

### CARELESSNESS IN CONCRETE CONSTRUCTION.

Richard L. Humphrey, president of the National Association of Cement Users, has examined many of the cases of collapse of concrete construction and pronounces his opinion that in every instance the fall of the structure has been due to carelessness of construction. From observation of other concrete buildings in process of construction, he is satisfied that the same errors are being repeated and that further collapses will surely come unless the officials of the cities take the question in hand. He believes that in order to meet this problem squarely, every city in the United States should revise its building laws in such a manner that either the owner or the contractor of a concrete building shall be compelled to employ a competent inspector whose duty it shall be to follow every detail of the construction from the beginning of the foundations to the completion of the roof. New York, St. Louis, Boston and Philadelphia have either prepared or are now preparing new regulations governing concrete construction.

The science of concrete construction is not yet thoroughly settled, and until it is, the greatest care should be taken in the use of the material. Concrete, by reason of its superior qualities, especially its resistance to fire and its cheapness, is being used extensively in these days, and will be employed still more in the future. It is a comparatively new material, and until its properties are fully known and appreciated, the greatest safeguards should be thrown about it. There is a prevalent idea that it can be used by unskilled laborers. That is the error which has led to serious consequences. While it is true that unskilled labor can be employed to a large extent, concrete construction requires the same care and attention to details that is demanded by first-class construction with other materials.

Each failure tends to discourage the use of concrete, for the reason that it is almost universally attributed to the material rather than to the improper conditions under which it is used. The failure of a reinforced concrete structure by reason of improper design, poor materials or bad workmanship is no more an argument against its use than the collapse of a steel structure under similar conditions is an argument against the use of structural steel in construction.

Building permits issued during the current year at Edmonton, Alta., up to August 28th, total \$2,027,375.

The building permits issued at Prince Albert, Sask., during the month of August, amount to \$20,492.

### THE MANUFACTURE OF CEMENT.

The following extract setting forth some of the features in cement manufacture that go to produce the most desirable article, is culled from an Owen Sound exchange in connection with the projected plant of the Ben Allen Portland Cement Co.: "Grinding is, however, not the only requisite of good cement. The proper proportion must be obtained in mixing the different ingredients. Lime is the chief active ingredient, and experience has shown that, within certain limits, the more lime a cement contains the greater is its strength. But if more lime is present than can chemically combine with the other ingredients, the cement after setting will blow and disintegrate. A thoroughly-washed, well burned and finely ground composition will bear with safety a much higher percentage of lime than one made from the same raw materials which have been badly incorporated, insufficiently washed imperfectly burned, and coarsely ground.

Experts have found that an ideal cement is represented by the formula:—

Lime (per cent.) equals 2.8 per cent. silica plus 1.1 per cent. alumina. To the layman this may be more clearly expressed by saying that three parts lime to one part silica is a sound cement;  $3\frac{1}{2}$  lime to 1 silica is unsound; 2 parts lime to 1 part alumina is sound, while  $2\frac{1}{2}$  lime to 1 alumina is unsound, (The marl furnishes the lime, the clay gives the silica and alumina, with a proportion of iron oxide."

### NEW COMPANIES.

Montreal Packing Company, Limited, St. Cesaire, Que., incorporated, capital \$20,000. Incorporators, H. Lamontagne, of Montreal, and P. Leclair, Chas. Grise, Henry Grise and A. Grise, all of St. Cesaire.

Canadian Thermos Bottle Company, Montreal, Que., incorporated, capital \$300,000. Incorporators, John Schwabacher, G. MacDougall, L. McFarlane, Chas. Pope, and A. Swindlehurst, all of Montreal.

Ideal Smoke Consumer Company, Limited, Montreal, Que., incorporated, capital \$49,000. Incorporators, J. Labadie, O. Papineau, L. Demers, A. Deguire, Montreal, and P. Bernard, of Longue Pointe, Que.

The Calkins Tile & Mosaic Company, Limited, Montreal, Que., incorporated, capital \$20,000. Incorporators, W. J. Henderson, A. L. Smith, J. W. Hannah, A. C. Calder and John W. Graham, all of Montreal.

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minals, Limited, Toronto, Ont., incorporated, capital \$2,000,000. Incorporators, Gerard Ruel, A. J. Mitchell, J. W. Robertson, R. P. Ormsby, F. C. Annesley and Lorne Mitchell, all of Toronto.

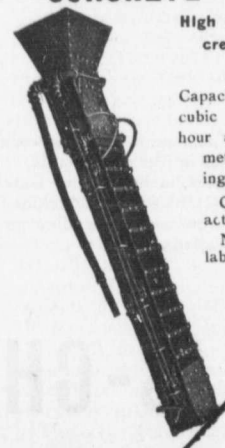
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