

The Canadian Engineer

WEEKLY

ESTABLISHED 1893

VOL. 17.

TORONTO, CANADA, OCTOBER 22nd, 1909.

No. 16

The Canadian Engineer

ESTABLISHED 1893.

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	\$3.00	One Year	\$3.50
Six Months	1.75	Six Months	2.00
Three Months	1.00	Three Months	1.25

Copies Antedating This Issue by Two Months or More, 25 Cents.

ADVERTISEMENT RATES ON APPLICATION.

HEAD OFFICE: 62 Church Street, and Court Street, Toronto
TELEPHONE, Main 7404 and 7415, branch exchange connecting all departments.

Montreal Office: B33, Board of Trade Building. T. C. Allum, Editoria
Representative, Phone M 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 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, OCTOBER 22, 1909.

CONTENTS OF THIS ISSUE.

Editorials:

Trees on the Highway	449
Concrete Under Constant Vibratory Move- ment	449
Problems in Statics	449

Leading Articles:

Problems in Applied Statics	469
Traction of Freight Trains	458
Dust Prevention by Calcium Chloride.....	461
Developments in Railway Motor Control.....	463
Tar as Applied to the Surface Treatment of Roads	465
Highway Bridge Over the Miami River.....	451
Airships in Germany	453

Sanitary Review:

The Sanitary Engineer or the Patent Vendor.	455
Distributing Appliances	455
Society Notes	450, 457
Correspondence	468
Railway Earnings and Notes	471
Construction News	472
Market Conditions	475
Railway Orders	452

TREES ON THE HIGHWAY.

One cannot travel through the rural sections of Eastern Canada and not be impressed with the number of handsome trees along the highway. During the period between the cutting down of the forests and the growing of these roadside shade trees some sections of the East presented very bald and uninteresting landscapes, but that is changed now.

Canada is developing a characteristic landscape, scenery most beautiful in spring and autumn.

It is a pity though that some time and money was not spent on maintaining the shape of these avenues of trees and in removing the objectionable natural growths along the roadside. Many hillsides, ploughed by the heavy rains, might be protected and beautified by planting sumach and other wild growths.

The contrast of a well-kept lawn or farm with a neglected roadside does not leave a favorable impression; and surely the municipality should at least keep pace with the individual. Usually it should be the leader.

CONCRETE UNDER CONSTANT VIBRATORY MOVEMENT.

Much has been written of concrete, its fireproofing quality, its adaptability, and its cheapness, stress in concrete, the allowable loading, and such like, have furnished texts for many articles and books, but concrete under repeated loads, the action of concrete under constant vibratory movements is not so well known, has not been so thoroughly investigated, nor written about.

Stone buildings have stood for ages beside wagon roads, but will concrete stand the vibratory motion, the repeated shocks caused by motor cars, motor drays, traction engines and the street cars of modern traffic?

This is a matter for the architect and structural engineer, and we are pleased to know that in some measure the question is being investigated.

What is the increased depreciation in concrete structures due to, repeated loading or vibratory motion?

PROBLEMS IN STATICS.

Some of our readers say our articles are too technical, some say they are not technical enough. Some say there is not enough theory, and others that there is too much. This week we commence a series of articles that we hope will combine both theory and practice.

Mr. T. R. Loudon, B.A.Sc., has consented to solve twenty-six problems that admit of easy solution by the methods adopted in statics. Those anxious to go more fully into the theory of the problems will find Mr.