

nessed in Calgary. It was the arrival of the vanguard of the American spring invasion, in the shape of three crowded trains of seven to eleven cars each. It was the most remarkable movement of settlers ever recorded in that city of new arrivals. Calgary and its enterprising business men gathered in groups to welcome the new-comers. An important feature of the circumstance was the substantial character of the settlers. Three men alone, we are told, deposited in one bank the sum of \$35,000, for investment in farming lands. Not only this, but the party or series of parties were composed of men accustomed to farming on a large scale in Indian Territory and Oklahoma, Kansas, Arkansas, Missouri, or other parts of the United States of a character more or less similar to the North-West. This influx is only an index of what is going on in Calgary and at other points in the Canadian West all the time. On this particular day the new arrivals at that distributing point numbered somewhere between 1,200 and 1,500, but the aggregate of smaller parties and of individual groups and families must be simply enormous. And, it is only just beginning for the current year!

Saskatchewan, the new Province with the "name," as some of our American friends half-derisively call it, is also attracting thousands of new settlers, and many of them are drawn from the ranks of their best. Almost every despatch or letter that comes from various points contained in that great area refers to land being taken up by new arrivals. One for instance, dated Maple Creek, Sask., 8th March, says:—"Settlers are now coming into this district at a very rapid rate, making everything along business lines move a little." And other districts have the same story to tell.

REINFORCED CONCRETE IN BUILDING.

Builder, Montreal, asks where he can obtain the fullest particulars as to the Hennebique system of fire-resisting construction, which he says: "I have been told is greatly in use in the United States, and was invented there." We are unable to inform our correspondent directly in answer to his question, but it occurs to us that he may learn about it by applying to the builders of the Ottawa new Roman Catholic College, which is, we understand, building on that system of reinforced concrete. As to its being invented in the United States, we are by no means so sure of that, although Americans have patented the Columbia, the Roebing, and possibly one or two more similar systems. We think it more likely to be French or Swiss. The "Engineering Times," of London, England, declares its belief in the statement of E. Probst, of Vienna, who said last year that no other branch of engineering work has progressed as much as reinforced concrete construction in the last few years.

In a supplement to that journal, dated 1st March, we find an article devoted to the subject of reinforced concrete in Europe. This relates how that substance was used by a Belgian architect to obtain a fire-proof building, some ten or a dozen years ago. He had had a bad experience of a fire in a factory, which proved to him that iron must be enveloped in some material which could protect it from the influence of fire, and so reinforced concrete was first introduced for fire-proof purposes. In France, Considère made a discovery which caused quite a stir at the time, and it was that reinforced concrete could expand ten or twenty times as much

as the concrete of the same composition without any iron. Experience has shown that the iron embedded in the concrete does not rust. In 1892, Wayss & Freytag, who are well-known Austrian and German contractors, built in a small city the whole water-pipe system of reinforced concrete. A few months ago they examined the pipes, and found that after eleven years' service everything was quite satisfactory. In Paris, where reinforced concrete pipes are freely used, it has been found 20 per cent cheaper than masonry work. At Hamburg, there is a six-storeyed factory built of reinforced concrete with the front columns covered by sandstone.

It is important to observe what is said of Europe's experiences of such methods, coming into vogue as they are on this side the Atlantic. Ten years ago a stairway was built of this material in Stettin, Germany, and after erection with a load of 100 lbs. per square foot did not show any cracks. The tomb of the Empress Frederick at Potsdam is covered with a cupola of reinforced concrete on the Monier system. At the London Exposition fire in 1903 the Visintini beam stood fire tests, while the Siegwart beams successfully withstood the fire in New York, where a temperature of 1,800 degs. F. was registered. Visintini appears to be one of the latest to present a system with some especial features. Among the numerous patented systems, those most familiar in England are the Ransome, Kahn, Thatcher, Hennebique, De Valliere, Cummings, Johnson, Columbian, Expanded Metal, Roebing, International, Unit, Visintini, etc.

These may be divided into five classes: (1) Those using "deformed" bars; (2) those using plain bars; (3) those using a "webbing"; (4) those using a "frame"; and those in which the parts are moulded in advance and then set in position.

Upon enquiry of the editor of "The Canadian Engineer" as to our correspondent's query, Mr. Groves hands us the March issue of "Concrete and Constructional Engineering," published in London, containing a paper on the preservation of iron and steel, written by B. H. Thwaite, C.E. Our correspondent might procure this magazine, which is the latest and one of the best authorities on the subject which its title indicates.

IMPORTANCE TO ONTARIO OF HUDSON BAY.

The present article is the sixth of a series, begun in these pages on the 16th February, devoted to considering: Why Ontario lacks commercial access to Hudson Bay. How such access can best be obtained. What Provincial advantages will result from up-to-date transit facilities extending to the great Canadian sea via Ontario. Our readers will probably agree that some light on these questions has been afforded by the information here furnished. Indeed, we have had evidence from week to week of awakened interest in Hudson Bay from a novel standpoint. And if any one has not preserved his copies of the paper, and would like to have the article in a compact form, we have some copies of a pamphlet containing them, which we will be pleased to forward. In this pamphlet are maps of Hudson Bay and the Great Lakes of America, and of what is probably the best area for supply of sea food in the world, namely, that part of the United States lying next south of the Great Lakes, this side the Rocky Mountains, and south-westward from Ottawa River to Omaha.