necessity of covering up carefully all concrete and cement works exposed for any length of time to dry air and sun. The bad effect of these agents is plainly demonstrated, and it is doubtful whether much strength would ultimately have been recovered.

It is also interesting to notice the results obtained by the concretes made of 1 part of cement, 2 of sand and 5 of stones, and 1 cement, 2 sand and 6 of stones. The specimens of these compositions gave results equal to concretes, 1, 2, 4, showing that for strength they are as good as the ones containing a less proportion of stones, while being much more economical.

These experiments are as yet very incomplete. But it is hoped that the researches in this subject will be continued, and that valuable information for the engineer in practice derived from them.

CONCRETE TESTS—COMPRESSION.

Proportions by weight: 1 part cement, 2 sand, 4 stone.

Per cent. of water by weight of cement and sand.	Crushing strength per square inch. 1 week. comp. tests.	4 weeks.	2 mos.	Average weight of sp. per c. f.
16	792	677	382	141.5
18	653	679	507	143.0
20	746	626	507	139.5
22	620	615	670	139.5
24	679	542	559	141.5
*26	362	545	500	141.2
28	326	340	823	138.0
30	245	331	361	135.5

Proportion by weight: 1 cement, 2 sand, 5 stone.

20	703

1 cement, 2 sand, 6 stone.

20	728

CEMENT AND SAND TESTS.

Proportions: 1 cement, 2 sand.

10	825	800	1822
12	800	1311	1666
14	750	1000	1100
*16	475	1389	1777
18	395	1110	1266
20	400	913	1633
22	330	844	1233
24	388	—	1230
26	—	—	1000

* Line of weakness due to excess of water.

McGill University, April, 1896.