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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 50th Competition

We offer a prize of £1 1 0 and a second prize of 10/6 for the Essay judged to be the best on

"The Quality of Fitness in Architecture."

Students are invited to write a short essay on the above subject. Among the various points to be considered are the suitability, or fitness, of different materials for the positions they are placed in, or the uses to which they are put. The fitness or otherwise, say, of designing a building for the centre of a city in the style of a country cottage; or a mansion in the Tudor style for a suburban section. The transgressions against this quality are so frequent and glaring, that there should be no trouble in critizing them, but on the other hand, competitors are required to point out how and where attention has been and can be paid to it.

Length of Essay not to exceed 2000 words. Points will be given for original matter; practical application of the "quality," literary style, punctuation, grammar and spelling. Students are advised to read "Essentials in Architecture" by John Belcher, A.R.A. (5/-).

Mr. Basil B Hooper, A.R.I.B.A., of Dunedin has kindly set this subject.

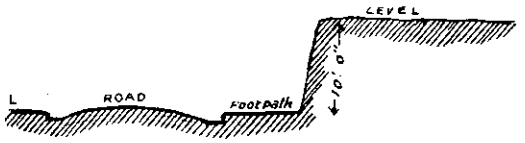
Essays must be sent in under a nom-de-plume, addressed to **Progress**, 8 Farish St., Wellington, and marked clearly "Fiftieth Prize Competition" on outside with a covering letter giving competitors's name, and address of employer. Designs to be sent in by January 10th.

Our 51st Competition

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

Motor House

with accomodation for two large sized cars and facilities for cleaning and general repairs. Building to be fire-resisting. No limit to cost, but lavish expenditure to be avoided. Building to be situated in clay bank about ten feet high with unlimited width and depth. Drainage and ventilation must be shown and explained. Access to back of garage from upper level is also required.



Drawings required: Plan, elevation and two sections to ¼-inch scale.

Mr. Wm. Fielding, Architect, of Wellington has kindly set this subject.

Designs must be sent in, in black and white under a nom-de-plume, addressed to **Progress**, 8 Farish Street, Wellington, and marked clearly "Fifty-first Prize Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by February 10th. 1917.

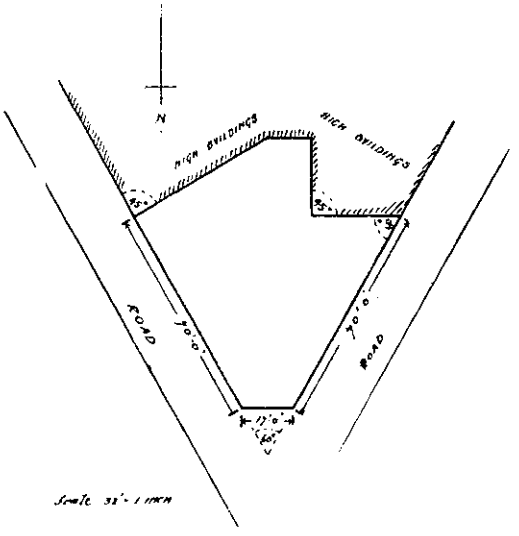
Our 52nd Competition

We offer a prize of £1 1s. 0d. and a second prize of 10/6 to the two best designs submitted for

Banking Premises

(A problem to illustrate the value of Axial Planning), in accordance with the following conditions:—

One of the leading Banks propose erecting a new branch building in the foremost city of the Dominion: the site chosen is situated at the juncture of two principal streets.



It is desired that the banking chamber shall extend as nearly as possible the full width of the site, and also that the same shall be symmetrical. In this instance a corner entrance must be arranged for, and no columns or piers are to occupy the floor space of the chamber.

The accommodation required must include in addition to the banking chamber, manager's room with fireplace, staff toilets and cloak rooms for both sexes, stationery room, staff luncheon room with small kitchen, living room and bedroom for janitor. The first floor to be so arranged with offices that it will be suitable for rental purposes, proper accommodation must be provided for both sexes in the way of lavatories etc., and a separate tenant's entrance given from the street.

There is further accommodation that should be provided for in modern banking premises, and the student is invited to include in his design any other features he may

(Continued on page 827)

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N.Z. BUILDING

PROGRESS

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Editor: Chas. E. Wheeler.

Incorporating the Journal of the New Zealand Institute of Architects.

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

Contents for December

Editorial Comment

The Living Wage.

New Zealand has just escaped from the verge of industrial upheaval. It is fortunate that conciliatory counsels prevailed, or the spark which was thrown by the horse drivers would easily have sprung into a blaze, owing to the resentment felt by many manual workers over the high cost of living. In fixing a minimum of £2 12s. weekly for drivers, the Arbitration Court evidently considered that this was a fair minimum giving fair reward for the slowest worker who could "keep his job," but the press and public were almost unanimous in declaring that this was not a wage on which a man could keep a family in health and comfort during these times of high food prices, especially in Wellington, where high rent adds to the difficulty of making ends meet on a small wage. The dispute threw into vivid relief the question of the minimum wage. Is it made the maximum by employers? The facts show that the bulk of Wellington carters get more than the minimum at present. Doubtless, when conditions of trade are bad, and employment scarce, there would be a tendency to regard the minimum as a standard, but the award protects the employee from possible evil results of an over-supply of labour by fixing a limit below which the employer cannot legally go. That legal limit, the minimum of the Arbitration Court award, is certainly very low in the case of the drivers, and would have a tendency if adopted in practice, to drive efficient labour out of that calling. This business is in an important transition stage; motor traction is gradually but surely replacing the horse, and it would be very unfortunate if the lowest class of labour was transferred from the care of horse-driven, to mechanically-driven vehicles. The bad driver can waste and destroy more than his minimum wage every day if he is trusted with a motor. The New Zealand postal department has learned that lesson. Youths were very generally employed at low wages to drive small mail-collecting motors and cycles, but they are being displaced by men, the reason given by the Secretary of the Department being that

youths cannot be controlled in the matter of the speed limits. "Cheap" driving has been a dear experiment for the Department in connection with tires and upkeep. "Cheap" driving will make a bad investment of the best motor vehicle on the road. Money is saved by care in starting, braking, and gear-changing, but experience and discretion have to be paid for.

Industrial Efficiency

Closely allied with the minimum wage question is the problem of industrial efficiency. Where the minimum wage becomes in practice the minimum, "go-slow" methods are adopted by employees. This furnishes the opponents of the New Zealand arbitration system with a text for their criticisms, though they appear to ignore the fact that the system is elastic, and includes a recognition of piecework. Here again, we could imagine the critic declaring that there are differences in the way jobs are turned out. Our reply to this is, "Give the least competent the minimum piecework rate, and recognise the superior work of others by a higher wage than the minimum." As a rule, the trade unionist is against piecework. The Victorian Minister of Agriculture, Mr. Hagelthorn, who has for some time past been instrumental in arranging for lectures on industrial efficiency, lately organised a series of conferences to discuss the question of piece payment in trades. In his recent report on some of the effects of labour legislation, the secretary for Labour (Mr. H. M. Murphy) recommended the adoption of universal profit-sharing and piece payment in all trades in order to provide an inducement to honest endeavour, and a fairer general form of reward. At the invitation of Mr. Hagelthorn, about 20 employees engaged in factories where piecework is in operation recently agreed to discuss the question of time payment, and assembled one evening to hear an address by Professor P. B. Kennedy, of the United States, and to discuss with him and the Minister the question of piecework or bonus work *versus* day labour. At the meeting, general approval was given to the piecework system, but apprehension was expressed lest unscrupulous employers might cut rates when employees became expert. It was pointed out, however, that labour was now so well organised that no difficulty should be experienced in arranging a schedule of rates for piecework which would be satisfactory to both employer and employee.

"Product Not Hours"

Professor Kennedy, in one of his lectures, put the whole problem of the minimum wage and piece-work into a few crisp, thought stimulating sentences. "I wish to impress on every man's mind," said Professor Kennedy, in his address, "that what wages are paid for is product, not hours. Some men will tell you that a man is worth so much per hour. There is no such thing as a man's worth per hour. We cannot sell hours, therefore we cannot buy them. We can only sell product, therefore, we can only pay for that which produces product in proportion to that value produced. It is foolish to think that one man's time is worth as much as another's who may produce twice as much, and no legislation or organisation can make it so. Any attempt in this direction is to put a premium on laziness and inefficiency, which would shortly act as a boomerang. No nation, business, or individual, can long exist and maintain its relative position among others which try to set aside the universal law of the 'survival of the fittest.' By this I do not mean the law of the beast, the survival of the physically fit, but the law of man, the best combination of the mentally, morally, physically and efficiently fit."

Apprenticeship System Failing

Rapidly the old system of "binding down" a lad to learn a trade is ceasing to attract the rising generation. Apprentices' wages have increased, but the biggest obstacle to getting boys into a trade is the desire of parents to see them engaged in some "clean-handed" occupation, on the clerical side. We cannot all be professionals and brain-workers. Though the machine has diminished the necessity for manual work, this is still the greatest field for the employment of labour, and it becomes an economic problem of grave import if the supply of tradesmen is cut off. Training is needed to make a "tradesman," but this takes time which parents' are loth to give. They prefer, oftentimes, to place their boys into an occupation which pays high wages to young people, but runs them into a dead-end—"thus far, and no further, as the job is not worth it!" Mr. W. H. Bennett of Wellington dealt with this subject at the conference of the New Zealand Builders and Contractors Federation. In a paper full of helpful suggestions, he met the position with frank recognition of the need to make apprenticeship more attractive, and he placed his finger on the weak spot of our technical education system when urging that time off from work should be allowed apprentices who attend the technical classes. A youth who works conscientiously all day is not usually in the proper frame of mind to fully benefit from technical education in the evening, when he is fagged. There is a tendency, too, among the more serious minded boys—they are rare, we admit—to neglect athletics if their evenings can be filled by study. To strike the right balance between both is the point at which the enlightened parent comes in. As for the dread that manual toil repels boys, we are optimistic enough to believe that this is but a passing phase. When parents recognise that the clerical classes are, as a whole, much worse off except in dress and appearance than the well-protected and well organised manual worker, they will hesitate to place their children in a sphere which, except to the very ablest, presents a poor outlook. An able boy placed in a manual calling, will win prominence and reward quicker than if he starts at a ledger or the typewriter. The industrial field is wide, and the opportunities numerous for those who can grasp them.

Sarjeant Art Gallery Competition.

Our desire to publish the details of this competition as quickly as the information was available for publication is responsible for the late publication of this issue. We much regret the delay, but trust our readers will agree with us that it was worth waiting for.

Architecture and Building

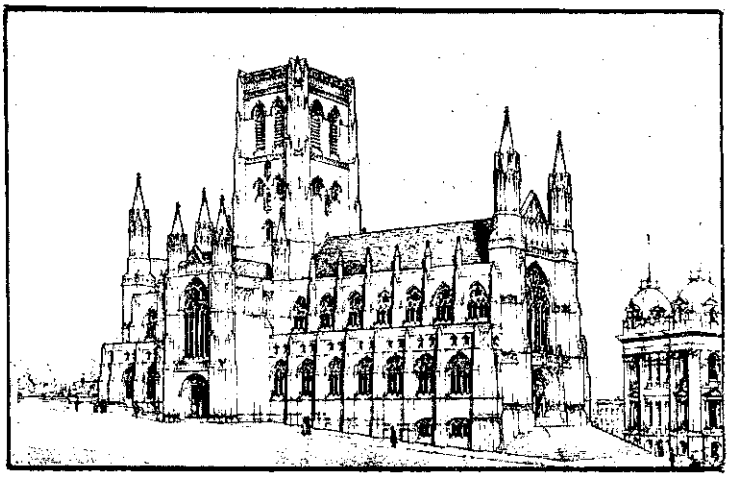
[Note—The Articles appearing on pages 803 to 810 are published by arrangement with the New Zealand Institute of Architects.]

The New Cathedral, Dunedin

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

Before proceeding with a description of the Cathedral itself, a few words as to the inception of the building scheme may be of interest. In the year 1905, the late Mr. Harrop bequeathed the sum of £20,000, for the purpose of erecting a new Cathedral, a condition attached being that, another £20,000 was to be collected before the expiry of 20 years, failing which the money was to be given to the Oddfellows. Also it was stipulated that the building was to be erected on the site of the old Cathedral. Soon after the beginning of 1915 saw the old church cleared away. It was not till May of that year, however, that building operations were started. The foundation stone was laid by the Primate on June 8th, with full religious ceremony and Masonic ritual.

Soon after the completion of the foundations, tenders were called for the erection of the superstructure, and in September a contract was signed for £28,458, the six other tenders ranging up to £49,500. This variation in tenders is striking, especially when the quantities were supplied and guaranteed by the Board, and showing that it was chiefly a matter of pricing the labour. The site in some ways is a very good one. It is convenient and in a conspicuous place. No visitor could fail to



A PERSPECTIVE OF DUNEDIN CATHEDRAL

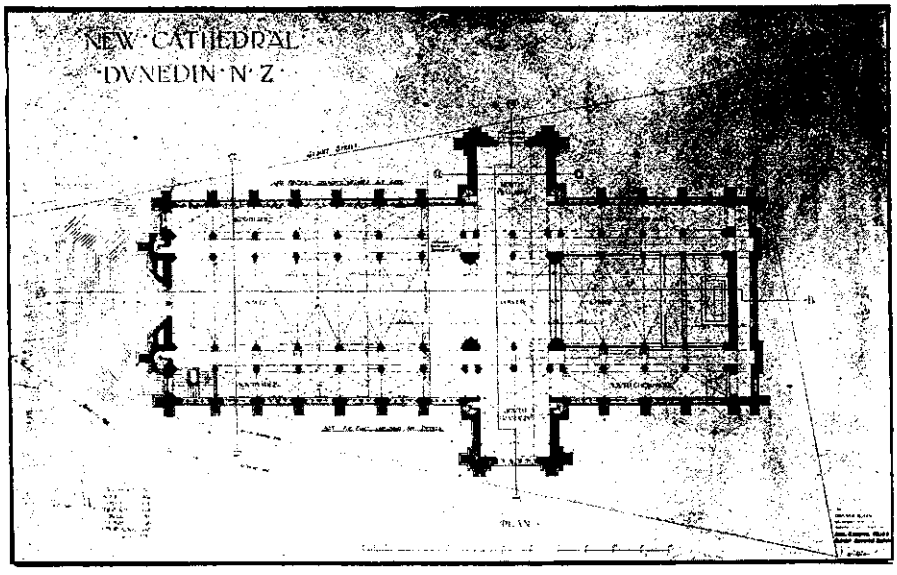
The chief points of difference between the perspective as shown above and the correct designs, consists in: (*a*), The addition of flying buttresses; (*b*), Wing walls above the West end of aisles; (*c*), Variation in the tracery of the windows; (*d*), Alteration in the design of steps; (*e*), Greater height of floor above ground; (*f*) Complete revision of tower which now shows a "crown" finish.

this the Primate when in England, arranged with Mr. Edmund Sedding, F.R.I.B.A., a well known ecclesiastical architect, to design the Cathedral. Sketch plans were prepared and brought out, and finally in the year 1909, Mr. Sedding came out himself and arranged all details, including the appointment of supervising architect. Many years passed, and many weary Board and Committee meetings were held, at which numerous alterations and amendments to the plan received from Mr. Sedding were proposed. Among many others were suggestions that the plan should be reduced in area, and the altar be placed at the true east end. When all these points were settled, discussions arose as to which section was to be commenced first, and decisions swayed from side to side, till at last, towards the close of 1914, the present position was finally adopted, and notice it, as it stands well above the highest part of the Octagon reserve. From a town-planning point of view, however, it is not ideal. In the first place, the site is cramped on all sides. Secondly, it is to one side, and not in the centre of the Octagon rise. What a magnificent effect would have been obtained if it had been placed in the centre of Stuart Street, and two streets carried up, one on either side, joining together at the back! What a noble vista would have been the result, noticeable all the way up Stuart Street from the Railway Station (itself forming a most effective vista from the Octagon). The same effect would have been obtained from the hill, coming down upper Stuart Street, and from all the points of vantage on the Town Belt, Queen's Drive etc. In fact the position would have been such as Christchurch Cathedral has, but with all the added advan-

tages of being on an eminence, instead of being on the dead level. However, as things are, we must be thankful that the site is as good as it is, and trust that the long desired Town-planning Bill will ensure more ideal conditions for the Cathedrals and other public buildings of the future.

The position of the site has determined the members of the Board in agreeing to a reversal of the usual plan, in which the Conventional East End is really placed west, and the Orthodox West End faces east. It was felt that the advantage and effect of having the main entrance with its noble flight of steps right on to the Octagon, was far too valuable to be lost for the sake of a custom, however ancient. This course was adopted, and I think wisely, too. The gradual rise in the level of the site, from front to back has necessitated a fairly high flight of steps, but the wide stairs from same at the west end of the south aisle. This will necessitate a fairly long march to the east end for the choir and clergy, but will on the other hand give an opportunity for processional effect.

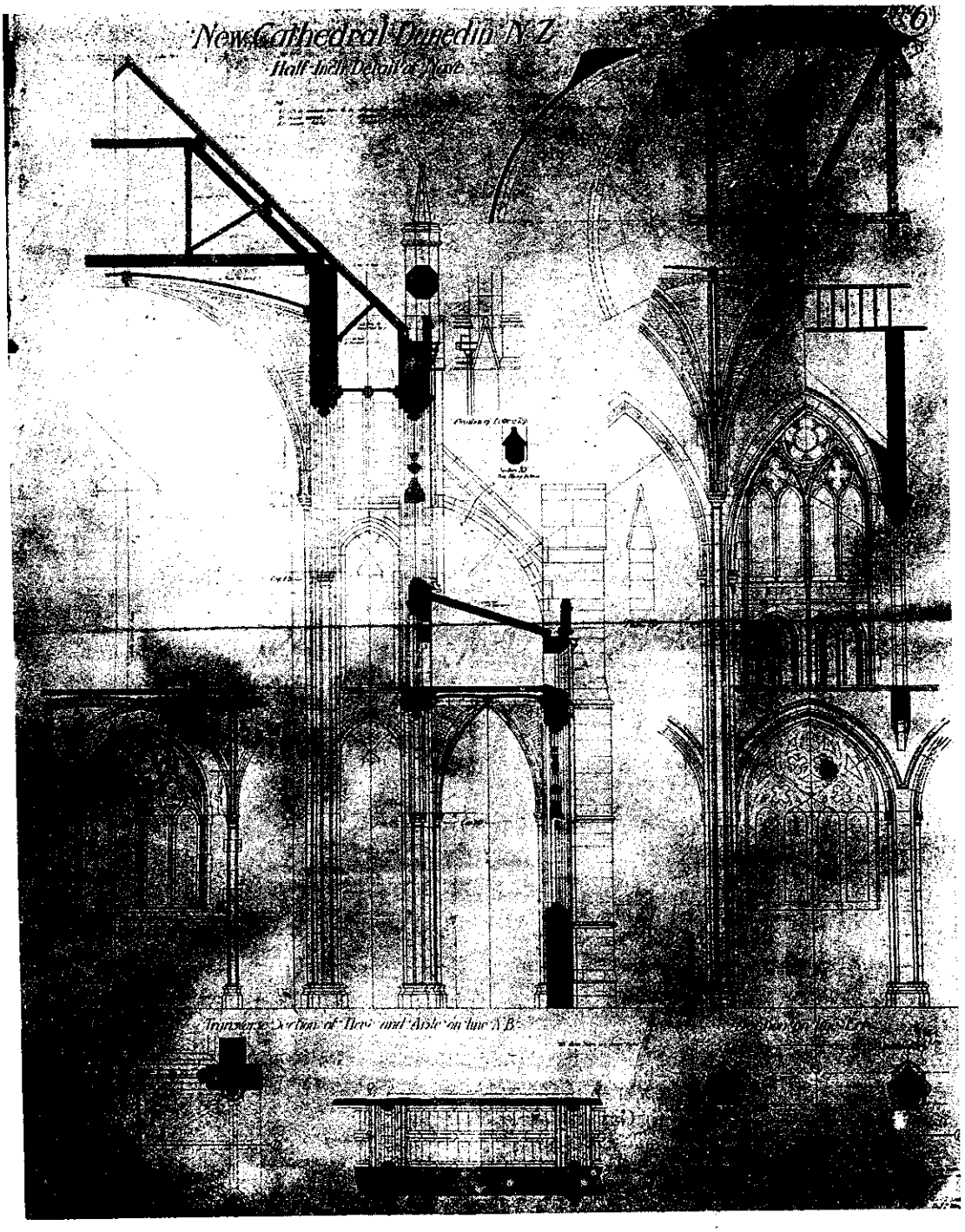
The north transept door (the conventional points of the compass will be used throughout this description) is planned to be slightly higher than the level of the footpath at that point, so doubtless this entrance will ultimately be the main one as it will save mounting the steps at the west end. The interior of the Cathedral is specially interesting, as the whole is vaulted in stone throughout. The vaulting is very simple, consisting merely of moulded wall, transverse, diagonal and ridge ribs to each bay, with random sheeting, but the result should be most effective. The aisle vaulting is practically the same as the nave, the ribs for the latter being slightly heavier in section,



GROUND PLAN

The above is accurate in all particulars save for the main entrance steps; the accepted design for which shows an octagonal finish, with massive statuary pedastals and subsidiary flights between them and the building.

need has drawn forth a scheme that will undoubtedly be a unique feature of the front. The design adopted shows a main flight of octagonal steps, with 2 subsidiary flights at right angles to the main set, and separated from them by massive statuary pedestals. The design should be very fine indeed, and the effect will be greatly enhanced by the N.Z. white marble that is to be employed for the treads and risers. The plan of the Cathedral is of the cruciform type, with fairly deep transepts, the Choir forming the top of the cross, and remaining to its extremity, the same width and height as the nave. There is thus no chancel or apse, to detract from the imposing dimensions of the interior. As the plan will show, a range of double piers runs the whole distance from west to east, forming between them an ambulatory, 5 ft. wide; this ambulatory is carried right round the "East" end, behind the altar, and should prove most effective and suitable for ceremonial processions etc. The vestries are placed in the basement, with and both are similar in this respect—the intersection of the ribs is not covered by a boss of any sort. This entails a great deal more accurate and rather intricate working, especially when it is seen that the ribs come in at all different angles and radii. After having worked one of these intersections, it was easy to understand why bosses have been almost universally used in such positions. The springers of the vaulting ribs are taken up with level beds for a height of about 4 ft., which is where they clear one another, thus greatly reducing the thrust. The space between the twin piers is spanned by a series of barrel vaults, following the line, and just above the jamb of the clerestory windows. Altogether the whole vaulting scheme should be most effective and varied. The system of having double piers is rather interesting in that it utilises the two walls above as an abutment to the nave vaulting; *i.e.* practically a depth of 10 ft. The stability is further increased by the barrel vaulting and cross arches, and the small amount of thrust



TRANSVERSE SECTION OF NAVE

Notice the great depth of abutment to the Nave vaulting, precluding any possibility of "thrust."

remaining, is taken up by the flying buttresses. As a matter of fact, these flyers were a later addition to the design and are not shown in the original eighth inch scale drawing, so they are there partly for external appearance.

The piers are slender, but well proportioned and moulded, and with an attached half shaft on 3 faces, the over-all sizes being approximately 2 ft. 6 ins. x 2 ft. 6 ins. Being joined together at triforium floor level, they should be specially rigid. The triforium, though not very high (7 ft. down to 5 ft.) is high enough to accommodate a number of people on special occasions, and although the view from there will be limited, owing to the closeness of the mullions forming the arcade, it will be decidedly interesting. It is floored in concrete, the surface being brought to a fine finish, and left thus. Access to the triforium is obtained by means of two spiral stairs, placed in the two west end turrets; these stairs are continued up, opening on to the nave gutters, and finally to the top of the turrets, from whence a splendid view should be obtainable. The height from nave floor to triforium floor is 26-ft., to apex of nave vaulting 59-ft. 6-ins, and to top of ridge 78-ft. 9-in. From these figures it will be seen that the building will be fairly lofty, especially after adding on the 14 or 15-ft. from ground level to nave floor. With regard to the materials, the whole of the interior is lined with stone, each alternate course being allowed to be 2½-in. thick. This method is most economical, and enables a great deal of the cuttings to be used up. Gay's stone is being used throughout, the warm colour of which should be most pleasing. It was intended to use T.T. for the interior lining, but as this entailed wasting the thin slabs obtained from the cuttings it was found much cheaper to stick to the one stone.

A great deal of Gay's stone has veins of dark yellow, following the natural bed, and this, while giving beauty and variety to the work, has also checked the possibility of the stone being laid off its natural bed. The piers and arches are all of Gay's *"hard"* stone, which consists of the top 2 or 3 lifts in the quarry. The difference in crushing strength between these top lifts and the lower ones is very great. The former on being tested, failed at 115.4 tons per sq. ft., the latter at only 36. There is a load of approximately 85 tons on each pier, which works out at about 16½ tons per sq. ft. of area in the pier, thus giving a factor of safety of about 9½. As Oamaru stone hardens and becomes denser with age, it was felt that this would be well on the safe side. The sheeting of the vaulting is kept as light as possible, being only 3" thick, and is built of T.T. stone, with Gay's every five courses, for the sake of variety. To show the difference in hardness between the hard and soft Gay's it may be of interest to mention that the large circular saw used for cutting up the blocks, had to be sharpened every 5 or 6 days while working at the hard, and only once in six weeks while at the soft. A great deal of hard quality came in the first few months of the job, considerably adding to the cost of working —a little item not appreciated by the contractor. The least thickness of stone on the exterior is 8", and the core between the inner and outer stone facing is concrete—6 shingle to 1 cement with "Trus-con" waterproofing paste in same, in the proportion of 5 lbs. paste to each cubic yard of concrete. The mixture seems to make a good dense concrete, and if the statement of the agents is any guarantee, there should be no trouble with damp penetrating the walls. The turrets, save for the exterior stone facing, are carried up in solid concrete, although it was open to the contractor to use rubble. This necessitated a great deal of rather costly boxing, especially as the turret stone steps were not built-in simultaneously with the walls. Recesses were formed in the walls by fixing little projecting boxes on the outside of the circular timber drum to take the ends of the steps. The stone steps will thus have to be lifted and lowered from the top by the cranes.

The nave floor is in reinforced concrete and, as originally designed, was to be 8-in. thick, with 6-in. x 3-in. R.S.J. at 2-ft. 6-in. centres embedded in same. The weight is taken up alternately by girders formed of pairs of R.S.J.—16-in. x 6-in., and by solid brick walls, at 15-ft. centres. However, when the 6-in. x 3-in. came to be ordered, it was found impossible, owing to war conditions, to get such a large number, so the design was changed to round rod reinforcement. The system adopted was the "beam and slab," consisting of 9-in. x 12-in. beams at 6-ft. centres, spanning the 15-ft. above mentioned, with a 4-in. slab covering the whole. The spacing of the rods varied according to the diameter used, and also as to whether British mild steel or Burnside w. iron was employed. As it was a case of using what one could get, there was considerable variation in this respect. I might mention that a saving of £78 was affected by this change, and I consider a much better job was the result, as the cohesion between the concrete and a 6-in. x 3-in. joint would not be very secure, especially on the under side. The effect from below is much improved by the use of beams, as the flat ceilings are thus broken up in a perfectly natural manner. A design was also made for a floor with a flat soffit, but it would have had to be 10-in. thick, and even then would not have been as solid a job. The main floor is specified to be paved with wood blocks under the seating, and with Malmsbury stone slabs in the alley ways. It is most likely that Italian marble "tiles" will be substituted for the stone slabs if the value is about equal. The dimensions of the floor of the present portion are 90ft. long by 66ft. wide, but the appearance of undue width will be greatly lessened by the row of twin piers on each side, which will leave the Nave 30ft. wide in the clear.

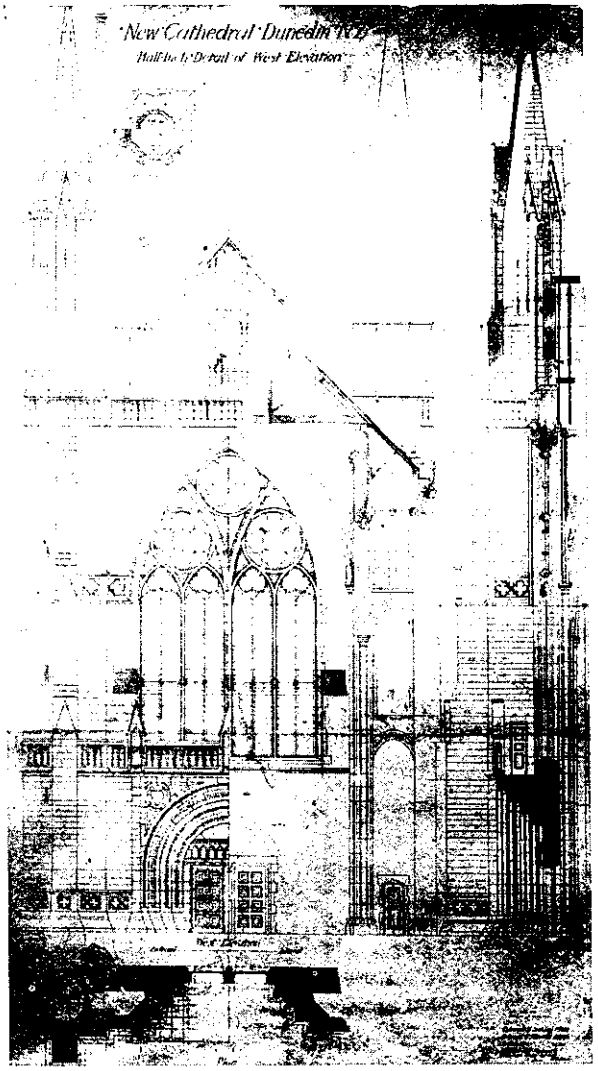
Taking the basement next, the first point of interest is the staircase. This is constructed of concrete, reinforced with expanded metal in the soffit, and ¾-in. rods in the steps, and will be faced with stone or marble. The stairs lead direct into the choir vestry (a room 48-ft. x 30-ft) access to which is also obtained from the exterior on the "S.W." side, off this are also the priest's and bishop's vestries. All these rooms are paved with wood blocks on concrete, reinforced with wire netting. Besides these rooms

are lavatories, coals, heating chamber and a large meeting room. Most of the rooms are lined with white lime and sand bricks, which make a strong permanent job, provided that cement mortar is used exclusively. Lime mortar seems useless with these bricks, as there is practically no adhesion between the bricks and the lime mortar, for some reason or another, in fact it seems to lose all strength when combined with these bricks. The concrete bases of the piers from ground to nave floor are 4-ft. x 3-ft. 6-in., reinforced with ¾-in. vertical rods, bound with wire, the concrete being 5 to 1.

A few words as to the foundations may be of interest though I presume they should have come first in the description. It was decided that this work should be done by day labour, as it was thought that by this means greater certainty of the best results would be obtained. The contractor in charge was to receive 7½% on his estimate, 5% on any excess, and 10% on any amount under his estimate. By this sliding scale it was anticipated that the contractor would be induced to hasten the job, without receiving any benefit from scamping. As a matter of fact, the result was a good bit over the estimate, but even then it was a cheap job. The contractor was bound to provide tools, scaffolding etc. and a concrete mixing machine, which in this case was of the "continuous" type. Judging from this experiment my opinion is that the "continuous" concrete mixer is not equal to the "batch" type. With the former, it is not possible to be so sure that the right proportions are going in. The feeding of the constituents into the mixing box is not regular or even, at times the cement sticks, or goes in too fast, and the same is the case with the aggregate. With the "batch" machine on the other hand, you can be certain that the proportions are correct, and it is then only a question of sufficient mixing. The "continuous" is certainly very fast, and admits of no loafing, as the chain of labourers employed found out very soon. The ground was exceptionally good, fortunately, and nothing but hard dense clay was encountered.

For the walls an average depth of 4ft. 6in. was excavated, though at the corner near the Town Hall the depth was about 12-ft., that is, slightly below the level of the right-of-way. From that corner we gradually rose to the 4ft. 6in. average. The reason for going down so deep in this part,, even though quite a good distance from the bank, was to prevent any possibility of "squeezing out," when the weight began to tell. The contractor in charge was rather scornful of the idea of wasting (as he put it) so much labour and material, but the size and weight of the building admitted of no risks being taken. The footings of the aisle walls are 6ft. wide, and across the buttresses 6-ft. 9-in. wide. The thickness is 3-ft., except at the deep portion, where it is increased to 3-ft. 6-in. Each pair of twin piers has a footing 8-ft. x 15-ft. x 3-ft. 6-in. thick, reinforced with three 5-in. x 3-in. x 11-lbs. R.S.Js., and the base of the piers is in one mass till ground level is reached. Altogether, abundant precautions have been taken to ensure the stability of the building, as far as the foundations are concerned, and there should be no chance of any settlement or other troubles.

Coming now to general details of construction and materials, a few notes may be of interest. The aisle walls are 2-ft. thick, above the plinth, and the clerestory walls 2-ft. 6-in. thick. The whole of the stonework is to receive two coats of Szerelmey preservative, as long as possible after completion; the reasons for thus leaving it being that it is considered all the natural



DETAIL OF FRONT

This illustration shows the centre portion including the turrets, but omits the West end of aisles.

sap should be allowed to dry out thoroughly before applying the preservative. If applied too soon the pores of the stone would be closed and prevent the natural drying. Dr. Marshall's opinion is, that applying the preservative while "green," is the cause of a great deal of the disintegration of freestone. The amount of sap that the stone contains when new is very evident from the green stain that has covered the face of the work on all surfaces that did not face

the sun. As soon as the masonary was laid, it received a wash made of stone dust and a little lime, this prevents discolouration of the stone, and when finally cleaned down, it will be a comparatively simple matter to remove all dirt and stains. The jointing is also quite unique as far as Dunedin is concerned. A joint ½-in. wide has been adopted right through. This will be pointed in cement, and a fine bold effect should be gained, very different to that of the usual close jointing, which is barely distinguishable from stucco work. The wide joint also allows of a decent thickness of motar to bed the stone on to. The mortar used is composed of stone dust and a little lime. It sets very hard in a short while. All the vertical joints have grooves filled in with cement grout, thus making them doubly secure.

The aisle roofs are specified to be covered with 24 gauge sheet copper, which will do away with the "creeping" habit of the lead which was originally proposed; the rain water pipes for the same reason have been made copper. Slates, "green American" have been specified for the roofing of the nave, which should add a little soft colour to the design. The gutters behind parapets are formed in fine concrete, waterproofed, in the place of timber, and then covered with lead. This will remove the chance of rotting of timber, and the gutter will be watertight in itself even if the lead failed in any place. A feature of the windows will be the gun metal saddle bars, and 1" square stanchions, which each light contains, fixed on the outside of the glass and giving an effect of strength and rigidity. Wire netting reinforcement is used for the basement concrete floors, and is also embedded in 2-in. of concrete on the back of the vaulting. This latter precaution should be most useful in case of earthquakes. An average height of 2ft. of Coromandel granite has been used at the base of the building, to take the wear and tear, splashings etc. The great cost —£1 per cub. ft.—prevented its use any higher, though certainly it would have been an improvement if it could have reached the floor level. The "damp course," consisting of two courses of slates, set in cement, was laid on this granite, and a permanent job should be obtained, as there is nothing more lasting than slate.

HEATING.—This has been designed on the low pressure hot water system. Radiators have been provided for to be situated under the aisle windows in moulded recesses, with ventilating gratings behind, and also in the triforium, just behind the triforium arcade. The latter will warm the air descending from the clerestory windows, and prevent a cold draught from coming down on to the heads of the congregation in the nave. There are no radiators on the floor of the nave itself, but the air being warmed all round the walls, and above, should make the temperature of the whole building quite comfortable. The heating chamber is in the basement, and to enable the rooms in the basement (which of course are on the same level as, or below the heating chamber) to be heated, "wall" radiators have been specified, which are placed along the top of the walls near the ceilings. "Ideal" radiators and boiler have been used throughout. Provision has been made for an "Accelerator," to be installed or not as desired. This apparatus is electrically driven, and is said to increase the flow of water in the pipes very considerably and thus add to the efficiency of the system greatly. I believe it is a new thing for New Zealand and certainly for Dunedin, but if successful it should soon be much used, as it enables pipes of smaller diameter to be laid. Altogether the heating system of the Cathedral has been well thought out, and the result should prove a great comfort for the congregation. I may say that great opposition was shown at first to the idea of hot water heating at all, so little were the advantages and benefits of the system understood, and it was only by dint of great patience and perseverance that the scheme was carried. By settling the designs and contract at the commencement of the building, it has been a simple matter to make provision for pipes, connections etc., in the stone and concrete work as it proceeded.

VENTILATION.—This at the time of writing has not been fully thought out, but the preliminary sketches show a large main exhaust pipe above the vaulting to which are connected exit flues from the intersection of the nave vaulting ribs. The main pipe is carried to a louvred opening in the top of the west gable, where an exhaust electric fan is fixed, which will draw the foul air from the nave and expel it at this opening. For fresh air inlet, a certain number of gun-metal centre-hung casements in aisle and clerestory windows are provided, besides the gratings at the back of the aisle radiators.

LIGHTING.—Electric lighting will be installed, and the scheme has been prepared, so that holes have been left in the concrete and masonary where conduit will have to be inserted. By this means much boring and drilling will be avoided and a better job obtained. Owing to the war conditions and the scarcity and uncertainty of materials such as conduit etc., it has been deemed best to postpone obtaining tenders till after the war, provided it is over before the work of installing is commenced.

In conclusion, a few words as to the style adopted by the architects for the general design of the Cathedral may be in place. Beyond being Gothic, it is not possible to define it as being much more of one period than another, and indeed the main features are quite free and original, though designed in the true Gothic spirit. The mouldings are decidedly original, simple yet effective, and the window tracery is also most uncommon. It is refreshing to get away from the orthodox type, whether early English, decorated or perpendicular, and in this case something new has certainly been evolved. There is an air of solidity and strength, and freedom from the numberless little cusps and spidery mullions, that usually mark the design of the orthodox tracery, that is very welcome. The balcony, if one may term it so, that is placed over the front doors, is quite unique, and will be quite a feature of the front, and should also prove quite useful for open air addresses. Much more might be written on the subject but the foregoing are the main items of interest.

A Building Dispute

A Supreme Court Judgment

A judgment of interest to builders was delivered by Mr. Justice Hosking, says the Auckland "Star" of November 23. The case was stated by arbitrators for the opinion of the Court on certain questions arising out of a building contract for the erection of an apartment house in Lower Symonds Street by Frederick Joseph Herring Ellisdon (Dr. Bamford) for Rachael Basten (Mr. McVeagh). A penalty clause was attached to the contract, providing for the payment by the contractor of £10 per week for every week the contract remained uncompleted beyond the time specified or within any extended time which may have been allowed by the architect. The contract provided that the contractor should be allowed an extension of time in all cases where the completion of the work was delayed by inclement weather, strikes, or authorized extra additions or alterations known as extras. The extension of time to be allowed was to be agreed upon by the contractor and architect. The question to be decided was whether the authorization of a number of extra works in connection with a contract set at large or waived the penalty clause for the non-completion of the works in the period specified in the contract. When the contractor forwarded his account to Mrs. Basten for the recovery of the balance of the contract money, Mrs. Basten lodged a claim for a sum of £110 damages for non-completion of the contract within the time specified. In the dispute before the arbitrators, the contractor argued that by virtue of the fact that extras had been ordered, an extension should have been allowed. As no extension of time was granted, he submitted that the penalty clause should be waived or set aside. His Honor, in the course of his judgment, said he was of the opinion that the provision for the penalty clause was applicable, notwithstanding the fact that no extension of time was fixed when the order for the extras was given. An incidental question asked in relation to the case was what is the meaning of the expression in clause 22—"the works shown in the plans and specifications?" The suggestion was that this clause was not applicable if there were extras, because if there were, the works whose non-completion was to bring the clause into operation, were not the works shown on the plans and specifications. His Honor said he did not think this suggestion could be upheld, otherwise the provision for extension in the case of extras would become migratory. The contractor agreed to execute the contract, subject to the general conditions of contract, the works shown on the drawings and described in the specifications, but Clause II. of those conditions gave power to vary the contract by ordering extras, so that the works shown on the plans and specifications were subject to this power of variation. Had there been no provision for extension, then, according to the decisions these variations, if they caused delay, would, although they were authorized by the contract, set aside the penalty clause. Here, however, provision for extension had been made as indicated. Therefore it did not appear to his Honor that the expression in question precluded the application of Clause 22, although extras had been ordered. It should be carefully noted, he said, that it was not because extras were ordered that an extension was to be allowed. That was only to happen if the extras were such as to cause delay in the completion of the works.

The Modern Gospel of Good Work

From the "Architects' and Builders' Journal"

The Design and Industries Association, whose special aim is to bring about a better standard of taste in all things of common usage by drawing together the producer, the distributor, and the consumer, have issued a fourth pamphlet, written by Mr. Clutton Brock, who, with great directness and vivacity sets forth his creed of work. The following are some interesting passages relating to the taste of the general public and those who control it:—

Beauty to most people consists, not in design, but in what they call "style"; and style changes as quickly as fashion in dress. Thus, people get a notion that high finish is inartistic, as it is when it is finish for the sake of finish; they suppose that there is some mysterious virtue in the roughness of peasant art; and they will buy objects in which this roughness is imitated for commercial purposes, objects that are merely badly made. . . .

Good design and good workmanship produce beauty in all objects of use. That is the common sense of the matter. But human beings never attain to common sense unless they aim at something beyond it. There must be a kind of religion of workmanship, if workmanship is to be good; and a religion of design, if there is to be good design. It never is good unless both designer and workman do their best for the sake of doing it. What we need most in England now is this religion; and we need a condition of things, a relation of all the parties concerned, in which it will be possible to do good work for the sake of doing it. When we have that, we shall have art soon enough. And it is not an impossible or unnatural relation, for it has often existed in the past.

The delight in doing a job well for its own sake is just as natural to man as greed or laziness or fraudulence. There is a natural force in him making for good work, as there is a natural force making for bad. Unfortunately the force making for bad work is helped, at present, in England, by circumstances which can be overcome, and by a body of mistaken opinion which can be refuted. But the circumstances can be overcome only if the opinions are changed. Thus, both manufacturers and shopkeepers often believe that they are utterly at the mercy of the public taste, and that the public taste is quite irrational; the public does not want good design or workmanship; the only way to success is to tempt it with continually changing

fashions. Unfortunately such beliefs become true, if acted upon, in trade as in politics. The public can easily be demoralized in both cases. It has not a fixed and certain taste of its own. It does not know what it wants, but is subject to suggestion; and if it is beset with articles ill made and ill designed but following some new and violent fashion, it will come to believe that these are the articles which it wants. Tradesmen, like politicians, can be demagogues, and can make their fortunes by demagogy. But there is promise as well as danger in the fact that the public taste is plastic. The mistake in England has been the belief that it is plastic only in one direction, or, rather, the belief that it is not plastic at all, but always in favour of plausible rubbish. Producers think they are giving the public what it wants, when really they are forcing upon it what they think it wants. The fact is that they can force upon it what they choose to give it. This is not true of the individual producer. He probably is not strong enough to withstand any general tendency of the mass of producers; but still it is the tendency of the producers that controls him, not the tendency of the public. So producers in the mass can control their own tendency, since they can persuade the public that it likes what they choose to give it. Therefore the question is whether they shall blindly, and without any forethought or organization, submit to a general tendency imposed upon them by the worst among themselves, or whether they shall exercise their will in combination to persuade the public that it likes what is good. The future of all English industry depends upon their decision. . . .

It has been proved again and again, as Morris himself confessed, that individual artists of genius, though they may make a small public for themselves, cannot affect the condition of a whole industry; and that art schools, though they may produce armies of trained students, cannot force an industry to use those students, cannot even train them so that they shall be useful to an industry. At present the art-student is a separate genus, something quite different from the artist, and seldom able to become one. The country is full of art-students who have never become artists, who, remain capable only of producing art-students' work, or of teaching others to produce it. Manufacturers are impatient of them, and they are contemptuous of manufacturers, both with some reason. For the vice of our artistic education is that it can turn a youth, with no artistic capacity whatever, into a very skilful art-student; while the vice of our industries is that they do not want artistic capacity. They only want designers who will do quickly, exactly, and cheaply, what they are told to do. Thus the designer is the slave, not one of the captains of industry. Indeed, industry has no captains at all, except, perhaps, the commercial traveller. It is he who is supposed to know what the public wants. It is his taste which controls design; and all the while it is not his taste at all, but what he supposes to be the taste of the public. And the public buy what they suppose to be the taste of someone else, so that design is not controlled by any real taste at all, by any actual likes or dislikes, but only by a general desire to follow some imaginary standard.

This system of unreality can only be destroyed by the collective will of all those who are concerned in the industries where it prevails. We can have neither good workmanship nor art unless objects are made according to the liking of someone, and it is useless to try to make them according to the liking of the public. That only means a process of blind experiment; for, since the public do not know what they like, no one, not even the commercial traveller, can know. Therefore there is nothing for it but to produce articles in which the liking, the taste, the zest, of the producer is expressed. That is the only way to excellence; and it can only be done, as I have said, by co-operation among manufacturers, designers, and shopkeepers.

There is, at present, in England, far more jealousy between competing manufacturers than in Germany or America. This jealousy is itself a symptom, not only of a low conscience, but of a low state of enterprise and capacity, of timidity rather than of adventure. For in the long run the prosperity of a country depends upon the general excellence of its industries; and general excellence cannot be attained by blind and jealous competition. In this matter manufacturers must learn from men of science. Science advances rapidly because men of science are concerned for its advance rather than for their own pockets or reputations. So industry will advance in this country, both in quality and prosperity, when all concerned in it aim at a general excellence. And apart from all material questions, to aim at a general excellence, to forget yourself in that aim, is the only way to enjoy your work, and so to make life worth living. Commerce is a dreary business when its one aim is to make money; how dreary many of our articles of commerce prove, for they are made only to sell, and they have an ugliness which betrays the joylessness of all who are concerned in the production of them. They will not be able to compete, already they are failing to compete, with articles from other countries, which have more of a joy of a public spirit in them, and therefore more adventure, more sparkle, more beauty. . . .

So the cause of the Design and Industries Association means more than a little pleasure for cultured people. It means what we call the social question. It means ultimately a change in the relations between producer and consumer; it means, in fact, the future of civilization. For you cannot have civilization where the lives of millions are sacrificed to produce rubbish for thousands who do not enjoy it when it is produced. That means a perpetual conflict growing always more bitter until it leads back to barbarism. This is not a political matter and it cannot be settled by a political struggle. So long as the workman has to produce rubbish he will not be satisfied with his work or his life, no matter how large his wages may be or how short his hours. He will be satisfied only when he has work that will satisfy his soul; and he will get that only when the public want it from him. . . .

Sarjeant Art Gallery Competition WANGANUI.

The Sarjeant Bequest

Won by Design No. 16

The assessor in this competition, Mr. S. Hurst Seager, F.R.I.B.A. gave his decision in the final competition in October, but owing to some question having been raised regarding one of the designs, we were unable to publish the details till now.

The following is the result:—Design No. 16 emanating from the office of Mr. Edmund Anscombe of Dunedin, 166 marks out of a possible 168, first; Design No. 2 by H.M. Helm, Wanganui, 149 marks, second; Design No. 1 by Messrs. W. G. & H. B. Young of Wellington, 143 marks, third; Design No. 33 by C. Winter, C/o Government Architect's Office, Sydney, 121 marks, fourth.

The Wanganui Council has appointed Mr. Anscombe architect for the carrying out of the work.

Architects were asked to compete first of all in a Preliminary Competition from which three designs were to be selected, the authors of which were to receive £35 providing they agreed to compete again in the final competition. The winner of this final competition was to carry out the work.

The sum of £9,000 was named as the amount which was not to be exceeded in the preliminary competition, and a builder's tender was asked for. Drawings to be 8-ft. to the inch and in pencil, with the walls and sections tinted in. Studies for elevations, and sections to be shaded to represent horizontal and vertical projection. Sections to be made through all points, and four elevations were required.

Although this competition was for the Art Gallery only, it was desired that the Art Gallery shall form part of a scheme including a Museum corresponding to the Art Gallery, and a central block of Municipal Offices and Town Hall.

The assessor drew attention to the necessity of correct lighting in the conditions, and warned competitors that "the recent additions to the National Gallery and the Picture Galleries in the Victorian and Albert Museum failed wholly in respect to their lighting—that is, they failed wholly to fulfil the purpose for which they were erected."

The Assessor did not wish to hamper competitors in the conception of their designs but there are certain dominant thoughts which must be kept clearly in mind in the preparation of them, i.e., the building is to be a memorial, and must therefore be a work of architectural distinction, not by lavish expenditure of material and labour, but by the artistic quality of the design.

The Assessor's article on "The Lighting of Picture Galleries and Museums" (published in the R.I.B.A. Journal, 3rd Series, Vol. XX., 1912), had to be carefully studied, and the building designed on the principles there laid down.

Report on Preliminary Competition

The Chairman,
Sarjeant Art Gallery Committee.
Dear Sir,—

I have the honour to report that thirty-three designs were received. These were first carefully examined in conjunction with the descriptions and estimates. It is to be regretted that but little reliance could be placed on the builders' estimates which accompanied the plans—how little can be at once seen from the fact that designs varying from 6,228 superficial floor area up to 12,576 superficial feet were valued by the builders equally at £9,000, and that even when the larger designs were often of a more expensive character than the smaller ones. I was compelled therefore, to disregard the estimates, and to measure up each design and assess the value as far as possible.

This naturally entailed a large amount of work which need not have been given if more honesty had been shown on the part of competitors and their builders. Any competitor should have known that a building of the monumental character asked for and measuring 318,008 cubic feet, could not possibly be carried out for the amount stated. Yet the builders' estimate for this large work was £9,000 and many other estimates were nearly as erroneous.

Some competitors have made an honest attempt to keep within the amount allowed, but the builder's estimate exceeding their expectations they have stated how the design might be reduced in order to comply with the Conditions. These designs have been adjudged on their merits on the reduced basis, as also were all designs which came within a reasonable distance of the amount allowed. Extravagant designs which could not possibly be executed as shown, and could not be carried out in part in such a way as to comply with paragraph 2 on page 9 of the Conditions which states that:

> "The work when the £9,000 has been expended must not in any way suggest an unfinished building."

were rejected. It is pleasing to note that no outstanding first class design had to be rejected on these grounds, although among many so rejected, considerable skill was shown,—skill which would have perhaps placed the competitors in the first rank if this very important condition as to cost had been honestly fulfilled.

From the whole number, nine designs,—having the distinguishing numbers 1, 2, 7, 10, 15, 16, 19, 29, and 33—were selected for detailed examination.

A general survey of these showed that many competitors had again, as in the Dunedin Town Hall Competition, disregarded the request that they

should "present their ideas with the minimum amount of labour and expense." Some of the designs were most elaborately and fully drawn, envolving a large expenditure of time, which in many cases could have been far better devoted to thought and study of the essential features of the problem.

As before stated, a professional assessor is not in the least influenced by the display of skilful draughtsmanship. In this preliminary competition it is the ideas only which are judged. These should be presented in as concise and direct a form as possible. It should be remembered that the possession of sufficient power of draughtsmanship to materialize an architectural erection can be shown to a fellow architect as well by a preliminary sketch as by elaborately finished drawings.

The method of competition here adopted—the submission of preliminary rough sketches by all who wish to compete, and of carefully finished and detailed drawings by the few selected from them—is a very valuable one both for the competitors and the promoters. It enables busy professional men to present their ideas with a minimum of time and expense and thus to take part in the competition, when otherwise they would be unable to do so, and it enables those who finally compete to amend their designs where necessary in the light of the Assessor's criticism and report. It is to be hoped that competitors in future competitions will not nullify the advantages of the system by the useless attempt to influence the decision by elaborate presentation.

It is necessary in the final competition that the drawings should be as accurately and highly finished as the skill of the competitor and his draughtsman will allow, for the Assessor in this case would naturally be influenced by the skill shown in details, and, moreover, the drawings would also have to make their appeal to the promoters and the public.

In assessing the value of the designs, they were compared under twenty-two headings as shown by the accompanying table, with the result that No. 33 comes first with 127 marks out of a possible 168; No. 1 second with 125; and Nos. 16 and 2 equal with 123 marks.

The individual marks vary exceedingly, and no one design takes a leading place in any two of the groupings shown.

The headings were grouped under:—

1. General Scheme	10	marks.
2. The Plan	50	,,
3. The Elevations	48	,,
4. The Interior Design	30	,,
5. Lighting	30	,,
Total ..	168	,,

For the General Scheme, No. 2 was easily 1st; Nos. 33 and 16, 2nd, equal; No. 1 a weak 4th.

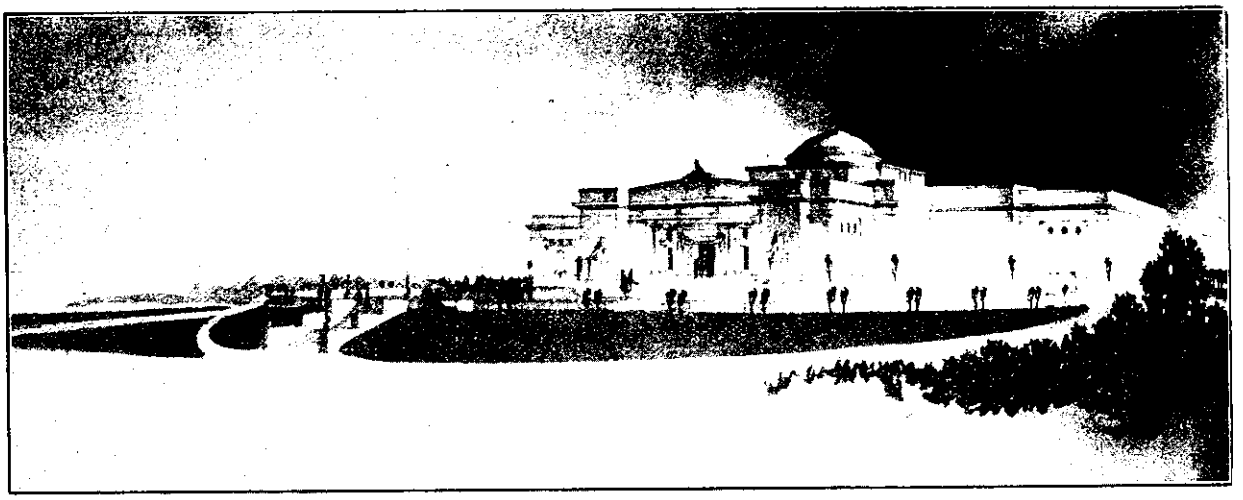
For the Plan, No. 33 was 1st; No. 1 was 2nd; Nos. 16 and 2, 3rd equal.

For the elevations, No. 16 was easily first; No. 1 2nd; No. 33 3rd; No. 2 4th; (These three were separated by only 1 mark).

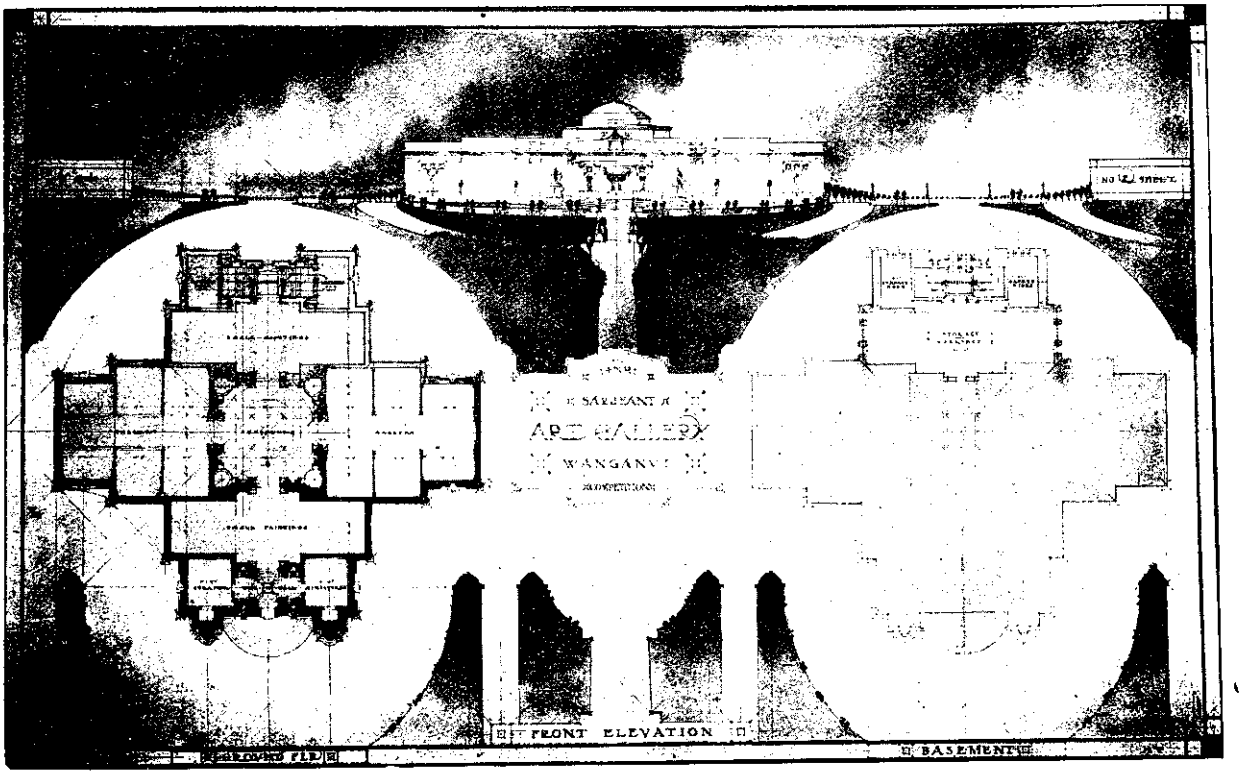
Marks obtained by First Nine Competitors

	Maxm.	No. 33	No. 1	No. 16	No. 2	No. 7	No. 15	No. 10	No. 19	No. 29
General Scheme										
The approach	5	4	2	3	5	2	5	3	4	4
The site	5	3	2	4	5	2	4	2	5	4
	— 10	— 7	— 4	— 7	— 10	— 4	— 9	— 5	— 9	— 8
The Plan										
General arrangement	6	3	5	4	5	3	6	4	3	2
Entrance Hall	4	3	3	4	1	3	4	4	0	2
Central Space	4	2	2	4	4	2	4	2	1	2
Oil Painting Gallery	4	4	3	2	1	4	4	2	2	2
Water Colour Gallery	4	4	3	2	2	3	4	2	2	2
Engravings Gallery	4	3	3	2	4	3	3	4	2	2
Miniature Room	4	3	3	4	3	3	2	4	2	2
Male latrines and locker room	4	4	4	2	3	4	4	0	3	1
Ladies' lavatories and lockers	4	4	4	2	2	4	4	0	3	1
Basement	4	4	1	2	2	1	1	1	1	1
Stairs	4	3	2	2	2	2	1	2	0	2
Curator's room	4	3	4	4	4	0	2	4	0	2
	— 50	— 40	— 37	— 33	— 33	— 32	— 39	— 29	— 19	— 21
Elevations										
Front	12	8	6	12	9	8	6	7	8	6
Sides	12	7	10	12	7	8	7	10	10	7
Back	12	9	9	12	7	9	4	10	6	6
Dome	12	8	8	12	8	8	4	6	8	4
	— 48	— 32	— 33	— 48	— 31	— 33	— 21	— 33	— 32	— 23
Interior Design										
Entrance Hall	8	5	4	8	3	5	4	7	0	3
Central Space	10	5	9	5	10	6	5	5	5	9
Galleries	12	8	8	6	16	8	10	8	6	6
	— 30	— 18	— 21	— 19	— 29	— 19	— 19	— 20	— 11	— 18
Lighting										
Oils and Water Colours	30	30	30	16	30	30	30	30	30	24
	— 30	— 30	— 30	— 16	— 30	— 30	— 30	— 30	— 30	— 24
TOTAL	168	127	125	123	123	118	118	117	101	94

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



Perspective of Winning Design No. 16



Plans and Elevation of Winning Design No. 16

For Interior Design No. 1 was 1st; Nos. 16 and 2 2nd equal; No. 33 3rd.

For lighting, Nos. 33, 1 and 2, 1st equal; No. 16 a weak 2nd.

It will thus be seen that each design will require to be considerably altered before any of them could be recommended for adoption. They are all good designs, but all have good and bad features in about equal degree.

Notes for Final Competitors

In making a selection of designs from the thirty-three designs submitted, the Assessor has found that there are four which are of such equal merit that he has recommended the Council to award a fourth premium and to ask the authors of the four selected designs to compete in the final competition.

The four designs selected in this competition each show good and bad features. There are none that could be recommended as they stand, for adoption by the Council, although the points gained by each competitor vary exceedingly in detail, the resulting totals are very close. The final selection would depend on the skill and care shown by the competitors in re-modelling their designs so as to eliminate the bad features and strengthen those which are not quite as satisfactory as they should be. The Assessor has marked with a blue cross in each set of plans, those points to which reconsideration must be given.

How far they depart from what the Assessor considers perfect arrangement is indicated by the copy of the marks gained by the competitors for the various parts of the design.

A mere enlarging and re-drawing the designs submitted would serve no useful purpose. The position is that four competitors have been selected by reason of the evidence they have given that they are capable of designing a perfectly satisfactory work, and they are now asked to reconsider, and where necessary entirely re-model, their designs in the light of the Assessor's criticisms and notes, and to produce altered designs in accord with them for his final decision.

The blue crosses on the plans will show to which portions of the design special attention must be given but the Assessor has not given any hint as to the manner in which the alterations must be made. In preparing their fresh designs, competitors must carefully re-read the Conditions and Notes for Competitors originally issued, together with the detailed notes here following.

GENERAL SCHEME

Full advantage must be taken by the competitors of the sloping bank which at present exists and to form as much of their roadway as possible on the side of this bank. There should be a space between each of the blocks of buildings. It would not be absolutely imperative that vehicles should be able to drive between the three blocks but they should be able to drive all round and there should be space left for turning. It is very important that competitors give their close consideration to convenience of vehicular approach. Footway approach may rightly be by flights of steps.

THE PLANS

None of the selected competitors have quite grasped the meaning of the Assessor when he stated that the Sculpture Hall should be a "central" space. In every reference the Sculpture Hall is spoken of as a central space. Competitors are asked to read again the last clause of page 10 of the original Conditions. The Assessor does not think that the Entrance Hall which would also be a place for sculpture—not for pictures—should open directly into the Sculpture Hall. Far better effect would be produced as indicated by the Assessor in the original Conditions, that the Entrance Hall should give access to a picture gallery which should in turn lead to the central space by which each of the other galleries might be approached. The Entrance Hall should have some architectural dignity and competitors are to remember that it is asked that it should be spacious. 300 superficial feet would not be regarded as extravagant. It must be thoroughly well top-lighted.

THE CENTRAL SPACE

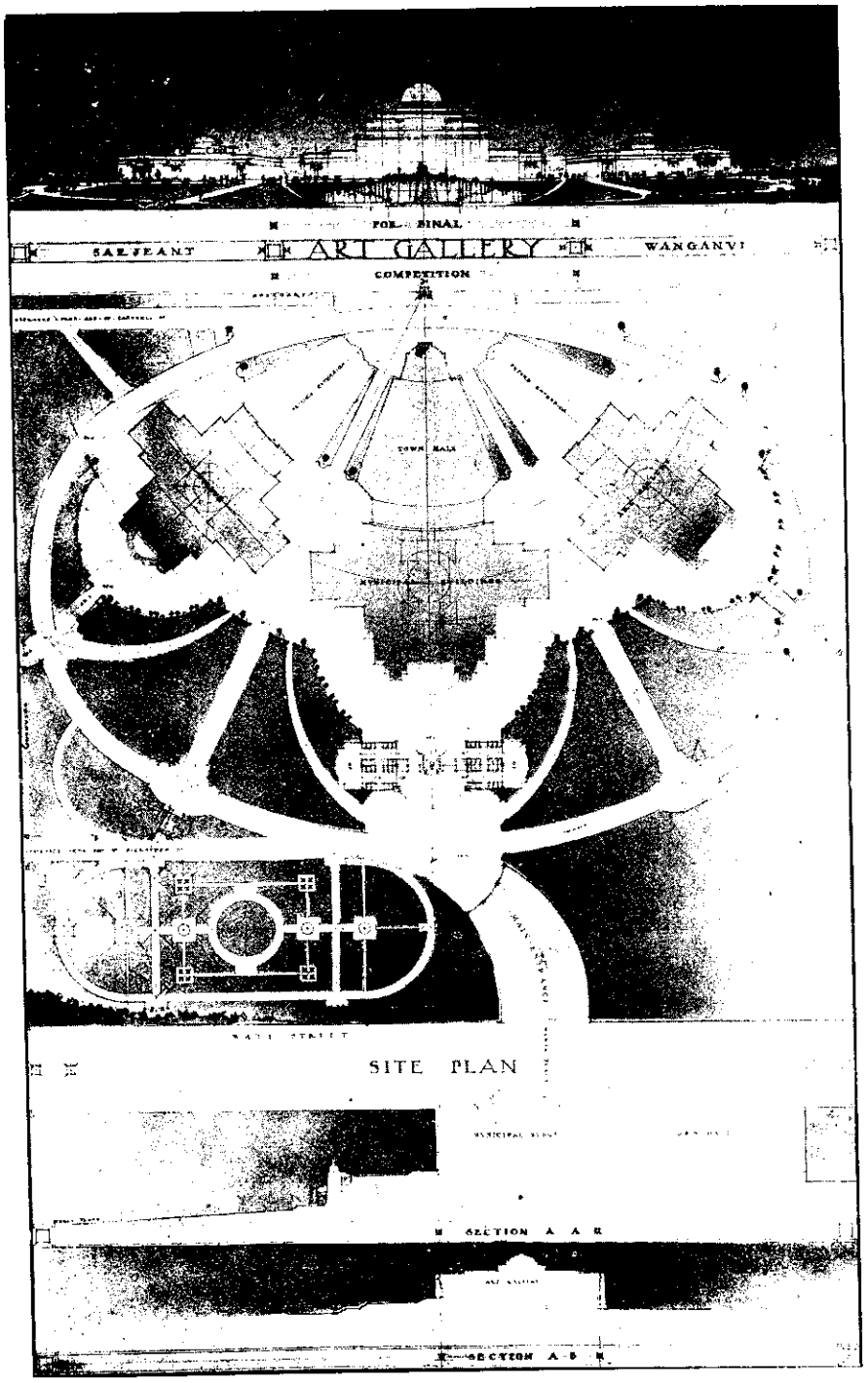
None of the competitors have shown a suitable Sculpture Hall. It should be about 30 feet in diameter, certainly not less, and would not be regarded as extravagant if it were a few feet more. In designing this central space some competitors have not given sufficient lighting. It should be well lighted as stated in the original Conditions, by windows in the drum of the dome and the central light in the crown of the dome would also have a good effect but it would not be advisable to make this too large. Certainly the whole of the dome should not be of glass, but should be of solid construction. If the light in the eye of the dome is thought necessary, it should not be more than about 4 feet in diameter.

The openings into the corridors from the central space should be about 10 feet wide so that a fine vista may be obtained in each direction.

OIL PAINTINGS, &c. GALLERIES

It should be noticed in reference to the galleries, that although oil, water colour and engravings galleries are spoken of, a well-lighted gallery would be equally useful for any of these exhibits, the only thing to remember is that oil paintings are likely to be larger than water colour paintings, and that the distance for viewing them should not be less than the 16 feet stated in the Assessor's paper on lighting, and the width of the avenues should not be less than 12 ft. Some of the competitors have shown narrow passage ways, which would not be desirable.

It is very important and imperative that the galleries should be formed as suggested in the Assessor's paper. The old method of rectangular rooms even when the skylights are made to throw the light on the walls, cannot possibly be as satisfactory as the corridor system with well-lighted bays. The area of the buildings varies considerably



Site Plan of Winning Design No. 16

and in order that competitors may be on a perfectly equal footing in respect to the size of the building, the lengths of wall surfaces are now given and must be adhered to.

For Oils and Water Colours there must be a length of outer wall of 250 feet and the possibility of extension must be kept in view. If the building is arranged or planned as suggested, the arms of the cross might be omitted or extended, and the building yet present a perfectly finished appearance at any time.

In giving the length of the outside wall required for oil and water colours the Assessor wishes it to be borne in mind by the competitors that the promotors may wish to spend at first only the £9000 at present allotted. So that it would be well to point out how much of the design can be erected for that sum and also to suggest possible enlargements. The work at any stage must not present an unfinished appearance.

ENGRAVINGS

These may be provided for in a bay or in a separate room. In either case the wall surface of about 60 feet would be sufficient and in both cases the sky-light should be so arranged that each wall is equally well lighted. (See notes on lighting).

MINIATURES

The Miniatures should be placed in a separate room and this should certainly be off the Entrance Vestibule opposite the Curator's room. A room having a superficial space of between 200 and 225 feet will be ample.

LATRINES & LOCKER ROOMS

These have in some cases been well designed and placed, but in considering these and the entrance to them from the basement, it must be remembered that the Art Gallery will be very often used for conversaziones, and at these times these locker rooms and lavatories would be used as cloak rooms so that the entrance to them must be direct, that is to say it must not be necessary to pass through the main portion of the building before reaching them. A double doorway should be arranged for entrance and exit. The lavatories need not be partitioned off, it would be sufficient if the basin were in a recess off the locker room with entrance to the w.c. from the recess. The locker rooms might well be rather larger than originally stated. It would be better that the superficial area should be about 200 feet including the lavatory recess.

BASEMENT

It should be kept in mind that it is necessary that the basement entrance should have some architectural dignity as when the building is used for conversaziones this would be the entrance for the guests and the stairs leading from the basement entrance hall would give access to the retiring rooms. It may be considered more convenient to have two staircases leading on either side to the men's and ladies' retiring rooms for in this way the rooms can be approached perhaps more readily than by the central staircase leading at first into the gallery.

The locker rooms may be as stated in the original conditions as at the basement level, but wherever they are placed, a point to remember is that it must be possible to reach them off the basement vestibule having a dignified architectural treatment and that it must be possible to get access and egress without any chance of crowding. Wherever the locker rooms and lavatories are placed, their position must not be apparent from the exterior.

STAIRS

From what has been stated it can be seen that it is not imperative to have a single staircase to carry out the desired arrangements, and that it may be thought more desirable to have two staircases but in either case the staircase and stairs must be treated in an architectural manner, and be of sufficient importance to make them suitable for exhibition purposes. They must therefore be thoroughly well lighted.

CURATOR'S ROOM

The Curator's room should undoubtedly be off the Entrance Hall, opposite the room for miniatures. It may be of the size already given for miniatures.

ELEVATIONS

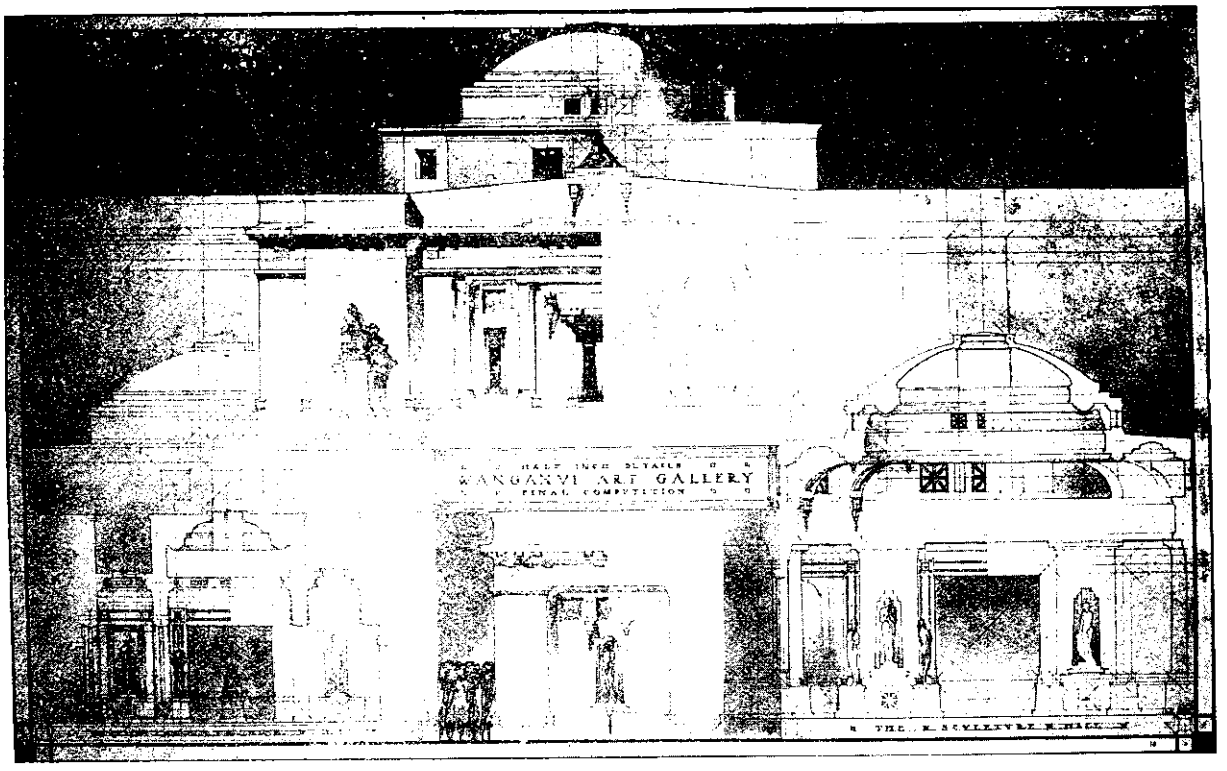
It was stated in the original Conditions, page 8, that the building should be in the classical style, drawn in a quiet, dignified simple manner. Although this is desired the building should still appear as if designed for the purpose of an art gallery. Competitors must be careful to avoid any appearance that would give a suggestion that it was designed for a mausoleum. It is required that the treatment should be original, not a mere copy of classical buildings. Those elevations which show an original treatment in a simple dignified manner, will receive more favourable consideration than those which are strictly in accord with classical examples or which show an unnecessarily ornate treatment.

As stated above, it would be a great blot on the design if the elevations showed the position of the lavatories. It must be remembered that the that it is important that the treatment should be elevations will be seen from every point of view and artistic and dignified on all fronts.

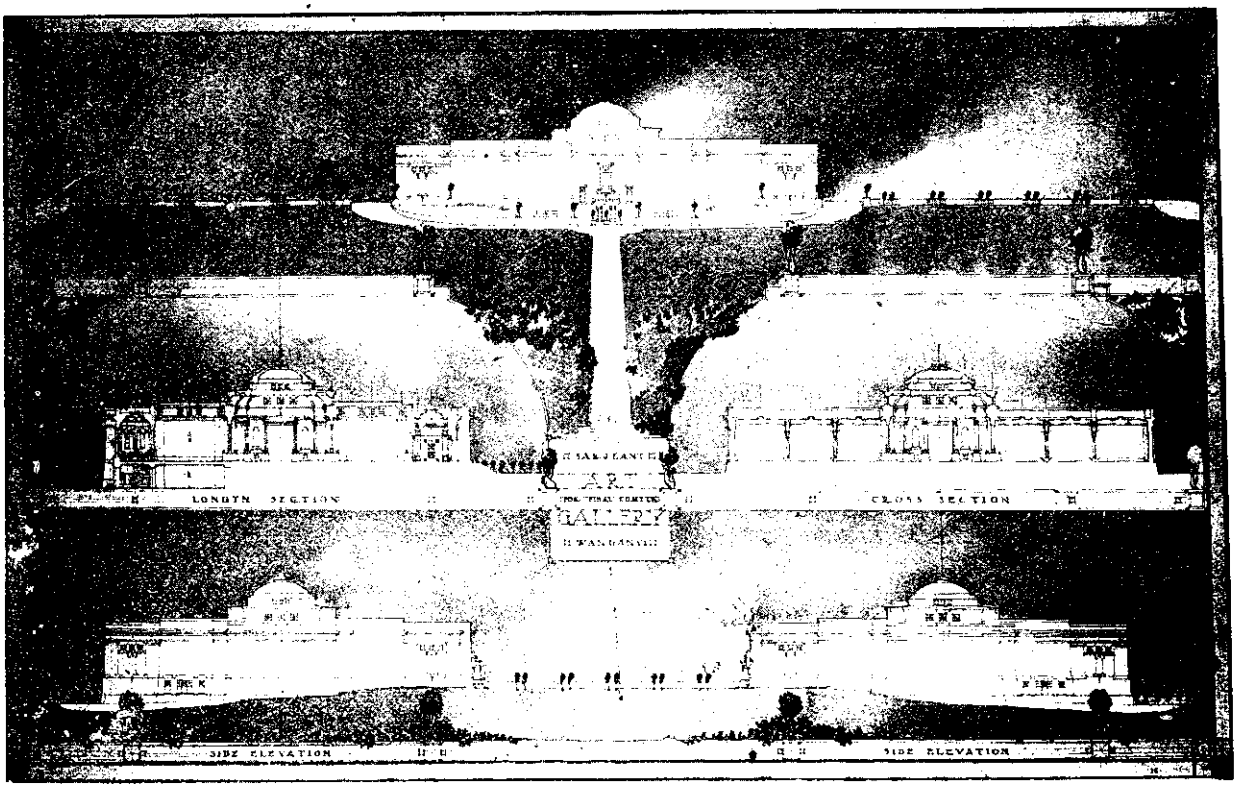
INTERIOR DESIGN

The two portions of the design which seem to call for carefully considerd architectural treatment, are the Vestibule and the Sculpture Hall, but in either case it must be remembered that however fine an architectural treatment may be, if it is not suitable for sculpture it will not serve the end in view.

In the galleries the bays which are formed by the cross partitions, can be wider than shown by many competitors. It will be found by working out the diagram for the lighting on the partition walls that probably a width of bay of about 18 feet will be possible. This of course will vary according to the position of the sky-light. Very few competitors have worked out the lighting problem on



Half-inch Detail of No. 16's Design



Winning Design No. 16—Sections and Side Elevations

the partition wall. It must be remembered that it is not desired to put pictures on the inner part of the partition wall, but there should be a good, lighted space of about 6 feet from the corridor upon which single pictures might be hung.

The corridors should be kept lower than the skylight of the bays and might well be arched or ceiled lower in an architectural manner, but it is not desired that columns should form the termination of the partitions. It would be better that these should have an original artistic treatment of modelled ornament. There is a good opportunity for the design of original work in this part of which the Assessor hopes the competitors will make full use. It requires to be simple and refined but not stereo-typed.

LIGHTING

The competitors generally have followed the course laid down in the Assessor's article with the result that the lighting generally is quite satisfactory. Some good designs have been spoilt by want of attention to the principles laid down. It must be remembered that if the light falls vertically over the pictures, there will be an absence of reflections but in the case of oil colour pictures painted in a thick rough manner, the projections of the colours would cast shadows, so what would be intended by the painter to be a high bright light, would be dulled in consequence of the mass of shadow.

The skylight should be kept back as far from the wall surface as possible to avoid reflections. It will be seen that the rule laid down by the Assessor is the one which gives this result best. In the Engravings room and also in the Small Water Colour room this objection does not hold, for in those cases the light may be only a few feet from the wall surface without any disadvantage. The lighting of the central space has already been referred to. In all cases competitors must show clearly by sectional diagrams both longitudinally and transversely, the exact effect of the lighting and the position of reflecting surfaces. The end walls of the corridors, it should be noted are very suitable for hanging large pictures upon and these should therefore be well lighted.

THE COST

Definite dimensions are now given in lieu of a definite cost so that competitors are now required to furnish a definite tender from a reliable builder stating the sum for which he is prepared to carry out the work. This will naturally be in excess of the amount previously allowed but the cost must not exceed that which is necessary to carry out the work in accord with the spirit of the Conditions and the attached notes.

In reference to the above competitors are requested to bear in mind the views stated in clause 10 of the conditions.

Many competitors in designing their dome have forgotten that it will be seen principally from points much below the level of the site so that what may appear to be a good proportion on paper would in execution be so much foreshortened that it would become quite insignificant.

The whole of the exterior design must be of stone. Competitors are at liberty, as in the preliminary competition to ask questions up to the end of July.

S. HURST SEAGER, F.R.I.B.A., F.N.Z.I.A.
Assessor.

Assessor's Report on Final Competition

The Chairman,
Sarjeant Art Gallery Committee.

Sir,

I have the honor to report that the authors of the four designs, No. 33, 1, 16 and 2, selected in the preliminary competition for the final, have each presented excellent sets of drawings. These drawings show that each competitor has earnestly endeavoured to embody in his design the suggestions given them in the "Notes to Competitors Final Competition." They have all succeeded in improving on their first designs. The extent of the improvements is clearly shown by a comparison of the marks in the two competitions:

	No. 33	No. 1	No. 16	No. 2
Final Competition	131	143	166	149
First Competition	127	125	123	123
Additional marks gained	4	18	43	26

It will thus be seen that No. 16, though bracketed with No. 2 for third place in the first competition, is now easily first, while No. 2 takes a good second place, No. 1 third, and No. 33 fourth.

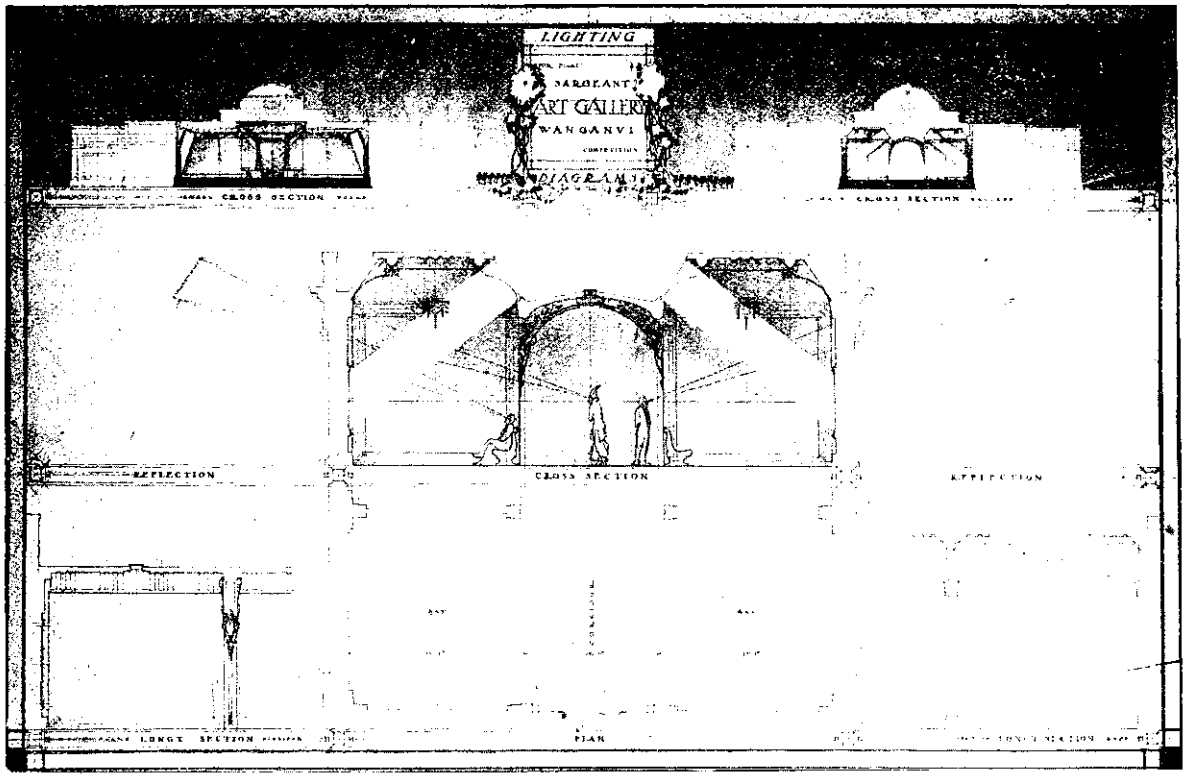
It is interesting also to note that whereas in the first competition No. 16 was first only in the "Design of Elevations," it is now equal with No. 2 in the "General Scheme," first in "The Plan," first in "Design of Elevations," first in "Design of Interior" and equal with others in "Lighting."

LENGTH OF PICTURE SPACE

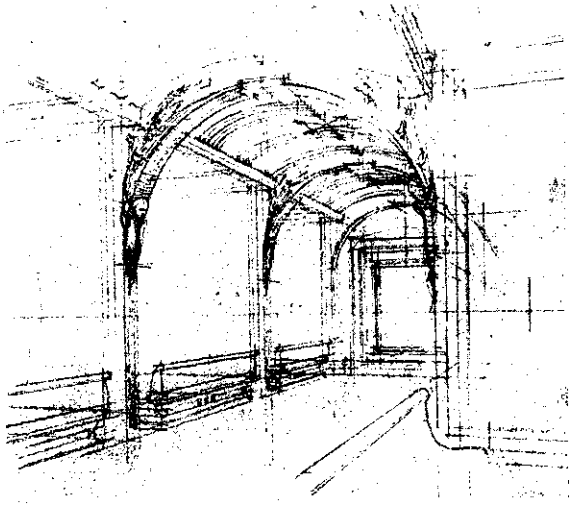
In the first competition, the competitors were asked to design a building which would not cost more than £9,000. In the final competition, in lieu of a definite amount, an exact length (250 feet) of well lighted wall surface was asked for, and the competitors have kept very closely to the conditions in this respect. The extra surface available on the partitions and at the ends of the corridors depends upon the arrangement of the plan. The total length of wall spaces in the designs as drawn, exclusive of the miniature room is:—No. 16, 568 feet run; No. 2, 486 feet run; No. 1, 434 feet run; No. 33, 408 feet run.

In No. 16 design there are two wings which might be omitted for the present if thought desirable, and still leave the building complete as demanded in the conditions. These wings give 104 feet of wall surface, which if omitted, would place this design on the same footing as the others, for 568 less 104 gives 464 feet, only 30 feet more than No. 1, and 22 feet less than No. 2.

Competitors were asked to provide estimates from reliable builders stating what the building, as designed, could be executed for. As in the first



Winning Design No. 16, showing Lighting



Main Gallery showing Bays

competition the estimates are obviously most unreliable. The superficial areas of the designs as drawn and the estimates submitted are as follows:—No. 16, area 11,632, estimate £10,800; No. 1, area 9,994, estimate £13,750; No. 2, area 9,428, estimate £12,500; No. 33, area 8,994, estimate £18,050.

I am of opinion that the estimate of No. 16 is lower than the value of his building as drawn, and the estimates of the others are higher, No. 33 especially so. I had the value of the design No. 16 in the first competition carefully estimated by a reliable builder, and the estimate coincided with my own opinion, viz., that the work will cost somewhere about £1 per superficial foot of the main floor and wall area. At any rate, as all the designs are somewhat of the same character, they would have the same relative value. Comparing these values with the builders' estimates we have:—

No. 16–£10,800	£11,632
No. 1—13,750	9,994
No. 2—12,500	9,428
No. 33—18,050	8,994

If the two wings are omitted from No. 16 the superficial area will be reduced by 1368 superficial feet, making the area of the reduced building 11,632—1368 = 10,264 superficial feet, (230 supl., feet more than No. 1), and the relative cost £10,264.

I do not advise the omission of the two wings. I am, on the contrary, strongly of opinion that the building should be erected exactly as drawn, subject only to such minor modifications as are hereafter suggested. If a sufficient amount of money is not at present available, then the work might be reduced as suggested, with the knowledge that a perfect and complete work will result, giving no evidence of an unfinished structure. The wings could in that case be added at any time.

In respect to the estimates, it must be remembered that at the present time prices are fluctuating to such an extent and are so much higher than the prices of normal times, that it is impossible to accurately foretell what the actual tenders will be. It should be said in reference to No. 16, that if there is any difference in the relative value of the designs, it is in its favour, for while its close competitors have obtained their effects by added decorative features, No. 16 has shown throughout an artistic restraint. The excellence of his design consists in the carefully studied grouping and the fine proportion of the essential features of the design. The design throughout is characterised by studied simplicity acting as a foil or giving emphasis and added value to the few parts where architectural or sculptured enrichments are placed.

THE DESIGNS

The careful system of marking adopted renders it unnecessary that I should criticise designs in detail. Competitors can see at once why they have succeeded or failed by comparing the marks gained for any feature with those gained by the other competitors, and by studying designs in relation to them. It must be remembered that all the marks are relative. Each feature of the designs has in turn been placed side by side and the order of merit determined. Then that placed first for that feature was, if it had no defects, given full marks, and the others were marked in relation to it. There are many features in all the designs whilst having no actual faults would have secured full marks, had there not been a design which in that particular was better.

Competitor No. 1 for instance, would certainly have obtained full marks for his well drawn Ionic portico if No. 16 had not shown an appropriate original treatment which placed it well ahead of the careful copy of antique forms. The same applies to Competitor No. 2.

The markings show the actual position in respect to the essential utilities and their artistic treatment. In this there is not a very great difference between Nos. 2, 1, and 33, but there is an artistic quality in No. 16 which carries the author far ahead of the other competitors. This quality can be readily felt by all who examine this excellent design, presented, as it is, by superb draughtsmanship. But though readily felt, the feeling cannot be translated into cold terms of numbers of marks. The system of marking ensures that the utilities of the problem have been as carefully as possible determined. The total marks of 166 out of a possible 168 indicate truly my opinion of the manner in which the author has solved the essential demands the conditions imposed. The drawings alone will reveal the manner in which he has embodied the essentials in an appropriate and artistic structure. A structure which will when erected make Wanganui distinguished as possessing the most beautiful Art Gallery in the Dominion, and one in which the essentials of Art Gallery design have been more fully complied with than in any gallery I am acquainted with elsewhere.

I have therefore no hesitation in recommending that the author of Design No. 16 be appointed as architect for the work. That he be instructed to prepare the working drawings and call for tenders.

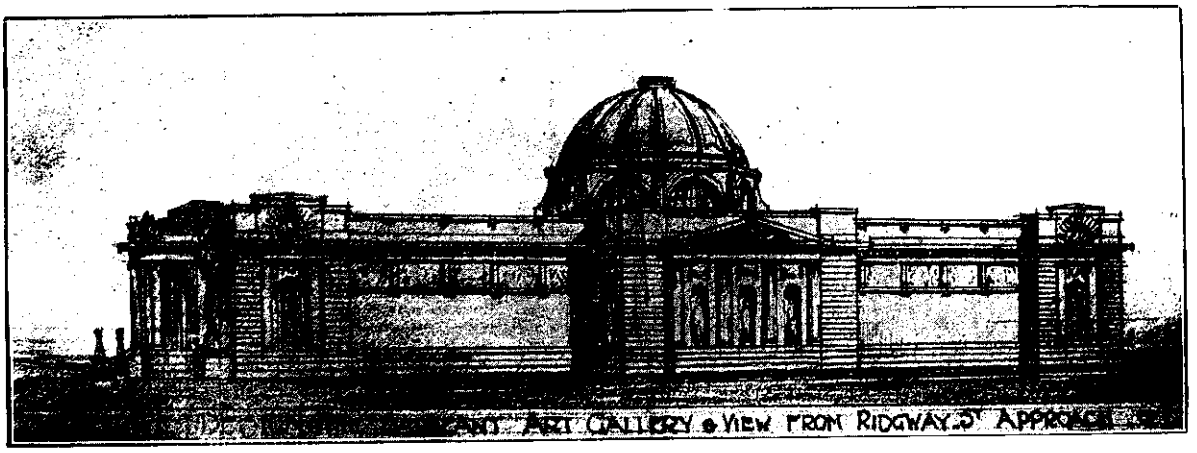
All the competitors are now entitled to receive the honorariums offered.

I have the honor to be,
Yours faithfully,
S. HURST SEAGER, F.R.I.B.A., F.N.Z.I.A.
Wanganui, 9th October, 1916 Assessor.

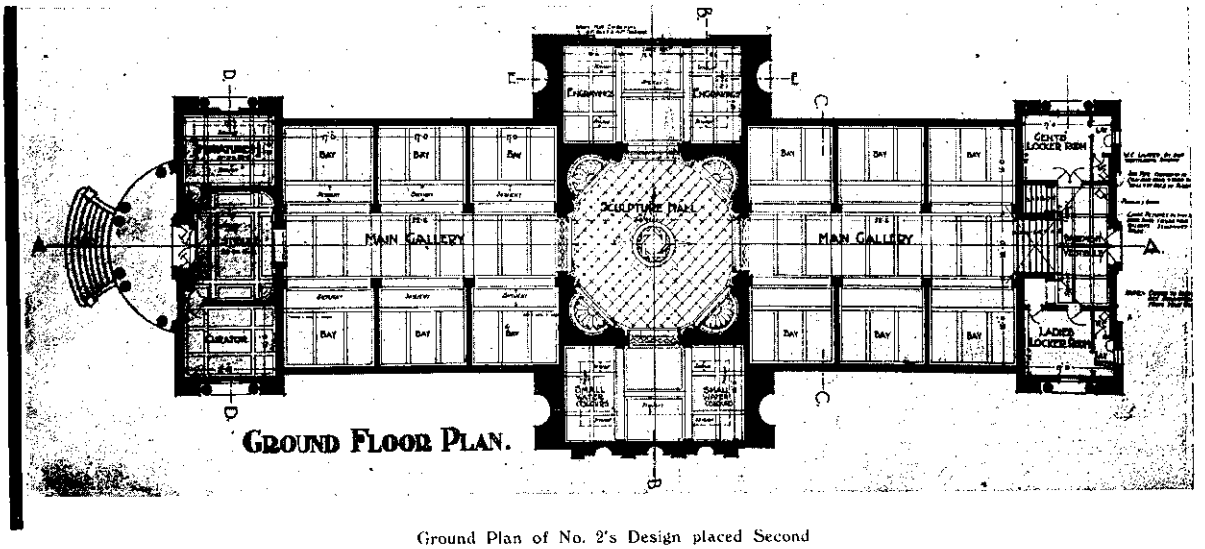
Marks obtained in Final Competition

	Maxm.	No. 16	No. 2	No. 1	No. 33
General Scheme					
Convenience of approach ..	5	5	5	4	3
The lay-out of site ..	5	5	5	4	3
	— 10	— 10	— 10	— 8	— 6
The Plan					
General arrangement ..	6	6	6	6	5
Entrance Hall	4	3	3	3	3
Central space	4	4	3	3	3
The Galleries	12	12	12	12	11
Miniature room	4	4	4	4	4
Male latrines and locker room	4	4	3	3	1
Ladies' lavatories & locker rm.	4	4	2	3	1
Basement	4	4	2	3	3
Stairs & access to locker room	4	4	2	3	2
Curator's room	4	4	4	4	4
	— 50	— 49	— 41	— 44	— 73
Design of Elevations					
Front	12	12	10	9	10
Sides	12	12	11	9	9
Back	12	12	10	10	10
Dome	12	12	11	10	10
	— 48	— 48	— 42	— 38	— 39

(*Continued on page 822*)



Perspective of Design placed Second—No. 2



Ground Plan of No. 2's Design placed Second

Design of Interior	Maxm.	No. 16	No. 2	No. 1	No. 33
Entrance Hall	8	8	7	7	7
Central space	10	9	8	7	6
Galleries	12	12	11	9	8
	— 30	— 29	— 26	— 23	— 21
Lighting	30	30	30	30	28
TOTAL	168	166	149	143	113

Suggested Modifications

There are a few minor alterations which I think should be made in Design No. 16. In respect to the gallery itself these are:—

1st. Omit window at landing between stairs and put in a top light so that a large scale picture may be hung there and be well seen from the "Central Space.

2nd. The windows shown in the raised base on which the dome rests should, I think, be omitted, and their place taken by solid sculptured panels, as for instance reproductions of the metopes of the Parthenon. The number of the windows in the drum of the dome might be increased, so that a brilliant light may be obtained without any chance of the direct rays falling in the spectators' eyes.

3rd. The windows at the sides of the raised flat ceiling over the "Small Paintings" galleries, should be omitted for if not, direct rays may fall upon the spectators and cause reflections on the pictures on the end walls.

4th. The Entrance Hall is excellent in design but should be made about 3 feet wider, making it 12 ft. instead of 9 ft. between the projections. If carried out as at present, it would be somewhat cramped.

NOTES.—Mr. Macleod, Demonstrator in Physics at Canterbury College, has at my request made experiments with the different kinds of translucent glass, and I have a sample of the one which gives the best results.

Spring roller white blinds must be provided working from a roller *at the bottom,* of the skylight.

It will be better that clear sheet glass should be fixed a few inches away from the outer glass, in order that an equal temperature may be maintained in the galleries. The blinds can be arranged to work between the two glasses.

S. HURST SEAGER,
Assessor.

Report on General Scheme

The Chairman of the Sarjeant Art Gallery,
Sir,—

Apart from the actual design for the Art Gallery the question of the General Scheme for the lay-out of the site has received most careful consideration. I am of opinion that the scheme presented by No. 16 is one which your Committee can mostly heartly recommend for adoption by the City Council.

The site is a magnificent one and can be converted into the finest civic centre in the Dominion. It is a level rectangular space with the long sides parallel with Victoria Avenue. There is ample room for the Art Gallery, the Museum, the Municipal Buildings and Town Hall. The conditions stated that the Art Gallery should be placed on the S.E. end, the Museum at the N.W. end and the Town Hall and Municipal Offices as a central block, and the competitors were asked how these buildings could best be arranged.

The difficulties presented are that it stands some 35 feet above the upper part of Maria Place which forms the only direct approach from Victoria Avenue.

No. 2 has overcome the difficulties with considerable skill, but No. 16 shows a finer conception and one which would make the site very easy of approach from Wicksteed Street, Maria Place and Guyton Street, along Wicksteed Street and Campbell Street, crossing Cameron Terrace.

By adopting an encircling oval roadway as the main approach for vehicles he has been able to obtain roadings of very easy grade (1 in 20.5), which rise up to the level of the site at about the centre of the S.E. and N.W. boundaries. Other roadways having a gradient of 1 in 11 lead up to the space between the buildings. A wide terrace runs in front of the group of buildings at the main level.

Directly in front of the Municipal Office and in the same axial line a monumental flight of steps is shown and on the landing is placed the Lion monument. The Lion monument would I think be more appropriately placed in that portion of the park overlooking the river as it is here the memories of the Maori War and the fallen British soldiers are more forcibly revived.

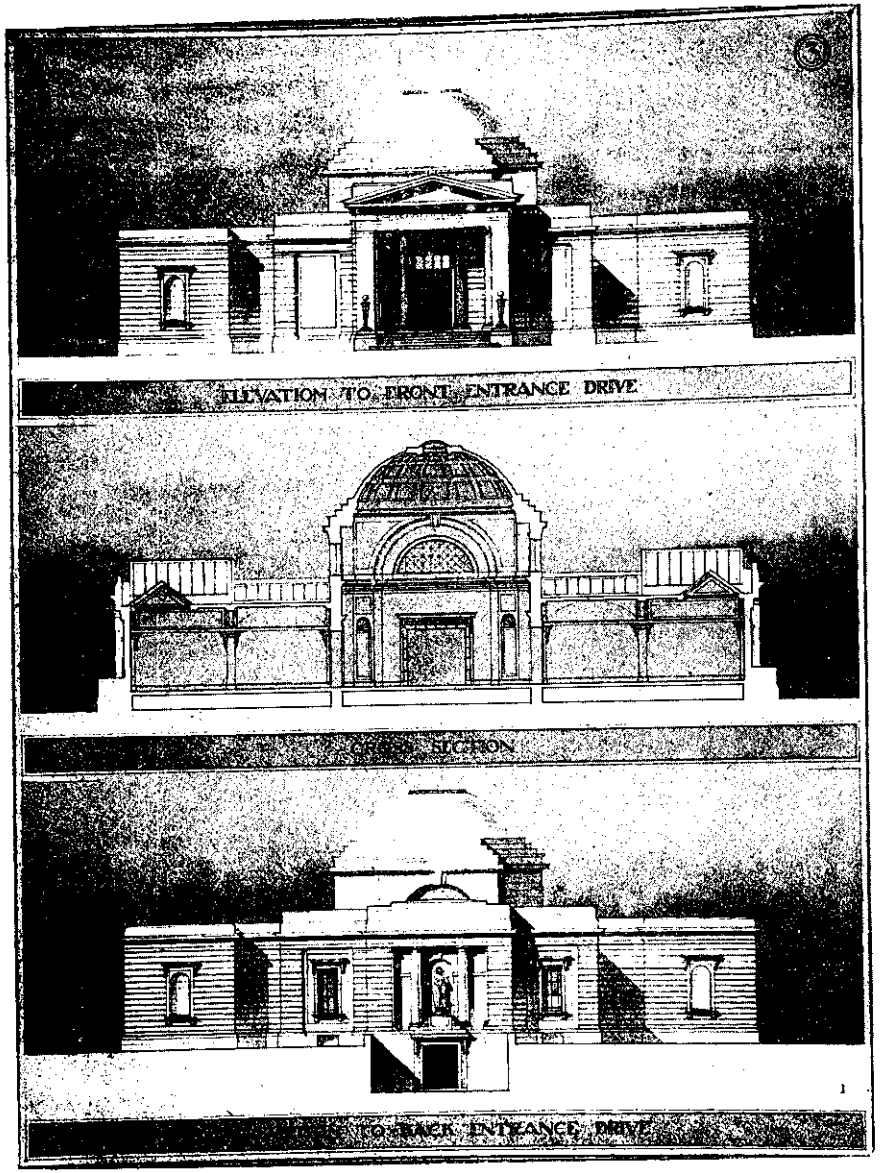
I am of opinion that the landing of the steps would be the most suitable position for a memorial to those who have fallen in the present war; when designed in harmony with the Art Gallery and other buildings, this monumental stair and memorial would form an approach of the deepest interest.

I am of opinion that it would be better that the Art Gallery should have the front turned more towards the S.W. as shown on the tracing submitted. An Art Gallery is mostly frequented in the afternoon, and by turning the front more to the S.W. it will be well lighted by the late afternoon sun. Moreover, the front would be better seen from the end of Maria Place. The southern portion of the oval roadway, the grading of the upper part of Maria Place, and the steps, should be undertaken in connection with the erection of the Art Gallery, as also the forming and planting of that portion of the park lying to the S.W. and S.E. of it.

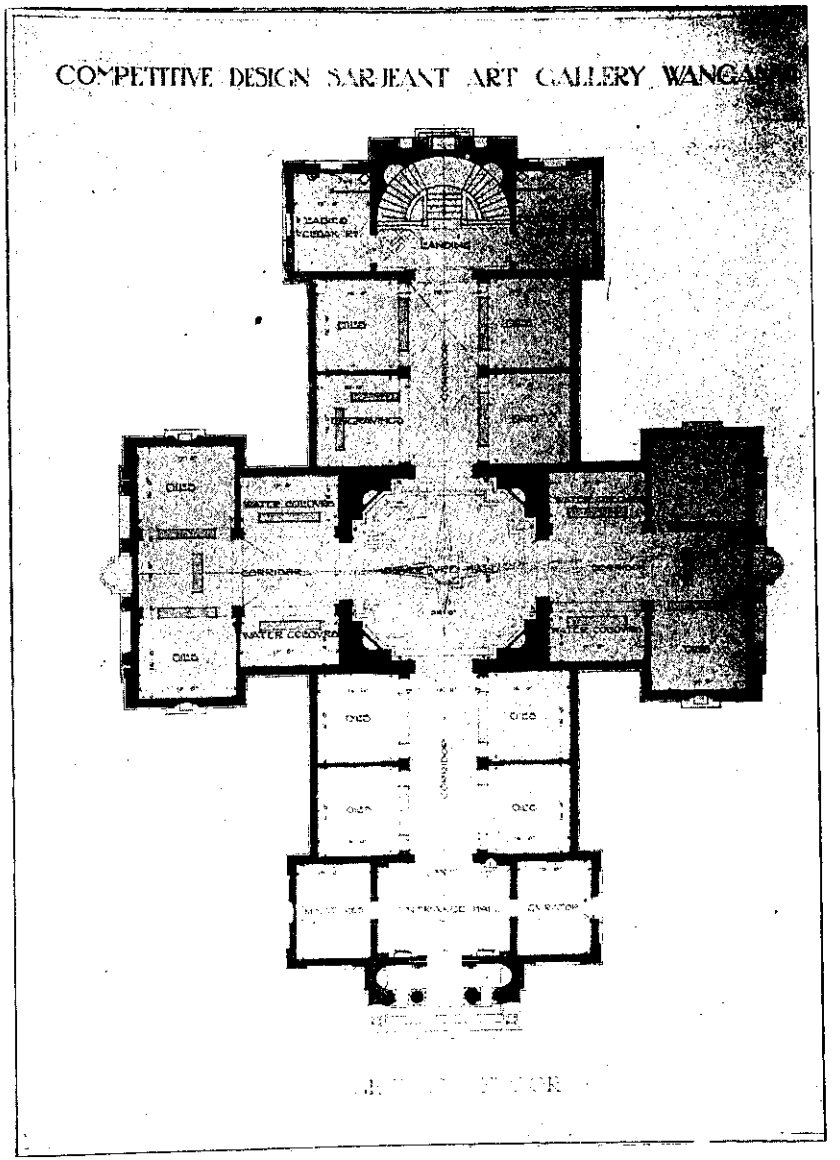
I have also suggested in the tracing an alteration to the setting out of the ground in front of the steps so that a symmetrical and more dignified effect may be produced. The band room would of course have to be moved to some less conspicuous and more appropriate position.

The scheme as a whole is certainly a fine one and it is sincerely to be hoped that the City Council will agree to carry it out in its entirety as opportunity occurs.

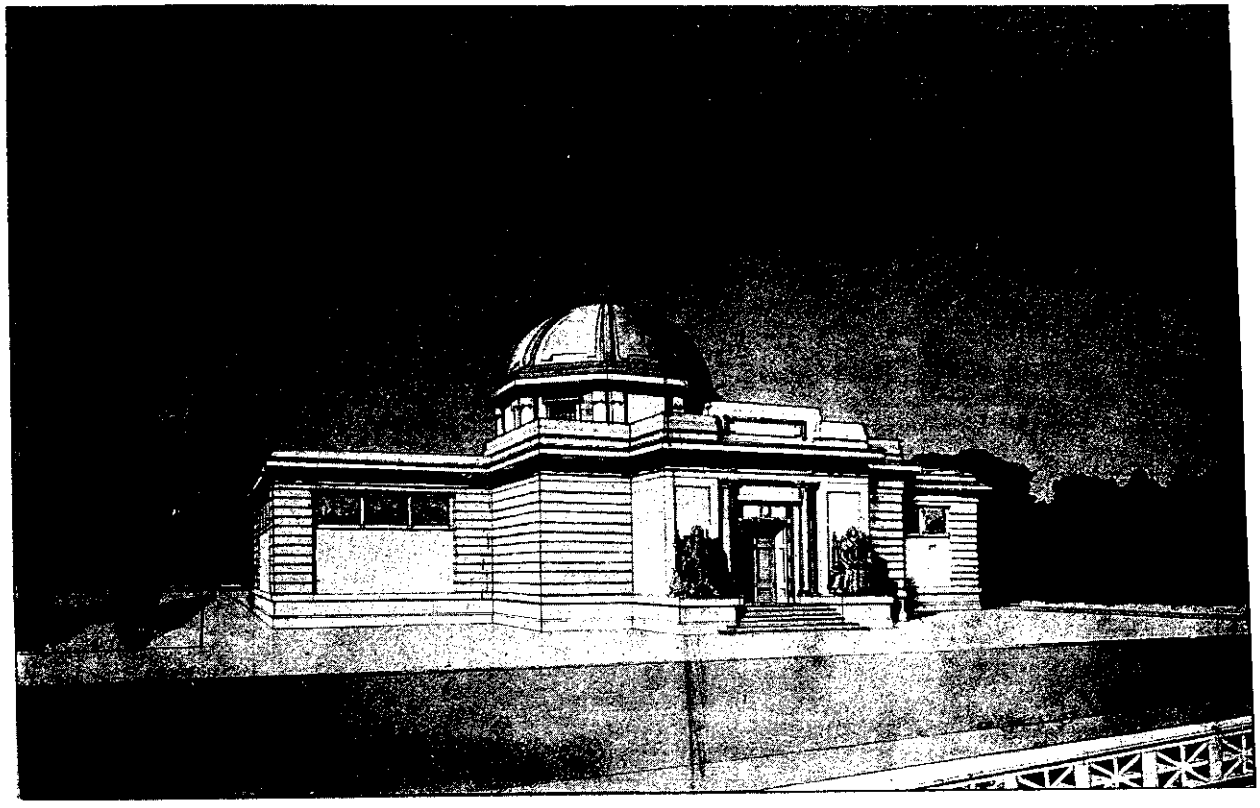
S. HURST SEAGER,
Assessor.



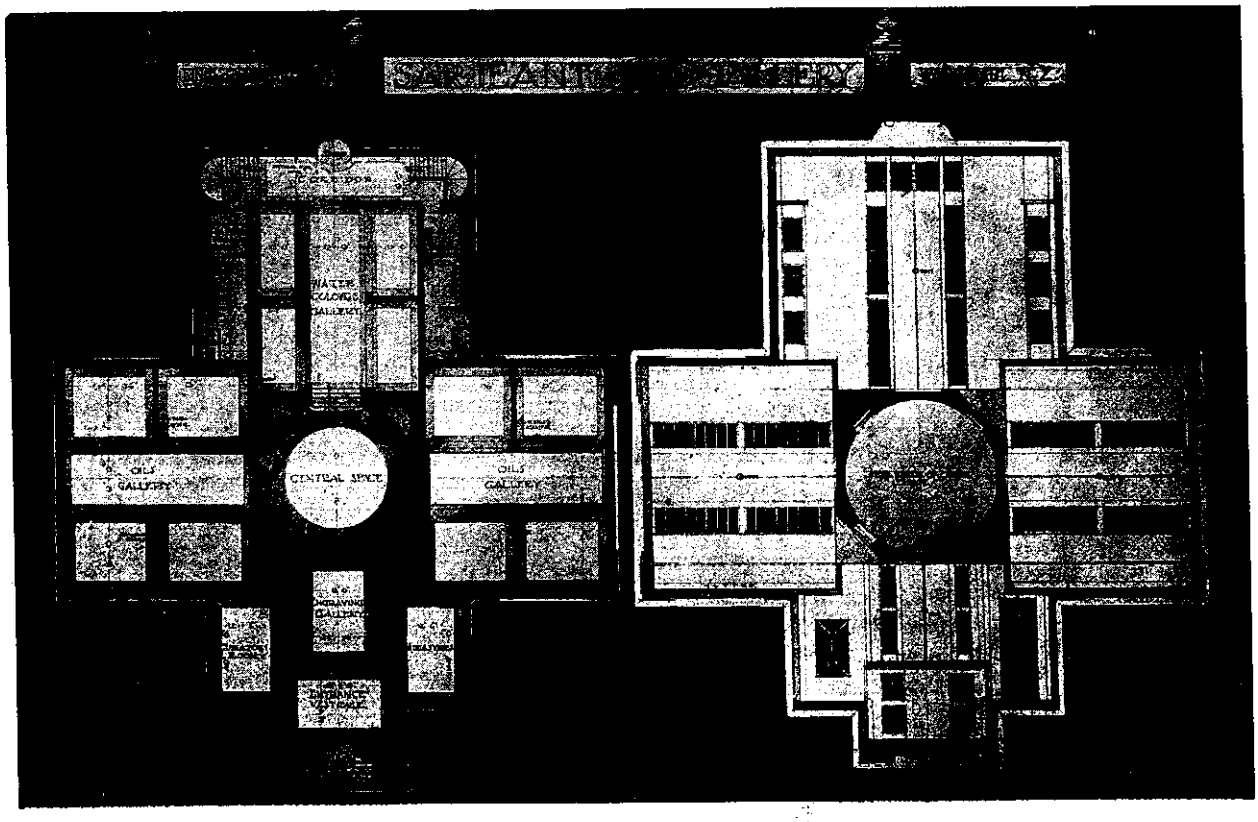
Design No. 1 placed Third



Ground Plan of Design No. 1 placed Third



Perspective of Design No. 33 placed Fourth



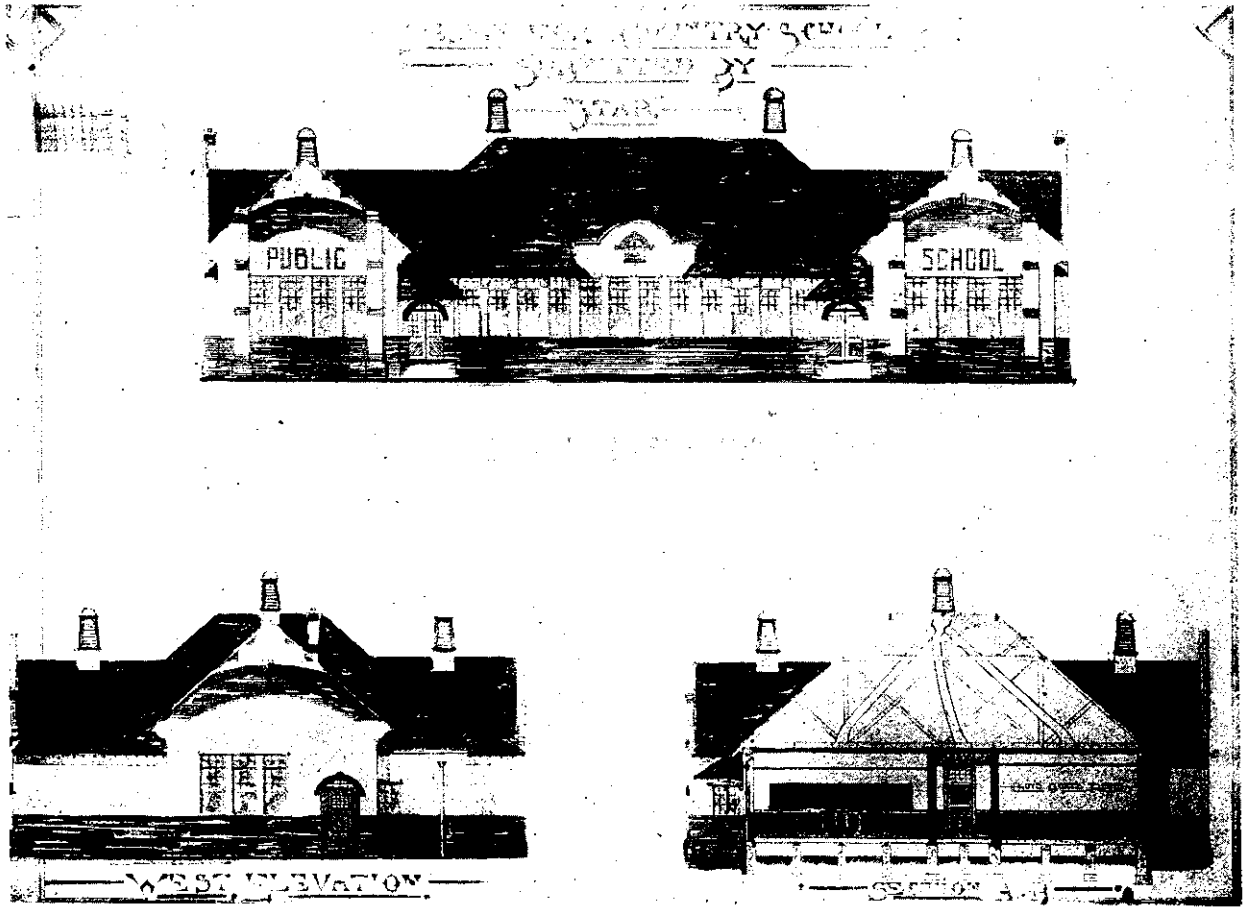
Plans of Design placed Fourth—No. 33

Our 47th Competition

Country School

Two drawings only were sent in for this competition, viz.:—"Star" by Henry C. Critchfield, with Messrs. Anscombe and Smith of Invercargill, and "Yokel," by Harold L. White, with Mr. A. H. White of Auckland.

As only two drawings were sent in, no prize money is payable under the Conditions of these Competitions, but we illustrate the design considered the better of the two by the judge, Mr. H. Mandeno, who kindly set this subject. His report runs as follows:—



Winning Design in our 47th Competition "Star" by Henry C. Chritchfield, with Messrs. Anscombe and Smith of Invercargill.

"It is to be regretted that there is little interest shewn in this Competition, and the two competitors "Star" and "Yokel" have failed rather badly to grasp the problem in a satisfactory manner. Of the two "Star" has shewn that he has studied a good many of the details necessary to School planning, but his scheme is far too ambitious for a Country School. I purposely gave no indication of cost, but any competitor should know that a small country school must be reasonably inexpensive. If a public school of this description is to cost £5550 our Education will become alarmingly expensive. To provide two teacher's rooms each about 20ft. x 16ft. is rather unnecessary where the total number of teachers would not be above six. On the whole, "Star's" lighting is good, but the 2nd and 3rd Standard Class Room is too wide, about 24ft. or 25ft. being now considered the maximum, also this room would not get any sun at all. Another point to remember about lighting is that it should not be brought up in line with the blackboards but should rather be kept behind the pupils a little. Star's allowance of space is too generous altogether; in the public schools twelve square feet per pupil is about the maximum allowed. Star also proposed electric fans in the exhaust ducts. It is not likely that a small school like this would be able to get any current, otherwise his scheme of ventilation is well indicated. Star is not very happy in his elevations. His roof quite overshadows the remainder of the design and is quite out of place in a small country school. He is also rather unfortunate in his spacing of *Public School;* he would have been wise to cut this out. His lay out of the grounds is good, but the Sunk Gymnasium is rather unnecessary. Star's drawings are well done on the whole, his drafting is neat and he has gone to a great deal of trouble, the colouring of the elevations is however rather poor, and with pencilled lines and not hard ink to contend

with, his drawings might have been made much more pleasing. Star's is undoubtedly the better design of the two.

The "Yokel" has gone rather to the other extreme as regards his planning and I think for £3200 he should have been able to provide better accommodation. His rooms are too small, ten square feet, though sometimes in vogue in Public Schools, is too little. Then, too, single desks are fast coming into general use. Yokel has paid no attention to left hand lighting which is the first essential in School planning. Then, too, the proportioning of the numbers to the various classes is not good. The old idea of putting lavatory basins in cloak rooms is also universally condemned now. The elevations are rather uninteresting and the colouring is very coarse. Yokel evidently has some idea of making a sketchy drawing, but he wants to remember that he must first learn to draw neatly and accurately. The printing on this plan is also very weak. Yokel's lay out of his plan is quite good but he has quite neglected to study detail."

Faithfully yours,
H. MANDENO.

"The imitation of old work with its crudities and irregularities is false in art."—*Belcher.*

Our 48th Competition

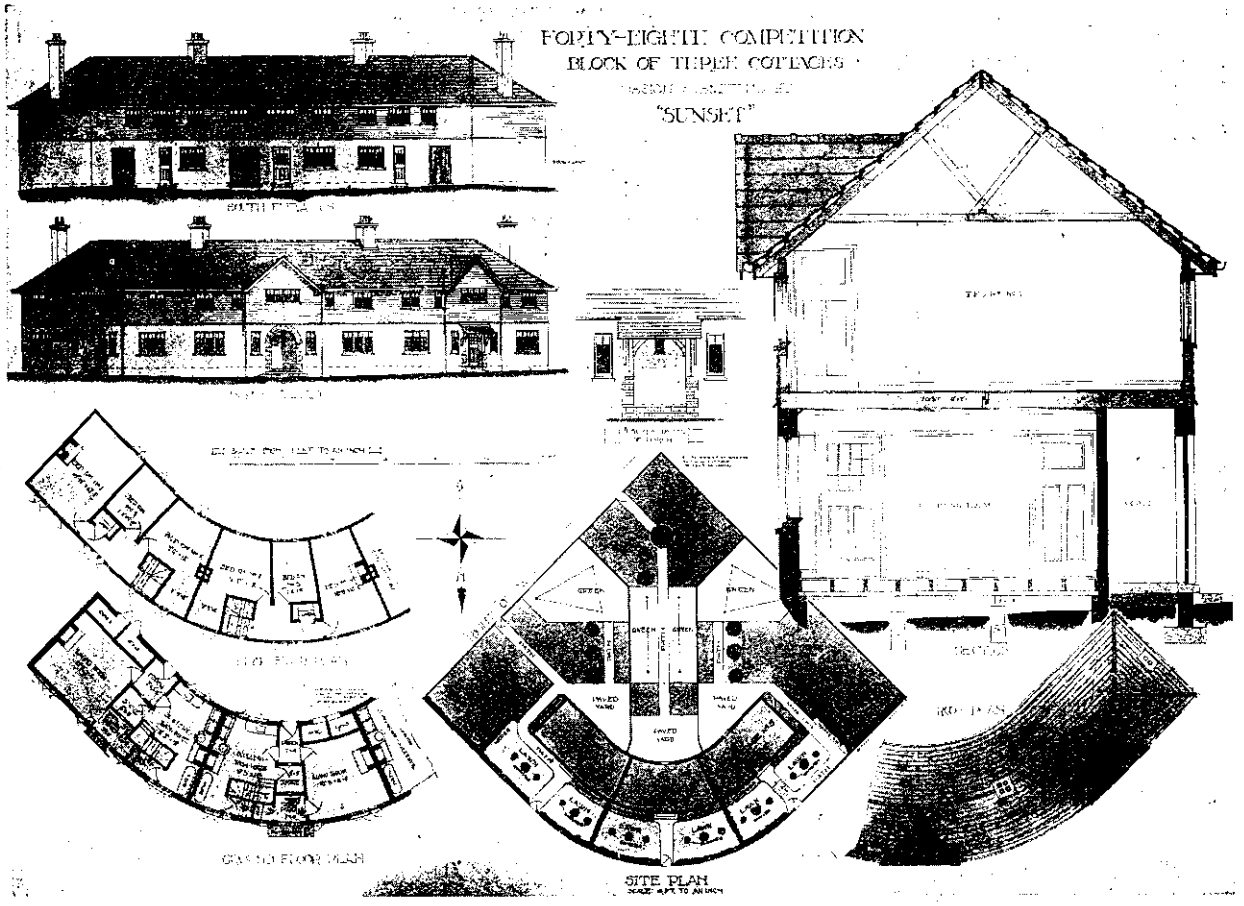
Block of Three Cottages

Three drawings were sent in for this Competition, viz.:—"Sunset," by F. W. Short, with Mr. A. J. Palmer of Auckland; "Hotspur," by M. King, c/o Public Works Dept., Wellington; "Rush" by F. J. Field, with Mr. F. de J. Clere, of Wellington.

Messrs. Atkins and Bacon, who kindly set this subject report as follows:—

"Three designs have been received in this Competition, which we place in order of merit as follows, "Sunset," "Hotspur," "Rush." None of the designs are, in our opinion, quite up to the standard of excellence so well maintained hitherto in the generality of these competitions, and although in point of design "Sunset's" contribution has much to recommend it, there are structural anomalies which should not have occurred, but which time, study, and observation will soon eradicate.

As regards "Sunset's" plan, the too intimate inclusion of the w.c. within the building is a mistake. The door enclosing back porch could have been dispensed with, and the porch to centre dwelling could well have been enlarged at the expense of the scullery. Through ventilation to this space is a good feature.



Winning Design in our 48th Competition, "Sunset," by F. W. Short, with Mr. A. J. Palmer of Auckland.

The effect of the quadrant portion of the plan would not compensate for the difficulties into which it leads, as instance the back porch above mentioned, the Marseilles tiling, which could not be successfully laid to the curve, also all the longitudinal plates would have to be cut to waste and then be in shorter lengths than desirable, gables brought out in the roof with no corresponding line in the walling below. (down pipes cannot be accepted in this capacity), are never satisfactory and the same can be said of tangential curves. The design would have been improved had polygonal instead of curved lines on plan been adopted.

The half inch detail shows faulty construction, collar ties for instance are better hung vertically from the ridge blade, and the rafters strutted from a horizontal bearer which should be on edge, not flat as shown, to give greater bearing strength. Observation of a similar building in course of construction would enlighten "Sunset" as to prevalent methods of constructing ground floors in the knowledge he is apparently weak. Fanciful panelled doors are unnecessary here, a well built ledged door would suffice and look more in keeping. "Sunset's" lay out of site is well conceived but he has overdone the paved yards and clothes lines, curtailing thereby useful and profitable garden ground.

"Hotspur" has a well arranged plan but not the best suited to the site. He has wasted his Northern aspect. There is no half-inch scale section showing construction, and the clothes lines are overdone as in "Sunset's" design. The elevations are commendable. In both these designs the draughtmanship shews much care and promise.

"Rush" has apparently aimed at justifying his nom-de-plume and with some success, he has missed many points through lack of care and consideration. His work is incomplete and the draughtsmanship leaves much to be desired."

ATKINS & BACON.

Our 52nd Competition—*Continued*

consider desirable. In planning, economy of space must be constantly borne in mind, and as the banking chamber should be well proportioned in height to the floor area, the student is asked to consider, carefully, some means whereby the other rooms, etc., may be also proportional in height to their floor area. Good lighting is of the utmost importance and it is necessary that the plan should show the positions of the counters etc. allowing generous space for the "Public."

The elevations must express the purpose of the building and although cost is of no object, anything in the nature of vulgar and meretricious ornament must be avoided. It is suggested that the facades be treated in the style of the French or the Italian Renaissance. Drawings required are: —Plan of each floor; longitudinal section to 1/16 in. scale; elevation of one side and also of corner to ¼ in. scale; one detail of a portion of the banking chamber for the full height, and showing a section of the portion so taken (not to include any counters or fittings) to ½ in. scale. Drawings to be in ink, but elevations must have shadows cast at angle of 45 deg. and window openings may have graded washes. No perspective.

Mr. Claude Jones, Lic. R.I.B.A., who has kindly set this subject has generously offered an "extra" prize of one guinea to the best design sent in. He explains in a letter to the editor that the problem requires "thought" on the part of the student and is a subject that should be of great benefit to the student.

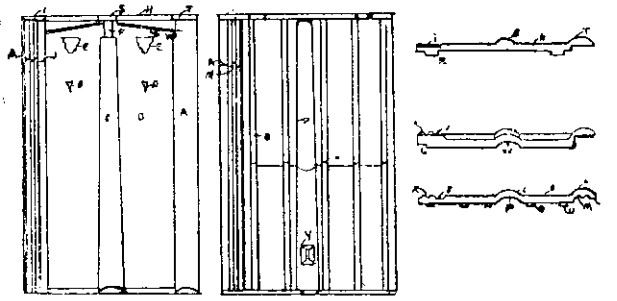
Designs must be sent in, in black and white under a nom-de-plume, addressed to **Progress**, 8 Farish Street, Wellington, and marked clearly "Fifty-second Prize Competition" on outside with a covering letter giving competitor's name, and address of employer. Designs to be sent in by March 21st, 1917.

Conditions of "Progress" Competitions

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

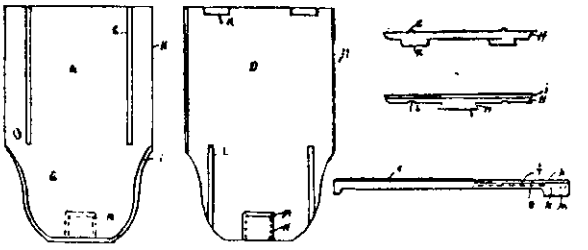
Recent Building Patents

Roofing Tile.—A patent, No. 37,110, has been taken out by William Black, builder, of Arthur Street, Timaru, and John Muir, pottery worker, of Craigie Avenue, Timaru. It consists



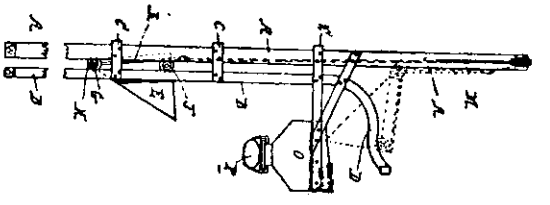
of a double bead working into recess double bead bottom flat of tile recess on top flat of tile, beads on top of tile to prevent backwash, ornamental stops to prevent tile slipping, also foot-rests to prevent slipping when engaged in roofing.

Slate Tile.—A patent, No. 36,877, has been taken out quite recently by William Black, builder, of 112 Arthur Street, Timaru, and John Muir, pottery worker, of Cain



Street, Timaru. It comprises beads to prevent the rain from driving under the tile, bevelled edges to make the tile lighter, and a bevelled clip which is intended to act as a lock and to keep the tile in position.

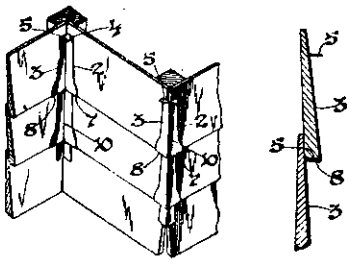
Concrete Hoist.—A patent, No. 37,191, has been taken out by Charles Perley Baker, contractor, of Eltham. It con-



sists, generally, in a bucket adapted to hold the material that is suspended from hoisting-means in such a manner that the bucket has a tendency to tip down, and a vertical guiding-

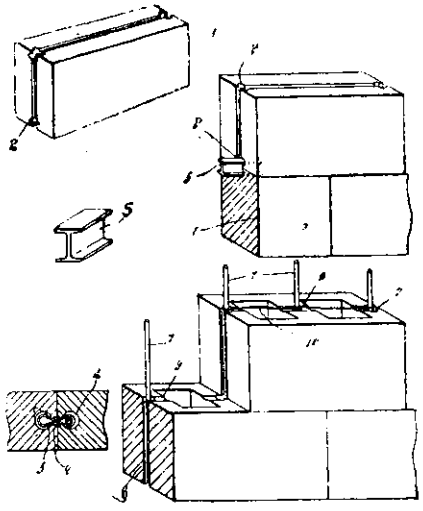
frame in which the bucket is mounted to move up and down and which then retains the bucket in its upright position. This frame at its upper end is, however, so shaped that the restraint against the bucket is removed, so that on the upward travel of the bucket in the guide it will be free to tip when it reaches the top of its travel. A hopper is supported on the framing and so positioned that the bucket, when it tips, will empty its contents into the hopper. From the hopper a movable and extensible chute leads away and serves to convey the contents of the bucket to any desired point.

Weather-board Buildings, Corner Covering.—A patent, No. 37,935, has been taken out by John Rose, of Melbourne (Assignee for Victor Macpherson of Normanby Road, South Melbourne) which consists of a corner cover having a body



portion, including a right half and a left half, above each of which is a right wing and a left wing, and below each of which is a right wing and a left wing. The upper right and left wings are preferably outbent, and the lower right and left wings inbent. Other features are comprised in invention.

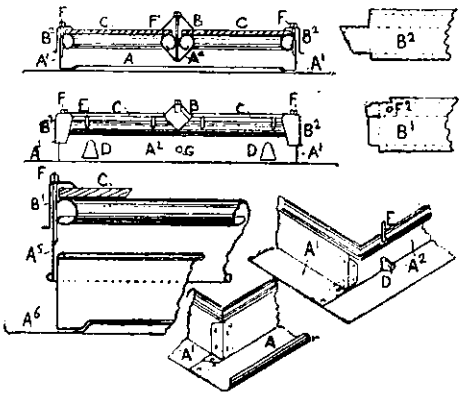
Concrete Building Construction.—A patent, No. 36,911, has been taken out by A. G. St. Clair Isbister, builder of Palmerston North. In this patent the blocks or slabs are formed with grooves running along the edges of the block, the interior portion of the grooves being larger than the exterior portion in order to form a lock at the joints and to provide means of reinforcing the joints. The joints may be



reinforced with metal ties or dowels, one portion thereof adapted to be inserted into a groove in the edge of a block, and the other portion inserted into a groove into the edge of the adjacent block.

Skylight.—A patent, No. 37,790, has been taken out by Henry William Ward, plumber, 54 Shetland Street, Roslyn, Dunedin. It consists of the combination of roll tops formed

in one with the walls and inside gutters and outside rims for the main outsides of the frame and the double roll top formed in one with the V bar. The corners of the frame are



overlapped and interlaced, and the top, or any two corners, secured by special bolts from one member to the other. A further feature lies in the combination of the roll top with part of the wall of the main frame, strengthened at the lower edges, with the remainder of the wall of the main frame strengthened at the upper edges.

Fire Cement.—Patent No. 37,754 for a Fire-stone Cement has been taken out by Nicholas Thomas, of 11, Josephine Street, Caversham, Thomas E. Hore, Wm. Davis, and John Barker of 374 Armagh Street, Christchurch. The patent consists of a mixture of Silica sand, clay, and silicate of soda.

Building Notes

AUCKLAND.

The Myers Kindergarten has recently been completed, and was officially opened last month. It is situated in the Myers Park; both the building and the park are the gift of the Hon. A. M. Myers.

The cost of building, furnishing and equipment of the kindergarten and school for backward children is £7,009, which together with the cost of the land purchased for the park, and gymnasia equipment, will bring the value of Mr. Myers' gift to the total of £26,000.

A case of considerable interest to the building and allied trades, says the "Herald," came before His Honor, Mr. Justice Hosking at the Supreme Court recently in the civil jurisdiction, and in which His Honor was asked to decide a dispute in connection with a building contract owing to the failure of arbitrators to come to a settlement.

The building in respect to which the dispute arose is an apartment house in Lower Symonds Street, the erection of which Frederick Joseph Herring Ellisdon contracted to carry on for Mrs. Rachel Bastea for a sum of £3,785. Disputes arose in connection with the contract, and were, in terms of the contract conditions, referred to arbitration.

"An architect's work is sure to be unpopular if it avoids being commonplace."—*Sir Chas. Nicholson.*

"Houses are built to live in, and not to look on; therefore let use be preferred before uniformity, except where both may be had."—*Bacon.*

Between the arbitrators, however, certain contentious points of law arose, and it was resolved to state a case under the terms and provisions of the Arbitration Act, 1908, and to seek for the Court's decision on the points at issue.

The basis of the dispute is that the contractor, Ellisdon, claimed from Mr. Basten the moneys outstanding under the contract, and Mrs. Basten counterclaimed a sum which included, inter alia, penalties for the non-completion of the contract within the time specified in the contract conditions. It was admitted that a large number of "extras" were authorised, entitling the contractor to an extension of time. Such extension was not fixed at the time the "extras" were ordered. The contractor claimed that in consideration of the fact that "extras" had been ordered, and no extension of time allowed, then the clause imposing penalties for the non-completion of the contract should not be enforced, but should be waived, or in legal terminology, "set at large."

Clause 22 of the contract conditions reads as follows:—"If the contractor shall fail to complete the works shown in the plans and specifications within the time provided by the contract, or within any extension of time allowed by the architect, or by these conditions, the contractor shall pay or allow the employer the sum of £10 per week as liquidated damages during every week in which the work shall remain unfinished beyond the time allowed."

Mr. McVeagh appeared for Mrs. Basten, and Dr. H. D. Bamford for the contractor, Ellisdon. The hearing was confined to legal argument, in the course of which it was stated that the sum claimed under the penalty clause by Mrs. Basten was £110—11 weeks at the rate of £10 a week.

His Honor said he would take time to consider his verdict.

The judgment appears on p. 809 of this issue.

CHRISTCHURCH.

It is proposed by the Old Boys Association of Christ's College to re-erect Mr. Flower's house as a memorial to the Old Boys who had fallen in the war. It is estimated that the building will cost £7,000.

A proposal to sell a block of municipal property in Sydenham brought a counter proposition from a City Councillor last month to utilize the section for building workmen's homes. The Mayor, (Mr. H. Holland), said the Works Committee, which recommended the sale of the property, had gone into the question of erecting municipal houses upon it, but had decided that in view of the present price of materials such a course was impossible. Councillor Hayward, chairman of the Works Committee, said the only way the erection of workmen's dwellings upon the property by the Council would pay would be to erect them in terraces, and people out here would not stand terraces. The section was not worth erecting detached cottages upon. The property stood on the books of the Council for £4,000, but the Council would be lucky if it secured £1,500 for it. The place had been locked up a long while, and was at present an eye-sore. If the Council could secure £1,500 for the property, in the interest of the city, it should sell it. An amendment by Councillor McCullough that the clause be referred back to the Works Committee was lost, and that committee given authority to sell the property.

NELSON.

The Nelson Anglican Cathedral, which has been showing the effects of age during the past few years, and which occupies the most historic and picturesque site in the little city, has lately had its appearance considerably changed. In the interests of safety, it has been found necessary, after taking the advice of two architects, to remove the tower and steeple of the building, which is built of wood. The question of providing funds for erecting a new cathedral was put before the recent meeting of the Diocesan Synod, and a Bill providing for the creation of a Chapter and Cathedral Erection Board was passed. Bishop Sadlier, in introducing the Bill, said that they had the finest church site in New Zealand, and that whatever building was erected on such a site in future should be of a permanent character.

OTAGO.

Tenders were called recently by Mr. Stanley C. Roberts, A.N.Z.I.A., for the erection of a large residence in Oamaru stone, rough cast on the outside and finished with granite plaster inside. The structure will be two storied and covered

with a tile roof. The same architect has in hand the boarding house at Pukeuri which is now nearing completion, and also Mr. W. G. Grave's two-storied "English" residence in Aln Street, Oamaru, which is now ready for occupation. Mr. John Allan is the builder. Mr. Roberts has also in course of erection a large bungalow in rough cast with tile roof in Severn Street for Jas. Rodman, Esq. The gables are finished with shingles well belled and the portico roof is supported on heavy pressed brick piers. The contractor is Mr. John Allan. Also a bungalow on the North road, Oamaru for C. P. Roberts, Esq., the verandah being finished with pergola effect, the contractor is Mr. F. Crawshaw.

Mr. D. G. Mowat, A.N.Z.I.A., of Dunedin, has let a contract to Messrs Fletcher Bros., builders of Dunedin for extensive alterations and additions to existing premises in Moray Place for Messrs Macky, Logan Caldwell, Ltd., Warehousemen. When completed it will make a fine commodious building, and with its central situation, it will be admirably suited for a warehouse.

Mr. Leslie D. Coombs, A.R.I.B.A., reports that Messrs A. E. Shank & Co.'s tender has been accepted for the erection of a motor car garage at Pine Hill for Mr. W. Breen. Mr. Geo. Gibbs' tender has been accepted for additions to a residence at Maori Hill. The cheese factory reported previously is now complete.

Mr. Walden reports extensive additions and alterations to St. Margarets' College in brick and stone with plaster and figured red pine finish. Contractor, G. Simpson & Co.; price, £5,500. A motor garage and offices at Milton, built of brick with steel casements and steel ceilings; contractor, L. Warren; price, £1,400. Alterations and additions to residence Littlebourne, finished throughout in figured red pine, plastered walls and ceilings; special feature made of kitchen, accommodation being provided for breakfast alcove opening into kitchen. Contractor, A. McKay.

The following is the Labour Department's report for the district:—Bricklaying: steady; only one or two journeymen have been temporarily unemployed. Carpentry and joinery was very slack during early part of period, but has improved latterly, and there are now no tradesmen out of employment. Painting: A general improvement is observed, and as far as can be ascertained there are no tradesmen unemployed. Plastering: steady; all competent tradesmen are in employment. Plumbing and gasfitting: quiet, but as far as can be ascertained there is no unemployment. Stonemasonry: steady.

A Competition has just been held in Dunedin for a Band Rotunda, Shelter Sheds, etc., for the City Council, on the old pavilion site at St. Clair. The Assessor, Mr. P. Y. Wales, gave his decision and report last month on the figures submitted by Mr. Wales being checked with the names, it was found that Messrs Salmond and Vanes had secured first prize; Messrs Macfie and Hood were second, and Mr. L. D. Coombs was third. There were eleven competitors, nearly

all being local architects. The council is prepared to spend some £2,000 on the buildings enumerated, but the work has yet to be finally sanctioned by the council.

WELLINGTON.

The directors of the Wellington Meat Export Company have decided to proceed with the erection of the new freezing works at Kakariki, Marton. The original plan has been modified to some extent, with the object of completing the works in time for the 1917 season. Extensions may be made later as they are required. Some preliminary work in connection with the original scheme has already been done.

Tenders have been called by Mr. Claude Jones, Architect, for a new branch bank building in Cuba Street, Wellington, for the National Bank. The new office will be of three stories, and will be constructed of reinforced concrete and brick. The banking chambers will be situated over the ground floor, and will be lighted by a glazed octagonal dome, whilst the counters and screens will be of rosewood. The building will have a frontage to Vivian street of seventy feet, and to Cuba street of fifty feet.

One of the largest Meat Freezing Works in New Zealand is now being erected on the Wanganui River to designs of Messrs Panton & Sons, Architects, Timaru. The company is to be known as the Imlay Freezing Works of the New Zealand Refrigerating Co., formerly the Christchurch Meat Co., and the works are reported to be one of the most complete yet erected in the Dominion. The block of buildings covers 7½ acres of land, in addition to which there is a considerable space for paddocks and stock, etc. The works are built of brick, concrete and steel, and the roofs of the buildings are covered with "Poilite" Asbestos Tiles, the whole being as nearly fire-proof as possible.

Notice to Subscribers

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