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Engineers — And

Cinder Concrete

With every succeeding year the utilization of reinforced concrete for building purposes of every sort is becoming more and more general. Both from experience with actual constructions and through the use of tests, engineers are able to foretell how the various forms of the material will act under different conditions. Moreover, in the field of fireproof construction of buildings, concrete stands preeminent, with regard to durability, economy, and fire-resisting qualities. Many interesting facts have been brought to light with regard to the manner in which concrete withstands fire, and the investigations along these lines have been thorough and far-reaching.

The use of cinder-concrete in fire-proof floor construction has been growing in popularity from day to day. Objections to the use of this material have been advanced, in view of the fact that in some cases where it has been used, piping for the sprinkler systems or for other purposes have been corroded to such an extent as to be rendered useless. For this corrosion the cinder-concrete has been blamed. However, it has been demonstrated that, if the cinders are not new, are free from sulphides, and that if the mixture consists of one part of cement to ten parts of cinders, with enough sand to make a dense mixture, there is little or no danger of the corrosion of water piping.

A recent fire, water and load test, carried on upon cinder, terra-cotta and gypsum floor arches, showed that the first mentioned material was the best of the three. A fire was kept burning continuously below the floor for a period of four hours, and during that time the floor was subject to an average of 1700 F. At the end of the four hours a fire stream was turned on the roof while it was still red hot. The floor load during the test was 150 pounds per sq. ft.

The cinder concrete suffered very little damage, and the test served to furnish an additional proof that this material is an excellent fire-resisting medium.—W. L.C. in "Conservation."

STREET CLEANING IN SCOTLAND.

The city of Glasgow, which now has a population of over 1,000,000, writes United States Consul McCunn, is undoubtedly all things considered, one of the best cleansed cities in this or any other country. It has an excellent up-to-date sewerage system and an abundant supply of pure water, and its municipal government is of high order, reflecting great credit on the efficiency and ability of the officials in charge of the various departments.

All domestic refuse and garbage from hotels, restaurants, etc., in the city is collected during the night concurrently with the street sweeping done by the sweeping machines. Bins are sunk in the pavement at regular intervals, in which are deposited the sweepings of the day staff. These bins are emptied nightly and the contents, together with the sweepings left at the street side by the sweeping machines, are carted away.

Private streets and back courts, after being swept when required, are cleansed by the use of 1½-inch I. R. hose attached to the street fire plugs. The court washings in the city average nearly 1,000 per day. The owners of these properties are assessed 2 cents per \$4.86 of the annual rental to meet the expense of this work.

After a heavy snowstorm, in order to avoid disorganization of traffic and great inconvenience to the public, the snow must be removed without delay, and consequently, great activity at such times prevails in the cleansing department. Salt is used to melt the snow on the tram tracks, and is followed shortly afterwards by the sweeping machine, which spreads the brine, created by the action of the salt on the snow, over the entire width of the street thereby rendering it possible to clear the street quickly. The snow and slush is then rapidly carted and tipped into the Rivers