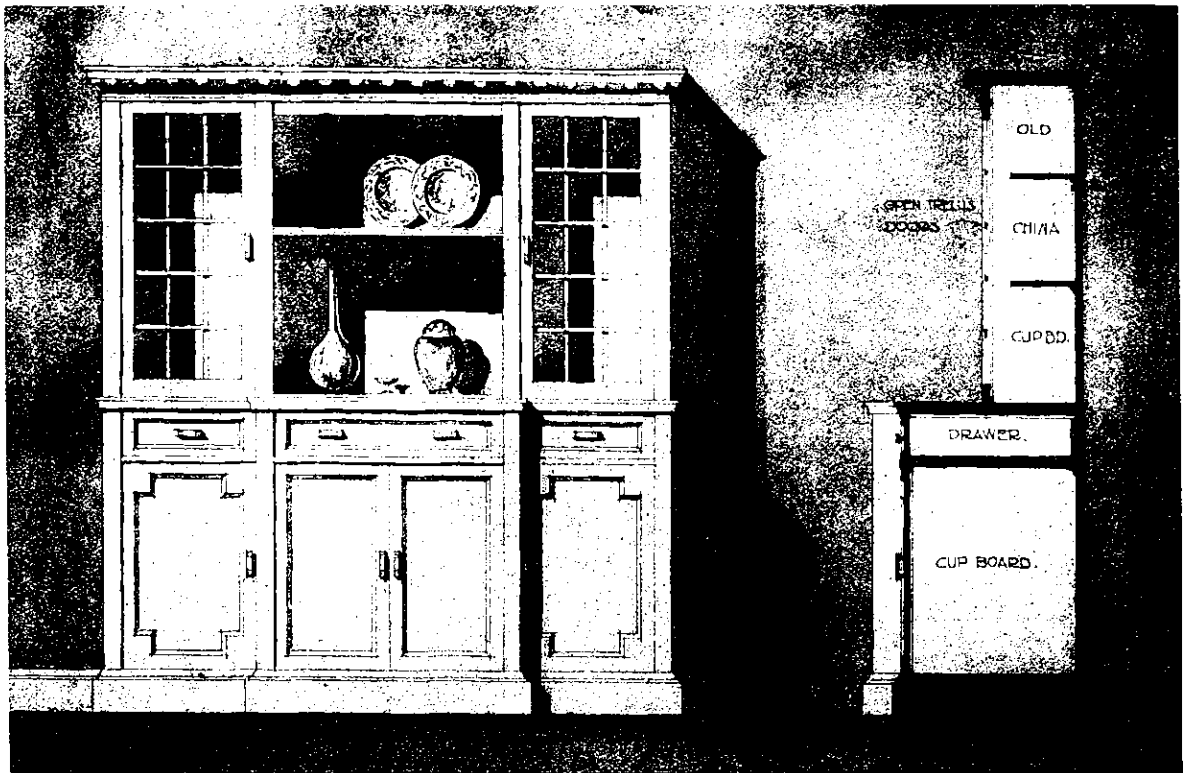
Won by Horace L. Massey, Auckland ("Quid")

By an unfortunate oversight the designs for this competition were overlooked, consequently no result has been announced. There were however only three designs sent in, viz.—"Pyramus," by Keith D. Murray, with Messrs. Wilson & Moodie, Auckland; "Quid," By Horace L. Massey, with Mr. A. Wiseman, Auckland; and "Hardup," by A. B. Miller, with Mr. Cecil Trevithick A.R.I.B.A., Auckland

ably for the display of old china, and if the protection of doors is required these should be glazed. Trellis doors may be used with good effect when a silk hanging is drawn inside. The square corners to door panels of side cupboards are rather large. The cupboard doors should shut into a rebate at the bottom and not merely against a fillet.

The other two designs by "Hardup" and "Pyramus" are indifferent versions of sideboards we have seen before and display no originality. The drawing, too, is not good. "Pyramus" surely would not make a sideboard of oak and then stain it dark walnut with one coat shellac and two coats "flat finish" on top?

W. M. PAGE."



Winning design in our 23rd Competition by Horace L. Massey ("Quid") with Mr. A. Wiseman, Auckland

The judge, Mr. W. M. Page, who kindly set this subject, reports as follows:—

"I have to apologise for the delay in judging this competition. The drawings were put aside and overlooked.

Only three students submitted designs for a sideboard which serves to show that comparatively little interest is yet taken in the designing of furniture.

I have no hesitation in awarding first place to "Quid." This sideboard would be quite a delightful piece of furniture, and the only criticisms I would offer are as follows:—

The trellis doors to the china cupboards seem to me rather unnecessary. The cupboards are presu-

Personal

Mr. W. Wren, who left Invercargill two years ago to take up a position in an architect's office in Sydney, has been appointed draughtsman to the Housing Board, which is controlled by the New South Wales Parliament to erect residences at Daceyville, the Government garden suburb of Sydney. The Board has been authorised to spend £150,000 on the work and Mr. Wren has a free hand in the designing of the residences. Prior to accepting the Government position he assisted in the erection of the Union Steam Ship Co's. works at Bale's Head, and which cost £100,000.

Building Notes

AUCKLAND

The Education Department has authorised the board to proceed at once with the erection of the proposed Meadowbank school in Waitatarua Road, Remuera. Thirteen tenders have been received for the work, which will cost several thousand pounds. The school, which will be erected in brick, will have five classrooms to accommodate about 250 children. The site is admirably suited for the purpose and comprises about four acres. As occasion requires, the building will be added to, until ultimately it becomes a grade 10 school, capable of accommodating from 600 to 640 scholars.

Mr. A. B. Herrold, Architect, has in hand a block of shops and offices to be erected for the trustees of the late Thomas Short in Queen Street at a cost of about £10,000. The site is at present occupied by premises recently vacated by Hardie Brothers, and has a frontage of 33ft., with a depth of 116ft. The new building will comprise five storeys and a basement, with two shops on the Queen Street frontage of the ground floor.

Good progress is being made with the erection of the new Grammar School in Mountain Road, Mount Eden. Fifty-three carpenters, bricklayers, and labourers are at work on the building, and by Christmas it is expected that another 20 men, the majority plasterers and tilers, will be engaged. The brick construction was started in May, and notwithstanding the trouble which occurred between the contractor, Mr. W. E. Hutehison, and the bricklayers, some months ago, only the centre portion and the four towers remain to be built in brick. The brickwork will be completed by Christmas. Four roofs are now being placed on the two storey portion of the school, and in about a month's time the main roof will have been finished. The new school is being erected at a cost of £31,450.

CHRISTCHURCH

Building permits for month of September are as follows:—Central Ward, (inner), 1 permit, value £500; (outer), 1 permit, value £300; Linwood, 6 permits, value £1,530; St. Albans, 8 permits, value £3,775; Sydenham, 5 permits, value £2,050. Total 21 permits, value £8,155.

Building permits for month of August are:—Central Ward, (inner), 2 permits, value £2,360; Linwood, 5 permits, value £2,800; St. Albans, 3 permits, value £2,100; Sydenham, 3 permits, value £1,050. Total 13 permits, value £8,310.

The question of erecting open-air homes for children has been solved after a long collecting campaign. The Committee has now over £3,000, and the Government subsidy of 2s. in the £ was sufficient for the purpose. The Hospital Board, says the Mayor, should immediately proceed with the erection of the building, after a suitable site had been approved.

DUNEDIN

A recent report of the Works Committee of the Technical School stated that Mr. T. W. Kempthorne had intimated that he was prepared to defray the cost of erecting the wall and fence in front of the college, and at the same time he handed the director a cheque for £100. Mr. Mandeno had undertaken to prepare the plans and specifications, and the Committee, after a careful consideration of these, had arranged with Mr. McLellan to erect the wall and gates for the sum of £145. The wall and fence designed would provide the finishing touch of effectiveness to their magnificent building, and Mr. Kempthorne's generosity should be specially noted, the more so since the present donation made £900 given to the college by him in two years.

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The new Methodist Church at Forbury Corner is closed in consequence of street-widening operations. The church buildings are being removed, and a new church erected on the Main South road, Caversham. The building is expected to be completed early next year. Mr. W. King is contractor for the work.

HASTINGS

The plans and specifications of the proposed new Municipal Theatre at Hastings, which Mr. H. E. White, who designed and built His Majesty's Theatre in Wellington, has prepared, provide for a building to accommodate 1,200 people, and to cost about £11,200.

More confidence is being shown by people in Hastings. Building contracts that were cancelled on the outbreak of the war are now to be gone on with.

INVERCARGILL

Mr. C. J. Broderick, architect, has just completed new premises for a local syndicate for a picture theatre, on the site occupied by Messrs. G. W. Woods & Co. This firm have secured the premises of Messrs. Heads & Hill, and intend erecting an engineering shop and large garage. Messrs. Heads & Hill have erected in Spey Street large stables. Messrs. McKay & Tinnoek were the builders.

MARTON

The Marton freezing proposition has sprung into activity again, the Wellington Meat Export Company having advised the promoters that as soon as matters become more elastic the company will be prepared to proceed with the erection of the works at Kakariki.

WELLINGTON

The principal portion of a new store designed by Mr. J. Charlesworth architect, for Messrs. C. Smith Ltd. is now erected. The construction is of steel and brick, stone finish, and tile treatment. There are two entrances, with extensive window space, vestibules with arcade features—a further development of the island shop windows. The building is three storeys, on a site 84ft. x 195ft., with two spacious light wells, 32ft. x 32ft., and 32ft. x 24ft., respectively, each forming galleries in upper floors. Drawn solid steel columns support the floors and in no way interfere with lighting arrangements or block passage-ways. Sizes of columns:—First floor, 7 ins. diameter, 16ft. high; second floor, 6 ins. diameter, 13ft. high; third floor, 5 ins. diameter, 12ft. high. Crystal showcases replace counters and the Hanger system for suspension of made-up garments in dust proof cabinets or presses to prevent creasing. Handsome brass rails are used for fittings, and ceilings are of Wunderlich embossed steel. The Grinnell system of sprinklers—with calls—is installed for fire prevention. The roof is reinforced malthoid with Wade skylights for lighting. Messrs. Alf. Seamer & Son are contractors. The work will cost about £20,000 when finished.

Messrs. J. H. Mayers & Co., are the contractors for the training college at Kelburne which is under construction to design of Mr. Gray-Young. The same contractors are building a wool shed for the Harbour Board.

Good progress is being made by Mr. H. H. Olliver with his contract for the erection of the new buildings in connection with the Otaki Hospital (says the Otaki Mail). Three buildings are being erected—one for the female staff, another for the men, and the third being a laundry and storeroom. The laundry is a spacious one, with a cement floor. The building will probably be completed this month.

Mr. J. M. Dawson, architect, has just completed the building known as the Macarthy Buildings in Willis Street. The building has a frontage of 42ft. 10ins., and a depth of 92ft. and is built of brick, concrete and steel, plaster-finished. Mr. W. L. Thompson was the builder and the sub-contractors were, plumbing, Judd & Randell; plastering, Kent & Bryant; painting, T. A. Wells.

Messrs. Penty & Lawrence were the architects for Lombard Buildings recently finished for Messrs. Ellis & Manton, Old Custom-house Street, and Messrs. Sanders Bros. the builders. The building consists of five storeys and basement and is built of brick and has a frontage of 66 feet.

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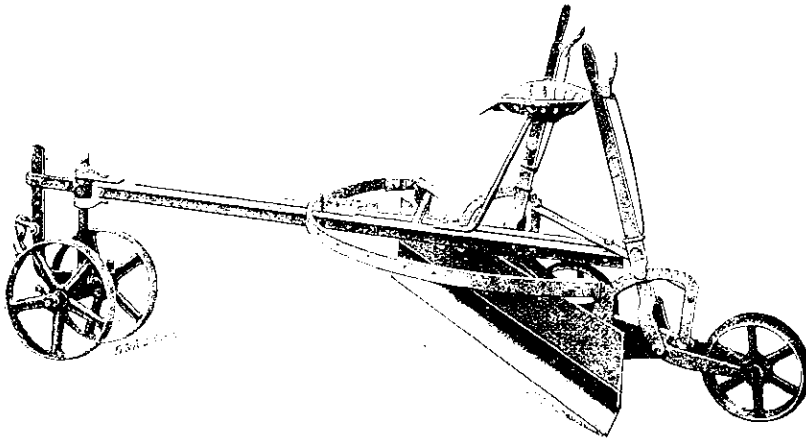
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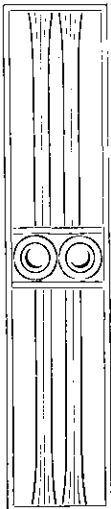
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