

terrestrial, or atmospheric, influences. Interference with the subsoil was clearly not contemplated by Wren, and without it they might even now reduce the Cathedral's danger to a minimum.

NOTES.

The foundations for the new Civil Service Club are now completed, and the building will be finished within contract time. Contract price, £10,000.



INTERIOR OF MR. CACHEMAILLE'S HOUSE.

The contract for additions and alterations to a shop, dwelling, and residence on Upland road, Kelburne, has just been let. Architect, W. Gray Young; contractor, F. Luckins.

Two charming cottages are to be erected at Goldie's Brae, Wellington, for Mrs. Woodward, with tiled roofs and jarrah interior finishing work. Inglenooks with seats by the fireplaces will be features of the designs. Architect, J. Chapman Taylor.

A dwelling is to be erected for Mr. J. Thompson, at Kelburne, Wellington. The house is to contain six rooms and numerous cupboards, etc. It will be finished with jarrah on the inside, and will have many new and interesting features. Architect, J. Chapman Taylor.

Hambling and Raebone have commenced their contract for Mr. Leigh's new house in Woodville. Accommodation is provided for dining-room, drawing-room, three bed-rooms, kitchen, large hall, bath-room, store, and wash-house. Contract price £453. The roof is being covered with "Calmons" asbestos slates, the first of this material to be used in the district. Architect, Reginald G. Craig, of Woodville.

The following contracts are being carried through by J. C. Maddison, F.R.I.B.A., under the supervision of T. J. Youelle:—Windsor Palace Hotel, cost £25,000; shop in Cuba street, Wellington, cost £2000; large residence at Rata for Mrs. Hammond, cost £10,000; additions to Mrs. Seddon's house, Wellington, cost £3000; alterations for Messrs Davis and Clater; meat works at Ngahauranga, cost £8000.

In designing a residence for Mr. Cachemaille on Wellington Terrace, the architect has endeavoured to show that harmony and not discord should exist between a habitation and its surroundings, and also how utility may be combined with the artistic to produce that satisfaction which can never be achieved by display alone. All the interior woodwork, including the entrance porch, is finished in picked heart of rimu, with the exception of the drawing-room and dining-room, which are painted ivory white. The landing of which we show a view has the walls papered with brown paper, which gives a pleasing effect. A delightful view of the harbour is seen from the small window shown through the doorway. The domestic offices are treated appropriately on original lines, and every convenience has been provided to minimise work, for in this age domestic help has become a problem to be faced by architects as well as housewives. Architect, E. Coleridge; contractors, Campbell and Burke.

The Woodville Jockey Club have considerably improved their enclosure by forming concrete steps at each side of the grandstand. The steps are worked on the curve from a 6 ft. to 28 ft. radius, having a 2 ft. tread and 6 in. rise. The steps are finished in cement and oxide of iron, the red tint being a pleasant contrast against the turf, as well as obviating the glare that would occur from a white surface. The work was carried out by Fred. Holder, and completed in time for the summer meeting. Architect, Reginald G. Craig, Woodville.

A fine town residence has just been completed in Pahiatua for Mr. J. O'Shurey-Lilly, solicitor. The outside walls of this dwelling are finished with 4 m. weather boarding, feather-edged, the roof being covered with "Malthoid." One of the principal features of the interior is the octagonal hall, finished in 3 m. V-joined heart of rimu lining, and oiled, the ceiling being carried up 3 ft. above ordinary ceiling level, diagonally lined and finished in the form of a star with half-round beads. The dining-room fireplace is built with Peter Hutson's small pressed bricks, the over-mantel being carried to the ceiling, which is deeply panelled by the joists being exposed. Ample provision is made for presses and cupboards, the angles formed in the hall being utilised. The scheme of decoration is carried out in deep toned ingrams with wide friezes. The doors are furnished with antique bronze furniture, the gas fittings matching same. Tank accommodation is provided for the roof water, the borough supply being used as an auxiliary. The joinery work was supplied by the Palmerston Sash and Door Factory. The carpentry work was carried out by T. Hewat; plumbing, J. W. Mills and Company; decorating, J. Smith; bricklaying, J. Nicholls; architect, Reginald G. Craig, Woodville.

Dangers of Concrete.

A valuable paper was read recently before the Western Society of Engineers by Dr. Michaelis. After dealing sharply with the prevailing exaggerations of previous expectation and subsequent criticism, the author insisted that the best way to establish confidence in this modern building material

would be to minimise the danger of failure by establishing proper building ordinances, which would compel the contractor to handle the material in the prescribed way, and to make proper tests of it while the building is in course of construction. The principles governing modern concrete construction are thoroughly understood by comparatively few; and this explains the divergence of opinion on many points pertaining to this branch of the building industry. While some engineers are careful to specify concrete of ample strength, others blame such "over-cautious" builders for making use of an excessive factor of safety. In reply to the statement frequently made by engineers that cement is not sufficiently uniform at present, and that if it could be so manufactured as to give as uniform results as steel, it would be possible for the engineer to reduce the larger factor of safety now demanded for concrete over that required for steel, the author of the paper answers that such a statement is entirely without foundation. Steel is a well-defined chemical compound rolled into the desired shape, while concrete is the sum of a number of factors. The calculation of a steel girder and that of a reinforced concrete girder can never be based on equal safety factors, no matter how much the properties of cement may be improved in the future; and it will not be improved in the future for the reason that we have arrived at the limits of its good qualities. In the opinion of Dr. Michaelis, the author of the paper, failures of concrete steel can be materially lessened, if not entirely prevented, by making it compulsory to use concrete of specified proportion of crushed stone, sand, and cement, and to use the proper kind of reinforcement in each case, and the necessary amount of it. Certain standard rules should

