The Canadian Engineer

WEEKLY

ESTABLISHED 1893

Vol. 17.

TORONTO, CANADA, SEPTEMBER 10th, 1909.

No. 10

The Canadian Engineer

Issued Weekly in the interests of the

CIVIL, MECHANICAL, STRUCTURAL, ELECTRICAL, MARINE AND MINING ENGINEER, THE SURVEYOR, THE MANUFACTURER, AND THE CONTRACTOR.

Editor-E. A. JAMES, B.A. Sc.

Business Manager-JAMES J. SALMOND

Present Terms of Subscription, payable in advance :

Canada and Great Britain : United States and other Countries : One Year Six Months Three Months - \$3.00 - 1.75 83.00 One Year 1.75 Six Months 1.00 Three Months \$3.50 2.00 1.25

ADVERTISEMENT RATES ON APPLICATION.

HEAD OFFICE: 62 Church Street, and Court Street, Toronto TELEPHONE, Main 7404.

Montreal Office: B₃₃, Board of Trade Building. T. C. Allum, Business and Editorial Representative, Phone M 1001.

Editorial Representative, Frone at 1001.
Winnipeg Office: Room 315, Nanton Building. Phone 8142. G. W. Goodall Business and Editorial Representative.
London Office: 225 Outer Temple Strand T. R. Clougher, Business and Editorial Representative. Telephone 527 Central.
Address all communications to the Company and not to individuals.)
Everything affecting the editorial denactment should be directed to the Editor.

Everything affecting the editorial department should be directed to the Editor.

NOTICE TO ADVERTISERS

Changes of advertisement copy should reach the Head Office by 10 a. m. Monday preceding the date of publication, except the first issue of the month for which changes of copy should be received at least two weeks prior to publication date. PRINTED AT THE OFFICE OF THE MONETARY TIMES PRINTING Co., LIMITED, TORONTO, CANADA.

TORONTO, CANADA, SEPTEMBER 10, 1909.

CONTENTS OF THIS ISSUE.

Editorials.

The Cement Merger	277
Canada's Timber Loss	277
Editorial Note	278
Leading Articles:	270
National Transcontinental Railway	292
Railway Accidents for August	283
Precipitation for August	278
Toll of the Railways	282
Compressed Air Engineering	280
Sanitary Review:	200
Water Supply and Purification	285
Flow of Water in Pipes	288
Railway Earnings	284
Engineer's Library	in mit
Railway Orders	297
Engineering Societies	294
Construction News	300
Market Conditions	301
Market Conditions	304

Copy and cuts for changes of advertisements must be in our hands by the Monday preceding date of issue. If proofs are to be submitted, changes should be in our hands at least ten days before date of issue. When advertisers fail to comply with these conditions, the publishers cannot guarantee that the changes will be made.

THE CEMENT MERGER.

It is announced that the \$30,000,000 Canadian cement merger has been successfully launched. The final negotiations and legal details have been completed. The companies coming into the new Canadian cement company have made their terms, have accepted the valuation offered them, the underwriters are busy on the security issue, and all that remains to make this new venture a success is to sell the cement manufactured next year at a profit.

We wonder will they, or is there to be repetition of this year's uncertainty in the cement market?

Press despatches state that a "leading official" of the new company placed the yearly output of their mills at 4,500,000 barrels-just one and a quarter million barrels more than the yearly consumption of cement in Canada.

Add to the proposed output of the new company the output of the mills in Canada not included in the merger and the prospective output for 1910 will be double the probable consumption during that period.

And this is not all. The amount of cement imported annually is on the increase. In 1908 it was almost half a million barrels. Because of the unusual conditions attending the cement trade in Canada during this year the imports for 1909 are likely to be larger. Where, then, is this 4,500,000 barrel plant to find its market, and by what means will they sell cement at a profit?

For some years past the consumption of cement in Canada has been on the increase, but we have no guarantee that this increase will long continue. In fact, unless new uses for cement are found there is every indication that the consumption will remain stationary.

The cement industry in Canada since its inception has had financial troubles all its own, and we do not see that this new venture will in any way ameliorate the difficulties under which it has been struggling.

CANADA'S TIMBER LOSS.

The Forestry Branch of the Interior Department, Ottawa, are doing a good service to Canada in making known the timber loss through forest fires. A knowledge of the loss will impress the necessity of great care with fire.

During the year 1908 835 forest fires of serious proportions occurred in the Dominion, upwards of 188,000 acres were burned over, causing destruction of over 56,000,000 feet, valued, including mills and improvements, at \$25,500,000. Twenty-one lives were lost as a result of forest fires (all in British Columbia) and 2,404 persons were thrown out of employment.

Quebec Province headed the list with 250 fires, then British Columbia came second with 235. In Quebec, however, the value of the timber destroyed was very slight. In British Columbia 40,000,000 feet were destroyed at a loss of \$25,000,000, or over 90 per cent. of the total loss by fire in Canada.

The destruction by fire in Manitoba and Alberta was very light. In Saskatchewan timber valued at over \$20,000 was burned.

The heavy loss in British Columbia was due, of course, to the great fire in the Crow's Nest Pass country,