



The Manitoba Professional Engineer

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NO. 3

37th Annual Meeting of B. C. Association By L. A. BATEMAN, P. Eng.

(Editor's Note: L. A. (Len) Bateman was scheduled to receive an award at the Fall Frolic. However, he was unable to be present at the dance as he was attending the Annual Meeting of the B.C. Association.)

Following the pattern of the last two years, representatives of the four Western Provinces have been sent to the annual meetings of the other Professional Engineering Associations.

It was to their 37th Annual Meeting, therefore, that I was sent to B.C. to report for our Association. Alberta sent one representative and Saskatchewan sent two.

The meeting was a two-day affair, covering Friday November 30th, and Saturday December 1st. The four western provinces held a public relations committee meeting on Sunday morning, December 2nd.

It would be too lengthy to report on the meetings in detail, so I shall list some of the highlights and my impressions.

British Columbia has fairly large numbers of engineers in various sections of the Province and the Association is, therefore, organized in Branches. Representatives from each of these Branches presented reports outlining the activity in their respective Branches. These are patterned somewhat along the same lines as Sections of the Winnipeg Branch of The Engineering Institute of Canada in that they serve the local members in the dissemination of technical information at organized meetings with speakers, and for fellowships and social activities among the members and their wives.

The reports were followed by a luncheon, which had as its main functions the presentation of registration certificates to newly registered engineers, the presentation of prizes to students in the University, the presentation of life memberships in the Association, and the presentation of a prize to the man making the best report on his work leading toward registration.

The past presidents and distinguished members of the profession acted as hosts to the new members in a short "get-acquainted" meeting preceding the luncheon. The whole manner in which the luncheon and presentations were handled was impressive and in my opinion a worthwhile internal public relations program.

The afternoon session on Friday and the morning and afternoon sessions on Saturday were taken up entirely in hearing reports of Committee Chairmen, of which there were approximately 20.

Some of these items are of particular interest to us in Manitoba, as we continue to expand our function and program of greater service to the Professional Engineers of this Province.

The B.C. publication, now in its seventh year, has a circulation of some 3,600 copies. It is the Journal of the Association and has

made progress from the red to the black side of the ledger financially. Its net cost to Association members has gradually been decreased until now it is approximately 41c per year per subscription. As the costs are further decreased and as the advertising revenue increases, the Association will have more space for coverage on its own affairs. An Editorial Board, which meets once each month, handles policy and is responsible to Council. They have a difficulty in common with our publication — finding reporters.

The engineer placement service of the Association reported a decrease in requests for engineers this Fall, although they had placed some 325 engineers who made use of this service up to the time of the Annual Meeting. This number was down some 30% over last year. There are still 110 applications for engineers on file, the biggest demand being for civil engineers. The planning and design requirements in British Columbia have apparently levelled off, as reported by the Association.

In Public Relations the B.C. Association employs a member of the firm of McConnell Eastman on a fifty percent time basis. The coverage of the Annual Meeting that I saw in the local papers certainly left something to be desired. The Association Public Relations Committee believes that good public relations within the Association is a first desirable objective. The meeting, however, was a poor indication of interest on the part of the 1,874 registered members, 1,108 Engineers in Training and 751 Student Engineers, who form the Association membership, for there did not appear to be more than 250 people at any one meeting, and while the membership is spread over the Province, those in the Vancouver area certainly could have been represented in larger numbers. However, the Chairman of the Public Relations Committee made an excellent report on the program and progress over the year, which is worthy of serious study by our Association's Committee.

A problem raised by the Dean of Engineering, Dr. Gunning, in connection with registration of scientific personnel and physicists, provoked some serious discussion and a new committee is to be set up next year on this problem. The B.C. Association purchased its own building some 4 or 5 years ago. The site has appreciated considerably since its purchase. It provides office space for the permanent Registrar and his assistant, along with the clerical staff of four women. They are now discussing a new building which would be a mark of tribute to the profession. The meeting was in favour of an increase in fees if necessary to help finance such a project, even though their fees are now the highest of any Association of Professional Engineers in Canada. The annual fee in British Columbia is \$27.00.

The foregoing provides a few facts and im-

pressions I gathered while in attendance at the Annual Meeting of the Association of Professional Engineers of the Province of British Columbia. One thing is certain, I can now appreciate that the B.C. Association has its problems, just as we in Manitoba have ours, but when seen from a distance things seem just a little greener than when you get to the middle of the field.

E. F. Cook, M.B.E., formerly a member of the Manitoba Association, has been elected to a life membership of the B.C. Association.

George Lipsey, P. Eng., who is a member of the Manitoba Association, was elected Vice-President of the B.C. Association at their recent annual meeting.

President's Message

By J. HOOGSTRATEN, P. Eng.

As 1956 draws to a close, we can look back on an eventful year in Association affairs. This year saw the removal of the twenty-five dollar registration fee, and for the first time since incorporation, an increase in annual dues.

The opening of an office with a full-time secretary under the direction of the Registrar was a major step in our development, and as events have shown, an undertaking that was long overdue. For I must own that the volume of work passing through the office has been a source of surprise to me, and has at the same time brought me to the full realization of the heavy burden that we have imposed these many years on the Registrar, Charlie Landon.

An increase in membership of some forty-five percent has been achieved this year, bringing our total registration at 850, to a figure that for the first time places the Association as truly numerically representative of engineers in Manitoba.

The publication of the News Letter, now firmly established, and the inauguration of the annual "Frolic" were other firsts and will prove invaluable instruments in clothing the administrative functions of the Association with that warmth of personal relationships so essential to successful operation.

This year has been a busy one for everyone in the engineering world, and all should feel that this coming holiday season has been well earned. I bring you Council's greetings and the wish that you will enjoy with your friends and families a Merry Christmas and a Happy New Year.

Published by the Association of Professional Engineers of the Province of Manitoba
418 — 265 Portage Avenue, Winnipeg 2, Manitoba

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Vice-President — N. S. BUBBIS, P. Eng.

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The Manitoba Professional Engineer is published under the direction of the Bulletin Committee,
A sub-committee of the Public Relations Committee.

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The Association Year End

By G. T. CHRISTIE, P. Eng.

At about the same time as this newsletter is circulated, nomination forms for council membership in the A.P.E.M will be in the mail.

While we all realize that the opportunity to nominate members for council exists, how many have considered the fact that it is but a simple matter to do so, as only three nominating signatures are required to sponsor a candidate. This makes it possible for nearly everyone of us to become active in the true sense of the word, should we know of potential leadership that is likely to be overlooked, or should we feel that a segment of our professional group might be represented to a better degree.

We on the newsletter staff like to feel that this organ is here to emphasize the situation, and to create a closer personal contact with the activities of the association, particularly to do with council and committee matters. In this issue we have biographies covering the remaining members of the 1956 council not covered in previous publications. It has been the intention to give the membership an idea of the technical and personal backgrounds of their representatives so that considerations can be given to the foregoing thoughts with respect to the possibility of introducing new nominations for council that will keep the organization alive and progressive. We have been most fortunate to date in having excellent leadership, but it must be remembered that previous councils operated without the advantages of an association office, secretarial staff, and an association publication.

There isn't much time to consider election nominations, and we would emphasize the urgency of action in this regard. At the same time, we would add, the message that this year the annual meeting on January 17th will be covered in both afternoon and evening sessions to be held at the Marlborough Hotel. The afternoon sessions will hear committee reports while the evening sessions will cover general business. These sessions are open to all and your attendance will serve as a recognition of the increased activity within the association.

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Hungarian Refugees

Will They Get a Helping Hand From You?

The plight of the Hungarians has been presented to Canadians in the daily newspapers, on radio and television, and it is not necessary to go into further details of this disaster here. This Association is primarily concerned with the future of those refugees who come to Manitoba to start a new life. They will need clothing bedding, accommodation, and most important of all they will need jobs.

The Immigration Department will give this Association a list of those refugees who come to Manitoba who are engineers or who have

had engineering experience. It is our hope that we will be able to rise to the occasion and find employment for them. In this regard we solicit the help of every member of this Association. Please advise the Association office of any positions which are available for engineers or draughtsmen. Jobs available for unskilled personnel may also be reported to the office.

Let us take time out during the approaching festive season to give a few sober thoughts to those people who have had to fight for the freedom that we in Canada are blessed with. If you can offer assistance in any way, please contact the Association office, 418 — 265 Portage Avenue; telephone 93-6745.

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Letters to the Editor

The Editor.

Dear Sir:

The Dominion Council of Professional Engineers is again conducting a survey of salaries paid to members of the Engineering Profession in Canada. Similar surveys were conducted by the Dominion Council in 1955 and in 1954, and by the A.P.E.M. for Manitoba in 1953 and in 1952. Returns to all four of these surveys from Manitoba engineers were disappointingly low being only about one-third of the membership. It is not possible to obtain a completely true picture of engineering salaries in Manitoba from such a low number of replies to the questionnaires, and consequently it is not possible to make much use of such returns. Those in charge of engineering salaries will not, and cannot be expected to accept salary surveys which represent only a minority of the members of our Association.

All members who can possibly do so are therefore urged to fill in and return the questionnaire which is being mailed out, and in doing so to give very careful consideration to the information requested.

It is realized that, for various reasons, all members are not in a position to fill in the questionnaire. One reason for this is that some members may not be, or think they are not, truly employed as engineers. Before discarding the questionnaire for the above reason, careful consideration should be given to the following questions:

- (1) Would you be in your present position if you did not have an engineering education and a background of engineering experience?
- (2) Could a non engineer fill your position as effectively as you do?
- (3) Are important decisions made by you dependent upon your engineering education and experience?

If the answer to any of the above three questions is in the affirmative there is no doubt that you are acting as an engineer and should fill in and return the questionnaire.

Again to all members — you will be assisting the Association, yourself, and your fellow members, by completing the questionnaire.

J. B. STRIOWSKI, P. Eng.,
Chairman, Salary Committee.

Staff Appointments

G. T. Christie, P. Eng., Editor of The Manitoba Professional Engineer, wishes to announce the following appointments:

G. A. Tough, P. Eng.—Photographer.
W. A. Dexter, P. Eng.—Reporter (Wpg.)
C. R. Young, P. Eng.—Reporter (Wpg.)
W. J. Perdue, P. Eng.—Reporter (Wpg.)
H. A. MacKay, P. Eng.—Reporter (Selkirk)
A. G. MacKenzie, P. Eng.—Reporter (Lynn Lake)
J. Peacock, P. Eng.—Reporter (Brandon)
C. S. Crocker, P. Eng.—Reporter (Snow Lake)
John Duerksen, P. Eng.—Reporter (Swan River)

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Congratulations

To Mr. and Mrs. G. C. Booth, on the birth of their son, Jon Whitley.

To Mr. and Mrs. George De Pauw, on the birth of a daughter, Lori Ann.

To Mr. and Mrs. W. J. Adams, on the birth of a son, Robert James.

To Mr. and Mrs. J. S. Kingdon, on the birth of a daughter, Faye Dorothy.

To Mr. and Mrs. R. G. Nizalik, on the birth of a daughter, Melody Lynn.

To M. J. McGregor, P. Eng., and June Lillian Rodgers McGregor, who were recently married.

To E. J. Conway, P. Eng., and Margaret Rose MacRae Conway, who were recently married.

To Mr. and Mrs. A. R. Caton, Selkirk, on the birth of a daughter, Mary.

To Mr. and Mrs. G. C. Cartwright, on the birth of a daughter, Elizabeth Jane.

To Mr. and Mrs. C. R. Bouskill, on the birth of a son, David Ralph.

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Are you doing your fair share in the department of vital statistics??

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News Items

Members are requested to telephone the Association office, 93-6745, regarding any news items concerning births, marriages, promotions, appointments, etc. The success of this venture depends, to a great extent, on the cooperation and support of the members. Would any members who are interested in assisting with the publication of this paper, please contact the Association office.

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W. J. Patton, P. Eng., Chief Engineer in Western Canada of Mexico Refractories Company has been transferred to Edmonton. Bill Patton took an active interest in this Association's affairs and was one of the most frequent visitors to the office. He will certainly be missed. We wish him well and hope that he may still be able to pay us an occasional visit.

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PORRIDGE, ANYONE?

Charlie Landon and Tom Kirby recently held a lengthy discussion in the Association office on the best method of making porridge. Mr. Kirby claimed that it should be made in the evening, placed in a thermos and served the following morning. Anyone wishing to have the recipes of these two famous chefs may procure them by mailing 10c to the Association office.

News from the North

By M. N. COLLISON, P. Eng.

FLIN FLON—Once again our news starts off with an announcement concerning W. A. Green, P. Eng., General Manager of Hudson Bay Mining and Smelting Co. Limited. Mr. Green has held this position since 1937 and just recently was appointed Vice-President and Director. Mr. Green has been associated with Hudson Bay Mining and Smelting Co. Limited since 1925 when he first visited this area, prior to the installation of the original pilot mill and preliminary tests resulting in the founding of this plant and the subsequent growth of the town to the third largest metropolitan area in Manitoba. Mr. Green was warmly congratulated by his many friends and associates at a small spontaneous reception tendered him when he returned from his vacation in the east on November 21st.

Several local professional engineers are employed by the Hudson Bay Mining and Smelting Company in its research department. Among these, G. H. Dash, P. Eng., known as Gord, has recently moved from the island in Ross Lake to a home he has purchased in the Birchview Subdivision in order to give his daughter a little more room to play. He was just recently registered as a professional engineer.

L. G. Guglielmin, also a new member of the Association, became the father of a second daughter last September. R. K. Bradley, P. Eng., or Ken, already has three daughters. In addition to these three, there is Frank (R.F.) Pearson, P. Eng., who announced the arrival of a son in September. Frank now has two boys and only one daughter. Whether his having the two boys has anything to do with square dancing we do not know, but he is one of the better square dance callers in town and can usually be found at the Whirling Willows Club out Willowvale way. He has a very nice rhythm (in his calls). Our congratulations to him on his registration as a professional engineer, and also to the other two researchers.

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CALLING THE PAS

To date we have been unable to locate a reporter in The Pas area. Would the professional engineers in The Pas please put their heads together and nominate one of their number to act as reporter for this paper. We are getting excellent coverage in Flin Flon and are reluctant to see The Pas neglected.

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LYNN LAKE

By A. G. MACKENZIE, P. Eng.

A. E. Gallie, P. Eng., Manager of Sherritt Gordon Mines Ltd., has been appointed a Director of the Company.

M. R. C. Mitchell, P. Eng., Chief Engineer for Sherritt Gordon Mines Ltd., has returned to Lynn Lake after spending his vacation in the Toronto area.

A. F. Gregory, P. Eng., exploration geologist at Sherritt Gordon Mines Ltd., is an ardent 35mm fan and was largely responsible for the formation of a 35mm club at Lynn Lake.

Angus G. MacKenzie, P. Eng., formerly in charge of all field operations for New Peninsular Oil Ltd., in the Gaspé Peninsula, is now Assistant Chief Engineer with Sherritt Gordon Mines Ltd., at Lynn Lake.

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SNOW LAKE

C. S. Crocker, P. Eng., reports that all the registered professional engineers in Snow Lake are avid curlers. Perhaps a new Manitoba or Canadian champion is developing.

HIGH-FIDELITY

By G. A. TOUGH, P. Eng.

Most people consider high-fidelity or hi-fi, as it is often called, to be a development of the last few years. It is quite true that only recently has hi-fi come into relatively widespread acceptance and use. Actually, the phrase "high-fidelity" was coined about thirty years ago, and the pursuit of hi-fi has existed since the invention of the recording process.

There is no standard definition of high-fidelity, with the result that it means different things to different people. The most widely accepted description seems to be "faithful reproduction". Music is composed with the intention that it will be heard directly by the human ear as in a live performance, and not through a loudspeaker. Therefore, when music is heard through a loudspeaker, it should sound to the listener as if he were listening to an actual performance in a concert hall. Concert hall reproduction in your own living room, then, is the goal of high-fidelity.

I say goal purposely, because high-fidelity is not an absolute. Too often the impression is given that the purchase of a particular set of components or a particular recording immediately conveys a top level of musical sound. Such is not the case. A high-fidelity component in an otherwise poor set-up won't provide hi-fi reproduction.

For that matter, there is no such thing as absolute fidelity even when the listener is in the presence of the performer. The acoustics of the concert hall, the listener's location in the hall, the idiosyncrasies of the listener's ears, all affect what is heard. When even the best recording and reproducing system comes between the listener and performer, there is still further alteration of the sound. Thus, high-fidelity is not an attained state; it is the pursuit of an ideal.

It is at this point that we become aware of the two different types of hi-fi enthusiasts. Music lovers use high-fidelity equipment as a means to an end — that of obtaining good quality music reproduction in the home. The audio fan, on the other hand, is more interested in the equipment itself, and uses music solely to demonstrate the capabilities (and limitations) of his hi-fi equipment.

While the reproduction of music from records is the most frequently encountered use for hi-fi equipment, it is by no means the only use. Any radio program will sound much improved if heard over a hi-fi set. The audio portion of television programs will similarly be improved if heard via high-fidelity equipment.

Hi-fi imposes a number of requirements on the reproducing system. First, it must be capable of reproducing all the frequencies present in the original music. This means that it must pass a band of frequencies of from approximately 20 cycles per second to 15,000 cycles per second. The piano, for example, has a frequency range of from 20 to 6,000 cycles per second, including fundamental tones and their harmonics. The cymbals have a range from 400 to 12,000 cycles per second. To extend the frequency range beyond 15,000 cycles per second would be of questionable value, since the average human ear does not respond to frequencies above this value.

By way of comparison, intelligible conversation can be limited to a range of 100 to 2,500 cycles per second, as is done in telephony. An average radio receiver has a frequency range of approximately 100 to 4,000 cycles per second. It can be seen that an extended frequency range is not absolutely essential to the understanding and enjoyment of musical reproduction, but it does give a

truer representation of an actual live performance.

Lack of distortion in its many forms is the second requirement for hi-fi. False sound may be introduced into the reproduction of music by any of the components of the phonograph system: by the turntable; by the needle and pickup; by the pickup arm; by the amplifier; by the loudspeaker and its enclosure; and by the room in which the music is heard. Good design of each individual part of the system will reduce distortion to a negligible value.

A consideration of the various components may be of use at this point. The phonograph needle or stylus follows the wiggles of the record groove and transmits the mechanical vibrations to the pickup. It has a hemispherical tip which rides on the V-shaped record grooves, and is subject to wear. A worn stylus will cause distortion so a hard-wearing stylus is to be preferred — diamond, sapphire and metal, in that order.

The pickup is a small cartridge in the end of the tone arm which holds the stylus, and converts the mechanical movement of the stylus into electrical signals. A poor pickup can result in poor reproduction no matter how good the rest of the system. There are two general types — magnetic, which are miniature electric generators, and crystal, which depends on piezoelectric characteristics. As a class, the magnetic pickups are superior to the crystal pickups.

Pickup arms and turntables usually are purchased as a single unit, though the enthusiast may prefer to purchase them separately. The arm can introduce distortion by virtue of its length, angle, mounting, and method of attaching the pickup cartridge. The turntable must have exact speed, not only in the number of revolutions per minute, but also during each revolution. A heavy flywheel type turntable is used on many players to maintain even speed.

The amplifier section of a hi-fi system can be divided into two parts — the power amplifier which amplifies the electrical signals sufficiently to operate the loudspeaker, and the pre-amplifier. This unit generally includes bass and treble tone controls, volume or loudness controls, and possibly other controls for changing the frequency (tone) balance in the voltages entering the pre-amplifier from the radio, TV set, or phonograph pickup. The two units may be physically separate, or may be obtained as one unit.

The loudspeaker is the final link in the chain of components that make up the reproducing system. It is the unit that changes the electrical energy into mechanical motion, and so into acoustic energy which our ears detect as sound. Loudspeakers consist of a cone which is moved by a moving coil in a static magnetic field.

It is a difficult job for one speaker to reproduce all frequencies from 20 to 15,000 cycles per second, with the result that two or more speakers are used instead. One speaker, the woofer, will produce the low frequencies, say from 20 to 600 cycles per second, while the second speaker, the tweeter, will produce all frequencies above this. The woofer is usually much larger in size than the tweeter, in order to produce the low frequencies. Some speaker systems use two or more small woofers to duplicate the performance of one large one.

A hi-fi system is only as good as its weakest link, but if proper care is exercised in the choice of components, a system will be obtained which will reproduce music to the satisfaction of any listener.

MEET YOUR COUNCIL MEMBERS

A BUSY ENGINEER



Nathan S. Bubbis, P. Eng., 1956 Vice-President of the A.P.E.M., was born in Philadelphia in 1912. He received his education in Winnipeg, ending up with a B.Sc. in civil engineering at the University of Manitoba in 1934. His basic training as a new graduate followed a familiar pattern to most engineers who stepped out into their profession during the depression.

His first work was as a bricklayer's and plasterer's helper, and if any of the members still have a 1920 vintage house that has magnesite stucco hanging from its outside walls, we are sure that friend "Nat" could still dig in and correct the situation with a first class job.

He joined the City of Winnipeg engineering department in 1934 as a pipe plant inspector, later transferring to the drafting and design branch before moving up to the position of engineer-in-charge. During the period 1942-45, "Nat" was attached to the Royal Canadian Artillery, 13th Battery, 38th Field Regiment (Reserve).

In 1944, he was promoted to engineer of water works and sewage, holding this position until 1948. Since that time he has been general manager and chief engineer of the Greater Winnipeg Water and Sanitary Districts. During the 1950 flood situation, his position placed a direct responsibility on him which resulted in his being made chairman of the City of Winnipeg Rehabilitation Committee, notwithstanding all of the other technical problems which confronted his municipal responsibilities.

Wife Rose and Daughter Roslyn Cecile take over where the City and suburban councils leave off, so it takes a man with tact to hold down this full time job.

Apart from his association membership, he belongs to the following list of technical and executive groups, holding many official appointments within them:

The Engineering Institute of Canada;
American Water Works Association;
Canadian Institute of Sewage and Sanitation;

Western Canada Water and Sewage Conference (Here he was awarded the Lindsten Memorial Award for outstanding work in promoting interest in the conference activities);

American Public Works Association;
Federation of Sewage and Industrial Wastes;
and the Community Planning Association of Canada.

How he does it we don't know, but "Nat" finds time for curling, gardening, and fishing, as well as playing golf at the Glendale Country Club.

Donald M. Stephens

Donald M. Stephens, a member of Council of this Association, was born in Reston and attended public and high school in rural Manitoba and Saskatchewan. In 1921-22 he attended Normal School and then for four years he taught at several Manitoba and Saskatchewan points, with occasional employment as a construction worker and farm hand. In 1931 Dr. Stephens graduated from the University of Manitoba with the degree of B.Sc. C.E. He was senior stick during his final year at University. In 1932 and 1933 he did post-graduate work in hydraulics and economics. He received an honorary degree of Doctor of Engineering from Clarkson College, Potsdam, N.Y. in 1954.

In the Fall of 1933 Dr. Stephens joined the permanent staff of the Department of Mines and Natural Resources, Province of Manitoba. From 1938 until 1951 he was Deputy Minister of Mines and Natural Resources.

Dr. Stephens has served on two International Engineering Committees considering boundary water problems. He represented the Province of Manitoba on the Prairie Provinces Water Board until May 1951, and represented the three Prairie Provinces on the Forest Insects Control Board until his appointment to the Manitoba Hydro-Electric Board.

During the 1950 flood Dr. Stephens organized and directed an emergency flood forecasting unit and represented the Province of Manitoba on the Greater Winnipeg Dyking Board.

Since 1948 Dr. Stephens has been Chairman of the Manitoba Section of the Winnipeg River Interprovincial Advisory Board, an engineering board appointed by the Governments of Manitoba and Ontario, which is responsible for achieving co-ordination of power development programs of the two provinces on the Winnipeg River watershed.

Since May 1951 Dr. Stephens has been Chairman and General Manager of The Manitoba Hydro-Electric Board. Upon the acquisition in 1953 by The Manitoba Hydro-Electric Board of the common shares of the Winnipeg Electric Company, Dr. Stephens became President and General Manager of the reorganized Winnipeg Electric Company. Dr. Stephens is a member of long-standing of The Engineering Institute of Canada, and his efforts in this organization were recognized in 1954 when Dr. Stephens was elected President. He is a member of the Canadian Institute of Mining and Metallurgy, the Institute of Public Administration of Canada and the Winnipeg Branch of the Canadian Institute of International Affairs.

Dr. Stephens is married and has three sons and one daughter.

Dr. Stephens' contribution to the affairs of the Association has been great and varied and his opinions and advice are given place of first consideration in many of the decisions of Council. Dr. Stephens is completing his third term as a member of Council.

William Leslie Wardrop

William Leslie Wardrop, who is serving his first term on Council of this Association, was born and raised in Whitemouth. He received his degree in Electrical Engineering from the University of Manitoba in 1939, and his degree in Civil Engineering in 1947. For five years he served in the Royal Canadian Signal Corps and was discharged with the rank of Captain.

During the war he was stationed at both the east and west coasts of Canada, went to England and for ten months he was in Darwin, Australia. While he found the climate of Australia to his liking, he was not enamored by the insect life. In 1941 he married Olive McLean. They now have three children.

From 1947 to 1955 Mr. Wardrop was employed in the City of Winnipeg Engineering Department, for six years as Engineer of Waterworks and Sewage. Since the Spring of 1955, he has been a Consulting Engineer with W. L. Wardrop and Associates.

Mr. Wardrop is a member of the American Waterworks Association, the Canadian Institute of Sewage and Sanitation and the Western Canada Water and Sewage Conference.

During his spare time, which is very limited, he does some carpentry. He has built a mobile trailer for camping and a recreation room in the basement of his home, and he plans to build a summer cottage at Moose Lake. While he was at University and in the Army he was an enthusiastic baseball and hockey player. He is a member of Oxford United Church and was Treasurer of the Church for one year.

Les Wardrop is the answer to a meeting chairman's dream. His opinions are well considered and briefly stated. He does not think out loud and expresses himself quietly and succinctly. He remains calm and unruffled during debate, the only sign of emotion being a sly twinkle that occasionally creeps about his eyes.

The speed with which the years are slipping by was brought home sharply to Les Wardrop only recently, when his son announced that he had a "date" for Sadie Hawkins.

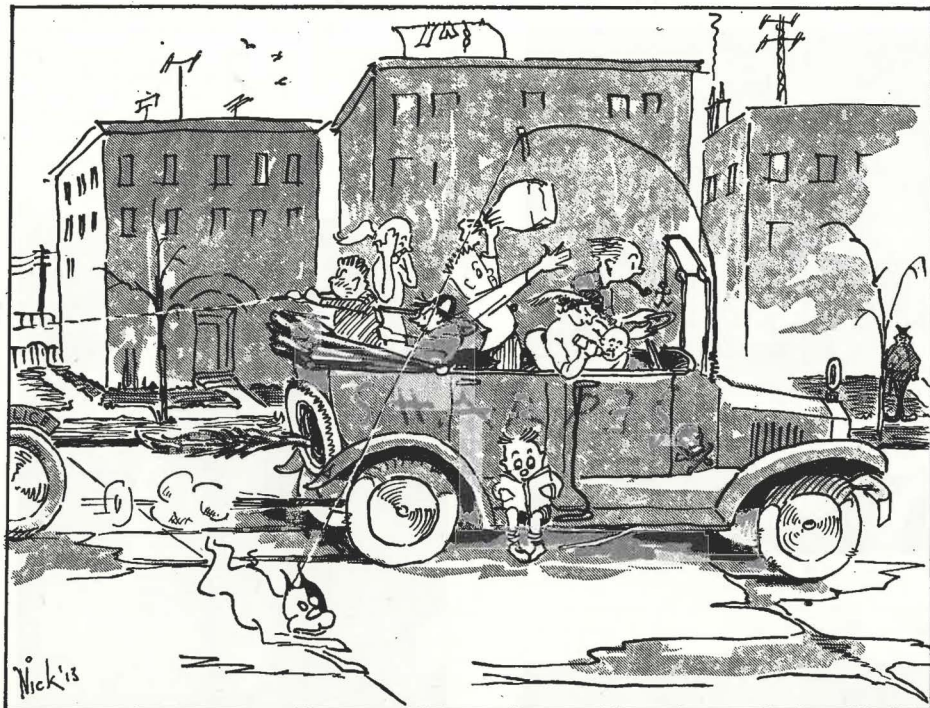
In view of his crowded schedule and many activities, there is a surprising air of serenity about Les Wardrop and his youthful appearance belies the fact that he has a son old enough for Sadie Hawkins dates.

The Canadian Construction Association has announced that applications are now being received for the 1956 fellowship for post-graduate study in construction. The deadline for the receipt of applications is December 31, 1956.

There are three main qualifications for the individual applying, namely: (1) that he be a Canadian citizen; (2) a graduate of a recognized university and (3) that he has had at least three years' employment in some phase of construction operations since graduation.

Fellowship application forms are available at the Association office.

Meet Your Council Members .. Cont'd



Father of the Year

Russell Neville Sharpe was born in Mount Forest, Ontario. His father was an engineer, whose job of supervising construction necessitated considerable moving on the part of the Sharpe family. Russell Sharpe attended school in Dauphin, Claremore, Okla., Washington, D.C., East Orange, N.J., Mount Forest, Ont., and finally Winnipeg. He received his degree of Bachelor of Science in Civil Engineering from the University of Manitoba in 1938. After graduation Mr. Sharpe again resumed the life of a Nomad. He worked for the Department of Transport at Rivers, Manitoba; he was a demonstrator in the Faculty of Engineering at the University of Manitoba; he worked for P.F.R.A. in south west and central Manitoba and then went to work for the British Air Commission in Seattle and Los Angeles.

In 1943 he married the former Eileen Dalman, just prior to enlisting in the R.C.A.F. Mr. Sharpe was the first recruit in the R.C.A.F. under a new system inaugurated at this time, whereby automatic commissions were no longer given to recruits with university degrees. A.C.2 R. N. Sharpe took his basic training and obtained his worst marks in drill. He graduated from the course as a pilot officer and served for the remainder of the war as an aeronautical engineer.

His activities are many and varied. He was on the Council of the Engineering Institute of Canada at the time the co-operative agreement with the Association came into effect. He is presently serving on the Engineers Alumni Council and is a Director of the University of Manitoba Alumni. He was a charter member of the West End Orioles Community Club and is currently active in the Riverview Community Club. He is a member of the Canadian Good Roads Association and is on the committee on directional signals for automobiles for the Canadian Standards Association. He is a member of Council of this Association and is a member of the Highway Research Board.

He is at present employed as District Engineer in the Highways Branch of the Department of Public Works of the Manitoba Government and in this same department has

held the positions of Resident Engineer, Assistant Drainage Engineer and Materials Engineer.

Russell Sharpe learned to fly in Toronto and got his pilot's licence at Barker Field in that city. He also belonged to the Yard Birds Flying Club in Seattle, Wash.

His sporting activities include tennis (which he has now given up), golf, curling and rugby. This Fall he was playing rugby with some of his own and neighboring children when a fierce tackle from a couple of five-year-olds put him on the injury list and he was benched for the remainder of the season.

The Sharpes have six children, 4 boys and 2 girls, ranging in age from 12 years to 4 months. It is an amusing sight to see this family of 8 out for a Sunday afternoon drive. Russell Sharpe is almost completely hidden from view by the heads of so many little people.

Russ Sharpe is amiable and friendly, a good citizen and neighbor. In spite of his busy schedule and the fact that he is harassed by the problems confronting a father of 6 children, there is a surprising air of tranquility about him. He looks like the kind of man who ought to smoke a pipe — and he does.

WINNIPEG

Lt. Col. George E. Cole has returned from a trip to Montreal, Ottawa and Toronto. While in Montreal he attended a reunion commemorating the 50th anniversary of his graduation from McGill University as a Mining Engineer. This is the second such expedition Lt. Col. Cole has made. In 1952 he attended the 50th anniversary of his graduation from McGill with an Arts degree.

L. A. Bateman, P. Eng., has joined the staff of the Manitoba Hydro Electric Board in the System Planning Division. Mr. Bateman was with City Hydro from April, 1942 until his resignation in November, 1956, at which time he was General Superintendent in charge of Production.

Brian Akins, a 1956 graduate of the University of Manitoba, has been awarded the top prize of \$150 in the sixth annual Canadian Construction Association competition for his thesis on "Techniques of Winter Construction." Mr. Akins is an engineer in training with this Association.

C. L. Fisher, P. Eng., was elected a director of the Canadian Good Roads Association at the 37th annual convention held recently in Quebec City.

M. Lasko, P. Eng., has been appointed Winnipeg District Engineer of the new district office opened by CSA Testing Laboratories in Winnipeg.

Douglas L. McLean, P. Eng., has recently retired as Superintendent of the Greater Winnipeg Sanitary District. Mr. McLean, who was born in Ottawa, has had half a century of engineering experience and training under some of the most eminent engineers of the continent. Mr. McLean has always taken an active interest in the Engineering Institute of Canada and the Association of Professional Engineers of the Province of Manitoba. He was a member of Council of the Association in 1925, 1926, 1927 and 1928 and was President in 1926.

Mr. McLean is the first and only Canadian engineer west of the Great Lakes to be given the Arthur Sidney Bedell Award for outstanding personal service in the sewage works field.

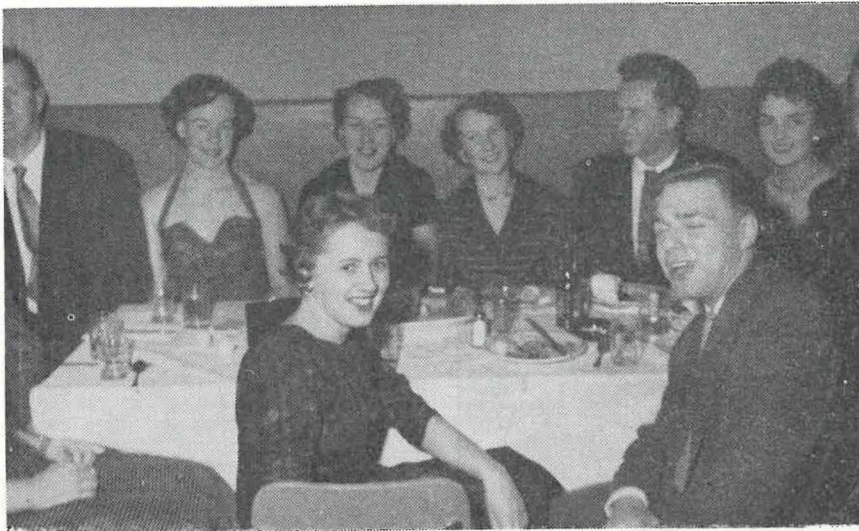
Mr. McLean is now re-entering the consulting engineering field in Winnipeg.

I. B. Henderson, P. Eng., has been appointed General Superintendent of the Greater Winnipeg Water District, replacing Mr. George McFadden who retired after 40 years' service. Mr. Henderson was born in Brandon and is a graduate in Civil Engineering of the University of Manitoba.

A. Penman, P. Eng., has been appointed Superintendent of the Greater Winnipeg Sanitary District, to fill the post left vacant by the retirement of D. L. McLean, P. Eng. Mr. Penman is a native of Dunfermline, Scotland, and was educated in India and Edinburgh. In World War II he served with the Corps of Royal Engineers in France, Holland, Belgium and Germany. In 1951 Mr. Penman came to Canada and after a short stay in Regina he came to Winnipeg and joined the staff of the Greater Winnipeg Sanitary District.

R. S. Williams, P. Eng. and Mrs. Williams have returned to Winnipeg after spending two weeks in eastern Canada and the United States. Mr. and Mrs. Williams attended several shows in New York and were at the Grey Cup game and subsequent victory dance. Mr. Williams also attended the Schenley dinner. Ray Williams was in Montreal after the Grey Cup game and reports that the natives were really ready to admit defeat this time, although they certainly had no premonition that the West would clobber them. After his hectic tour, Ray was glad to get back to Winnipeg for a rest.

Talent Galore at Fall Frolic



Back Row — Jack Tulloch, Barbara Tulloch, Mrs. A. B. Buchanan, Donald Schell, Al Schell, Shirley Nasser, One-Eyed Al Buchanan.
Front Row — Margaret Bassington, Evan "Stoney" MacKenzie.



Bill Dickins, Mrs. George Newman, George "Stoker" Newman, Jon Johnson, Mrs. Johnson, Ken Hallson.

A capacity crowd turned out to the Association's Fall Frolic at Jack's Place on November 30th. A gaol and judge's stand, designed and constructed by George Newman, P. Eng., attracted a good deal of attention and several prisoners. The judges, Scotty Borgford and Charlie Landon, were suitably attired in gown and wig and collected a total of \$1.93 in fines. President Hoogstraten had the questionable honour of being the only two-time offender. The second time he was arrested he ungallantly insisted that his dance partner be taken off to gaol with him. However, good Samaritans like Fred Lindenschmidt and Charlie Ireland paid the lady's fine and she was soon freed.

The Master of Ceremonies' duties were shared by Tom Weber and Ken Hallson, both of whom did a fine job. Ken Hallson presented the awards and read the citation accompanying each one. Jack Hoogstraten won the design award — a large pair of rubber gloves — for having solved the problem of how to clean small ducks, when one has exceptionally large hands. The Good Housekeeping Award went to Craig Somerville, who was presented with a red and white apron, shaped like a pair of bloomers. The apron was designed and made by Mrs. W. J. Adams. Bill Adams won the award for the greatest

success in animal training. Bill had just recently housebroken his dog in the record time of thirty-eight and one-half days and was presented with a jar of dog deodorant and a box of sawdust for his prowess. The Award for Outstanding Courage went to Bill Lynn, for having refused to succumb to his wife's plea for a new \$40.00 hat. Bill was presented with some veiling and two lovely feathers so that he might make his wife a hat. Bob Gottfred won the Style Award and received a hat, shaped like an umbrella.

There are certainly some fine dancers among the engineers and several top-notch performers were noted at the Frolic — Dick Schaller (one-step), Hans Neufeldt (rhumba), Vern McGregor (jive), and Wilf Ducharme (waltz). Top honours for manoeuvrability went to Ray McQuade. In spite of the large crowd on the dance floor, Ray seemed able to pilot his partner about with grace and ease.

The engineers obviously have the nucleus of a very fine male voice choir. This heretofore undiscovered talent made a successful debut at the dance. The fine tonal qualities of Doug Anderson, Jack Yellowlees, Bob Handler and Jack Kemp blended together harmoniously with surprising results.

The consensus seemed to be that it was a

terrific party and much credit is due the committee in charge of arrangements. The committee included Tom Weber, Ken Hallson, Evan MacKenzie, G. C. Cartwright, Bob Young, G. B. Wiswell, George Newman, Fred Lindenschmidt, Bill Dexter, Bill Adams, George dePauw, Ian Chester, A. E. Sharp, E. V. Malmgren, L. A. Bateman and N. W. Diakiv (the hottest ticket seller on the Prairies). As the Winnipeg Free Press stated in its write-up of the dance, the engineers really "lived it up."



Award winners — Bob Gottfred and Craig Somerville.



Award winners Bill Adams, Bill Lynn and Jack Hoogstraten.



Jack Hoogstraten (in gaol), Chief Constable Bob Young and Judge Scottie Borgford.

CONSTABLE ARRESTED W. A. Dexter Stripped of Badge of Authority

W. A. Dexter, P. Eng., was one of several constables selected to maintain order at the

Fall Frolic and it is with much regret that we report that he landed up in gaol. This is not to be construed as a reflection on Co-chairmen Tom Weber and Ken Hallson, who carefully screened all the candidates for the police force. Bill Dexter certainly appeared reliable and had all the necessary qualifications. However, he proved to be derelict in his duty and committed so many infractions himself that we do not have space to record them all here. Suffice to say that once he put

on his badge of authority, he seemed to place himself above the law. Chief Constable Bob Young wanted no corruption on his force and issued a summons for Bill Dexter's arrest. Even in Gaol Bill Dexter proved to be incorrigible and on two occasions he sneaked into the women's section to fraternize with the lady prisoners. Fortunately for Bill, the gaol had to be dismantled in order to make room for another table for late arrivals and he was released.

To avoid endless embarrassment and maintain a reasonable credit rating, the "use" of three to four thousand dollars is necessary to bridge these gaps between payments. This is assuming that one has applied for the maximum mortgage and has provided the minimum required cash. This difficulty, I think, probably doesn't affect a contractor who has moneys coming in regularly from a number of houses in various stages of construction. In my case the situation was aggravated because I did much of the work myself and although progress was steady it wasn't always very fast. The whole project took about eighteen months.

The final inspection is a big day. If successful, the final payment is received and there should be enough to pay all creditors. The builder can then begin repayment of the interest on the loan, as well as a small portion on the principal. I am told that the payments on the principal will in time equal and even exceed the interest payment. I was never present at the inspections but my wife was thoroughly briefed for the big event. She must have had all the "right" answers because the inspector went away happy. Our house isn't quite conventional and it may have been that the inspector had difficulty deciding whether a certain part was incomplete or was meant to be that way. We sometimes wonder ourselves.

Premier Opens Two Plants

The new Telecables and Wires Ltd. plant in Fort Garry was officially opened on October 29, 1956, by Premier D. L. Campbell. The plant, situated on a 13-acre site off McGillivray Blvd., will manufacture paper-insulated, lead covered telephone cable in cable sizes from six pair to 2,424 pair and insulated and jacketed exchange cables. Some of the telephone cables will be capable of carrying more than 2,400 simultaneous telephone conversations. H. B. Carnahan, P. Eng., has been appointed Plant Manager, and H. O. Coish, P. Eng., has been appointed Manager of Sales and Engineering.

On October 26, 1956, Premier Campbell officially opened the new Winnipeg Light Aggregate Limited plant at Transcona. The plant will convert Manitoba clay into ingredients for building blocks. F. H. Quirt, P. Eng., the Manager of the plant, is a mechanical engineering graduate from the University of Manitoba. Prior to his association with Winnipeg Light Aggregate Limited, Mr. Quirt was employed with International Business Machines in Toronto, United States Gypsum Company of America in Plaster City, California, and with Kipp Kelly Ltd., in Winnipeg.

GUESTS

A guest book has been procured for the Association office, so that a permanent record of all visitors may be kept. The first name in the guest book, under date of October 26, is that of W. M. Scott, P. Eng. Mr. Scott, who is still actively engaged in engineering, was the Chairman of the Provisional Council of the Association. The second visitor was George E. Cole. Mr. Cole, a past president of the Association, has taken a keen interest in Association affairs over many years. The third visitor to the office was T. Medland, Executive Director of the Ontario Association. Other visitors to the office include: George Flavell, W. J. Patton, N. Mudry, J. H. Macdonald, A. E. Sharp, H. G. Riessen, James P. Blayney, Alden R. West, W. J. Adams, W. L. Wardrop, E. F. MacKenzie, Hans E. Neufeldt, Jon G. Johnson, D. M. Silverberg, J. E. Whenham, J. B. Striowski, all members of the Association.

THE HOUSE THAT JIM BUILT

Some of the Problems of House Building

By J. E. WHENHAM, P. Eng.

Some might think that this should be entitled "Some of the Problems of Home Building." One builder in the city devotes his entire time to building homes exclusively, leaving house building to other builders. Whether it is a house or a home the problems are similar.

The problems vary, however, depending on how the job is approached. This shall deal with the problems of one who has set himself up as a part-time contractor for the first time, for the sole purpose of building one house for himself and family.

The design for the house may come from a number of sources or it might be one's own dream house design. It is important to satisfy oneself in this regard but even more important to produce a plan that is satisfactory to the mortgage company. This may give no trouble if a standard design has been chosen from an approved list of plans. If, however, the design is one's own as in my case, there may be some changes necessary. I may be wrong or somewhat bitter, but it seems to me that the most likely changes required before approval are those items most closely connected with the prospective builder's own profession. The electrical engineer will be checked on the size of the panel, the structural engineer on the basement beam, and the mechanical engineer on the B.T.U. output of the heating unit. One might even be required to have a P. Eng. stamp the drawings if they deviate too far from the conventional. After approval of the plans locally they are sent elsewhere for final approval. After a week or two of beautiful weather final approval will likely arrive.

Assuming that a piece of property has been acquired arrangements may be made to begin excavation. At this stage it is still possible to change one's mind. Careful consideration at this point can prevent a lot of headaches and one may decide that the most important thing in life is not a new house. Or one might try buying a house on one of the new streets; one will always be able to tell his own house by the number over the door. I finally decided that I really wanted a house but not one of the types I had seen in some of our suburban districts. Strict supervision of the excavation is essential if there are any choice trees to be retained. It seems that any aesthetic sense that a bulldozer operator might have is overcome by an insatiable desire to watch them fall. I had gone to considerable trouble to place the house properly in order to save the nicest oaks. My property was barely recognizable after the excavation. There was hardly a square inch of the entire half acre over which the bulldozer had not passed.

At this point I was first introduced to Unemployment Insurance and Workmen's Compensation from the employer's point of view. It is quite an education in itself. Either are easily enough started; merely the acquisition of a licence to buy stamps and payment of a percentage of the estimated cost of the labor, the insurance becomes effective, in my case, not more than two weeks after my carpenters

and laborers had begun working. The difficulty with either is to get them stopped and to stop the flood of instructions, forms to be filled in, and letters inquiring why they had not been notified of my change of address when I moved in.

My labor force, a maximum of 5 at its peak, was hired on the agreement that their wages would be forthcoming regularly while my money lasted. After that time they agreed to work until I received my first advance from the mortgage company. The money was exhausted soon and before long I was receiving inquiries as to the first progress payment. Those with wives and children at home told stories of starvation and malnutrition. Overcome by this sad state I made my first request for a progress payment. It seemed to me that the house had progressed well. The concrete was poured and stripped, the floor, walls and roof were up, and the bills piling up higher daily. In due time an inspector arrived, checked and returned to his office. With all due respect to inspectors, there is a time when pressure is great from many directions, that a builder may become a little annoyed. The inspector's appraisal, particularly at the time of the first advance, is of great importance to the builder. From my experience there appears to be a tendency on the part of the inspector to become temporarily blind at this time, unable to discern even the outline of the house. Although the opportunity never presented itself, I have given some thought to leading such an inspector over the edge of the excavation and quickly back-filling — with due allowance for settlement.

About two weeks after the inspector's inspection, as I had received no word of any money, I checked, only to find that the amount due me was so small that it was thought not worth the trouble to make an advance. Here lies the biggest problem of the entire venture if one is attempting to gain the advantages of acting as one's own contractor. All requirements of the loan company may be met as to annual salary, money on hand, value of one's own labor, if any, but the house must be so far advanced in construction before the first monetary advance is forthcoming that cash on hand is long since gone and one's credit is strained to the limit. The opportunity of getting the 10% discount on the lumber account for payment within 30 days is out of the question. This situation continues through the second and third payments. Each payment received covers about half of current labor bill, materials and sub-contractors. This one point can change an enjoyable experience into a nightmare. To make matters even worse the builder is required to obtain from these same patient suppliers and sub-contractors a waiver of lien before a cheque can be issued to them. The best method of getting their signature and seal on the dotted line is to take along a token remittance in exchange for their waiver of mechanics lien. To the uninitiated this seems a queer system whereby the supplier or sub-contractor is asked to give up his right to a claim on the house in lieu of payment.

Application No. 1500

In November, 1952, Nestor Mudry, whose application number was 1000, was admitted by Council to membership in this Association. In the four years since that time, 500 applications have been received, and on October 9, 1956, application number 1500 was submitted to the Association. The applicant was James Porter Blayney. Jim Blayney was born in Brantford, Ontario, and was raised in Weston. He received the degree of B.A.Sc. (Mechanical) from the University of Toronto in 1945. For two years following graduation, Jim Blayney was employed by Dow Chemical of Canada Limited at Sarnia, as maintenance engineer of the Styrene Plant. In 1948 he went to work for International Petroleum Company Limited at Barranca Bermeja, Colombia, South America. Five weeks after his arrival the Pan American conference was held in Bogota with the ensuing riots. For 9 days the town where Mr. Blayney lived was in the hands of the "rebels." He and other members of the foreign staff of International Petroleum Company Limited moved into houses on one side of the camp, remained indoors and passed the time playing cards until the rebellion was over.

In 1949 Mr. Blayney married the former Charlie Fischer, whom he met in Colombia. They now have two girls and one boy. The Blayneys moved to Winnipeg in January, 1955, where Jim is employed by the North Star Oil Limited as Mechanical Superintendent. From a country that has two seasons, one wet and one dry and both hot, Jim Blayney has come to Manitoba, with four seasons, three short and one long and cold, but he says he prefers the latter arrangement and thinks this climate is much better for his children. He spends his spare time bowling or in his work shop at home and hopes to take up curling this winter.

We welcome applicant number 1500, James Porter Blayney, to Manitoba and to this Association.



TRANSFERS

The following have been admitted to membership by transfer:

- A. G. MacKenzie (Quebec); W. A. Farnell (Ontario); W. J. Perdue (Ontario); W. V. Lodge (Nova Scotia); N. F. Budgen (Ontario).



TRANSFERS TO OTHER ASSOCIATIONS

- W. W. Brumby (Quebec); T. R. Gunther (Alberta); H. J. Petursson (Alberta); Adam Sandilands (Ontario); W. Jarlowsky (Ontario); P. F. G. Cotsworth (Alberta).



METEORIC RISE TO FAME

Following the spectacular golf played by George Flavell in the Association tournament, which resulted in his winning the coveted Sullivan trophy and also after the publication of his picture in the last issue of this paper, the office has been bombarded with requests for autographs or a public appearance tour. We are, therefore, pleased to announce that arrangements have been completed to have George in attendance at the Association office from 12:00 to 1:00 p.m. on the day prior to the annual meeting, for the purpose of signing autographs and kissing babies (up to 21 years old).



LICENCES

Temporary licences to practice have been granted by Council to the following:

- G. E. Midgley C. D. Carruthers
- F. S. Lazier B. T. Kerr
- K. R. Burns

Dear Santa Clause

When you come calling Christmas Eve,
With your big bag full of toys,
Here's some gifts we'd like to have
For the engineering boys.

An 8-day week for our President,
Who leads a busy life;
So he can go to meetings and also spend
One evening with his wife.

For Charlie Landon will you please
Put this down in your book;
Good health, good spirits (aged in wood),
And a neighbor who can cook.

For Social Chairman Weber,
What do you think would be the chances
Of assuring that he always has
A sell-out at his dances?

For George Flavell a book on golf,
To help improve his game;
So he can carry on next year
To even greater fame.

For Membership Chairman Williams
A hundred and fifty members more
To achieve the goal of 1000
That he's been aiming for.

We'd like the stork to call around
With presents in his bill,
Then the birth announcement column
We can always fill.

In the stockings of a very few,
I wonder if you'd please
Deposit twelve one dollar bills,
So they can pay their fees.

Editor Christie would surely like
Contributions by the score
To fill up all these columns
And assist him with this chore.

And when you've finished all your rounds
And distributed your greetings,
If you have some left, for Council bring
Just one or two short meetings.

For all our members we would ask,
For every engineer,
Good health and wealth and happiness
Throughout the coming year.



A Report from the Ladies

Beginning with this issue, the *Manitoba Professional Engineer* will report on the activities of the Professional Engineers' Wives Association. This Association has a membership of 147. A luncheon is held each month. The highlights of the meetings are the pleasant associations and the guest speakers. This season the ladies have heard Mrs. Anderson from the United Nations Association and Rev. W. G. Martin, who related experiences of his east Arctic travels.

A membership tea is held each Fall, and this season 24 new members have joined the Association. In February a coffee party is held to raise money for scholarships for deserving engineering students. On December 5th the annual tea and shower was held at the home of Mrs. J. C. Davis. Gaily wrapped gifts were brought for distribution among T. B. patients.

- This year's executive is as follows:
 President—Mrs. C. A. Antenbring
 1st Vice President—Mrs. M. D. Young
 2nd Vice President—Mrs. D. H. Stratton
 Secretary—Mrs. John Henderson
 Treasurer—Mrs. M. F. Dixon
 Social Convener—Mrs. H. N. Gawley
 Membership Convener—Mrs. H. R. Hopper
 Project Convener—Mrs. D. G. Curiston
 Counsellors—Mrs. C. L. Fisher
 Mrs. W. R. Taylor

NEW MEMBERS

The following have been registered as members of the Association of Professional Engineers of the Province of Manitoba.

- | | |
|-------------------|-----------------|
| J. S. Anderson | G. A. Muir |
| A. E. Jerome | P. B. Cleugh |
| F. H. Foord | E. J. Conway |
| W. R. Torrance | W. A. Cook |
| H. R. Hopper | H. F. Hurlbut |
| G. P. Berthin | A. M. Leiterman |
| R. G. P. Morgan | S. Olenik |
| J. N. Warrenner | G. W. Patterson |
| S. C. Suggest | B. W. Torell |
| J. R. M. Marchand | G. T. Williams |
| H. S. Lundy | J. G. Johnson |
| E. Kuiper | J. P. Blayney |
| H. N. Andrews | B. Whitfield |
| A. F. Klymchuk | J. B. Morley |
| Austin Douglas | |



Our Publication

The continued publication of this paper is going to depend to a large extent on the amount of support that we receive from members. Some members have little time and perhaps little aptitude for this sort of work. However, EVERY member can assist us by completing the form below and mailing it to the Association office, 418—265 Portage Ave., Winnipeg 2. Some members of the Association are putting a great deal of time and effort into this publication. In order to continue, we must have some information about the members of the Association. Will you make your contribution by completing this form and mailing it to the office today.

Name
(Please Print)

Branch of Engineering
If you have done engineering work in a country other than Canada, please indicate where

.....
.....
.....

Have you been engaged in engineering work in Manitoba for 40 years or more?

Would you be interested in working as a reporter on the paper?

As a photographer?

What are your hobbies?

.....
.....
.....

Have you any suggestions for future issues?

.....
.....
.....

Have you any comments to make about past issues?

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.....

Can you suggest the name of another member who might have something interesting to relate to us?

AT THE UNIVERSITY

By R. DIAMOND

Freshie Week

The 1956 Freshie Week got off to a big start this year with the Engineering freshmen displaying the usual antics that are expected of them by the freshmen of the other faculties. As usual, the other faculties devoted most of their singing and yelling to panning the engineers. A serious setback was encountered when "unknown persons" replaced the bronze letters at the front of the new Engineering building with a sign proclaiming the building to be the "Science Annex." The age-old feud between Medicine and Engineering once more flared up when the Meds stole an Engineering banner and had the audacity to print a picture of the Medicine freshmen holding the banner in the University paper. When the second, third and fourth year engineers registered, the excitement of Freshie Week had died down and the first year Engineers had settled down to their studies.

Engineering Float

The Engineering Float entry, although it did not win first prize, was top notch. The float was built by a group headed by "Spike" Stephenson, a third year student. The float took almost a month to build and parts were contributed by Mumford-Medland, City Machinery and Litz, to mention a few. The float consisted of twirling planets and a rocket ship which used flares for its exhaust.

Freshie Queen

The Engineering Freshie Queen was Wendy Woods of 77 Kingston Row, and for the first time the Engineers had a full-fledged girl engineering student as their queen. Wendy is registered in first year Engineering and is the fourth girl to enter this supposedly all-male faculty. The faculty is also represented on the University cheerleading squad, for Wendy has included cheerleading in her activities. She has always liked mathematics and physics and likes the first year Engineering course very much. Wendy has no plans yet as to which branch of Engineering she will enter.



WENDY WOODS

Enrollment

There are 267 students entered in first year, an increase of 10 over last year's registration. The class has been split up into morning and afternoon sections for their drafting. The registration of students in their final year totals 116, this number being split up into 48 mechanicals, 40 civils and 25 electricals. There are no geological students graduating this year. Approximately 85 of the graduating engineers are of the original class of 227 which started first year Engineering in 1953.

Contest

It is doubtful whether the "40 Beer Contest", which was held last year at one of the local parlors, will take place this year. The object of the contest is to see which of the students can consume 40 or more beers in 12 hours and last year's winner was a second year student who ended up with a total of 64. The

event received much publicity and one Ontario student, who had a low opinion of Manitoba beer, wrote in saying he had sent a sample to an analyzing lab and received a report that *his horse was sick*.

The Future

Employers are now on the campus and indications are that more than ever will be interviewing graduating students. Imperial Oil, C.I.L., Westinghouse and Marconi are a few of the many that have already been here. The largest demand, as last year, is for mechanical engineers and many of them will probably receive four or more offers of employment. Many companies are reluctant to name a starting salary for the graduates. Most of the companies that will be interviewing civil graduates will appear after Christmas exams, although many of the industrial companies are willing to accept the civils for work in the mechanical line.

Student Section E.I.C.

The student section of the E.I.C. is headed this year by Fred Gumprich, a fourth year mechanical student and he expects a larger student registration in the society than ever before. The society has had a number of speakers and films from various companies shown to the students during the lunch hour. The S.E.I.C. this year is trying to get prominent graduates from each branch of Engineering to speak to the first and second year engineers to help them in choosing the branch of Engineering they will enter. The first of these speakers was W. L. Wardrop, P. Eng., of the consulting firm of W. L. Wardrop and Associates. Mr. Wardrop is a member of Council of the Association of Professional Engineers of the Province of Manitoba. Dr. V. A. McKillop, President of the E.I.C., spoke to the students and gave an interesting and amusing talk on his engineering experiences. He then presented Terry Rooke with the E.I.C. award, an award presented to the student having the highest combination of average and participation in University activities.

Challenge

The first home game of the Bisons was on November 24th, and the Engineers challenged

the Science faculty to beat the Engineers' attendance at the game. As a result, the Engineers came out in very large numbers and made good their boast that they would outnumber the Science men. "Unknown persons" turned out the lights in the gymnasium at half-time, and the cheerleaders were coaxed into leading the Engineers in their faculty song. Many of the Engineers turned up at a party at a local fraternity house after the game. The party ended in the wee hours of the morning.

Senior Stick

The Senior Stick of Engineering this year is Terry Rooke, a fourth year mechanical.

Terry has followed in the footsteps of the previous Senior Stick who was a mechanical and like Terry was married. Terry has two young sons, one 2 years old the other 8 months. Apparently the youngsters don't keep him awake too much, for Terry has done exceptionally well in his scholastic studies. During his University years he has participated in soccer, basketball, volleyball and badminton. He received the staff award in high school and was the Junior U.M.S.U. representative in first year Science. He is undecided as to his future field in Engineering work.



TERRY ROOKE

IV Electrical Notes

Two field trips were taken during November by the class. The first of these was to the Department of Transport installations of navigational and landing approach aids at Stevenson Field. The second was to the R.C.A.F. Navigator Training School. One of the features of this tour was a visit to the large cantilever hangar. Another feature was the privilege of the officers' mess, which was extended to the class.

Two members of the class were recently honoured by having their summer thesis se-



FOURTH YEAR CIVILS CELEBRATE

At the University

lected for presentation to the Winnipeg Section of the I.R.E. In order, these students were Eric Valstyn, whose thesis was "The Short Circuit Current Study for the Manitoba-Ontario Connection" and Francis Van Humbeck, who wrote on the "Logarithmic Amplifier."



IV Mechanical Notes

This will be one of the most enthusiastic groups of mechanicals to graduate from the Engineering Faculty. Boasting a Senior Stick and various committee heads, most of the class participated in all fall sports, one feature of which was the University Road Race, in which George Dunn added a bit of colour when he ran in his shorts.

However, due to the high percentage of married men in the class, social activities have been restricted to the Friday Afternoon Club. This Club affords its members a basic study of fluid mechanics and public speaking.

Academically, things are different this year. There are new professors, new courses and a new department head.



IV Civil Notes

The fourth year civils started off their social year by having a party that wound up at Jack's Place, after it was discovered at the last moment that the Club Morocco was reserved for that night. About 20 couples attended and another party is planned after the Christmas exams. It is rumoured that part of the powerful civil hockey team that humbled the mechanicals last year, may be whipped into shape for another challenge. The class boasts the faculty sports chairman, senior U.M.S.U. representative, Brown and Gold representative and many other members of various committees. Most of the students have chosen the soils lab as their option over the Photoelasticity and Urban Development courses.



WANTED — Reporters for Class Write-Ups—Contact R. Diamond IV C.



SPORTS

By HUGH KRENTZ, Sports Chairman

In the past few years, teams and individuals from the Faculty of Engineering have been perennial champions, or near champions, in nearly every sport offered by the intramural athletic program of the University of Manitoba.

Prior to the 1955-1956 season, Engineering had won the Lieutenant W. G. Kotchapaw trophy, awarded to the faculty obtaining the highest number of points in intramural athletics, for four successive seasons. Last year, however, the Faculty of Agriculture dethroned Engineering and left them trailing in the runner-up spot. This year the point race is shaping up as a struggle between the two largest faculties, Science and Engineering, with agriculture and some of the smaller faculties looming as distinct threats to their leadership. At the present time, Science is well ahead of the other faculties, mainly by virtue of their supremacy in the track and field events. However, it is still early in the season, and anything can happen.

Although the Engineers were not intramural champions last year, they still succeeded in winning the most championships. If this seems to be a paradox, it should be noted that the

intramural championship depends not only on winning, but on participation as well, with a graded point system used to enable the smaller faculties to compete on even terms with the larger faculties. Engineers were particularly outstanding in rifle competition last year, winning all the championships, with Art Lobel winning the individual championship. Other individual champions were Dave Thompson in badminton, John Bennett in archery and Ron Pierce in skiing. In addition, Engineering teams won championships in basketball, hockey, soccer and swimming. A big upset occurred last year when Science beat Engineering in volleyball, causing the Engineers to lose the Y.M.C.A. trophy for the first time since it was put up for competition. Another era came to a close this year when the Engineering Senior A soccer team was beaten 2-0 by a fine Science aggregation, in the league finals. This was the first loss for this team in four years, and also marked the first time this team had been shut out in this period. This defeat, while not as surprising as the volleyball defeat, was rather unexpected because the Engineers had beaten Science 7-2 earlier in the year.

Elsewhere on this year's sport scene, Gordon Crabtree, a second-year Engineer, won the individual golf championship, with the Engineering golf team losing to Science by one stroke. In the track and field events, Engineering were once again runners-up to Science, with Science's Dave Drybrough winning everything he entered. Engineering did not fare too well in tennis, where Rudy Schilling, who advanced the farthest, was beaten by Jim Ionides of Arts, the eventual tournament winner. The six-man football team was in contention until the last game, in which they were beaten by St. Paul's College, while the flag-football team is still in contention. In soccer, while the senior team lost, the Junior A team won the junior championship, by downing a fighting Commerce squad 2-1 in the finals. Competition has started in several other sports, but nothing significant has occurred in them yet. This, then, is the sports picture for the Faculty of Engineering. At the present time, Engineering trails Science in the intramural race, but if Engineers can come through as they usually do in the winter sports, the Kotchapaw trophy will return to its usual resting place, the Engineering Building.



ATTENTION UNIVERSITY STUDENTS

The following is an excerpt from the By-laws of this Association:

"Any person not under 17 years of age, resident in the Province of Manitoba, and who is registered as a full engineering undergraduate in the second or any subsequent year in the Faculty of Engineering and Architecture at the University of Manitoba, may be enrolled with the Association as an Engineering Pupil, and may remain in this classification until qualified for registration."

The annual assessment for an Engineering Pupil is \$2.00, and this accrues to the benefit of the student. This means that should you be an Engineering Pupil for 5 years, at an annual assessment of \$2.00 per year, you would have a credit of \$10.00 and only a balance of \$2.00 would be required for registration and the annual dues for the year in which registration is effective.

Registration in the Manitoba Association makes you eligible for transfer of membership to any of the other professional associations in Canada. Thus, if your work should carry you outside of Manitoba, your registration in any other province is materially facilitated.

All Engineering Pupils are on the Association mailing list and receive all notices as well as copies of this publication.

Application forms are available at the Association office — telephone 93-6745.

PUZZLE

After publication of the first puzzle, two replies were received, the one submitted by D. M. Silverberg being the only correct one. Mr. Silverberg also submitted the second puzzle which appeared in the last issue. Unfortunately, this removed Mr. Silverberg from competition, and as a result no replies were received to the second puzzle. This column will, therefore, be suspended until such time as there is some demand for its return.

The last puzzle, with the answer, follows:

A perfectly flexible rope hangs over a frictionless pulley. A weight is tied to one end and at the other end hangs a monkey of equal weight. The rope weighs four ounces per foot. The combined ages of the monkey and its mother equal 4 years and the weight of the monkey is as many pounds as the mother's age. (The mother is twice as old as the monkey was when the mother was half as old as the monkey will be when the monkey is three times as old as its mother was when she was three times as old as the monkey was). The weight of the rope plus the weight is half as much again as the difference between the weight of the weight and the weight of the weight and the weight of the monkey. How long is the rope?

SOLUTION

ALGEBRAIC

At one time the monkey was "a" years old and the mother was 3 times as old, or "3a" years.

The difference in their ages is therefore equal to $x = 3a - a$

$$\text{and } a = \frac{x}{2} \text{ ----- (1)}$$

Continuing:

When the monkey was "a" years, the mother was "3a," and when the monkey is 3 times as old it is $3 \times 3a = "9a"$ years.

If the monkey is half as old it is $\frac{9a}{2}$ years,

then the monkey would be $(\frac{9a}{2} - x)$ years.

The mother's present age is $M = 2(\frac{9a}{2} - x)$

years (since she is "twice as old").

Again:

The sum of the monkey's age plus its mother's age is twice the mother's age minus the difference between their ages etc. . . and . . . this sum of ages = 4.

$$\dots 2 \left\{ 2 \left(\frac{9a}{2} - x \right) \right\} - x = 4$$

$$18a - 4 = 5x$$

Substituting $a = \frac{x}{2}$ from (1) above we get:

$$18 \frac{x}{2} - 4 = 5x \dots x = 4$$

The mother's present age "M" plus the monkey's present age "m" = 4.

$$\begin{aligned} M + m &= 4 \dots (2) \\ \text{also } M - m &= x = 1 \end{aligned}$$

$$\text{adding } \frac{2M = 5}{M = 2\frac{1}{2} \text{ years}}$$

and that equals:

- (a) The weight of the monkey in pounds.
- (b) The weight of the weight in pounds
- (c) The age of the mother in years.

Substituting in (2) we get:

$$\begin{aligned} M + m &= 4 = 2\frac{1}{2} + m \\ \text{and } m &= 1\frac{1}{2} \text{ years} \end{aligned}$$

If "l" represents the length of the rope in feet, then its weight is:

$$\frac{4 \text{ ozs.}}{16} l = \frac{1}{4} \text{ pounds}$$

$$\dots \frac{1}{4} + 2\frac{1}{2} = 1\frac{1}{2} \left\{ (2\frac{1}{2} + 2\frac{1}{2}) - 2\frac{1}{2} \right\}$$

and $l = 5$ feet