cases of these kinds, and contractors have been compelled to use methods and machines that made his work much more expensive. This shows the necessary cutting out of specifications where the clauses have outlived their usefulness.

The second part of the provision quoted relates to the proportion of the materials to be incorporated in the concrete. Nothing affects the cost of concrete more than when the ingredients vary, and it is an easy matter to set forth the various proportions to be used. Even if the kind of structure to be built is not known, it is still possible to make the specifications definite. When it is not done, the contractor is very apt to suffer. If he bids on a 1:3:5 mixture, it may be changed to a 1:2½:5 or even 1:2:4, and the cost will be increased. On the other hand the owner may be made to pay an excessive amount for the work, owing to this element of doubt.

A method in this connection, that is to be commended, is the dividing of the concrete work into classes, as Class A, Class B, and so on. Thus the specifications can be definite as to each class, although on some work there may not be used concrete of certain classes, while if there is work to be done the specifications are explicit and the contractor has named a price for the work.

Some specifications go a step farther by providing for the different classes of concrete and obtaining a price on each class with forms and without forms. This is done to obtain more economical construction. and should be welcomed by contractors.

From these remarks, it is evident that there should be no need of writing specifications as indefinite as those from which we have quoted.—The Contractor.

REPAIRING CONCRETE FLOORS

THERE IS A POPULAR and widespread fallacy to the effect that a concrete floor once chipped or cracked is practically at the end of its usefulness. This is undoubtedly due to the results of unskilled workmen attempting to repair a damaged floor. Unless proper care is taken and the workman engaged on the job has sufficient knowledge of concrete, a repair job is most unsatisfactory.

In this connection, says "Concrete," the practice of a Boston firm is worth noting. In certain of the concrete buildings erected by this firm floors have been chipped in particular places because of some phase of the industry which gave rise to dropping heavy materials in one place, as, for example, the winding rolls in a paper mill. When a floor has become chipped out in some such manner as this, the proper method of repairing is to chip out with mallet and chisel a recess usually square, of sufficient depth to reach to the bottom of the deepest break in the concrete surface. The rough surface resulting from this process is then treated with acid to bring out the solid aggregate, or else a stiff brush is used to remove all the loose dust, and the recess washed out by sluicing out with a hose. When all the dust particles have been removed the recess is grouted with cement and before this has set the granolithic finish is applied and leveled up with the rest of the floor. Repairs made in this manner are just as permanent as the remainder of the floor, as the bond between the new and the old concrete will be perfect if all the loose material has been carefully removed.

NEW BRICK PLANT

EXCELLENT PROGRESS is reported as being made on the buildings comprising the plant which the Sandstone Brick and Sewer Pipe Company, a new concern, with head offices in Calgary, is establishing at Sandstone, a point twenty miles south. The new plant, in fact, will be in operation by July 1. It is the intention of the company to erect temporary kilns this year, and on this account the output will be limited to 500,000 brick per week. Next year, however, when continuous or permanent kilns will be built, the output will be between 900,000 and 1,000,000 brick per week. For this season the energies of the company will be directed towards getting out brick only, but next year sewer pipe, terra cotta, hollow ware, etc., will be manufactured. Mr. F. Prendergast, formerly connected with the Alberta Portland Cement Company, and the Blairmore Brick Works, has been appointed manager of the plant. The company is capitalized at $75,000, all of which is paid up.

REMOVES TO NEW QUARTERS

A CARD IS TO HAND announcing the removal of the show rooms and offices of E. F. Dartnell, the well known building material dealer, of Montreal, from 157 St. James Street, to 8 Beaver Hall Square. The new quarters are much more commodious and better arranged for display purposes than the premises just vacated. The extensive line which Mr. Dartnell carries includes among other products, high-grade face bricks, tapestry brick, enamelled and glass brick, terra cotta fireproofing, glass tile, hollow brick, floor quarries and roofing tiles. One of the important orders for supplies received so far this season, calls for 160,000 white porcelain to be used in the exterior of the Dominion Express Building now being erected in that city from plans by Messrs. E. & W. S. Maxwell. Montreal patrons can avail themselves of quick service by 'phoning "Uptown 2975."