Architecture and Building.

The Architectural Editor will be glad to receive suggestions or matter from those interested in this section. Address: Architectural Editor, Progress, Progress Buildings, Cuba Street, Wellington.

EVERY-DAY ART.

By F. de J. Clere, F.R.I.B.A.

Does it ever strike the ordinary man that art, either good or bad, enters more or less into almost every part of our every-day life? Take, for instance, a man's bedroom, in which we may suppose he begins his daily round. Every thing about him has had thought spent upon its design; the wall paper, the carpet, the quilt, the furniture, the basin and ewer are all made with a view to being a little more than mere utilitarian objects. Then let him glance round his breakfast table. The plates probably have a pattern on them, the table cloth is not absolutely plain, and his silver, if electro-plated, ventures some little attempt at ornament upon it. Wherever he goes his mind will be more or less influenced by art in some form or another.

An artistic instinct or faculty seems to be inborn with some, is to a certain extent acquired by others, but is entirely wanting in a few. As mere animals these last are probably the happiest, for they go through life enjoying its gross pleasures, and feeling little of the pain which the prevalence of bad art is constantly giving to the more cultivated.

A great teacher has written that without law there would be no sin, but this has never been advanced as a reason for no law. Without knowledge there would be no ignorance, for the latter is purely relative to the former; but for the reason that knowledge proves our ignorance no argument can be advanced that we should reject it. It has been argued that as a knowledge of what is pure and right and best in art would only make us dissatisfied with what is about us—in our architecture, in our pictures, in our sculpture in our dress and other things—such knowledge had better not be attained because there is so very little pecuniary advantage to be gained by it. There might be some reason in this if we could entirely efface our sense of art; but this we cannot do. Moreover, we annually pay large sums for art, so why should we not get the best value possible? For instance the wall paper costs more than mere brown or white paper, and in nearly everything else we pay more for decoration.

It has always been difficult to decide what is good and what is bad art. I doubt whether any educated man would dare to say authoritatively that any particular design is wholly good; but he may say that it pleases him. On the other hand, it is quite reasonable that all schools of artists—this word is meant to be taken in its widest sense—could agree that certain things are bad art. Wellington and some other New Zealand centres are full of such things—in buildings, in furniture, in decoration, and, to a lesser degree, in dress. In buildings, for instance, it may be taken that all design is bad which expresses no idea. A primitive building is a mere shelter, and consists probably of a simple roof, as is exemplified in the Arab tent or the Indian wigwam. Walls were introduced so that the space covered could be used to greater advantage. Then the materials became of a permanent nature, and openings were introduced for the admission of light; and so on, till art was introduced and architecture was born. Now, in all good architecture every feature is supposed to express something. The pediment, for instance, is the gable formed by the inclination of the two end rafters supported on and tied in at the feet by a beam; therefore, to put a pediment where a roof would be an impossibility is bad art. Then again, as the rafters must meet or fall down, to break the pediment before its members meet is also bad art, and the same may be said of the tie beam which should certainly remain unbroken. To introduce a pier, or buttress, presumably to strengthen the wall, and not to carry the same to the ground or otherwise give it support independently of the wall it is to strengthen, is about as bad as can be imagined. Error, too, is illustrated in a parapet with pinnacles—the natural terminals of a pier or buttress—only supported by weak corbels a few feet below them. Similar instances are unfortunately only too numerous in our street architecture, and they may be seen daily by those who have eyes to see and a mind to reason with.

The common English idea is that art is a disguise—artificial in fact; but in all probability the use of the adjective in its modern sense has come about from the fact that in later times art, as usually practised, is more or less a sham. It need not be so; and in this respect in the making of many things of every-day use America is far ahead of us. American articles generally are simply ornamented in a natural way and are not designed to look like something that they are not. In English work it is not at all unusual to see some material taking a cross strain—the rail that supports a table or the lintel to a window—and so ornamented as to appear like a series of cubes placed side by side, merely sticking together and having no possible strength with which to withstand a downward pressure. Surely common sense should teach the designer to make the main lines of his ornament, in a case like this, lateral.

Nearly every writer for many years past has condemned the use of shaded decoration on surfaces that are plainly flat, and yet it is still common to see carpets looking like a garden of flowers, and wall papers against which pictures are to be hung, covered with designs that stand out boldly from the surface. The art education of the present generation is happily higher than that of the last. The question of every-day art, which has been so ably discussed by Ruskin and others, is founded on the enlightenment of the layman. As a natural sequence there would follow the preservation of the true forms of architecture and those arts which are inseparable from every-day life.

Dunedin Drainage and Sewerage Works.

By J. T. Noble Anderson.

The most comprehensive scheme for drainage in the colony is nearing completion in Dunedin. The city presented exceptionally difficult problems to the sanitary engineer, being situated on what seems to be the crater of an extinct volcano. The hills which flank the Otago harbour on all sides rise with steep grades, in some parts streets being found where the grades have a rise of one foot in every three-and-a-half feet. Among these hills there are of course many valleys which do not all flow together. Some six or seven of these which contain the city proper and the suburbs of Maori Hill and Northeast Valley, run down into the harbour, while the important valleys of Caversham and Mornington discharge into what was at one time a morass or swamp, but which has been gradually reclaimed, and arterial drains run through it into the harbour.

Up to now all the sewers in these valleys discharged into the harbour, and the first cause of the present scheme being adopted was the difficulty which arose between the Harbour Board and the local authorities. At an early date a scheme had been suggested to divert all these sewers by one main intercepting sewer which would run along the harbour foreshore and would convey the sewage to the ocean, and on leaving the foreshore of the harbour such a sewer would have to cross a mile of the old morass to reach the sand hills which fringe the ocean beaches. The result of trial bores showed that such a scheme would be almost impracticable, owing to the last two miles of this main sewer being located in ground where the mud was very fluid and ending in seams of running sand. The matter then remained in abeyance for twenty-five years, and in the meantime more than three dozen engineers devised schemes, no two of which were alike. On his appointment the author revived the original scheme, but, as the result of ocean-float trials and other observations, found that it would not be practicable to discharge sewage on the beaches and that the sewer outfall would have to be located either on some islands situated over two miles along the coast to the east, or else at the foot of some very high cliffs, which are over 300 feet plumb, and nearly three miles to the east of the originally projected site. The scheme which has been carried out brings both stormwater and sewage to the ocean, and for economy the large double sewer, which carries combined sewage and stormwater, has only been carried to the first rocky point, where it can with safety to the structure be discharged into the ocean. This is at a point known as Lawyer's Head, situated one mile east of the originally proposed outlet in the sands. Here at present the sewage is being discharged, but the tunnel for the smaller sewer has been driven some 1,400 feet further, and eventually the sewage will flow to one of the more remote places mentioned above. Two-and-a-half miles of the main intercepting sewer along the harbour frontage has also been completed, and for the past eleven months the drainage from this has been pumped to the ocean. For the latter half of this time sewage from w.c.'s has been also passed through this sewer. At the present moment there are over 3,500 w.c.'s connecting with sewers, over a third of which number are connected with this new intercepting sewer, while it is hoped in about a month's time to turn almost all the others into it.

The pumping plant is particularly interesting, since it comprises the first installation of Diesel engines erected south of the line. It consists of three Gwynne "Invincible" centrifugal pumps, each with a normal discharge of 12½ million gallons per diem, and capable of being driven, in case of an emergency, each up to 18 million gallons per diem, giving an ultimate capacity equal to the combined capacity of the two main sewers which supply it, or about 55 million gallons per diem. These two main sewers are respectively 5 feet 6 inches diameter and 3 feet diameter.

The Diesel engines are peculiarly applicable for such work, because they do not require stokers to be continually standing by to keep up steam for an emergency, as would be needed in case of a steam plant. They can be got under full power within two minutes from starting, and are very clean and cheap to run. The estimated cost of running a complete steam pumping plant was over £2,500 per annum, but it does not seem likely that the cost of the present plant will reach half this figure.

There are several other very interesting features of the scheme, such as the Dortmund tank erected on the stormwater overflows into the harbour. The necessity for these has not, however, as yet been appreciated by the community, and the two tanks which have been erected seem likely for some time to be left unused. They were used for 15 months with excellent results, but when they became full of detritus the cost of cleaning them was postponed. A second feature of interest is that the main sewers have all been constructed of ferro-concrete, on the Monier system, while the rising mains have been constructed of jarrah and ironbark timber in accordance with the most modern views.

The pumping station, which requires no unsightly chimney stack, is a striking architectural feature of the suburb of St. Kilda, being built in the classic style with a lofty and well proportioned peristyle of Doric columns, and occupies an open space of nearly four acres adjourning the Culling Park. This space has been laid out with avenues and shrubs, and will eventually be a handsome park.

The total cost of loan works to date, including a portion of the interest charges, has been about £180,000. A considerable sum has also been spent in replacing obsolete and worn out sewers The present extent of the stormwater drains and sewers in the district of a permanent character is 60 miles, and the population which they will serve in a year or so is over 50,000, or nearly 90 per cent. of the population of the district under the Board's control. Estimates have been made for sewering the whole area of the district, or nearly 20 square miles, with a system of sewers 170 miles in length, and when this is accomplished the estimated expenditure will reach £400,000.

While a great deal of such detail as ventilation and the connecting up of several of the branch sewers yet remains to be done, all the works presenting any real engineering difficulty have been completed.