The Canadian Engineer WEEKLY

ESTABLISHED 1893

Vol. 17.

TORONTO, CANADA, SEPTEMBER 24th, 1909.

No. 12

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 othe	r Countries :
Six Months -	- \$3.00 - 1.75 - 1.00	One Year - Six Months -	- \$3.50
Copies Antedating ADVERTIS	This Issue by EMENT RAT	Two Months or More, ES ON APPLICATIO	25 Cents.

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

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

Winnipeg Office: Room 315, Nanton Building. Phone 8142. G. W. Goodal¹ 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, SEPTEMBER 24, 1909.

CONTENTS OF THIS ISSUE.

Editorials.

Technical Societies	
Chemistry and Engineering	337
Water Consumption	337
Water Consumption	338
Cement Market i. Newfoundland	338
Timber Crops	338
Leading Articles:	
October Star Map	359
Vertical Air Pumps	
Earth Roads	350
Tar and its Uses in Road Construction	351
Poteining and Povetnesst W 1	353
Retaining and Revetment Walls	355
Characteristics of the Artist-Engineer	342
Sanitary Review:	
Percolating Filters	345
Civic Hygiene	347
Legal Notes	
Railway Earnings	349
Construction Norma	344
Construction News	361
Market Conditions	364

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.

TECHNICAL SOCIETIES.

With the end of September comes the opening of the engineering societies throughout the country. Many engineers look upon the old evenings of fall and winter as delightful times for private reading and quiet evenings in the home. Others take an interest in technical societies and clubs and such institutions as may be used to improve their knowledge of the different branches of engineering and make them more efficient in their chosen calling.

Already we have heard on the street the perennial complaints: "Some members use our club to their own advantage too much."

"Why this waste of time?"

"Such general papers are of no value."

"Some papers last year were so highly technical in character that we could not listen to them."

That all money and time spent by and at these organizations is well spent we do not pretend to believe, but with all their faults these societies are strong factors in the professional life of the engineer.

We wonder sometimes if the "dissatisfied member" recognizes that those who get the most out of the society are the members who put most in. Because a man gets good because he does good, don't "grouch," but dig in and take your part. Do something to increase the standing and influence of the society. If you cannot read a paper, aid in discussion, interest someone who can. If you know of an engineer who has had good experience and is likely to be able to give an interesting paper, let the Executive know, and every chance you get boost, don't knock.

We do think, though, that the membership in general might be more largely interested in the work of each society if special committees were appointed, and under the direction of experienced chairmen they were led to investigate certain engineering problems.

Every city that has a branch of the Canadian Society of Civil Engineers or an Engineers' Club has also a university. The university in each instance has a capable staff and a laboratory. Both the university and the society would gain by demonstrations, tests and experiments made with the university plant and machinery.

The varying branches of Canadian industries require the engineer. Few engineers have the laboratory equipment that will enable them to investigate problems. The engineering societies and the universities should unite and assist.

Why not make a start in your society this autumn?

CHEMISTRY AND ENGINEERING.

The recent report of a chemist on a water supply for a Canadian town has impressed the necessity of a closer alliance of chemistry and engineering, or, if you like, engineering and chemistry.

In the industrial plants throughout Canada the chemist has made many discoveries which were rapidly converted into successful manufacturing ideas, and for these the chemist must receive full credit. But as a rule the trained chemist is locked up in his laboratory and