Eternit.

Among the articles connected with the building trade which have come to the front of late, "Eternit," an asbestos-cement fireproof material, has well established itself. The article, in the form of slates of terra cotta and grey colour, is admirably adapted for roofing, for besides being fireproof and indestructible, these "Eternit" covered roofs appeal to the aesthetic taste. The sheets, both for internal and external use, have been applied to numerous public and private buildings throughout the Dominion, and are being used to a large extent by country people, owing, no doubt, to the facility with which the material can be applied. "Eternit" carries the hall mark of the authority of the Admiralty and the War Office, as well as London County Council, and various British and Colonial Government departments.

Work in course of erection under Mr. Livesay's supervision includes a bungalow at Island Bay for Mr. W. H. Coy, and a two-storied residence in Hawker street for Mrs. Goldfinch.

A contract has been signed for the house and stables for Mr. Gordon Williams, of Te Aute, H.B. Contract price, £1942. Architects, Rush and James; contractors, H. H. Campbell, Hastings.

UNIQUE TEST OF REINFORCED CONCRETE.

Beam, 12in. x 22in., reinforced with Kahn Bars 1in. x 3in.; span, 25ft.; load, 14 tons; deflection, one-sixteenth of an inch.

(The Editor, PROGRESS.)

Sir,—In your issue for July we notice an article on "Failures of Ferro Concrete," by a Mr. Lewis. We ask you as a matter of public interest to be good enough to afford equal publicity to our reply herewith. We are quite aware that your influential and widely read journal does not identify itself with the individual opinions of your contributors, and only inadvertently would be the means of giving publicity to a borrowed set of unverified statements casting aspersions on so universally accepted a method of construction as that of reinforced concrete.

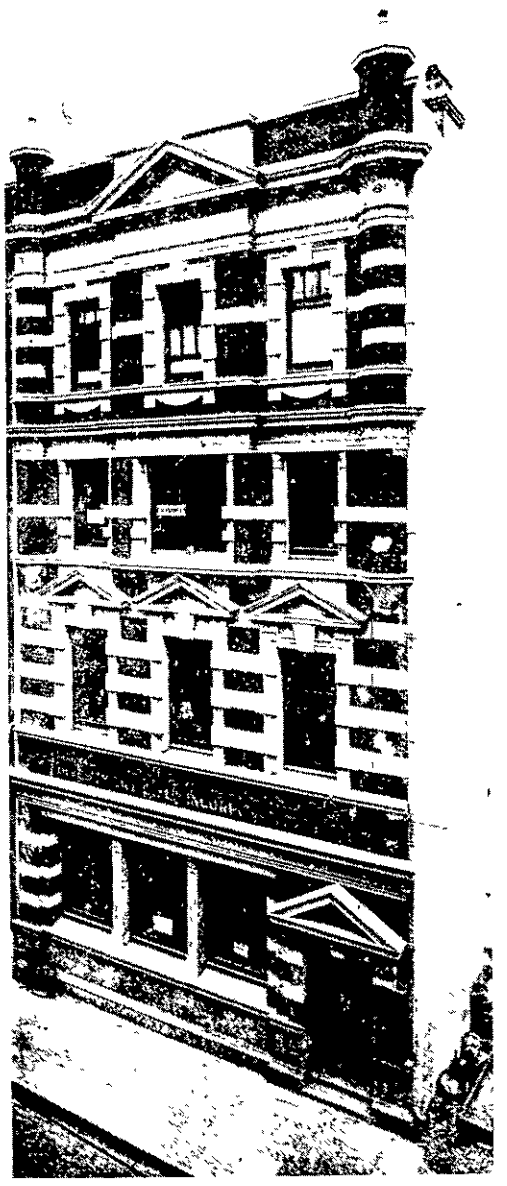
ELLIOTT, MACLEAN & CO.

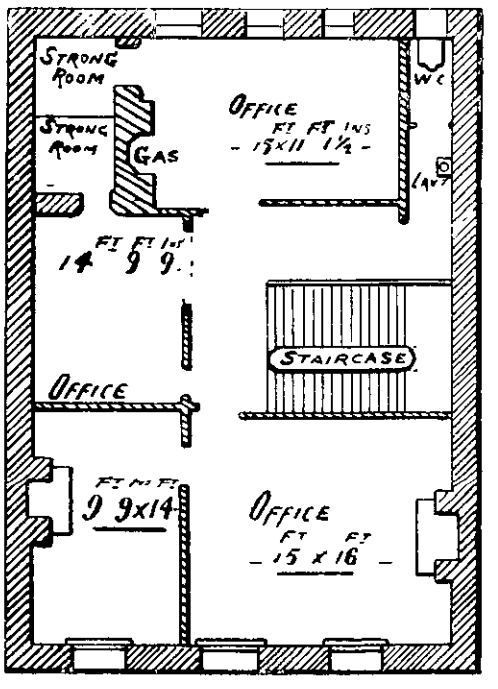
[Our correspondent, with whose request we have complied, is quite correct about our opinions It is generally understood, of course, that the editor of a journal is not responsible for either the opinions of his correspondents or those of the writers he quotes. For our part, we have given space to both sides in the Ferro-Concrete controversy, and with the very best results for Ferro-Concrete.—Ed.P.]

The tonnage of the world's merchant shipping fleet, according to the latest returns, is 37,554,904. Of this total no less than 31,744,904 tons represents steam shipping, and 17,611,096 tons of the whole is under the British flag.

Wellington Trust and Loan Company's Building.

Below we give the floor plans of this building with the street front. It is one of the most honest of the buildings which adorn the city, being content to depend on plain brick effects, without relying exclusively on plaster and stucco. It is a feature of the new block that is rapidly filling up the gap left by the great fire of 1906. The architects who have filled the greater portion of that gap easily persuade us, every time we look at their work, that the said fire was a blessing in disguise. It is the best possible answer to the critics who aver that there is no architectural taste in the Dominion.





WELLINGTON TRUST AND LOAN CO.'S BUILDING.—FIRST FLOOR.

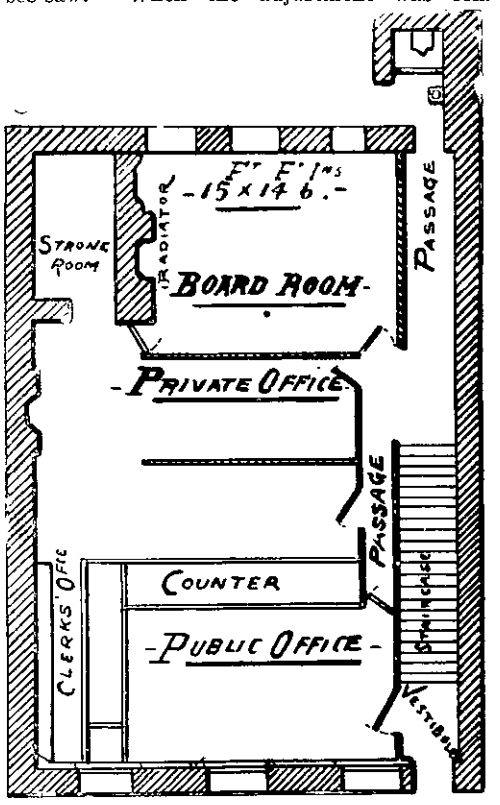
Concrete: Wet or Dry?

(Contributed.)

The proper amount of water to be used in mixing concrete has been a much discussed question ever since the latter came into favour as a constructive material. Authorities have argued on one side and the other until it is hopeless to attempt to base a conclusion upon the current literature of the subject.

The writer has carried out a simple experiment which strengthens his confidence in wet concrete. The idea of the experiment was derived from a similar one, a description of which was published in one of the cement journals some seven or eight years ago.

Two boxes of equal size and shape were balanced, one on each end of a strong beam, which was supported under the centre like a "see-saw." When the adjustment was completed and the boxes exactly balanced, a support was placed under each and they were filled with concrete: one with a dry mixture and the other with a very wet mixture. The proportions of cement, sand, and gravel used were the same in each case, the only difference being in the amount of water used. The dry concrete was tamped very thoroughly, but the other was too wet to admit of any tamping.



WELLINGTON TRUST AND LOAN CO.'S BUILDING.—GROUND FLOOR.

As soon as the concrete had set the supports were taken from under the ends of the beam. The end containing the wet-mixed concrete sank at once, and the beam had to be shifted nearly two inches on its support in order to rebalance the boxes.

This indicated that the concrete mixed wet was much denser than the dry. This was verified when the boxes were broken away. The dry block was rough, and contained many unfilled spaces, while the wet was very smooth and contained no visible holes. When they came to be broken in half the wet block was much harder to split.

From the results of the above experiment, and from other personal observations and experiences, the writer concludes that a moderate excess of water above the amount absolutely necessary in mixing concrete is not injurious, but is, in fact, decidedly beneficial, as wet-mixed concrete is:

1. Denser, stronger, and more impervious to water.
2. Cheaper to put in place,
3. Easier to mix thoroughly, and
4. Gives a smoother finish on the surface next to the forms.