

WET OR DRY CONCRETE MIXTURE, WHICH?

The question as to which is the better, the wet or dry mixing of concrete, is much discussed. Recently in Germany there were given out the results of extended experiments covering some four years. From these reports the conclusion is drawn that the smallest amount of water which produces a mixture suitable for ramming gives the strongest concrete.

The results of these experiments confirm that which other experiments, covering shorter periods of time, indicated, and will not occasion any surprise. At the same time the concrete worker who attempts to use the smallest amount of water which will produce a mixture suitable for ramming will find many practical difficulties.

The great obstacle will be the difficulty of securing "skilled" labor. The degree of skill and care required with such a mixture is so great that the ordinary laborer cannot be entrusted with the work, and prices have been cut so low that to train men to perform this work is well nigh impractical.

We recently examined a brick pavement that was being torn up preparatory to relaying. The bricks had been grouted with a comparatively dry mixture of cement and sand. The result was that the grouting only went about one-quarter way down the bricks, and in less than two years the pavement had become so rough that it had to be relaid.

Other pavements were examined where the grouting had been done with a mixture that would flow readily and could be swept into the crevices. In this case the grouting completely surrounded the brick and the roadway was a solid pavement.

Not only does a wet mixture of concrete allow the use of less skilled workmen, but it insures against the injurious effect of the varying amounts of moisture found in the material used.

EDITORIAL NOTES.

It is said that Commissioner Harris is asking Toronto City Council to back him up in a request to the Railway Commission that they pass an order compelling railroads to provide smoke consumers on all engines. If Mr. Harris would arrange for smoke consumers on the city buildings and show the Commission that dense smoke could be prevented it would help more than a bushel of City Council resolutions. Within the city boundaries there is no greater offender against the smoke by-law than the city building's smoke stacks.

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Great Britain was the last country we would have thought of as likely to refuse recognition of patents on articles manufactured in foreign countries. They are preparing now to cancel the British patents on foreign manufactured articles. Other countries are preparing to retaliate. Germany, Austria, and the United States are expected soon to pass regulations refusing to recognize British patents. The regulations devised by some of our Legislatures are just as ingenious as the work of some inventors—and just as useless to civilization.

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There are 225,000 miles of railway in the United States. Companies having a length of 168,839 miles—three-quarters of the whole—earned, gross, according to the Finance Chronicle, in the first six months of this year \$863,860,000; had operating expenses of \$632,606,000, and net earnings of \$231,254,000, which last figure is equal to 26.78 per cent. of the gross earnings. These figures, compared with the first half of last year, show decreases of \$172,868,000 in gross earnings (equal to 20 per cent. decline), \$109,383,000 in operating expenses, and \$63,484,000 in net earnings. If so serious a shrinkage is felt this year by people who merely carry things, must there not be a great shrinkage in the business of people who make, buy, and sell things.

CANADIAN PACIFIC RAILWAY, ANNUAL REPORT.

The twenty-seventh annual report of the directors of the Canadian Pacific Railway Company, for the year ended June 30th, 1908, has been issued to the shareholders. It says in part:—

The accounts of the company for the year ended June 30th, 1908, show the following results:—

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| Gross earnings | \$71,384,173 |
| Working expenses | 49,591,807 |
| Net earnings | 21,792,366 |
| Net earnings of steamships in excess of amount included in monthly reports | 1,112,759 |
| Interest, etc. | 1,541,874 |

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|----------------------------|--------------|
| Deduct fixed charges | \$24,446,999 |
| | 8,770,076 |

Surplus

\$15,676,923

And after paying \$4,625,466 in dividends leaves a net surplus for the year

\$5,579,715

In addition to the above dividends on ordinary stock, one per cent. was declared from the interest on land funds.

The working expenses for the year amounted to 69.47 per cent. of the gross earnings, and the net earnings to 30.53 per cent., as compared with 64.96 and 35.04 per cent. respectively in 1907.

The statement of earnings for the year ended June 30th, 1908, shows receipts:—

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| From passengers | \$19,900,432 |
| From freight | 44,037,507 |
| From mails | 739,755 |
| From sleeping, express, elevators, telegraph and miscellaneous | 6,706,388 |
| Total | \$71,384,173 |

The statement of working expenses, for the year ended June 30th, 1908, shows:—

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|---|--------------|
| Transportation expenses | \$24,112,713 |
| Maintenance of way and structures | 10,410,751 |
| Maintenance of equipment | 9,358,138 |
| Traffic expenses | 1,734,086 |
| Parlor and sleeping car expenses | 395,628 |
| Expenses of lake and river steamers | 751,197 |
| General expenses | 1,942,756 |
| Commercial telegraph | 887,534 |
| Total | \$49,591,807 |

HEIGHT OF CAR STEPS.

The Ontario Railway and Municipal Board has set September 24th as a day for hearing Dr. Helen MacMurphy's application in which she will apply for an order by the Board "fixing the height of the first step of street and electric railway cars from nine to twelve inches from the ground, and the other steps with a rise from seven to nine inches one above the other."

The board has notified some twenty-four railways, that are under their jurisdiction, that they will hear the application and make such disposition of the application as may seem just.

Another indication of the general improvement in the outlook is the fact the Grand Trunk Pacific Railway Company have decided to purchase fifty more locomotives, half of which will be passenger and half freight. The passenger locomotives will weigh 122,000 pounds each, and will have eight wheels with 60-inch drivers and 18 x 24 cylinders. The Mogul freight locomotives will have three pair coupled wheels and two-wheeled centre-bearing swing-trucks with 20 x 26 cylinders and 63-inch driving wheels. They will weigh 162,000 pounds each. Delivery is to be completed by July 1909. The company is calling for tenders.