News Bulletin of The Sanatorium Board of Manitoba

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I. Pitblado Tribute to a Great Citizen

Isaac Pitblado, Q. C., was a man who valued friendship highly. "The older I grow," he once said, "the more convinced I am that the friendships one forms in his journey through life are one of life's greatest assets. Outside of religion and a happy home, the one lasting asset of real value which a man gets out of life is not the honors heaped upon him — they may wither in the brightness of tomorrow's sun; not the amount of money which he has accumulated — it may vanish overnight; not the successes which he has achieved in his chosen profession or calling — they are soon forgotten; but the warm personal friends whom he has bound to his heart as by bands of steel."

Isaac Pitblado, who died December 6 at the grand age of 97, acquired many, many friends during his lifetime, friends who ranged from the Prime Ministers of Canada to the ordinary man in the street.

And it was also the very good fortune of the Sanatorium Board of Manitoba to have Dr. Pitblado as a friend and advisor for many years. He became an elected member of our Board in 1933 and, in his post as honorary solicitor, helped greatly to shape our policies during expanding years. In 1956, at the age of 89, he was made an honorary life member.

A man as old as Canada herself, Dr. Pitblado will long be remembered for his outstanding contributions to Canadian history and to Canadian law. He was the dean of the legal profession in Canada, known by his colleagues as Mr. Freight Rate, because of his close association with two great issues of the west's economic life — freight rates and the marketing of grain.

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EINAR HOLBOELL, 1865 - 1927

This year the Christmas Seal is particularly deserving of a place of honor on our Christmas letters and parcels — because 1964 marks its diamond anniversary. The first little seal was issued and used in Denmark in 1904, the inspiration of a big, good-natured postman.

But to begin the story of the Christmas Seal, we must go back a year before to a few days before Christmas when Einar Holboell stopped a moment in his work in a busy Copenhagen post office. As he lit his pipe, he happened to glance out the frosty window, and across the bustling decorated street he saw three ragged children selling artificial flowers, their thin little bodies shivering in the icy north wind as they sought to stop the busy Christmas shoppers.

Holboell looked at the children for a long moment, then he looked at the great mounds of Christmas mail bursting with good will and friendliness. And it was then that he got the idea: "Why not get people to buy an extra special stamp while the Christmas spirit of giving is so strong — just a penny sticker on each letter could help sick and needy children a lot."

The Danish postal authorities were enthusiastic about Holboell's idea and the King of Denmark gave it his royal support. A committee was formed, mail clerks agreed to work overtime to sell the seals.

And so it was in 1904 that the first Christmas Seal, bearing the picture of Denmark's Queen Louise went on sale for the first time anywhere. The people of Denmark loved the idea. So did people in other countries. In 1907 Christmas Seals were sold in the United States; a year later the idea was introduced to Canada.

Today, Christmas Seals encircle the globe, the messengers of happiness and health in more than 70 different countries. They have been responsible for tremendous changes in one of the widest fields of human loss and suffering —

And all because Einar Holboell, through his compassion for unfortunate children, had a unique idea . . . which gave everyone, even the least of us, a chance to be of real help in the war against tuberculosis.

SBM Will Conduct Study Of TB Policy, Facilities

What are the future trends in tuberculosis treatment and control? Will tuberculosis treatment be given more on an out-patient basis? If so, what permanent treatment facilities would then be needed in the province of Manitoba?

In an attempt to answer these and other questions, the Sanatorium Board of Manitoba last month concluded arrangements for an intensive study of tuberculosis facilities and policies in this province. The survey, which has the approval of Minister of Health C. H. Witney, will be conducted early in 1965 by Dr. G. J. Wherrett of Ottawa, who for many years was executive secretary of the Canadian Tuberculosis Association and is today one of Canada's leading tuberculosis authorities.

According to the Sanatorium Board's executive director, T. A. J. Cunnings, there is a great need for careful assessment of the probable future developments of the Board's tuberculosis control program. If it becomes necessary that present treatment facilities be modified in function or discontinued, he said, the Sanatorium Board must decide what alternative resources must be developed in order to maintain a high standard of tuberculosis control.

Some questions which the Board thinks should be considered in the study are:

1. Length of treatment for tuberculosis patients — i.e. treatment policies for children, length of treatment after surgery, treatment of patients who have primary disease or who are recent tuberculin converters, etc.

2. Should more stress be placed in future on out-patient treatment under the supervision of health units and public health nurses? If so, what will be the future requirements for treatment beds?

3. What are the advantages, or disadvantages, of replacing santoria with a chronic chest hospital which would not only care for tuberculosis patients but also patients with other types of chronic pulmonary disease?

4. What will the future medical staff pattern be? Will there be a development in the use of part-time chest specialists and surgeons?

5. How can service be developed to provide for participation in the university professional training programs for both undergraduate and postgraduate medical and paramedical personnel to ensure high standards for the future?

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News Bulletin of The Sanatorium Board of Manitoba

P.O.R.D.U. — A Bold New Program to Impro

At the Manitoba Rehabilitation Hospital in Winnipeg last month, a small group of orthopaedic surgeons and research engineers converged from various parts of the country to hold a one-day workshop. The meeting, second to take place in Canada this year, represented an increasingly important trend in the physical rehabilitation field, in which the members of two widely different professions have pooled their knowledge and skills in a bold attempt to solve an age-old problem: the production of satisfactory artificial limbs for the severely disabled.

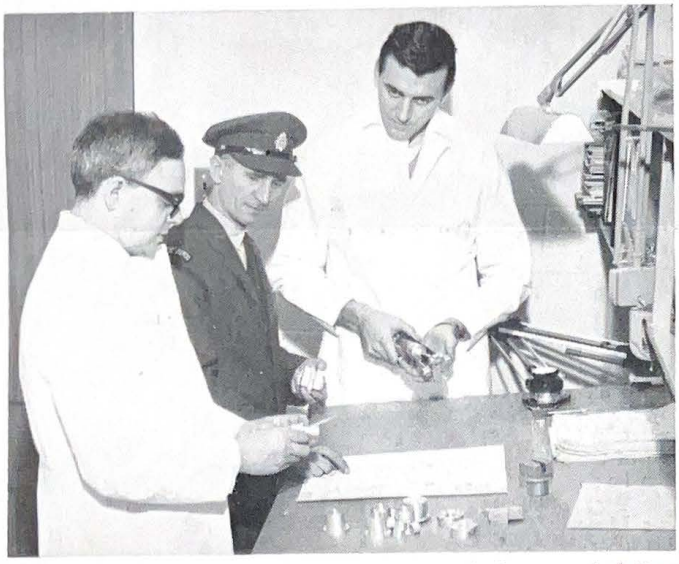
The art of limb-making is as ancient as the practice of amputation itself. But for hundreds of years the main purpose of most prostheses (a Greek word for artificial limbs meaning additions) was to disguise or cover up deformities, and there was little effort to make them useful additions to the body. It is true, of course, that during the past century working artificial limbs have been devised to accomplish some simple actions, but even so, when compared to the fantastic advances in the fields of industrial and aeronautical engineering, modern appliances for the handicapped are still fairly crude.

Today, with our universal concept of the highest possible level of health for all people, it is no longer acceptable that an amputee should resign himself to a life of disability. The thalidomide tragedy in recent years gave urgency to the problem and in Canada last year three centres in Toronto, Montreal and Winnipeg were established through a special appropriation under the national health grants to undertake intensive programs to develop, among other things, artificial limbs which would become as much as possible a useful part of the patient's own body. The human body is a superbly constructed machine and to attempt to make up for the loss of a limb is indeed a formidable task. The engineer is required to substitute wood, metal or plastic for the support-giving bones, to devise special hinges which will permit motion between leg segments, and to harness somehow some form of external or internal power to produce controlled movement.

Each Unit Has a Different Project

Each of the prosthetics and orthotics (braces) units is engaged in different aspects of research and the purpose of the meeting on November 15 was to review and compare progress made during the past six months and to co-ordinate further projects. The Toronto group, for example, is concentrating on refining appliances for the upper limbs and prosthetics research engineer Colin McLaurin is working on new methods of using small batteries and small electric motors to power artificial arms.

The research unit at the Montreal Rehabilitation Institute has recently purchased rights to a new Russian artificial arm which operates on the principle that electrical impulses given off by moving muscles can be passed through an electrode set on the surface of the skin, which in turn will activate a small motor in the artificial limb. The Russian arm apparently has only one simple finger-thumb action, and Montreal Researchers C. Corriveau and Andrew Lippay plan to evaluate the arm, perhaps refine it and adapt it to Canadian use. Mr. Lippay has a good background for this project, having spent some time doing intensive research on these same problems at the Case Institute in Cleveland.

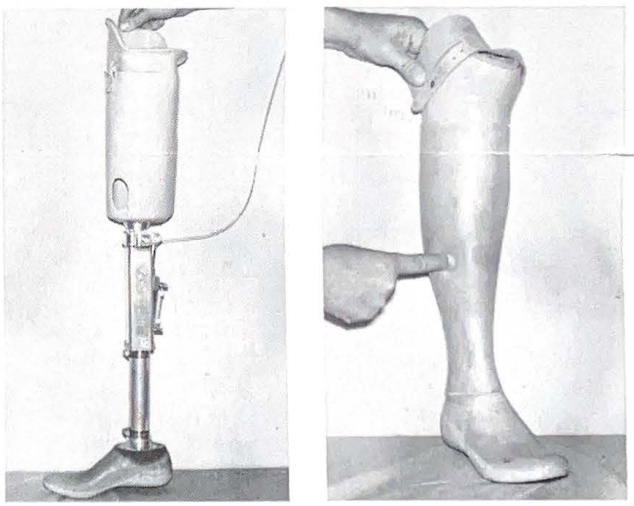


P.O.R.D.U. has a unique and satisfactory arrangement with the personnel of Stony Mountain Penitentiary: the inmates supplement the work of the prosthetics engineer by making blueprints from rough sketches and metallic prototypes of experimental devices. Here Jim Thompson (centre), Assistant Industrial Supervisor at the penitentiary, looks over completed blueprints with James Foort (left), Technical Director of the Biomechanics Laboratory at the Manitoba Rehabilitation Hospital, and Douglas Hobson, a fourth year student in mechanical engineering, who was attached to P.O.R.D.U. during the summer and plans to enter the field of prosthetics and orthotics research.

Working hand in hand with these units are the members of the two-year-old Technical Assistance and Research Group for Physical Rehabilitation at Fredericton. R. N. Scott, associate professor of electrical engineering at the University of New Brunswick and head of T.A.R.G.P.R. is now leading a special program to discover the ultimate capacity of the human being in internal (bio-electric signal) control. Part of Professor Scott's extensive research includes embedding electrodes right through the skin and into the muscles of college athletes to determine how long the electrodes can be retained, their physiological effects and their usefulness in transmitting signals which could then be used for controlling powered prostheses and ortheses. The principle here is that the twitch of an eyebrow, for example, could be used to move an artificial arm in some specific direction.

Research at the Manitoba Rehabilitation Hospital

Electronic control is only one aspect of the engineering projects. Another important objective is the development of light-weight, easy-to-assemble prostheses which can be fitted to the patient early in his rehabilitation program. This became the first major project of the Sanatorium Board's Prosthetics and Orthotics Research and Development Unit at the Manitoba Rehabilitation Hospital, and this year James Foort, a chemical engineer who heads the Biomechanics Laboratory, and his co-workers successfully produced this much needed limb for the hip, thigh and shank amputee.



The "tinkertoy" prosthesis (left) will soon be fitted to three children with thiugh amputations. Although designed to fit amputees of all ages, this prosthesis particularly answers the need for a child's limb which can be adjusted to accommodate his growth, as it has replaceable parts which permit the lengthening of the leg segments and changing of the shape and size of the leg socket. As development of the prostheses progresses, it will be possible to furnish them with a cosmetic covering of synthetic foam rubber, as shown in the limb for the shank amputee, right. (Photos by Tony Gibson)

The philosophy of P.O.R.D.U., explains Mr. Foort, is to develop appliances which will not only be as simple and as light as possible, but which will also require a minimum amount of handwork. In this respect, the new instant, adjustable prosthesis fills the bill in a number of ways. It is lighter than other artificial limbs and it can be quickly and easily assembled for testing, training and conditioning the amputee as early as three to four weeks after surgery. It is centrally (pylon) structured, has replaceable parts and, as development of the prosthesis progresses, it will be possible to furnish it with a cosmetic covering when the patient is ready for his final fitting. To control movement of these prostheses at the knee, the pylon constructed knee-shank unit incorporates "pneumatic swing-phase control". Operating much like a pneumatic door closer, this special unit enables the patient to vary and control his gait smoothly, the resistance being proportional to the speed at which he walks.

Perhaps the greatest advantage of the instant prosthesis is that there will be no need to exchange or scrap a whole unit during the long process of getting the patient equipped with the best possible limb. According to Mr. Foort, the patient will keep the one appliance and as changes become necessary during his rehabilitation program, parts can be inserted, adjusted or replaced. Similarly, as changes to the patient's stump occur, "instant" plastic sockets, now

ove Devices for Disabled

used during the training and conditioning phase, can be quickly fabricated, fitted and adjusted.

The rehabilitation hospital's "tinkertoy" leg will answer the need for a child's limb which can be adjusted to accommodate his growth. It will also enable the staff to evaluate inexpensively a patient's rehabilitation potential. Many of the adult amputees are elderly people with a number of other illnesses and the question often arises as to whether or not they should wear artificial limbs.

Research centres in the United States have shown great interest in our engineer's work and at a workshop which Mr. Foort recently attended in Florida, the Sub-committee on Socket Design of the United States Committee on Prosthetics Research and Development asked for molds of the sockets used on the instant legs.

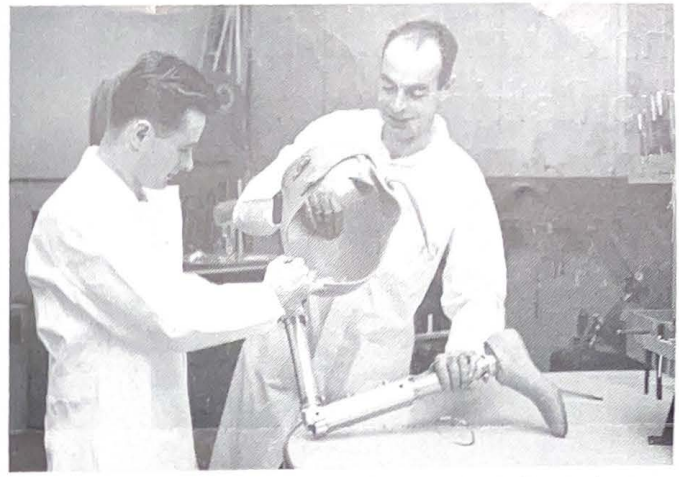
Program to Evaluate and Improve Braces and Splints

The improvement of artificial limbs is only part of the Winnipeg Unit's work; almost equally important is research in the field of ortheses (braces) and splints. It is the unit's procedure to review devices and techniques now used and, wherever possible, to improve them. The problem of leg braces, for example, is still in the exploratory stage; the main objective will be to find some way to make a leg brace which will stabilize unstable joints and at the same time allow continued function of the unaffected parts.

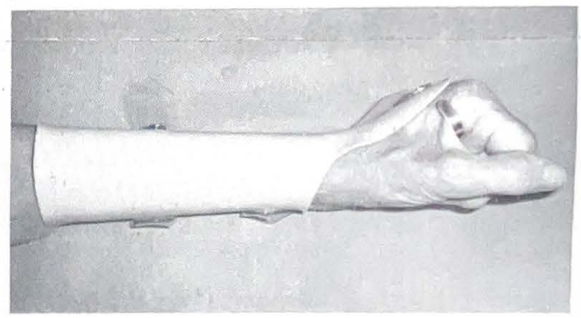
P.O.R.D.U. has also been concerned with designing back braces to give more support and keep affected areas immobile. So far this year, ten light-weight, plastic laminate jackets have been produced to give satisfactory support for such conditions as osteomyelitis.

Arthritis patients benefit from the unit's research, and one of the past year's accomplishments was the development of a plastic work splint which holds a patient's wrist in a fixed position in order to correct or prevent deformity. The work on hand splints, according to Mr. Foort, has been separated into two problems. These are the development of a hand splint which will keep affected parts completely immobile, and the evaluation and designing of special splints to supplement and improve remaining function.

Research in upper extremity appliances is at present limited to the treatment of two thalidomide babies. The two children (both boys) are now over two years old. One of them has normal legs and rudimentary arms, all four limbs of the second child are rudimentary flippers. The quadrilateral baby has succeeded in getting into a sitting position with the aid of a rolled rug and he can manage to shuffle about either on his buttocks or on a specially constructed pair of rocker prostheses. The problem now is to provide the babies with some means of reaching out for things and bringing them back to themselves. And here again the laboratory plans to develop a tinkertoy prosthesis much like the one now designed for the lower limbs. Part of the problem, says Mr. Foort, will be to determine the optimal length of each segment of the artificial arm for most effective control, and to devise a thin unit which will not obstruct the user's vision.



Technicians David Whitton (left) and Ian Cochrane put the finishing touches to an artificial limb for the hip amputee. Assembly time for this temporary unit is approximately three-quarters of an hour, excluding the time needed to make the plastic socket. The special value of tinkertoy components and prefabricated sockets is that the hospital staff is able to begin training and conditioning the amputee soon after surgery. As changes to the leg become necessary during the patient's rehabilitation program, the parts can be quickly and easily inserted, adjusted or replaced.



This plastic hand splint was developed for arthritis patients to hold the wrist in a fixed position to prevent or correct deformity. Compared to temporary plaster splints previously used, this new splint is more comfortable, more durable, waterproof and washable, and allows greater freedom for the use of remaining finger function.

In researching these artificial arms, the work of the Winnipeg centre will be closely related to the work of researchers at other Canadian units which are developing electronic controls and power units.

Hopeful Future for Today's Amputee

To see what can be done for today's amputee, one need only look at disabled children. Until a few years ago, children born with deformities were allowed to reach full growth before any major corrective measures were taken, but now doctors are taking a very different approach. As soon as the child is ready to stand, physicians say he is ready for a prosthesis. The result is that many young children with artificial appliances develop uncanny skills — and perhaps even more important, avoid the danger of becoming emotionally crippled. Little boys and girls, born without arms, have learned to draw as well as the normal child with the aid of special terminal devices. Older children have learned to dance, skip rope and even ice skate on artificial legs.

As research goes on it may actually become difficult for the untrained eye to single out the amputee. In any event, research in Canada has been given great impetus during the past year, and the formation of the prosthetics and orthotics research and development units in itself represents an imaginative use of public funds to introduce modern techniques in an "under-developed" area of medical rehabilitation. On the basis of what has been accomplished so far, the outlook for the handicapped today looks very bright indeed.

A RESPONSIBLE ROLE IN EDUCATION

The Prosthetics and Orthotics Research and Development Unit at the Manitoba Rehabilitation Hospital is vitally interested in playing a responsible role in promulgating knowledge about artificial limbs and braces. According to the unit's medical director, Dr. F. R. Tucker, members of P.O.R.D.U. have taken every opportunity to give lectures and demonstrations to the medical profession and under-graduate medical students, to nurses, occupational therapists, physiotherapists and prosthetists.

Last spring a general night course was arranged for some 20 technicians and, more recently, a senior prosthetist from the Workmen's Compensation Board of Alberta was given a two-week intensive course in the advanced techniques of fitting lower limb prostheses.

In 1965 the unit is prepared to train prosthetists for other medical centres in Western Canada. The unit, said Dr. Tucker, can take three candidates from other centres and either bring them up-to-date in prosthetics, or give new men a complete training course. The ideal program for the latter, he felt, would include six months intensive instruction in lower limb prostheses, and six months instruction on artificial arms. The ideal trainee would be a male physiotherapist who would have the necessary medical background to act as a link between the doctors and the hospital therapists and the research engineer.

A second goal of P.O.R.D.U. is to build up a reference library. All the recent information from prosthetics and orthotics research centres in North America and Europe is being gathered by the unit. An excellent collection of colored slides is also being acquired. These slides show many types of disabilities, the kinds of appliances used to treat them, and the step-by-step procedure of fabricating the appliances.

The unit has also produced a colored film entitled "The Adjustable Brim-fitting Technique". This is a technique for fitting above-knee amputees which the unit's technical director, James Foort, devised at Berkeley, California, and later introduced in Winnipeg. The film has proved very valuable and during the past few months it has not only been shown widely in Winnipeg but also in Helsinki, Finland, and in Edmonton, Toronto, Montreal and Vancouver.

To round out the Lower Extremity Correction Program, a second film is now being made on the various types of amputees, their prostheses and how they use them.

Sanatorium Staff Honors Two Retiring Members

Last month John Mahr took a long last look at his sanatorium library. Slowly his eyes roved over the rows of some 7,000 volumes neatly and correctly arranged on the shelves, and finally they came to rest on the index file which he had so painstakingly compiled. Then, picking up his hat and coat, he left the little room and locked the door behind him.

There was no one to take John Mahr's place when on November 10 he retired from his post as library director at Manitoba Sanatorium, Ninette. The patients and staff were saddened to see him go, but as Mr. Mahr, now 76, explained, the prairie winters had become too hard on his health and he longed for and needed the more agreeable climate of the West Coast.

A kindly, gentle man, with a passion for books and learning, Mr. Mahr had charge of the sanatorium library since 1954. From cheerful disorder, he brought it up to the standards of any other good library — despite the fact that when he took on the job he had no library experience.

Mr. Mahr was a former patient at Ninette. He had been born in the Crimea, the son of a German Baptist missionary, and in 1928 emigrated from Russia to Canada with his wife and two small boys. Settling first in Vancouver, then in Manitoba, he found it hard to obtain work in the depression years and finally took up farming and hauling gravel. In 1935, weakened by the long years of strenuous living, he fell ill with tuberculosis and was admitted to Ninette.

Following his discharge from sanatorium, Mr. Mahr became one of the first ex-patients to benefit from the Sanatorium Board's newly formed rehabilitation program. He took a job as an orderly at the Winnipeg General Hospital and worked there until 1948 when once again he developed active disease. On regaining his health 10 years ago, he remained at the sanatorium as librarian.

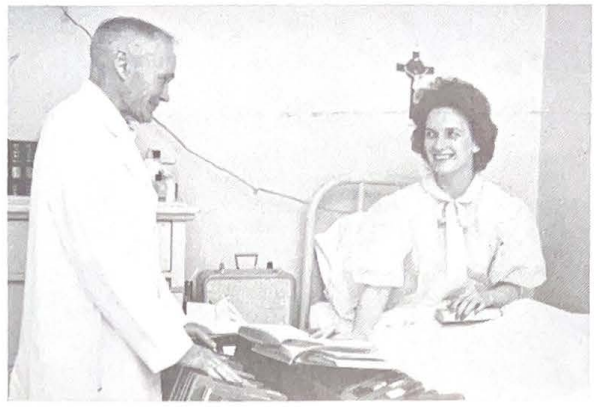
Mr. Mahr was determined that his library system would compare to any other in the province. He read a good deal about the subject and paid visits to public libraries in Winnipeg and Brandon. Then, armed with a brush, paint can and pen, he closed the library, sorted the books and renumbered them according to the Dewey system. He made out a catalogue, set the books in their new places, and reopened for business.

At Manitoba Sanatorium Mr. Mahr found a serene life in his books, in classical music and long walks through the countryside. We are grateful to have known him, and it is our hope that he will continue to find the same sort of pleasure in his new home.

* * *

On November 25 the personnel at Manitoba Sanatorium held a special tea in honor of another long-time staff member: George T. Brown, who after 21 years of service was retiring from his post as senior carpenter. Some 90 people turned out to present Mr. Brown with a handsome travelling bag.

George Brown, who on November 25 retired from his post as senior carpenter at Manitoba Sanatorium, is pictured with his wife Ilo and Medical Superintendent Dr. A. L. Paine at a special tea held in his honor by some 90 sanatorium staff members. Mr. Brown, a very good carpenter who served the sanatorium well for more than 20 years, was presented with a travelling bag. Mrs. Brown received a corsage. The tea table was attractively decorated with white and yellow 'mums for the event; Mrs. Paine, Miss D. Ellis, Mrs. Ann Stinson and Mrs. Stella Kilburg, poured tea. (Photo by Bill Amos)



Books are especially great friends of people who must spend long periods of time in bed, and for over 10 years John Mahr, librarian at Ninette sanatorium, helped to keep many tuberculosis patients happy through his excellent library service. Besides operating a well-organized library in the administration building, Mr. Mahr regularly made the rounds of the wards offering, as he put it, the finest in English literature. It was with great reluctance, therefore, that patients and fellow workers bade him farewell last month when he retired to take up residence in Vancouver. (Photo by David Portigal)

Mr. Brown first came to the sanatorium on March 25, 1943. As he recalls, he had taken on a job to repair the ceiling of the Assembly Hall. But as soon as he had completed the work, the hospital manager discovered numerous other things in need of repair, and before Mr. Brown realized it the two weeks stretched into many weeks of temporary employment, and finally into years of permanent employment.

Mr. Brown was born in Glenora, Manitoba, and was raised in Stockton, Hilton and Belmont. His father, a Welshman, was also a carpenter and he taught his young son all he knew about the business. At the age of 16, Mr. Brown and his father became partners and together they moved throughout the countryside building many of the grain elevators and bridges which helped open up the south-west.

During World War I, Mr. Brown left his work to serve with the Canadian army overseas. At the close of the war he returned to Belmont, resumed carpentry and married a school teacher. He and his wife moved to Ninette village some 17 years ago.

At the sanatorium, Mr. Brown and his co-workers have been in charge of the repairs to some 25 buildings. Recent projects have included building a new school room and closing in the balconies of the East and West Infirmary to make very attractive new wards for the patients. They also added a porch and cloak room to the recreation hall.

And, when there was no other special work to be done, Mr. Brown busied himself repairing hospital furniture.

A good-humoured man, who has made many friends during his stay at the sanatorium, Mr. Brown will be greatly missed by fellow staff members. We all wish him and Mrs. Brown many more years of happiness and health.

SPECIAL TUBERCULOSIS STUDY

(Continued from page 1)

6. Can the Board's tuberculosis preventive program be improved? Should there be any further modification in tuberculin and x-ray surveys? Should the anti-tuberculosis vaccine, B. C. G., be used more widely?

It is hoped, said Mr. Cunnings, that the survey will lead to specific recommendations for the future guidance of the Sanatorium Board and government authorities.

ISAAC PITBLADO, Q.C., LL.D.

(Continued from page 1)

He was a brilliant scholar and philosopher, a great sportsman (who even after the age of 90 went out each fall for his limit of ducks), and he was ever a courteous gentleman.

But, perhaps best of all, Isaac Pitblado will be remembered as the man who believed in work. "Life ends at retirement," he said on his 90th birthday, and almost up until the day he died, he went to his office daily at Pitblado, Hoskin and Company. Even at the age of 80 he handled and won an $80,000,000 bid by the railways for higher freight rates. The hearings took well over a year, the evidence covered 19,000 pages.

"I attribute my long life to hard work," he said. "That's a good policy for any man — to work as hard as he can at something that gives him satisfaction."

Bulletin Board

Our warmest good wishes are extended to the Associated Canadian Travellers of Brandon who last month celebrated the 25th anniversary of their club.

Over the years the members have achieved an outstanding record of public service. One of their major projects has been to aid the work of the Sanatorium Board, and more than $225,000 has been donated to help expand tuberculosis preventive services and to develop the facilities at Assiniboine Hospital, Brandon. Last year the club completed an $85,000 pledge to aid the construction of the hospital's Physiotherapy and Occupational Therapy Unit; this year members pledged $30,000 to purchase new x-ray equipment for Assiniboine.

* * *

The Sanatorium Board also expresses deepest appreciation to the Associated Canadian Travellers, Winnipeg Club, who recently presented the Board with a cheque for $4,751.17. The money will be used towards the club's $100,000 pledge to help buy special equipment for the Manitoba Rehabilitation Hospital. During the past few years, more than $50,000 of this amount has been raised and presented by the club to the Sanatorium Board; contributions during the past year alone have amounted to $8,287.42.

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The Sanatorium Board announces the appointment this month of Dr. D. L. Kippen, of Winnipeg to the Board's Medical Advisory Committee.

* * *

James Foort, C.E., Technical Director of the Biomechanics Laboratory at the Manitoba Rehabilitation Hospital, has been appointed Consultant in Prosthetics to the Sub-department of Orthopaedic Surgery at the University of Manitoba.

While attending a prosthetics workshop in Florida last month, Mr. Foort was also made a member of the Sub-committee on Socket Design, of the United States Committee on Prosthetics Research and Development.