RETRAINING CANADA'S DISABLED SOLDIERS

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FORMERLY DIRECTOR OF VOCATIONAL TRAINING

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT

CANADA

Foreign Canada - Sec. 4

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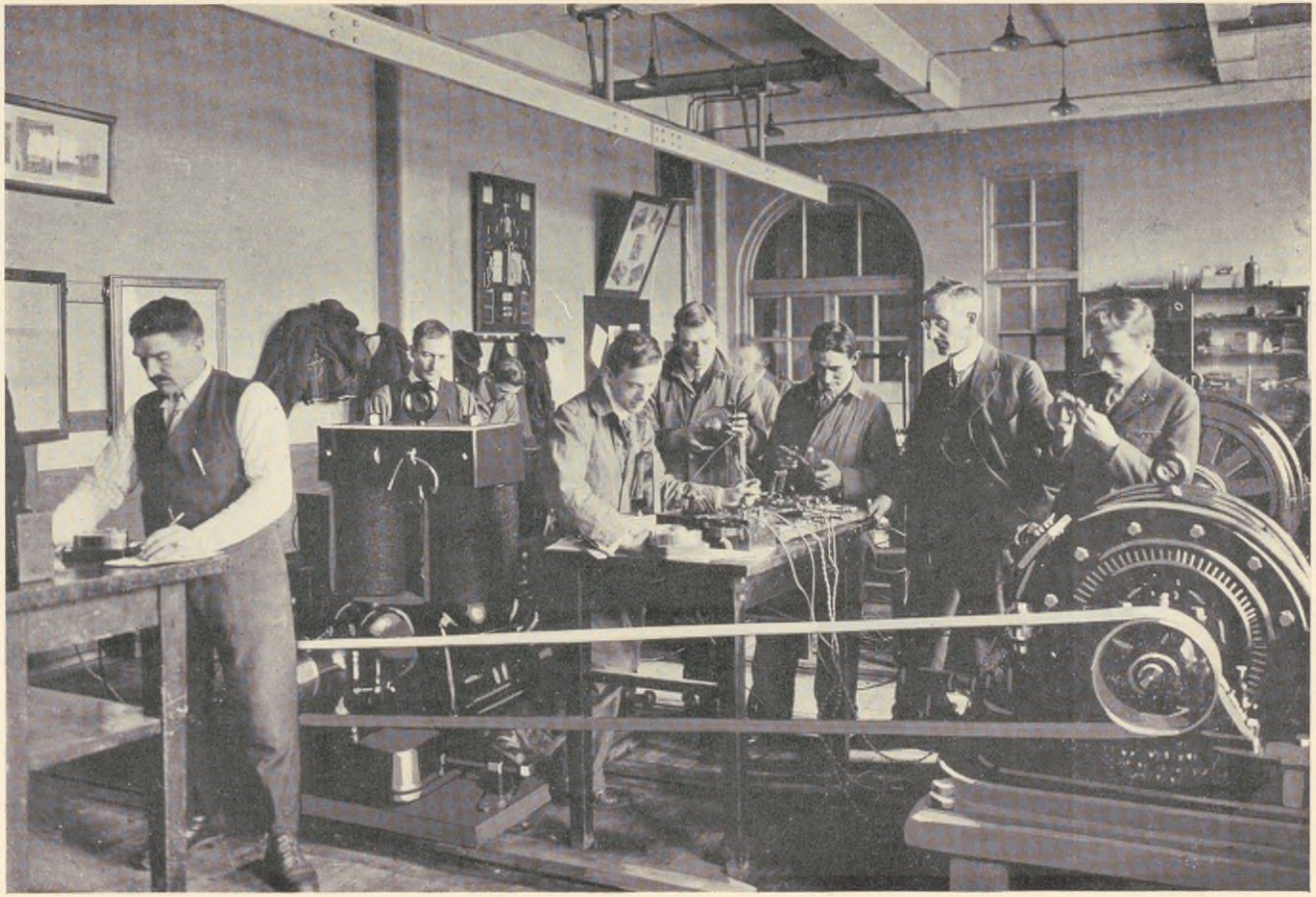

CLASS IN ELECTRICAL ENGINEERING.

Electrical engineering is not taught as a separate subject except to those men who are taking a course for a degree. The men in the class in the illustration are men taking part time courses in school and will finish their training in some industrial establishment. They are being taught the basic principles in the class room. These men will become sub-section tenders, meter testers, house wire men, etc.

FOREWORD.

For the purpose of re-establishing in civil life those ex-members of the Canadian Forces so far disabled by service as to be unable to resume their pre-war activities, Industrial Re-training was commenced by the Canadian Government in 1915. Mr. W. E. Segsworth, a mining engineer, was appointed Director in July, 1917. The salient features of the Canadian system have been outlined in this volume so that they may be available to those interested in the re-training of the disabled, whether by war or otherwise. This publication should form a distinct contribution to the available knowledge on this subject.

There may have been some who, not being familiar with the difference between training normal men and disabled men, were unable to appreciate the basic soundness of the scheme so promptly inaugurated in Canada, and who therefore felt somewhat sceptical of its effectiveness. The practical results obtained from operation over a period exceeding three years, demonstrates its success. Not only had Mr. Segsworth the vision to foresee the value of the plan when started, but with the courage of his convictions he made it effective when requested by me to do so. Although he retired from the active direction of the work nearly a year ago, the organization he developed has been capable of continuing what he so well started, despite an amazing growth in the number of men seeking and receiving the benefit of re-training.

An indication of the rapid growth of the activities of Industrial Re-training since Mr. Segsworth became Director in July, 1917, until he retired in March, 1919, to resume his practice as a mining engineer, and thereafter, is obtained from the following:—

When the present policy of re-training was adopted and undertaken by him in July, 1917, there were but 638 men in training classes of all kinds. The men receiving their re-training were for the greater part to be found in class rooms which were shared by those taking convalescent training. By December of 1917, the groups were divided, there being at that time 954 men in re-training and 2,199 in convalescent classes. The work has steadily and rapidly grown to the present date, December 31, 1919, at which perid there are 23,626 men receiving re-training and 9,505 graduates. Of the men in retraining, 12,342 are attending schools and 11,284 are training in industries. Classes for convalescents are providing occupational work for an additional 4, 323 hospital patients. The figures as of December 31, 1919, include 7,454 minors, young men who enlisted prior to their eighteenth birthday and who, through war service, suffered severe interruption to their training for civilian life, provision for whom was made by the Government as from April 16, 1919.

Quite rightly, Mr. Segsworth maintained that unless an unequivocal survey of results was continuously made, the value of the expenditures in money and energy could not be estimated. By his periodical follow-up at their new occupations of those who had been re-trained, data was secured which, I believe, is not available with respect to similar work being conducted in other countries. It might have been reasonably expected that with the rapid and unexpected sudden increase in the number undergoing re-training, combined with the general industrial unsettlement during the transition from war to peace conditions, there would be an appreciable drop in the efficiency of the work. An analysis of the follow-up surveys, however, shows that the organization stood this abnormal strain satisfactorily.

In the appendix will be found charts and tables which show the growth of the work since the manuscript of Mr. Segsworth's book was prepared, and the

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latest analysis of the success of the disabled men who have been re-trained and re-claimed and are now re-established in a trade or occupation wherein their disability does not affect their success or earning power.

James A. Lougheed.

Minister, Department of Soldiers' Civil Re-Establishment.

PREFACE

The industrial rehabilitation of soldiers who have been disabled in the war has aroused a great deal of interest among labour unions, employers, sociologists, educationalists and the public at large in all the belligerent countries.

In former wars the disabled soldier was given a pension, often far too small, and was then discharged to eke out a living as best he could without further assistance from the Government. The present war has, however, awakened a keen sense of public duty toward those who have so bravely defended their country, with the result that provision has been made in every country for the re-training of those disabled in the war. Growing out of this work is a feeling that industrial re-training should be extended for the benefit of men crippled in civil life.

In Canada the work has grown so quickly and for a long time has been so much a matter of development that there was no time to write. As experience was gained changes were made to fit the needs as they occurred. These changes came so quickly that if any attempt had been made to set down the system as it stood, such statement would be out of date before it could be published. By the end of the year 1918 however, certain broad general principles had emerged and the main features of the system had been established. Also sufficient statistics had been gathered to permit a review of the actual results. Naturally enough, any work which aroused such great public interest and about which so little was known, was often misunderstood. It seemed desirable therefore, at this time to place before the public a plain statement of fact as to the principles adopted and the results obtained in Canada with the hope that such statement would inform all those who wished to know more about the work, and bring out helpful and constructive criticism which is one of the greatest spurs to progress.

Much of the misunderstanding as to Canadian principles and methods has been due to statements by authors not connected with or authorized to speak for the Department of Soldiers' Civil Re-Establishment which is charged with the administration of this work by the Government of Canada.

For the most part they have not been in sympathy with the practical aim of the Canadian work for the disabled. Many are sentimental or theoretical amateurs possessing a very limited knowledge of the facts. To these facts they add surmises, and these are taken as facts by the next writer. Among other misconceptions, they have succeded in creating the impression that all disabled soldiers are physical or mental wrecks, mere human drift-wood, broken in mind, body and spirit and devoid of will. This is none the less an unfortunate if unintentional libel. Once these disabled soldiers have overcome the state of institutionalism due to their long period in hospital, and are given an opportunity to learn a new occupation, they display more initiative, will power, concentration and desire to learn then do civilians. It is hoped that the plain statement of fact in this volume will clear away these misunderstandings.

An endeavour has been made to show that the problem is first of all a human one; that the re-training of each man must be considered a separate problem, to the solution of which must be applied not only training, but all other social agencies such as medicine, psychology, social service, trade, industrial and labour relationships, and many others which enter into special cases.

This problem cannot be solved by any scientific formula, for the factors due to varying individuality are not susceptible to accurate measurement. These men cannot be sorted and classified and then each group treated according to some pre-arranged scientific plan. The most complete system charted, organized and planned in advance will fail if it does not provide a ready means of

adapting it to individual need; and unless it provides at all times for the fullest application of the understanding of human nature.

If in the endeavour to describe the completely unified organization built up to supply, control and apply all these agencies, the impression has been created that the human element has been sacrificed to efficiency and economy, then the author has entirely failed to present a true picture of the Canadian system.

This volume has been prepared amidst the hurry and rush of work, and if in places it lacks logical arrangement and literary merit it is hoped that the facts contained therein will excuse the faults.

The writer wishes to acknowledge the kindness of those who helped to prepare the work—to Mr. N. F. Parkinson, Director of Vocational Training, to Dr. J. G. Cunningham, Deputy Director of Medical Services who reviewed the chapters on Ward occupations and Curative Workshops, and to Mr. V. G. Rexford and Mr. N. L. Burnette who furnished much of the material for these chapters; to Dr. D. A. Hingston, Vocational Medical Officer for the Province of Quebec, and Dr. Geo. Graham, Vocational Medical Officer for the Province of Ontario, who furnished the material and reviewed the chapter on Medical Aspects; to Capt. E. A. Baker, M.C., Croix de Guerre, who is in charge of the training of the Blind for the Department, and who furnished the material for the chapter on the Blind; to Prof. H. E. T. Haultain, Vocational Officer for Ontario, and Professor of Mining at the University of Toronto, who reviewed the chapter on Industrial Re-training; to Mr. G. A. Boate, Superintendent of Training, who furnished the statistical information and reviewed the book before publication, and to Miss K. Calhoun and Mrs. L. Timbrell who rendered invaluable assistance in its preparation.

OTTAWA, CANADA,
April 15, 1919.

W. E. S.

CHAPTER I.

SCOPE OF THE WORK.

From the moment a man enters the army every effort is made to make him a small unit in a large organization. He is taught to obey first and to think afterwards. If he is wounded he is taken to a hospital where he will likely pass through a long period of idleness during which he is prone to brood on his misfortunes and those of the other wounded about him.

The soldiers with whom the Vocational Branch deal, have all incurred some disability which prevents them from following their former occupations. While they are in the hospital they are constantly wondering what they are going to do in order to recover the earning power which they had in their former occupation. The state of mind so produced is what has been termed "institutionalism." Once this state of mind has been overcome the ex-soldiers are far superior to the average civilian as students.

The problem of bringing men who are thus disabled back to their full earning power in civil life, can be divided into two parts—medical and industrial. The medical part is taken care of by the Army Medical Corps and the Medical Branch of the Department of Soldiers' Civil Re-Establishment.

The Vocational Branch is concerned directly with all those agencies necessary to bring the handicapped soldier back to civil life from an industrial standpoint. The problem is not always entirely that of teaching a man a new occupation, but is in part that of teaching him that he is not really a cripple in the ordinary sense, and that he is not even as badly handicapped as he may think.

Disabilities incurred on service may prevent a man from following or returning to his former occupation from three causes:—

1. He may be physically unable to return to his former occupation.
2. He may sincerely believe that he is unable to go back to his former occupation, or
3. The man for whom the Medical Branch can do nothing more, may not immediately be able to return to his former occupation, but may become so later.

In the first case it is necessary to teach him a new occupation.

For the second class the problem is to bring the ex-soldier to believe that he can go back to his former occupation, if he will. In a good many cases it is sufficient to reason with him and show him that he can and ask him to try; success usually follows, but there are other cases in which the man cannot be got by reason or persuasion to believe that he can return to it, and he is then granted a course in some other occupation, and before long merely working has such a curative effect mentally, that he goes back to his former vocation.

The third case is the man for whom the Medical Branch can do nothing more, who cannot immediately return to his former occupation, but whose disability will so decrease in time or by exercise that he may be able to do so later. Usually he does not know or believe that at the end of three, four or six months, he will be able to resume his former occupation. He is treated as a man of the second class, usually with successful results.

In re-training disabled soldiers, most of whom by the way are unskilled men without definite occupations, or of the less highly skilled occupations, two policies are open to the Government:—

1. To take all these men and train them in highly skilled trades, such as carpenters, printers, plumbers, machinists, etc. which if they have no skill to build upon would take from one to three years, or possibly more.
2. (a) If they are skilled in some occupation to build on that foundation by training them in some lighter occupation closely allied to it where their former experience may be made use of, or
   (b) If they have no former skill to build upon to train them in some occupation (not piece work) in which they will be able to earn the full going wage. This can be accomplished in an average of from 6 to 8 months.

The second method has been adopted as a general principle in all allied and enemy countries, and also in Canada. While we speak of training a disabled man for a new occupation this should not be misunderstood. It is definitely part of the policy of the Department in every case of disablement, to train a man in an occupation as closely allied to his former one as possible. If a man has been a printer and has an amputation of the leg, he should be trained to operate a linotype or monotype machine. If he has been a house carpenter and is so weakened that he cannot climb over a building, he should be taught cabinet making. If he was a high tension wireman and cannot carry on he should be given some of the lighter lines of electrical work. A disabled railroad brakeman should become a telegrapher, train despatcher or something on the railroad, thus carrying on in his own environment. However, for the disabled unskilled labourer, some occupation should be selected in which he can earn the full going wage in the locality in which he resides. The illiterate mine labourer if he has mechanical aptitude should be taught to run concentrating tables or the stamps in a gold mill. The unskilled labourer may be taught shoe repairing or some such occupation, and the unskilled European who has fought in our armies, may be taught some occupation suited to his nationality. For instance Finns and Italians take kindly to tailoring.

The whole policy of the Vocational Branch therefore may be stated shortly as follows:

First to introduce to the man at his bedside the idea of work in ward occupations. To start at that place to train his mind away from a state of institutionalism—to continue this work in a more intensive form in the curative workshops, and in these two branches while the doctor is curing him to gain some knowledge of his industrial adaptability, and then when he is discharged by the medical board if he is too disabled to follow his former occupation, to train both his mind and hands in an occupation at which he can earn the full going wage. Having trained him, to assist him to find employment and readjust himself to the conditions of civil life.

As far as unionised occupations are concerned, the policy of the Department is to work in close conjunction with the labour organizations.

It is also a definite principle of the Department to train the whole number of disabled men in as many occupations as possible instead of in a few, so that competition between the men themselves and others in these occupations, will be as small as possible.

Those who receive this training are in age all the way from youths to men of 50 years; in education, from the illiterate to the university student; industrially, any where between the limits of the lowest grade railway labourer and the highly skilled mechanic. While a large number are single, fully half the men taking training are married and have children, or have dependents as well as other responsibilities. In industrial experience they range from the boy who has never worked for wages, to the mechanic, artisan, clerk and professional man, who has been engaged in industrial life 15 or 20 years.

In public and techincal day schools, the students vary between certain well defined ages. In high schools, technical day schools and universities besides the ages of the students being confined within fairly well settled limits, the students are drawn from the higher classes, mentally, of the population, and for the most part have not been wage earners. In the ordinary educational institutions the students all enter at one time and leave at one time, and in the university especially those students who get so far are of a high mental type compared with the rest of the population.

The disabled men who are eligible for industrial re-training are really a cross section of the male society of the country from 16 to 45 years of age, while in the Universities or other educational establishments only a small section is obtained by process of natural selection. The disabled ex-soldier has to enter on any day of the year and graduate at any time during the term.

These are conditions which must be known and recognized to build up an effective system of re-training for the disabled. The slightest consideration will show how different this is from the ordinary educational problem.

With the policy herein stated in view, and in consideration of the new factors introduced, a system of re-training has had to be built up to meet these new conditions which is totally unlike any training or educational system heretofore in operation.

The evolution of re-training has taken place by natural growth. Hand in hand with the re-training has gone study, research and experiment, and as new ideas have developed and been found to be effective in one part of the country, they have been put into effect throughout the whole country. It is the policy of the Vocational Branch to continue this research and improvement, and to put change into effect as soon as found beneficial.

CHAPTER II

HISTORY AND GROWTH.

Before the present war attempts had been made in several places to train crippled soldiers and the industrially handicapped. Nothing had ever been definitely done to put systems of training in force for all crippled soldiers or civilians. The training of industrial cripples had probably reached its greatest development in Belgium, in one or two small isolated schools in Holland, the United States and the Lord Roberts' Workshops in England, but little substantial progress had been made.

On the 30th June, 1915, the Government of the Dominion of Canada created the Military Hospitals Commission to take care of the interests of returned soldiers. The President of this Commission was the Honourable Sir James A. Lougheed, P.C., K.C.M.G., and the Secretary, Mr. E. H. Scammell. The Commission consisted of prominent men throughout Canada who gave their time voluntarily to the work. The history of this Commission is told more fully elsewhere, and this article will only treat with the history of the vocational work under its care.

In the early months of its existence the attention of the Commission was directed to the problem of re-training disabled soldiers by Mr. E. H. Scammell, the Secretary of the Commission. Mr Scammell about this time received a short unsigned report from Mr. E. M. MacDonald, M.P., Pictou, N.S., which afterwards was found to have been written by Miss Ina Matthews. This report urged the establishment of a comprehensive system of vocational training.

In view of this and other information, Mr. Scammell requested Prof. F. H. Sexton, Director of Technical Education for Nova Scotia, to prepare a full report on the matter. He also conferred with Professor Sexton, Miss Matthews, Mr. MacDonald, Senator Smeaton White and others, after which he prepared a report outlining a National System of Vocational Training, which was published by the Government in Sessional Paper No. 35a, dated October, 1915. It was proposed in this report that the maintenance of men undergoing training should be paid out of a voluntary fund which had then been started, known as the Disablement Fund, an account of which is to be found in the Annual Report of the Commission, dated May, 1917. This fund was the forerunner of the present Pay and Allowances of the Government. In view of the recommendations made the Government of Canada determined to have a centrally directed system, so that the benefits of Vocational Training could extend to all soldiers entitled to the same, no matter where they resided in Canada. The Government looked upon itself as responsible for this problem and determined to shoulder the responsibility and to carry it through.

During the year 1915, practically all the civilized countries at war had started a movement for the systematic training of the handicapped soldiers. These early beginnings have been treated fully by other writers and need not be described here.

A study of the work in other countries at this time revealed the fact that in most of them the work of re-training crippled soldiers was being taken up by local committees and municipalities, who directed their own work and also supplied the money, or where the money was supplied by the central Government, the work at least was directed by the local authorities. There was no unified system of control; in some parts of these countries the work was administered well and great progress was made; in other parts little or nothing was done.

At the request of Sir Robert Borden, the Prime Minister, the Premiers of all the Provinces met in conference in Ottawa on the 18th October, 1915, and among other things considered was the problem of vocational training for disabled soldiers. It was decided at that conference that the training and employment of those men who were so disabled that they could not return to their previous occupation, should be left in the hands of the Dominion Government, and that the various Provinces would co-operate with the Federal Government by placing at its disposal those educational and other training institutions under their control. Mr. F. H. Sexton, Director of Technical Education in Nova Scotia, attended this conference as adviser.

This cleared the way for the present centrally controlled system of training.

During these early days Mr. T. B. Kidner, who was Director of Technical Education in the City of Calgary, Alberta, was with a few friends voluntarily interviewing returned soldiers in regard to their future plans. In January, 1916, Mr. Kidner was called to Ottawa by Sir James Lougheed, to undertake the organization of this work in Canada for the Commission.

When Mr. Kidner arrived in Ottawa he had already made a close study of all that had been done up to that time both in Canada and other countries, and had plans partly matured to put into effect. In the month of March 1916 he visited the various Provinces of Canada and made arrangements to secure the co-operation of the Provinces. It was arranged that in each province a voluntary committee would be appointed, on which there would be representatives of education, labour, agriculture, manufacture, and others who were interested and could bring light to bear on the training of these disabled soldiers. It was also arranged with the various educational departments that they should loan to the Dominion Government men to undertake this work.

In the Province of Ontario it was arranged that the Military Hospitals Commission should select the men for training and designate in what subjects they were to be trained, and that the Ontario Government would create a body to be called the Ontario Soldiers' Aid Commission, which should undertake the training as agents for and at the expenses of the Dominion Government.

As a result of this organization trip, work was started in the spring of 1916 in a number of hospitals throughout Canada. At the commencement of the work in the hospitals classes in general subjects were established, in which those who desired to do so might brush up their education before taking up new subjects. One of the earliest classes put on was to teach English to foreign born members of the Canadian Expeditionary Force of whom a number had been returned.

More from a recreative than an educational point of view instruction in simple work of arts and crafts was introduced. This work often involved draughting, and led to the installation of apparatus for instruction in mechanical and architectural drawing. In practically every centre classes in general subjects developed a definite commercial side, in which shorthand, typewriting, bookkeeping and relative subjects were taught. A little later on shoe repairing, novelty making, wood working and auto mechanics were introduced, and in some of the hospitals where land was available market gardening and poultry raising were taken up.

It was soon found however, that while a few men could be sufficiently trained before discharge to become proficient in some occupation, that a large number were being discharged before their training was complete. In order to take care of these men it was found necessary to continue their training after discharge, and some authority had to be granted for their support during this period. On the 29th of June, 1916, an Order-in-Council (No. 1472) was passed, fixing a scale of pay and allowances, and giving the Military Hospitals Commission authority to train after discharge men who were so disabled by war service that they could not follow their previous occupation. The practical develop-

ment of the system of industrial re-training dates from the passing of this Order-in-Council.

The gradual expansion of the work outlined in the previous paragraphs continued until December 1916, when Mr. S. A. Armstrong was appointed Director of the Military Hospitals Commission. Under his able leadership the universities throughout the country were induced to take up part of the work, and McGill University in Montreal and the University of Saskatchewan in in Saskatoon were the first to be brought in. Mr. Armstrong made a visit to Saskatoon in the spring of 1917 and met Dr. Walter C. Murray, LL.D., President of the University of Saskatchewan. At that time no facilities existed in the Province of Saskatchewan for technical training. The only place available to carry on this work in that province was at the University where a very complete equipment existed for teaching farm engineering. Mr. Armstrong induced Dr. Murray to undertake the training of disabled soldiers, and from that time forward all work in mechanical lines and agriculture in Saskatchewan has been done at the University.

This policy of using the universities once introduced by Mr. Armstrong has been extended throughout Canada until nearly every university in the country is taking its part.

Mr. Armstrong's experience in creating a system of industries under the Ontario Provincial Government enabled him to visualize the importance of developing the practical side of vocational training and introducing into it some broader views than had hitherto existed.

During these early days when the work was developing little distinction was made between the curative side of vocational training and industrial re-training or training for new occupations. Part of the work was done prior to discharge and part after discharge. Those students taking work for curative purposes were mixed in the same classes with those who had the more serious aim of learning a new occupation. Men who were learning a new occupation were taught part of it before discharge and the balance after.

It was found however that this system was full of defects and did not fill the needs of the students. When the men were in hospital they had to attend at medical parades and orderly room at all times of the day, and had also to attend for treatment. These appointments broke up the day for those men who were taking industrial re-training. The men who were not taking industrial re-training but did work with a curative object in view only, attended the classes one or two hours a day under the direction of the doctor, and this caused discontent among the other men who were learning a new occupation and had to attend five or six hours a day. The mixing of different classes of students led to serious misunderstanding as to the objects of the work, both among the men, the doctors and instructors, and led also to a conflict of interest and control. It was therefore decided to divide the work into two distinct branches—the curative work and industrial re-training.

The curative work was to take place prior to discharge while the men were in hospital, and under the direction of the doctors.

Industrial re-training was to take place after discharge and after medical treatment had ceased.

The two classes of students were to be separated while being trained, and where possible put in different institutions.

The men taking curative work were referred to as patients and not students, and the work was all to be under the control of the doctors.

In the second class—industrial re-training—the men were to be students and not patients and the doctors would become advisers instead of being in control of the direction of the work.

It would not have been possible to make this distinction with economy in the early days, owing to the small and scattered numbers of those for whom the work was being administered. This division of the work however was

possible at the time it was made owing to the increasing number of students and the large number of institutions in which the work was being taken care of.

During the year 1915 Mr. W. M. Dobell and Major J. L. Todd, were asked by the Dominion Government to proceed to Europe and study the work of rehabilitation of the returned soldiers in various countries, and on their return they made a very complete report.

They found that attempts had been made to train crippled soldiers in the industries but there had been a tendency on the part of the French employers to exploit the labour of these soldiers rather than to train them. This led the Commission to adopt definitely the policy of training all men in schools and institutions and to discard the apprenticeship system. This policy was definitely stated in the annual report of the Commission in May, 1917.

During the spring of 1917 a few technical men in the city of Toronto formed themselves into a Joint Committee of Technical Organizations, for the purpose of putting at the disposal of the Government the services of those engineers and technical men in Canada who were not able to go overseas and who desired to offer their services part time to the Government. On this committee were not only technical men who were manufacturers and employers but technical men who were foremen and managers of works.

Among other subjects investigated by this committee was that of training handicapped soldiers, and after discussion it came to the conclusion that the Commission was at fault in deciding not to adopt the apprenticeship system.

They felt that the employers of Canada were willing to shoulder their part of the burden of training crippled soldiers if properly approached, and would not exploit their labour.

Up to July, 1917, 39 occupations were being taught, and the following table shows these courses with the cumulative and direct percentages:—

1. Commercial work	16·9	16·9
2. Civil Service	26·6	9·7
3. Motor Mechanics	42·1	15·5
4. Gas & Steam Engineering	51·4	9·3
5. Telegraphy	58·1	6·7
6. Tractor Engineering	62·6	4·5
7. Farming and Poultry Raising	67·1	4·5
8. Electrical Work	70·4	3·3
9. Shoe Repairing	73·7	3·3
10. Farming	76·7	3·0
11. Machine Shop Practice	79·4	2·7
12. Poultry Raising	81·8	2·4
13. Draughting	84·0	2·2
14. Farm mechanics	86·0	2·0
15. Commercial art	87·5	1·5
16. Municipal accounting	88·8	1·3
17. Occupations for the Blind	90·1	1·3
18. Building inspection	91·2	1·1
19. Manual training teachers	92·3	1·1
20. Miscellaneous courses	100·0	7·7

This study was made by Dr. C. C. Brigham, Ph.D., a doctor of Psychology, and in presenting this table he says as follows:—

> "It may be seen from the above table that although the number of courses offered is comparatively large, the majority of the men are in very few courses. For instance 50% of the re-training cases are taking one of 4 courses, 75% are included in 10 courses. If the cases were distributed equally among the 39 courses offered 8.4% of them would be in each course."

This state of affairs was the result of the policy of the department up to that time as hereinbefore stated. It will be seen that if this policy continued—three courses which absorbed 42%, viz., Commercial, Civil Service and Motor Mechanics would become overcrowded and the disabled men would not only be competing with other disabled men but with those already in these occupations. It was, therefore, realized that a larger number of courses must be made

available to prevent this competition. It was apparent also that too many men were being placed in sedentary occupations instead of productive ones.

Experience in technical schools had shown that there were only a small number of occupations in which men could be successfully trained in a school, therefore the obvious solution of the difficulty was to train them in industry. Another reason for this policy was that the cost of equipment and buildings for training men in occupations in schools was very high and the transition from training to wage earning was easier if the men were trained in the industry itself rather than in the school.

Mr. Armstrong met several members of the Joint Committee of Technical Organizations in July, 1917. As a result of these meetings the policy of the Commission in this respect was changed, and Mr. Armstrong asked the author, a Mining Engineer and who was a member of the committee, to become Director of Vocational Training, in order to put into effect the apprenticeship system, bring the work into closer touch with labour and employers and give a more practical trend to the whole policy. The author took charge on the 1st of August, 1917.

The result of this change in policy has been that at the present time the department is training, or has trained, men in 314 occupations and in chapter 6, page 60, will be found a list of these occupations. This list is being added to constantly.

At the inception of the work in 1916, an arrangement was made with the Soldiers' Aid Commission, in Ontario, that in addition to training the returned soldiers under the agreement made with them they should also act as general agents of the department in selecting the men for training.

The expansion of the work however, had progressed so far by September, 1917, that it was found desirable for the department to put its own staff in the province of Ontario in order to take charge of the interviewing, the selection of men for training, the introduction of the apprenticeship system, social service, after care, etc., and to provide ready means for the purchase of equipment and for the issue of pay and allowances for men; also to provide more direct means of communication between the department in Ottawa and the Soldiers' Aid Commission, so that new policies adopted could be put in force without delay.

Prof. H. E. T. Haultain, Professor of Mining at the University of Toronto, was induced to take charge of this work and act as Vocational Officer for the province of Ontario. Under his administration the expansion of the work and the introduction of the new policies were put into effect without delay. Prof. Haultain rendered voluntary service and to him are due many of the changes of policy introduced.

During the year 1916 the work of the Vocational Branch received so little encouragement from either the public or the men that the increase in the number of students was small, but the rate of increase was largely accelerated during the first half of 1917, and in the latter half of that year, owing to publicity among the soldiers and the public, this acceleration was very marked indeed.

The question of staff had become a pressing one. Up to that time both the executive and teaching staff had been drawn from men who had had previous training in educational work. It was clearly seen that very shortly this source would fail to supply the requisite number of men. Further it was not only desirable but necessary to have returned soldiers administering the work and there were not enough educationalists returning to form a sufficient staff.

It was also felt that in order to bring the work more closely in touch with the labour and manufacturing interests and put it on a practical basis, the executive staff at least should be composed in some part of men who had had previous experience in industry and trades, and who understood both the point of view of the labour organizations and the employers. With regard to this it was felt that soldiers who had been craftsmen, if properly selected, would make better instructors for other returned men than men who had spent their lives in teaching. It was therefore decided to build up both the administrative and

instructional staff so that there would be a happy mixture of educationalists and industrial men, and to have on this staff as large a proportion as possible of returned soldiers. While it was desirable to have returned soldiers it was seen that the question of efficiency and administration must come first. This policy was immediately put into force and has been adhered to ever since, and among the male members of the staff the percentage of returned soldiers has risen from thirty-seven per cent at the end of 1917, to seventy-three per cent at the end of 1918. On the 1st February, 1919, the returned soldiers on the staff of the Vocational Branch numbered five hundred and nineteen, male civilians one hundred and eighty-four.

At the beginning the instructor in charge of the work in any hospital, was assigned the duty of interviewing soldiers to see whether they needed re-training or were entitled to its benefits. There was no compulsory system of interviewing. The principal of the school simply picked out those men whom he thought needed training and interviewed them. A large number of men were discharged and passed into civil life who could not compete with their fellow workmen, and these men kept constantly returning to the department for training. Those who needed training and did not return spread dissatisfaction throughout the country. It was therefore decided that all men who were discharged through the invalided section of the army must be interviewed by a representative of the Vocational branch before discharge. This policy was put into force in the fall of 1917, and at this time the Vocational Branch began to go through all the back files and write to all invalided soldiers who had been discharged without an interview, in order to call their attention to the advantages of industrial re-training.

About this time also an order was put into force that all men in hospital should spend some time each day in the curative workshops, provided it did not interfere with medical treatment. This resulted in an increased number of men attending curative workshops and materially shortening the time of treatment. This order could not be put into effect everywhere as facilities did not exist at that time in every hospital, but these deficiencies have since been made up in practically every instance.

During the fall of 1917 the Director of Vocational Training visited the officer in charge of every province in Canada and made plans for the introduction of the apprenticeship system. It was, however, necessary, before introducing this system, to get into touch with the manufacturers and labour unions, and Mr. G. A. Boate, who was a Canadian by birth and training but had been for some years in the United States, was brought from Newton Technical School to plan and introduce the industrial surveys referred to elsewhere.

Briefly then, the changes in policy which were put into effect during the year 1917, were:—

1. To make a sharp distinction between occupational therapy and industrial re-training.
2. To introduce the apprenticeship system into Industrial re-training.
3. To aid this purpose, the organization of a system of industrial surveys of employers.
4. To make occupational therapy in the hospitals compulsory provided the doctors concurred in each case.
5. To increase the number of returned soldiers on the staff and introduce a large number of men on the executive staff with industrial experience.
6. To interview all men in the invalided section before discharge in regard to their ability to carry on in civil life.
7. To introduce measures to see that all men already discharged through the invalided section, were communicated with either by letter, personal interview, or through the travelling visitors of the Pension Board.

During 1918 however, further changes and expansion of policy were made and put into effect.

At the beginning of 1918 the graduates numbered 133. The Department began to feel that a very searching inquiry should be made as to the success being attained in the work. Up to that time men had been taken on the strength for training but, owing to the length of the courses, few had graduated. It was impossible to measure results except through the success of the graduates. It was also felt that it was not sufficient merely to graduate the men from courses and turn them out into civil life without assisting them to get positions suitable to the training taken, and disabilities from which they were suffering. The Department therefore introduced and organized the follow-up and after-care section. Its duty was to receive notification a month before a man was about to graduate and see that a position was waiting for him; to place him in this position, and then to see that it was suited to him and that he was making a success of his work there. It was also its duty to obtain and keep statistics as to the work graduates were doing, the wages they were receiving, and their relations with their employers, fellow workmen and the unions, if they were engaged in a unionized occupation.

At first this section of the work met with a great many difficulties, for the men who had graduated did not freely give information as to what they were doing. However it was finally found that on assuring the men that the information was confidential and only for the purpose of assisting them and obtaining support for further work, these difficulties were overcome.

The follow-up and after care section aims to follow the man in civil life only until he becomes stabilized. The Department does not wish to introduce any paternal system of after-care. So far it has met with such success that we have been able to trace over 90 per cent of all the graduates. The reason the balance cannot be traced is that on graduation or shortly after they move to other provinces or countries without leaving any address, but even of these who have been lost track of for some time, many are gradually being found and recorded.

In the early months of 1918 it was found that a number of men who were taking courses were absent from their classes without excuse, and it was felt that the money spent so far by the Government on these men would be wasted if something was not done to overcome this laxness.

In the largest centre of training, viz, Toronto, Prof. Haultain suggested that a social service worker should be put on the staff,whose duty it would be to investigate these cases. In Montreal a part time social service worker was engaged. Investigation by these social service workers showed that there were two or three causes for these chronic absentees. It was found that the domestic relations of some of the men were not satisfactory and this caused them so much worry that they could not continue their work. The social service worker was successful in a great many cases in adjusting this. In other cases it was found that the wives and dependents of the men were not encouraging them but after being enlightened as to the work, instead of discouraging the disabled soldier, they took an active interest in his training.

In other cases it was found that owing to lack of management on behalf of part of the family, the pay and allowance in a few instances were not meeting the needs of the man and his dependents. The social service worker was able to assist the family with her advice in this regard and so solved this difficulty in a number of cases. Again it was found that the children of the disabled soldier were sick, and a little instruction was given to the mother along the lines of nursing and sanitation together with a little assistance for a day or two, thus relieving the man from worry and allowing him to give his undivided attention to his work.

In a very few cases men were found to be ill and they were immediately turned over to the medical branch of the Department for care.

Montreal and Toronto were the only places large enough to require the time of paid social service workers. In other centres advantage was taken of the Canadian Patriotic Fund, the Red Cross and other such organizations. It should be stated here that there is no attempt to extend this social service work on a paternal basis and investigation is not made unless the man is absent from his classes, or for some reason unknown to the Department he is not making progress.

As the work continued it was found that a small number of men were falling ill not only from a recurrence of their disability, but also from minor complaints. When a man fell ill his course was interrupted and after a lengthy illness a great deal of time was lost in picking up the work again. It seemed therefore to be the best policy from a standpoint of economy to get these men well and have them continue their courses at the earliest possible moment, and as pay and allowances were only sufficient to cover reasonable necessities of life, a regulation was put into force that all men receiving training should get medical treatment during their course of training.

Apart from the standpoint of economy this seemed the just course in any case. These men were still wards of the Government and should be taken care of until their course of training ended. This medical treatment is given by the Medical Branch of the Department of Soldiers' Civil Re-Establishment.

During the latter part of 1917 the department began to collect statistics in regard to the work, and make some investigation of the costs. During the early months of 1918 the work was increasing so rapidly and assuming such large proportions that it was decided that both the statistical and cost sections should be put on a firm basis, and this has been done.

This statistical section was organized by Mr. G. A. Boate, who had put the industrial surveys in running order, and it is now in excellent shape. The statistics are treated more fully in Chapter 11.

The cost system was introduced and is well on the way to becoming complete. The costs are shown in Chapter 12.

On the 21st February, 1918, an Order in Council (P.C. 432) was passed, changing the name of the Military Hospitals Commission to the Invalided Soldiers' Commission and creating the Department of Soldiers' Civil Re-Establishment. This change, while affecting the work of some of the other branches carried on by the Military Hospitals Commission, had little effect on the work of the Vocational Branch, except as set out in the next paragraph.

One far reaching decision arrived at by the Government at that time, which has since worked out to the advantage of all, was that in the hospitals controlled by the Department of Militia and Defence, Occupational Therapy should be administered by the Vocational Branch of the Department of Soldiers' Civil Re-Establishment, this Department supplying and controlling the equipment and personnel but the work to be directed by the Army Medical Corps of the Department of Militia and Defence.

This settled the jurisdiction of the work in the hospitals. The doctors prescribed and the Vocational Branch administered the prescription under the direction of the doctors. Since the Department of Militia and Defence were charged with supplying accommodation, the Vocational Branch were their guests in these hospitals, and this arrangement has worked out most satisfactorily.

A new section for the training and after-care of blinded soldiers was created in August, 1918, under the care of Capt. A. E. Baker, M.C., Croix de Guerre. This is distinct from other branches of training.

The training of the blind is a problem in itself. No one thoroughly understands the blind except the blind. The Department had for some months been in communication with Sir Arthur Pearson in England, and had made an exhaustive investigation of facilities for training the blind in Canada. It was found that there was no place in Canada where the training of adult blind was

made a specialty. However, Sir Arthur Pearson, at St. Dunstan's, had succeeded by his broad sympathy and his business and organizing ability, in putting the training of the adult blind on a firm basis, and introducing into it methods which had never been used before. By arrangement with Sir Arthur Pearson, the Department adopted the policy of having all Canadian blind soldiers who so desired, trained at St. Dunstan's. A number of blind soldiers who had been returned to Canada without training were, at their own request, returned to St. Dunstan.

The history and training of the blind with statistics is treated fully in Chapter 8.

Shortly after the department was created it was decided that the pay and allowances which were in existence up to that time were hardly adequate to meet living expenses which had been increasing for some time. A new Order in Council (P.C. 1366) was passed on 22nd June, 1918, providing a new scale of pay and allowances effective until 1st March, 1919, when an increased rate went into effect. This increased scale is shown in appendix No. 3-together with that of Great Britain, Australia, New Zealand and the United States.

During the latter part of 1917, Major R. T. MacKeen, District Vocational Officer for the province of Quebec, came into touch with Mrs. W. A. Peck of Montreal, and asked her to organize craft work for the soldiers who were confined to the wards of the hospitals in the city of Montreal. At the same time Mr. Burnett at Whitby Hospital was introducing craft work. Mrs. Peck's work was so successful that it was decided to extend it all over Canada. The history of this work and its growth is treated fully in Chapter Four. Its growth was so remarkable that in order to handle it properly it was separated from the curative workshops of which it formerly had been a part, and the occupational therapy was then divided into two sections—Ward occupations and curative workshops.

The literature regarding the expansion and growth of the work in Canada, had its counterpart in other countries, and was becoming quite extensive. It was therefore decided to introduce a Research section in order to obtain, record and study this mass of literature coming in from all countries, and to keep in touch with developments everywhere.

It was part of the duty of this research section to bring to the attention of the Director of Vocational Training, the District Vocational Officers and all others interested, new features so that if valuable or applicable to Canada they could be put into force. Every endeavour has been made to keep in touch with the advancement of the work in all countries so that the Department may take advantage of any new ideas.

The changes and growth in 1918 may then be stated as follows:—

1. The institution of the follow-up and after-care section.
2. The introduction of a small amount of social service work.
3. The provision of medical treatment for men taking industrial re-training.
4. The organization of Statistics and Cost sections.
5. The creation of a section for the Blind.
6. The introduction of ward occupations as a separate and distinct branch of the work.
7. The creation of a research section.

Together with these changes in policy an enormous expansion of the work was taking place. While at the beginning of 1918 there were 133 graduates, at the end of 1918, 2,285 students had completed their courses. At the beginning of 1918, there were 954 re-training students and on the 31st December, 1918, the number had increased to 3,189 notwithstanding the number who had graduated in the meantime.

This growth of the work necessitated the provision of a larger amount of equipment and space. Arrangements were made with different universities and

schools throughout Canada to provide for this expansion. Practically every educational institution of any size is now taking part. Various arrangements have been made with these institutions depending upon local conditions. Some are paid their out of pocket expenses, others are paid so much per pupil per month. In nearly all, separate branches of the work have been organized. In some instances the Department has supplied the equipment which is still the property of the Government; in others equipment has been supplied on a different basis, becoming the property of the institution when the work of the Vocational Branch ceases.

It would not be right to close this history of the development and growth of vocational work in Canada without giving credit to those who contributed so much. Practically every member of the staff of the Department has given ideas as to the formation of policy. Suggestions have also been received from educationalists and laymen at large. It is impossible to give credit by name to all those who have so unselfishly assisted in the work.

The Minister of the Department, the Hon. Sir James A. Lougheed, P.C., K.C.M.G., by his confidence in his officers and the support he has given them at all times, has lent the encouragement necessary to overcome the numerous difficulties.

Mr. S. A. Armstrong, the Director of the Military Hospitals Commission and later Deputy Minister of the Department, through his sympathy, imagination and practical knowledge of trades, gave a great incentive to the work, and to Mr. F. Gerald Robinson, the present Deputy Minister, who has in every way supported the efforts of the Director of Vocational Training by advice and assistance.

The Vocational Officers and District Vocational Officers each contributed to the policy and administration.

The various Provincial Governments through their Ministers of Education, Deputy Ministers and principals and staff of Technical Schools, have heartily co-operated and assisted.

McGill University, Montreal, through the President, Sir William Peterson, and the Faculty of Applied Science, placed its facilities at our disposal.

The University of Saskatchewan likewise has contributed, and Dr. Walter Murray, LL.D., its President, has assisted with advice, counsel and active work on the Advisory Committee of Saskatchewan, practically from the beginning.

The University of Toronto became actively interested in the Fall of 1917, through loaning Prof. H. E. T. Haultain, Professor of Mining, who voluntarily took charge of the work in Ontario, and through the sympathy of the President, Sir Robert Falconer, and Prof. Ellis, Dean of the Faculty of Science.

The University of British Columbia through its President, the late Dr. Westbrook and Prof. Klink, Dean of Agriculture, for the introduction of the work in British Columbia.

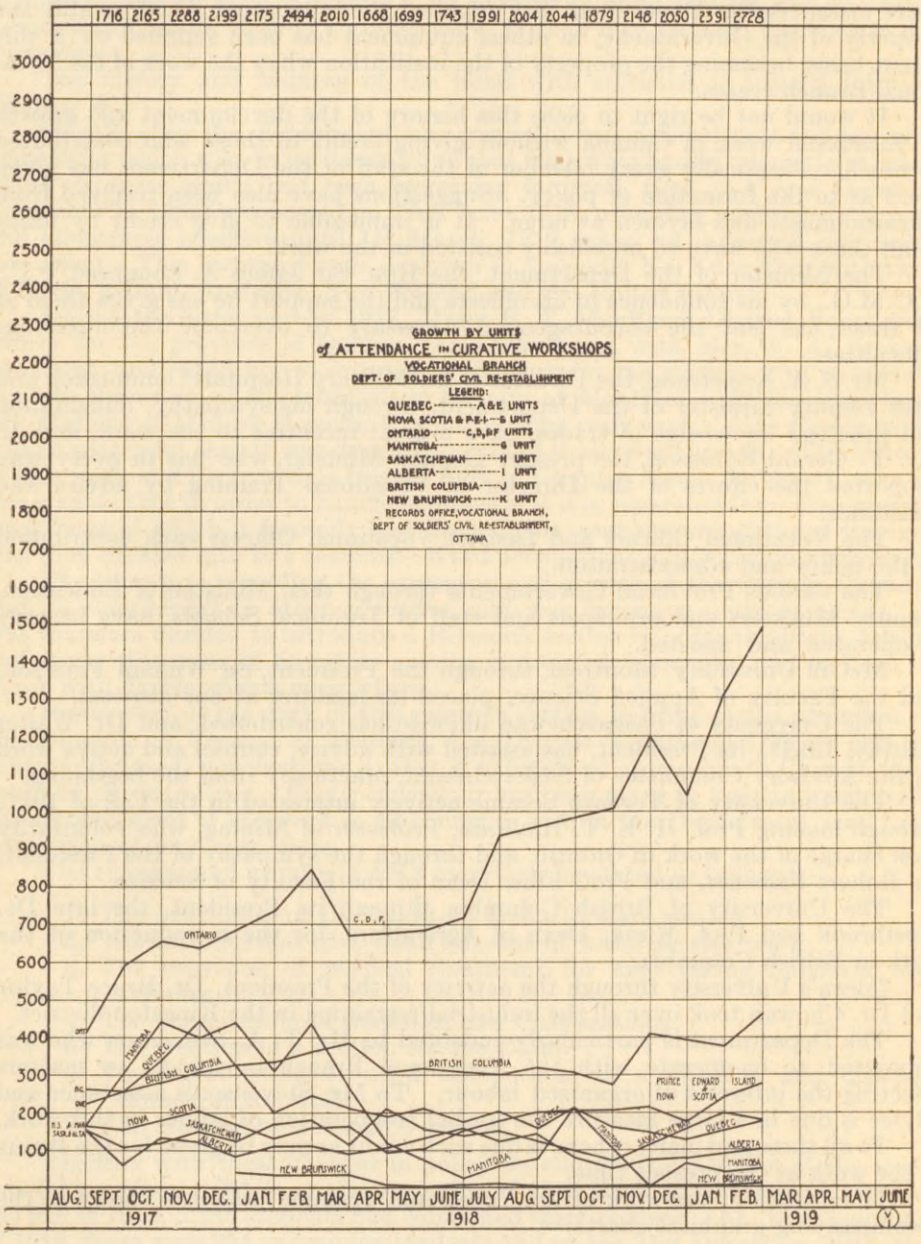
Queen's University through the activity of the President, Dr. Bruce Taylor and Dr. Chowan took over all the industrial retraining in the Kingston district.

The Department is particularly indebted to Mr. T. A. Stevenson who was appointed to co-operate with the Vocational Branch in respect to matters affecting the interests of organized labour. To Mr. Stevenson's assistance and advice is due in a large measure the cordial co-operation of labour in this work.

To all these and many others, is due such credit as may be given for the status of the work at the present time.

The growth of the work of the Vocational Training branch is shown in the accompanying graphical charts:—

1. Attendance in Curative Workshops by Units.
2. Attendance—Industrial Re-training—by Units.
3. Attendance in Curative Workshops and Industrial Re-training in Canada.
4. Growth of Pay and Allowances.


1716 2165 2288 2199 2175 2494 2010 1668 1699 1743 1991 2004 2044 1879 2148 2050 2391 2728
3000
2900
2800
2700
2600
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2300
2200
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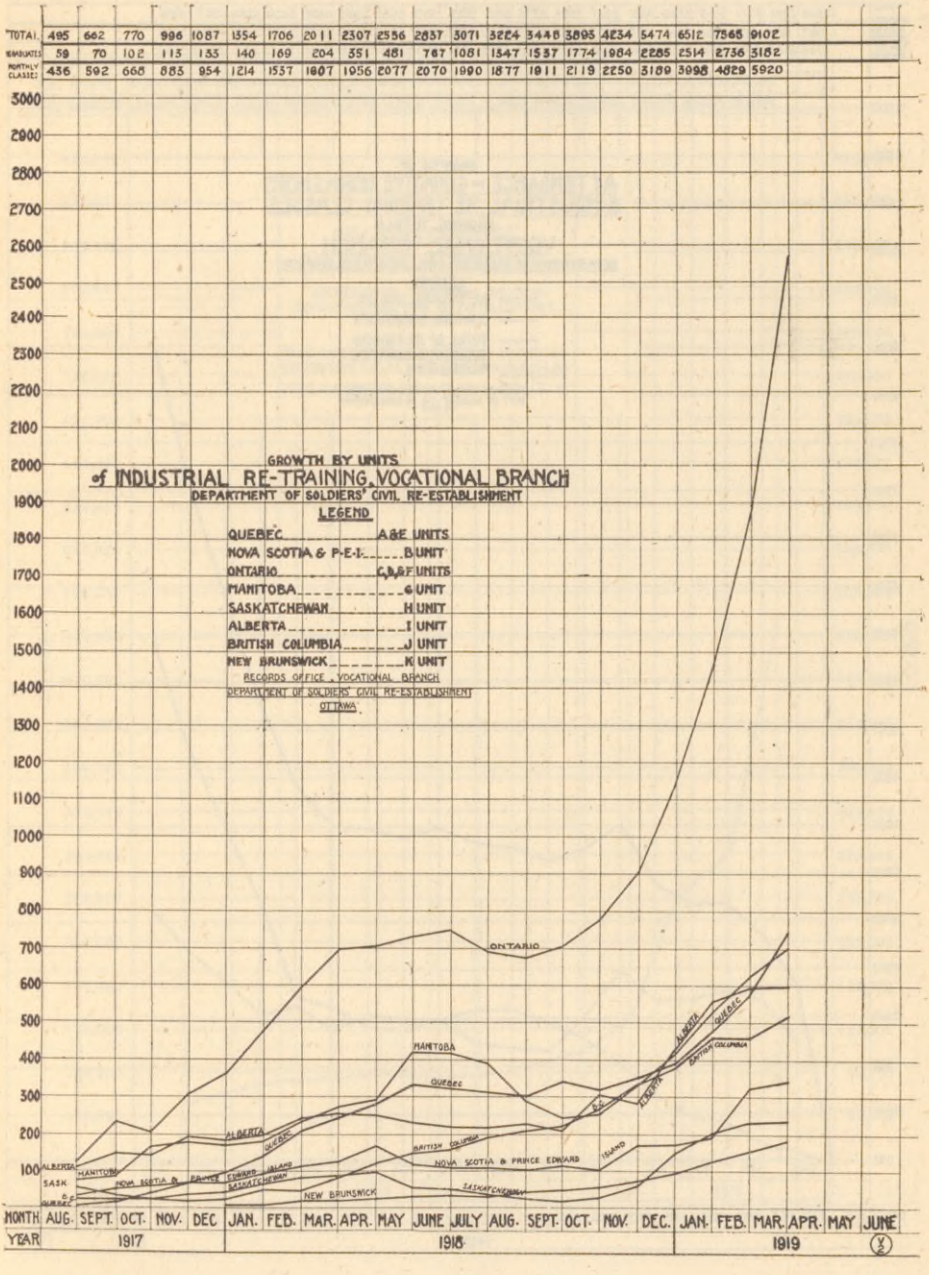
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
GROWTH BY UNITS
of ATTENDANCE in CURATIVE WORKSHOPS
VOCATIONAL BRANCH
DEPT. OF SOLDIERS' CIVIL RE-ESTABLISHMENT
LEGEND:
QUEBEC ---------- A & E UNITS
NOVA SCOTIA & P.E.I. --- B UNIT
ONTARIO ---------- C, D, & F UNITS
MANITOBA ---------- G UNIT
SASKATCHEWAN ---------- H UNIT
ALBERTA ---------- I UNIT
BRITISH COLUMBIA ---- J UNIT
NEW BRUNSWICK ------ K UNIT
RECORDS OFFICE, VOCATIONAL BRANCH,
DEPT OF SOLDIERS' CIVIL RE-ESTABLISHMENT,
OTTAWA
C.D.F.
ONTARIO
MANITOBA
QUEBEC
BRITISH COLUMBIA
NOVA SCOTIA
SASKATCHEWAN
ALBERTA
NEW BRUNSWICK
PRINCE EDWARD ISLAND
AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE
1917 1918 1919 (1)


TOTAL 495 662 770 996 1087 1354 1706 2011 2307 2536 2837 3071 3224 3448 3895 4234 5474 6512 7565 9102
GRADUATES 59 70 102 113 133 140 169 204 351 481 767 1081 1547 1537 1774 1984 2285 2514 2736 3182
MONTHLY CLASSES 436 592 668 883 954 1214 1537 1807 1956 2077 2070 1990 1877 1911 2119 2250 3189 3998 4829 5920
3000
2900
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2700
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2400
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1900
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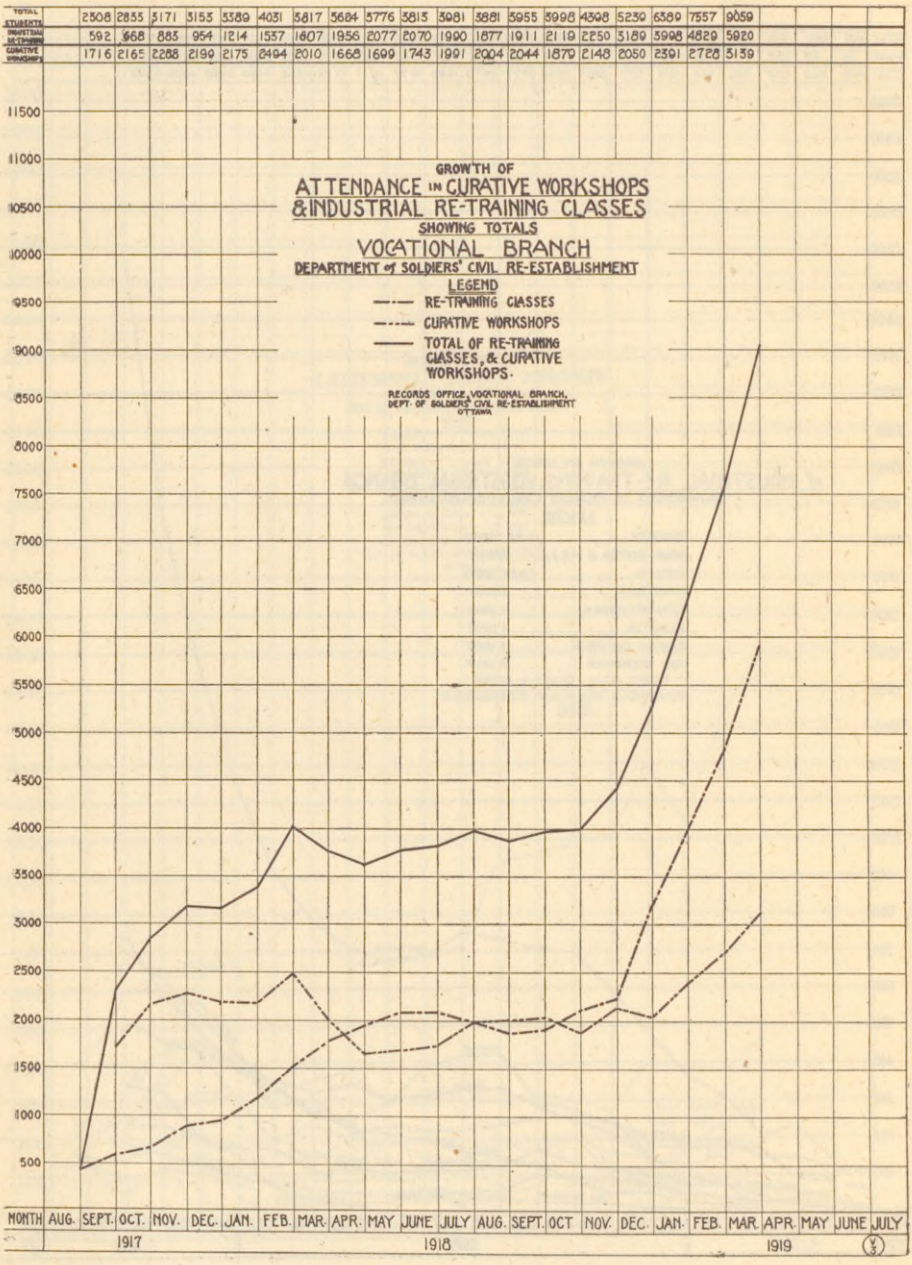
100
GROWTH BY UNITS
of INDUSTRIAL RE-TRAINING, VOCATIONAL BRANCH
DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT
LEGEND
QUEBEC A&E UNITS
NOVA SCOTIA & P.E.I. B UNIT
ONTARIO C,D,&F UNITS
MANITOBA G UNIT
SASKATCHEWAN H UNIT
ALBERTA I UNIT
BRITISH COLUMBIA J UNIT
NEW BRUNSWICK K UNIT
RECORDS OFFICE, VOCATIONAL BRANCH
DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT
OTTAWA
ONTARIO
MANITOBA
QUEBEC
ALBERTA
BRITISH COLUMBIA
NOVA SCOTIA & PRINCE EDWARD ISLAND
SASKATCHEWAN
NEW BRUNSWICK
MONTH AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE
YEAR 1917 1918 1919


GROWTH OF
ATTENDANCE IN CURATIVE WORKSHOPS
& INDUSTRIAL RE-TRAINING CLASSES
SHOWING TOTALS
VOCATIONAL BRANCH
DEPARTMENT of SOLDIERS' CIVIL RE-ESTABLISHMENT
LEGEND
RE-TRAINING CLASSES
CURATIVE WORKSHOPS
TOTAL OF RE-TRAINING CLASSES, & CURATIVE WORKSHOPS.
RECORDS OFFICE, VOCATIONAL BRANCH, DEPT. OF SOLDIERS' CIVIL RE-ESTABLISHMENT OTTAWA
TOTAL ATTENDANCE 2308 2835 3171 3153 3389 4031 5817 5684 5776 5815 3081 3881 5955 5998 4398 5230 6589 7557 9059
PROFESSIONAL RETRAINING 592 668 883 954 1214 1557 1607 1956 2077 2070 1990 1877 1911 2119 2250 3189 3998 4829 5920
CURATIVE WORKSHOPS 1716 2165 2288 2199 2175 2494 2010 1668 1699 1743 1991 2004 2044 1879 2148 2050 2591 2728 3139
11500
11000
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10000
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6500
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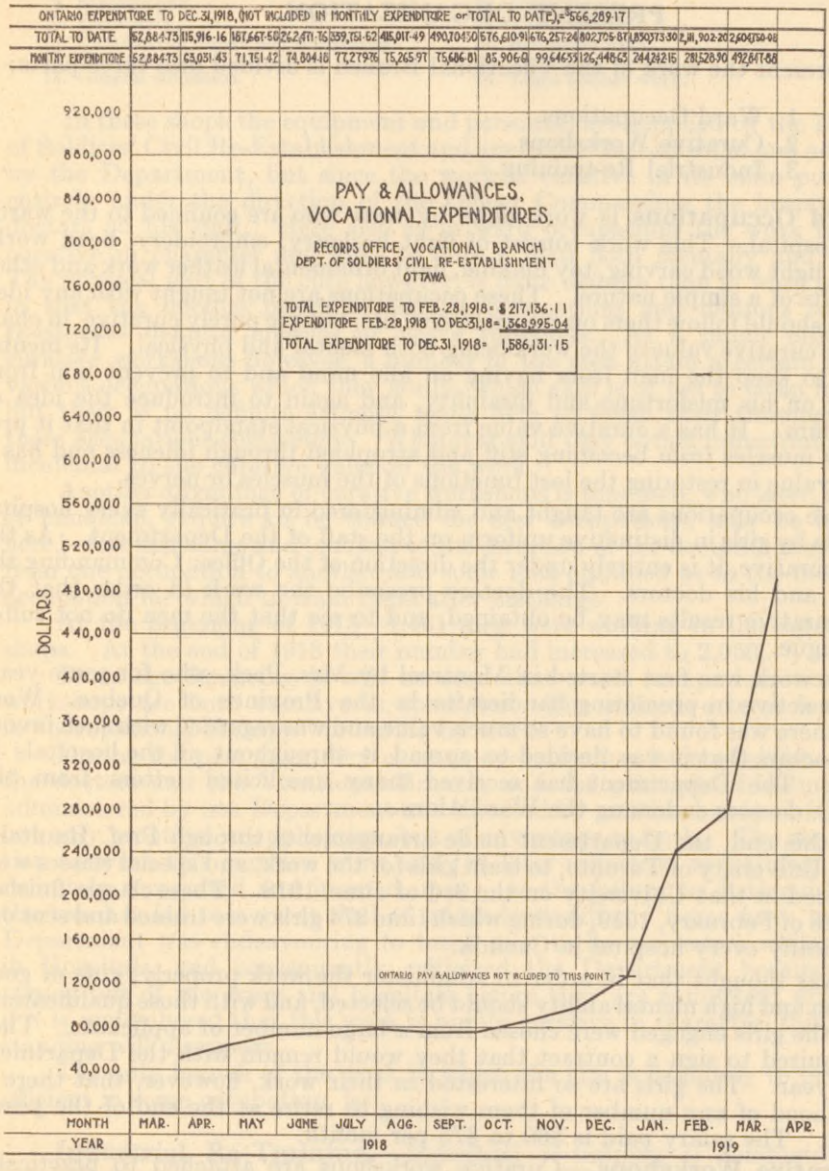
MONTH AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY
1917
1918
1919
(5)


ONTARIO EXPENDITURE TO DEC.31,1918, (NOT INCLUDED IN MONTHLY EXPENDITURE or TOTAL TO DATE)= $566,289·17
TOTAL TO DATE 62,884·73 115,916·16 187,667·58 262,471·76 339,751·62 415,017·49 490,704·30 576,610·91 676,257·24 802,705·87 1,850,573·30 2,311,902·20 2,600,730·08
MONTHY EXPENDITURE 62,884·73 53,031·43 71,751·42 74,804·18 77,279·76 75,265·97 75,686·81 85,906·61 99,646·33 126,448·63 244,242·15 281,328·90 492,847·88
PAY & ALLOWANCES, VOCATIONAL EXPENDITURES.
RECORDS OFFICE, VOCATIONAL BRANCH DEPT. OF SOLDIERS' CIVIL RE-ESTABLISHMENT OTTAWA
TOTAL EXPENDITURE TO FEB.28,1918= $ 217,136·11
EXPENDITURE FEB.28,1918 TO DEC31,18= 1,368,995·04
TOTAL EXPENDITURE TO DEC.31,1918= 1,586,131·15
DOLLARS
920,000
880,000
840,000
800,000
760,000
720,000
680,000
640,000
600,000
560,000
520,000
480,000
440,000
400,000
360,000
320,000
280,000
240,000
200,000
160,000
120,000
80,000
40,000
ONTARIO PAY & ALLOWANCES NOT INCLUDED TO THIS POINT
MONTH MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR.
YEAR 1918 1919

CHAPTER III.

PRESENT ORGANIZATION.

At present the work of the Vocational Branch is divided into three parts:—

1. Ward Occupations.
2. Curative Workshops.
3. Industrial Re-training.

Ward Occupations is work done by men who are confined to the wards of the Hospital. This work consist of light basketry, embroidery, bead work, weaving, light wood carving, toy making, light ornamental leather work and other handicrafts of a simple nature. These occupations are not taught with any idea that men should follow them on return to civil life, but are purely curative, in character, the curative value of the work being both mental and physical. Its mental effect is to keep the man from having an idle mind and to prevent him from brooding on his misfortune and disability, and again to introduce the idea of work to him. It has a curative value from a physical standpoint in that it prevents his muscles from becoming stiff and atrophied through idleness and has a positive value in restoring the lost functions of the muscles or nerves.

These occupations are taught and administered in pratically every hospital in Canada by girls in distinctive uniform on the staff of the Department. As the work is curative, it is entirely under the direction of the Officer Commanding the hospital, and his doctors. The doctors prescribe the work in order that the proper curative results may be obtained, and to see that the men do not suffer from fatigue.

This work was first started in Montreal by Mrs. Peck, who for some years has been active in promoting handicrafts in the Province of Quebec. Work started there was found to have so much value and was regarded with such favour by the doctors that it was decided to spread it throughout all the hospitals in Canada. The Department has received many unsolicited letters from the C.A.M.C. doctors endorsing the Ward Aides.

To this end, the Department made arrangements through Prof. Haultain, with the University of Toronto, to train girls for the work, and special classes were commenced in that University on the 3rd of June, 1918. These classes finished on the 5th of February, 1919, during which time 274 girls were trained and sent out to practically every hospital in Canada.

It was thought that in order to administer the work properly, girls of good education and high mental ability should be selected, and with those qualifications in view the girls engaged were chosen from a large number of applicants. They were required to sign a contract that they would remain with the Department for one year. The girls are so interested in their work, however, that there is no likelihood of any number of them wishing to retire at the end of the year's contract. The salary paid is $60 to $75 per month.

Curative Workshops.—Curative workshops are attached to practically every military and departmental hospital throughout Canada. The work conducted in these shops is for those patients who are convalescing and can leave the wards, and has the same general purpose as the ward occupations, except that the work is heavier. In these curative workshops the occupations followed are in general:—

1. Gas tractors.
2. Sign writing.
3. Steam engineering.
4. Oxy-acetylene welding.
5. Horticulture.
6. Music.
7. Machine shop practice.
8. Motion picture operation.
9. Stenography.
10. Electricity.
11. Commercial design and illustrating.
12. Commercial.
13. General education.
14. Auto mechanics.
15. Weaving.
16. Basketry.
17. Barbering.
18. Drafting—General.
19. Shoe repairs.
20. Woodworking.
21. Agriculture.
22. Civil Service.
23. Telegraphy.
24. Art metal work.
25. Market gardening.
26. Light leather work.

In these shops the equipment and personnel are supplied by the Department of Soldiers' Civil Re-Establishment and are under the control of and administered by the Department, but since the work is curative in its main purpose, it is entirely under the direction of the Officer Commanding the hospital and the doctors on his staff. Here also as in ward occupations the work is primarily curative in character and aims to cure a man both mentally and physically. The physical part of the cure however, is more definite than in ward occupations in that the doctors prescribe definite occupations and motions to cure and re-educate definite muscles or nerve functions. As a minor object of the curative workshops however, a number of the men attain a certain skill in the various occupations which they study, which skill is of use to them in after life, but there is no definite attempt made here to finish their training in any of these occupations completely. Whatever skill they obtain industrially is merely incidental to the curative value of the work.

Another advantage of curative workshops is that men, who later, on account of handicap, require to be trained for new occupations, may be interviewed here before discharge and (subject to the direction of the doctors) may be moved from one occupation to another and some idea obtained as to the most suitable occupation for which to train them after discharge.

At the beginning of 1918—1,461 men were working in the curative workshops. At the end of 1918 their number had increased to 2,050.

From the foregoing it will be seen that ward occupations and curative workshops are both curative in character. The collective term for the work is "occupational therapy" or curing by work.

During the past year, very close co-operation has been established between the doctors and the Vocational Branch, and the principle of having the work administered by one Department and directed by another has been found to be, not only practical in application, but of advantage to both. The sharp distinction between this curative work and the later industrial re-training, should be definitely recognized and insisted upon,—as the failure to distinguish between the two has led to a great deal of misunderstanding. Some have thought the Department was endeavouring to teach men to be carpenters while they were in Hospitals, and consequently criticized the Department because men are turned out of the army and hospitals before they are competent artisans; but if it is remembered that this work is purely curative in character, this misunderstanding will disappear.

The only branch of the work in which the aim is definitely to make a man efficient in some occupation, is:

Industrial Re-Training.—Industrial re-training is conducted entirely after discharge and is open only to those men, who through injuries received on, or aggravated by, war service, are prevented, by reason of their disability, from following their pre-war occupations.

This division is called the Disability Line, and has been adopted by practically all countries at war, with the exception perhaps of England and Australia. In England the advantages of industrial re-training have been extended to other classes, such as boys who were under age when they enlisted, university

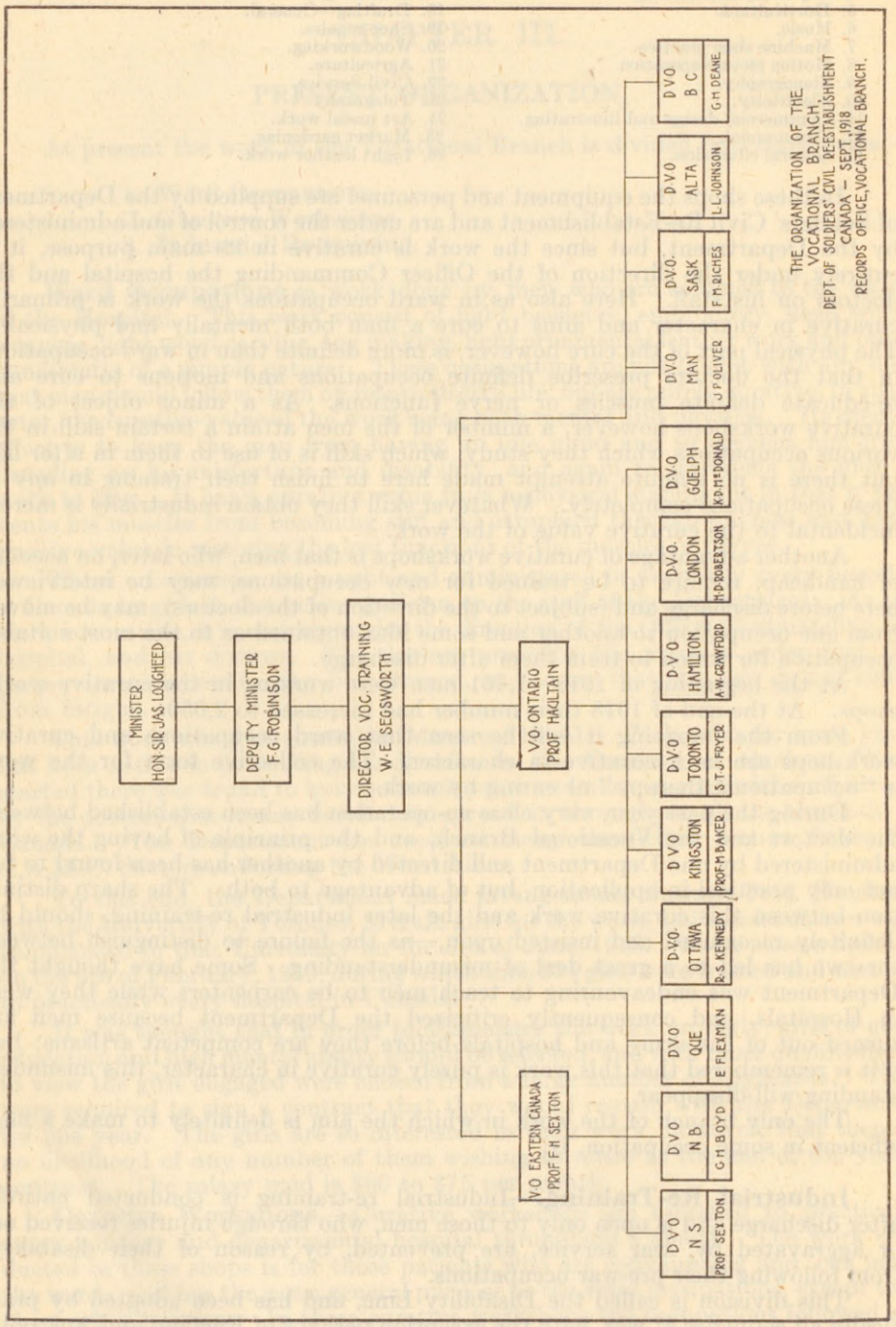

MINISTER
HON SIR JAS LOUGHEED
DEPUTY MINISTER
F.G. ROBINSON
DIRECTOR VOC. TRAINING
W.E. SEGSWORTH
V.O. ONTARIO
PROF HAULTAIN
V.O. EASTERN CANADA
PROF H. SEXTON
D.V.O. N.S.
PROF SEXTON
D.V.O. N.B.
G.H. BOYD
D.V.O. QUE
E. FLEXMAN
D.V.O. OTTAWA
R.S. KENNEDY
D.V.O. KINGSTON
PROF H. BAKER
D.V.O. TORONTO
S.T.J. FRYER
D.V.O. HAMILTON
A.W. CRAWFORD
D.V.O. LONDON
H.D. ROBERTSON
D.V.O. GUELPH
K.D. McDONALD
D.V.O. MAN
J.P. OLIVER
D.V.O. SASK
F.M. RICHES
D.V.O. ALTA
L.L. JOHNSON
D.V.O. B.C.
G.H. DEANE
THE ORGANIZATION OF THE
VOCATIONAL BRANCH,
DEPT. OF SOLDIERS' CIVIL RE-ESTABLISHMENT
CANADA — SEPT. 1918
RECORDS OFFICE, VOCATIONAL BRANCH.

CHART No. 1.

students who had interrupted their academic studies, widows of soldiers killed in the war, and some other special classes of officers.

Chapter 7 discusses fully the various phases of Industrial re-training.

Chart No. 1 shows the organization of the Vocational Branch throughout Canada. In Ottawa there is a central administrative office presided over by a Director of Vocational Training with his staff. In each Province with the exception of Prince Edward Island (which is attached to Nova Scotia) the Director of Vocational Training has a representative called the District Vocational Officer, who administers all the work in his territory. These officers are as follows:—

Prof. H. E. T. Haultain, Vocational Officer for Ontario, 185 Spadina Avenue, Toronto, Ont.
The following districts are under his jurisdiction:—
Lieut. S. T. J. Fryer, 185 Spadina Avenue, Toronto.
Prof. M. B. Baker, Golden Lion Block, Kingston, Ont.
Lieut. R. S. Kennedy, 432 Rideau Street, Ottawa, Ont.
Lieut. A. W. Crawford, 30Q Clyde Block, Hamilton, Ont.
Lieut. H. D. Robertson, Technical School, London, Ont.
Lieut. K. D. McDonald, Guelph Military Hospital, Guelph, Ont.
Prof. F. H. Sexton, Vocational Officer Quebec and Maritime Provinces, Bellevue, Spring Garden Road, Halifax, N.S.
Major R. T. MacKeen, District Vocational Officer, 109 Drummond Building, Montreal, Que.
Major J. P. Oliver, District Vocational Officer, 400 Notre Dame Investment Building, Winnipeg, Man.
Mr. F. M. Riches, District Vocational Officer, MacCallum Hill Building, Regina, Sask.
Lieut. L. L. Johnson, District Vocational Officer, Lancaster Building, 8th Avenue and 2nd Street, Calgary, Alta.
Mr. G. H. Deane, District Vocational Officer, Board of Trade Building, Vancouver, B.C.
Capt. G. H. Boyd, District Vocational Officer, Royal Bank Building, Fredericton, N.B.

The principle has been adopted of giving the District Vocational Officer as much freedom of action as is consistent with the administration of a Government Department, and holding him responsible for results. Certain parts of the work however, are centralized in Ottawa, such as the final approval of courses, renting and purchase of buildings, the purchase of equipment and materials, the approval of pay and allowances, statistics, and those things in general which are matters of Government policy.

The decentralization of the balance of the work is necessary for certain definite reasons. The training given the men must necessarily be adapted to local conditions. Training which is proper for men in British Columbia, would not always do for men in Nova Scotia, and the Prairie Provinces differ considerably in this respect from Ontario and Quebec.

In addition to this, the District Vocational Officer must be given considerable freedom of action in order to obtain the co-operation of the Provincial Departments of Education. Labour conditions also vary in each of the Provinces and apart from matters of general policy, each District Vocational Officer makes his own arrangements with the local Unions.

The organization of the Ottawa office, shown on Chart No. 2.

Attached to the Director of Vocational Training, is an Assistant Director—who is responsible for the detail administration of the branch and is in charge of all the work when the Director is absent from Ottawa. The Director at the

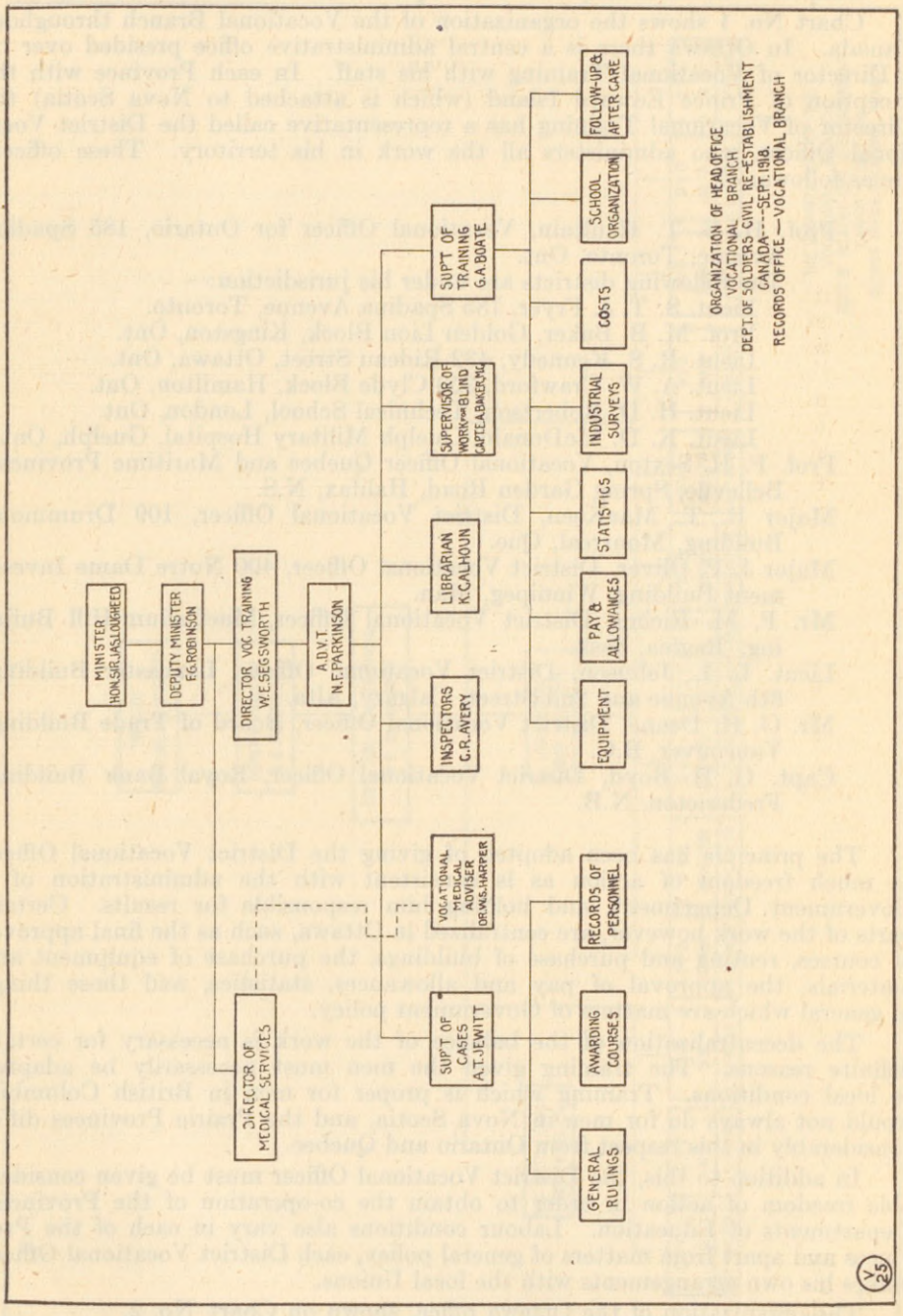

MINISTER
HON. SIR J. A. LOUGHEED
DEPUTY MINISTER
F.G. ROBINSON
DIRECTOR VOC. TRAINING
W.E. SEGSWORTH
A.D.V.T.
N.F. PARKINSON
DIRECTOR OF
MEDICAL SERVICES
SUPT OF
CASES
A.T. JEWITT
VOCATIONAL
MEDICAL
ADVISER
DR. W.S. HARPER
INSPECTORS
G.R. AVERY
LIBRARIAN
K. CALHOUN
SUPT OF
TRAINING
G.A. BOATE
SUPERVISOR OF
WORK for BLIND
CAPT. E.A. BAKER, M.C.
GENERAL
RULINGS
AWARDING
COURSES
RECORDS OF
PERSONNEL
EQUIPMENT
PAY &
ALLOWANCES
STATISTICS
INDUSTRIAL
SURVEYS
COSTS
SCHOOL
ORGANIZATION
FOLLOW-UP &
AFTER CARE
ORGANIZATION OF HEAD OFFICE
VOCATIONAL BRANCH
DEPT. OF SOLDIERS CIVIL RE-ESTABLISHMENT
CANADA.---SEPT. 1918.
RECORDS OFFICE — VOCATIONAL BRANCH
V 25

CHART No. 2.

present time spends the major portion of his time on matters of policy and keeping in touch with the work outside.

Under the Assistant Director, the administration in Ottawa is divided into two divisions:—

1. That which controls the granting of courses, extension of same when necessary, and the personnel.
2. What might be called the operating division.

The first division is controlled by Mr. A. T. Jewitt. When the District Vocational Officers, in consultation with the Vocational Medical Advisor and the Advisory Committee, have decided that an ex-soldier should be given a course, and what course he should have, all the papers are sent to Ottawa to Mr. Jewitt's division and examined carefully. It is there decided whether or not the man is eligible and the course is either approved or not. The same procedure is followed in regard to extension of courses.

There has been some criticism of this procedure of having courses approved in Ottawa, but the Ottawa office is responsible for the administration of the Act and the control of the expenditure. The Order-in-Council reads—"only those men are eligible for pay and allowance who have been so disabled that they cannot follow their previous occupation." The question of whether a man falls on one side or the other of this disability line, is necessarily a matter of opinion and judgment—no hard and fast rule can be made. A man with two fingers off one hand might be too disabled to follow his former occupation as a watchmaker, but this disability would not debar him from following his previous occupation if he had been a machinist. A man who has an amputation of the right leg would be capable of carrying on as a bank clerk if that were his previous occupation, but could not continue as a house carpenter. If each district were allowed to award courses without reference to Ottawa, injustice would be done in some Provinces, and in others too liberal an interpretation might be made. By having all the recommendations go through what might be called one channel or gateway at Ottawa, these inequalities can be remedied.

It is evident that as men are moving from one Province to another, satisfaction would never be obtained if inequalities existed between the different Provinces, and if there was a failure to render substantial justice to all.

Mr. Jewitt also keeps a very close record of the personnel. The educational and industrial history of each man on the staff, together with the qualifications, is obtained and recorded so that at any moment there is available in Ottawa a full history of each employee.

General rulings to be made effective are sent out by Mr. Jewitt who keeps a ruling file which must at all times be kept up to date.

After the courses are granted, the work is handed over to the operating division, which is presided over by Mr. G. A. Boate, who is a specialist on industrial training. This division controls the following:—

1. Pay and allowances.
2. Equipment.
3. Statistics.
4. Industrial Surveys.
5. School organization.
6. Follow up and after care.
7. Costs.

Pay and Allowances—With the recommendation to Ottawa that a man be granted a course, information is sent in regard to the number and classification of his dependents, and when the course recommended is approved, pay and allowances are computed and wired to the district, so that the man is put on pay immediately his course commences. Mr. Jeschope, a returned soldier, is in charge of this section.

Equipment.—When the District Vocational Officer requires equipment, he sends his requisition to Ottawa. This is examined and passed upon by a mechanical engineer—Mr. Kearns—who is a specialist on the equipment of training schools. He also advises the District Vocational Officer as to the proper equipment to be installed. These requisitions when approved by the Head Office are sent to the Purchasing Branch of the Department for purchase through the War Purchasing Commission.

Statistics.—The statistical work of the Vocational Branch during the past year, has been brought up to a high state of efficiency. On account of the policy adopted of giving the District Vocational Officers as much scope as possible in the administration of the work, it is necessary to have a very complete system of gathering statistics and reports in Ottawa to see that the work is being properly accomplished. This Statistical section is in charge of Mr. Campion, a returned soldier. Some returns are made every week, and others every month. By a complete system of weekly returns we can ascertain in Ottawa at any time what subjects any man is taking to complete his course—the number of hours per day he is attending school and the number of hours per week. We can also ascertain at any time what subjects each instructor is teaching, the number of students he instructs and the number of hours per month he is instructing.

Chapter 11 covers this section of the work fully.

Industrial Surveys.—As pointed out elsewhere, before the adoption of the apprenticeship system of training men, it was necessary to find out the occupations suitable to certain disabilities, the openings available, the attitude of the managers and foremen, the hours of work, etc., This was done by instituting a system of industrial surveys—a fuller treatment of which is given in Chapter 8. This work was primarily organized throughout Canada by Mr. G. A. Boate.

School Organization.—This section of the work is to supply advice to the different District Vocational Officers, as to the organization of training schools, equipment and general administration of school work. Further details in regard to school organization will be found in Chapter 7.

Follow up System.—Each man granted a course is followed up to see what becomes of him either after graduation or after he discontinues his course. This following up of the man is continued until such time as he is either stabilized in civil life or lost track of.

In commercial business, there exists a profit and loss account, with the expenses on one side and the receipts on the other, the balance being profit. An endeavour is being made to administer the Vocational Branch on a commercial basis. On the debit side of the profit and loss account, we have the costs and on the other side disabled men stabilized in civil life. The follow-up work is designed to serve two purposes.

1. To assist the man after graduation.
2. To ascertain the credits in the profit and loss account.

Great care is taken to prevent this branch from being too paternal. The idea is merely to give the man every opportunity of establishing himself after graduation from his course, and to assist him if he is likely to fall down from lack of encouragement or assistance at a critical moment. As soon as the man becomes stablized in civil life the Department ceases to watch over him.

This follow up section is a most vital part of the work when it is considered from the standpoint of assessing or judging results. Without carefully gathered information as to the after life of these men, we would have no yard stick by which to measure the success or non-success of the work of the Vocational Branch. The follow up system and its results are treated in Chapter 13.

Costs.—The work of the Department is carried on in a large number of institutions, a schedule of which is given elsewhere. In order to control efficiently

the expenditure in these institutions, it is necessary to have a proper cost system, so that the costs in one institution can be compared with those in another, also with a civil institution of as similar a character as possible.

These costs are treated more fully in Chapter 12.

Owing to the rapid expansion of the work and to the fact that it is new and has had to be evolved, the system of costs accounting is not yet in as efficient a state as the Department desires, but it is rapidly approaching that state.

This section is in charge of Mr. Russell, a returned soldier.

In addition to these two main branches of the work, the Vocational Branch has a library and research section, conducted by Miss Calhoun. In this library the Department has probably the second or third best collection in America of literature on the subject of the rehabilitation of soldiers. It subscribes to and collects publications from all the allied as well as the enemy countries, and the more important foreign articles are translated and circulated among the branches of the Department.

The librarian is prepared to issue at any time a precis of all the literature extant on any branch of the work and is of immense service.

A special section of the Vocational Branch has been created to take charge of the blind. This section is presided over by Capt. E. A. Baker, M.C., Croix de Guerre. Before going overseas, Capt. Baker graduated from Queen's University in Electrical Engineering. He himself is completely blind having lost both eyes. He returned to Canada in 1916, after graduating from St. Dunstan's, and was later employed in the Ontario Hydro Electric Commission at Toronto. Full particulars regarding the care of the blind appear in Chapter 10.

Another section is the medical work. The Vocational Medical Adviser at the head office is detailed to the staff of the Director of Vocational Training by the Director of Medical Services of the Department, and is under the control and administration of the Director of Vocational Training, but is subject to the criticism, advice and inspection of the Director of Medical Services in technical medical matters. It is the duty of the Vocational Medical Adviser to advise the Department in all medical matters regarding re-training.

The medical aspect of industrial re-training is treated in Chapter 9.

There is an Inspector attached to the Director of Vocational Training in Ottawa, whose duty it is to inspect the administration and training in the Units. In the administration of the districts practically the same sections of the work as outlined above exists, except that owing to the smaller amount of administration, instead of each section being presided over by a head, several may come under one head in order to reduce expense of staff.

As an example of the administration in the districts Chart No. 3, on page 33, shows the organization of the district of British Columbia.

The other Provinces are organized in much the same manner, except that changes and adjustments are made owing to local circumstances and to meet local conditions. The administration in the Units may be divided into the following sections:—

Interviewing and boarding for courses.
Industrial Surveys.
Pay and Allowances.
Medical advice and social service.
Training.
Inspection.
Discipline.
Follow-up and after care.
Employment.

Interviewing.—By arrangement with the Department of Militia and Defence, a standing order has been issued that no soldier shall be discharged from the invalided section before a certificate has been furnished that he has

been interviewed by a representative of the Department of Soldiers' Civil Re-Establishment to ascertain whether he needs, or is likely to need industrial re-training. Particulars are taken as to his educational, industrial and social history and especially as to his former occupation. He is asked whether he can return to his old occupation or not and if he says that he can do so, the facilities for industrial re-training are pointed out and explained to him and he is allowed to receive his discharge. If, however, he says he cannot, on account of disability, he is brought before the Vocational Medical Officer, who advises the Department as to whether, from a medical standpoint, he can or cannot return to his former occupation. If the Medical Officer advises that he cannot do so, he is offered industrial re-training. The interviewer then consults with him as to the occupation for which it is desirable that he should be trained.

Industrial re-training is not compulsory nor is a man's choice restricted except where it is obviously a bad one. Interviewers are trained to use the power of suggestion in guiding a man into the proper course and in a great majority of cases the power of suggestion is found sufficient.

After the man himself, the interviewer and the vocational medical adviser have tentatively made up their minds as to the proper occupation for the man to learn, he is brought before a Disabled Soldiers' Training Board. This Disabled Soldiers' Training Board is composed of the District Vocational Officer or his representative in the person of the interviewer, the Vocational Medical Adviser, and from one to three or four members drawn from the district advisory committee. As far as possible, the Department endeavours to have on the Disabled Soldiers' Training Board a member of the advisory committee who is familiar with the trade or occupation into which the man is about to enter. For instance, if it is proposed that a man should take a course as an electric station tender, the Department endeavours to have a man familiar with electrical power work to sit on the Board. This member of the local advisory committee sits on the Disabled Soldiers' Training Board in order to bring to the work the point of view of one not connected with the Department and also to represent the public in their district. The Disabled Soldiers' Training Board talks over confidentially and intimately with the man, the work he intends to undertake, and their recommendation is sent to Ottawa, and either concurred in or rejected.

If the man is to be given a course of training in an industrial establishment, the interviewer usually arranges a conference of himself, the hand capped soldier and the employer who is going to train him, before the recommendation is sent to Ottawa, so that his advice may be taken.

These Interviewers and Disabled Soldiers' Training Boards also exercise the same functions in regard to the extension of a man's course or change of course, if after a probationary period, it is found that the man is not succeeding in the course selected.

The Interviewers are practically all returned soldiers and selected from men who before the war had industrial experience.

Chapter 6 deals more fully with this important subject

Industrial Surveys.—The object of this work is given under head office organization in this chapter. It is fully discussed in Chapter 8.

Pay and Allowances.—The pay and allowances section of the local administration takes care of the men's pay and adjusts differences, and co-operates with the pay and allowance officer in the head office, Ottawa.

Medical Advice.—The medical advisers in the districts are detailed to the local office by the local Unit Medical Director. They furnish the District Vocational Officer with medical advice:—

1. As to whether the man's disability was received on or aggravated by service, and as to whether the man can return to his former occupation.

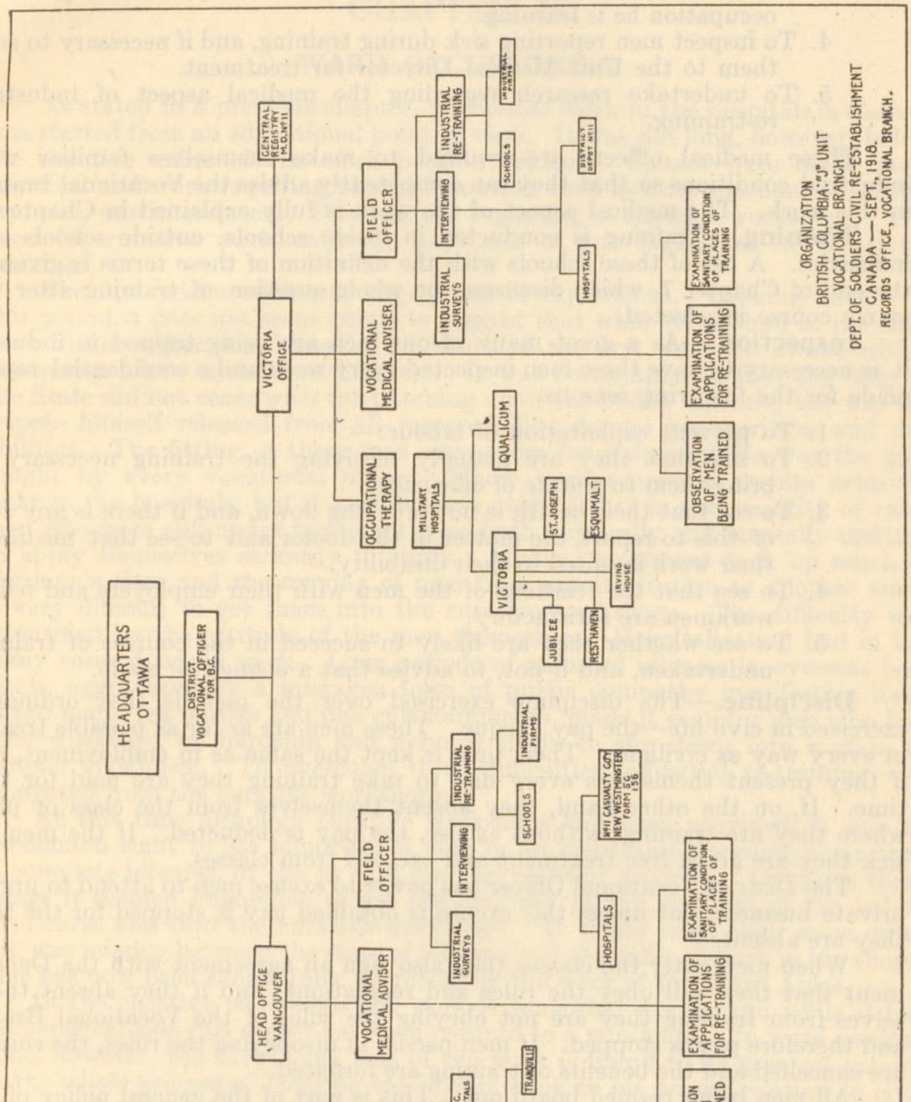

ORGANIZATION
BRITISH COLUMBIA "J" UNIT
VOCATIONAL BRANCH
DEPT. OF SOLDIERS CIVIL RE-ESTABLISHMENT
CANADA — SEPT., 1918.
RECORDS OFFICE, VOCATIONAL BRANCH.
HEADQUARTERS OTTAWA
DISTRICT VOCATIONAL OFFICER FOR B.C.
VICTORIA OFFICE
CENTRAL REGISTRY M.D. No 11
FIELD OFFICER
VOCATIONAL MEDICAL ADVISER
OCCUPATIONAL THERAPY
INDUSTRIAL RE-TRAINING
INTERVIEWING
INDUSTRIAL SURVEYS
SCHOOLS
DISTRICT DEPOT No 11
HOSPITALS
EXAMINATION OF SANITARY CONDITION OF PLACES OF TRAINING
EXAMINATION OF APPLICATIONS FOR RE-TRAINING
OBSERVATION OF MEN BEING TRAINED
QUALICUM
MILITARY HOSPITALS
VICTORIA
ST. JOSEPH
ESQUIMALT
JUBILEE
RESTHAVEN
IRVING HOUSE
HEAD OFFICE VANCOUVER
FIELD OFFICER
VOCATIONAL MEDICAL ADVISER
OCCUPATIONAL THERAPY
INDUSTRIAL FIRMS
INDUSTRIAL RE-TRAINING
SCHOOLS
INTERVIEWING
INDUSTRIAL SURVEYS
HOSPITALS
EXAMINATION OF SANITARY CONDITION OF PLACES OF TRAINING
EXAMINATION OF APPLICATIONS FOR RE-TRAINING
OBSERVATION OF MEN BEING TRAINED
I.S.C. HOSPITALS
MILITARY CONVALESCENT HOSPITALS
TRANQUILLE
BALFOUR
NEW WESTMINSTER
VANCOUVER
SHAUGHNESSY
VANCOUVER GENERAL MILITARY ANNEX
V 27

CHART No. 3.

2. As to whether he is medically fitted for the new occupation selected by him.
3. After he has started his course as to his continued suitability for the occupation he is learning.
4. To inspect men reporting sick during training, and if necessary to send them to the Unit Medical Director for treatment.
5. To undertake research regarding the medical aspect of industrial re-training.

These medical officers are required to make themselves familiar with industrial conditions so that they can competently advise the Vocational branch in this work. The medical aspect of the work is fully explained in Chapter 9.

Training.—Training is conducted in inside schools, outside schools and industries. A list of these schools with the definition of these terms is given at the end of Chapter 7, which discusses the whole question of training after the man's course is selected.

Inspection.—As a great many of our men are being trained in industry it is necessary to have these men inspected every week and a confidential report made for the following reasons.

1. To prevent exploitation of labour:—
2. To see that they are actually receiving the training necessary to bring them to a state of efficiency.
3. To see that their health is not breaking down, and if there is any sign of this to report the matter to the doctor and to see that medically their work is suited to their disability.
4. To see that the relations of the men with their employers and fellow workmen are satisfactory.
5. To see whether they are likely to succeed in the courses of training undertaken, and if not, to advise that a change be made.

Discipline.—The discipline exercised over the men is that ordinarily exercised in civil life—the pay cheque. These men are as far as possible treated in every way as civilians. Their time is kept the same as in employment, and if they present themselves every day to take training they are paid for that time. If, on the other hand, they absent themselves from the class or place where they are training, without excuse, the pay is deducted. If the men are sick they are given free treatment and excused from classes.

The District Vocational Officer has power to excuse men to attend to urgent private business, but unless this excuse is obtained pay is stopped for the time they are absent.

When men enter the classes they also sign an agreement with the Department that they will obey the rules and regulations; and if they absent themselves from training they are not obeying the rules of the Vocational Branch and therefore pay is stopped. If men persist in disobeying the rules, the courses are cancelled and the benefits of training are forfeited.

All men being trained board out. This is part of the general policy of the Department to cast the men as soon as possible upon their own responsibility. In civil life each man arranges his own place of living and makes his own domestic arrangements. If the men boarded in institutions they would still maintain part of the army life and sense of irresponsibility as to these matters.

Follow-up and after-care.—This branch of the work has been noted under head office administration in this chapter. It is more fully discussed in Chapter 13.

Employment.—The Vocational Branch is charged with the finding of employment for all disabled men who have graduated from its classes. This employment or placement is done through the industrial surveys section as a rule, but in some of the larger units such as Toronto, the work is put into the hands of one man definitely responsible for it, called the placement officer.

CHAPTER IV.

WARD OCCUPATIONS.

As stated in a previous chapter, vocational work in the hospitals in Canada was started from an educational point of view. It was not long, however, before the curative value of the work became evident. Classes were made more practical and work requiring physical exertion such as auto mechanics, carpentry, etc., was introduced. This was the beginning of curative workshops. This need for curative work naturally grew out of our experience in vocational training.

The first year's work was largely one of experiment. Looking back over this period it does not seem unfair to suggest that what we all had at the start were ideals rather than ideas. The return of the first wounded awoke within the nation a new social consciousness. It was borne upon us that the duty of the State did not cease with the patching up of the bodily infirmity nor was the cripple himself released from all responsibility despite his sacrifices and disabilities. The fitting of these men once more for industrial life was the goal sought by every vocational officer. There were successful results achieved right in the hospitals, but it soon became evident that in the majority of cases men who were still under treatment were both physically and mentally unfitted to apply themselves seriously to study. Medical treatment took up much of the man's time and the moving of men from one institution to another made it very difficult to get them into the curative workshops. The difficulty was intensified by the attitude of the men themselves. Hospitalization had in too many cases done its work. Long periods of enforced idleness in overseas hospitals, aggravated by a mistaken form of public sympathy manifesting itself in too many tea parties and like entertainments, made it easy for men who had been weakened by hardship and nervous strain to slip down into a state of chronic invalidism. To overcome these difficulties industrial re-training was separated from the curative workshops.

At this time although curative workshops had been provided, it was no uncommon sight to see hundreds of men in an institution spending their time in complete idleness, or else in card playing, chess or checkers. Owing to these things it seemed impossible to get the majority of the men out of the habits of idleness and into the curative workshops. It would seem that some vital link was missing between the state of idleness and the habit of work in the shops. This has now been successfully overcome by the work of the Ward Aides.

In the curative workshops the work is somewhat heavy, and while it has a diversional side this aspect has been reduced to a minimum. In ward occupations, however, the diversional side of the work is found to its greatest extent. In the whole process of bringing the invalid back to his proper relation to civil life we must begin by diverting his mind from the morbid state in which we find it. In doing this we first introduce a mental stimulus. As the work proceeds through the more serious subjects taught in ward occupations and curative workshops the diversional side of the work decreases, the mental stimulus increases, and this together with the increased physical activity hastens the functional cure.

It has been proven without a doubt that properly trained girls are the only ones who are uniformly successful in introducing the idea of work and bringing about the first mental stimulus at the bedside. Such work as is conducted in the curative workshops cannot be carried into the wards on account of the equipment. Before the Ward Aide work was introduced the men in the wards were idle. Ward occupations however, such as basketry, weaving, bead work,

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embroidery, light wood carving, etc. can be carried into the wards and even men lying in bed can undertake them.

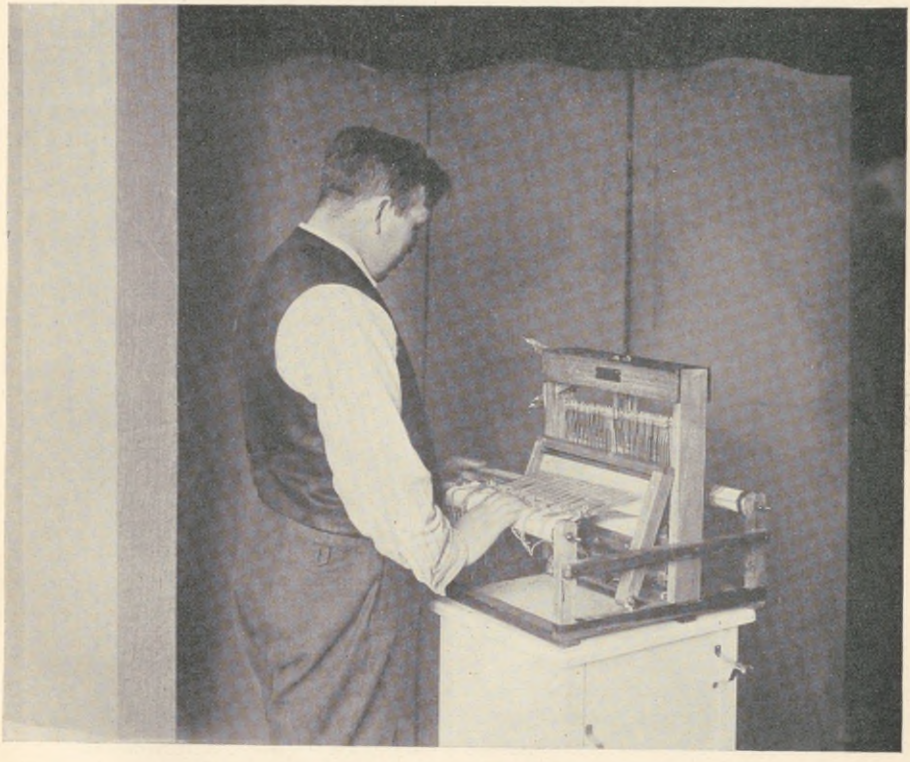
The peculiar value of this work lies in the fact that no matter how helpless the invalid is there is something he can do to occupy his mind. In severe cases the Ward Aide may find it necessary to read to the patient first in order to stimulate his interest. The whole idea underlying the work is to induce the man to engage actively in something, whether it be amusement, reading or light work. Having stimulated his mind we must increase its activity by gradual steps and then transfer the interest so awakened to some more serious occupation. By gradual steps the man's physical and mental activities are transferred from diversion to occupation, from unconnected work to processes having sequence and order. The whole secret lies in the gradual progression of the mental and physical processes.

Occupational therapy has become a recognised curative agency in civilian hospitals. If it is necessary there it is much more necessary in the military hospitals. The convalescent period for the military patient is much longer than that of a civilian patient, owing to the fact that the civilian paying hospital fees leaves the hospital as soon as possible and spends his convalescent period in his home, whereas the man in the army is entitled to full treatment and remains in the convalescent hospital until such time as his treatment will cease to benefit him.

During this period men in this physical and mental condition when left to their own devices usually expend their newly acquired energy in non-productive ways, and very often in ways detrimental to their own convalescence, unless guided. In the old days some would read, others enjoy a quiet game of cards, but more often than not, if able to leave their beds they would wander aimlessly about the hospital getting in the way of doctors and nurses, playing practical jokes on one another, and not infrequently causing disturbances detrimental to the quiet and rest essential to fellow patients less fortunate than themselves. Others again, tiring of all forms of amusement, would lie on their beds brooding over their troubles and thinking how black and hopeless the future was. The crux of the whole situation was this, that games, pleasures and entertainment, although occupying a very important part in hospital life, are not of themselves satisfying. They do not engage the man's mind sufficiently and something more tangible, more difficult and more absorbing was necessary, and it was to combat this most unsatisfactory state of affairs and to provide some form of work to lead up to curative workshops that Ward occupations were first introduced, into hospital life, offering to the men congenial and absorbing occupations of almost unlimited variety.

Today the first impression made on a visitor to one of our military hospitals is the great activity displayed by the patients on all sides engaged in a variety of occupations, the smartly uniformed young ladies busily engaged in guiding and helping in the work, and the happy, contented atmosphere pervading the whole place. Baskets in every stage of operation and of every variety, weaving looms both large and small, turning out every pattern and design one can think of, frequently operated by a man with only one arm; some patients doing wood carving, some making bead chains, others doing knitting and fancy work; still others, with an eye to the future, being engaged in a course of study in order to brush up their former vocation, and so on. Upon inquiry the visitor learns that the young ladies in uniform are Ward Aides who have been through a three month's course of training and are competent to instruct in over a dozen different handicrafts. The change is wonderful; the patients are keenly interested and the various occupations absorb their whole attention; they are no longer self centred and idle and they cease to brood over the future.

There has been a great deal of argument about the value of ward occupations, the aims and objects of this work, and as to whether girls should be used for it. A great deal of this has been due to a misunderstanding of the aims of the



CONVALESCENTS USING LOOMS.

The upper picture shows the Canadian single saddle bed loom, and the lower picture the four saddle loom. Many of the looms used in the Canadian Hospitals have been specially designed by the Department and made in the curative workshops.

work. Some say that basketry, weaving, etc., should not be taught to men, that they are effeminate occupations; others say that women should not be used as the training should aim at some practical vocation in life. Those who argue in this manner are probably not conversant with the whole policy. There is no idea that the occupation taught in the wards should be followed for gain after leaving the hospital. Others forget that this work only leads up to the more serious work in the curative workshops, that there is no intention of teaching a gainful occupation but only to assist in a cure by preventing idleness, and awakening mental activity. Ward occupations are only used to bridge the gap between chronic invalidism and idleness, and the work in the curative workshops. It is the medium through which the first mental stimulus is introduced. It is the agency by which the melancholy patient is induced to forget himself and take an interest again in other people and other things. Actual experience in Canada has shown this to be the best method. We did not see this clearly until the ward occupations were separated from the curative workshops, and both these forms of occupational therapy separated entirely from the industrial re-training for a new occupation which follows later.

Each of these three methods of training has its own peculiar object, and these being different they must be administered each in its own way, by a different class or personnel.

Ward occupations were started at about the same time in 1917 in two centres —one in Montreal and the other at Whitby Convalescent Hospital, Ontario. In both these places the work was started as an experiment to fill a long felt want. By the spring of 1918 the value of the method had been so demonstrated that it was thought desirable to spread it quickly throughout the whole of Canada. At first the work was received cooly both by various officers of the Vocational Branch and by the hospital officials. A few enthusiastic workers; however, viz., Mrs. W. A. Peck in Montreal, and Mr. Burnette at Whitby, pushed their ideas in season and out of season, and finally won recognition. This work was brought to the attention of Major MacKeen the District Vocational Officer for Quebec, and Prof. Haultain, the Vocational Officer for Ontario, who received it enthusiastically.

From the first Dr. Archibald, the officer commanding Whitby Hospital, gave Mr. Burnette every support in the furtherance of his work, as also the doctors in charge of the hospitals in Montreal.

When it was decided to train a large number of girls for the work, inquiry was made as to the experience of others in training handicraft instructors. All the information we could obtain pointed to a training period of over a year, but it was felt that if it took this time to train the staff the opportunity to apply their work would be to a large extent past. The Department therefore determined to try what could be done with short courses of training, the idea being that after a short course the girls should be sent to the hospitals for a probationary period and then if necessary brought back for further training.

The experience of the Department, however, has shown that a period of three months is quite sufficient to train Ward Aides.

Prof. Haultain, the Vocational Officer for Ontario, was asked to organize the training school, and he placed the matter in the hands of Dr. Geo. W. Graham, the Vocational Medical Officer for Ontario. Prof. Haultain made arrangements with the University of Toronto for space and accommodation; a committee of the Faculty of Applied Science took charge of the training under the University.

Mr. N. L. Burnette who was interested in the beginning of this work at Whitby, was attached to the staff of the Vocational Officer for Ontario in an advisory capacity in regard to occupational therapy and exercised a guiding hand on the training. A Committee of Management of the University had as its first Chairman, Prof. C. H. C. Wright, Professor of Architecture, and later Dean Ellis, of the Faculty of Applied Science and Engineering, became Chairman and Prof. Arkley of the same Faculty was appointed Secretary. On the 1st

October, 1918, Prof. Arkley, resigned owing to press of duties and Mr. Geo. A. Guess, Professor of Metallurgy, took his place as Secretary of the Committee of Management, and assumed active charge.

After a little experiment with the first two classes it was finally arranged that the pupils should be assembled in groups of 50 for a three months' course, the first half of the course to be spent in the University and the second half partly in school and partly on practise work in the hospitals. Some of the later classes were composed of 70 and 80 students.

The teaching staff consisted of:—

Miss M. A. Wathen who was instructor in manual training and handwork in New Brunswick Normal School, Fredericton, and who had had two years experience as Supervisor of Craftwork in the Public Schools of Calgary, Alta.

Mr. J. W. Chester, A.R.C.A., who had just returned from overseas and had been a patient in Whitby Military Hospital.

Mr. W. D. Paton a graduate of the Faculty of Education who had been an instructor at Whitby Military Hospital, and

Miss Lillian Scott an Arts and Crafts teacher of wide experience.

Other instructors and assistants were added from time to time, most of them, however, being drawn from the students as the classes progressed.

In the early part of the work Miss Brainard assisted.

The work was divided as follows:—

For the first four weeks each girl received daily a lecture in "Design applied to all the crafts" by Mr. Chester. During these four weeks she spent 2½ days at each of the major crafts. In the next two weeks she specialized in one craft. During the first six weeks lectures were given on the principles and practise of Occupational Therapy by Mr. Burnette. Starting with the 7th and running through to the 12th week the girl put in one half of her time specializing in craft work and further instruction in design at the school. During the twelve weeks lectures were given by Prof. Haultain, Vocational Officer for Ontario, on the general work of the Department;

Dr. Geo. W. Graham, Vocational Medical Officer, on the medical aspects of the work;

Dr. Margaret Patterson on hospital etiquette and procedure;

Nursing Matron Leishman, who was matron of all the hospitals in "D" unit, on hospital organization and the relations between the ward aides and the nurses;

Major Boyer, C.A.M.C., and

Major Baillie, C.A.M.C., on various medical aspects of the work.

It will be noticed that the last three lecturers were attached to the Army Medical Corps and through their instruction the Ward Aides were taught hospital etiquette and their relations with the medical branch, so establishing the proper relation before the girls entered the hospitals:

Instruction was given in crafts as follows:—

Basketry.—Miss Wathen and assistants. Types of baskets—Indian baskets, reed baskets—knowledge and choice of materials—use of reed and raffia—weaving—staining and finishing.

Book Binding.—Mr. Harod and assistants. Various types and methods of binding and re-binding.

Leather Work.—Mr. Harod and assistants. Tooling—inlaying—cutting and applique.

Weaving.—Miss Scott and assistants. Pla'n and pattern weaving, the use of two and four harness looms, with special attention to use of the bedside loom—rug making.

Blockprinting and Stencilling.—Miss Scott and assistants. Design and cutting of stencils—making of wood and linoleum blocks—application of this knowledge to the various textiles.

Bead Work.—Miss Wathen and assistants. Modern and Indian designs stitches and weaves—the use of bead work in combination with other crafts.

Wood Work.—Mr. Paton and assistants. Nature and property of wood—identification of woods—tool operations—the making of mechanical toys—wood carving—chip and relief —staining and finishing of woods.

Metal Work.—Mr. Paton and assistants. Pierced work, bent work, chased work, raised work, riveted work, finishing, colouring and preserving.

Design in Theory and Practice, and Modelling in Clay and Plastecine.—Mr. Chester, A.R.C.A., and Miss Patterson.

During the period from June, 1918, to February, 1919, 271 girls were trained and are now working in the hospitals.

The choosing of a young lady to be trained as a Ward Aide is important. She must be of the very best type, well educated, and possess a personality that is bound to please, together with a healthy constitution. It is desirable that she should be between the ages of 25 and 35, have unlimited patience, be intelligent and not too emotional. She must be prepared to meet all kinds of difficulties and all kinds of treatment. The work is very hard. On the staff of the Ward Aides there are many nurses, teachers of several years standing, and girls who have followed various professions and occupations, all of whom claim they find this work harder than any other occupation they have followed. This is largely due to the mental strain to which these workers are subjected. They are forced, and indeed it is part of their duty, to listen to the patient's worries and troubles, and not infrequently they are made his confidant in regard to various family troubles which the patient must tell to some one for his own peace of mind. It is essential that the Aide, while being sympathetic, should not be over sentimental otherwise these enormous tragedies of life, that are daily being enacted before her, are sure to wear her down beyond her resisting power and she will be obliged to give up. This has been the case with several. In order that these girls should have the qualities of endurance, the training course is made quite hard, so that those who are weak of will, and are physically unable to stand the strain, will be weeded out.

It should not be forgotten that the Ward Aide is not instructing normal people, that the most important part of her duty is not to teach basketwork or weaving but to provide the mental stimulus which brings the man out of his state of morbidity.

Those who examine the work of these girls superficially are prone to forget the mental strain under which they work. These considerations are of first importance when selecting the staff.

It is necessary that they should have a large amount of tact and diplomacy, for while they are on the staff of the Department of Soldiers' Civil Re-Establishment, they work under the direction of the doctors. While they are in the hospitals of the Department of Militia and Defence they are guests in another's house and must get their work done not as a matter of right but by co-operation.

All the Ward Aides in Canada are paid and have regular hours, there are no voluntary workers. During training they receive $45 per month, and after graduation $60-$75 per month, out of which they pay their own living expenses. They are also supplied with uniforms. Every girl must take a course of training and sign a contract to stay with the Department at least one year and must go to any part of Canada where she is sent.

A good many of the girls who have entered this work have had nursing experience, some have been social service workers, and others teachers, but for the most part they have been girls who wished to share in the work of the Empire during the war. A large number have husbands or brothers overseas.

An interesting development has been the special training given to a group of students preparatory to their going into institutions caring for the mentally ill. After completing the general course and having some experience in the hospitals these students were sent out to the Toronto Reception Hospital, where, through the courtesy of Dr. Clare, they received a series of special lectures. Afterwards through the kindness of Dr. Forster these students were given practice work among the patients in the wards at Queen Street Asylum. Girls who took this course are now at work in mental hospitals operated by the Department of Soldiers' Civil Re-Establishment and also in civil institutions caring for ex-soldier patients suffering from mental disabilities.

The organization of Ward Occupations throughout Canada is as follows:—

In Ottawa there is a Supervisor of Ward Occupations who controls the work throughout Canada, through the Director of Vocational Training.

In each district the Ward Aides come under the District Vocational Officer for administration. This officer has a Supervisor of Ward Aides in charge of all the Ward Aides in his district.

In each hospital one Aide is in charge of all the Aides in that hospital; in large hospitals where there are a large number of Ward Aides her duty is purely administrative, but in small hospitals where the number is small she may assist in the work herself.

The Supervisor of Ward Aides in Ottawa has charge of the distribution of girls as between provinces and has charge of the general policy. He makes his policy effective by orders given through the Director of Vocational Training to the District Vocational Officers. It is part of his duty to see that the central stores in each district are supplied with sufficient material at all times, and that the sales of the articles in the districts are conducted in accordance with the uniform policy, and that the cash returns for material sold to the patients reaches the Receiver General and is credited to the Vocational Branch.

The Supervisor of Ward Aides in each district under the District Vocational Officer is charged with the distribution of Ward Aides in his district, and the general supervision of the work. It is his duty to see that the Ward Aides are supplied with materials at all times, and that the proper arrangements are made as to the sale of the product.

When material is supplied to a patient he is charged with the cost of same in his account, also with a small amount to cover overhead expenses, freight handling, etc., but nothing for administration. When he completes the article he is allowed to keep it on payment of the charges in his account; if he wishes to sell it, it is given a distinguishing number and he is credited with it in his account. When the article is sold the balance of the cash received over the debit in his account is given to him.

The Supervisor of Ward Aides in the district arranges for the sale of these products through departmental stores or other commercial mediums of sale. All articles are sold on a commercial basis and not on a compassionate one. No patient is allowed to sell his work individually in the hospitals nor are individual sales recognized by the Department. No orders for work are taken for future delivery.

The Ward Aides, however, have instructions that production is not to be pressed, but is to be in all cases subservient to the curative value of the work.

It is difficult to say which form of handicraft work is the most popular, basketry is probably the most universal, and a great many articles of real value have been made by the men. The men are encouraged to make up their own designs and develop whatever artistic ability they may have.

THE VALUE OF WARD OCCUPATIONS.

Note the active interest the men take in their work. This work is curative in character. There is no attempt to teach craft work in the wards as a gainful occupation except to the blind.

HANDICRAFT IN THE HOSPITAL.

Typical scene showing patients confined to Hospital being taught handicraft. This work in curative and diversional and done under the direction of the doctor. The girls in uniform are not nurses or masseuses but Ward Aides who have taken a course in Toronto University in Occupational Therapy. This work is not Vocational or educational. It, however, in addition to assisting the cure, develops the patient's artistic sense.

Weaving is another very popular subject and in this also the men are encouraged to put into effect their own ideas as to colour and design. In the city of Montreal and in Quebec province generally, weaving has reached its highest development. A great many of the patients in this province have natural aptitude for getting the proper colour effects. A great deal of the material woven in Montreal is suitable for use—ladies' scarfs have been woven out of wool and silk—material for hats is woven out of raffia. Most of this material finds a ready sale.

The variety of looms on which weaving can be done lends itself to work by men in all stages of invalidism. For those who have to lie down in bed, a small bead loom for making bead chains is suitable. This is illustrated in the photograph herewith. For men who can sit up in bed the small bed loom shown in the illustration is suitable. These looms can be used by patients able to sit up in wheel chairs, etc. For those patients who are confined to the wards but who can move around the treadle loom shown in the illustration is suitable.

While there is no attempt to teach these handicrafts as a gainful occupation their value in awakening the artistic sense of the men should not be discounted. Many more men than is generally thought have a certain artistic sense which is dormant, but with the teaching of these handicrafts and a slight amount of guidance, this can be developed. This artistic sense may never be turned into dollars and cents, and it is unnecessary that it should be, but no doubt when the men leave the hospitals and go back to their own homes they will apply the artistic sense which they have developed in the selection of more suitable house furnishings and decoration. They learn that artistic effects do not necessitate expensive or gaudy materials, but that the general blending of line, form, colour and proportion to make a harmonious whole is the basis of good design; that simplicity is more effective than a complex arrangement, and that artistic effects can be obtained by the expenditure of small sums of money if properly applied, where large sums might be spent with a total lack of artistic effect.

It is only within the last four months that the uniforms for Ward Aides have been introduced. These uniforms have had a very beneficial effect. The girls have now a recognised standing in the hospitals; having a definite place and uniform they try to make that uniform stand for useful service. These uniforms serve to build up the esprit de corps which is so desirable in any organization. The illustration shows the uniform but not the colour, which is a quiet apple green, very pleasing and restful to the eye. The uniforms have white collars and cuffs, and a red badge with the initials of the Department of Soldiers' Civil Re-Establishment. Each girl is given:—

3 uniforms,
1 dark green winter coat,
1 felt hat to match for winter,
1 straw hat for summer.

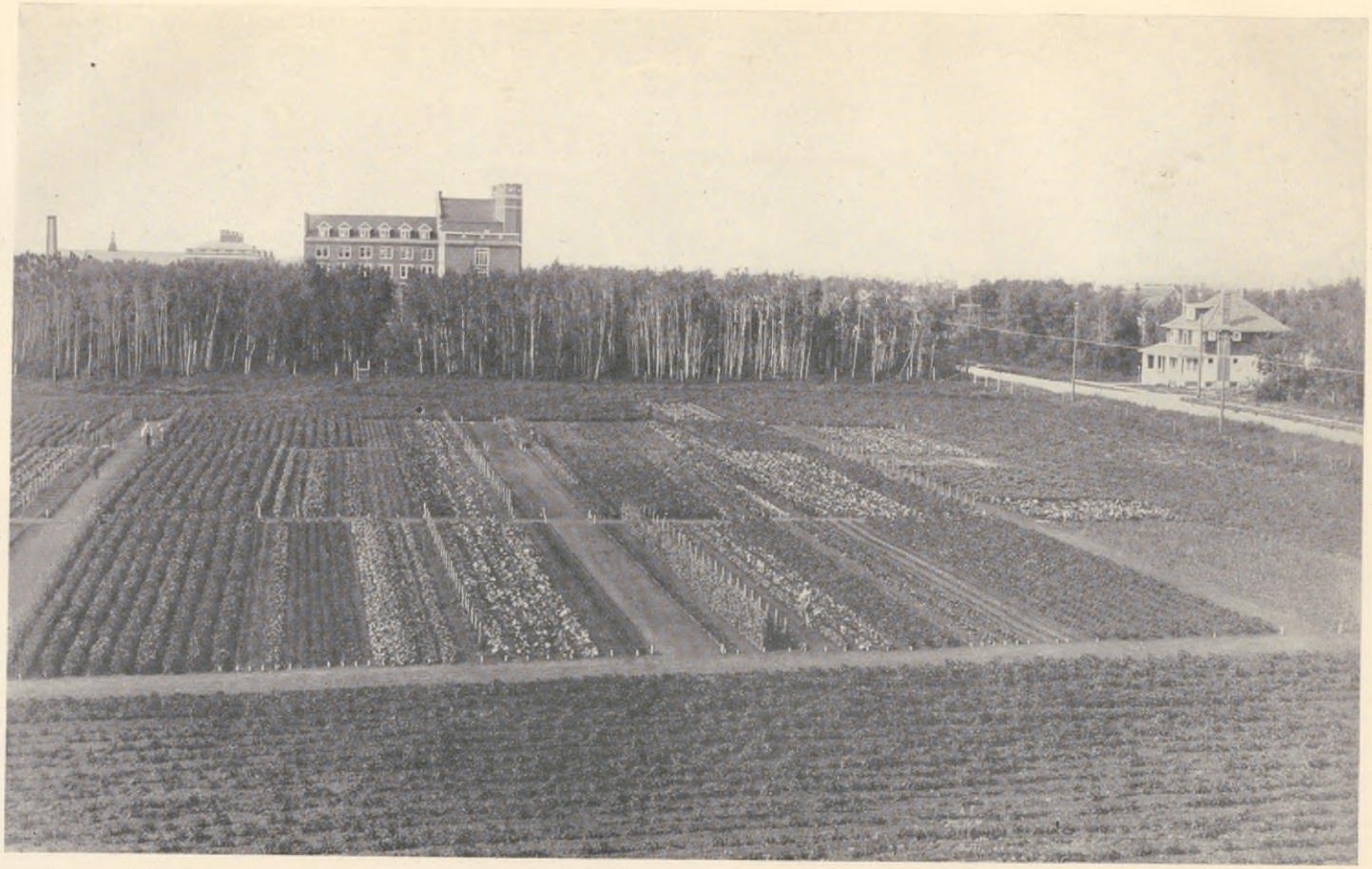
This uniform was designed by Mr. S. T. J. Fryer, the Deputy Vocational Officer for Ontario.

Another important feature of the work of the Ward Aides is the information they are able to give to the men in the wards in regard to the activities of the Vocational Branch. They describe the curative workshops and industrial retraining and give the men information as to the regulations of the Department in regard to them. If a man is too disabled to go back to his former occupation this information immediately sets his mind at rest as to his future.

While the girls are training they are given lectures on the work of the Department, so that they will be carefully informed on all these matters in order that the information they give will be accurate and not lead to misunderstanding. It is very important that the information which gets to the men

should be correct as it would do a great deal of harm to encourage a man in the belief that he could take a course, when he is not eligible, as the disappointment would be great.

The Ward Aides are instructed not to give advice to the man regarding the occupation he wishes to follow if he is to be re-trained. This is left entirely to the interviewers who are familiar with the trades and occupations available in their district. This is very important as it is sometimes difficult to alter a man's mind when he has decided to take a course which is not suitable for him. It is very desirable that the first man to talk to the disabled soldier about a new occupation should be very familiar with the occupation which it is desirable for him to learn. Girls owing to their lack of experience in trades and occupations can very seldom gain the necessary knowledge to advise in connection with new occupations.



GARDENING AS A CURATIVE AID.

This illustration shows the soldier garden at the Convalescent Hospital in Edmonton, Alta. Note the individual gardens. Each soldier takes care of a small plot and prizes are awarded for the best garden. Industrial Re-Training is not taught in these gardens. The idea here is to assist in the recovery of the patient and to teach him to take care of his own individual vegetable and flower plot.

CHAPTER V.

CURATIVE WORKSHOPS.

It is not easy to draw a hard and fast line dividing the ward occupations from the curative workshops. The division depends both upon the physical and mental state of the patient. From a physical standpoint the ward occupations should be reserved for those men who are confined to the wards and who can only do the lightest kind of manual work, for the most part with the hands. Training in curative workshops, however, should be undertaken by men who have so advanced in their period of convalescence as to be able to move around freely, leave the wards, enter the shops and undertake considerable physical work. From the mental standpoint the patient's attitude towards work should form the dividing line. Both forms of treatment are therapeutic and curative in their object.

The curative workshop is the final step in occupational therapy, and ward occupations should lead up to and dovetail into the curative workshop.

The four benefits to be derived from the curative workshops are:—

1. To provide mental stimulus.
2. To provide functional re-education.
3. To provide mental diversion.
4. Least of all, training, and knowledge as to a man's adaptability for a future occupation.

The first two of these are purely medical agencies, and should be ever uppermost in the minds of those administering the work. Their effect is one of progression. In ward occupations the first effort is made to promote mental activity and to re-awaken the functions of the muscles and nerves. The work started here should progress through the heavier forms of ward occupations into the curative workshops, until the date of discharge.

The third and fourth benefits may be looked upon as more or less incident to the first two. There is no doubt that considerable benefit is derived from the diversional side of this work, and this factor is probably more important in the early stages than later. A time comes when diversion should be abandoned, otherwise the treatment will miss its objective. Too much diversion is just as liable to produce idlers as complete inaction.

The benefits of training in all cases should be subordinate to the curative effect.

The functional value of the curative workshops is much greater than that of ward occupations. In ward occupations the functional cure is limited, perhaps, to the muscles and nerves of the fingers, hands, arms and shoulders, and the upper part of the body, and, to a very minor extent, the muscles of the lower part of the body. In curative workshops, however, all the muscles of the body may and should be brought into action and the work should be heavier and more intensive.

Moreover, the work in these shops can approximate more closely the occupations carried on by normal workers in industry. Not only can the hands, arms and back be brought into play, but exercise can be given to the lower part of the body through the use of such tools as the treadle jig saw, the lathe, and through locomotion at the planing bench or other forms of carpentry or shop work.

There is one distinct difference between functional education given in the curative workshops and mechano therapy given by the Zandler and Bott apparatus. The patient's mind is engaged in his work and the exercise of his

muscles is quite unconscious. He is not worried by the monotony of set treatment. In the other forms of mechano therapy, however, the man's mind is constantly concentrated on his disability and the movements are monotonous and without interest. The same amount of work which in other forms of mechano therapy will create great mental fatigue will not produce any mental fatigue in the curative workshops.

Fox in "Physical remedies for Disabled Soldiers" describes a man who was easily tired if set at exercises with a spring dumb-bell, but who would cheerfully grasp a large cloth in his injured hand, and clean windows. It is possible that there are not many men who would get much enjoyment out of this form of work, but it is easy to believe that men will become absorbed in the making of a piece of furniture and will work at it outside of regular hours and therefore give themselves self treatment.

A remarkable case came to our attention of an officer with university training and high mental ability, whose right leg and hip had been badly injured by shrapnel. After treatment the leg was 1½" shorter than normal. He had been discharged from the hospital and for months walked with a cane with very slight movement of the knee joint. Very little improvement was taking place in his condition as time went on. However, shortly after this his duties necessitated his driving an automobile and the exercise given his right leg by pressing the brake was just the movement necessary to restore the functions of the muscles, and effected a speedy cure, so that he now walks normally without a cane.

In the curative workshops in Canada classes in general education, commercial work, stenography and typewriting find a place. Typewriting has a direct functional curative effect on the muscles and nerves of the fingers, arms and back, but these subjects have also a curative effect mentally, as they teach a man mental concentration.

In connection with the School of Physiotherapy at Hart House, Toronto, at which school special attention is given to amputation cases, the Vocational Branch installed a curative workship, and the following is part of a report from Mr. Ross, the Supervisor:—

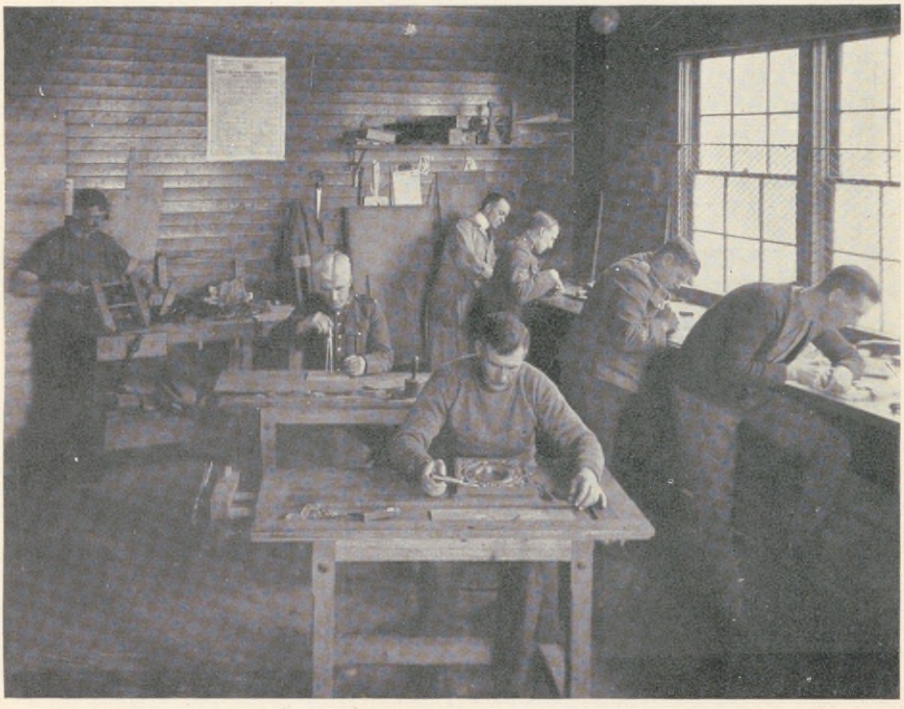
> "At the present time with the improvement of artificial appliances and the facilities for training, a man with one arm need not despair. Take the case of a Sergt. Major and a Corporal of the 42nd Battalion. Both these men were wounded at Vimy on the 9th April, 1917 the Sergt. Major with his battalion, and the Corporal with the trench mortar battery, and in both cases amputation of the upper arm was necessary. Neither of these men had any hope of even being able to take up their previous occupations again. The Sergt. Major was a machinist before enlisting and felt so convinced that he would be unable to follow his trade that he took advantage of a course in book-keeping and general office work. The Corporal was a moulder, a trade where ten good fingers are a necessity, therefore he decided that he would have to find some other job more suited to his disability.
>
> "About a month ago for the sake of experimenting with wood-working tools and the 'Bowler-Hook' these two men commenced work in the shops at Hart House.
>
> "It should be mentioned here that these men were of the very best possible type, neither of them possesses a stump longer than five inches, but they have that which is possibly just as valuable as a longer stump, namely, the grit and determination to do the very best with what they do possess. At first they experienced some difficulty in handling the various tools and the time expended on small and simple articles was necessarily great, but each day an improvement was noted, and now after only a month in the shop, they are turning out good work on useful articles.

A CLASS IN WOODWORKING.

Class in wood-working in the Ontario Hospital Curative Workshops. Work is prescribed for each patient by the Doctor. Each prescription is designed to assist in restoring the lost functions of the muscles or nerves in some wounded member. Gainful occupations are not taught in the curative work-shops. The curative work-shop however serves as a clinic where a man of industrial adaptability may be tried out if he needs to be trained for a new occupation after discharge.

A POPULAR CURATIVE COURSE.

Elementary sign writing is another popular course in the Hospital curative work-shops. If a man shows artistic talent here and after discharge needs Industrial Re-training for a new occupation, he is trained in some line of commercial art. Sign writing is very popular.



CURATIVE WORK-SHOPS AT LONDON, ONTARIO.

This work is excellent for wounds in the hands, arms or shoulders. It provides light interesting occupation and assists in restoring the lost functions of the muscles and nerves. Note all the men are in uniform. Curative work-shops are for men during convalescence and are administered under the direction of the doctors. Industrial Re-training is all taught after discharge.

They have gained some knowledge of carpentry, but what is more important they have discovered that the loss of an arm has not made them 'one-armed' in the strict sense of the term. The Sergt. Major is now going to commence work in the machine shop to see if he can possibly go back to his old trade and the Corporal intends to carry on with carpentry, and later on to go in for farming.

"Both men are satisfied that the time spent in the shops has been well repaid and they are prepared to advise any man suffering from a similar disability to spend some time in a work shop even if he intends going into clerical work, as they state, apart from the knowledge of tools great benefit can be obtained in making both the good arm more proficient, and the stump longer."

The School of Physiotherapy at Hart House, Toronto, was established as a centre for training doctors and others in physiotherapy. Instruction was given there in massage, electro therapy, hydro therapy and mechano therapy, and in it the Department of Soldiers' Civil Re-Establishment established a curative workshop. Doctors were brought in from all parts of the country to learn physio therapy methods and masseuses were trained under their care.

The Vocational Branch also trained at this institution supervisors of curative workshops, and the doctors who came from all parts of the country learned to appreciate the value of these curative workshops, and when they returned to their own hospitals they co-operated more fully with the officers of the Vocational branch. The supervisors of the curative workshops who were being trained at Hart House became acquainted with the doctors and their methods, so that each understood the other. This led to the hearty co-operation which at present exists between the two Branches.

Hart House has now been closed, but this work will be conducted in the curative workshops at the Dominion Orthopaedic Hospital, Toronto, from now on. The curative workshops should be very carefully controlled by the supervisor and the doctors who direct the work, so that the greatest amount of benefit may result. The man is sent into the shop for the specific purpose of giving exercise to certain muscles, and it must be so arranged that the work prescribed is carried out. For instance, a man sent into a carpenter shop to strengthen a crippled right hand must not be allowed to perform every action left handed.

Several attempts have been made to measure mechanically the decrease in disability after a period of work in a curative workshop. Authorities differ as to the real accuracy of these measurement and their value in judging results.

The value of the curative workshops in connection with mental cases should be fully realised. In the hospitals for mental treatment, both at Cobourg and Newmarket, very surprising results have been obtained in these workshops. Ward occupations and wood working seem to give the most benefit.

As shown in the chapter on the History and Growth of Vocational Training in Canada, the work was first started in this country from an educational and diversional standpoint. Later on the industrial re-training of the disabled soldier was brought in. It was soon found, however, that these two could not be carried on together. About this time Mr. Burnette, who was in charge of the vocational work in the hospital at Whitby, Ont., began to develop the curative and functional side. Development proceeded apace; industrial retraining was entirely separated from occupational therapy. An order was promulgated to grant no more courses in industrial re-training until after discharge, to put all work in the hospitals on a curative basis and make education entirely subordinate to the therapeutic effect.

It is the intention of the Vocational Branch to continue to press the curative object of the work in the hospitals and at all times to enlist the sympathy and co-operation of the doctors in directing the work. The Vocational Branch

takes the view that the hospital is an institution for effecting a cure rather than an educational establishment.

From a training standpoint, the curative workshop is most useful in that it may be used as a clinic where the supervisor may move a man, under medical direction, from one occupation to another and by actual trial select what he is best fitted for, and help to determine what course he should take, if it is found after discharge that he needs re-training. It can be determined here whether the man has mechanical ability or not, or whether he is best fitted for clerical work. If he is best fitted for mechanical lines it can be determined whether he should train for some of the finer mechanical occupations, such as dental mechanics, or whether he is best fitted for some of the heavier lines, such as motor mechanics, machine shop practice, etc.

If he is best fitted for commercial work it can be determined whether he has aptitude as an accountant or clerk, or whether his vocation should be something with an artistic trend, such as sign writing, commercial illustrating, mechanical draughting, etc. It should be remembered that while a number of vocations are taught in the curative workshops there is no intention seriously to teach a man a new occupation there. What he learns is merely incident to his cure. We have, however, remarkable cases of men with latent ability who had no occupation before the war, who in the curative workshops learn some useful vocation.

From a training standpoint another benefit of the curative workshops is in the brushing up in his regular calling which a man may get while he is there. For instance a machinist has spent three or four years in the army, and has lost some of his skill, and in the curative workshops he has the opportunity before going out into the wage earning world, to brush up that skill.

The accountant whose mind has been dulled by idleness and institutionalism, can once again study accountancy and learn to concentrate his mind on the figures and problems before him. The stenographer who has not handled a pencil or typewriter for three or four years and has lost his speed, can before leaving the hospital, attain the speed and accuracy necessary in that work.

It should be made perfectly clear that while the curative workshops in hospitals in Canada are under the administration of the Vocational Branch of the Department of Soldiers' Civil Re-Establishment, the work itself is entirely under the direction of the officer commanding the hospital. The relation is that of the doctor to the druggist, the doctor prescribes and the druggist follows the prescription, not until this relation is fully realised will the greatest success be obtained.

For the work to be of the greatest benefit the doctor must direct it and see that the work given exercises the proper muscles in the right way, that sufficient work is given to effect a cure, but not so much as to produce fatigue.

In this, as well as in ward occupations and the re-training schools, production is always a secondary consideration. The main object of the work is to cure, not to produce. However, in these curative workshops a great many articles are made for the hospital. Many of the looms which are used by the ward aides have been made in these shops, besides desks and furniture, also bed trays and other small articles for use.

As in the ward occupations, any man making an article in the shops can obtain possession of it by paying the cost of the material. No articles produced in the curative workshops are allowed to be sold on the premises nor is anyone allowed to take orders for future delivery.

In July 1917, there were 544 men taking curative workshop and industrial re-training combined. The number in each class at that time was not known. On 31st December, 1918, there were 2,581 pupils taking this work.

In the chapter on History and Growth of Vocational Training will be found a chart showing the growth of curative workshops. The list of institutions in which the curative workshops are placed shows how widely this work is distributed through all the hospitals in Canada

The attached list shows each institution in which there is a curative workshop in Canada, the subjects taught and the number of pupils in each subject. This list does not include gardening. This is due to the fact that the list refers to subjects taught as of 31st December, 1918. However, in the summer probably one of the most popular and beneficial subjects in the curative workshops is that of gardening. At a great many of the hospitals truck and flower gardens are laid out for the soldiers in grounds adjoining the hospital, each soldier is given an individual plot which is his particular care and prizes are awarded for the best gardener. No attempt is made to teach gardening in the curative workshops as a gainful occupation. However, besides the curative value the men learn to take care of small plots of vegetables and flowers, and we hope when they leave the hospital they will have their own little vegetable and flower gardens, so beautifying their homes.

Number of Pupils Taking Curative Workshop Training and Subjects Taught January 31, 1919.

"A" UNIT—QUEBEC.

Institution.	Course.	Number of Pupils.	Totals.
Montreal Technical School	Business	1	
	Machine Shop Practice	1	
	French—English	1	
	Commercial Illustration	1	
			4
Laurentide Inn	Wood Working	12	
	Business	5	
	Ward Occupation	21	
			38
Ste. Anne's M. Hospital	Business	18	
	Wood Working	17	
	Draughting	5	
			40
Unit Total—82 Pupils and 3 Institutions.			

"B" UNIT—NOVA SCOTIA.

Camp Hill Hospital	Barbering	1	
	Shoe Repairing	5	
	Wood Work	5	
	General Education	20	
	Telegraphy	4	
	Stenography	1	
	Art Novelties	4	
	Auto Mechanics	106	
			146
N. S. Sanatorium	Telegraphy	4	
	Motor Mechanics	9	
	Business	5	
	General Education	13	
			31
Moxham Ross Hospital	Wood Work	1	
			1
Pine Hill Hospital	Ward Occupation	15	
			15
Unit Total—193 Pupils and 4 Institutions.			

"C" UNIT—EASTERN ONTARIO.

Institution.	Course.	Number of Pupils.	Totals.
Cobourg M. Hospital	Ward Occupation	62	
	Wood Work	18	
	Show Card Writing	3	
	Shoe Repairing	9	
	Typewriting	1	
			93
Mowat Sanatorium	Ward Occupations	18	
	Music	5	
	Commercial and Civil Service	42	
			65
Sandford Fleming Home	Commercial and Civil Service	2	
			2
Queen's Military Hospital	Ward Occupations	40	
	Commercial	5	
	Civil Service	1	
	Draughting	3	
	General Education	3	
	Electrical Engineering	2	
	Farm Tractor	1	
	Machine Shop Practice	5	
	Shoe Repairing	2	
	Orthopaedic Shoe Making	1	
	Telegraphy	7	
	Music	2	
			72
Unit Total—232 Pupils and 4 Institutions.			

"D" UNIT—CENTRAL ONTARIO.

Brantford Military Hospital	Shoe Repairing	2	
	Wood Work	9	
	General Education	21	
	Ward Occupations	21	
			53
Central Technical School	Show Card Writing	2	
	Commercial Design	1	
	Commercial Illustration	2	
	Motor Mechanics	6	
	Motion Picture Operation	5	
	Power Plant Engineer	3	
	Chemistry	1	
	Electricity	2	
	Draughting	8	
	Machine Shop Practice	4	
	Carpentry and Cabinet Work	4	
			38
C. M. C. H. Toronto	Ward Occupation	47	
	Wood Work	29	
	Motor Mechanics	30	
			106
Base Hospital, Toronto	General Education	17	
	Oxy-Acetylene Welding	3	
			20
Central Y.M.C.A., Toronto	Commercial and Civil Service	4	
	Telegraphy	11	
			15
No. 8 Brunswick Ave., Toronto	Commercial	13	
	Stenography	9	
			22

GROWN BY CONVALESCENT PATIENTS.

This picture shows an exhibition of Vetegables grown by soldiers while in Hospital. This exhibit took first prize in open competition for the best collection of vegetables at the Fall Fair. Gardening is taught for its curative value. The healthy exercise in the open air developes the muscles and tones up the system during convalescence.

"D" UNIT—CENTRAL ONTARIO—*Concluded.*

Institution.	Course.	Number of Pupils.	Totals.
Davisville Military Hospital	Ward Occupations	70	
	Shoe Repairing	6	
	Wood Work	14	
	Commercial	11	
	Civil Service	17	
	Telegraphy	12	
	Motor Mechanics	12	
	Draughting	9	
			151
Mountain Sanatorium, Hamilton	Ward Occupations	36	
	Shoe Repairing	3	
	Commercial Design	8	
	Music	2	
			49
Newmarket Hospital	Ward Occupations	50	
			50
Whitby M.C.A	Ward Occupations	26	
	Motor Mechanics	23	
	Special Classes	13	
	Commercial	28	
	Telegraphy	12	
	Shoe Repairing	9	
	Music	10	
	Manual Training	17	
	Draughting	10	
	Civil Service and General Education	58	
			206
Technical School, Hamilton	Chemistry	1	
			1
University of Toronto	Shoe Repairing	5	
			5
Broadway Church	Music	19	
			19
Dominion School of Rail Roading	Telegraphy	1	
			1
Euclid Hall	Commercial	4	
			4
Lansdowne School	General Education	6	
			6
Longwood Conv. Home	Ward Occupations	17	
			17
Muskoka Sanatorium	French	8	
			8
Spadina Military Hospital	Ward Occupations	27	
			27
Unit Total—798 Pupils and 19 Institutions.			

"E" UNIT—QUEBEC.

Lake Edward Sanatorium	General Education	23	
			23
Laval Sanatorium	Wood Working	2	
			2

"E" UNIT—QUEBEC—*Concluded.*

Institution.	Course.	Number of Pupils.	Totals.
Savard Park	Motor Mechanics	7	
	Wood Working	13	
	Commercial and General Education	18	
			38
Unit Total—63 Pupils and 3 Institutions.			

"F" UNIT—WESTERN ONTARIO.

Byron Sanatorium, Byron, Ont	Ward Occupations	37	
	Wood Working	9	
	Draughting	8	
	Music	19	
	Commercial	17	
			90
Freeport Sanatorium, Kitchener	Ward Occupations	25	
			25
Connaught Hospital, London	Ward Occupations	19	
			19
Wolseley Barracks, London	Ward Occupations	47	
			47
Victoria Hospital, London	Ward Occupations	10	
			10
C.M.C.H., London	Ward Occupations	18	
	Wood Work	27	
			45
Guelph M.C.H	Ward Occupations	93	
	Market Gardening	1	
	Farm Tractor Operator	1	
	Agriculture	3	
	Engineering	16	
	Music	22	
	Horticulture	13	
	Manual Training	39	
	Commercial and Civil Service	37	
	Auto Mechanics	9	
	Oxy-acetylene Welding	7	
			241
Unit Total—477 Pupils and 7 Institutions.			

"G" UNIT—MANITOBA.

Keefer Home, Port Arthur	Ward Occupations	13	
			13
M.M.C.H. Tuxedo Park	Auto Mechanics	3	
	Stat. Engineering	3	
	Prac. Math. Estimating, etc	3	
	Wood Working	6	
	General Education	16	
			31
Unit Total—44 Pupils and 2 Institutions.			

"H" UNIT—SASKATCHEWAN.

Earl Grey Sanatorium	Ward Occupations	46	46

"H" UNIT—SASKATCHEWAN—*Concluded.*

Institution.	Course.	Number of Pupils.	Totals.
St. Chads Military Hospital	Ward Occupations	27	27
Fort Qu'Appelle Sanatorium	Wood Work	3	
	Ward Occupations	19	
	General Education	9	31
Moosejaw, M.C.H	Civil Service	14	
	Telegraphy	9	
	Auto Mechanics	18	
	Commercial	13	
	Wood Working	3	
	Draughting	6	
	Sign Writing	3	
	Ward Occupations	33	
	Special Steam (Theory)	1	100
Provincial Insane Hospital, Battleford	Ward Occupations	11	11
Unit Total—215 Pupils and 5 Institutions.			

"I" UNIT—ALBERTA.

Ogden D.S.C.R. School	Civil Service	7	
	Ward Occupations	13	
	Handicraft	9	
	Commercial	17	
	General Education	15	61
Edmonton D.S.C.R. School	Wood Work	14	
	Ward Occupation	11	
	General Education	11	36
Unit Total—97 Pupils and 2 Institutions.			

"J" UNIT—BRITISH COLUMBIA.

Qualicum Beach C.H	Commercial	10	
	Wood Working	11	21
Resthaven C.H., Resthaven, B.C	Art Metal Work	5	
	Auto Mechanics	8	
	Wood Working	16	
	Agriculture	5	
	Commercial	10	
	Draughting	1	45
Royal Columbia Hospital, New Westminster.	Telegraphy	7	
	Ward Occupations	8	
	Commercial	9	24
Balfour, C. H., Balfour, B. C	Ward Occupations	18	
	Wood Work	17	
	Commercial	21	56
Vancouver Gen. Hosp. Annex	Poultry Raising	4	
	Ward Occupations	78	82

"J" UNIT—BRITISH COLUMBIA—*Concluded,*

Institution.	Course.	Number of Pupils.	Totals.
Shaughnessy Military Hospital	Commercial	17	
	General Education	14	
	Civil Service	5	
	Barbering	1	
	Telegraphy	10	
	Ward Occupations	8	
	Fruit Farming (Lectures at U. of B.C.)	19	
			74
St. Joseph's Hospital, Vancouver	Ward Occupations	9	
			9
Esquimalt C. H.	Boat Building	2	
	Shoe Repairing	3	
	Motor Mechanics	4	
	Wood Working	16	
	Draughting	4	
	Agriculture	6	
			35
Fairmont Military Hospital, Vancouver	Auto Mechanics	24	
	Shoe Repairing	4	
	Carpentry and Cabinet Making	5	
	Draughting	8	
			41
Jubilee Hospital, Vancouver	Ward Occupations	12	
			12
Unit Total—399 Pupils and 10 Institutions.			

RECAPITULATION.

Unit.	Number of Institutions.	Number of Pupils.
A	3	82
B	4	193
C	4	232
D	19	798
E	3	63
F	7	477
G	2	44
H	5	215
I	2	97
J	10	399
K	0	0
	59	2,600

CHAPTER VI.

INTERVIEWING.

In the general scheme of industrial retraining there are two features which are of the utmost importance, and might be called the essential ones. They are:—

1. Interviewing and aiding the man in the selection of his course.
2. The actual training for the occupation.

All the other activities of the Vocational Branch centre around these two things. The follow-up and after care merely assist in the placement and take care of the results; the industrial surveys branch is really a service department for the interviewing and training branches. Ward occupations and curative workshops cure the man and lead up to industrial retraining; medical officers advise and assist in this work; statistics and costs, purchasing, etc. are no more than service branches.

It is hard to say which is the most important, interviewing or training. The success of the training for a man's future life depends so much on getting him started in the right course that one might almost say interviewing was the most important. This would be absolutely so if it were not that the interviewing would be useless unless the man received proper training. The average cost to the country for retraining a single man without dependents, is approximately $560 From an economic standpoint this money is wasted unless the man is a success, and he cannot be a success unless the course taken is adapted to him, and the degree of success in adapting the course to the man depends entirely on the success of the interviewing.

It is therefore a sound business principle to spend sufficient money on interviewing to make it successful. It would not be economy to save money here at the expense of efficiency. Sufficient interviewers should be provided to give all the time necessary to consider the man's course completely and advise with him. The salaries paid the interviewers should be sufficient to attract to the work the class of man who can give this advice best.

In large and well conducted industrial establishments at the present time the question of employment is given a great deal of thought. There is usually one man in charge of employing all the staff. This man must become conversant with every operation in the establishment. If he is the employment officer for a steel plant he must know the duties and work required of the man who operates the crane and the man who operates the rolls, and he must be familiar with the knowledge and experience required by an employee to be successful in the operation of the blast furnace, or the Bessemer plant. To this man come all those who seek employment. He interviews them and having on his desk the number and classification of all men required by the various foremen that day, he allots the applicants to the different foremen. The applicant is then sent to the foremen for employment, but if it is found after three or four days or three or four weeks trial with this foreman that he is not suited to the work, he is sent back to the employment officer, who in the light of his experience, sends him to some other foreman for employment in another branch of the work. Usually, this employment officer has been employed in steel works in a number of capacities, himself, and is familiar by actual contact with a great many of the occupations in that plant. Nothing but experience and natural aptitude can make a proficient employment officer.

Now, an employment officer possessing tact, diplomacy and a large amount of sympathy, would, with training, make a good interviewing officer. The

employment officer deals only with the men as he finds them, while the interviewer must also bear in mind what can be made of them and for this he must be trained.

It is quite evident that the man who has been a book-keeper all his life, a bank clerk or a school teacher, has not had the necessary experience with trades and occupations to make a good interviewer, There are several classes of men whose experience would naturally fit them for this work. For instance, a contractor who has built buildings, corporation works, or railroads, and operated them, and has employed all classes of workmen, skilled and otherwise, necessarily knows what is required of each. The factory manager also has this point of view; the labour representative who has for years been actively in contact with the labour movement also understands these things. These qualifications are essential, but it is also necessary that the interviewer should have diplomacy, tact, sympathy and the ability to enlist the man's confidence and respect. He must be able to put at ease the man he is interviewing and to find out what the man's aims and ambitions not only are, but have been. Many a man comes to us who in youth desired to learn some particular occupation but was unable to do so. He is loath to speak of his disappointed ideals, but if the interviewer has the proper sympathy and can get the man's confidence, he may draw these things out. If, in addition to these qualifications, the interviewer has technical training so that he can understand by personal experience the training the man has to go through, so much the better.

The large majority of men being trained, are, as pointed out previously, of necessity drawn from the heavier occupations—the unskilled labourer or the partially skilled workman employed in the heavier occupations. The man who can best understand these men and get their confidence is the one who has himself at some time actually earned his daily wage at some heavy occupation; who has frequently not known where his next meal was to come from; who has slept and eaten in a lumber or railroad camp and often had to take any job that offered to satisfy the immediate necessities of life.

It is also considered absolutely essential that of all the men on the staff of the department, the interviewer at least, if none other, must be a returned man, as he is the only one who can talk to the man being interviewed, on an equal footing. Voluntary enlistment in Canada is probably responsible for a strong feeling on the part of the ex-soldier against the civilian of military age holding official positions in any work connected with the handling of army matters or the administration of rehabilitation. He has inevitably the soldiers' conviction that all such are slackers, and when forced to deal with them, there springs up a feeling of distrust, leading to secretiveness which totally defeats the purpose of the interviewer. Although conscription was finally introduced in Canada, such a small proportion of the army was raised in this manner that from our standpoint we are really handling a volunteer army.

Any suggestion of army methods has been done away with. All the staff wear civilian clothes, and the interviewer must approach the applicant as a civilian who is trying to put all the machinery of the department at his service. The interviewer is the soldiers' friend, not the guard at the door.

Contact with the prospective applicant for retraining is first made while the man is yet a patient in hospital in Canada. During his period of treatment or convalescence, he comes in contact with the organization of the Vocational Branch through his occupational work in the ward or curative workshop. In each institution all this work is in charge of the Vocational Officer. This man is an ex-soldier and preferably a casualty. He is not a part of the military organization, but goes amongst the men and treats with them as an adviser rather than as an officer. He is also in charge of all personnel carrying out the curative and ward occupational work, and is responsible for the initial work in guiding a man towards his ultimate course of training. He accomplishes this not through one interview, but by a series of actual personal contacts, and

Face page 53.

CANDIDATES FOR RE-TRAINING.

A group of men waiting to apply for re-training. Note the average age of these men. This shows what might be called normal cases of disabled. There are very few badly mutilated cripples among them. The greater number are well able to follow some light occupation and re-training them really means re-adapting them to some light occupation in the line they followed before the war. After the first month or six weeks, these men show more initiative, application, and desire to learn, than do students who have not been in the Army.

through the instructors in ward occupations and curative workshops. During the whole period of a man's stay in hospital he is therefore under the observation of the Vocational Officer and receives advice from him. The choice of a future occupation, if made by a man at this period, is given every consideration and the curative training provided is if possible preparatory to this desired occupation. The enthusiasm of the man is carefully nursed, and his progress watched and noted for reference at a later date. If his interest can be awakened sufficiently at this point, one of the greatest difficulties in getting him back to civilian life is overcome before his retraining really starts.

The actual application for a course of retraining may be made prior to discharge from the army, but the course does not commence until after this date.

In assigning a man to a course the first requirement is that the man himself must be satisfied. The succcess he attains will depend almost entirely on the amount of enthusiasm and application he puts into his work. If he is not satisfied with the course he has selected, he will not apply himself and success will not result.

In some countries vocational retraining is compulsory but it has never been made so in Canada. It has not been found necessary. A man is neither compelled to take training nor to take any course that he does not desire. The department depends entirely on its ability to persuade the man that he should take advantage of the training offered. While the man is not compelled to take any course, there are a few instances in which a man may not be allowed the course which he chooses himself. This is only done when it is quite obvious that the course he is choosing would not lead to success.

While the choice of course is left open to the man himself, a great deal of guidance is required. If the interviewers are of the right type they can, by the power of suggestion or persuasion, guide the man into almost any course thought desirable, for the great majority of the men are reasonable and can be shown wherein the choice of the Department Officials is the best. If the Department did not use the powers of suggestion, persuasion or reason, in guiding the men, it would be found that 50 p.c. of them would take up commercial work, civil service and motor mechanics. The railroad brakeman who has lost a leg is possibly given motor mechanics in the hospital as a curative measure. He comes to the interviewer with his mind made up that motor mechanics is the course he wishes, but it takes very little explanation in the part of the interviewer to show him that motor mechanics is not as well suited to his disability as would be the occupation of a telegrapher, train despatcher or railroad billing clerk. The labourer, who is 40 years old with a wife and family has his mind made up that he wants to become a bookkeeper. It is a comparatively simple matter to show him that he would never make much of a success as a bookkeeper, but that if he becomes a brass finisher he can earn good wages and have steady employment.

A summary of the number of men being trained, the number of courses being given and the number of men in each, gives the following figures. Of the men being trained in July 1917, 42 p.c. were being trained in three courses, motor mechanics, civil service and commercial. In all 39 different occupations were being taught. It is very interesting study to contrast the figures above with those showing the distribution for the present date. On January 31st, 1918, a total of 5,754 men had been trained or were being trained in no less than 315 different occupations. A list of these occupations is given at the end of this chapter. Of this total 409 or now 12 p.c. only, are being trained as auto mechanics, including chauffeurs and garage men; 543 or 15 p.c. are being trained in the combined commercial and civil service class. This distribution was not obtained, however, through actually closing the door in the face of the man wanting to enter one of the congested classes, but through the personal guidance of all the staff with whom the man came in contact. The guidance consisted of argument or suggestion rather than refusal or command.

Interviewing of adults has never been carried on to any extent before. Vocational counsellors had their place before the war in some few technical and high schools, but this was on a small scale, and they dealt only with the immature boy. The interviewer for industrial re-training however, must deal with an entirely different problem—an older and more mature subject—and must therefore have a broader point of view and immeasurably more experience in occupations and trades.

In chapter 10 on Industrial Re-Training, men are divided into two classes according to the occupations they may desire to follow:—

1. Brain workers, including clerks, book-keepers, civil servants, professional men, etc.
2. Those who are engaged in manual occupations, skilled or otherwise, of which the higher types may also be brain workers.

The interviewer first places the man in one of these two broad classes. In order to assist him in doing this he has a report from the hospital where the man has been engaged in the curative workshops. While he has been taking curative work there, he has been moved around from one occupation to another under medical direction, and a report is sent, to the interviewing officer on the man's discharge. Part of the interviewing may be done by the officer in charge of the curative workshops. In these curative workshops it is a comparatively easy matter by inspection, to find out whether the man has mechanical skill or not, or whether he is more adapted to clerical pursuits. This information enables the interviewer to decide what the man is best fitted for.

The word "trades" usually refers to highly skilled occupations which take a long time to learn, such as carpentering, machinist, plumbing, printing, etc. The word "occupation" however, applies to a large number of vocations in which men are engaged. While these occupations may take a short time to learn, the wages in some are equal if not higher than in the highly skilled trades. A great many of the so called trades are seasonable, and with many occupations the seasonable factor does not come in to such a large extent. As examples, of occupations, as distinct from trades we might instance—glove cutter in the glove factory, collar maker in the harness factory, carriage painter in the automobile body factory, the monotype operator in the printing trade, the hoist runner in a mine, the glass cutter, silver polisher, electric station tender, meter-tester, gold pen grinder or the lens grinder.

Besides trades and occupations the modern industrial system has developed a new class, piece workers. These workers perform only one operation such as a certain operation on a lathe, milling or punching machine. This method, the result of so called efficiency methods of intensive production, attempts to eliminate the human factor and turn a man into a machine. The work is monotonous in the extreme. The effect is to dull the workers intellect. Efficiency production has been so lately introduced that socially it must be regarded as an experiment.

We have therefore three divisions—trades, occupations and piece workers.

If an ex-soldier has a trade and is too disabled to follow it, the Department endeavours to raise him higher in that trade. It endeavours to train him to become a specialist in some lighter and more highly skilled division in that trade. For instance, the house carpenter becomes a cabinet maker, or the printer a monotype or linotype operator. If a handicapped soldier had no trade before the war, be may be trained for an occupation. The Department does not train men for piece work or single occupations.

One of the principles of interviewing which must be kept in mind at all times is that the occupation chosen by the man must in so far as possible be closely related to his former calling.

The locomotive engineer who is so disabled that he cannot follow that occupation, is in possession of a large amount of knowledge in regard to operating

a railroad. He is familiar with the movements of trains, the operation of train orders, has a fair knowledge of the duties of a station agent or train despatcher. He is also familiar to some extent with the operation of a round house and repair of locomotives. Of necessity he must have mechanical ability or he would not have attained the position of lomotive engineer. It seems only reasonable that advantage should be taken of this knowledge. He might be taught telegraphy and become a station agent, or railroad despatcher, or if his disability permitted he might become a machinist in the car repair shops, thus obtaining such a start that he might become foreman of the repair shops.

The miner who has worked underground for some years is familiar with a great many operations around the mine. It would be folly to put him into railroad work. If he has mechanical skill, he may be trained to be a hoistman or to repair the tools which he has used all his life, or he may be taken into the mill and taught to run the concentrating tables or he may become a stationary engineer. If on the other hand he is more fitted for clerical work and has never had the opportunity to do that, he may become a time-keeper or keeper of stores. His familiarity with various machinery and supplies used in mining operations would give him an immense advantage as a storekeeper over the man who has never seen a mine. If a man has been employed in heavy electrical work and cannot follow that, it would be unwise to put him into a shoe factory; he should be given some lighter occupation in the electrical line.

It is well known that men have a tendency to continue in the calling in which they have worked for some years. A miner is nearly always a miner although he may change his occupation within the broad classification. The man who has worked on a railroad for years seldom takes to any other occupation with any satisfaction. The printer is always a printer although he may change his occupation within the printing trade from compositor to that of Linotype operator. This is to a large extent due to the fact that men are more or less diffident and nervous about starting new things. A man in his own occupation also has friends among his fellow workmen and has their sympathy. If a man who previously worked in a foundry has been disabled, and is taught the occupation of a core-maker he will be more likely to receive help and sympathy from his fellow workmen when he goes back to the foundry, than he would if he went into some other occupation.

Another consideration in building on a man's former occupation is that the lenght of time necessary for training is kept down to a reasonable limit.

There is a well settled but erroneous idea fixed in the minds of a number of people that the Department is attempting to teach trades to men with no previous experience, in from six to eight months. This should be emphatically denied. It is obviously impossible to take a man unskilled in that line and teach him to be a carpenter, machinist, plumber, etc., in from six to eight months, but if a man has been a building carpenter and has an amputation of the leg, by building on his former skill he can be taught cabinet making in eight months. If he has been a machinist's helper and by reason of his disability is not strong enough to follow heavy machine work and has sufficient natural mechanical ability, he can be trained as an improver in a machine shop in from six to eight months. If he has been a printer and has either a single or double leg amputation which prevents him from following the ordinary printing trade he can be trained to operate a monotype or linotype machine, which is a sitting job, in the length of time at the disposal of the Department. This is true of other trades provided the man has former experience.

The general principle is that while building on a man's former occupation he should be raised from a heavier occupation in his former line to a lighter one. The lighter occupation while being suited to his disability, usually draws higher wages.

However, there are quite a number of men who have no occupation on which to build. Some left school without an occupation, and others among them

have always been labourers with practically no education. They have been drifters and have formed the great class of transient labour. A great many of these men have natural ability which has never been developed. Some are natural farmers, others have mechanical ability and others are more fitted for clerical and sedentary occupations. With these men it has been the aim of the Department by every means possible—by inspecting in the curative workshops, by interviewing, or by getting at former ambitions—to find the man's natural aptitude and train him in some occupation along that line. Those who are fitted for clerical work are trained as civil servants, book keepers, time keepers, etc. For those men who have no former occupation but have mechanical ability there are a large number of occupations available such as glass cutting, silver polishing, adding machine repairing, gold pen grinding, optical lens grinding, dental mechanics, etc., to name only a few of hundreds.

The foregoing sets out the qualifications for an interviewer and the general principles he must apply.

The first thing the interviewer must endeavour to decide is whether or not the man is eligible for training. This depends on two things:—

1. Whether he is too disabled to return to his former occupation.
2. Whether this disablement was incurred on or aggravated by service.

After a short conversation with the man as to his war experience, former life and occupation, he is asked whether he can return to it or not. If he says he can, the interviewer informs him that he is not eligible for training, but that if after entering civil life he finds himself unable to follow his previous occupation, he can come back to the Department and ask for training. Particulars are then taken as to his educational and industrial history and filed for future reference.

If on the other hand he tells the interviewer that he cannot return to his former occupation due to disability incurred on or aggravated by service, he is sent to the Vocational Medical Adviser who examines him physically and mentally to determine whether in his opinion the man can return to his former occupation. In these examinations the advice of specialists is taken when necessary. A man may have to be brought before a lung specialist, a neurologist, an eye specialist or an orthopædist. His last medical board taken on discharge, and his overseas medical board documents are examined to find out if the disability has been incurred on service or not. The army medical boards, however, are only considered by the Department as evidence bearing on the point in question; these boards are not considered final. The Department gathers all medical evidence available as to the man's disability, and how incurred, both from his army record and medical examination, and makes a decision on these points in consideration of all this evidence.

If the man is found eligible for vocational training the interviewer then consults with him as to what training it is advisable for him to take. Wherever possible his former employer is consulted provided the man wishes to return to his employ. If there is no opportunity of training him with his former employer, an opportunity may be found in his former calling in some other industrial establishment. In any case, if the man has to be trained in an industry, a meeting is arranged between the interviewer, the employer whom it is thought may train him, and the man himself, before the course is decided on. Every endeavour is made to take the advice of those particularly conversant with the trade or occupation in which the man is to be trained. If the man comes with some pre-conceived idea as to the course desirable, and the course he has selected is not considered suitable for him, he is shown the reasons why, and very little difficulty is found in persuading him to change. After the man himself and the interviewer have tentatively selected an occupation the Vocational Medical Adviser is again consulted as to the suitability of this occupation for his disability.

The Vocational Medical Adviser is furnished from time to time with studies showing the relation between disabilities and occupations, and also tabulated in the reverse order, of the relation between occupations and disabilities. The interviewer has on file for his information all the surveys of industries made in this district, which are treated more fully in Chapter 8 on that subject.

The man is brought before the Disabled Soldiers' Training Board. This Disabled Soldiers' Training Board consists of an interviewer, the doctor and one or more men drawn from the local advisory committee. At the present time these boards usually consist of about five men. In addition to the interviewer and doctor, we have the representative of labour, an employer and another man who is particularly conversant with the trade or occupation into which the man is going. This Board talks over in a personal and confidential way with the man himself, the course which has been selected for him. This information obtained, they decide on a course of action and their views and recommendations are set out in writing, and this recommendation is sent to Ottawa where it is examined carefully by other men trained in the work, and special doctors. In Chapter 2 on pages seven and eight it has been explained fully why it is necessary to send these recommendations to Ottawa. It should be remembered, however, that all the work of interviewing and the decision, is practically made in the unit office by the Disabled Soldiers' Training Board and the Head Office in Ottawa merely maintains the right to concur in or veto a decision, the latter course being seldom necessary. Itis felt in the Ottawa office that unless there is some good reason for not concurring, the concurrence should be given.

The average length of time taken in getting the concurrence of the Ottawa office has now been reduced to ten days for the whole of Canada Of necessity there are a few cases in which a little delay occurs, but the decision is only held up in cases where extremely bad decisions seem to have been made or where further information is found on the Headquarters file.

It has been pointed out elsewhere that it is of the utmost importance both from the man's point of view and the point of view of the Department that the man should be started on the right course. Sometimes this delay while irksome, is entirely for the man's benefit.

The interviewers and Disabled Soldiers' Training Board also review the cases of all men who desire or need extensions of courses. Where these cases come up before the Board they have in addition to the information formerly obtained on the man, reports from the principal of the school and his instructors to guide them, or if the man is working in industry they have reports of the inspectors and factory manager, and the man himself is again brought up and interviewed.

The function of the advisory committee in interviewing is a very important one. It brings to the problem the point of view of the laymen. The labour representative sitting on the Board will know if the man who is taking training will be absorbed by the union, and if not, may suggest some other course of training by which he will fall within union regulations. The employer or manufacturer will advise whether the man can succeed in the occupation selected.

At one time it was possible for the District Vocational officer to handle each case individually; now, however, with as many as 700 applications a week being received at Head office from thirteen unit offices—which means considerably over this number in the units—the work has grown beyond the limits of a one-man job.

As I previously intimated the importance of first hand advice at this point has been realized more and more as the work has progressed. In an effort to do away entirely if possible with a change of course due to faulty guidance, a specialized Disabled Soldiers' Training Board has been introduced. At first it was thought sufficient to have on the Board in addition to the interviewer and the doctor, one or two men who would represent the laymen or industrial and commercial life. This was later developed by the introduction of one or two

more men, four different branches of industrial, commercial or professional life being then represented. Even under these conditions, however, it was found that men were applying for courses, in some of which perhaps no member of the Board was thoroughly familiar with the details of the work involved. The new procedure is as follows—If the disabled men warned for a Board on any particular day include two men who are applying for cabinet making, then care will be taken that one of the members of the Board shall be a man who is familiar with the details of this work; and similarly with regard to other occupations. In this way expert advice will be available for each individual case and the results, which will be carefully watched, should be an improvement over those obtained under the old system.

I have elsewhere called attention to the fact that changing a course once started was an evil to be avoided, and that a large number of such changes could be taken as an indication of inefficiency in the counsel provided. To a certain extent this may be the case, but there are undoubtedly times when it is necessary to leave the final convincing of the man that the course he has chosen is the wrong one, to the instructor and to the realization that he can not do the work—which conviction comes only after trial.

As has been pointed out, no man is compelled to take training unless he so desires, but it has been found by experience that the men are more than anxious to avail themselves of the advantages of training if they are eligible. For some time however, there was no systematic way of bringing the advantages of training home to all disabled men. Many of them were being discharged and were going to their homes some distance from the interviewing offices. They did not know the advantages available to them and were not succeeding in their former occupation. It was therefore decided that every man discharged through the hospitals or the invalided section should be interviewed. In every hospital or discharge depot through which invalids are passing, there is now a representative of the Vocational branch who interviews the men.

A large proportion of the men interviewed at these points are at once found to be ineligible and a record is made of their educational and industrial experience, which is sent to the unit office for filing for future reference. If however, a man is considered eligible, he is sent to the District office to be further interviewed by the unit office interviewers.

From an administrative standpoint the interviewers can be divided into two classes:—

1. Those who interview in discharge depots and hospitals.
2. Those who interview in the unit offices.

The first class merely make a rough division between those who may be eligible and those who evidently are not. As they do not go into any of the details of vocational guidance they do not require to be highly trained.

The men who do the final interviewing however, are selected from the best of those in the first class of interviewers. The interviewing in hospitals and discharge depots forms a training school in which the second class of interviewers can be trained, and from which we can select those with the necessary qualifications to do the final interviewing.

After being selected however, from this source, and being partially trained here, the interviewer must receive further training. For a while he is put on industrial survey work—sent to study factory conditions, interviewing managers and foremen, and the workmen in the factories so that he can get the point of view of all these people. He must then thoroughly study our school system, to become familiar with the training given there both as to courses available and methods used. It is also necessary for him to learn a good deal about disabilities. He is then used as an assistant interviewer in our district offices until it is thought safe to put him on as a final interviewer.

We have found it very beneficial to interchange interviewers and industrial survey officers from time to time. In a unit where three final interviewers are necessary, four are employed, one of whom is out for a week at a time accompanying the industrial surveyor in his work or doing the industrial survey work himself. Each interviewer therefore spends one week in four making this detailed inspection of the industries and occupations so that his information available for the guidance of the prospective student is at all times fresh in his mind.

List of occupations for which disabled soldiers have been trained or are being trained.

This list is increasing month by month:—

1. Agriculture
2. Adding Machine Repairs
3. Auto Painting
4. Artificial Limb Making
5. Art Metal Work
6. Armature Winding
7. Advertising
8. Auto Mechanic
9. Auto Tire Repairs
10. Air Brake Mechanic
11. Architectural Drafting
12. Aeroplane Mfg.
13. Auto Salesman
14. Auto Upholstering
15. Auto Truck Driver
16. Accountant
17. Animal Husbandry
18. Assaying
19. Auctioneering
20. Art Lead Glazing
21. Bicycle Repairing
22. Battery Making
23. Bird Cage Making
24. Boat Building
25. Book-keeping
26. Barbering
27. Bronze Moulding
28. Building Construction
29. Boiler Inspector
30. Battery Repairs
31. Brush Back Boring
32. Brush Making
33. Boiler Laying
34. Brass Finisher
35. Box Factory Foreman
36. Bee Keeping
37. Broom Making
38. Basket Making
39. Blacksmithing
40. Book Illustrating
41. Butter Making
42. Butchering
43. Building Inspector
44. Baking
45. Book-binding
46. Brass Novelties
47. Chemistry
48. Carriage Painting
49. Civil Engineer
50. Cheese Making
51. Cable Telegraphy
52. Cabinet Maker
53. Commercial
54. Concrete Construction
55. Coremaking
56. Carpet Weaving
57. Civil Service
58. Carpentry
59. Commercial Designing
60. Central Telephone Office Work
61. Cash Register Assembling
62. Cylinder Press Feeder
63. Cloth Weaving
64. Commercial Illustrating
65. Confectioner
66. Commercial Art
67. Comptometer
68. Chiropody
69. Clock Repairing
70. Cigar Making
71. Cornet Playing
72. Cleaning and Pressing Clothes
73. Cartooning
74. Compositing
75. Cooking
76. Cotton Spinning
77. Dry Goods Salesman
78. Drafting and Estimating
79. Dairying
80. Dyeing
81. Dentistry
82. Drafting
83. Die Polishing
84. Estimating and Plan Reading
85. Electric Light Station Operator
86. " " Wiring
87. " " Meter Mechanic
88. " Substation Operator
89. " Fixture Making
90. " " Assembling
91. " " Repairing
92. " Engineering
93. " Welding
94. " Winding
95. " Switch Board Operating
96. " Wiring
97. Electrician
98. Embalming
99. Engraving
100. Farm Mechanics
101. " Carpentry
102. " Machinery Repairs
103. Floriculture
104. Fruit and Vegetable Drying and Canning
105. Fur Cutting
106. Farrier
107. Furniture Polishing
108. Farm Tractor Operator
109. Factory Clerk
110. Forestry
111. Fancy Wire Work
112. French Polishing
113. Flour Milling
114. Fire Insurance Agent
115. Fountain Pen Maker
116. Greenhouse Work
117. Gas Engineering
118. Glass Cutting
119. Garment Designing
120. " Cutting
121. Grain Buying
122. " Elevator Operator

List of occupations for which disabled soldiers, &c.—*Continued.*

123. Glove Weaving
124. Gardening
125. Grain Inspector
126. Gas Tractor Engineer
127. Glove Making
128. Gunsmithing
129. Gold Penmaking
130. Hat Blocking
131. " Making
132. Highway Engineering
133. Hydro Inspector
134. Hardware Salesman
135. Hospital Technician
136. Harness Making
137. " Fitting
138. Horticulture
139. Heating Plant Operator
140. Hog Raising
141. House Painting
142. Harness Repairing
143. Interior Decorating
144. Iron Moulder
145. Jeweller
146. Jewellery Repairs
147. Janitor
148. Joiner
149. Knitting Machine Operator
150. " " Repairing
151. Life Insurance Agent
152. Locksmith
153. Log and Lumber Scaling
154. Landscape Gardening
155. Lens Grinder
156. Leather Novelties Mfg.
157. Lead Glazing
158. Linotype Operator
159. Lithographing
160. Law Course
161. Librarian
162. Medicine
163. Meter Reading
164. Metal Pattern Maker
165. Metal Spinner
166. Marble Cutting
167. Mechanical Drafting
168. Machine Shop Practice
169. Motor Mechanic
170. Milling and Assaying
171. Mining Engineering
172. Monotype Casting
173. Milk Testing
174. Metal Polishing
175. Moving Picture Operator
176. Mining
177. Machinist
178. Mechanical Dentistry
179. Metal Enamelling
180. Moving Picture Photographer
181. Meter Construction
182. Massaging
183. Mechanical Engineering
184. Magneto Repairs
185. Multigraph Operator
186. Marine Engineering
187. Meat Inspector
188. Municipal Secretary
189. Machine Buttonhole Work
190. Metal Drill Work
191. Mattress Making
192. Machine Wood Work
193. Navigation
194. Naval Architect
195. Nautical Instrument Repairs
196. Office Equipment Repairs
197. Optical Work
198. Oxy-acetylene Welding
199. Ornmental Iron Work
200. Orthopædic Boot Making
201. Ocean Cable Telegrapher
202. Photography
203 Poultry Raising
204. Printing
205. Plumbing
206. " Supplies Assembly
207. Pharmacy
208. Piano Tuning
209. " Polishing and Finishing
210. " Repairs
211. " Sounding Board Mfg.
212. " Hammer Making
213. Picture Framing
214. Paper Box Making
215. Prosetic Dentistry
216. Power Plant Engineering
217. Pattern Making
218. Pressman
219. Photo Engraving
220. Pressed Metal Work
221. Paper Hanging
222. Pickle Making
223. Paper Novelty Mfg.
224. Rubber Turning
225. Railway Clerk and Accounting
226. Ring Making
227. Radiographing
228. Railroad Station Work
229. Rubber Tire Repairing
230. Reed Furniture Making
221. Railroad Track Inspector
232. Reporting
233. Railway Drafting
234. Shoe Making
235. " Cutting
236. " Repairing
237. Sheet Metal Work
238. Stencil Cutter
239. Steel Analysis
240. Scientific Course
241. Steam Engineer
242. Switch Board Operator
243. " " Installing
244. Stenography
245. Shipping Clerk
246. Stone Drafting
247. Steel and Cement Construction
248. Soldering
249. Street Car Repairs
250. Surveying
251. Steam Boiler Inspector
252. Silversmith
253. Stationary Engineering
254. Sign Painting
255. Sewing Machine Repairs
256. Shipbuilding
257. Steel Stamping
258. Silver Polishing
259. Steel Letter Cutting
260. Sign and Card Writing
261. Storekeeper
262. Sanitory Inspector
263. Seed Inspector
264. Stamp Making
265. Stove Moulding
266. Saw Filing
267. Steam Fitting
268. Ship Drafting
269. " Fitting
270. Sheet Metal Drafting
271. Stationery Salesman
272. Stone Planer
273. Sash and Door Mfg.
274. Scale Repairs
275. Slaughtering animals
276. Saxaphone Playing

List of occupations for which disabled soldiers, &c.—*Concluded.*

277. Salesmanship
278. Sheep Herding
279. Surgical Appliance Mfg.
280. Tinsmithing
281. Tile Setting
282. Tool Making
283. Taxidermy
284. Telegraph Cable Splicing
285. Time Keeping
286. Telegraphy
287. Telephone Installation
288. " Repairs
289. " Lineman
290. Typesetter
291. Truck Gardening
292. Theology
293. Tailoring
294. Typewriter Repairs
295. Touch Typing
296. Trunk Making
297. Trap Drummer
298. Teachers' Course
299. Upholstering
300. Undertaking
301. Veneering
302. Violin Playing
303. Vulcanizing
304. Veterinary Work
305. Watch Repairing
306. Veneer Lathe Operating
307. Window Dressing
308. Wire Cable Making
309. Wooden Shoe Making
310. Wood Carving
311. Wireless Telegarphy
312. Wood Polishing
313. Wire Bed Spring Mfg.
314. X-ray Operating

CHAPTER VII.

INDUSTRIAL RETRAINING.

The Vocational Branch of the Department of Soldiers' Civil Re-establishment has always considered that the retraining of handicapped soldiers is a new problem and requires an educational system quite different from any heretofore established. To understand fully what follows, it is necessary to indicate and establish the points of difference.

It is also necessary in solving any new problem to study the factors to be dealt with before attempting to establish a system. At the risk therefore of being tedious I will repeat here briefly some things which have been stated before.

The returned soldier has passed through an experience which others of mankind have not been through. None can understand this experience except the soldier himself. It is far reaching in its effects.

There is an opinion abroad, due partially to ignorance and a cursory examination of the facts, that soldiers as a class return with the idea that they should for ever after be kept by the country, and that they have a tendency to demand unjust things and are disinclined to return to work. Close contact with the returned soldier has shown that the large majority are anxious to return to civil life at the earliest possible moment. In Canada the greatest part of the army was raised by voluntary enlistment, the young went with the old, the rich with the poor; the adventurer served alongside the more sober citizen; the ne'er do well enlisted thinking that army life would be easy, and the serious worker enlisted through a sense of patriotism. The Canadian Expeditionary Force is practically a cross-section of the adult male population of military age, and among it is found the same proportion as in civil life of those who did not want to work and never would, unless driven to it by necessity. This proportion is very small indeed, but before the war they could not be heard to complain if they did not work, but the war being finished, some of these men are taking advantage of the situation. By far the greater majority of the returned soldiers, however, are anxious to return to their daily work at the earliest possible moment.

Their experience has broadened their point of view. They have travelled and seen the world. have discussed things which never before interested them, and their minds are more mature than the students found in civil educational institutions.

When a civilian entered the army everything was done to make him a small unit in a large organization. He was taught to obey rather than to think; he was for the most part relieved of the care of his dependents; clothing, food and a place to sleep were provided for him. If he was guilty of a misdemeanour he was punished, but he was not deprived of the necessities of life, whereas in civil life he would have been discharged. Thus the whole system, for the time being, tended to reduce the action of his own will and relieve him of all sense of responsibility.

In addition to this the wounded man with whom the Vocational Branch deals has spent long idle months in hospital where he had time to brood over his misfortunes and disabilities. The resulting state of mind has been termed a state of "institutionalism". From the time the man enters the hospital so badly wounded that he cannot return to active life in the army, he is on his way back to civil life and has to go through the reverse process. It is the business of the Vocational Branch to take care of the industrial side of this reverse process. Mental and psychological treatment is required as well as training.

It has been found that while during the first month or two the men show lack of initiative, as compared with civilians, there seems to be a critical period of about a month to six weeks after commencing training, and when this has been successfully passed, the majority of the men are better than those who have not passed through this experience.

A great many of the men who come to the department have never spent the necessary time to attain any degree of mechanical or mental skill. A number wasted their opportunities in their youth, but when the opportunity of training is again presented to them, they seize it with enthusiasm. For this reason a large proportion of our students show a greater desire to learn and apply themselves, than the ordinary civilian students.

In all the literature on the subject of the training of the crippled soldier, there is a tendency to display pictures of men badly mutilated. This is done no doubt to enlist the reader's sympathy, and may have its uses, but to those who must deal with this subject it gives a wrong impression.

The term "crippled soldier" in connection with this work does not convey the proper mental picture; the "handicapped soldier" is really the correct term. All those interested in solving the training problem should become familiar with what might be called the normal case of the handicapped soldier. Ordinarily one thinks of the crippled soldier as one who has suffered an amputation of one of the members of his body, or who has lost his sight, but out of 113,766 soldiers returned to Canada by the 15th February, 1919, only about 2,600 had suffered amputation of limbs. The rest had suffered from wounds which had healed but had left the members of the body either in a normal state of usefulness or with a varying percentage of normal function remaining. Others had been weakened by wounds in the back, chest or head. Another great class had broken down through pulmonary trouble or chronic diseases which had left them well able to do light work but unable to follow a heavy occupation.

Summarized Statement of Courses

Current and Discontinued or Completed on Date of December 31, 1918.

Showing by Units the Number of: (1) Single Men Without Dependents (2) Single Men With Dependents (3) Married Men (4) Widowers With Children, Who Have Been or Are Being Paid This Department's Training Allowance.

Current Cases	3,469
Discontinued or Completed Cases	2,992
Grand Total	6,461

	Current Cases.			
	Single men without Dependents.	Single men with Dependents.	Married men.	Widowers with Children.
A	234	44	179	2
B	160	7	80	1
C	176	10	124	.....
D	481	57	333	.....
F	63	10	65	.....
G	231	26	142	1
H	121	2	55	.....
I	181	17	195	2
J	183	33	154	2
K	69	.....	29	.....
Total	1,899	206	1,356	8

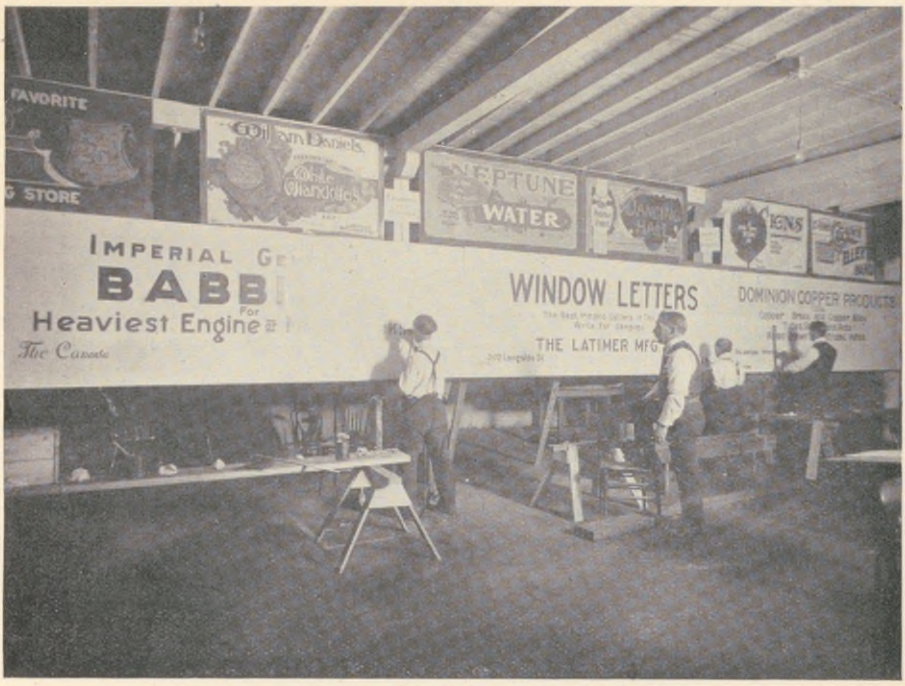
CURRENT CASES.

Single men without dependents	1,899
Single men with dependents	206
Married men	1,356
Widowers with children	8
Total	3,469

	Discontinued or Completed.			
	Single men without Dependents.	Single men with Dependents.	Married men.	Widowers with Children.
A	101	26	185	3
B	72	21	40	.....
C	102	23	103	.....
D	397	71	417	2
F	70	10	96	1
G	181	40	213	1
H	97	15	65	1
I	168	38	174	1
J	116	20	91	2
K	18	.....	11	.....
Total	1,322	264	1,395	11

DISCONTINUED OR COMPLETED.

Single men without dependents	1,322
Single men with dependents	264
Married men	1,395
Widowers with children	11
Total	2,992



A CLASS IN SIGN WRITING.

Sign writing is a useful subject for Industrial Re-training for men who have no foundation on which to build, but who have a nature aptitude for the work. Industrial Re-Training is always given after discharge, and after the patient is cured.

INDUSTRIAL RE-TRAINING.

Lance Corporal..... who was wounded in the legs, was a shipper before the war. In this illustration he is shown along with others of his comrades learning gold pen grinding with a firm of fountain pen manufacturers in Toronto. Training in industries has reached a high state of developement in Canada.

Face page 66.

The normal case of the handicapped soldier therefore is the man who still enjoys the use of the members of his body and his senses, but in a slightly impaired or handicapped condition. While he cannot follow his heavy occupation he is well able to follow some lighter form of work along the lines of his old occupation, or a new one.

Those who apply to the department, vary in age from the immature youth to the man of 50; in education from the illiterate to the university graduate; in industrial experience from the railroad navvy or former sweat shop worker to the highly trained mechanic and professional man. There are also single men and married men with children or dependents; men who have worked for a number of years for wages and boys who left school to enter the army. The accompanying table on page 66 shows the classification of men as to married, single or dependents.

Among these it is natural that the manual workers should exceed in number all others, since the man who was in clerical or professional work would have to be seriously handicapped to be unable to go back to his former occupation.

These men have to enter training at any day of the year and graduate at any time. In civil educational institutions the work starts at a stated time of the year and ends at another stated time, all students entering and leaving their courses at one time.

In ordinary civil educational institutions the student has all his life before him, and for the most part has never been a wage earner, nor has he family responsibilities. On the other hand a large majority of the soldiers coming up for retraining have a good part of their lives behind them, have been wage earners and have families to support.

Again, in the civil educational institution the aim is to build a broad foundation on which the man may erect the structure of his life, but with the large part of our work, the problem is to repair an already existing structure which has been partially wrecked.

As pointed out before, the desire expressed by a great majority of these men is to return at the earliest possible moment to a wage earning capacity and resume their domestic relations as though no interruption had occurred. The man past 30 with wife and children does not wish to be taught why certain things are done in the way they are, but rather how to do them. There are, of course, exceptions to this. The younger men wish to know the why and wherefore and to lay a foundation, the older men wish to know how, and have the structure repaired.

The average man who graduates from a civil institution is not married nor has he children, and for the most part he has no dependents. His education has given him the ground work for an occupation, and he enters industrial life at a small wage, gradually advancing as he becomes more proficient. The men, however, who graduate from the training courses of the Vocational Branch must be placed immediately in a position to earn full wages in competition with other workmen in that occupation, and must resume at once the responsibility and care of their families and dependents.

To sum up—the returned soldier student differs from the civilian in the following points:—

1. His experience has been such that he can best be dealt with by returned soldiers.
2. He has a more mature and broader point of view.
3. He comes to the Department suffering from a state of institutionalism.
4. After this institutionalism has been overcome and the critical period passed, he has more initiative.
5. In the majority of cases the desire to learn and the degree of application, is greater than with civilian students.
6. Men of all ages come to the Department at the same time.

7. There are all classes from the illiterate to the educated.
8. There are manual workers from non-skilled to the highly skilled.
9. A large proportion are married or have dependents and civil responsibilities.
10. A large majority have been wage earners.
11. They must enter and leave the classes at any time.
12. They must be in a position immediately on discharge to earn sufficient money to support themselves and their dependents.
13. They require schools which are open all the year.

The foregoing sets out the points in which this work differs from ordinary education. It indicates that for the most part courses should be short, intensive and practical, and that the most flexible system of training heretofore in existence was rigidity itself compared with the flexibility which must be obtained in this work. One might even go further and say that except in a few instances no set courses can be laid down, but every man's training must be individual. Of course this individual treatment as far as interviewing is concerned, must be put into effect without exception, but so far as training is concerned, every endeavour must be made to make the courses flexible within the point of reasonable economy.

For the purpose of discussion, industrial retraining may be divided into two sections:—

1. Academic training including professional courses, general education, civil service, book-keeping, accounting, municipal accounting, music and like subjects.
2. Such training as leads to manual occupations highly skilled or otherwise.

The first class needs little explanation or comment, for the method of carrying out the training of this class differs little from ordinary educational systems. Business colleges, technical schools and universities are used in part, but owing to the fact that soldiers are best trained by soldiers, in order to accommodate the men entering and leaving at all times, and in other ways to adjust the training to the peculiar needs of the men, the Department has organized classes taught by returned soldiers for the carrying on of this work. Those taking up professional courses are sent to the universities and colleges where they take the ordinary courses.

It is in the second class of training, however, that the greatest departure from existing systems has been made, and what follows will bear almost entirely on training for manual occupations.

The training for manual occupations involves three governing factors:—

1. Equipment.
2. Personnel.
3. Methods.

Methods may be broadly divided into:—

1. Training in schools.
2. Training by apprenticeship system.

Training for manual occupations in Canada in schools has not been widespread when considered from a geographical standpoint. While a few cities have highly developed and splendidly equipped technical schools these schools have been entirely lacking in other Provinces and cities. In the cities where these schools do exist they were found for the most part to be carrying a peak load of civilian students, and although they made sacrifices to accommodate the soldiers, the time soon came when they could not accommodate the suddenly increased burden without doing injustice to the civilian students.

Arrangements were made to have a number of students trained at the technical schools in Montreal, Toronto, Hamilton and London, but in most of the provinces no facilities of this kind existed. The Department therefore had to find other ways and means to accommodate the students. It was found on investigation that most of the university students in engineering courses had gone to the Front and that these universities had equipment and space lying idle. The Nova Scotia Technical College and the Calgary Institute of Technology and Art were taken over by the Department and new equipment and space added, and are now conducted by the Department as trade schools.

McGill University, Toronto University, University of Saskatchewan, University of British Columbia and Queen's University, Kingston, placed at our disposal such equipment and space as they had, and additional equipment was added. Arrangements were made with the Agricultural College at Truro, N.S., Macdonald College, Ste. Anne de Bellevue, Que; the Ontario Agricultural College; University of Manitoba; University of Alberta and the University of British Columbia, to undertake agricultural training. In the province of Manitoba the Department built and equiped a trade school of its own.

The equipment of technical schools is very expensive, from the standpoint of capital. It is evident that the vocational training of returned soldiers is only a temporary problem and cannot last for long. The problem is in the nature of a peak load. The only wise and economical course is to use existing facilities as far as possible, and if new facilities are required, to provide them in such a manner that they can be used after the Dominion Government has completed its task.

All the foregoing arrangements were made and equipment was supplied and installed so that the same could revert to the institution in which it was installed, after the work of the Department was completed.

It became quite evident however, from a standpoint of equipment, that an enormously increased outlay in capital would have to be made or some other method of training must be found. Training by the apprenticeship system was the only solution available.

It was also clear that the personnel available for teaching or training existed in the same proportion as the equipment and space; if the available equipment and space was all employed it followed that the available personnel was employed or over-taxed in the same proportion. Here again the only solution was in the development of the apprenticeship system.

In Chapter 2 on the History and Growth of Vocational Training in Canada, it is shown that the number of occupations which could be taught in schools is very limited, and that in order to provide against competition an increased number of occupations had to be provided. By the time the use of existing schools and universities had reached its maximum, this necessity of increasing the number of occupations was becoming more evident, and here again the apprenticeship system was the logical solution.

For reasons explained in Chapter 6, one of the policies of the Department has always been that a man should be trained in an occupation as closely related to his former one as possible.

The number of so called trades is small, but the number of occupations as distinct from trades is large. For demobilization purposes England has classified 3,000 occupations. The Department of Trades and Labour for demobilization in Canada has classified 5,500 occupations. If therefore we are to build on a man's former occupation, provision must be made for training in all of these occupations if necessary, and training in industries is the only system by which it is possible to do this.

When the trainee on the completion of his course in school, first enters employment on wages, he finds himself among unfamiliar surroundings and feels nervous about his ability to make good. If he is trained by an employer in that

occupation his transition from training to wage earning takes place with the least possible dislocation. One week he receives his pay from the Government and the next week he receives it from his employer. The transition is made practically unconsciously.

The difference between trades, occupations and piece work is not well understood by the general public, partly because they are unfamiliar with trades, occupations and piece work, and partly through the fact that their daily work does not lead them to analyze these things closely. It is, however, necessary to understand this distinction. This difference is clearly defined in Chapter 6 page 55.

The Department is never satisfied with training a man to run a lathe or a milling machine. This would be merely piece work. By teaching an occupation we mean teaching all the operations included in the occupation and not just one operation.

Training by apprenticeship does not necessarily mean the teaching of trades as defined in Chapter 6, but may mean the teaching of an occupation. The heavy electrical worker who is disabled in the back may be trained as a sub station tender in a short time, and earn better wages, but it would take a long while to teach him a trade.

Training in trade or technical schools is practically limited to the teaching of trades and not occupations, and as a rule only the ground work of these trades is given. Training in industry, however, makes available practically every occupation which a handicapped man can follow. The advantages therefore of training in industry can be summed up as follows—

That a very large number of occupations for disabled men is made available.

That it is possible to carry to the logial conclusion the policy of training a man in an occupation closely related to his former one.

That the transition from training to wage earning takes place with the least dislocation.

That the man at the end of his training is better able to earn immediately the full going wage in the occupation for which he is trained.

That the facilities for training are greatly increased without extra capital cost.

In training in factories, the following policies have been adopted:—

1. The Government will pay the full cost of maintenance.
2. That the man being trained must conform to the civil discipline of the employer as to hours of work, etc.
3. That the man himself, the employer, and his fellow workmen, must be satisfied with the arrangement.
4. That if the factory is unionized the union must be satisfied.
5. That the first month or six weeks should be considered a probationary period.
6. That proper inspection must be instituted to see that the man is making progress, that he is being actually trained and not exploited, that medically the work is suited to his disability and that it seems likely at the end of his course he will be able to earn the full going wage in that occupation.

In England, under the apprenticeship system, arrangements have been made in a few industries that the Government should during part of the course pay something towards the support of the trainee, and the employer should pay the balance, the Government bearing the maximum to start with and decreasing as the course progresses. These arrangements, however, have only been made in about 30 occupations and the Government only contributes for a period of three weeks to a year. Conditions in England are very different from those in

Canada. In England it is well known that occupations are localized. In Sheffield we have the cutlery industry; in Nottingham the lace industry; in the Five Towns immortalized by Arnold Bennett most of the pottery is made; in Lancashire we have the cotton industry; these examples are sufficient. This concentration of trades or occupations in certain localities renders it possible to make these arrangements. However, in Canada the occupations are scattered. Shoe making in factories is carried on in Quebec City, Montreal, Toronto, and some smaller cities. The wages in each city vary and an arrangement would have to be made for each locality, and the small numbers in any occupation in any locality would make the system too cumbersome.

The desirability and necessity of this arrangement also depends on what is expected of the employer. In Canada it is expected of the employer—and means are taken through our inspectors to see to it—that the man shall be actually trained and not kept on piece work, and that instruction and not production shall be the prime object. If the manufacturer were compelled to pay part of the maintenance of the man he would consider it his right to avail himself of part of his labour in order to compensate himself for the time his foreman and superintendant spend in training, and for the use of machinery, space and material.

After a year's experience with the system as at present operating, it has been found that in only a few instances is there any tendency to exploit the man's labour instead of training him, and where this is found to be the case, the inspector immediately takes the man out of the factory.

When the system was first instituted it was thought there should be a contract enforcing certain conditions between the man, the employer and the Department. It was felt, however, that this contract would be of no use, as there was no consideration on the part of the parties to such a contract, and that unless they wished to carry it out there was no means of compelling them to do so. It was considered that any agreement between them should be based on good will and satisfaction. It was therefore decided that the man must obey the ordinary rules of the employer which affected all employees in the factory, that the man himself, the employer and his fellow workmen must be satisfied with his presence and actions there, for if any dissatisfaction developed it would be wiser to remove the man than attempt to effect a change in conditions.

It was necessary that the man should work the same hours as the other workmen, otherwise there would be jealousy and the organization of the factory would be interfered with.

If his fellow workmen were not satisfied and the difficulty could not be removed, no success would be obtained and unless the man himself was satisfied he would not work with a will to succeed.

In unionized occupations it is of course essential that the interest of the unions be consulted.

It is not always possible when interwiewing men to decide without trial whether they are fitted for a certain occupation. The first month or so therefore is considered a probationary period and the man and his surroundings are inspected very carefully. In some cases it also develops that during this first period the conditions are not suited to the man's disability. If the man has an artificial limb and the factory is too warm, the limb will sweat and become uncomfortable. If the man has a tendency to eczema and the disease is dormant it may develop if he is put in the fur trade. If the man is in an indoor occupation latent tuberculosis may become active. Trial may show that the man is industrially and mentally unsuited to the work. If any one of these causes is discovered during the first two or three months the man may be immediately changed to some other occupation.

To gain information about the foregoing points the man is visited once a week by paid inspectors of the Department. Without this system of inspection the work would be a failure, or fall far short of success.

It has been stated that there are two broad methods of training:—

1. In schools.
2. By the apprenticeship system.

But this division cannot be made sharply. These two are the extremes of a complete series. There is however, what might be called another method lying between these two. New method is a combination of methods one and two in any proportion between the two extremes.

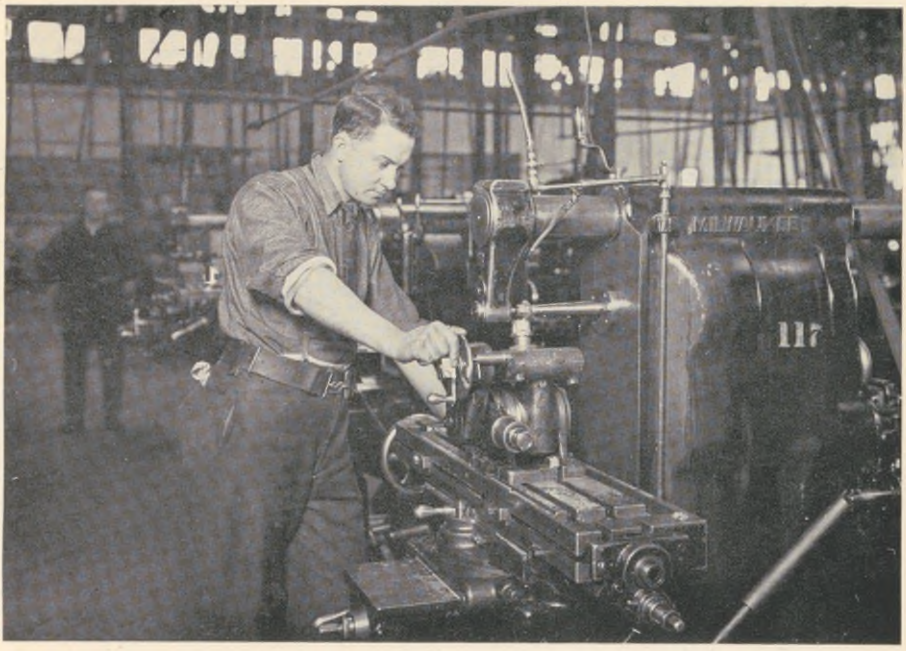
It is desirable in most occupations that some training be given in schools. If the average course be taken as eight months it will be found that in certain courses it is desirable to give one month's training in school and seven months in the industry. In other occupations it is desirable to give six months training in the school and two months in the industry. It is possible to teach a man to run a gasolene tractor entirely in the shops and fields, but to make him most useful as an operator of gasolene tractors he should be taught a certain amount of free hand sketching so that if any part breaks down he can draw a sketch of it and send the sketch to some factory or repair shop, if one is not available in the locality, so that the broken part can be made and sent back. In the ordinary apprenticeship system machinists spend no time in school, but they would be more useful if they were taught enough mechanical drawing to make them more proficient in reading blue prints It is possible to teach a man to become a house wireman by letting him do practical work, day by day, and receive instruction from his fellow workmen, but he would be able to grasp the principles of the work more quickly, his course would be shortened and he would be a better wireman, if he were given some training in the mathematical principles underlying the use of the wiring tables, which he uses every day. A man can be taught to be a farmer by practical demonstration, but he will be a better farmer if he is given a short training in theory in some agricultural college.

Therefore, in a great many of our schools we find men taking training which is used more or less as ground work for later training in the factory. When such courses are given in conjunction with training in industry they are made as practical as possible. The man who is to become an electric sub-station operator may be given mechanical drawing and shop mathematics, but in these classes the examples in drawing are taken from the design and equipment of central stations. All his shop mathematics is closely related to the design of sub-stations. If the man was a bricklayer and is being given a course to fit him to be a clerk of works all his mechanical drawing is along the lines of architecture and building construction and his shop mathematics will have to do with estimating materials. If the man has been a boiler maker and is being taught to be a boiler layer-out all exercises in draughting will be drawn from the construction of boilers and patterns for boiler plates. His shop mathematics will have to deal specially with the laying out of rivet holes, curved surfaces and areas.

When part time training is given in schools for skilled manual operations, the basic school work is usually draughting and shop mathematics. In the shop mathematics classes, consisting of ten or fifteen men, it will be found that each man is working on separate problems closely related to the occupation for which he is training. In the draughting class you will find that one man has problems relating entirely to the construction of gas tractors; another, construction of automobiles, and a third, problems relating to the construction of buildings. This makes it necessary for all instruction to be individual, and it is also necessary to have a smaller number of pupils for each teacher than in ordinary educational institutions.

It is also essential that each man's course should be laid out to suit his individual needs. These needs depend not only on the occupation the man is going to follow but upon his previous education.

Two bricklayers may be disabled—one is going to become a clerk of works and the other an architectural draughtsman; the course will naturally differ for



RETRAINING A MACHINIST.

This man who was a heavy machinist before the war had the flexor muscles of his left knee broken, is now training with the Armstrong Whitworth Co. in Montreal, as a bench machinist and tool maker, so taking advantage of his former occupation. Disabled men are not trained as machinists unless they have some previous experience on which to build.

A SUITABLE OCCUPATION.

Disabled soldiers with mechanical ability are trained as adding machine repairers in the Burroughs Adding Machine plant at Toronto. There men make good salaries as repair men or salesmen. The openings for advancement are good. Suitable for men injured in the lower extremities or men weakened by disease or hardship.

each and will be laid out to suit the particular needs of the man himself. One may be weak in mathematics and have to be coached particularly along that line although he may have a natural aptitude for draughting. The other man may already have a fair knowledge of mathematics and a natural aptitude for that, and will not need so much coaching in mathematics. On the other hand, however, he will need a greater amount of training as a draughtsman.

The organization of the classes for this work, therefore, must provide for the greatest flexibility to suit individual needs. The whole success of the school work for handicapped soldiers will depend upon the degree of individual training and flexibility which is put into effect.

In applying this part time training the three methods should be taken advantage of, depending on the needs of the case. A man may be kept in school for two or three months and the balance of the time be spent in industry, or he may be sent to school for half a day and spend the other half in the industry until the school work is finished, or he may be put two or three days a week on school work and two or three days a week on factory work, during the early part of his course.

Of these three methods the last two are probably the best in results but most difficult to put into effect. The employer as a rule prefers the man to spend the necessary time in the school and then come to him full time. To take the man into employment part time during the day or week upsets the employers' organization, but a number are doing this. We have found employers very ready to accomodate themselves in every way possible to the training of these men.

Summary of graduates from industrial establishments to December 31, 1918.

Province	Unit.	Total Graduates	Completed in Industries A & B.	Training Solely in Industry. A.	Part School Part Industry. B.	Percentage of Total Graduate Completing in Industry.
						%
Quebec	A	204	117	16	101	57
Nova Scotia	B	86	18	4	14	20
E. Ontario	C	169	21	15	6	12
C. Ontario	D	667	269	185	84	40
W. Ontario	F	137	44	23	21	32
Manitoba	G	413	29	14	15	7
Saskatchewan	H	176	22	14	8	13
Alberta	I	239	16	4	12	7
British Columbia	J	163	41	27	14	25
New Brunswick	K	31	4	2	2	12
Total	.....	2,285	581	304	277	25

The preceding table shows the distribution of those graduates who have been trained solely in industry or part time in school and part time in industry. This table shows that 25% of the graduates as at 31st December, 1918, had spent some or all of their time in industry. However, a large proportion of the graduates on that date were those who had been granted courses before the apprenticeship system had been put in force. If an analysis were made of the men taking courses at the present time a much larger proportion would be found taking part or all of their work in industry.

We will now discuss the full time training of men in the school. The proportion of men training thus for skilled manual occupations is becoming smaller from month to month. The method of conducting this training in schools is practically that set out in previous paragraphs in regard to school work for men training in employment. The organization of the classes must permit the instruction to be individual and intensive, and the courses flexible enough to meet each man's needs. The schools must be kept open all the year round as the men are entering and leaving at all times.

The schools are kept open 7 hours a day. It is not intended that all men should be compelled to put in 7 hours a day school. Many when they leave hospital and come to the Department for industrial re-training cannot work that length of time, but one of the Vocational medical advisers sees to it that the hours of training in each case are not too long. While the students may work a smaller number of hours when they first come to the Department, the time should be gradually increased so that during the last month or two of their courses they should be able to work 7 hours. When they graduate into industrial life they will be asked to work 8 hours or more and they should be able to work 7 hours in the Department's schools, if they are to work 8 or more when they leave..

Objection has been raised to this policy on the ground that a man cannot work 7 hours a day receiving instruction and that other educational institutions do not run this length of time. In this connection, however, one must consider every point made in the first part of this chapter, wherein the problem differs from that of ordinary education. The men for the most part are being taught how rather than why, therefore the instruction does not entail so much mental effort. The men are more mature than the civilian students and are more anxious to put in their time and learn; they are also more anxious to complete their training and get back to civil life. Complete statistics are kept in regard to the men who break down in training; these statistics are shown in the chapter on that subject, and of the total number granted courses only 1.3% discontinued their courses on account of ill health.

It should never be lost sight of that in re-training there are two objects in view. Not only must the disabled man be given the mechanical skill necessary to work at his occupation, but he must be brought back to the habits of work and concentration necessary in civil life. The most critical period in putting a man back into civil life is the first week or two after he begins to work for wages. The more we can make conditions in the school toward the end of the course similar to those he is going to find in the factory, the less will be the dislocation or readjustment necessary. Some desire that our schools should only be kept open 5½-6 hours a day, but if a man cannot work more than this length of time in school he is going to find great difficulty indeed in working 8 hours or more when he becomes a wage earner. The policy of keeping the schools open 7 hours a day is not based as some seem to think on the question of economy, but on what experience has shown to be the method which will get the best results when placing the handicapped man in employment.

In the Department's schools, also, no home work is required of the men, while in civil institutions such work is required. Most universities are kept open from 8 in the morning until 6 in the evening, although of course men do not always attend the classes for the full period, but these university students not only have to attend lectures and laboratory work during the day, but have to study at night. This is not required by the Department. The whole idea is to keep the classes open seven hours a day and have the man do as much work during that period as they are medically fitted to do, and to bring them up to the full 7 hours a day toward the end of the course in order to make their transition to wage earning with as little dislocation as possible.

In appendix No. 1 will be found a precis of all foreign literature regarding the length of time schools are open. It will be noticed that in France, from

which country most information on this point is available, the number of hours varies, but in all schools they exceed seven, and in a great many schools are more. It should also be remembered in this connection that the men taking training in industrial establishments are required to work the full day worked by the factory, in none less than 8 hours and in some 10. This being the case, there is no reason why the men should not work 7 hours a day in the schools, when it is considered that the work is much more practical than it is in the high school, technical school or university.

Experience has taught us in the organization of school work that soldiers must be kept apart from civilians. This is due to the fact that the soldier students are on the average much older than the civilian students and they do not work well together. Also the courses have to be so much more flexible, and since the students are entering and leaving at all times, the classes in civilian institutions would be upset. The work in civilian institutions is not as individual as it is in those of the Department. It was therefore found when we took advantage of already existing institutions such as technical schools and universities, that special space and apparatus had to be set apart and special classes organized for the handicapped soldier. This is done practically without exception.

Production has always been made subordinate to training in the Department's schools. This has been made possible by the part time training in industry. The schools for the most part are reserved for training in such parts of the work as must be done there, such as drawing, shop mathematics, general education, etc. As has been explained before, as far as possible the training staff has been drawn from men discharged from the army, and if possible those who have been casualties or in the area of active operations. These men are mostly craftsmen or men without former teaching experience. They are, however, carefully selected to see that they have the ability to impart knowledge.

The average length of course varies between seven and eight months. A few courses are short, running three and four months, but these are very few in number. Some few courses run ten and twelve months but the long courses are in such proportion to the short courses that they will average 7 months. The great majority of the courses are granted for either six or eight months. This is possible by making the courses practical, by building on a man's former occupation, and by teaching occupations instead of trades. The system adopted provides for getting the men stabilized once more in civil life at the earliest possible moment, which is what the men desire. This policy is naturally adopted to some extent from considerations of public policy and economy, but these are minor, the main point being the desire of the men to get back to civil life. Long courses are expensive not only from the standpoint of direct cost, but also because the man's energy is withdrawn in the meantime from productive operations.

As stated before, 50% of the men are married or have dependents and it is not their desire to spend any great length of time in training, but to become at the earliest possible moment wage earners and so pass under their own control as before. This is shown by the fact that a number of men, although perfectly satisfied with the training they are receiving, discontinue their courses when they and their employers feel that they can earn the full going wage in the occupation for which they are being trained. A considerable number of men find that after they have taken a course for some time their disability is so much improved by actual work that they can return to their former occupation. There is a small class of men who desire to take advantage of longer courses, but these men are in the minority, and a system of training when it cannot be made all inclusive must be made to fit the majority of cases, and it is a fact taught us by experience that the majority of men wish to make their training as short as is consistent with getting a full going wage in the occupation.

When a course is granted for 6 or 8 months it is not intended that the man must definitely finish his course in that time. It merely means that that is the time in which the man is expected to finish his training. If at the end of the time allotted, or shortly before, it is found that he has not quite completed his work, but that another couple of months would make him proficient, his course is extended. These extensions are freely granted.

In civil educational institutions the time necessary for qualifying as a doctor, lawyer, draughtsman or any similar profession is definitely known; students in these institutions have passed standard examinations and have previously been brought up to a certain point. It must be remembered that the men in the courses of the Vocational Branch enter in all stages of preparation. This, therefore, points out the necessity of having the length of course flexible and giving every facility for extensions.

The flexibility of the courses in Canada is shown by the table on page 77 showing the extensions up to 31st December, 1918, with the average length of extension in each unit, and month. Very few extensions applied for are refused.

The length of course in Canada in general agrees with that in other countries. In appendix No. 2 will be found a precis of the literature from foreign countries on this subject, showing that the length of course in Canada is quite as long as in the other countries, and longer than most.

Reference has been made in the chapter on interviewing and under training in factories, to changing courses after starting. The more perfectly interviewers are trained and the more experience the Disabled Soldiers' Training Boards gain, the fewer will be the changes, but when it is found that a man is not suited to his work the Department does not hesitate to change the man's course with his consent. This changing of courses is necessary to success in a number of cases, but every effort should be made to make the changes as few as possible. The following table shows the changes of courses up to 31st December, 1918.

Tabulated statement for change of course.

1918.

Province.	Unit.	Total to June 30, 1918.	During July, 1918.	Total to July 31, 1918.	During August, 1918.	Total to Aug. 31, 1918.	During Sept., 1918.	Total to Sept. 30, 1918.	During October, 1918.	Total to Oct. 31, 1918.	During Nov., 1918.	Total to Nov. 30, 1918.	During Dec., 1918.	Total to Dec. 31, 1918.
Quebec	A	7	8	15	6	21	9	30	13	43	6	49	1	50
Nova Scotia	B	2	4	6	0	6	1	7	1	8	2	10	0	10
E. Ontario	C	3	5	8	1	9	5	14	7	21	1	22	2	24
C. Ontario	D	25	34	59	13	72	25	97	35	132	8	140	11	151
W. Ontario	F	2	5	7	3	10	6	16	7	23	3	26	2	28
Manitoba	G	3	6	9	3	12	5	17	6	23	2	25	3	28
Saskatchewan	H	0	0	0	0	0	2	2	3	5	0	5	0	5
Alberta	I	8	13	21	4	25	10	35	17	52	2	54	4	58
British Columbia	J	4	6	10	5	15	11	26	13	39	7	46	3	49
New Brunswick	K	0	0	0	0	0	1	1	1	2	1	3	2	5
Total	.....	54	81	135	35	170	75	245	103	348	32	380	28	408

INDUSTRIAL RE-TRAINING.

Farm Tractor courses are popular in the western provinces for disabled farmers. They are taught the theory and operations of gasoline engines and farm machinery. They also receive instructions in elementary sketching, drawing, machine work and blacksmithing to enable them to make minor repairs. They become the trouble experts for the farming district in which they reside. Many become farm machinery agents or salesmen.

BLACKSMITH'S INSTRUCTION.

In Industrial Re-Training blacksmithing is not taught as an occupation. However men training for such occupations as Farm Tractor Operators, Auto Mechanics, farming, etc. are given elementary instructions in blacksmithing so they can make simple repairs.

Face page 76.

Number of extensions granted during 1918 showing average length of extension by the month, up to December 31, 1918.

1918.

——	Unit.	April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Total Exten.
		No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	No. Ex.	Av. length of Ex.	
Quebec	A	3	2	18	1½	10	1¾	10	1½	10	1¾	15	1¾	13	1¾	22	1	22	1¼	123
Nova Scotia	B	1	1	7	1¾	4	1¾	4	3	6	1½	7	2	8	1¼	11	1	17	1¾	65
Eastern Ontario	C	3	2	25	1¾	5	2½	6	1¾	5	1¼	6	1½	9	1¼	54	1½	16	1¼	129
Central Ontario	D	43	1¾	123	1¾	43	2	29	2½	56	1½	44	1¾	48	2	61	1½	67	1½	514
Quebec	E	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Western Ontario	F	3	1¼	6	2½	8	1½	5	3	9	2¼	6	2	7	1¼	52	3	5	1¾	101
Manitoba	G	13	2½	25	2	9	2	15	2¼	4	1½	5	2	37	2½	16	2	38	1¾	162
Saskatchewan	H	3	2	3	1½	2	1½	2	1¾	1	3	3	1¼	4	1¼	3	1¼	5	1¾	26
Alberta	I	10	2¼	7	1½	3	1	5	1¼	7	1¼	8	1½	24	1	5	1½	157	1¼	226
British Columbia	J	6	2¼	25	2	3	3	9	1¾	9	2	16	2½	22	2	4	1½	20	1	114
New Brunswick	K	–	–	–	–	–	–	1	1	–	–	–	–	3	1½	17	1¼	13	1	34
Total	.....	85	.....	239	.....	87	.....	86	.....	107	.....	110	.....	175	.....	245	.....	360	.....	1,494

The Number of Extensions applied for and refused is practically nil.

The functions of the Advisory Commitee have been touched on in former chapters. Its two main functions are, however:—

1. To advise as to the suitability of candidates for training and the course desirable.
2. To advise as to all questions connected with training.

In some Provinces the usefulness of the advisory committee in regard to the duties under the second heading has been highly developed. This committee provides the Department from time to time with advice regarding the personnel of the teaching or executive staff, and as to their suitability and previous history. More important, however, is the means they provide to obtain the point of view of the labour man and employer. The representative of labour assists us in informing all the labour unions of the policy of the Department, and watching the work with their interests in mind. The representavies of the manufacturers, employers and agriculturists tell us whether the men are being trained in such a manner as will best fit them for finding employment when they graduate. They also assist us in providing equipment and space, and making the necessary business arrangements. The educationalists on the committee form a connecting link between the Provincial Departments of Education and the departmental executives. They co-operate with us in obtaining facilities in existing institutions, and, what is probably more important, they correct any tendency on the part of the Department to make the work too practical.

One function of the advisory committee which it is desired to mention here, is the service it can render the Department by way of advice and inspection, in connection with particular classes. For instance, if there is on that committee a man who is specially familiar with the automobile industry, both in regard to design, repair, and manufacture, and also from the commercial side of sales and operation, this man should inspect the classes of the Department from time to time to see that the training given is going to lead to the success and employment of the graduates. This man can also assist in placing the graduates. He will go out from the Department to his everyday business as an advertiser of the work, and the information he gives to those he meets in the automobile industry will inspire confidence and lead to a happy reception of our graduates.

If on that committee there is the manager of an electric power concern, he will inspect the classes in electricity, advising as to any desired changes in the course or methods of training.

If these advisory committees properly discharge their functions, the men will have more confidence in the work given them. If the men know that the classes and training are inspected from time to time by men closely in touch with industry and labour they will have more confidence in the work. As time goes on these advisory committees are being used to a larger extent as their functions develop. They are a very important part of the system. Their functions, however, are advisory and not executive.

Attention has been called to the necessity of training men in as many occupations as possible in order to prevent competition. The table on page 80 shows the distribution among various occupations of the men in re-training classes on 31st January, 1919. Notice the small percentage of men in each occupation and the wide diversity of subjects.

In carrying out the training described in this chapter three classes of institutions are used, referred to by the Department as inside schools, outside schools and industrial establishments. Inside schools are those conducted by or for the Department in which special classes have been organized for the soldiers and in which the salaries of the instructors are paid by the Department. In some of these institutions the space and equipment is loaned to the Department. In other cases it is rented and in certain institutions the Department has supplied extra equipment. A large number of these schools have been completely equipped and organized by the Department and are under its exclusive control.

Outside schools are those already existing educational institutions such as Business Colleges, Universities, Technical Schools, and Normal schools where soldiers are placed for training and their fees are paid and books provided.

Industrial establishments where men are apprenticed to employers to train for an occupation or to complete training commenced in the Departmental school. These consist of factories, mines, offices, farms, lumber camps, etc.

The following table shows the number of each class of institution unit by unit:—

Summary of Schools and Institutions where re-training is given, as on December 31, 1918.

Unit.	* Outside Schools.	† Inside Schools.	‡ Industries.	Total.
A. Quebec	6	3	33	42
B. Nova Scotia	9	3	17	29
C. E. Ontario	8	2	25	35
D. C. Ontario	7	32	209	248
F. W. Ontario	9	3	40	52
G. Manitoba	1	1	12	14
H. Saskatchewan	5	1	24	30
I. Alberta	4	1	29	34
J. British Columbia	7	5	66	78
K. New Brunswick	10	2	10	22
Total	66	53	465	584

*Not controlled by department. †Controlled by department. ‡Co-operative industrial training.

The following table shows the number of men beng trained in each of these institutions unit by unit, and the number of instructors employed in the inside schools on 31st January, 1919:—

Unit.	Inside Schools	Number of pupils in			Total.
	No. Instructors.	Inside Schools.	Outside Schools.	Industries.	
A. Quebec	22	381	31	58	470
B. Nova Scotia	19	128	54	18	200
C. E. Ontario	25	284	26	28	338
D. C. Ontario	43	442	137	339	918
F. W. Ontario	11	43	56	65	164
G. Manitoba	31	256	38	13	307
H. Saskatchewan	16	169	8	26	203
I. Alberta	21	421	70	31	522
J. British Columbia	28	275	65	81	421
K. New Brunswick	6	75	29	10	114
Total	222	2,474	514	669	3,657
Evening classes					55
Grand total					3,712

It will be seen from this table that 222 instructors train 2,474 men in the inside schools or 11·1 pupils to each teacher. This is a lower ratio than in public schools or higher schools, but not much lower, if any, than in trade schools or universities. The low ratio is due to necessity of individual and flexible instruction.

The following is a list showing each institution in Canada where industrial re-training was being given on January 31, 1919, together with the number of instructors, subjects taught, and pupils in each subject.

Department of Soldiers' Civil Re-Establishment, Distribution of Current Re-Training cases, Month ending January 31, 1919.

Courses.	A			B			C			D			F			G			H			I			J			K			Total.	%
	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.		
1. Auto Mechanics	59	....	1	36	....	....	44	....	1	57	....	21	5	....	1	17	....	1	19	....	2	63	....	1	56	....	3	21	....	1	409	12·0
2. Armature Winding	....	....	....	....	....	....	....	....	....	....	....	6	....	....	2	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	11	0·3
3. Agriculture	....	24	....	....	12	....	....	....	....	....	....	....	....	28	....	....	6	....	27	....	....	....	52	....	....	24	2	....	3	....	178	5·0
4. Auto Painting	....	....	....	....	....	....	....	....	....	....	....	2	....	....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	5	0·1
5. Auctioneering	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
6. Arts	....	....	....	....	1	....	....	4	....	....	2	....	....	....	....	....	....	....	....	1	....	....	2	....	....	3	....	....	....	....	13	0·3
7. Art Lead Glazier	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
8. Assaying and Milling	....	....	....	....	....	....	....	....	....	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	13	....	1	....	....	....	24	0·6
9. Art and Design	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
10. Academic	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	0·05
11. Adding Machine Repairs	....	....	....	....	....	....	....	....	....	....	....	7	....	....	16	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	23	0·6
12. Applied Electricity	....	....	....	....	....	....	....	....	....	4	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	0·1
13. Accountancy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	1	....	....	....	3	0·08
14. Applied Science	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	2	0·05
15. Brass Finisher	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
16. Book-binding	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
17. Boiler Inspection	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
18. Braille Reading, etc	....	....	....	....	....	....	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6	0·1
19. Brush Making	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	0·05
20. Box Making	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	0·05
21. Bench Hand	....	....	1	....	....	....	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	0·1
22. Barbering	....	....	2	....	....	2	....	....	....	....	....	6	....	....	....	2	....	....	....	....	....	3	2	....	1	....	....	....	....	1	19	0·5
23. Basket Making	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	0·02
24. Building Construction	....	....	....	....	....	....	....	....	1	5	....	1	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	12	0·3
25. Boring	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
26. Baking	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	2	0·05
27. Boat Building	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	2	0·05
28. Bed Spring Making	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	0·02
29. Commercial	90	....	....	....	34	....	40	5	....	102	26	1	3	22	....	34	....	....	18	....	....	96	....	....	46	7	....	....	19	....	543	15·0
30. Civil Service	14	....	....	....	....	....	16	....	....	13	....	....	....	....	....	....	....	....	17	....	....	....	....	....	....	1	....	13	....	....	74	3·0
31. Carpentry and Cabinet Mak	22	....	....	8	....	....	17	....	....	18	....	6	7	....	2	5	....	....	....	....	....	10	....	1	4	....	4	5	....	....	109	3·0
32. Chemistry	....	1	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	0·08
33. Clock and Watch Repairs	....	....	1	....	....	....	....	....	....	....	....	4	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	7	0·1
34. Commercial Illustrating	....	....	2	....	....	....	....	....	....	3	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	9	0·2
35. Correspondence	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	0·08
36. Cable Splicing	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	0·05
37. Core Making	....	....	....	....	....	....	....	....	1	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4	0·1
38. Commercial Law	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
39. Civil Engineering	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	4	0·1
40. Cotton Spinning	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
41. Cost Production	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
42. Cycle Repairs, Ass. and etc	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
43. Cigar Making	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	2	0·05
44. Chiropody	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	0·02
45. Crepe Paper Craft	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
46. Carpet Weaving	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	0·02
47. Cleaning and Pressing	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	2	0·05

48. Draughting M. and A	24		3	8			3		1	17		2	7			11						6			19					101	3·0
49. Dental Mechanics			7								4	6			1						2					12				32	0·8
50. Dyeing												1																		1	0·02
51. Dairy Business								1							2								1							4	0·1
52. Dental																									1					1	0·02
53. Electrical Work	37				2				8	14		12			2	9					2	22		5	23		2			141	4·0
54. Elect. Engineering	1			12			24			11																			3	48	2·0
55. Elect. Switchboard Oper			2									1			2			1												6	0·1
56. Elect. Welding			3																											3	0·08
57. Evening Classes					2															35			13			4			1	55	
58. Est. Quantity Surv., etc										33		1																		34	0·9
59. Elect. Meter Testing Ass												5																		5	0·1
60. Forestry			1								1															17			3	22	0·6
61. Fruit Canning Evaporation						1																								1	0·02
62. Gas Tractors							12			23		3	2			28	21		31			16								136	4·0
63. Flour Milling															1															1	0·02
64. Farm Mechanics									1										22			134		1						158	5·0
65. Fancy Wire Worker			1																											1	0·02
66. Furriers												1									1									2	0·05
67. Florists			1									1																		2	0·05
68. French Polishing												1				8														9	0·2
69. Field and Animal Husbandry																	10													10	0·2
70. Furniture Repairs																														1	0·02
71. General Education	50			11	1		5							1		17						3	1		26			14		129	4·0
72. Glass Cutting												1																		1	0·02
73. Gardening, Market													10	5		11											5			31	0·9
74. Garment Design											1																			1	0·1
75. Glove Making																											1			1	0·02
76. Gold Pen Grinding										13																				13	0·3
77. Grain Buying and Inspec																3					1		1							5	0·1
78. Hat Making										1																				1	0·02
79. Higher Accountancy							1			1																				2	0·05
80. Heating Plant																						5		1						6	0·1
81. Interior Decorating			2																											2	0·05
82. Iron Moulder															1												2			3	0·08
83. Janitors Course	4			1																										5	0·1
84. Jewellery Repairs												3																		3	0·08
85. Knitting Machine Oper															2															2	0·05
86. Lathe Hand			2									1																		3	0·08
87. Light Machine Repairs									2			1																		3	0·08
88. Law		1										13				2						2	1			4				23	0·7
89. Lens Grinding												5																		5	0·1
90. Linotypists												6						1								3				10	0·2
91. Librarian																									1					1	0·02
92. Log Scaling								1																						1	0·02
93. Machine Shop Practice	45		4				16			21		24			2	4									17					133	4·0
94. Machine Tool Oper				14								1															1		1	17	0·4
95. Lip Reading								1			1						1		1											4	0·1
96. Mech. Engineering		1																												1	0·02
97. Medicine		1			2			6			38											4								51	1·0
98. Matriculation								3												2								1		6	0·1
99. Music											9											1				1				11	0·4
100. Mach. Design and Allied S							4			23																				27	0·8
101. Moving Picture Oper										13		1									2				6					22	0·7
102. Machine Operation												3			1															4	0·1
103. Magneto Repair												1																		1	0·02
104. Multigraph Operator												15																		15	0·4
105. Monotypist											3																			3	0·08
106. Monotype Casting											1																			1	0·02
107. Machine Woodwork															1				5											6	0·1

Distribution of Current Re-Training cases, Month ending January 31, 1919—*Concluded.*

Courses.	A			B			C			D			F			G			H			I			J			K			Total.	%
	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.	I.	O.	Ind.		
108. Municipal Secretary																2															2	0·05
109. Manual Training																				1		2									3	0·08
110. Nautical Inst. Repairs						1																									1	0·02
111. Nat. Cash Reg. Ass. and Rp.												1																			1	0·02
112. Navigation																											4				4	0·1
113. Office Clerk			1									2																			3	0·08
114. Oxy-Acetylene Welding			1						2			7				7					2										19	0·5
115. Orthopaedic Appliances												1				1															2	0·05
116. Ornamental Iron Worker												1																			1	0·02
117. Optician												3									1										4	0·1
118. Piano Tuning, etc		1	1			1						4			2																9	0·2
119. Plumbing										2		2																			4	0·1
120. Pattern Making			1				3					2																			6	0·1
121. Power Plant Engine										10																	1				11	0·3
122. Pharmacy					2						3									1			2								8	0·2
123. Prest-o-lite Battery Wk												2																			2	0·05
124. Photo Engraving												2															2				4	0·1
125. Picture Frame Mkg												1															1				2	0·05
126. Photography												8				2		1			1						1				13	0·3
127. Press Work, Stamping												2																			2	0·05
128. Plumbers' Supplies Ass.															2																2	0·05
129. Printing						1						2				2															5	0·1
130. Pickle making																											2				2	0·05
131. Railway Track Superv															1																1	0·02
132. Ring Making												2			1																3	0·08
133. Reed Working															4																4	0·1
134. Reporter																											1				1	0·02
135. Shoe Repairing	19			18			43		1	25		25	8		3	36		1	14			29			27			17			266	7·0
136. Sign Painter			1									3																			4	0·1
137. Show Card Writer			1							3					1												1				6	0·1
138. Steel Stamp and Letter Mkg.			1									3																			4	0·1
139. Structural Design				1																											1	0·02
140. Steam Engine Stat									2							2						14			22						40	1·0
141. Steam and Gas Engine				6			3												6												15	0·4
142. Science		1						5															1								7	0·1
143. Salesman's Help								1			5	7									1										14	0·3
144. Sign Writing												6				7															13	0·3
145. Stenography					1					6	1					5											1		4	1	19	0·5
146. Steel Inspection												1																			1	0·02
147. Silver Polishing												8																			8	0·2
148. Shipping clerk									1			2																			3	0·08
149. Spec. of Tire Work												1																			1	0·0
150. Ships Fitter												1																			1	0·02
151. Switchboard Install												1									1										2	0·05
152. Stationery Business															1																1	0·02
153. Sheet Metal Work												3																		1	4	0·1
154. Sanitary Inspector																7															7	0·1
155. Shoe and Harness Making			6									4			2						1			1							14	0·3
156. Surveying												1						1													2	0·05
157. Slaughtering Animals																		1						2							3	0·08

158. Steam Fitter			1								1																	2	0·05
159. Stone Cutter											1			1														2	0·05
160. Saw Filer																									1			1	0·02
161. Telegraphy	16		2	13		1	53			28	15	1				29		1	9			21			11	5	1		3	209	5·0
162. Telegraphy, Wireless																											4			4	0·1
163. Tailoring			1			4						3			1									1						10	0·2
164. Tile Setting												2																		2	0·05
165. Taxidermy																											1			1	0·02
166. Typewriter Repairs			1					4				2						3			2			2			1			15	0·4
167. Theology					1						2									1			3							7	0·1
168. Teachers' Courses											3									1			2		1	3			1	11	0·3
169. Technician												1																		1	0·02
170. Tinsmith												2			3			1						1						7	0·1
171. Upholstering			6			1		1				9			1						1						2			21	0·6
172. Vulcanizing						1						4									2			1			5			13	0·3
173. Veterinary								1			6																			7	0·1
174. Wiring Batteries												4			1									2			2			9	0·2
175. Wood Carving													1																	1	0·02
176. Window Dressing												1												1						2	0·05
177. X-Ray Operating												1								1										2	0·05
Totals	381	31	58	128	54	18	284	26	28	442	137	339	43	56	65	256	38	13	169	8	26	421	70	31	275	65	81	75	29	10	3,657	100·00
		470			200			338			918			164			307			203			522			421			114			

N.B.—Above totals exclusive of 55 men attending Evening Classes.

RECAPITULATION.

Inside Schools	2,474
Outside Schools	514
Industries	669
Total	3,657

7494—6½

Distribution of Re-Education, week ending January 31, 1919.

"A" UNIT—INSIDE SCHOOLS.

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Montreal Technical School	3	13	Commercial	90	232
	1		Civil Service	14	
	5		Auto Mechanics	59	
	1		General	23	
	1		Carpentry	22	
	2		Draughting	24	
McGill University	1	8	Machine Shop	45	
	1		Janitor	4	
	3		General	27	
	1		Electrical	37	
	1		Telegraphy	16	
	1		Elec. Engineer	1	130
College of Pharmacy	1	1	Shoe Repairs	19	19
Total		22			381

"A" UNIT—OUTSIDE SCHOOLS.

Mass. Agricultural College			Agriculture	1	1
McGill University			Law	1	
			Chemistry	1	
			Medicine	1	3
McDonald College			Agriculture	22	22
Hascote Coaching Co			Mech. Engineer	1	
			Civil Engineer	1	
			Science and Art	1	3
Institute of Agriculture			Agriculture	1	1
Nazareth Institute			Piano Tuning	1	1
Total					31

"A" UNIT—INDUSTRIAL ESTABLISHMENTS.

Dr. Watson			Dental Mechanics	5
Moler Barber College			Barbering	1
J. Bethell			Harvesting	1
Wilder's, Ltd			Upholstering	1
R. Mitchell & Co			Pattern Making	1
			Draughting	1
Valiquette, Ltd			Upholstering	1
Laurentide Pulp Co			Forestry	1
C.P.R. Shops			Brass Finisher	1
			Upholstering	1
			Electrical Welding	3
			Draughting	1
			Telegraphy	1
Montreal Light, Heat and Power Co			Electrical Switchboard	2
G.T.R			Office Work	1
			Telegraphy	1
			Acetylene Welding	1
Goodwins, Ltd			Upholstering	1
			Commercial Illustrating	1
G. W. Bethell			Harness Making	2
F. S. Downham			Fancy Wire Making	1
Hollands' Sons			Upholstering	1
Hill's Nursery			Florist	1
Lamontagne's, Ltd			Harness Fitting	1
Waterman's Fountain Pen Co			Lathe Hand	2
Henry Birks & Son			Watchmaking	2
Dents Sign Co			Sign Painting	1
Mortimer & Co			Commercial Illustrating	1
Dr. Rondeau			Dental Mechanics	1
Ogilvy's, Ltd			Show Card Writing	1
Montreal Public Service Corp			Auto Mechanics	1
Can. Con. Rubber Co			Steel Stamp Making	1
			Shoe Making	1

Distribution of Re-Education, week ending January 31, 1919—Con.

"A" UNIT—INDUSTRIAL ESTABLISHMENTS—*Concluded,*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Awaiting Disposal			Painter Decorator	1	
W. H. Read			Interior Decorator	1	
Smith Premier Co			Typewriter Repairs	1	
G.T.R.			Machine Shop Practice	4	
			Upholstering	1	
St. Antoine			Barbering	1	
D. A. Bethune			Steam Fitting	1	
Semi-Ready Co			Tailor	1	
Willis & Co			Piano Tuning	1	
United Shoe Machine Co			Shoe Making	1	
Canadian Car Foundry			Draughting	1	
In Abeyance			Dental Mechanics	1	
Total					58

Inside Schools	381
Outside Schools	31
Industries	58
Total	470

"B" UNIT—INSIDE SCHOOLS.

Nova Scotia Technical School	1		Shoe Repairs	17	
	2		Electrical Work	12	
	2		Mach. Tool Operation	14	
	1		Steam Engineer	6	
	3		Auto Mechanics	35	
	2		Draughting	8	
	1		Structural Drafting	1	
	1		Janitors	1	
		13			94
Nova Scotia Sanitorium	1		Telegraphy	1	
	1	2	Auto Mechanics	1	2
Camp Hill Military Hospital	1		Telegraphy	12	
	1		Woodworking	8	
	1		Shoemaking	1	
	1		General	11	
		4			32
Total		19			128

"B" UNIT—OUTSIDE SCHOOLS.

University of Dalhousie			Medicine	2	
			Arts	1	
Maritime Business College			Commercial	29	
			Stenography	1	
Maritime			Pharmacy	2	
Nova Scotia Agricultural College			Agriculture	12	
County Academy			General	1	
King's College			Commercial	1	
Charlottetown Business College			Commercial	1	
Acadia College			Commercial	1	
Union Business College			Commercial	3	
Total					54

"B" UNIT—INDUSTRIAL ESTABLISHMENTS.

Amherst Piano Co			Piano Tuning	1	
Atlantic Cable Co			Telegraphy	1	
M. Ross, Charlottetown			Tailoring	2	

Distribution of Re-Education, week ending January 31, 1919—Con.

"B" UNIT—INDUSTRIAL ESTABLISHMENTS—*Concluded,*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Dominion Coal Co.	.....	.....	Electrical	1	
J. B. Studley	.....	.....	Barbering	1	
A. Ross, Oxford	.....	.....	Tailoring	1	
Imperial Publishing Co.	.....	.....	Printing Press	1	
C. B. Lowe	.....	.....	Tailoring	1	
Nautical Instrument Co.	.....	.....	Vulcanizing	1	
New Standard Vulcanizing Co.	.....	.....	Vulcanizing	1	
A. W. McKinley, Ltd.	.....	.....	Book-binding	1	
Gordon Keith	.....	.....	Upholstering	1	
Grahams, Ltd.	.....	.....	Fruit Canning	1	
Mar. Telephone and Telegraph Co.	.....	.....	Cable Splicing	1	
Randing & Nile	.....	.....	Barbering	1	
Nova Scotia Cleaning and Pressing Co.	.....	.....	.....	1	
Walsh and Egan	.....	.....	Electrical	1	
					18

Inside Schools	128
Outside Schools	54
Industries	28
Total	200

"C" UNIT—INSIDE SCHOOLS.

Queens Military Hospital, Kingston.	2	.....	Civil Service	16	
	1	.....	Carpentry	7	
	1	.....	Commercial	13	
	1	.....	Draughting	3	
	1	.....	Electrical Engineer	24	
	1	.....	Farm Tractors	12	
	1	.....	General Education	5	
	1	.....	Higher Accountancy	1	
	1	.....	Machine Shop Practice	16	
	2	.....	Auto Mechanics	20	
	1	.....	Pattern Making	3	
	1	.....	Steam and Gas Eng.	3	
	1	.....	Shoe Making	22	
	1	.....	Telegraphy	2	
	1	.....	Business	1	
		17			175
Sir Sandford Fleming Home	3	.....	Commercial and C. S.	26	
	1	.....	Carpentry	10	
	1	.....	Machine Drawing	4	
	1	.....	Auto Mechanics	24	
	1	.....	Telegraphy	24	
	1	.....	Shoe Repairs	21	
		8			109
Total	.....	25			284

"C" UNIT—OUTSIDE SCHOOLS.

Eastern Dairy School	.....	.....	Dairy Business	1	
Cornwall Commercial College	.....	.....	Commercial	2	
Queens Military Hospital	.....	.....	Medicine	6	
			Arts	4	
			Science	5	
Ontario School for the Deaf	.....	.....	Lip Reading	1	
International Correspondence College	.....	.....	Salesmanship	1	
Brockville Business College	.....	.....	Commercial	1	
Ontario Business College, Belleville	.....	.....	Commercial	2	
Albert College, Belleville	.....	.....	Matriculation	2	
High School, Campbellford	.....	.....	Matriculation	1	
					26

Distribution of Re-Education, week ending January 31, 1919—Con.

"C" UNIT—INDUSTRIAL ESTABLISHMENTS.

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Can. Gen. Electric Co., Peterboro			Electrical	3	
Harrison & Co., Kingston			Upholstering	1	
Hull Iron and Steel Foundry			Machine Repairs	1	
E. B. Eddy Co., Hull			Light Machine Repairs	1	
McLaughlin Bros., Fort Coulonge			Log Scaling, etc	1	
Oliver & Son, Ottawa			Stationary Engineer	1	
Artificial Ice Co., Ottawa			Stationary Engineer	1	
Federal Typewriter Co			Typewriter Repairs	1	
Electrical Mfg. Co			Electrical Wiring	1	
Marchand & Donnelly			Electrical	1	
A. J. Freiman & Co			Shipping	1	
Ottawa Typewriter Co			Typewriter Repairs	1	
Progress Shoe Repair			Shoe Repairs	1	
Ottawa Car Co			Oxy-Acetylene Welding	1	
Public Works Dept., Ottawa			Draughting	1	
United Typewriter Co			Typewriter Repairs	2	
International Harvester Co			Farm Mach. Repairs	1	
Halliday Electrical Co			Electrical Wiring	1	
Dr. Bell, Kingston			Veterinary	1	
Edge Co., Ltd., Ottawa			Oxy-Welding	1	
Thos. Lawson & Sons			Core Making	1	
Costello, Crowe, Bellamy			Electrical	1	
Beach Motors, Ottawa			Auto Mechanics	1	
H. E. Hobson			Electrical	1	
Gilmour & Co., Almonte			Building Construction	1	
					28

Inside Schools	284
Outside Schools	26
Industries	28
Total	338

"D" UNIT—INSIDE SCHOOLS.

University of Toronto	2		Draughting	10	
	1		Auto Mechanics	55	
	1		Farm Tractors	23	
	3		Est. Quantity and Sur'g.	33	
	1		Engineering	11	
	3		Milling and Assaying	10	
	1		Shoe Repairs	9	
	2		Applied Electricity	4	
		14			155
Central Technical School	2		Machine Draughting	23	
	1		Boiler Inspection	1	
	2		Carpentry	4	
	2		Machine Shop	8	
	2		Plumbing	2	
	1		Auto Mechanics	2	
	1		Motion Picture Oper	13	
	1		Building Construction	5	
	2		Electrical	14	
	1		Power Plant	10	
	1		Show Card Work	3	
	1		Commercial	3	
		17			88
Lansdowne School	1		Civil Service	12	
		1			12
Technical and Art, Hamilton	1		Machine Shop	13	
	1		Carpentry	14	
	1		Draughting	7	
	1		Civil Service	1	
		4			35

Distribution of Re-Education, week ending January 31, 1919—Con.

"D" UNIT—INSIDE SCHOOLS—*Concluded,*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Central Y.M.C.A.	1		Telegraphy	14	
	1		Commercial	26	
		2			40
Commercial and Telegraph School	2		Commercial	76	
	1		Stenography	6	
	1		Telegraphy	14	
		4			96
616 College St.	1		Shoe Repairs	16	
		1			16
Totals		43			442

"D" UNIT—OUTSIDE SCHOOLS.

University of Toronto			Medicine	38	
			Forestry	1	
Royal Dental College			Dental Mechanics	4	
Ontario Veterinary College			Veterinary	6	
Ontario College of Art			Commercial Art	4	
Ontario College of Pharmacy			Pharmacy	3	
McMaster University			Theology	1	
Broadway Church			Music	4	
Sheldon Schools			Salesmanship	5	
Normal School			Teacher	1	
Dominion Business College			Commercial	4	
Central Business College, Toronto			Commercial Law	1	
Toronto Conservatory			Music	2	
Canadian National Inst. for Blind			Basketry, etc.	6	
Canadian Monotype School			Keyboard operation	3	
Lanston Monotype School, U.S.A.			Machinist	1	
McKie Business College			Stenography	1	
			Commercial	1	
Central Business College			Commercial	14	
Barrie Business College			Commercial	2	
Shaw's Business College			Correspondence	3	
Collegiate Institute			Academic	2	
Hamilton Conservatory			Music	1	
Phelps Design School			Garment Design	1	
Brantford Business College			Commercial	3	
Dominion Railroading School			Telegraphy	15	
Trinity College			Arts	2	
Miss Waddell			Lip Reading	1	
Howard Studio			Music	2	
High School			Teacher	2	
St. Catherine's School			Commercial	2	
Knox College			Theology	1	
Osgoode Hall			Law	12	
					149

"D" UNIT—INDUSTRIAL ESTABLISHMENTS.

Burroughs Adding Machine Co.			Machine repairs	5	
Moler Barber College			Barbering	5	
Western Hospital			Technician	1	
			X-Ray operation	1	
Crown Mfg. Co., Hamilton			Steel Letter Cutting	2	
Packard Electric Co			Electrical	2	
Multigraph Sales Co			Multigraph Operation	15	
Walker Parker			Shoe Repairs	1	
Canadian Allis-Chalmers			Machine Shop Practice	7	
			Ornamental Iron worker	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"D" UNIT—INDUSTRIAL ESTABLISHMENTS—*Continued.*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
S. L. Pearson			Battery Service	3	
Reo Motor Sales Co			Auto Mechanics	2	
Ferranti Electric Co			Motor Testing	5	
Newcombe Piano Co			Piano Tuning	2	
Phoenix Engraving Co			Photo Engraving	2	
Prest-o-lite			Battery Service	2	
Mabie, Todd & Co			Gold Pen Grinding	13	
Auto Elec. Service Co			Auto Mechanics	2	
Martin Electric Service Co			Auto Mechanics	1	
Toronto Street Railway Co			Armature Winding	4	
Palmer Tire & Rubber Co			Vulcanizing	1	
J. J. Snorr			Upholstering	1	
Smith Morton Optical Co			Lens Grinding	1	
International Harvester Co			Cost Production	1	
			Pattern maker	2	
Walker Vallance Co			Vulcanizing	1	
Fred T. Brooks			Sign Painting	1	
Metallic Roofing Co			Draughting	1	
Planet Cycle Co			Bicycle Assembly	1	
J. Leslie Weir			Shoe Repairing	1	
Murray Kay Co			Upholstering	1	
Danforth Plumbing			Plumbing	1	
Cameron & Campbell			Carpentry	1	
Gendron Mfg. Co			Auto Painting	1	
Meakin & Sons			Office Work	1	
Bredannez Ltd			Machine Shop	1	
Mercury Mills			Light Machine repairs	1	
			Light Machine operation	1	
Meakin & Son			Machine Shipping	2	
			Boring	1	
United Brush Co			Brush Making	2	
Wearwell Co			Shoe Repair	1	
Can. Chadwick Brass Co			Salesmanship	1	
West End Shoe Repair			Shoe Repair	1	
Westinghouse Co			Electrical	2	
Kent Garvin Co			Tile Setting	1	
E. S. Collins			Sign Painting	1	
H. Greer			Shoe repairs	1	
A. M. Cunningham			Photography	1	
Hill Vulcanizing Co			Vulcanizing	1	
Riddell, Stead, Graham			Higher Accountancy	1	
Hupp Sales Service			Auto Mechanics	1	
Boston Insulated Wire & Cable Co			Cable Splicing	1	
Westinghouse Co			Armature Winding	1	
			Core Making	1	
Harkness Studio			Photography	1	
Patterson Auto Sales			Auto Mechanics	1	
Malcolm & Soultar			Wood Polishing	1	
Jas. A Wary			Plumbing	1	
Irvin Olmstead			Barbering	1	
Modern Shoe Co			Shoe Repairs	1	
Remington Typewriter Co			Typewriter Repairs	1	
G. Booth & Sons			Sign Painting	1	
Toronto Electric Light Co			Meter Testing	1	
			Electrical	5	
Robert Simpson Co			Window Dressing	1	
W. Pierce Munroe			Salesmanship	1	
Massey Harris Co			Machine Tool operation	1	
Williams Watch Repair				1	
Beal Bros			Shoe Repairs	6	
R. Bunt & Co			Salesmanship	1	
D. W. Best & Co			Piano Tuning	1	
Matthews & Blackwell			Auto Mechanics	1	
Standard Underground Cable			Machine Shop practice	1	
Gremlin & Sutherland			Vulcanizing	1	
McLaughlin Garage			Auto Mechanics	1	
Commercial Engravers			Commercial Art	1	
Hamilton Stamp & Stencil Co			Steel Cutter	1	
Ontario Lantern and Lamp Co			Pressman	1	
Marshall Bros			Florist	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"D" UNIT—INDUSTRIAL ESTABLISHMENTS—*Continued.*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Massey Harris Co.			Engineering	1	
Gould, Shapely & Muir			Farm Tractors	1	
Stevens Shoe Repairs			Shoe Repairs	2	
Hamm & Nott, Ltd.			Sheet Metal Work	2	
W. McCance, St. Catherines			Shoe Repair	1	
Dominion Canners, Ltd.			Machine Shop practice	1	
Imperial Life Insurance Co.			Salesmanship	1	
Modern Shoe Co., Simcoe			Shoe Repairing	1	
Adams Harness Co			Harness Making	1	
Beach Garage			Auto Mechanics	1	
Toronto Carpet Co.			Weaving	1	
			Dyeing	1	
Wretham			Shoe Repairs	1	
Waddington			Shoe Repairs	1	
Auto Strop Co.			Polishing	1	
Massey Harris Co.			Farm Tractors	1	
			Machine Shop	5	
			Bench Hands	4	
Ontario Show Case Co.			Cabinet Making	2	
Mills, Branby & Collins			Sign Writing	1	
W. R. Johnston			Tailoring	2	
Toronto Welding Co.			Oxy-Welding	1	
Lyonde			Photography	1	
Morrison Brass Co.			Core Making	1	
Macey Sign Co.			Sign Writing	1	
Canuck Auto, Ltd.			Auto Mechanics	1	
Publishers, Ltd.			Press Printing	1	
American Watch Case Co.			Press Work	1	
Practical Shoe Repair			Shoe Repair	1	
C. Gray			Shoe Repairs	1	
W. C. Hunt			Tinsmithing	1	
Gold Medal Furniture Co.			Upholstering	4	
Coleman Tool and Die Works			Machine Shop Practice	1	
Standard Silver Co.			Silver Polishing	4	
McBride's Garage			Auto Mechanics	1	
C. L. Daly			Mech. Dentistry	2	
A. J. McLean			Comm. Photography	3	
Chamberlain & Hookham			Applied Electricity	1	
Goodyear Tire and Rubber Co.			Spec. Tire Work	2	
Dr. Stewart			Dental Mechanics	1	
Splitdorf Electric Co.			Magneto Repairs	1	
Canadian Optical Co.			Lens Grinding	1	
Dominion Ship Building			Ship Fitter	1	
Dalton's			Core Making	1	
Minister Myles Co.			Shoe Lasting	1	
L'Air Liquide Society			Oxy-Welding	3	
Gerhardt Heintzman			Cabinet Making	1	
National Cash Register			Assembling, etc.	1	
Moore's Garage			Auto Mechanics	1	
Mono. Linotype Co.			Linotypist	1	
Universal Film Co.			Salesmanship	1	
Clarke Bros.			Machine Shop Practice	1	
W. J. Mitchell Co.			Jewelery	1	
C. C. Kawin & Co.			Chemistry	1	
F. W. Bond			Sign Writing	1	
Oxy-Welding Co.			Oxy-acetylene Welding	1	
J. L. Rawbon			Optician	1	
Harris & Stall			Surveying	1	
P. W. Ellis			Watch Repairing	3	
Corley, Wilkie, Duffy & Hamilton			Law	1	
Toronto Testing Laboratory			Chemistry	1	
Can. Drill and Chuck Co.			Machine Shop	2	
Petrie Co.			Machine Shop	1	
Carter Welding Co.			Oxy-acetylene Welding	1	
Armstrong Co.			Machine Shop	1	
G. T. R. Nelles Corners			Telegraphy	1	
G. A. Browne, Orillia			Shoe Repairs	1	
Dominion Welding Co.			Oxy-acetylene Welding	1	
Sellers Gough Co.			Furrier	1	
United Typewriter Co.			Adding Machine Repair	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"D" UNIT—INDUSTRIAL ESTABLISHMENTS—*Continued.*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
W. L. Walker			Mech. Dentistry	1	
Kilgour Mfg. Co			Cabinet Making	1	
McLaughlin Motor Car Co			Auto Mechanics	1	
W. H. Stevenson			Sign Writing	1	
Reliable Auto Repair			Auto Mechanics	1	
Lawrence Park Garage			Auto Mechanics	1	
Roden Bros			Silver Polishing	1	
Robert Crean			Hat Making	1	
J. A. Consaul			Upholstering	1	
Ante Bros			Dental Mechanics	1	
G. T. Smith			Salesman	1	
Spadina Hospital			Dental Mechanics	1	
A. Boyd			Shoe Repairs	1	
J. J. Taylor			Tinsmith	1	
Can. Machine Telephone			Lathe Hand	1	
Culverhouse Optical Co			Lens Grinding	1	
Hydro-Electric			Electrical	2	
Phillips Mfg. Co			Picture Framing	1	
Consolidated Optical Co			Optician	2	
Ideal Shoe Repairing			Shoe Repairing	1	
Unique Theatre			Motion Picture Oper	1	
Overland Sales Co			Auto Mechanics	2	
Dominion Garage			Auto Mechanics	1	
Eastford Sales Service Co			Auto Mechanics	1	
Firstbrook Bros			Box Making	1	
Toronto Battery Service			Wiring Batteries	1	
Gale Bros. Mfg. Co			Tailoring	1	
Remington Typewriter Co			Typewriter Repairs	1	
Excelsior Shoe Repairing			Shoe Repairs	1	
Williams Shoe Repair			Shoe Repairs	1	
Otto Higel Co			Steam Fitting	1	
Roy Co., Ltd			Ring Making	2	
Rogul, A			Jewelry	1	
Turnbull Elevator Co			Electrical	1	
Geo. Baynham			Auto Painting	1	
J. Ivory			Sheet Metal Work	1	
Pringle & Booth			Photography	1	
G. A. Bowerbank			Sign Writing	1	
Prov. Hydro Electric Co			Draughting	1	
International Business Mach			Adding Mach. Repairs	1	
Dickie Construction			Building Construction	1	
Barber Ellis Co			Salesmanship	1	
Monarch Tractors			Farm Tractors	1	
Deer Park Garage			Auto Mechanics	1	
Grundy Clapperton			Glass Cutting	1	
College Press Co			Printing	1	
Parkinson, J			Jewelry	1	
Heintzman & Co			Piano Tuning	1	
Imperial Optical Co			Lens Grinding	2	
Mooring Mfg. Co			Machine Shop Practice	1	
Steel Co. of Canada			Machine Operation	1	
Swedish Electric Co			Armature Winding	1	
Soo Business College			Commercial	1	
Ames, Holden, McCready			Storekeeper	1	
T. Eaton Co			Photography	1	
Rawlinson, L.			Upholstering	2	
Richardson Signs			Sign Writing	1	
J. Simpson			Cotton Spinner	1	
I. Whitfield			Machine Shop Practice	1	
Acme Machine Co			Machine Shop Practice	1	
Atkinson Marble Co			Stone Mason	1	
Authors & Cox			Orthopaedic Appliances	1	
Bell Telephone Co			Switchboard Installation	1	
Canada Glass and Lite Co			Tile Setting	1	
Dominion Steel Foundry			Steel Inspection	1	
Canadian Linotype			Linotypist	5	
Green, H			Carpentry	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"D" UNIT—INDUSTRIAL ESTABLISHMENTS—*Concluded.*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
L. Curley & Son			Harness Making	1	
Canada Cotton Co			Machine Operation	1	
Total					327

Inside Schools	442
Outside Schools	137
Industrial	339
Total	918

"F" UNIT.

INSIDE.	1		Shoe Repairs	8	
	2		Auto Mechanics	5	
	1		Carpentry	7	
	1		Commercial	3	
	1		Draughting	7	
	2		Repairs Farm Tractors	2	
		8			32
C.M.C.H., Guelph, O.A.C., Guelph		2	Market Gardening		10
C.M.C., London		1	Wood Carving		1
Total		11			43
OUTSIDE.					
Euler Business College			Commercial	1	
O. Agric. College			Agriculture	28	
"			Market Gardening	5	
O'Brien Business College			Commercial	5	
Cen. Business College, Stratford			"	8	
Windsor Business College			"	2	
Woodstock Business College			"	2	
Western University			General	1	
Can. Business College			Commercial	2	
Sarnia Business College			"	2	
					56
INDUSTRIAL.					
Burroughs Adding Machine			Repairs and Inspection	16	
Belton Lumber Co			Machine Wood Working	1	
Benson Wiles			Wiring Batteries	1	
Can. Linderman Co			Machine Oper	1	
Coope Auction Rooms			Auctioneering	1	
Empire Mfg. Co			Plumber's Supplies	2	
G.T.R., London			Track Supervisor	1	
Hosiers Ltd			Knitting Machine Oper	1	
Hulbur Shoe Co			Shoe Making	1	
Imp. Rattan Co			Reed Chair Making	4	
C. F. Jones & Co			Ring Making	1	
A. A. Langford & Co			Stationary Business	1	
McClary Mfg. Co			Tinsmith	3	
McCraken Show Case Co			Carpentry	1	
McKenzie's Machine Shop			M. T. Practice	1	
A. E. Nobbs			Stone Cutter	1	
J. H. Pollock			Electrical	2	
Dr. Hutchison			Dental Mech	1	
A. Norton			Dairy Business	1	
Knetchel Shoe Co			Shoe Repairs	1	
Robson Motor Car Co			Auto Mechanics	1	
Somerville Paper Box Co			Box Making	1	
L. E. Edwards, Woodstock			Shoe Repairs	1	
Strathroy Fur Co			Carpentry	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"F" UNIT—*Concluded.*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Powell Shoe Repairs			Shoe Repairing	1	
Sherlock Manning Co			Piano Tuning	2	
Silverwoods Ltd			Dairy Business	1	
Smallman & Ingram			Upholstering	1	
F. Spettigue			Tailoring	1	
Stewart & Markin			Armature Winding	2	
The Signoy Ltd			Show Card Writing	1	
Wards Factory			Cigar Making	1	
Wolverton Milling Co			Flour Milling	1	
Jno. Campbell & Son			Auto Painting	1	
Hobbs Mfg. Co			Art Bead Glazing	1	
Public Utilities Com			Electric Switchboard	2	
Scott, Chamberlain & Co			Shoe Making	1	
London Hosiery Mills			Knitting Machine Oper.	1	
Eureka Planter Co			Moulding	1	
Jno. Morrow Screw and Nut Co			M. S. P	1	
					65

Inside	43
Outside	56
Industrial	65
Grand Total	164

"G" UNIT.

INSIDE.					
Winnipeg Re-training Centre	1		Telegraphy	29	
	1		Building Construction	5	
	1		Stenography	5	
	4		Commercial	34	
	1		Auto Mechanic	17	
	1		Stationary Engineer	2	
	1		General Education	17	
	2		Gas Tractors	28	
	1		Photography	2	
	1		French Polishing	8	
	1		Sanitary Inspector	7	
	1		Machine Shop	4	
	2		Cabinet Making	5	
	1		Oxy-Acetylene Welding	7	
	1		Market Gardening	11	
	1		Draughting	11	
	1		Electrical	9	
	1		Art. L. Making	1	
	1		Barbering	2	
	1		Machine Wood Work	2	
	2		Shoe Repairs	36	
	1		Printing	2	
	1		Signwriting	7	
	1		Grain Buying	3	
	1		Law	2	
		31			256
OUTSIDE.					
Agricultural College			Gas Tractors	21	
			Lip Reading	1	
			Fiel l & Animal Hsby	10	
					38
INDUSTRIES.					
H. Ceri			Shoe Repairs	1	
Marshall Wells Co			Shipping	1	
F. Burt			Music	1	
United Grain Growers			Grain Buying	1	
Pitbaldo Hoskins			Law	1	
Free Press, Winnipeg			Linotypist	1	
Kamistiquia Power Co			Electric Switchboard	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"G" UNIT—*Concluded*,

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
McKinnon, Winnipeg			Surveying	1	
Plumas Station			Telegraphy	1	
United Typewriter Co.			Typewriter Repairs	1	
Port Arthur Garage			Auto Mechanics	1	
Remington Typewriter Co.			Typewriter Repairs	2	
					13

Inside	256
Outside	38
Industries	13
Grand Total	307

"H" UNIT.

INSIDE.					
University of Saskatchewa	3		Farm Mechanics	22	
	2		Farm Tractors	31	
	1		Stationary Gas Engines	3	
	1		Auto Mechanics	19	
	1		Steam Eng	3	
	2		Mechanical Eng	1	
		10	Agriculture	27	
					106
Vocational Sch ol	1				
	1		Telegraphy	9	
	1		Shoemaking	14	
	1		Commercial	18	
	2		Civil Service	17	
		6	Municipal Secretary	5	
					63
OUTSIDE.					
Collegiate, Moose Jaw					
Regina College			Manual Training	1	
Earl Grey Sanatorium			Matriculation	1	
Normal School, Sask			X-Ray	1	
University of Sask			Teachers' Course	1	
			Matriculation	1	
			Theology	1	
			Pharmacy	1	
			Arts	1	
					8
INDUSTRIES.					
Dept. of Telephones			Telephone Instructor	1	
W. B. Finlay			Photography	1	
Grills & Co., Regina			Furrier	1	
Hicks & Pentz			Clock & Watchmaking	1	
F. Ivey			Optician	1	
John East Iron Works			Oxy-Ace. Welding	1	
B. Massecar			C. Accountancy	1	
Dr. J. A. Moran			Dental Mechanics	1	
G. C. Rooke & Co			Accountancy	1	
Stephenson & Colebank			Upholstering	1	
Sun. Elec. Co., Regina			Electrical	1	
United Typewriter Co., Regina			Type Repairs	1	
United Typewriter Co., Saskatoon			Type Repairs	1	
Western Gay Double Tread Co			Vulcanizing	2	
Gay Light Theatre			Motion Picture Operator	1	
L. Dennison & Co			Electrical	1	
Regina Mech			Oxy-Ace. Welding	1	
Sask. Bread Co			Baker	1	
Victoria Theatre			Motion Picture Operator	1	
Dominion Government Elevator			Grain Inspection	1	
Reid Dental Laboratory			Dental Mechanics	1	
Sask. Harness Co			Harness Making	1	
Union Meat Market			Salesman	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"H" UNIT—*Concluded,*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
McGrath Bros.			Auto Mechanics	1	
Palace Garage, Saskatoon			Auto Mechanics	1	
					26

Inside	169
Outside	8
Industries	26
Grand Total	203
Collegiate Inst., Regina, C. Service	23
Success Bus. Col., M. S. Stenography	1
Ross, M. H., C. Service	11
Total	35

"I" UNIT.

INSIDE.					
Technical & Art Institute, Calgary	1		Commercial	58	
	2		Telegraphy	21	
	2		Farm Mechanics	134	
	1		Auto Mechanics	63	
	1		Electrical	22	
	1		Draughting	6	
	2		Farm Tractors	16	
	1		Shoe Repairs	17	
	2		Manual Training	2	
	2		Carpentry	10	
	1		Steam Stat	14	
	1		Heating Plant	5	
		17			368
Vocational Sch. Educ	1		Shoe Repairs	12	
	2		Commercial	38	
	1		General	3	
		4			53
OUTSIDE.					
University of Edmonton			Agriculture	52	
			Medicine	4	
			Arts	2	
			Law	2	
			Science	1	
			Pharmacy	2	
			Theology	3	
R. C. High School			General	1	
Normal School, Camrose			Teachers' Course	2	
Adlam College Music			Music	1	
					70
INDUSTRIES.					
Rockford, Butcher			Slaughtering Animals	1	
Fiske Tire Service, Calgary			Vulcanizing	1	
Acme Garage			Auto Mechanics	1	
Kemphill Barber College			Barbering	3	
Fort Pitt Ranch			Farm Mechanics	1	
Ewing Harvey & Bury			Law	1	
Robinson			Tailoring	1	
Edmonton Cigar Factory			Cigar Making	1	
Johnston & Walker			Window Dressing	1	
Burman & Frith			Electrical	1	
McDermid			Photo Engraving	1	
Hope & Johnson			Typewriter Repairing	1	
Hillas Electric Co			Electrical	1	
Economy Electric Co			Electrical	1	
W. H. Clark Co			Wood Working & Carp'y	1	
Dr. Vermilyia			Chiropody	1	
Cooper & Brown			Wiring Batteries	1	

Distribution of Re-Education, week ending January 31, 1919—Con.

"I" UNIT—*Concluded,*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Pupils.
Liley & McCormack			Harness Making	1	
Pallison, Calgary			Dairy Business	1	
Remington Typewriter Co			Typewriting Repairs	1	
Chauncey Ltd			Watch Repairs	1	
I. E. Black			Engraving	1	
Wise Bridge			Slaughtering	1	
Metals Ltd			Heating Plant	1	
Otis Fensom Elevator Co			Electrical	1	
Canadian Govt. Elevator			Grain Inspection	1	
Alex Martin			Tinsmith	1	
Hotel Palister			Electrical	1	
Massie Bros			Elec., Wiring batteries	1	
					31

Inside	421
Outside	70
Industries	31
Total	522
Evening Classes	13

"J" UNIT.

INSIDE.					
M. C. H. Esquimalt			Auto Mechanics	6	
	2		Carpentry	3	
	1		Boat Building	2	
			Shoe Repairs	4	
		4			15
Fairmont M.C.H	2		Carpentry	1	
	2		Electrical	2	
	1		Manual Teachers	1	
	1		Shoe Repairs	1	
		6			5
Fire Hall No. 10		1	Shoe Repairs		22
Shaughnessy M.C.H	1		Barbering	2	
	1		Commercial	46	
	1		General	26	
		3			74
University of B.C	2		Assaying	13	
	3		Auto Mechanics	50	
	2		Electrical	21	
	2		Machine Shop practice	17	
	1		Draughting	19	
	2		Steam Enginee ing	22	
	1		Telegraphy	11	
	1		Motion Picture Operator	6	
		14			159
OUTSIDE.					
Sprott Shaw Institute, Victoria			Telegraphy	5	
			Commercial	7	
			Stenography	1	
Success Business College			Civil Service	1	
Provincial Normal School, Victoria			Teacher's Course	2	
N. Pacific Co., Oregon			Dental	1	
University of Washington, U.S.A			Librarian	1	
Prov. Normal School, Vancouver			Teacher's Course	1	
University of B. C			Agriculture	24	
			Applied Science	2	
			Art	3	
			Forestry	17	
					65

Distribution of Re-Education, week ending January 31st, 1919—Con.

"J" UNIT—*Continued.*

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Teachers.
INDUSTRIES.					
Alaska Bedding Co.			Bed Spring Making	1	
Albion Stove Works			Iron Moulding	2	
Dr. Brett Anderson			Mechanical Dentistry	1	
Atkins Saw File Co.			Saw Filing	1	
Madame Avery			Music	1	
Battery House, Vancouver			Auto Mechanics	1	
Bennett & Sons			Carpentry and Cabinet Making	2	
Bourne & McDonald			Law	1	
G. E. Brooks			Auto Mechanics	1	
Consaul Mining Co.			Assaying, etc.	1	
C. P. R. Gardens			Market Gardening	4	
Crossman Electric			Armature Winding	2	
Daily Colonist, Victoria			Linotypist	1	
Daily Province, Vancouver			Linotypist	1	
Davie Vulcanizing			Vulcanizing	2	
Dom. Tel. Wireless Co.			Wireless Telegraphy	4	
Battery House, New Westminster			Machine operating	1	
Boggs Motor Co.			Vulcanizing	1	
B. C. Vinegar Co.			Pickle Making	1	
Electrical Maintenance			Wiring Batteries	2	
Empress Mfg. Co., Vancouver			Pickle Making	1	
Dr. Garesche			Dental Mechanics	1	
H. Gleason & Co., Seattle			Electrical	1	
Dr. F. Greatrex			Dental Mech	1	
Dr. Lewis Hall, Victoria			"	1	
Dr. W. T. Hall, Vancouver			"	1	
Dr. Stave, Victoria			"	1	
H. Hargreaves			Auto Mechanics	1	
Harris, Bull & Mason			Law	1	
Hawkins & Hayward			Electrical	1	
King's Studios, Vancouver			Photography	1	
Dr. Lowe, Vancouver			Dental Mech	1	
New Method Co., Vancouver			Vulcanizing	1	
Dr. G. Moody, Vancouver			Dental Mech	1	
C. O. Morlock, Vancouver			Upholstering	1	
O. Olsen, Vancouver			Show Card Writing	1	
Wm. Quirt, Vancouver			Taxidermy	1	
Remington Typewriter Co.			Typewriter Mech.	1	
Restmore Mfg. Co.			Cabinet Making and Carpentry	2	
Richmond Art Store			Picture Framing	1	
Shaugnessy Pressing and Cleaning				1	
Sholvock Bros.			Linotypist	1	
Smith & Champion			Furniture Repairs	1	
A. Sawy, Vancouver			Agriculture	1	
Standard Furniture Co.			Upholstering	1	
Dr. A. H. Tanner			Dental Mech.	1	
Tupper & Steele, Vancouver			Auto Painting	1	
E. J. Wakefield			Basket Making	1	
D. Walker			Agriculture	1	
Capt. Williamson			Navigation	1	
B.C. Veterans' Weekly			Reporter	1	
Crebat Mowatt Co.			Accounting	1	
Dr. Sterling			Dental Mech.	1	
Hodgkinson Ltd.			Auto Painting	1	
C.P.R., Port Moody			Telegraphy	1	
J. Stevens, Vancouver			Market Gardening	1	
Vancouver Glove Co.			Glove Making	1	
Dr. Wright, Vancouver			Dental Mech.	1	
Comrades' Lunch Room			Baking	1	
Darling & Nabb, Vancouver			Law	1	
Dr. Cunningham			Dental Mech.	1	
Ellis & Brown			Law	1	
H. J. Holman, Victoria			Vulcanizing	1	
Municipal Power Plant			Engine, etc.	1	

Distribution of Re-Education, week ending January 31st, 1919—Con.

"J" UNIT—*Concluded*,

Institution.	Number of Teachers.	Sub-total of Teachers.	Courses.	Number of Pupils.	Sub-total of Teachers.
Reliable Electric Co., Vancouver			Armature Winding	1	
W. Turcliffe			Barbering	1	
					81

Inside	275
Outside	65
Industries	81
	421
Evening Class	4

"K" UNIT.

INSIDE.					
Reed School, Fredericton	1		Carpentry	5	
	1		Stenography	4	
	1		Civil Service	13	
	1		General	14	
	1		Auto Mech	21	
	1		Shoe Repairs	17	
		6			75
OUTSIDE.					
Mt. Alison University			C. Engineering	1	
St. John Business College			Commercial	6	
Success Business College			Commercial	1	
Success Business College			Stenography	1	
Fredericton High School			Matriculation	1	
Fredericton Business College			Commercial	9	
Provincial Normal School			Teacher's Course	1	
Reed School, Fredericton			Agriculture	3	
St. Stephen Business College			Commercial	1	
University of New Brunswick			Forestry	3	
Mount Allison College			Commercial	2	
					29
INDUSTRIES.					
C.G.R., Dalhousie			Telegraphy	1	
G.T.R. Shop, S. Devon			Machine Tool Operating	1	
Fred Smith			Barbering	1	
C.G.R., Dorchester			Telegraphy	1	
C.G.R., Flatlands			Telegraphy	1	
Great Eastern Garage			Auto Mechanics	1	
J. Wilson Ltd			Sheet Metal Work	1	
H. Webb			Electric Wiring	1	
N. B. Power Co			Electrical	1	
Harry Moore			Electrical	1	
					10

Inside	75
Outside	29
Industries	10
	114
Evening Class	1

DEFINITION OF VARIOUS TERMS EMPLOYED.

"INSIDE SCHOOLS"—
Schools conducted in a borrowed or rented building, the Instructors of which are wholly paid by the Dept. of S.C.R.

"OUTSIDE SCHOOLS"—
Business colleges, universities, normal schools, etc., where returned soldiers are placed for training; school fees and cost of books only being borne by the D.S.C.R.

"INDUSTRIAL ESTABLISHMENTS"—
Business institutions where men are placed for training, in order that they may gain a practical knowledge of their course.

RECAPITULATION.

Unit.	No. of Teachers.	Inside Schools.	Outside Schools.	Industries.	Total.
"A"	22	381	31	58	470
"B"	19	128	54	18	200
"C"	25	284	26	28	338
"D"	43	442	137	339	918
"F"	11	43	56	65	164
"G"	31	256	38	13	307
"H"	16	169	8	26	203
"I"	21	421	70	31	522
"J"	28	275	65	81	421
"K"	6	75	29	10	114
Totals	222	2,474	514	669	3,657
Evening classes					55
Grand total					3,712

CHAPTER VIII.

INDUSTRIAL SURVEYS.

Shortly after Industrial retraining was organized and schools established for the rehabilitation of disabled soldiers it was found that numbers of men were asking for training, which it was impossible to give in schools. The reason for this was that a great many occupations could only be learned by actual contact either in an office, industry or manufacturing plant.

Specific instances of men in this class are those who desire to enter some form of the fur industry, as fur sorters, cutters, stitchers, and so forth; men who require work in a shoe factory running, lasting, welting or heel burnishing machinery. There are men who have been in the lumber industry all their lives, and through injury are no longer in a physical condition to stand the exposure and hardship which are necessary in the woods or on the rivers. Such men as these will ask for a course which will permit them to become lumber inspectors, lumber surveyors, stationary steam engineers, and to enter numerous other occupations.

One of the guiding principles which is ever before our Disabled Soldiers' Training Boards, is that the training is given to adults, therefore it must be most practical in its nature, and all waste of time eliminated. The training must be so condensed that the maximum of information will be gained in the shortest possible time.

It is found from our statistics that it is difficult to keep a great number of the returned soldiers in our retraining classes for more than four or five months. Therefore, it is most important that the training from the first will be such that the men will have an increased earning power were they to leave their courses three months after entering, and have an asset, as far as making their living is concerned, and be so rehabilitated that they will have courage to undertake a wage earning vocation.

It was found that the number of courses in our schools was limited to a small range of trades and occupations, and that if the policy of training men in this limited field were followed, there would be an over production of workers in this small range.

In order to broaden the work of our schools and embrace a large number of occupations, two ways were suggested—the first being to purchase additional equipment and give a greater range of courses in the schools, and the second—through a systematic intensive survey of industries to discover openings or possibilities, for which disabled workers could be trained, in which the new occupation would be within the limits of their disability, and to place returned men in the suitable places found in the industries.

Furthermore, the feeling was quite strong that in certain occupations our schools, although they were doing the best they could in the short period of training allowed them, were not in a position satisfactorily to train the men so that they could enter these occupations and hope for success, when working in competition with men who not only were physically fit but also had a long industrial experience.

It is demonstrated beyond doubt that for most occupations the early portion of the training can, with great advantage, be given in the schools, enabling the returned soldier who has a disability to accustom himself to a civilian atmosphere, methods of handling tools and doing the work. After he has reached this stage of his development the District Vocational Officer should arrange to have the disabled men, through the co-operation of employers, enter that form

of industry for which he was being trained, for the completion of his retraining course. Very little information was available as to the number of men employed in any occupation, or as to the demand for trained workers. It was evidently useless to train men for occupations already crowded, and disabled soldiers would necessarily stand a better chance of making good in an occupation in which there was an active demand. The Department found it necessary to gather this information at first hand so that it would be available to all those who were interested in advising the applicant for training as to the best occupation for him to learn.

When it was decided to take up training in industry it was thought that to make it a success, it should not be started until a broad foundation had been prepared, the foundation to consist of a close study of industry in relation to disabled men and the education of the employer and the officers of the Department who were to put it into effect.

To accomplish this the industrial surveys division was organized to cover the following points:—

1. To ascertain as far as possible under present conditions the occupational opportunities for disabled soldiers, the facilities for training them, and the possibilities for absorbing them after training, in the particular locality in which the survey is carried on.
2. To give concise, definite and accurate information regarding these industrial opportunities to each Disabled Soldiers' Training Board, District Vocational Officer, or interviewer, in the district where retraining is to be given.

Constant reference should be made by the Vocational Officer to his copies of industrial surveys in order that correct information may be given to those who are seeking re-training, and that they may be assisted in making a wise selection of a new occupation.

3. To determine the fitness of existing educational institutions in a particular locality for the re-training of disabled men for industry.
4. To grade the opportunities as to the stability of the field in each locality, or in the country as a whole, since some industries are similar all over the country, while others are peculiar to certain localities, and to ascertain when enough men had been trained in each occupation.
5. To inform an applicant for a course in re-training before he enters upon that course as to all its limitations and advantages. He should know whether the field is broad or limited; whether employment is temporary, seasonable, or permanent; whether or not previous experience is required, and how previous experience may be utilized in the new occupation. Further, he should know the remuneration to be expected from a certain grade of work, and be able to give a reasonable estimate of the length of time it will take to prepare for that new vocation. All this is necessary in order that short intensive preparation may be given and wasted effort eliminated; and this is just the information which may be obtained from the surveys when they are consolidated.
6. To ascertain the attitude of manufacturers and employers of labour towards the disabled soldier and to educate them toward a proper understanding and appreciation of the aims and objects of the Vocational Branch of the Department of Soldier's Civil Re-Establishment.
7. To establish a direct personal contact between the Vocational Officer of the district and the managers and foremen of a large number of industries with the result that, when the returned disabled soldiers are placed in industries for the completion of their re-training, a personal interest will be taken in them by their employers.

8. To enable the industrial surveyor to act as a liaison officer between the district office of the Department of Soldiers' Civil Re-Establishment and the employers. It might be stated here that in all cases where men are placed in an industry for the completion of their re-training, they are accompanied by a representative of the industrial survey section, preferably by the man who has surveyed that particular industry, and are brought to the personal attention of their employer, so that any difficulties may be adjusted immediately.
9. To put the industrial surveyor in a position to render assistance in the establishment of aid and advice sections, follow-up systems, employment bureaux, and also in the interpretation and working of the workmen's compensation laws and regulations. The surveys will also indicate the living and working conditions, both in the community and in the industry, which would determine whether or not a certain occupation was likely to prove advantageous.

In collecting this information two methods were available, either by questionnaires or by personal interviews. During the war manufacturers and employers have been flooded with questionnaires and an analysis of many of them showed that information so gathered was not dependable. This method also lacked the most important advantage of the personal interview in that neither the employers nor the officers of the Department received that education in the work which is so necessary for success. It was therefore decided to adopt the method of personal interviews and have the industrial surveyors carry a direct message to employers, showing them directly, simply and clearly how they could co-operate with the Government in the rehabilitation of men who had been disabled by war service. This missionary work has resulted in a great deal of good. The results are so far reaching that at this time they cannot be fully measured.

For some time the Department was in doubt as to how the industrial survey branch should be organized. In September, 1917, however, Mr. G. A. Boate, a Canadian, who had spent some time in the United States, placed before us copies of surveys made by him for the United States Government in connection with the training of workmen for the shipbuilding campaign. Mr. Boate was retained by the Department to organize the industrial surveys branch.

The Department did not intend to demand service from the employer, but rather wished to enlist his sympathy and co-operation. The industrial surveyor would have to interview and convince the highest executives of each company. To do this it was necessary that he adopt the methods of the best class of personal salesmen. He should also be familiar with manufacturing and the handling of labour so he could interest at the outset the men he was interviewing.

In making a survey of an industry the chief executives of the concern, the President, General Manager, and foremen are interviewed first; finally each branch of the industry is visited and the workers performing each particular operation carefully observed. Meanwhile the survey sheets mentioned above are filled in. It may be clearly seen, therefore, that all of the information gained is uniform as to content and has a definite sequence, so that collaboration is made easy. Furthermore, the information obtained by these surveys throughout Canada is not hearsay, but is the result of actual observation and investigation carried on within the industrial concern and among the workers down to the lowest grade.

The first duty of the industrial survey division was to familiarize itself with the most common disabilities incurred by soldiers on active service. The medical records at Headquarters, Ottawa, were carefully studied, grouped, listed and tabulated. With this information in mind the officer in charge of industrial surveys visited several of the large hospitals and sanatoria and analyzed very carefully the effect of disability on movement. When this study has been

grasped, as far as it is possible for a layman to grasp it, standard industrial survey field note forms were designed as illustrated by sheets A, B. and C. These sheets form the basis of the industrial survey report and are taken into the industry by all the industrial surveyors. It was necessary at the outset to train men for this work. Each man selected to undertake it was carefully coached, supervised and accompanied through several industries. He must familiarize himself with the operation of the schools, the courses of study, the equipment and methods used by the interviewers, doctors, and other officers of the department. He must work with a man already trained until it is deemed that he is competent to make surveys independently.

In order to provide that at least a minimum amount of information in each case should be secured, these form A. B. and C. were provided.

On form A. is recorded the information obtained from the President or Manager and is made out for the concern.

Form B. must be made out for each occupation in the industry, and deals with the elements which enter into the occupation such as hours, renumeration, tools used, training required, related experience, and the most satisfactory preliminary training which a school could give, and so forth.

The third sheet is known as the disability sheet and must also be made out for each occupation recorded on sheet B. A standard list of disabilities (shown at the end of this chapter) was drawn up. This list was taken from the disabilities as they appeared on the medical boards of the Army Medical Corps. Each industrial surveyor is supplied with a copy of this list and must familiarize himself with these disabilities before undertaking survey work.

Besides the information on the Survey sheets A, B and C. filled in by the industrial surveyor when interviewing the workers in the factory, much general information is obtained from the chief executives and through personal observation. This forms the introductory part of the industrial survey report. To maintain uniformity, as far as content is concerned, in this introduction the following rules with regard to form have been adopted.

The title page of the survey report should specifically state the line manufactured, or the type of work carried on, followed by the name of the concern, street, number and location. The name of the officer making the survey and the date on which it is made must also appear on the title page.

The following page should contain the index and a summary of the number of men who may be placed for training, specified by departments and occupations, as well as the qualifications, physical, educational and industrial, which are necessary in order to obtain the full benefit from the training offered by this industry. After this there should be a full statement from the chief executives of the industry surveyed, indicating their attitude toward returned men and the co-operation which the Vocational Branch may expect from them when application is made to place certain disabled men in their factory for completion of training.

The next paragraph should contain general information regarding the surroundings of the factory (from the surveyor's own observation) and detailed observations regarding light, heat, ventilation, number of floors, composition, character of grounds, fire escapes, sanitation, whether or not midday meals may be obtained within the factory, or the distance which a worker may have to walk in order to get his luncheon; lodging, rate and character, rent in the locality (both house and room rent) factory societies, unions, amusements, recreations, and welfare bureaux which are controlled by the industry.

The next paragraph should contain a detailed report from observation giving the number and occupations of maimed workers already employed, comments regarding safety appliances on machinery of various types, any extra or additional hazards which may be noted, and an analysis of the employment, whether stable or unstable, and general impressions regarding the nationality of the greater percentage of the workers employed.

This information jotted down in note form at the time of the survey, is dictated to a stenographer in the District Vocational office later.

The body of the report is made up from the information on the industrial survey sheets A. B. and C. (which are illustrated on pages). The typewritten copy of the report must at all times follow the sequence of the headings suggested on these sheets.

Qualifications for an Industrial Surveyor.

A very careful selection must be made of the individuals to be trained as industrial surveyors. One of the most important qualifications for this work is a convincing personality. In interviewing the highest executives of large industrial concerns it is necessary at the outset to gain their interest and to convince them of the soundness of the aims of this work. They must be made to understand that the objects of it are constructive in every case, and never will be destructive or detrimental to their interests. They must be assured that all information is absolutely confidential. The industrial surveyor must also be a man to inspire confidence. Business secrets and processes are, and must be, as jealously guarded by each of the industrial survey representatives as though the concern being surveyed were his own. A verbal guarantee is given to owners and managers of concerns that the information obtained shall not be printed or so placed that others than those who are dealing directly with the problem of re-training disabled soldiers, will have an opportunity of analysing or digesting it. Undoubtedly, this fact has had a great deal to do with the continued co-operation and assistance given to us by all manufacturers and employers of labour whom we have interviewed.

In our experience the most successful industrial surveyors have been men who have had university training in engineering, combined with actual experience, and who have later worked for several years at various forms of industry to earn their own living and have shown suitable progress in the particular field chosen. These men are enthusiastic, adaptable, dependable, and wide awake, and they believe that the industries offer the widest opportunities for the final training of men who, on account of disability, must choose a vocation for earning a livelihood. All the industrial surveyors are returned soldiers.

It is gratifying to note that after one and a half years of this investigation work, at least ninety-seven (97%) per cent of the manufacturers who have been interviewed, have shown keen interest in the project, and have given their unbiased opinions, and many times very helpful suggestions which have been introduced into our training schemes.

At the time of making this report, in December 1918, every province in the Dominion had its industrial survey representatives who were gathering first hand information from almost every walk of life wherein returned soldiers would be absorbed, and reports of 993 investigations have been sent in to Ottawa. Some of these reports which were made of the larger manufacturing industries embrace an analysis of six or seven thousand workers. Other reports are of much smaller volume but contain vital information.

Copies of all industrial surveys are forwarded to the central office in the Vocational Branch, at Ottawa, where they are carefully read, commented upon, contents analysed, tabulated, card indexed, and studies made from them, of vital importance, which have a direct bearing on the work, when coming from one unit and disbursed to the others. In other words, it acts as a service branch in a small way. Constant access is made to these surveys for the purpose of analysis when comparing course outlines in the various units, and in establishing equipment in a school.

These surveys are also carefully indexed and filed in the district office, and the interviewers are required to keep themselves posted on the contents of these files. The information in them is also classified on card indexes under occupa-

tions. If an interviewer or training board wishes information in regard to storage battery repairing the card will show the number of openings in that occupation and the surveys of plants where it can be found. If a disabled soldier has before the war worked at a heavy occupation in a piano factory, the interviewer will call for the survey of the piano factory in which the man has worked, and, in consultation with the man, endeavour to select some lighter occupation in the factory for which the man may be trained.

In order to make these surveys most useful it has been found that the interviewers, industrial survey officers, employment officers and training inspectors, should be interchanged from time to time. In some of the smaller centres the industrial surveyor or training inspector places the graduate in positions, but this is not found possible in the larger units. These men should work very closely together and make their work interlock with the training conducted in the schools.

Among the "A" group of surveys the following are selected as examples of industries surveyed: manufacture of aeroplanes, aluminum ware, adding machines, agricultural implements; particulars for garage workers, amount of capital necessary to start a garage in a small town, business connections, agencies, distribution, remuneration to expect from this class of work; manufacture of automobile tops and bodies, manufacture and repair of automobile radiators; installation and care of automatic telephones; particulars and training necessary for assayer or chemist, particularly applied to the mining regions of Northern Ontario and British Columbia; apiary or bee-keeping, what a man should know and what he should possess, and what his remuneration would be from keeping bees for a living; asbestos and mineral wool pipe covering and its uses; manufacture of air brakes and air motors; manufacture of axes and lumber tools; opportunities in advertising, poster work, circulating information for a zone, show card writing, window decorating, methods of training.

In the "B" group such examples as Boot and Shoe manufacturing, surgical boots as a special line of hand boot and shoe repairing; manufacture of beds and mattresses; bicycle repairing; baby carriage manufacture; brush manufacturing; bread and pastry and confectionery; manufacture of blinds and blind cloth; wooden boxes; batteries and battery parts; steel bridges; steam boilers and engines; book-binding and publishing; button manufacture; bank clerks brewing and malting; baskets and chairs (reed) Motor boats; barrels; billiard tables and phonographs.

In the "C" group a few industries selected are:—manufacture of carpets and rugs; corsets and brassieres; can making, copper mining and smelting; carriage building; cigars and tobbacco; coal mining; club management; coal tar products; cleaning and dying; cables for telegraph work; cutlery; manufacture of railway cars; coal dock operation; freight handling; cabinet making; cash register manufacture; clothing (men's and boys' wholesale), coffee roasting and tea blending; cameras and kodaks and supplies; cotton manufacture.

Through this work an almost endless number of new occupations have been discovered for disabled men. At one time it was thought that there were very few occupations suitable to the disabled but it has been found that in nearly every industry there are many things at which a handicapped man can earn the full going wage in competition with able bodied man.

The results of training in industry, have been very gratifying. At the end of December 1918, there were 2285 retraining graduates who had received their training through the Department of Soldiers' Civil Re-Establishment. Of this number 581 or 25% had received some part of their training directly in an industry or commercial establishment, 304 had received their training directly in industry because it was found impracticable to establish courses in schools to give this particular kind of training; the remaining 227 had received the final stages of their training in industry after attending school for some months. This latter method is considered the best because it gives the disabled man an

opportunity of expert guidance, personal supervision and encouragement during the earlier stages of his training, which sometimes overcomes many difficulties.

After a certain period has elapsed he becomes confident and feels as though he were capable of grappling with conditions outside. At this period the work of the industrial survey department comes into its own, in so much that the placement officers of the Vocational Branch in each city or town have information from the industrial survey representatives telling them where it is possible to place a man with a certain disability, in the particular line which he has chosen. It is then the duty of the placement officer to bring the disabled soldier in contact with the employer or manufacturer with whom he is to continue his training until its completion.

On page 16 will be found a table showing the number of men who had been trained, or were taking training, in industries on 31st December, 1918. The proportion of the men taking training in industries and the men taking training in schools is increasing very rapidly. At the end of the Chapter will also be found a typical survey of a brass factory showing all the occupations to be found there, just as the survey comes into the office for filing.

A later development of this survey work is the drawing up of a general statement in regard to each group industry for the information of the Information and Service Branch of the Department which looks after the employment of able bodied soldiers. Each industry has to be treated separately—for instance the Vocational Branch is drawing up statements in regard to the shoe industry and harness manufacturing, railroad car repairing, electrical manufacturing, etc. These studies go into all the various occupations taken up, the hours, wages, labour and social conditions, etc. and will be published in book form. These handbooks will be turned over to the employment officers of the Information and Service Branch to assist them in finding employment for able bodied soldiers.

At the end of the chapter will be found a typical study of the shoe industry.

Statement of men trained, or training, in industrial establishments, December 31, 1918.

Units.	Allocation of Men Numerically.					
	Commenced.	Completed.	Discontinued.	Suspended.	Current.	No. of Surveys.
A.—Quebec	200	117	32	5	46	22
B.—Nova Scotia	47	18	4	4	21	29
C.—E. Ontario	43	21	3	0	19	
D.—C. Ontario	542	269	73	9	191	224
F.—W. Ontario	104	44	9	2	49	42
G.—Manitoba	53	29	7	3	14	89
H.—Saskatchewan	46	22	7	0	17	
I.—Calgary	38	16	10	2	10	137
J.—British Columbia	101	41	9	9	42	271
K.—New Brunswick	9	4	0	0	5	
Totals	1,183	581	154	34	414	814

Sheet A.

Military Hospitals Commission,
Vocational Branch,
22 Vittoria Street, Ottawa.

.....19.....

Industrial Survey for determining the openings for training disabled soldiers in industries.

City.....Unit.....
Firm Name.....
Street.....
Manufacturing.....
General Manager.....
Treasurer.....
Supt.....
Foreman.....Dept.....Section Sheets.....
.....
.....
.....
.....Vocational Officer. .....Investigator.
Easiest way to reach Factory.....
.....

M.H.C. Form 150.

Sheet B.

Division of Labour, Nature of Job. Classification of Grades in Various Divisions of Labour and permanency of employment taken from the Pay Roll and Information obtained from the Chief Officers of the Concern.

Div. of Labour.....Foreman.....
No. employed.....Disabled workers.....
Rate per hour or day.....Hours worked.....
First class.....Second class.....
Nature of job.....
.....
.....
Training needed.....Time to train.....
.....Could place.....
How acquired.....
Work most closely related.....
.....
Advanced from.....Advanced to.....
Experience needed.....
.....
Tools used.....
.....
Could a start be made in a school.....
Education given in school.....
.....
Equipment for school.....
.....
.....
.....

M.H.C. Form 151. (Date of Survey). Investigator.

Sheet C.

Military Hospitals Commission,
Vocational Branch,
22 Vittoria Street, Ottawa.

.....19.....

General class of disability.....Could do this work having .....
Lung wounds.....
Lung diseases.....
Head.....
Neck.....
Ear.....
Eye .....
Shell shock.....
Hernia.....
General Debility.....
Abdomen.....
Alimentary canal.....
Kidney.....
Skin.....
Miscellaneous.....
Leg.....
Toes.....
Arms.....
.....

M.H.C. Form 152.

List of Disabilities.

Lung Wounds—
- Gun shot wound, lungs.
- Loss of lung tissue, one side.
- Loss of lung tissue, both sides.
- Gun shot wound, chest.
- Collapse of lung—Lower lobes.

Lung Diseases—
- Asthma.
- Bronchitis.
- Asthma caused by gas.
- Bronchitis, caused by gas.
- Lung expansion.
- Debility following pleurisy.
- Tuberculosis.
- Pulmonary tuberculosis.

Head—
- Gun shot wound, head.
- Dizziness.
- Faintness.
- Gun shot wound of skull.
- Gun shot wound of head, causing impairment of speech.
- Partial stiffening of jaw.
- Gun shot wound through cheek.

Neck—
- Shrapnel wound, side of neck.
- Limitation of movement of head.
- Stiffness of neck.
- Gun shot wound, side of neck.

Ear—
- Deafness, both ears.
- Gun shot wound in ear.
- Deafness, one ear.
- Slight deafness.
- Ear nerve deafness.
- Concussion, deafness.

Alimentary—Canal—
- Constipation.
- Gastritis.
- Indigestion.

Kidney—
- Weakness of back.
- Colic caused by stone in kidney.

Skin—
- Intractable skin disease.
- Boils.
- Chronic eczema.

Miscellaneous—
- Tubercular spine.
- Stiffness of back.
- G.S.W. hip.
- Limitation of movement of hip.
- Rheumatism.
- Rheumatic fever.
- Muscular fever.
- Muscular and articular rheumatism.
- Lumbago.
- Weakness of back.
- Pain when stooping.
- Pain in back.

Eye—
- Total blindness.
- Loss of one eye.
- Gun shot wound, eyes.
- Blindness, one eye.
- Defective vision.
- Eye taken out.
- Diminished vision of eye.
- Tendency to double vision.
- Detachment of retina of eye.
- Partial blindness.
- Ulcer in eye.

Shell Shock—
- Nervousness.
- Headaches.
- Dreams.
- Hesitant speech.
- Stammering.
- Loss of memory.
- Insomnia.
- Concussion symptoms.
- Inability to stand or walk freely.
- Momentary mutism.
- Irritable heart.
- Vomiting attacks.
- Erratic and depressed.
- Nerve deafness, resulting from shell shock.

Hernia (Rupture)—
- Operation for appendicitis.
- Chronic pleurisy.
- Double hernia.
- Post operation for hernia.

General Debility—
- Frost bite.
- Epilepsy.

List of Disabilities.

Abdomen—
- Abdominal aperative wound.
- Gun shot wound, abdomen.
- Gun shot wound, injury to muscles of back.
- Lumbago.
- Fracture and injury to back.
- Perforated stomach, result of gas.

Toes—
- Amputation of toes.
- Gun shot wound in toes.
- Hammer toes.

Arms—
- Amputation of arms.
- Amputation of forearms.
- Limited flexion of elbow joints.
- Disarticulation of arm or shoulder.
- Partial paralysis of arm.
- Ankylosis of shoulder and elbow.
- Limitation of movements of arm.
- Limitation of movement of elbow.
- Ankylosis of wrist.
- Wrist drop.
- Destruction of wrist joint.
- Destruction of wrist bones.
- Loss of movement of wrist.
- Limited movement of wrist.
- Fracture of wrist.
- Amputation of fingers.
- Limitation of movement of fingers.
- Loss of muscles.

Leg—
- Amputation, leg, thigh.
- Amputation, leg near hip.
- Disarticulation of leg.
- Amputation of leg above knee.
- Amputation of leg below knee.
- Amputation of thigh of lower third.
- Shortening of leg.
- Gun shot wound, leg.
- Fracture of leg bone.
- Displacement of bone.
- Fallen arches of foot.
- Myalgia in legs (species of rheumatic pains).
- Mal-union of tibia.
- Compound fracture.
- Loss of muscle tissue.
- Loss of muscle substance.
- Weakness and pain in leg.
- Pain in leg when walking.
- Numbness of thigh.
- Limited backward flexion of leg, preventing heel being brought to ground.
- Painful scars and shrapnel wounds.
- Gun shot wound, calf of leg.
- Complete loss of power of extension in foot, due to loss of tissue and adherent scar.
- Frequent knee locks.
- Dislocation of knee.
- Weak knee joint.
- Limitation of movement in knee.
- G.S.W. in knee.
- Stiffness in knee.
- G.S.W. in ankle.
- Limitation of ankle movements.
- Partial fixation on ankle caused by gun shot wound.
- Bayonet wound in ankle.
- Fracture of ankle.
- Varicose veins due to service.
- Foot drop.
- Ankylosis of foot.
- Inverted foot.
- Paralysis of foot.
- G.S.W. in foot.
- Loss of flexion of foot.
- Limitation of foot movements.
- Lameness.
- Flat feet.
- Trench feet.
- Pain in ball of foot.
- Painful and swelling feet.
- Bunions.

Survey of a brass manufacturing company, in Canada.

SUITABLE MEN COULD BE PLACED FOR TRAINING TO BECOME

SUMMARY.

Product.—Brass fittings, valves, lead pipes, and plumbing supplies.

Pay.—40 cents to 50 cents per hour. There is no piece work done in this shop.

Hours.—9 hour day. 49½ hour week.

Disabilities.—Men suffering from certain disabilities of the lungs, ear, eyes, head, abdomen, and from shell shock could be placed for training with this firm to become:

Brass Polishers.
Lathe Operators.
Core Makers.

Comments.

The General Manager and Superintendent of this Company were most enthusiastic in their efforts to assist the Survey Division of the Vocational Branch. They expressed a willingness to co-operate and gave evidence of a feeling of responsibility as manufacturers and employers to do all in their power to assist in the re-education of Disabled Soldiers.

The Company also has an Eastern Factory, also warerooms in the East and West. As well as manufacturing brass fittings, lead pipe and lead fittings, traps, tanks, etc., they buy and sell all manner of porcelain and enamelware used in the plumbing trade. Previously the company manufactured circular and band saws for mills, but have lately discontinued the manufacture of that line, concentrating their efforts upon supplies for the plumbing trade.

The factory is modern, light and airy. The working conditions are good. The hours are from 7.30 A. M. to 5.30 P.M., Saturdays 7.30 A. M. to 12.00 Noon, making a nine hour day and 49½ hour week.

The Company employ 75 hands at this date in their plant. Normally they have a staff of 125 men in their factory.

The factory is 100 feet by 150 feet, five storeys and basement, making 90,000 square feet of available floor space. The Superintendent drew the representative's attention to the fact that an employee, who was with the firm and left in 1914 with the first contingent for overseas returned, and is running a monitor lathe. He had been severely wounded in the head by shrapnel, and it was a question among the medical officers as to whether a plate would have to be used to replace part of the skull. He had been absent two days since returning and still felt the effects of his severe wounds, but was able to continue at his former occupation on the lathe. He also received a gunshot wound in the leg, but claims he does not notice any ill effects from that in spite of the fact that he is standing all day. His employers are quite satisfied with his work. He was previously a sub-foreman.

The Superintendent remarked that the work was steady and that the pay received by their machinists, polishers and core makers was high in comparison with factories in different lines of trade which furnished steady work.

Division of Labor.

BRASS FOUNDRY.

Disabilities for Re-Education.—One opportunity exists for a disabled man to learn core-making.

Number employed.—Eleven men.

Disabled Workers.—No disabled men were employed in the Brass Foundry at the time this Survey was made.

Pay.—50 cents per hour.

Hours.—9 hour day. 49½ hour week.

Nature of the Work.—The foundry is built for the purpose and, high ceilings allow any gas and smoke present to rise. The air is remarkably good for a foundry.

The moulders take the pattern of the parts of valves and fittings to be produced and make the impressions in moulding sand ready to receive the molten brass. They work at the bench in this shop on account of the fact that nearly all the pieces moulded are small. In spite of the fact that the tools are light as well as the part to be dealt with, the Superintendent expressed the opinion that the handling of the flasks of sand, sometimes six at a time, would make it difficult for a man, other than a man with fairly robust physique to perform the work in an efficient manner. The weights handled approximate 80 pounds.

Core-making is much lighter work than moulding. The Superintendent agreed that many disabled men who could not return to more active occupations could make a good living at core-making.

Core-making supplements moulding. It deals with the construction of separate shapes in sand which form holes, cavities or pockets in the castings. Such shapes are called cores. They are held firmly in position by the sand of the mould itself. The whole detail of core-making is so different from moulding that it is a distinct trade. A trade, however, that is generally considered a stepping stone to that of moulding.

The moulding sand used is damp and contains some binding material such as flour, glue, linseed oil, or resin. It is shaped in various ways. The cores under process of manufacture in this plant were being formed in brass core boxes. There were cores for $\frac{3}{4}$ inch brass valves which would later be put in pickle for cleaning, smoothing and nickel plating. The coremaker tamps the sand into place, makes proper provision for minute hole to carry off the gases formed in moulding. He places the mould on a core plate, which is a flat iron plate on which green cores are placed for baking. The cores are baked in an oven by a quick heat, and are then ready for the moulder to put into place.

Some long cores are made in two pieces to prevent breakage and the pieces are made to adhere before they are baked.

The Coremakers were using core boxes less than two-foot long, fill in the sand by hand and the top is levelled off by a flat-steel, resembling a ruler known in the trade as a "Striker." The working men were standing up, but some of the work could be done while seated.

There were no power machines in the foundry. A battery of eight crucible furnaces was seen at one end of the department. They were sunk into the ground, so that the covers were on a level with the floor. No noise of any air blast could be heard. The core-makers benches are at the other end of the room, sixty feet away.

The work is carried on steadily. No shut down occurs during the summer months as in many foundries. One feature may be taken into account, viz., that brass moulding and iron moulding are very similar, and that a man who is familiar with the one can quickly learn the other. The difference is that with brass more allowance must be made for expansion, and finer sand is used. Molten brass flows more readily than molten iron.

Training needed.—Six months training in the brass foundry working alongside a coremaker should make a man fairly proficient, and he could then make the simpler cores, though it is doubtful if the average man could make the more intricate cores in a satisfactory manner in that time.

A feature of the training must be noted, that is that the shaping of the core does not entail the consumption of raw material and a man may practice making core after core without any material loss, and only the man's time need be taken into consideration.

Could place.—One suitable man could be taken in to learn the trade of "Coremaker".

Work most closely related.—Work that includes a knowledge of the weights of metals particularly of brass in a molten state would have a relative bearing upon coremaking. Coppersmiths, tinsmiths, blacksmiths, boiler makers, machinists, etc. could likely learn this line as a vocation if their disabilities were such as to prevent them from returning to their former vocation.

Tools used.—The coremakers use core boxes, core plates, sand shovel, riddle or sieve, soft brush, strike bellows, trowel, vent wires, slickers, calipers, cutting nippers.

Experience needed.—It cannot be said that any previous experience is necessary, though a familiarity with metals would be an assistance.

Could a start be made in school?—If a course in Foundry Practice were available the workman could be assisted by such a course.

Education necessary.—The education necessary to engage in Coremaking would not require to be above elementary.

DISABILITIES.

Lung wounds and lungs diseases.—At such times as the pouring of metal was in progress there might be enough devitiated air and fumes present to cause discomfort to a workman suffering through lung wounds or disease. The actual pouring occupies a small percentage of the time and unless the case were chronic, it is unlikely that the situation would prove injurious.

Head.—A man might engage in coremaking if he were handicapped by occasional spells of faintness or dizziness. Such an attack could scarcely result in any injury other than such as would be received anywhere else, in falling.

Neck.—The muscles of the neck were being used continuously by the coremakers in the shop, but a stiffness of the neck would not entirely eleminate the possibility of a man engaging in the work.

Ear.—Partial hearing or one good ear would be sufficient to carry on the work as a coremaker. Total deafness would be a handicap, but once learned there is nothing in the job that a deaf man could not perform in an efficient manner.

Eye.—It is not essential that the sight of the workman's eyes be up to a normal standard. There is nothing fine about cores as there is in jewellery. If the eyesight were fair and outlines could be easily distinguished the workman could learn to make cores.

Shell shock.—The only deterrent factor in shell shock as applied to coremaking would be an unsteady hand. Otherwise the general circumstances usually surrounding this trade would be beneficial to such a case.

Hernia.—The cores as handled in this plant are small and a coremaker is not called upon to lift more than 25 pounds. The workman would have to be able to stand a large part of the time.

Abdomen.—A contraction of the muscles of the abdomen occurs when pressing down upon the sand in the core boxes. The effort is slight, but repeated continually while making cores.

Kidney.—It was not thought that the contraction of the muscles of the back was such as to cause any trouble with weakened kidneys.

Skin.—The sand dealt with is in a damp condition, and no dust arises from it while being manipulated. It would be a very unusual form of skin disease that would be affected by the small amount of gas and odors common to the foundry.

Rheumatism.—There is dampness present but rheumatism is not a common complaint amongst the workman and it is not thought that any such trouble might be anticipated.

Leg.—The workman does almost all his work while standing. There is a certain amount of moving about and a single amputation case would find the work rather strenuous.

Arms and hands.—Two arms would be needed, but the loss of one or two fingers would not prove a great handicap. No great degree of strength is required in the arms.

BRASS FINISHING DEPARTMENT.

Possibilities for Re-Education.—There is an opportunity to learn brass lathe work on valves, elbows, tape, shower bath fittings, etc. The Superintendent directs the work and has a sub-foreman in charge when he is not there in person.

Number employed.—Thirty-seven.

Disabled workers.—In this department the returned man previously mentioned who had gunshot wounds in the head and leg, was working a monitor lathe turning up brass collars. His work was quite satisfactory.

At another turret lathe a workman was doing efficient work who was deformed in the legs, and required a platform to stand on to bring him to the proper height to handle the work.

Pay.—Pay ranges in the department from 40 cents an hour on speed lathes to 61½ cents an hour for a tool maker, averaging 47½ cents an hour.

Hours.—7.30 a. m. to 5.30 p. m. Nine hour day. 49½ hour week.

Nature of job.—In the shop there are six Fox lathes. Eight speed lathes, eight monitor lathes, two machines lathes, one tool lathe, one planer, one circular metal saw. Small brass fittings, valves, taps, couplings, and cocks are received from the foundry in the rough state. Here they are worked up in lathes, elbows are tapped out and threads are cut on taps, unions and all the various kinds of brass fittings that are common to the plumbing business. The lathe that is used most is the Monitor, the turret is equipped with a horizontal circular plate containing six chucks. These chucks hold different tools. The plate can be revolved and the different tools brought into contact with the work in succession.

Capstan lathes.—The revolving of the turret and the feeding up of the tool is done with the right hand, operating a four spoked wheel at the height of the waist, the left hand controls the starting gear. The part is released by both hands and a new part inserted and clamped in place. It must be secure, otherwise when reamers or dies meet blowholes or shot in the castings serious results may follow, on account of the speed of the lathe. Effort is required with both hands to fasten the work into place.

Speed Lathes.—The speed lathes resemble rather closely the wood turning lathe. The work is revolved between two spindles at a speed of about 800 revolutions per minute. The speed being regulated by the workman and depends on the diameter of the part being worked up. The workman stands in front of the lathe, adjusts the speed and starts it with the left hand and placing a hand tool upon a rest, brings the cutting edge into contact with the revolving brass. Both hands are used, the tool being held very firmly. There is a tension of muscles of the shoulders and back as the tool is pressed against the revolving work. A fitting was being tapered to prepare it for sweating into a pipe. This was not close work, but some of the work would necessitate the use of calipers. The speed lathes are much used in assembling.

The tool and machine lathes were used in the shop only on the equipment, tools, etc., for the other machines. No general machine work is done.

Fox turret Lathe.—The work done on the Fox turret lathe includes valve bonnets, stems, caps, and all the heavier fittings. The workman does the starting and stopping with the left hand and reaches for the cutting tool with the right, which on the Fox lathes is held in a pivoted arm at the back of the lathe and is brought forward and guided either for inside or outside threads or cuts, and is raised with the right hand back into place after the cut is made. The Fox lathe also has a turret arrangement. The feed is slower and is actuated by the right hand.

On account of the constant repetition in operations the turret or monitor lathe is the one most in use.

Bench work.—Bench work is done in assembling various parts of brass fittings such as float valves. The workman uses files, mallet, hammer, etc., In this shop the workman does not need to be able to read drawings, and very little real close work is done. The exception might be in ground cocks. Those must fit exactly. They are tested in a hydraulic machine.

The workman attaches them to a water feed pipe, with the left hand he starts the pump. He watches a pressure dial and if no leak shows at 75 pounds pressure he shuts off the power, disconnects the valve and repeats the operation.

Training Needed:—Any course established for a training in Machine Shop practice as applied to brass work should specialize in the training of men in quick work on the turret lathes.

Time to Train.—Six months should give an intelligent man a good working knowlegde of Brass Finishing.

Could Place.—One suitable man could be trained in Brass Finishing in this shop.

Tools Used.—The machinists use few if any tools other than the adjusting wrenches, calipers, and taps, and taps and dies on the machines. Where assembling is done, files mallets, hammers and monkey wrenches are used.

Work most closely Related.—A wood turner could soon learn brass finishing. Experience on any power machines would be of service.

Disabilities.

Lung wounds and Lung Diseases.—The only fact that needs to be taken into consideration is the possibility that continually bending over the lathe would have a cramping effect on the lungs. The working conditions are good. No gas, smoke or dust is present. The speed lathes might prove too strenuous for a man whose lungs had been severely hurt.

Head.—On account of the speed of the lathes in a brass shop a man should have normal mentality. Spells of faintness make it very unsafe to attempt this work.

Neck.—Limited flexion of the neck to look sideways and down at the clutch lever and work is necessary.

Ear.—Partial deafness would not be deterrent upon a man following this line of work.

Shell Shock.—Shell Shock cases that affected a man in any way would debar. Mutism would not be a serious drawback.

Hernia.—The brass parts to be handled seldom weigh more than three to four pounds, mostly less than a pound.

Abdomen, Alimentary Canal, Kidneys.—No opportunity offers for sitting and with the exception of the speed lathe, no great tension of the muscles is necessary.

Skin.—No feature is present that would have any affect on the skin.

Leg.—The disabled workman in this department, mentioned under a different heading, suffered from the effects of a gunshot wound in the leg, but this did not prevent him from standing at the work. It is unlikely that severe cases could stand continuously. No foot levers were seen to be operated.

Hands and Arms.—The arms must be fairly normal and the hands supple and quick. Speed is an important factor in brass finishing.

Brass polishing department.

The Superintendent looks after this Department personally, in co-operation with a sub-foreman.

No. Employed.—Eight.

Disabled workers.—One of the older workmen was suffering from lung trouble. He was unable to work steadily at the vocation.

Pay.—Polishers receive 47½ to 50c. depending upon their proficiency. One handyman was receiving $3.25 per day.

Hours worked.—9 hour day. 49½ hour week.

First Class.—7 Journeymen Brass Polishers.

Second Class.—1 Handyman.

Nature of Job.—After the brass parts, such as taps, valves, etc., are finished up in the machine room, they are brought to the Polishing Department. The machines used in polishing are similar to emery machines used in polishing

are similar to emery grinders except that the buffing wheel, instead of being emery is built up of layers of cotton an inch thick. The buffing wheel has a diameter of twelve inches, and is run at a speed of 2,200 revolutions per minute. The workman stands in front of the machine, and places a cake of abrasive mixture against the revolving buffing wheel. It was noticed, that as this was done small particles of this abrasive were inclined to fly. The workman then presses the part to be polished against the revolving wheel, manipulating it until the entire surface receives the required polish.

On some of the smaller parts, such as tank handles, and other light articles, the workman is able to sit 50% of the time. At the time this survey was being made, no such articles were being polished, and the men were all standing at the work. The Superintendent showed how easily the workman could meet with serious accidents. Taking a brass elbow having an internal diameter of 1½ inches, he showed how by putting the index fingers in the two ends and holding the work against the Buffing wheel serious accidents had happened. The inside angle of the elbow, if pressed to heavily against the buffiing wheel would be inclined to jam, and be carried around with the wheel, tearing the workman's fingers. Apart from accidents happening in that manner there was no danger attached to the work. The work room adjoins the Department in which are the lathes. The place is light and airy, and no particles of dust or abrasive were in the air, as they stated some times occured.

Speed is the essence of this work. The man must have nimble fingers to becomes thoroughly proficient. Some men who have attempted to learn brass finishing have failed, for this reason. The work is inclined to be rather dirty. The preparations put on the Buffing Wheels for nickel polishing seemed to be of a plumage composition. No great effort is required to perform the work, but the workman must be able to take a firm grip on the article or it would be knocked out of his hand by the swiftly revolving wheel.

Training needed.—A man could learn Brass Polishing as carried on in this shop in four months. At the end of that time he should be able to make 47½c., if he could attain the required speed.

Could Place.—One suitable man could be placed for re-education in the Polishing Department.

Work most closely related.—Polishing work of any description, either on wood, silver, glass, etc., would have a relative bearing upon Brass Polishing.

Experience needed.—Experience needed would be gained in the Shop, and would cover the handling of all the different sizes, and shapes of brass and nickel parts manufactured by this factory.

Tools used.—The tools used by the Polishers are the wrenches necessary to change the Buffing Wheel when the old one is worn out. A stick of abrasive is also used.

Could a start be made in school.—The workman would be better able to learn and carry on the work if he were to start right in the plant rather than in any class, which might cover Brass Polishing.

Disabilities.

Lung Wounds and lung diseases.—It is claimed by the workman that the particles of abrasive used in Brass Polishing sometimes affect the lungs. Though no evidence of any dust in the air or oder of brass was present at the time the Survey was made, this may be the case.

Head.—The man should possess normal mentality to engage in the vocation of Brass Polishing on account of the danger from accidents from the rapidly revolving buffing wheels and belts.

Neck.—Flexion of the neck downwards, but neither to the right nor to the left is necessary.

Ear.—Partial hearing would not debar a man following this vocation when once learned. A totally deaf man could perform the work equally as well as a man with perfect hearing.

Eye.—It can be conservatively stated that normal eyesight is essential to Brass Polishing.

Shell Shock.—Some form of shell shock would not be objectionable such as mutism, and temporary lapse of memory. If workman were affected so that his hands were shaky it would likely detract from his ultimate proficiency.

Hernia.—Articles handled are exceedingly light. Little physical effort is called for at the machines.

Abdomen, Alimentary Canal and Kidneys.—The workman can so arrange his work that he may be sitting down and standing up alternately, and so find no irritation from the effects of these disabilities.

Kidneys.—It is necessary to bend forward a little while placing the part to be polished against the buffing wheel. It is not thought that this fact would have any injurious effect upon the kidneys.

Skin.—It is possible that the abrasive used would have an irritating effect upon skin trouble. This conjecture should not debar a man from making an attempt.

Leg.—The Superintendent was doubtful if any but cases of minor leg disabilities could successfully carry on Brass Polishing.

Hands and arms.—As mentioned under the heading "Nature of Job" the arms must be normal, the hands strong and the fingers nimble.

LEAD PIPE DEPARTMENT.

On account of the unhealthy nature of the work and the weights of the materials handled, this department offers no possibilities for the re-education of the disabled men.

The process is as follows: The ingots of lead weighing 150 pounds are placed in a die in a Hydraulic Press. When pressure is put on, and lead is forced through a small opening, taking the form of lead pipe, the size being determined by the size of the hole in the die. As the lead pipe leaves the machine it is wound on drums, two feet in diameter, when the drum is full the lead pipe is slipped off and the process is continued.

SHIPPING ROOM.

The City Shipper and the Country shipper do the work required, with the assistance of a helper each. The helpers handle and assist in the loading of heavy baths, tanks and pipe. It is not a job suitable for a disabled man. The shippers must be sufficiently robust to handle this material also, though usually they look after the clerical end of the work. Orders are put up and packed. The shippers order from outside sources material on their orders that is not manufactured by the firm, and order from the factory such fittings as are manufactured in the plant. The shippers work is to fill these factory orders, and see that they are not unnecessarily delayed. Shippers must have an aptitude for system and commercial work.

The pay is from $14.00 to $17.00 a week.

PLATING DEPARTMENT.

Similarly to the Lead Pipe Department the work in the Plating Department is considered an unhealthy vocation. The fumes arising from the tanks containing the plating solutions are of a poisonous nature. The men employed showed the effects of the poison. They appeared to be very unhealthy and callow. One man is responsible for the technical end of the plating business. The helper that assists him is unskilled and draws less than labourers pay.

The system of plating carried on is the usual one viz., after being cleaned, and smoothed the brass parts are placed in the solution. Electric current is passed through the solution, and the articles take on a thin coating of the metal in the solution, either copper or nickle. Sulphuric acid is used to a considerable extent.

This branch of the business offers little possibilities for the re-education of disabled soldiers.

STOCK ROOM.

This department is under the direct supervision of the Superintendent.

Possibilities for Re-education.—A man could get an insight into the manner in which this Company keep track of their stock. There are over five hundred lines of brass fittings. There would not be sufficient work to keep one man engaged on small work alone. The pay is not large and the opportunity is hardly worth considering as a field for re-education, except in the case of a one-armed man who had the advantage of a substantial pension.

Number employed.—1 stock clerk, 2 helpers.

Disabled workers. –No disabled men were employed in this Department.

Pay.—$16.00 per week, $14.00 per week for helpers. These men receive pay for holidays.

Hours worked.—9 hour day, 49½ hour week.

Nature of Job.—These clerks attend to any persons in the plumbing trade, who call for material. They watch the bins where brass fittings are kept and see that the supply does not run short. They put in requisitions to the Superintendent for such supplies as are made in the factory and requisitions for purchase supplies from the buyer of the firm.

The men have to climb ladders to reach the upper tiers of bins. They collect the parts on order and by the time they reach the counter they are carrying perhaps fifty pounds of various iron and brass fittings.

DISABILITIES.

There are no factors present that would be necessary to take into consideration in regard to the lungs. Head: The memory should be normal. Shell Shock that affected the speech would debar, as the stock clerk occasionally has to meet outsiders in the plumbing trade at the sales counter. Legs: the man must be able to climb ladders and move about the stock-room. Arms: the man should have the use of one arm and be able to write. It would largely depend on the man whether or not he would be able to do the job satisfactorily to his employers if he had the use of only one arm.

BOOT AND SHOE MANUFACTURE.

There are at present but five types of boots and shoes ordinarily made.

1. The "Peg" shoe which is the cheapest type made.
2. The "Standard Screw" which is used in the Soles of the heaviest types of boots.
3. The "MacKay Sewed" which is made after the fashion established by Gordon MacKay in the year 1861.
4. The "Turn" shoe and light type of shoe which was invented centuries ago and which is still worn to a limited extent.
5. The "Goodyear Welt" which has been universally adopted as the highest type of foot-wear.

The Goodyear Welt Shoe from the state where it is merely "Leather and Thread, etc" to the completed product passes through one hundred and six different pairs of hands, and fifty-eight different machines are used, each performing accurately the various operations for which they are designed. It might

seem with so many details and specifications regarding materials and designs of many different lots of shoes in the process of manufacture, workers would become hopelessly entangled undergoing the same operations, but such is not the case. In a modern well organized Factory where an order is received, all details regarding samples to which the shoes have to conform are set down in the Order Book and each lot is given a number. This together with details regarding preparations are written upon tags, one for each two dozen shoes, which are sent to the Foreman of the upper cutting room, sole leather room and bottoming room, upon receipt of these tags the Foreman is able to figure out the amount and kind of leather, etc. required. These tags remain with the articles until finished, thus saving any confusion.

CLICKING DEPARTMENT.

In this clicking, or upper cutting room, there are benches with cutting boards. Cutting is done by hand, owing to the great variety of shoes made and the constantly changing fashions, which would make machine cutting very much more expensive. The cutters use patterns of cardboard with metal edges, which are laid upon the leather by the cutter, who then runs a small straight knife around the edges of the pattern cutting the leather to conform to it. There is in cutting by hand a tendency to cut away from the pattern or, through a slip of the knife, cut beyond the required limits. This is only mastered by constant practice. Leather often has defects in the skin which are not visible at first sight. These the cutter has to find before using his pattern, as there are sixteen different pieces or parts to a modern shoe upper. The cutter can easily use up the inferior leather upon the top. They use in cutting uppers, the Clicker Die Machine, which is very similar to that used by the hand workmen. Over it is a beam which can be swung either to right or left as desired and over any portion of the board. The skin to be cut is placed upon the board, the operator places a die of the design desired upon it, grasping the handle, which is a part of the swinging beam, over the die, and on downward pressure of the handle a clutch is engaged which brings the beam downward pressing the die through the leather. This accomplished, the beam automatically returns to its full height and remains there until the handle is again pressed.

UPPER STITCHING DEPARTMENT.

The assembled parts of uppers are here united by the stitchers upon machines of the type of the Singer Sewing Machine, which work very rapidly, and accurately. Then a skiving machine skives the edges where necessary to a bevell. A Cementing Machine and a Tipping Machine are then used by means of which the pieces of leather to be perforated are placed in a series of dies of various designs, which cut the perforations in the leather. Next is the duplex eyeletting machine.

SOLE LEATHER DEPARTMENT.

There are a number of various machines in this Department, large and small. The large Dieing out machine which cuts leather soles, etc., by pressure, heavy dies being used. The different shaped soles are being cut here, also the lifts for making heels and counters for stiffening the back of the shoe, against which the heel of the foot rests. After this operation some of the soles are rounded out on what is known as a Planet Rounding Machine. The out sole next passes to a heavy rolling machine, where it is subjected to tons of pressure between heavy rolls. This takes the place of the hammering which the hand shoe-maker used to cut his leather to bring the fibres together, and increase the wearing qualities. The sole next passes through a Splitting machine, which reduces it to an even thickness. The Goodyear Channeling Machine comes

next, it is a very intricate machine requiring skill in operating. It cuts a slit along the edge of the insole also a small channel along the surface. The lip which has been formed by the Channeling Machine is now turned up on the Goodyear lip Turning Machine, which prepares the work for the "Welt Sewing," a later stage. There is a Buffing Machine, Stripping Machine also Shank Reducing Machine, but they are simply necessary to the finish of the work.

LASTING DEPARTMENT.

The Ensign Lacing Machine is used which passes strong twine through the eyelets and instantly ties it automatically. This is done so that all parts of the shoe will be held in their normal position while being made. The spread of the Upper at the throat can be regulated perfectly when this machine is used. The various parts of the shoe now commence to come together. The Assembler places the toe box in position also the counter at the heel, and draws the upper over the last. To the bottom of this last the insole has already been tacked by means of the Insole Tacking Machine which drives tacks automatically. The Insole conforms exactly to the shape of the last. This last made of wood is of utmost importance for upon the last depends the shape of the shoe.

The workman after placing the last inside the shoe upper puts it on the spindle of the assembling machine, taking care that the seam at the heel is properly located. He presses a foot lever and a small tack is driven past to hold the upper in place. He then hands the spindle and last over to the Pulling Over Machine. This machine is very important, for, as the parts of the shoe upper have been cut to conform exactly to the shape of the last, it is necessary they should be correctly placed on the last to get the desired results. The pincers of this machine grasps the leather at different points on each side of the toe. The operator stands in a position where he can see when the Upper is in its exact position, when he presses a foot lever, the pincers close and draw the leather securely against the last. At this point the operation of the machine halts by moving different levers. The operator is able to adjust the shoe upper accurately so that each part lies in exactly the position intended when the shoe was designed. This done, the operator again presses a foot lever and the pincers move towards each other drawing the leather securely around the last and at the same time there are driven automatically two tacks on each side and one at the toe, which hold the upper securely in position. These tacks are driven only part way in, so that they may be removed later. The shoe is now ready for lasting. This is one of the most difficult and important parts of shoe making, for upon the success of this operation depends in a great measure the beauty and comfort of a shoe. The Consolidated Hand Method Welt Lasting Machine, which is used for this purpose, takes its name from the almost human way in which it performs this part of the work. It is wonderful to observe how evenly and tightly it draws the leather around the last. At each pull of the pincers a small tack driven part way in holds the edge of the upper exactly in place, so that in the finished shoe every part of the upper has been stretched, in all directions equally. It now passes to another lasting machine which lasts the toe and heel. This machine is called the "Bed Type". It is provided with a series of wipers for the toe and heel, which draw the leather simultaneously from all directions. There can be no wrinkles at the toe or heel of a shoe on which it is properly used. After the leather has been brought smoothly around the toe, it is held there by a small piece of tape fastened on each side of the toe and which is held securely in place by the surplus leather crimpled in at this point. The surplus leather crimpled in at the heel is forced smoothly down against the insole and held there by tacks, driven by a hand tool. In all lasting the tacks are driven only half way, except at the heel portion of the shoe where they are driven through the insole and clinched on the iron heel of the last. In making shoes other than the Goodyear Welt, with the exception of the Goodyear Turn Shoe, it is necessary to drive the

tacks right throught the insole and clinch them. The smooth interior of the shoe is one of the essential features of the Goodyear Welt process.

In the lasting operation there is naturally a surplus amount of leather left at the toe and sometimes around the sides of the shoe. This is removed on the Rex Upper Trimming Machine, in which a little knife cuts away the surplus portion of the leather very smoothly and evenly, simultaneously a small hammer operating in connection. The knife pares the leather smooth along the sides and toe of the shoe. The shoe then passes to the pounding machine in which the hammer pounds the leather and counter around the heel so that the stiff portion of the shoe conforms exactly to the shape of the last. The shoe is now ready to receive the welt, which is a narrow strip of leather that is sewed along the edge of the shoe, beginning where the heel is placed and ending at the same place upon the opposite side. This welt is sewn from the inside lip of the insole, so that the needle passes through the lip, upper and welt uniting the three securely, allowing the welt to protrude evenly along the edge. The needle in making this stitch does not go inside the shoe, but passes through only a portion of the insole leaving the inside perfectly smooth. This part of the work was one of the most difficult and laborious tasks in shoe-making, being done entirely by hand, the drawing of each stitch depending upon the strength and mood of workman. With different operators stitches were oftentimes of different lengths. The Goodyear Welt Sewing Machine does this work quickly and accurately. All the lasting tacks, as well as the tacks which held the insole to the last, have now been withdrawn and the inside of the shoe is left perfectly smooth. The surplus portion of the lip, upper and welt which protrude beyond the stitches made by the Goodyear Welt Machine are next trimmed off by the Goodyear Inseam Trimming Machine, in which a revolving cupshaped knife does the work very efficiently.

The shoe now passes to the Welt Beater in which a little hammer vibrating very rapidly beats the welt so that it stands out evenly from the side of the shoe. The workman now tacks the shank in place and fills the bottom spac left between the welt with ground cork and rubber cement. The insole and welt now receive a coat of cement which is contained in an airtight tank and is applied by means of a revolving brush which takes its supply of cement from a can as required. The heavy outsole also receives attention. The flesh side, the side which is placed next the welt, has also had a coat of cement. After these have dried slightly they pass to the bottoming Department.

BOTTOMING DEPARTMENT.

The lasted parts from the lasting Department and parts from the Sole Leather Department now reach this department for the final processes.

The Twin Sole Laying Machine is the first to proceed here. In this machine there is a Rubber Pad or Mould which has been made to confrom to the curve in the Sole of the shoe. The last is placed upon the spindle which is suspended from the machine over the rubber mould, the outsole having been previously pressed against the bottom of the shoe. The operator by pressing a foot lever causes this arm to descend, forcing the shoe down into the mould so that every portion of the sole is pressed against the bottom of the shoe and welt. They remain here long enough to allow the cement to properly set. The operator repeats this operation upon a duplicate part of this machine leaving one shoe under pressure while he is preparing another.

The next operation is the trimming of the sole and welt so that they will protrude a uniform distance from the edge of the shoe. This is done by the Goodyear Rough Rounding Machine, which gauges the distance exactly from the edge of the last. The operator can change the width at will. This being often necessary owing to the edge being considerably reduced in the shank of the shoe. The surplus portion of the leather is now trimmed off on the heel-seat

Rounding Machine and the Channel cut by the knife on the Rough Rounding Machine, is turned up so that it leaves the channel opening machine in which a little wheel turning very rapidly lays the lip smoothly back.

The outsole is now sewed to the welt. This is done on the Goodyear Outsole Rapid Lockstitch Machine. This is very similar in operating to the Goodyear Welt Sewing Machine. The lockstitch formed by this machine is a very durable one. A thoroughly waxed thread is used. It holds the outsole securely in place even after the connecting stitches have been worn off. This is one of the most important machines in shoe making process.

The Channel Cementing Machine is again called into operation for the purpose of coating with cement the inside of the Channel in which the stitch has been made. A special brush with guard is used for this purpose and the operation is very quickly performed. After this cement has been allowed to set a sufficient length of time, the channel lip which has been laid back against the sole is again forced into its former position and held securely in place by rubber cement. This work is done by the Channel Laying Machine which is a rapidly revolving wheel provided with a peculiar arrangement of flanges forcing the lip back into its place, securely hiding the stitches from observation on this portion of the shoe. The next operation is that of levelling. This is done by the Automatic Sole Levelling Machine. This is a double machine provided with two spindles on one of which the operator places a shoe to be levelled. It is securely held by the spindle and a toe rest. On the operator pressing a foot lever the shoe passes automatically beneath a vibrating roll under heavy pressure. This roll moves forward with a vibrating motion over the sole of the shoe down into the shank, passes back again to the toe and then cants to the right, repeating the operation on that side of the shoe returning to the toe and canting to the left, repeating the operation on that side of the shoe, after which the shoe automatically drops forward and is relieved from pressure. This rolling motion removes every possibility of there being any unevenness in the bottom of the shoe. While one shoe is under pressure, the operator is preparing a second one for the operation.

The shoe then passes to the Heeling Machines. First to the Automatic Heel Loading and Attaching Machine which fastens the Heel to the shoe. Then to the Slugging Machine where small metal sluggs are driven in to protect the heel.

The shoe next passes to the Heel Trimming Machine which trims the rough lifts of the heel to the desired shape.

It next passes to the Heel Breasting Machine which cuts the Breast of the Heel to the correct angle and curve. The shoe now passes to the Edge Trimming Machine which trims the edge of the outsoles smoothly.

Then to the Edge Setting Machine for finishing the edges. It next passes to the Heel Burnishing Machine which puts the finish to the shoe. It is now the finished product.

BOOTS AND SHOES.

1. Upper cutting.
2. Stitching machine operators.
3. Dieing out machine operators.
4. Planet Rounding machine operators.
5. Rolling machine operators.
6. Splitting machine operators.
7. Goodyear channelling machine operator.
8. Goodyear Lip Turning machine operator.
9. Buffing machine operators.
10. Stripping machine operators.
11. Shank Reducing machine operators.
12. McKay Channel opener.
13. McKay Channeller.
14. Heel Making machine operators.
15. Ensign Lacing machine operators.
16. Insole tacking machine operator.
17. Pulling over machine operators.

18. Consolidated hand method welt lasting machine operator.
19. Bed Type lasting machine operators.
20. Rex upper trimming machine operators.
21. Goodyear welt sewing machine operators.
22. Goodyear inseam trimming machine operator.
23. Welt beater machine operators.
24. Assembling.
25. Twin sole laying machine operators.
26. Goodyear rough rounding machine operator.
27. Goodyear outsole rapid lockstitch machine operator.
28. Channel cementing machine operators.
29. Channel laying machine operators.
30. Automatic sole levelling machine operator.
31. Automatic heel loading and attaching machine operator
32. Heel Trimming machine operators.
33. Heel breasting machine operators.
34. Edge trimming.
35. Setting machine operators.
36. Heel burnishing.
37. Turn work.
38. Preparing shoes for delivery.
39. Gemming machine operators.
40. Bed lasting machine operators.
41. Making surgical boots and shoes.
42. Repairing boots and shoes.

CHAPTER IX.

MEDICAL ASPECT OF INDUSTRIAL RE-TRAINING.

The Vocational Branch has a sufficient number of doctors detailed to it by the Unit Medical Director in each unit, to do such medical work as is required by the District Vocational Officer, except medical treatment. All medical treatment is taken care of by the Medical Branch of the Department.

The Vocational medical officers come under the Unit Medical Director for inspection, criticism and advice in regard to technical medical matters, and under the District Vocational Officers for administration.

The duties of the Vocational Medical Officer are:—

1. To advise the Department as to whether the handicapped soldier is eligible for training.
2. If he is eligible for training, to advise if from a medical standpoint he is likely to be able to carry on in the new occupation selected by him.
3. To advise the Department after the man has started training as to his continued suitability for the occupation he is learning.
4. To inspect men reporting sick during training and to send them to the Unit Medical Director for treatment if this is found necessary, and to inspect their places of training.
5. To undertake research work regarding the medical aspect of vocational training.

A moment's consideration of the above duties will show that it is not enough for the Vocational Medical Officer to be able to tabulate the gross and minute bodily injuries the man may have. It is not enough that he state the nature of an amputation, showing the results that have followed. It is not enough that he go exhaustively into the history of a man's nerve injuries. Experience has taught us that the Vocational Medical Officer must take into account the man's mental condition. The man may not know it himself, but there is a certain mental instability always present, a certain mental exhaustion which in the great majority of cases will eventually disappear, but it must be taken into consideration if the doctor is to give full justice to the returned soldier's case.

The ideal Vocational medical officer must not only know his medicine and surgery but he must have the happy faculty of sizing up a man from every angle. He must have a general working knowledge of various industries, and if he does not already possess this knowledge, he should acquire it by spending a considerable part of his time in visiting the various industries with the industrial surveyers and the inspectors in the factories. In addition to this he should be a man of decision, with a large amount of tact and human sympathy.

In all dealings of the Vocational Medical Officer with those under his care, a rule of first importance should be observed—all men should be treated with the delicacy, attention and consideration usually shown by the doctor to his patients. The Vocational Medical Officer should remember that he is no longer an officer dealing with soldiers under his command, but a physician dealing with particular cases which require special care and sympathy.

In regard to the duties of the Vocational Medical Officer, No. 1 is perhaps the most important. Care must be taken or great injustice may be done the applicant. The Vocational Medical Officer has the fullest information regarding the man and must be careful in accepting the opinions of others. In many instances officers writing out medical boards allow themselves to be unduly influenced by medical opinions of preceding boards. There is always a temptation to accept other men's opinions without certifying them, and thus errors may

be carried through successive boards and cause injustice to the applicant. The majority of cases are easily decided. A small percentage, however, are extremely difficult. Cases of Neurasthenia are perhaps the most difficult to decide, as there is nothing definite on which to base an opinion. Cases of Gassing are also hard to decide, as on physical examination one can frequently detect no signs of lung trouble yet the applicants are unable to do any heavy work on account of Dyspnoea on exertion.

If there is any doubt whatever as to the eligibility of an applicant, the course should be granted. In all cases the soldier should be given the benefit of the doubt. The last medical board is regarded by the Department not as a deciding factor as to the man's eligibility, but only as evidence in the case. Numerous cases come up where it is shown that men had disabilities when they enlisted, and although there is no mention on the medical boards of any treatment of these disabilities, in many cases there is circumstantial evidence that they may have been aggravated on service. For instance—Pte A. was a draughtsman before entering the Army; on his return with an amputation of the leg he applies for a course of training. It is evident that the leg amputation does not incapacitate him for his former occupation as draughtsman, but he informs the Vocational Medical Officer that he cannot continue as a draughtsman on account of his eyes being too weak. There is no record on his file showing treatment for his eyes. Examination by an oculist shows that the disability of the eyes was congenital. Further examination definitely establishes the fact that his eyes are now too weak for him to continue as a draughtsman. It is also found on inquiring from his former employer that he was carrying on as a draughtsman immediately before enlistment. Everything points to the fact that the weakness in his eyes was aggravated by service, notwitstanding the fact that his medical board does not show anything in this regard.

In cases where it can be shown that the disability existed before the war and that the man, owing to this disability, cannot continue in his previous occupation, the presumption is that the disability was aggravated by service, notwithstanding the fact that his medical board shows no history of aggravation.

In order to assist the Vocational Medical Officer in determining whether the applicant is eligible or not, he is always supplied with the last medical board, a detailed statement of the occupations the man has followed, the length of time spent in these occupations, the name of the firms with whom he was employed, his principal habits and recreations.

It has been suggested that in cases of obvious disabilities, the procuring of these last medical boards which in some cases involve a delay, is unnecessary, but it has been found by experience that while they are only evidence, they are of great value in assisting the doctor in coming to a decision. Men may apply for training with what might be called obvious disabilities. They state that their disabilities pre-dated enlistment, hence they are not eligible, but an examination of the last medical board may show that while these disabilities were not incurred on or aggravated by service, that there is some other condition which has been the result of service which renders them eligible.

For instance, one man had only one eye; he had lost the other prior to enlistment, but his disability was tuberculosis. Another man had but the thumb, first and second fingers of the left hand, a pre-war condition, while his condition was that of nephritis.

In these two cases the men applying for re-training would very likely apply on the grounds of their pre-war disability and would not be eligible, but an examination of the last medical board would show that they both have war disabilities which make them eligible, but which would likely not be discovered unless the last medical boards were available to the doctor. The obtaining of these last medical boards is, therefore, a protection to the man himself as well as the Department.

With regard to the actual physical examination of the man, little need be said. This examination is thorough. The man is received in an atmosphere untainted by officialdom, he is made to understand as soon as he meets the Vocational Medical Officer that he is talking to a man as human as himself, that his case will receive personal attention and that every opportunity will be afforded him at any time of interviewing the Vocational Medical Officer and placing any complaint he may have before him.

Other difficult cases arise, however, from not always understanding just what is required of a man physically or mentally in the work he followed before the war. To those unfamiliar with this work, it is usual to think of well defined trades such as carpentry, plumbing, printing, etc., but the fact is that a very small number of men follow these well defined trades, the larger number follow what may be called occupations, and it is sometimes difficult for the medical officer to come to a just decision as to whether a man can follow his pre-war occupation or not. In special cases of this kind he will visit the place of former employment and examine the work which the man did, studying the physical or mental exertion necessary in order to carry on. In all cases of doubt, however, from this cause, the benefit of the doubt is given to the soldier.

It may be questioned why so much care is taken to determine whether the applicant is eligible or not. Why not give all men courses who apply, and whose statements and physical examination show the slightest excuse for giving the course? But, as pointed out in other Chapters, there is a small—a very small—number of returned men who do not want to work. These men did not want to work before the war and will not do so now if they can help it. They dislike taking upon themselves responsibility. A Vocational training course offers an opportunity of putting off the evil day, if such course can be obtained. It is just this class of man to whom the course is of no use. He would probably not benefit by it if it were given him, not only that but if any number of such men are granted courses they becomes members of the classes and students in the schools. They do not pay attention to their work and spend a good proportion of their time interfering with the other students and upsetting control. While there is an infinitely small percentage of such men in the army they gravitate towards these courses, and if any number were admitted they would form a considerable percentage of the students, small as their aggregate number is in proportion to the whole army.

It must be remembered also that the Department is charged with the administration of the Act, and it is the duty of the Department to administer it with justice and fairness to all.

The question of a man's eligibility for industrial re-training having been established, we pass on to those duties included under No. 2. The Vocational Medical Officer must advise the District Vocational Officer and disabled Soldiers' Training Board as to the suitability from a medical standpoint of the new occupation selected by the man. It would not be wise to give an ordinary labourer with a poor education, a course in book-keeping or accounting. Such men if they have a fair amount of mechanical ability can be taught lens grinding, glass cutting, adding machine repairing, etc. On the other hand, a man of good education and somewhat above the average mental ability should not be put into these occupations, otherwise the monotony would be burdensome to him and he would not stay in the occupation long. The state of a man's nerves also, and his mental quickness, have to be carefully considered. If a man is suffering from neurasthenia, he should not be advised to train in the occupation of a hoisting engineer, for in that occupation the lives of many men depend upon the steadiness of his nerve, his judgment, and the quickness with which his mind acts in an emergency.

From the physical standpoint the new occupation must be suited to his disability. A man with pulmonary tuberculosis should not be put into an occupation where the fumes would be injurious, such as chemical works, soap

factories, etc. For the man with an artificial limb some occupation should be selected where the atmosphere is not overheated, or damp, as under such conditions the stump will sweat and chafe.

In order to assist the doctor in advising in regard to these matters, he is supplied with a record of the work done by the man with the Ward Aides and in the Curative Workshops. These records if properly taken will cast a great deal of light on the man's mental ability or his mechanical adaptability.

A close study has also been made of the relation between the various occupations which a man may follow and disabilities. These records are found in the tabulated industrial surveys, and under each occupation tabulated there will be found the disabilities from which a man may suffer and still be trained to receive the full going wage in that occupation. The medical information in these industrial surveys is also tabulated in short form for the guidance of the doctor.

The tabulated lists also show various occupations which a man may follow when he suffers from a certain disability. These studies are the result of experience gained while the work is progressing.

The man's eligibility having been determined and a course having been selected for him, he commences his training. It has been pointed out elsewhere that it is very difficult to be sure that the first choice is the right one. The first month or two is therefore, looked upon by the Department as a probationary period, during which time he should be very closely inspected by the Vocational Medical Officer and the industrial inspector.

All those tests which were used in selecting the man's course should be applied during this probationary period, and in addition to all those consulted before, his employer, foreman, instructor or teacher should now be consulted as to the progress he is making.

It is often found when a man is put on training that some chronic condition breaks into activity. A man who on being interviewed showed absolutely no trace of eczema was being trained in the fur trade, but in this occupation the dormant eczema became active and he had to be changed immediately. A man whose arm had suffered injury but had healed, was put into some light manual occupation but it was found that the particular motions required in that occupation were injuring his arm and his course was altered. It is therefore, necessary that as soon as it is found that the occupation in which the man is being trained is not suitable to his disability, he should select a new one at the earliest possible moment, so that no harm will be done.

The fourth division of the Vocational Medical Officer's work consists of attending to the man's medical care while he is taking training. A man during training may fall sick for two reasons:

1. Through a recurrence of his war disability.
2. Through ordinary disease or accident not connected with his war disability.

In the first case he is entitled to treatment under the regulations of the Department.

In regard to the second, it was felt that if a man took sick while taking training, the most economical policy was to treat him for his sickness so that he might return to his course at the earliest possible moment and his time not be wasted. The Vocational Medical Officer therefore, inspects the schools and factories, and if any men are found ill they are sent to the Unit Medical Director for treatment, since the Vocational Medical Officers undertake no treatment. If his treatment is likely to be of short duration he is kept on vocational pay and allowances, but if it is likely to be of long duration he is transferred to the pay and allowances of the Medical Branch.

From a practical point of view those men taking vocational training who require medical care fall into three classes:

1. Those requiring constant medical supervision.
2. Those requiring occasional medical supervision.
3. Those who are better without any medical supervision.

The first class comprizes such cases as arrested pulmonary tuberculosis, nephritis, heart disease and other special cases. Even if a man feels quite well a system should be followed by which he is examined at definite intervals, say once a month, and his condition noted on a special medical chart kept on file. Thus should the disease light up again and become active or should his condition grow worse in any way, the condition will be recognized and he may be sent to the Unit Medical Director for treatment.

Among the second class, those requiring occasional medical supervision, are included those with minor ills. If a man is suffering from some minor complaint he presents himself to the Vocational Medical Officer who may excuse him from his training for a short time, and he is sent to the Medical Branch for medicine or such treatment as he needs. If he is too ill to appear before the Vocational Medical Officer he will be visited at his home.

Among the third class—those who are better with little or no medical supervision—are the large class of neurasthenics, variously qualified as shell shock, neurasthenia, hysteria, etc. These cases have all received a vast amount of medical care and have become too dependent upon it. It is to their advantage to learn to rely less on the doctors and more on themselves—and thus fit themselves for civil life. However, those men should be carefully watched without their knowledge so that any deterioration may be noted and proper action taken.

It is also the duty of the Vocational Medical Officer to see that the sanitary conditions in the factories and schools are properly taken care of.

Since the number of men being re-trained on account of disabilities, is greater than it has ever been before, a great deal of new information is being gained by experience. The Vocational Medical Officer is required to make a close study and research of the information available in order to suggest new policies to be put into effect.

It may happen that the man is not making proper progress in retraining, although physical or mental examination does not disclose the grounds for lack of progress. A trained social service worker who serves the Department is sent to visit his home, and it may be discovered that the lack of progress is due to financial embarrassment, sickness in his family or various other family matters. This social service investigator should be a graduate nurse of experience who has made a special study of social service conditions, and she is directed to ascertain the home surroundings of the man, offer kindly advice if required, and so attempt to direct matters that all worries will be removed from the man's mind. These reports are sent to the District Vocational Officer in case of financial difficulty and to the Vocational Medicial officer if there is sickness in the family.

The Vocational Medical Officer at times has to avail himself of the services of a specialist in tuberculosis, neurology, orthopaedics, etc. This special advice is furnished by the Medical Branch of the Department unless one of the Vocational Medical officers happens to be a specialist in that particular work.

This description of the duties and work of the Vocational Medical Officer shows the close relation which exists between the work he does and that of the industrial surveyors, interviewers, and instructors. It points out the necessity of the closest co-operaion with all these branches of the work and with the Unit Medical Director, who has charge of treatment.

CHAPTER X.

CARE OF THE BLIND.

History of Training Blinded Soldiers in England and Canada, with reference to the various Phases.

War has left its mark on thousands of those who took part in the actual struggles that went on unceasingly for over four years on the various Fronts. But, of all the types of disabilities suffered there is one which to the casual observer seems to call for more attention than most others—that of blindness.

Soldiers have suffered loss of sight in many ways, but there are two fairly distinct classifications, viz:—blind soldiers and blinded soldiers. By blind soldiers is meant those who suffered a gradual deterioration of vision due directly or indirectly to service. By blinded soldiers we refer to those who were actually wounded in battle or were so affected by wounds that loss of sight resulted. We are now acquainted with practically all the cases of men who are blind or potentially blind due to wounds, but those whose sight is slowly deteriorating, either before or after discharge, are gradually increasing in numbers. This has been found to be true in all countries that have been discharging during the past two or three years soldiers who were suffering from defective sight.

The best and quickest results from training are secured with those who suffered total loss of sight in a short space of time. There was not the mental strain of a long period of indecision and mental and physical re-adaption were more quickly accomplished with the former cases.

There are several points that must be kept in mind in connection with the re-education offered to a binded soldier. First—he is a man who is normal in every way, but only deprived of the sense of sight. Secondly—he has received all his former education and experiences from a sighted standpoint and requires only re-adaptional training which will fit his former education and experiences to his present needs.

The problem of training Canadian blinded, or blind, soldiers has been a very complex one.

1. The soldiers were in hospital some 5,000 miles from their homes and friends.
2. There was Sir Arthur Pearson with his splendid organization, St. Dunstan's, right in London. He had conceived, planned for and started this training place in December, 1914. By 1915 when the first Canadian blinded soldiers entered St. Dunstan's he had nearly a year's experience with his advanced and radically changed methods of training.
3. There was no place in Canada specially designed to accomodate a large number of blinded soldiers, nor were the old stereotyped methods at all suitable for them.

Up to the end of 1915 not much attention had been paid in Canada to the training of blinded soldiers but about this time institutions here, learning of the two or three blinded Canadians at St. Dunstan's, sensed the desirability of doing something for these men and were no doubt actuated by a real desire to assist with their facilities and resources. The result of representations to the Canadian Government was that though the policy of bringing Canadians back to Canada was not officially adopted, still a number were returned without the option of taking their training in England.

By the middle of 1916 two Canadian graduates from St. Dunstan's had returned to Canada and they with certain prominent blind civilians, protested, and insisted that every man be allowed the option of going to St. Dunstan's. Those who wished to have the Canadians brought back here for training stated that the men should be allowed to go first to their homes and then take their training. They were not aware that experience had shown the demoralizing effect of returning a man to his home for a period before training. He is sure to be sympathized with and coddled by his friends and relatives, and, as has happened in so many cases, refuses absolutely to leave his home at a later date for the purpose of taking training. He never gains the sense of independence so essential and is withal generally helpless and incompetent. Nor did they consider the fact that 1,000 or 2,000 miles from home was to all intents and purposes as great a barrier to frequent visits as would be the distance from St. Dunstan's.

Finally the Canadian Government, represented by the Military Hospitals Commission, secured certain reports on the work being done at St. Dunstan's. These reports were considered in the spring of 1917, and as a result in the summer of that year, the commission fixed the following policy with regard to the training of Canadian blinded soldiers. That those who were in England should all be given the option of going to St. Dunstan's for training. That those who were resident in Canada should be trained at existing training institutions in this country. The above policy was adhered to in connection with this training till the spring of 1918.

By this time more information had been gathered concerning various kinds of vocational training. The Director of Vocational Training, having interested himself in the various phases of the work, discovered that those men who as blinded soldiers had been assigned to blind institutions in this Country for training were not being satisfactorily dealt with.

While this evolution had been occurring in the Vocational training work carried on in Canada there had also been started a movement for more comprehensive training to be initiated for all blind people in Canada. The first Canadian graduates of St. Dunstan's to return to this country associated themselves with prominent blind and sighted men and as a result of their combined efforts brought into being the Canadian National Institute for the Blind. This Organization, with a Federal policy and charter, was established with Head Office at Toronto. One of its objects was to provide comprehensive training for those Canadian blinded soldiers who had not been to, or did not wish to, attend St. Dunstan's, and secondly to provide some system whereby all blinded soldiers who settled in Canada should be looked after in so far as possible for the rest of their lives. In this they were simply following the St. Dunstan's plans in connection with training and after-care. The training and after-care arrangements above mentioned will be dealt with in more detail in another part of this chapter.

The Department of Soldiers' Civil Re-Establishment next got in touch with the Council of the Canadian National Institute for the Blind and discussed in detail the problems confronting the Department. It was finally decided that in order to clear up the situation in Canada and secure proper training for those who were then resident in the various training institutions in this country, every man should be offered the opportunity of returning to St. Dunstan's and that those who wished to remain in Canada, should be allowed to go to any blind institute they desired or to take advantage of special training for the adult blind being provided by the Canadian National Institute for the Blind. This policy was carried out. Six men were returned to St. Dunstan's in the month of July and three more in September.

In order to secure an official for the Department who would have the proper view point and experience for dealing in the most effective way possible with further problems that might come up, the services of Captain E. A. Baker, M.C.,

Croix de Guerre, the first Canadian officer graduate of St. Dunstan's, were secured. Captain Baker had after his return been employed for nearly two years with the Hydro-Electric Power Commission of Ontario in their head office at Toronto. He had vouched for the practical nature of the re-adaptional training given at St. Dunstan's and exemplified the idea that blinded soldiers could in many cases do better than follow one of the ill-paid handicrafts usually assigned to blind people.

Captain Baker entered upon his new duties on 1st August, 1918. All District Vocational Officers were at once notified of his appointment and instructed to inform him immediately concerning any cases of defective sight that came to their attention. Most of the cases coming up for training in Canada were those of men who had been discharged with defective sight and after anywhere from six months to two years found their remaining vision deteriorating to such an extent that they were unable to follow sighted occupations. It was then his duty to advise as to the reports necessary to confirm the eye condition present, training and disposition. Working on the principle that all matters affecting their welfare should be looked after in so far as possible, he assisted in securing necessary adjustments of pensions, adjustments of post discharge pay accounts, and secured for them all advice and information required in every possible connection.

The experiment with the civilian blind training institutions had not been a successful one for various reasons. The blinded soldiers objected to the atmosphere of these places. The afflicted and helpless ailments of blindness as a disability were being paraded as a stimulus to public philanthropy. The attitude of the instructors was to a certain extent indicative of their impression that blindness entailed not only physical limitations, but also mental.

In July, 1918, special classes had been opened by the Canadian National Institute for the Blind, in Toronto, and by December of that year, a special establishment had been set aside for the sole use of blinded soldiers. This place was named "Pearson Hall", after Sir Arthur Pearson, founder of St. Dunstan's Hospital for Blinded Soldiers and Sailors. It was fitted up to provide board and lodging accommodation as well as training facilities. It is a large family residence, fifty feet square, and standing in grounds two hundred by two hundred and fifty feet. Pearson Hall is the Mecca of those who go to the Canadian National Institute for the Blind for training, and has been fitted up to serve their needs.

Although the blind soldier is allowed to go to any blind institute in Canada, the majority prefer to go to the Canadian National Institute for the Blind and to Pearson Hall, and for these all preliminary training is taken here and then after sufficient advance has been made the men are passed on to one of the various regular courses provided. This establishment also serves as a clearing house for returning St. Dunstan's graduates who are seeking employment. Then too, those graduates who have secured employment drop in for visits and as a result, men in training are fired with ambition to do as well as those other blinded soldier graduates.

The psychology of training for men blinded in adult life is so important that it must be considered at every stage. The mental processes of the man who has suddenly been bereft of sight tend to lead to a state of depression, morbidity and total loss of confidence in himself. As soon as he is sufficiently free from physical pain to allow more or less connected thought he begins to wonder what there may be left in life for him. He tries to remember what other blind people of whom he has known, did for themselves. As a rule the only ones he can call to mind are those who stood on the street corners begging. It does not enter his mind that the extreme helplessness that they invariably displayed was a business asset which they recognized and made the most of. He therefore, had little consolation from this train of thought.

Contrary to the general opinion of casual observers such a man does not on becoming blind, experience more acute capabilities of his remaining senses, nor does he immediately acquire any other sense. The first duty, therefore, to be observed, in offering relief is to be most judicious in tendering sympathy, and to endeavour by suggestions and relation of the experience of other men labouring under the same disability to inspire with an ambition for accomplishment.

Next it is necessary to demonstrate in a practical way that it is possible for him to do those things which others have done, and this is where the construction of simple articles under proper supervision is of great value. As soon as it is learned that such articles can be constructed quite independently, the pride of accomplishment, coupled with the ambition to accomplish more, furnishes sufficient incentive for further efforts. Discouragement at this stage must be diligently guarded against.

Blind instructors are invaluable. If the man recognizes the fact that the individual giving the instruction was but recently in the same position as he himself, he realizes that the instruction will be practicable and also that he is not being asked to do something that has not been done before by those labouring under the same handicap. He is at once fired with the ambition to do the thing as well as the other fellow and says to himself "if the other fellow can do it, I can." This mental stimulus cuts down the period of training greatly. Also by eradicating the term "affliction" and impressing each man with the idea that he has but to overcome a handicap which has been imposed, a more cheerful and ambitious bearing is induced.

It has, therefore, been the practice at St. Dunstan's and in Canada after the early stages, to secure in so far as possible instructors who have received their training as blinded soldiers and who were picked because of their standard of accomplishment and general bearing. The instructor must be cheery and confident and it is invariably found that such a bearing is most contagious.

To increase confidence, attention must be paid not only to work but to recreation and sports. By occupying every moment of spare time the man's mind is not permitted to dwell on his limitations and he is rendered capable of taking part in games and sports particularly suitable. As has been said a man learns by experience, and through various forms of sport he is taught to be self reliant and confident in his movements.

The problem of training Canadian blinded soldiers has been a complicated one, partly on account of the disposition of training facilities and partly on account of the widely separate districts in which new cases are located from time to time in Canada.

A policy which has been followed by Sir Arthur Pearson and which has been adopted in this country, in so far as possible, provides for getting in touch with the new cases at the earliest possible date. In England this is simplified owing to the fact that all new cases are concentrated at one hospital, where they may be visited each day, and at the earliest possible stage given instruction in Braille reading and writing and light constructive lines, such as string bag-making, scarf weaving, etc. This occupies what would otherwise be dragging hours and accomplishment at this stage serves to stimulate the ambition and cheer up the patient with the idea that he can still accomplish much. He is also taught at this stage to consider his disability as a handicap and not as an affliction. He is impressed with the fact that he is simply a normal man who has been deprived of the sense of sight, and that by proper training of his other senses, they can be made to take the place to a large extent of the one of which he has been deprived. His accomplishments at this time serve to instil into him the feeling of independence and self confidence which is so essential when the next stage of his training is arrived at.

In Canada the same practice is followed where possible, but here the problem is more difficult. Cases are for the most part those that have been discharged

to civilian life for some time, but have returned to hospital for treatment and eventually come up for training. They appear in all parts of the country and in many cases some little time elapses before the hospital authorities can determine whether or not they will be in need of training from a blind standpoint.

Following this stage of preliminary training in hospital comes that of general preliminary training leading to the selection of a vocation.

In England a man goes directly from hospital to St. Dunstan's, where he starts training in general subjects that are taken along with other courses. By this I mean Braille reading and writing and typewriting. He may also at this time follow up string bag-making, netting, scarf weaving, raffia basket making and mat-making. Close watch is also kept on the man to determine whether or not he will be best suited to a handicraft, office work or a profession. Finally he is consulted as to his permanent vocation, and the line for which he seems best fitted is chosen.

In Canada this procedure is followed where practical. A majority of the blind in Canada elect to go to Pearson Hall where they take their preliminary general education and where it is determined what special course shall be followed. If a man seems particularly fitted for massage, the instructor in massage is called in, passes his judgment and, if favourable, the man is assigned to that course. The same procedure is followed for poultry farming. cobbling, etc. However, it sometimes happens that a man residing in some outside district has a definite desire to follow some particular occupation, and, if that line is considered feasible, it is sometimes possible to arrange for training in his own district and thus allow him to live at home. The whole result is not as a rule so beneficial, but sometimes there is no other way.

The whole range of subjects taught to blinded soldiers may be divided into three classes:—

First—General Re-adaptional Education.
Second—Vocations.
Third—Avocations or Side-lines.

The following is a list of those given at St. Dunstan's under the three above mentioned headings:—

Class 1.—Braille Reading and Writing.
Typewriting.

Class 2.—Re-adaptional courses, permitting return to former business or profession.
Massage.
Business Courses combined with Braille Stenography and Typewriting.
Telephone Switchboard Operation with Braille Stenography and Typewriting.
Poultry Farming and Carpentry.
Carpentry and Joinery.
Cobbling and Mat-making.

Class 3.—String Bag-making.
Net and Hammock-making.
Scarf Weaving.
Basket Making and Mat-making.

The following is a list of the subjects taught in Canada under the three above mentioned headings:—

Class 1.—Braille Reading and Writing.
Typewriting.

Class 2.—Re-adaptional Course, permitting return to former business or profession (arranged for where necessary).
Massage.
Poultry Farming and Carpentry.
Cobbling and Mat-making.
Piano Tuning.
Broom and Basket-making.
Telegraphy.

Class 3.—String Bag-making.
Net and Hammock-making.
Scarf Weaving.
Basket-making and Mat-making.

Braille Reading and Writing—

In 1829, Louis Braille, a blind Frenchman, invented an embossed alphabet, in which the characters are formed by an arrangement of six dots placed in an oblong, of which the vertical side consists of three and the horizontal of two.

With different combinations of these dots, all the signs and contractions of Revised Braille are made up, and by this means a good finger reader can read as quickly as a sighted person can read print.

There is no need to say much about the importance of Braille—that speaks for itself—for it gives a sightless man entrance to the world of books, gives him back some of the independence he has lost, and at the same time trains those faculties which are to play so large a part in his new life.

In connection with the training carried on at St. Dunstan's and in Canada, individual teachers are provided, the majority of them blind, and the length of the lesson varies according to the pupil's health and capacity.

Besides being taught to read, men are from the beginning taught to write Braille, and this is made easy by the use of the Stainsby-Wayne, or Hall, Braille Writing Machines, ingenious contrivances, possessing six keys to correspond with the six dots in Braille.

Every man who has made good progress is presented with a machine on graduation, and with this he can record his own notes for future reference, and attend personally to his private and business papers. Many blinded poultry farmers and tradesmen keep their accounts in Braille with complete success and are thus able to study their progress without the assistance of a sighted reader.

It is difficult to say definitely how long it takes to learn Braille, but most men pass the tests in five or six months.

Books of every kind can be obtained in Braille from the National Library for the Blind, London, England, or the Canadian National Library for the Blind, Toronto, Ont., and such books are passed through the mails free of postage and every provision is made to promote and induce extensive reading.

Typewriting—

It is curious to note that the typewriter was originally invented to enable people who have never seen to write. Those who lose their sight in infancy can never learn to write, and to enable them to correspond with the outside world, a crude machine, the father of the modern typewriter, was introduced.

When a grown person is blinded the question of writing is on quite a different footing. A blinded person is perfectly able to write on ordinary paper, on raised line paper, or by means of a specially constructed writing frame. This, though fairly satisfactory, does not replace ordinary writing, and is both clumsy and slow. Further than this, unless great precautions are taken, the writing deteriorates rapidly and becomes more and more illegible as time goes on. Later on, the blinded person begins to write smaller and smaller until one letter is written over the other, and the result is an unreadable scribble. There is a great risk, too, of writing over the same line twice, even when a frame is used; and it will be seen, therefore, that some more efficient substitute is required to replace the pen and paper of the seeing person. For this reason every blinded soldier at St. Dunstan's and in Canada is given the opportunity of learning to typewrite, and almost without exception the men pass the easy test imposed.

Typewriting is of course taught as a profession in conjunction with shorthand-writing.

It would appear to be very difficult to use a typewriter when only able to feel and hear it working, but it is in reality one of the easiest lessons taught. The most universal idea that a special machine is necessary to enable a blind person to typewrite is incorrect. The machine used is the ordinary Remington typewriter, or in fact any standard machine that is preferred by the man taking training. The universal keyboard is learnt, which enables the soldier to write on almost any machine he may come across. There are no raised letters on the keys, and the only difference to be seen in this machine is the embossed scale

which takes the place of the ordinary engraved scale and enables the operator to tell at one touch what position is occupied by the carriage. For those who have been unfortunate enough to lose a hand as well as sight, there has been fitted to the ordinary machine an ingenious lever, worked by the knee, which enables the typist to write capital letters, fractions, etc., and a special guide ensures that the paper is inserted straight in the machine.

The passing of the test is a very great day, for the successful pupil immediately becomes the possessor of a typewriter of his own which will prove to be one of his best friends during the rest of his days. The graduate after settling down is able to carry on all his business and private correspondence himself independent of sighted assistance. The number of perfectly typed letters received from the blind goes to show that in the great majority of cases good use is made of the typewriter which has been furnished.

Re-Adaptional Courses—

Sir Arthur Pearson promulgated a pioneer policy in the world of blind re-educators when he made plans for putting back into their original professions or businesses all those men who, by reason of previous training experience and mental capacity, were considered likely to succeed in spite of their handicap. This training takes various forms according to the nature of each case. Such courses have not yet been required in Canada, as special cases have been trained at St. Dunstan's. In the case of an engineer, instruction has been given in office work, use of the dictaphone besides other general training, and as a result, office work could be followed along the lines for which he was best fitted. Courses for insurance canvassers, lawyers, clergymen and storekeepers and others have been specially arranged where required.

Every man on coming up for training is surveyed carefully for the purpose of determining whether it will be possible to fit him to return to his former occupation, as it is recognized that such occupation was formerly followed by choice and would naturally be the most congenial.

Massage—

Massage has come to be regarded as one of the most suitable occupations for those who have lost their sight.

The great sensitiveness and delicacy of touch which the blind so readily acquire fits them in a peculiar way for this particular type of work and renders them at least as capable of carrying it on successfully as the sighted, perhaps more so. The Massage School of the National Institute for the Blind, London. probably the most complete and best equipped in the world, has been entirely given up to the training of St. Dunstan's men, including Canadians.

As regards Canada, arrangements were made by this Department early in the summer of 1918 for a class to be established in Hart House, School of Physic Therapy, Toronto, Ont. Here there is every facility in the way of equipment for the teaching of the theoretical part of the work, thus enabling every student to gain a perfect knowledge of the various parts of the human body. All this is particularly valuable to the blind, who are unable to do very much in the way of studying diagrams.

A really fine library of technical books in Braille type has been gathered together, and copies of these books are presented to every student. Many of these have been compiled by an ex-student of the school, Dr. Lloyd Johnstone, who, having lost his sight in the middle of his medical career, has turned his attention to the practice of massage.

Up to the present, over fifty St. Dunstanners, including Canadians and two officers, have qualified from the St. Dunstan's School of Massage, and there are now in training a further forty men, while in Canada three Canadians have graduated from Hart House, Toronto, and two more are in training. Some of the above mentioned graduates are launching into private practice in addition to hospital work, and none for the moment regret their choice of an occupation.

The work, though sometimes laborious, is always deeply interesting, and the remuneration is very satisfactory.

In order to follow out the policy of providing blinded instructors for the blind, Private D. J. McDougall, a blinded Canadian, was placed on the Staff of Hart House as Instructor. At the beginning he was concerned only with the blind students, but at the present time he is lecturing in anatomy, pathology and physiology at the sighted class. He also is engaged in practical demonstrations.

The above mentioned graduates from Hart House at the present time are employed in Military Hospitals at $2.30 per diem for unmarried men and $3.30 per diem for married men, plus the necessary travelling expenses.

The course of training in massage may be regarded as somewhat lengthy, lasting at it does from nine months to a year or even longer, if ill-health prevents regularity of attendance; but massage is not a simple subject to master and a shorter period would be quite inadequate.

It is, of course, impossible to state precisely what are the prospects of the masseur, blind or sighted, after the war, but there is every indication that massage has come to stay, and the excellent work done in Military Hospitals by the blinded men has made it tolerably certain that there will be no difficulties in obtaining private work in the future. That there will be plenty of this work for many years to come is a practical certainty, for there will be a number of men suffering from every kind of deformity and disease as a result of the war, who will require massage.

At the present time there are not enough blinded soldier masseurs in Canada to fill the available positions in Military Hospitals. A movement is on foot to establish some form of protection for these masseurs, when positions are no longer available in Military Hospitals, and it is necessary for them to start private practice. This protection will take the form of an association, which it is hoped will secure the co-operation of the Dominion Medical Council.

What, then, are the qualities requisite for the making of a successful masseur? They are simple, and are possessed by men in all classes of society—a healthy, vigorous body, a clear head, a pair of supple, muscular and soft hands, a sympathetic disposition and genial personality. Add to these, if possible, those rare qualities, tact, patience and unfailing courtesy, and success in the profession of massage is assured.

Business Course.

A short-hand writer, who cannot see, sounds like an impossibility ; but as a matter of fact, quite a number of blind men and women in England and this Country earn a very good living as clerks and secretaries, while many blinded soldiers, too, have been trained as stenographers at St. Dunstan's. No arrangements for this course have been made in Canada, as suitable student material are not to hand.

Telephone Switchboard Operation, etc.

The blind person cannot, of course, work in a public exchange where the flashlight system is in vogue, but he is able to use the drop shutter switchboards which are to be found in practically all large buildings, offices and business houses in England. Few of these switchboards are still in existence in this country: rural telephones are numerous and can be operated quite successfully.

The blinded soldier can grasp this work with remarkable speed, taking only from two to three months to do so.

Many large business firms in London and the provinces employ St. Dunstan's operators, and testify very strongly to their ability to manage the switchboards as quickly and accurately as any sighted operator.

Poultry Farming.

Poultry Farming is a calling particulary suited to the needs of those men who from choice, or necessity, must live in the country. Of course, a previous knowledge of the business is of very great assistance, but experience has shown that blind men who do not possess this have been able, after a course of training

at St. Dunstan's Hostel, to find both a pleasant and a profitable occupation in poultry farming.

A course in poultry farming has been arranged in Canada in connection with classes at the Ontario Agricultural College, Guelph, Ont. Here Cpl. C. Purkis, a Canadian graduate from St. Dunstan's, has been installed as instructor. He attends the regular classes held for the sighted pupils with his classes of blinded soldiers, and later goes over the material with them, adapting such from a blinded standpoint and explaining where necessary.

Men who take the course at Guelph under the Department of Soldiers' Civil Re-Establishment also take carpentry and mat-making.

Carpentry is intended to enable them to build their poultry houses, trap nests, runs, etc.

Mat-making is intended as a hobby with which to occupy spare time and earn a few dollars.

Each man on completing his course is allowed to take with him a complete colony house which he has completed with his own hands, under the supervision of the instructor, and a pen of fowls, which he has raised and tended.

Where men have been trained at St. Dunstan's and require some re-adaption of such training in order to carry on under changed conditions in this country, a post-graduate course is being arranged.

The blinded soldier who considers becoming a poultry farmer must bear two things in mind. Firstly, he must have quite clear and definite views as to his desire to live in the country, for, obviously, unless a very high rental is paid, farming land must be situated in a more or less isolated neighborhood. To the man who loves to be in the open air, there is, perhaps, no better occupation, but he who prefers the bustle of town life must leave farming alone and turn his attention to some other trade.

Secondly, it must be remembered that no farm will really begin to make money at once. The farmer may have to work for many months without being able to show any profits, but he must realize that he is preparing for the future, and that the time, thought and labour, he expends on his property add to its value, and will enable it to repay him over and over again in later years. The fact that money can be made is evidenced by the good news continually received from those fellows who, blinded in the early days of the War, have been hard at work on their poultry farms since graduation.

Poultry farmers are encouraged to take some kind of side line, such as mat-making or basket-making, in their spare time, so that they may be fully occupied, and make in addition an extra income.

With regard to poultry farmers settling in Canada, arrangements have been made with the Soldier Settlement Board for the provision of loans where necessary. First, the men in question, aided by relatives or friends, decide on a desirable location. This is generally a plot of land of from three to ten acres, with the necessary house and out-buildings, situated within easy reach of a good market.

The men are assisted in making application to the local branch of the Soldier Settlement Board and later when settled are visited periodically. This comes under the heading of "After-Care" and will be dealt with later.

At the time of writing more than 100 blinded soldiers have been started as poultry farmers in farms all over the British Empire, where they are making good, and are, in the majority of cases, earning more money than they did when they could see. Of these only three have so far returned to Canada; one is acting as an instructor at Guelph; one has settled in Saskatchewan, where he is making quite fair progress; and one has just returned.

Joinery.

Perhaps there is nothing at St. Dunstan's so remarkable as the training of a blinded man as a joiner, able to make a living at his work. An ordinary carpenter's apprentice is expected to take from five to seven years over his

initiation, but the blinded soldier picks up his trade in eight to ten months, even when he has not practised it in any way before.

Yet the whole thing is in no way complex, but remarkably simple. It requires only that the learner shall bring an unbiased mind to his work. The tools are practically the same for the sighted as the non-sighted, and the work proceeds on similar lines. The apprentice has only to work with this fingers instead of his eyes.

The blinded soldier is taught to make a living at joinery, but he is not taught to be an all-round joiner. He could become this if time were given him, and doubtless in many cases he will continue his training as he practises his trade; but at St. Dunstan's this is not feasible, as there inevitably has to be a time limit.

Sir Arthur Pearson realized the impossibility of imparting the whole art of joinery to a novice in the limited time available, but he saw it was practicable to teach him to make a number of readily saleable articles with adequate precision and the result has been a complete and stimulating success.

Whatever it is, the work is fully up to the standard of the best furniture shops.

With the knowledge that is gained at St. Dunstan's, a joiner may embark on varied kinds of work, and we have records of men who have started for themselves, tackling jobs they have never attempted before, by merely adapting their knowledge to new conditions.

No Canadians who elected to take this course have as yet returned to Canada.

Boot-Repairing.

Boot-repairing was a practically unknown occupation for the blind until Sir Arthur Pearson decided to introduce it as one of the subjects to be taught at St. Dunstan's. The course has now also been instituted at Pearson Hall, where two men are at present receiving instruction.

The work has proved to be very popular with the blinded soldiers, and it has been found that, provided reasonable care is taken in the selection of a situation, a steady trade is assured. In England especially, where shoe repairing machines are not so much in general use and therefore competition is not so keen, things are favourable for the blinded soldier cobbler. In Canada, however, where the use of the machine is universal, locations must be selected in small country towns or districts where the machine has not yet been introduced. By combining halter and harness repairing with the ordinary occupation of cobbling, a fair remuneration will result. Only one Canadian has graduated as a cobbler, and he is settled down in a fair business location.

For the most part the men who are taking up cobbling are those who had some experience before becoming blind.

Special lessons are given upon the various ways in which boots are made and upon the methods of cutting up leather and making the best use of material.

More than a hundred boot-repairers have been started in business from St. Dunstan's, and it is safe to say that, with scarcely an exception, they are all thriving at their business, getting plenty of work, and what is more important giving satisfaction to their customers.

Piano Tuning.

Piano tuning is a subject which but few blinded soldiers can follow. The requirements for this line are exacting. The applicant must have some knowledge of music and a good ear. The man must also be fairly young, as it has been found by experience that men over twenty five years of age entering this line are rarely successful.

This line has been followed by blinded soldiers only in Canada and instruction is arranged as follows:

The man takes the usual general preliminary blind training in Braille and typewriting and then he is taken on as an apprentice in one of the various piano factories throughout the country, where he is taught his trade under

the same conditions as apply to the course given to blind civilian students. This line has been followed for many years by civilian blind and is quite a recognized and remunerative calling.

Telegraphy.

Telegraphy has to a limited degree been followed by men who had some previous knowledge and experience in this line.

The one man who has so far been trained in Canada has been employed in a telegraphy class where he acts as instructor. The operation of the instrument is a simple matter and his quick ear enables him to perform his duties as instructor without difficulty.

Broom Making.

Broom making is the trade most universally followed in blind workshops in America. This trade is as a rule followed by men more or less mechanically inclined and who must of necessity work in an establishment under supervision, because of inability to manage an independent business.

This line has not been chosen by many of the Canadian blinded soldiers. Only two up to the present have followed it. It offers a fair wage and also requires that the man who follows it must move to a locality where a broom manufacturing establishment is in existence.

Avocations or Side Lines.

Avocations or side lines which are taught to the man taking various courses are simply intended to occupy spare time and provide a remunerative hobby. They also make possible the earning of a few dollars on the side. Preliminary training is also used to train the fingers and give confidence to the new pupil and to develop his sense of proportion and dimensions. The training is found to be extremely valuable and many useful little articles are produced. Reed basketry has been a particularly successful line and men at Pearson Hall have under the supervision of the Department's Occupational Therapy Instructors, attained a marked degree of proficiency in this line.

Sports and Recreations.

The men at St. Dunstan's are taught to play as well as work.

In Canada splendid arrangements have been made at Pearson Hall for recreation. One evening a week is devoted to classes in dancing and Friday evenings every week the regular dance is held in the hall, to which men may invite their relatives or friends. Another—theatre night—is a great source of pleasure to the men.

Men residing at Pearson Hall are able to enjoy walking as an exercise and the ample grounds surrounding the establishment provide sufficient space to accommodate land sports such as those carried on at St. Dunstan's.

A gymnasium has been fitted up in the building. This includes rowing machine, weights, etc., and in the early summer it is hoped a class in rowing may be started.

A piano and player attachment, also two gramaphones, have been provided, and the men living at Pearson Hall derive great pleasure therefrom.

Classes have also been constituted to instruct men in playing the various musical instruments, and it is expected the jazz band which will make its appearance in the near future will perform in a creditable manner. All the members are very keen and vie with each other in the volume of sound produced.

After-Care.

After care is a term which has been used on one or two occasions, previously, in this chapter, but which implies more than would be ordinarily supposed. It is one thing to train a blinded soldier in such a way as to follow some definite line of occupation, but it is entirely another matter to see that he makes proper use of his training and is the self-supporting and independent individual that he was intended to be, and for which he was equipped. With this end in view, St. Dunstan's has found it necessary to establish in Great Britain very comprehensive arrangements for the settling down, periodical visiting of, furnishing

of raw material and selling of manufactured products, and in general supervising the personal and business details in connection with every man who has graduated from its classes. This supervision and assistance enables 30 per cent of the St. Dunstan's graduates to be independent and self-supporting, where they would not otherwise be. It simply means that advice and assistance of the proper sort are always forthcoming, and the necessary and periodical visits very often reveal to the technical representative, faults in processes or methods which are so apt to appear from time to time, and which are so disastrous to success, if not corrected in the early stages.

St. Dunstan's has established an After-Care Department with head office in London, and district representatives throughout Great Britain. Also in connection with the head office in London there is a large warehouse with show and sales rooms. In the warehouse are kept stocks of raw material which can be shipped to the graduates upon receipt of application. Also there is stored quantities of products which the graduates have manufactured, and who not finding sufficient demand locally to keep them busy, went on manufacturing and shipped in the surplus. Show and sales rooms are thus used to dispose of these stocks of manufactured articles. These stocks include baskets of various descriptions, tea trays, picture frames, various sorts of small cabinet-work, furniture, mats, string bags.

Canadian blinded soldiers who after graduating have settled down or who will settle down in Great Britain, will of course come under the benefits of this system, and will have no cause to worry as to their futures, so long as they are conscientious and careful about their work.

In Canada, however, our problem is quite a different one. We have less than ten per cent of the number of men to look after, and these are scattered over probably fifty times as great an area. The best we can do at present in the way of after care is as follows:

When the graduate is prepared to settle down in his own locality, word is sent to our district office and the representative there endeavours to secure some proper location, if the man has not already a home to go to. Advice can be secured at any time from the officer in charge of the work in Ottawa, and interest is to as large an extent as possible created in the proper quarters where it is thought it will be of service to the man in question. It is however, planned to make "Pearson Hall" the headquarters of the after-care arrangements in Canada, and to keep supplies of raw material on hand in suitable locations, and also a warehouse and sales room for the handling of manufactured articles.

In order to justify the large outlay of money in this regard, it is proposed to handle this along with a similar proposition for the civilian blind. Work for the civilian blind has been begun in a Federal way, and the scheme will, I think, solve a great many difficulties. "Pearson Hall" can also be used in connection with the re-training of men who it is found have taken unsuitable courses and who require re-training. It can also be used as a club house where blinded soldiers may at any time secure accommodation for a short period, and find available information and assistance of a helpful sort.

Graduates Who have Succeeded in the Various Lines They Have Chosen to Follow.

Re-Adaptional Course.

Corporal ————, one of the originals of the famous P.P.C.L.I. Regt., was wounded in April, 1915. He entered St. Dunstan's late in the summer of that year. As he had formerly had some twelve years' experience in the western provinces as an insurance Agent, he thought he would like to follow this business. He therefore took the general re-adaption course at St. Dunstan's, and returned to Canada fired with ambition to make good. He made up a Braille book of tables, etc. and with a small boy for guide is canvassing. He has now been

with the Imperial Life Insurance Company, of Toronto, for over two and a half years, and has made a splendid success. Of all the canvassers in his district he stands next to the top for amount of business done.

Massage.

Pte. ————, who joined the P.P.C.L.I with a draft, was wounded in September, 1916, and entered St. Dunstan's in November of that year. His previous education had included three years at St. Michael's College, Toronto. He decided to follow massage, and after a twelve months' course at St. Dunstan's, went up for his examinations. These examinations were set by the I.S.T.M. of London, England, and 327 students came up at this particular time, of whom 11 were from St. Dunstan's and the remainder sighted. Of the total number Pte.————, passed second, and with distinction. Following this he was employed by St. Dunstan's for some time as pupil instructor, and shortly after his return to Canada in the summer of 1918, he was appointed as instructor at Hart House, Toronto. Here he began lecturing to a class of three blinded soldiers who had not been trained at St. Dunstan's. This class was graduated, and at the beginning of the succeeding course, Pte. ———— was requested by the Hart House authorities to lecture to not only this new class of blind soldier students, but also to a sighted class of students numbering seventy. Pte. ————'s work has been highly satisfactory, and he is receiving remuneration on the same basis as if he had his sight. He is an adept at getting about alone, and though dark blind, travels all over the city of Toronto, either by walking or by street car.

Pte. ———— of the 29th Battalion was also wounded in September, 1916. He entered St. Dunstan's in November of that year, and elected to follow Massage. After graduating he returned to Canada in the summer of 1918, and is now employed in the Shaughnessy Military Hospital, Vancouver, where he is receiving better salary than is paid to the average sighted Masseur. As a Masseur he is giving extremely satisfactory service. Pte ———— was previous to enlistment working as a labourer, and has received only an average public school education.

Business Course combined with Braille Stenography and Typewriting.

Pte. ———— of the 58th Canadians was wounded in June 1917. He entered St. Dunstan's in August of the same year, and elected to take a course of Braille Stenography and Typewriting. He passed the Braille Stenography minimum speed test of 100 words per minute, and returned to Canada in December, 1918. He is now employed at Toronto in the Department of Soldiers' Civil Re-Establishment, district office for Ontario. He is receiving the same rate of remuneration as our sighted stenographers and is doing as much work. This man had an average public school education before enlistment, and is dark blind.

Poultry Farming and Carpentry.

Pte. ———— of the 31st Canadians entered St. Dunstan's in the summer of 1916, and settled down in England in the fall of 1917. He now has a Poultry establishment at Longcroft Farm, Wesley, Essex, England, and is reported as doing exceptionally well.

Cpl. ———— of the 34th Canadians entered St. Dunstan's in November, 1917. After taking a twelve months' course in Poultry Farming, Carpentry and Mat Making, he returned to Canada and is now employed as an Instructor for a class of blinded soldier poultry farmers at the Ontario Agricultural College, Guelph. He is instructing in Poultry Farming, Carpentry and Mat Making, and is reported as doing extremely well. He formerly lived at Preston, Ontario, and has gone back near his old home. He is receiving remuneration at the same rate as a sighted man who is doing the same work.

Cobbling and Mat Making.

Pte. ———— (coloured) of the 2nd Construction Battalion, was trained in Cobbling at the Halifax Technical School. He has now graduated and is

at present located in a section of Halifax occupied by coloured people, and secures all their repair trade. He has not yet been at work long enough to get returns of his earnings, but he is expected to do quite well.

Broom and Basket Making.

Pte. ———— of the 60th Canadians took a twelve months' course in Broom Making at the Montreal School for the Blind. Pte. ———— suffered from shell shock, which has affected his mental capacity, but he is able to carry on work in the broom shop of the above institution, where he is working every day, and is earning a fair remuneration.

Remarks.

The above are fairly typical cases among the blinded Canadians who have taken up civilian life and who are carrying on in a cheery and confident way. As yet the number of Canadians who have graduated is not large, but it is confidently expected that as time goes on and more settle down either in England or in Canada, that the list of successes will gradually increase. There are those of course who through other disabilities besides those of blindness have not been able to take up much training. They will be assisted, in so far as possible, and if at a later date they recover sufficiently, will, if possible, be given further training.

Classification of Eye Cases.

Eye Disability.

Loss of both eyes	46
Loss of sight N.O.S.	23
Loss of right eye	145
Loss of left eye	119
Primary Refractive and Visual Disorders	669
Disorders of Conjunctiva, Adnexa, Cornea	103
Disorders of Iris, Ciliary Body, Lens	68
Optic Nerve and Brain Lesions	19
Disorders of Choroid, Sclera Retina	64
Undetermined Conditions	88
Disorders of Motor Control	3
Total	1,347

(See note attached.)

Ottawa, March 8, 1919.

NOTE ON CLASSIFICATION OF EYE CASES.

It will be noted that the above tabulation of cases of defective eyesight, which have so far been discharged from the Canadian Army, includes only those where defective sight is the major disability. Of the 1,347 cases which have so far come to light, 139 have been considered as requiring re-training from a blind standpoint. One hundred and six have or are being trained and 33 cases are under investigation, of which it is expected that approximately 25 will be eligible for re-training; therefore re-training cases are approximately 10 per cent of the total number of cases.

This record corresponds very closely with that found in connection with the cases of defective sight in Great Britain. Out of an approximate total of 12,000 cases discharged from the British Army on account of defective sight, 1,200 have so far appeared at St. Dunstan's for re-training. The percentage of re-training cases may increase to a certain extent as time goes on, and eye

disabilities which were aggravated on service become more marked and finally result in the necessity for re-training. Of the men who are considered as eligible for re-training, it should be noted that approximately 40 per cent are dark blind or have no perception of light, about 20 per cent have perception of light, 20 per cent have sufficient useful sight to permit of getting about alone under good light conditions, though such sight is useless at night or on very dark or glaring days, and 20 per cent have quite a useful degree of vision, though prognosis by eye specialist indicates that rate of deterioration is rapid, and within a year or more useful sight will have been lost.

Classification of Eye Cases. Blind Canadian Soldiers Pending Training, Training or Graduated.

Eye Disability.	
Loss of both eyes	46
Loss of right eye	18
Loss of left eye	16
Primary Refractive and Visual Disorders	2
Disorders of Conjunctive Adnexa, Cornea	2
Optic Nerve and Brain Lesions	12
Undetermined Conditions	34
Disorders of Choroid, Sclera, Retina	8
Disorders of Motor Control	1
Totals	139

NOTE.—In connection with the above classification it will be noted that cases pending training have been included. Some of these cases may on investigation prove to be not eligible for re-education from a blind standpoint. Such cases however will be given training with a view to conservation of remaining sight, and for the most part will follow light outdoor occupations.

Ottawa, March 8, 1919.

Classification of Eye Cases—Pending Training.

Eye Disability.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Eng.	Scot.	Nfd.	Not Stated.	Total.
Loss of both eyes	....	1	....	1	....	....	....	....	1	....	....	....	3
Loss of sight N.O.S	....	....	....	....	....	....	....	....	....	....	....	....	....
Loss of right eye	....	....	....	4	....	....	....	....	....	....	....	....	4
Loss of left eye	1	....	1	2	2	....	1	....	....	....	....	....	7
Primary Refractive and Visual Disorders	1	....	....	....	....	....	....	....	....	....	....	....	1
Disorders of Conjunctive, Adnexa, Cornea	....	....	....	....	....	1	....	....	....	....	....	....	1
Disorders Iris, Ciliary, Body, Lens	....	....	....	....	....	....	....	....	....	....	....	....	....
Optic Nerve and Brain Lesions	....	....	1	....	....	....	....	....	....	....	....	....	1
Undetermined Conditions	3	....	....	5	....	1	....	1	1	1	....	1	13
Disorders of Motor Control	1	....	....	....	....	....	....	....	....	....	....	....	1
Disorders Choroid, Sclera, Retina	....	....	....	2	....	....	....	....	....	....	....	....	2
Totals	6	1	2	14	2	2	1	1	2	1	....	1	33

NOTE.—It should be noted in connection with the above tabulation that a certain percentage of the above cases may not require immediate training. This must be determined by further investigation. A large percentage of these cases however, are eligible for training, and have been in the country for from three months to two years. These are the cases which for the most part reached their homes, and for whom it has been impossible to do anything because of inability to secure interest, or hostility of relatives to any form of training.

Classification of Eye Cases—Men Training.

Eye Disability.	
Loss of both eyes	23
Loss of sight N.O.S.	
Loss of right eye	8
Loss of left eye	6
Disorders of Conjunctiva, Adnexa, Cornea	1
Optic Nerve and Brain Lesions	8
Undetermined Conditions	14
Disorders Choroid, Sclera, Retina	5
Totals	65

March 8, 1919.

Classification of Eye Cases—Men under After-Care.

Eye Disability.	
Loss of both eyes	20
Loss of right eye	6
Loss of left eye	3
Primary Refractive and Visual Disorders	1
Optic Nerve and Brain Lesions	3
Undetermined Conditions	7
Disorders Choroid, Sclera, Retina	1
Totals	41

March 8, 1919.

Classification of Trades—Men Training.

Trades.	Place of Training.	
	St. Dunstan's	Canada
Massage	8	2
Poultry Farming and Carpentry	14	5
Boots and Mats	4	1
Piano Tuning	.....	3
General Training	13	8
Stenography	4	.....
Carpentry	3	.....
Chiropractice	.....	1
Totals	46	19

General Total.....65.

March 8, 1919.

Classification of Trades—After-Care Men.

Trades.	N.B.	N.S.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Nfd.	Not Std.	Place of Training.	
											St. Dunstan's	Canada
Massage	.....	1	1	3	.....	.....	1	1	.....	1	5	3
Poultry Farming and Carpentry	1	1	.....	1	1	2	.....	.....	.....	4	10	.....
Boots and Mats	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Piano Tuning	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2
Stenography	.....	.....	.....	2	.....	.....	.....	.....	.....	1	2	1
Telegraphy	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Telephony	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....
General Training	.....	.....	3	3	1	.....	.....	.....	.....	1	3	5
Special Adaption Training	.....	.....	.....	1	.....	2	1	.....	.....	.....	4	.....
Carpentry	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Baskets and Mats	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
	2	4	4	11	4	5	2	1	.....	8	28	13

General Total.....41.

NOTE.—Of the forty-one men included in the above tabulation two died from influenza during the recent epidemic.

March 8, 1919.

Classification of Trades and After-Care Men and Places of Settlement.

Trades.	N.B.	N.S.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	England.
Massage	.....	3	.....	2	.....	.....	1	1	2
Poultry Farming	1	1	.....	1	1	1	.....	.....	5
Boots and Mats	.....	1	.....	.....	.....	.....	.....	.....	.....
Piano Tuning	.....	.....	.....	.....	2	.....	.....	.....	.....
Stenography	.....	.....	.....	2	.....	.....	.....	.....	1
Telegraphy	.....	.....	.....	.....	.....	1	.....	.....	.....
General Training	.....	.....	1	3	1	.....	.....	.....	1
Special Adaption Training	.....	.....	.....	2	.....	2	.....	.....	.....
Telephony	.....	.....	.....	1	.....	.....	.....	.....	.....
Carpentry	1	1	.....	.....	.....	.....	.....	.....	.....
Baskets and Mats	.....	.....	1	.....	.....	.....	.....	.....	1
Totals	2	6	2	11	4	4	1	1	10

General Total.....41.

NOTE.—Of the forty-one men in the above tabulation twenty-eight graduated from St. Dunstan's and ten have settled down in England. These ten were for the most part British born and preferred to settle down with their relatives. Of the thirteen men who have so far been trained in this country two died during the influenza epidemic, one who appears under General Training took up Broom Making at Montreal School for the Blind, and is employed in their shop. Some men may appear from this tabulation to have followed occupations which have elsewhere been described as side-lines. It should be noted however that in all of these cases light work was followed because of other disabilities besides loss of sight.

March 8, 1919.

CHAPTER XI.

STATISTICS.

Canada has a population of eight million people distributed along a narrow belt 3,000 miles long, north of the International boundary, from Halifax, Nova Scotia, on the Atlantic Coast to the city of Victoria, British Columbia, on the Pacific Coast.

All parts of Canada contributed their quota to the enlistment in the Canadian Expeditionary Force and the soldiers on being demobilized for the most part return to the districts from which they came. These soldiers naturally wish to be trained near their homes where they are in their familiar environment, and where they can see their own people from time to time. For this reason it has been found necessary to have numerous centres of training in Canada. The Department has 53 schools which it exclusively controls; it also has students in 66 civil educational institutions where fees are paid, and has men in training in industries in practically every city in Canada.

As shown in Chapter 3, for administration purposes the country is divided into 13 districts each under a District Vocational Officer. From a business standpoint the administration of these institutions and districts is analogous to a chain of stores spread over a large area of the country. In very few of these districts are conditions the same. Some districts are devoted almost exclusively to farming, others to manufacturing, some to mining, and others again have mixed activities. The great distance of these districts from the head office and the diversity of conditions found in them necessitates that the District Vocational Officers be given the greatest possible freedom of action in the administration of their work. It is difficult to make general rulings to apply to all districts. It is necessary for the head office to dictate the general policy and hold the District Vocational Officers responsible for administering such policy.

In order to control such a complex system it is necessary to provide means for closely analysing the work and criticising the results obtained by the different District Vocational Officers. In the administration of any system of this kind, statistics to be vital must be fresh, therefore, they must be collected and tabulated quickly if they are to be of any use.

As has been said before, the industrial re-training of disabled soldiers is a transient phase of the operation of the Government, as is their medical care or the carrying on of the war itself. The time will come when this work will cease. When this time will come it is unsafe to prophesy. The work started from nothing. A large organization had to be built up quickly. At some time it will reach the peak and from then on decline until the work is finished and the organization disbanded. It is also hard to prophesy with accuracy when this peak will be reached.

The policy of the Department in making use of existing institutions and facilities for training has been explained, but naturally considerable money must be spent on capital account. It will be hard to realize on a considerable portion of this capital when the work is finished. It is, therefore, desirable to keep the expenditure on capital account as low as possible.

In order, however, satisfactorily to administer the work, some estimate must be made as to when this peak will come and when the work will end, also the rate at which it increases and decreases. For this purpose accurate statistics are necessary.

For cost purposes it is essential to know the number of men being trained and the length of time they stay in each institution. For control it is necessary

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to know the number of students which each teacher can handle. For purposes of criticism it is necessary to know how many pupils each instructor handles and the quality of the work done by him. In order properly to criticise our results it is necessary to know what becomes of the graduates. If these statistics are properly kept comparisons can be made as to costs and results, one district with another.

As has been pointed out elsewhere if too many men take up one particular course, they would not only be competing with themselves but with other civilians in that occupation. It is, therefore, necessary to know what percentage of men are taking each occupation for which the Department is training men, so that too many men may not enter one occupation.

From the statistics gathered, the Department makes up the following monthly studies:—

Study No. 1.—Monthly tabulated statements of the number of individuals taking re-training courses or attending Curative Workshop classes. These statistics are compiled each month for each Unit and are graphically represented in chart form in the main office of the Records Branch.

Study No. 2.—Number of men taking re-training in Industries for each Unit by months. This report is taken from Form 145 and tabulated statement of same.

Study No. 3.—Compilation of subjects, schools, institutions, and number of men attending classes in all schools by Units for each month.

Study No. 4.—Comparison of the increase or decrease of attendance of men taking re-training, also Curative Workshop training.

Study No. 5.—Information available at short notice such as, attendance, progress, etc., for any pupil for whom the extension of course is in question.

Study No. 6.—Percentage of distribution of men in the various re-training courses by months by Units, with a master compilation showing the percentage of distribution of men in various re-training courses for all of Canada.

Study No. 7.—Increase and decrease in the number of Individuals in any class by month by Unit graphically represented.

Study No. 8.—Comparison of telegraphic monthly attendance, information submitted on Form No. 145 for all Units by months.

Study No. 9.—The checking of Students' and Instructors' Time Sheets, Forms No. 145 and 146 which are sent to the Headquarters Office by the various District Vocational Officers. Form No. 145 is forwarded to the Headquarters Office weekly and Form No. 146 monthly.

Study No. 10.—Cross check No. 146 with No. 145 regarding instruction distribution of time.

Study No. 11.—Hours of instruction various courses for all Schools, all Units.

Study No. 12.—Percentage of distribution of graduates under courses.

Study No. 13.—Tabulated Statement of Re-training containing figures for the following headings:—

Applications to Ottawa, Cases Surveyed, Form No. 106 D.S.T.B. Pending Information and result of treatment, Non-eligible cases, Courses Approved, Extensions, Courses Granted but Not Accepted, Courses discontinued, Courses Completed, Courses concurred in not notified as having commenced, Courses notified as commenced, Number at present taking courses, Change of course, Current Discharged Re-training, Current Undischarged Re-training, Curative Workshops, Courses deferred, Courses Suspended, Courses Pending Decision.

No. 13. is issued in two forms, accumulative and non-cumulative. The first represents the work of the Vocational Branch in re-training disabled soldiers from June, 1917, to the end of the current month, and the second, the work for the current month only.

On page 148 is found study No. 13 for the month ending 31st December, 1918.

The statistics in regard to men in the classes, and subject taken, are collected on Form 145. The statistics in regard to instructors and the subjects they teach, together with the hours allotted to each subject, are collected on Form No. 146. These forms are filed under districts and institutions and the monthly compilation of results is shown on a graphic chart on each file. The results collected from these weekly class registers are checked against the number of courses granted, extended, changed or discontinued, passing through the Case Superintendent's hands. The results on Form No. 145 are checked with the results tabulated on Form No. 146.

The forms used in the follow-up branch are shown herewith. A copy of each of these forms is kept in the district office and a copy sent to the Head Office in Ottawa. The total of each of the items in Study No. 13 is checked every month by telegraphic advice from the districts. This system of cross-checking the statistics vouches for their accuracy.

Examples of information that can be gained from statistic data on file are shown throughout this volume. It is hardly necessary to discuss further the necessity of this information in controlling the administration of the Vocational Branch.

Form No. 145 is printed in two colours, white for the men taking industrial re-training, and pink for curative workshops. They are filed separately. From these school attendance charts we are able to obtain the maximum and minimum number of individuals in class month by month, and the maximum capacity for each institution for absorbing students. Curves are plotted for each institution where training is given, week by week, all over Canada and at the end of the year are plotted, showing the year's work. This supplies information as to whether a school has reached its maximum capacity and whether further accommodation is necessary. The total cost of any subject in any institution or school under the control of the Department may be ascertained from these forms; at the end of each month an analysis of the school activities throughout the Dominion is compiled.

All vital statistics in regard to each man are kept in a separate ledger, under his name. These vital statistics are continually tabulated on a Hollerith tabulation card and at any time any information in regard to the graduates may be obtained by running the cards through the Hollerith sorting machine.

The information tabulated on these cards is as follows:—

1. The unit where training is given.
2. Regimental number and rank.
3. Name.
4. Disability.
5. The district in which training is given.
6. City in which training is given.
7. The institution in which training is given.
8. The course selected.
9. The actual number of months in training.
10. Previous occupation or occupations in detail.
11. Previous salary.
12. Present occupation.
13. Present salary.
14. Percentage increase in salary.
15. Percentage decrease in salary.
16. Comments and remarks.

	Compiled from H.Q. Record Cards.										Compiled from Monthly Telegraphic Reports.									
	Applications to Ottawa—Cases Surveyed Form No. 106 D.S.T.B.	Pending Information and Result of Treatment.	Non-eligible Cases.	Cases Approved.	Extensions.	Courses Granted not Accepted.	Courses Discontinued.	Courses Completed.	Courses concurred in not notified as having commenced.	Courses notified as commenced.	Number at present taking courses.	Change of course.	Current discharged Re-Education.	Current Undischarged Re-Education.	Total.	Vocational (Conv.) Day.	Grand total.	Courses deferred.	Courses suspended.	Pending decision.
A	877	15	20	817	83	53	147	204	62	702	351	20	391	0	391	75	466	3	10	25
B	637	13	21	562	48	18	63	86	169	375	226	3	175	0	175	179	354	11	17	41
C	711	10	46	611	87	38	44	169	72	501	288	10	270	0	270	145	415	10	1	44
D	2,128	22	125	1,843	265	87	94	667	265	1,491	730	54	747	0	747	540	1,287	22	25	138
E																				
F	407	3	24	367	79	14	30	137	31	322	155	12	138	0	138	394	532	7	4	13
G	1,234	6	73	1,097	98	50	48	413	101	946	485	11	417	0	417	63	480	15	55	58
H	516	2	32	459	14	27	44	176	59	373	153	3	155	0	155	150	305	3	18	23
I	1,531	13	184	1,270	196	130	140	239	139	1,001	622	23	419	6	425	72	497	56	48	64
J	929	8	81	771	71	34	78	163	126	611	370	23	388	0	388	381	769	39	28	69
K	253	6	6	207	31	4	19	31	64	139	89	4	82	1	83	0	83	1	5	34
	9,223	98	612	8,004	972	455	707	2,285	1,088	6,461	3,469	163	3,182	7	3,189	1,999	5,188	167	211	509

Compiled by E.N.R.

December 31, 1918.

These are what we call the vital statistics in regard to the graduates, and it is from these statistics that the results in Chapter 13 are derived.

Up to the 31st December, 1918, preliminary interviews had been made in the various units as follows:—

"A" Unit	5,646
"B" Unit	3,303
"C" Unit	3,885
"D" Unit	13,763
"F" Unit	4,251
"G" Unit	1,639
"H" Unit	1,682
"I" Unit	3,049
"J" Unit	5,602
"K" Unit	642

making a total in Canada of 43,462.

Up to this time 8,004 men had been granted re-training courses. This shows that practically 20 per cent of the men being discharged through the invalided section were found eligible for training. After applications to Ottawa for training have finally been disposed of they are tabulated under eleven headings, a detailed analysis of which is made daily and consolidated in a monthly report. The eleven headings, constituting Study No. 13, are as follows:—

1. Courses approved.
2. Decisions withheld pending further information.
3. Non-eligible cases.
4. Granted but not accepted.
5. Commencement of courses deferred.
6. Courses commenced and put on pay and allowances.
7. Courses extended.
8. Courses changed.
9. Courses suspended.
10. Courses discontinued.
11. Courses completed.

From this a further division is made as follows:—

1. Approved, by courses.
2. Approved, courses by disabilities.
3. Commencement of courses, by subjects.
4. Commencement of courses, by disabilities.
5. Discontinued, by courses.
6. Discontinued, by disabilities.
7. Completed, by courses.
8. Completed, by disabilities.
9. Transferred from Vocational Branch for treatment to Medical Branch.
10. Transferred from treatment, Medical Branch, back to the strength of the Vocational Branch for training.
11. Transferred from Unit to Unit.

Each of these headings is analysed from time to time in order to gain information as to the reasons for success or non-success of different classes.

In Chapter 13 we have shown an analysis up to 31st December, 1918, of the men who have discontinued their courses with the reasons, analysis of the men who have graduated and their disposition. Interesting analyses have been made of the men who have discontinued in regard to their disabilities.

It would take too much time here to go into the organization of statistics to control supplies and equipment. Complete ledgers are kept of the equipment

in each institution and the supplies sent to it, as well as the disposition of these supplies. From these statistics we obtain the distribution of our costs.

In order to do this it was necessary to have an inventory taken of the equipment of all existing schools which were taken over by the Department, and in all institutions where the Department supplied the equipment direct. These Equipment Ledgers are accessible at any time and show the amount of equipment in any class-room in any school, which is directly under the Department of Soldiers' Civil Re-Establishment. The vocational equipment is purchased through the Chief Purchasing Agent of the Department of Soldiers' Civil Re-Establishment. Certain small purchases, under $50, may be purchased locally, by the Vocational Officer, providing permission is received from the Director of the Unit.

The Equipment Ledgers are of greater value than merely to contain a statement of the amount of equipment on hand at the various schools. They are constantly referred to, when additional equipment is required, in order that there may not be duplication of machinery for any school, also that the machinery supplied will be such that the experience gained will be diversified. When course outlines are submitted to Ottawa, the Equipment Ledgers are scanned very closely in order to ascertain whether or not the school possesses the equipment for satisfactorily giving the course suggested. If the equipment is found to be inadequate, a suggestion is made that it be brought up to date by the purchase of second-hand or new machinery, so that every moment of the soldier's time during his re-training course will be profitably spent. That is, the greater stress is placed on practical demonstration and operation.

The Equipment Ledgers also give a definite, reliable record of all tools and machinery loaned by the various manufacturers of machinery for certain purposes, such as demonstration of tractors, sulky ploughs, disc harrows, gas engines, magnetos, carburetors, delco lighting systems, battery sections, demonstration boards of various kinds; in fact, a great variety of machinery which is of extreme importance to the school but need not be purchased since manufacturers make it a point of their advertising to supply schools with demonstration material, providing it is returned after a certain definite period, in good condition. By means of these agreements with manufacturers and distributors, the Vocational Branch of the Department has been able to save many thousands of dollars.

It is well to note at this point, however, that there is a certain limited utility in this borrowed material. It may not be disassembled or worked with in a practical way. That is, a tractor which is loaned, is loaned for demonstration purposes only, and is more or less on display. When we attempt to take it apart to show its component parts, or put it under power for ploughing and harrowing, we encounter difficulties. Hence it is necessary that a certain amount of equipment of this kind should be owned by the Department.

The organization of the equipment and supplies requisitions is such that each institution has a code number and each class or type of work is numerically known, so that it is possible in the distribution of equipment and supplies, to know to what particular class-room they are destined.

On account of the information and studies which have been made regarding equipment and supplies, the men who are in charge of this work in the Vocational Branch at Ottawa, are in a position to be and are of inestimable assistance to the Vocational Officers in the various Units, in the selection and layout of the various school shop equipment, also regarding the manner in which it may be best utilized to get the most intensive, practical experience.

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT

INVALIDED SOLDIERS' COMMISSION

VOCATIONAL BRANCH EMPLOYMENT RECORD OF RE-TRAINING CASE. A

No .....Rank.....Name.....

I hereby certify that the above named completed his course of re-training in the subject of.....

given at.....on .....19..

(Institution or Firm or both)

*and (a) has obtained employment (b) has commenced business for himself as.....*at (a) or (b).....

(Occupation) (a) Firm, etc. (b) Place

at a wage of (a).....per.....

Hour, day, week, month, etc.

REMARKS.....

.....

.....

.....

.....

Dated at.....19.....

.....

District Vocational Officer.

*(a) or (b) cross out words not applicable.

NOTE.—This form must be sent to the Head Office, Ottawa, within one week after the date on which a man finishes his course. A copy should be kept on file by the D.V.O. If for any reason the man has not found employment, it should be stated under "Remarks".

I. S. C. F. 2—A. 25M 6-18.

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT

VOCATIONAL BRANCH FOLLOW-UP RECORD OF RE-TRAINING CASE *B

No.....Rank.....Name.....

I hereby certify that the above named is (a) still (b)‡ not now employed as.....by..... Firm, etc. .....at..... Place

‡(a) at a wage of.....per month. His (b)‡ late employer reports that.....

‡(b) and is now employed as.....by..... Firm, etc.

at..... Place .....at a wage of.....per.....

‡(c) is in business for himself and is..... Progress, success, etc.

REMARKS.....

.....

.....

.....

.....

‡(a), (b) or (c) Cross out words not applicable.

Date at.....

.....

District Vocational Officer

NOTE.—This form must be sent to the Head Office, Ottawa, one month after S.C.R. Form 2A is sent in and monthly thereafter until the man is definitely settled in a position.

‡After B state serial number of Follow-up Record, as B 1, B 2, etc.

S. C. R. F. 2 B.—75M.—1-19.

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT

VOCATIONAL BRANCH

WEEKLY CLASS REGISTER of Attendance of Men in.....at.....Unit.....

WEEKLY CLASS REGISTER of Attendance of Men in.....at..... Unit.....
(Institution) (City or Province)

Subject..... Class Periods { From.....A.M.....A.M. / From.....A.M.....A.M. } { From.....P.M.....P.M. / From.....P.M.....P.M. } Week ending.....
.....19....

Regimental No.		Name with Initials Surname First)	Discharged or Undischarged.	Course.	Date of Lesson.						Total Number of Hrs.	Total Possible Hours.	Percent Attendance.	Conduct.	Progress.	Effort.	Comments: Absence or Conduct. (This column must be used).
	1																
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
	10																
	11																
	12																
	13																
	14																
	15																
	16																
	17																
	18																
	19																
	20																

Instructors and Assistants.

Grand totals

Industrial Re-Education.

.....

.....

.....

.....

STANDARD SYMBOLS:

To be used in Recording Attendance.

- ☒ Present A.M., Absent without Excuse P.M.
- ☒ Present P.M., Absent without Excuse A.M.
- ☒ Present A.M. and P.M.
- ○ Absent all day without Excuse.
- ☒ Present A.M., Absent with Excuse P.M.
- ☒ Present P.M., Absent with Excuse A.M.
- ☒ Absent all Day, with Excuse.
- ☒ Absent all Day Excused Later.

NOTE.

The General Sign denoting Excused Absence is shown by a Wavy Line through the period excused. This may be done at the time of marking or later.

For the Colums: Conduct, Progress and Effort, Letter E=Excellent, G=Good; F=Fair; P=Poor.

.....
Signature of Instructor.

S. C. R. Form 145. 50,000-10-18

DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT

Invalided Soldiers' Commission

VOCATIONAL BRANCH

Monthly Time Table of.....at.....City.....Unit.....
(Instructor) (Institution) Town (Place)

Main Subject..... Week ending.....19....

TEACHING HOURS.

	A.M. 8	9	10	11	12	P.M. 1	2	3	4	5
Mon.										
Tue.										
Wed.										
Thur.										
Fri.										
Sat.										

Note.—In case an Instructor is teaching two or more subjects at one time, he should put the names of the subjects in the oblong space enclosed by him to denote the time spent and allot the time given to each in percentages. Should the space not be large enough for the subjects; denote in space thus, * and write the subjects as a Foot Note following a star. Also indicate whether teaching occupational therapy or industrial re-education in oblong spaces.

.....
Signature of Instructor.

I. S. C. Form 146.—30,000-5-18

CHAPTER XII.

COSTS OF VOCATIONAL BRANCH.

Although it is necessary from the administrative standpoint, to know the cost of doing certain work, it must also be borne in mind that the efficiency of the Vocational Branch of the Department of Soldiers' Civil-Re-Establishment cannot be measured by the cost because in the last analysis the purpose of the Branch is to re-train disabled soldiers and not manufacture articles or material at a minimum cost. However, in order that all equipment and supplies furnished, may be handled judiciously and conserved as part of the nation's wealth, it is necessary that a very strict supervision be placed upon their use and disposal, so that the losses of supplies through careless workmanship or general shortages may be minimised and the too rapid deterioration of equipment may be controlled.

The unit used to measure the costs, is the cost per month per man taking training. This is the only unit that can be used. Included in these costs however are a number of items that should not be charged to training but which cannot be readily separated.

In addition to a large number of interviews with men who are granted courses, the Vocational Branch interviews all men discharged through the invalided section of the discharge depots. Since the inception of the work the Branch has interviewed over 43,000 men in person, as to their need for re-training. The expense of the interviewing and clerical work in connection with this work is carried by the cost of training.

Included in these costs also is the cost of carrying the Ward Aides and administering that work. None of the men who take work in the wards are enrolled as students. The full cost of training the 270 girls for this work has been charged to "D" Unit.

These costs also carry the transportation of students from place to place for training. A large number of men have to come in from outside points to our offices to be interviewed.

In the chapters preceding this will also be noticed the benefits which are given to men free of charge in the way of medical examination and care during their course. The costs include as a charge the salaries of the medical staff and their office expenses, also the costs of the industrial surveys treated in Chapter 9, as well as the costs of the After-care Department.

As is generally found in an organization of this magnitude, certain difficulties may be met with in obtaining promptly all the information required to give a comprehensive result. The difficulties experienced in the past lead us to believe that the greatest obstacles have been getting the expenditures charged to the month in which it was made, and a prompt charging of supplies directly to the class using the same. Steps are being taken to remedy these two conditions at this time.

It is impossible to compare these costs with those in any other educational system on account of the expense of interviewing, inspecting, medical examination, industrial surveys, after-care and ward aide work, and also because the individual nature of the work done for each man is not done in high school, technical school or university. The system of individual instruction and flexible syllabi is nowhere carried to the same extent. This entails fewer students to each instructor and a greater executive staff. This system also carries the expense of factory inspection, industrial surveys and medical work, not carried by any other system, all of which is included in the cost per month per man.

The remarkable expansion of the work has necessitated considerable expense for organization, and since the work was so new a great deal of research and experiment had to be undertaken. This is all carried in the unit costs.

On the financial statements which are submitted by the Chief Accountant, the various accounts are indicated by code numbers, the whole number being used for group expenditures and the decimal following for a differentiation of the group. The numbers which have been allocated to the Vocational Branch for vocational expenditures, not including rentals of buildings or purchase thereof, purchase of equipment, range from 500 to 532 with a few omissions which have not been carried out by the Accounting Branch, as follows: 519, 521, 522, 523, 524, 525 and 529. Expenditures corresponding to these numbers have not, up to the present time, been allocated to vocational work. No doubt when the work expands they will be utilized.

The total of the current vocational expenditures, except pay and allowances by Units, has been carefully recorded from August, 1917, to December 31st, 1918. A compilation of these expenditures (Table No. 1, page 159) is attached to this report, which shows the total expenditures for all Units, both individually and collectively, and the gross total for the seventeen months amounts to $1,240,442.78, without pay and allowances.

An itemized list of the detailed accounts corresponding with the code numbers is attached, shown in table No. 2, page 160.

The information received from the units weekly, on our weekly reports of attendance of the number of individuals who attend vocational classes, has been carefully inspected and the total in each Unit, during each month ranging over a period from August, 1917, to December 31st, 1918, is appended in table No. 3, page 161.

As far as vocational costs are concerned, the best we have been able to do up to the present time, is to take the statements which are rendered monthly by the Accountant's Branch and divide the total current expenditures, without Pay and Allowances, for each Unit, each month, by the number of individuals who are collectively attending industrial re-training and curative workshop classes in that Unit. This analysis is shown in table No. 4, page 162.

As an example of how this work is carried on, we will take as a specific instance, the expenditure for "A" Unit for August, 1917, amounting to $2,481.79. The total number of individuals attending classes during that month was 227. Therefore the result of dividing this expenditure by the number of individuals receiving training is $19.42 which gives the unit cost per man for instruction for that particular month.

This study has been carried on for the seventeen months, as noted, and the average expenditures for all units are tabulated at the extreme right hand of table No. 4. From this analysis the highest cost per man per month is $23.06 in "I" Unit, and the lowest $14.02 in "J" Unit. The mean over all Canada for the seventeen months is $18.07. It is impossible to get from the Accountant a distribution for November and December of "C," "D" and "F" Units. The total expenditures were grouped in "D" Unit and the allotment for each unit cannot be made until a trial balance is taken.

It is very difficult to obtain information as to the costs of carrying on educational work in civil institutions. However, the Bureau of Education of the Department of the Interior, United States Government, has made some investigations into the costs of operating universities and agricultural colleges in the States of Washington and Iowa. In Bulletin No. 19 issued by that Bureau in 1917 on page 110 are found some very interesting figures touching the costs in these institutions. The costs given in this table cover all current operating and administrative expenses, but not capital cost, and are comparable with those given in Table No. 4 in this chapter. The costs in these institutions for the school year for each man based on the average attendance are as follows:—

State University of Iowa	$271.00	per school year
Iowa State College of Agriculture and Mechanical Arts	271.00	" "
University of Washington	192.77	" "
Washington State College	289.79	" "

The average of these four is $257.26 per man per school year.

This report does not state the length of the school year but it is probably seven months, if, however, it is taken as eight months the average cost per month per man would be $32.16 which is much higher than the average cost in the Vocational Branch of the Department.

It must be remembered that these colleges do not carry the charges for interviewing, medical care and examination, industrial surveys, after-care, transportation of students, ward aides and the training of certain instructors, as do the costs of the Vocational Branch in Canada given in this chapter.

It may be stated further that our attempts to find detail costs up to the present time have been somewhat crude, owing to the work being in a process of organization, and the impossibility of getting information with which to work, so that separate analyses might be made of the various kinds of school activities. However, during the past few weeks, two men have been working on a preliminary survey of this work, and in a very short time school stores will be established all over Canada, so that each school class room will be charged directly with the supplies which it consumes by months. There will also be a distribution of the administrative expenses of the institution where the class is carried. This item will cover all salaries of office staff and employees, excepting those who are strictly speaking, instructors of the class. This will be proportioned to the number of individuals who are receiving training in the institution. From this a ratio will be made which will be chargeable to the particular class which is being supplied. Instructors' salaries will also be proportioned in the same way, by means of information received from our lists of personnel, the pay lists of the units which are sent to Headquarters, Ottawa, also by studies of Form 145 which shows the attendance of classes per week, Form 146 which show the distribution of instructors' time, where they are teaching more than one subject.

Overhead expenditure will also be considered by institutions. This item will be segregated showing cost of light, heat, power, rent, maintenance, and repairs of buildings and equipment, and depreciation of the same. This amount will also be proportioned according to the number of individuals receiving training in the institution.

Equipment expenditures will be analyzed very carefully to cover the cost of new and second-hand equipment which is purchased or supplied to the schools from time to time, and will be proportioned to each class according to its use by that class.

The expenditure for supplies necessitates that a return be made from each school to Unit Office, thence to Head Office, showing actual value of supplies consumed each month, and a list on Form 62, or some other form, will have to be drawn up. These forms will cover all materials used by the class as entering into the products of training.

Transportation will cover car fares issued to members of the classes in places where it is necessary for the students to make use of the street cars in going to and from training.

Administrative expenses of the Unit Headquarters officers, and the administrative expenses of the Head Offices of the Vocational Branch, Department of Soldiers' Civil Re-Establishment, Ottawa, will also be proportioned pro rata to the students in each respective Unit.

From the total expenditures, both direct and indirect, it will be necessary to deduct the revenue from sale of articles produced by the class, together with

other refunds or recoveries which may be effected through sale of equipment or other assets. To this result must be added the total of Vocational Pay and Allowances to the classes, and this figure should then present the total cost of the class for a given period.

The refunds which come from classes are made out in the Units in the form of a cheque payable to the Receiver General. Any shop work product is a true indication of the quality of workmanship and skill which has been achieved by the students. The fact that these products have a marketable value and are in constant demand is most gratifying. However, it should be pointed out that there is a tendency in the classes to manufacture one small article or line which has a market value and shows a profit. As we proceed, therefore, to locate the student costs in all our classes we must be most careful through supervision and instruction to see that there is no exploitation and that the subjects of instruction are selected from a broad point of view, rather than that of an ordinary business procedure.

TABLE No. 1.

General Vocational Expenditures by Months.

August, 1917, to December, 1918.

Table 1 does not include pay and allowances.
Standing Account numbers 500 to 532, omitting 503, 519, 521, 522, 523, 524, 525, 529.

Units: / Months.	A & E Quebec.	B Nova Scotia.	C E. Ont.	D C. Ont.	F W. Ont.	G Manitoba	H Sask.	I Alberta.	J B.C.	K N.B	Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
August	2,481 79	2,462 78	2,718 89	3,842 00	1,978 87	2,417 95	1,910 76	4,365 82	3,035 85	.....	25,214 71
September	3,430 08	2,826 10	1,512 22	6,241 73	837 64	5,387 21	5,148 96	3,665 96	2,633 30	.....	31,683 20
October	3,911 19	3,306 01	2,613 35	6,010 35	1,574 66	6,035 83	2,897 77	3,990 13	3,525 19	172 40	34,037 08
November	5,606 12	2,726 65	1,685 51	7,715 80	923 14	21,914 10	2,434 91	10,482 96	2,384 52	742 92	56,616 63
December	5,069 87	2,672 68	2,162 88	4,891 18	1,003 71	7,697 67	2,536 82	6,053 18	3,416 10	754 77	36,258 86
January	7,812 24	3,763 68	2,990 09	9,047 86	1,355 18	13,430 74	6,680 88	7,093 20	6,033 02	918 65	59,125 54
February	6,931 81	4,935 32	3,538 17	11,833 67	2,527 02	10,251 21	2,379 06	8,684 09	4,353 09	766 53	56,199 97
March	5,986 51	3,500 37	2,174 13	16,742 67	5,980 42	9,399 00	6,580 03	7,302 84	4,630 96	649 38	62,946 31
April	7,794 82	5,324 16	2,248 77	12,999 45	1,680 78	9,921 47	2,789 93	10,492 53	5,995 04	1,038 62	60,285 57
May	8,778 55	4,740 36	4,603 65	23,944 37	3,699 09	10,964 26	3,037 92	9,068 52	8,816 34	547 61	78,200 67
June	11,129 07	5,501 80	6,343 91	22,193 07	5,456 61	12,424 57	5,229 54	7,787 43	6,481 56	1,187 74	83,735 30
July	7,768 61	4,881 45	4,518 04	42,131 36	4,939 21	8,270 79	2,682 07	8,874 09	8,010 40	713 20	92,789 22
August	9,281 43	5,344 12	4,101 08	29,718 95	5,755 08	9,477 62	2,667 78	6,496 75	8,373 19	881 72	82,097 72
September	7,382 54	4,946 89	7,408 86	42,534 03	8,239 76	8,058 85	2,373 43	9,084 69	8,620 19	979 65	99,628 89
October	12,794 08	6,609 45	5,906 24	44,709 77	6,774 01	9,551 79	2,827 82	10,854 78	11,146 33	910 70	112,084 97
November	13,667 52	8,457 81	.....	65,288 27 Inc. C, F	.....	16,192 89	2,805 56	13,614 56	15,352 47	1,121 03	136,500 11
December	12,956 28	6,839 98	.....	64,432 37 Inc. C, F	.....	13,854 03	4,634 49	12,101 02	16,352 90	1,866 96	133,038 03

Total Expenditures $1,240,442.78

TABLE No. 2.

Standing Account Numbers.

500 Salaries H. O. Staff.
501 " D. V. O's Staffs.
502 " Instructors.
504 Travelling expenses, H. O. Staff.
505 " D. V. O.
506 Stationery Office Supplies.
507 Proportion Machine Shop Expenses (Guelph).
508 Rent.
509 Light, Heat and Power.
510 Taxes.
511 Insurance.
512 Maintenance and Repairs, Office Furniture.
513 " " Buildings.
514 Automobile Expenses.
515 Undist. Frt. and Express.
516 Miscellaneous Expenses.
517 Transportation of Students.
518 Clothing.
520 Laundry.
526 Telephone.
527 Telegraph.
528 Postage.
530 Education Expense.
531 Correspondence and Business College.
532 Text Books.

TABLE No. 3.

Total Attendance Curative Workshops and Re-Education.
August, 1917 to December, 1918.

Months. Units:	A & E Quebec.	B Nova Scotia.	C E. Ont.	D C. Ont.	F W. Ont.	G Manitoba.	H Sask.	I Alberta.	J B.C.	K N.B.	Total.
August	227	193	195	275	117	223	200	273	290	.....	1,993
September	278	202	206	509	120	377	137	201	278	.....	2,308
October	392	247	173	562	140	603	148	271	297	.....	2,833
November	539	227	274	594	90	577	176	318	329	47	3,171
December	412	247	263	678	128	607	160	262	353	43	3,153
January	474	226	328	695	209	488	231	313	390	35	3,389
February	535	273	276	984	193	678	269	356	417	50	4,031
March	516	288	262	900	213	550	204	354	477	53	3,817
April	530	268	192	884	205	410	313	369	425	28	3,624
May	538	223	249	971	205	478	226	385	474	27	3,776
June	484	264	270	971	235	434	206	386	534	29	3,813
July	508	295	231	1,113	318	445	205	340	495	31	3,981
August	432	307	208	1,173	277	364	158	372	530	40	3,861
September	553	326	234	1,149	326	358	129	300	534	46	3,955
October	472	304	250	1,150	413	360	104	356	543	46	3,998
November	494	386	317	1,318	472	420*	200	356	746	66	4,775
December	517	354	415	1,287	532	480	305	497	769	83	5,239
Total	*7,901*	*4,630*	*4,343*	*15,213*	*4,193*	*7,852*	*3,371*	*5,709*	*7,881*	*624*	*61,717*

Figures in italic are Unit comparative factors and not total number of individuals or "non-month" Units.

*On account of the Spanish influenza in Winnipeg during the month of November, 1918, the average attendance for October and December was taken in substitute for the number of pupils during November. This is equivalent to the number of men who were on Pay and Allowances plus those in curative workshops.

TABLE No. 4.

General Expenditures—Cost of Vocational Training per Man per Month.

August, 1917 to December, 1918.

Table No. 4 does not include Pay and Allowances.

Units: / Months.	A & E Quebec.	B Nova Scotia.	C E. Ont.	D C. Ont.	F W. Ont.	G Manitoba.	H Sask.	I Alberta.	J B.C.	K N.B	Average all Units.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
August	19·42	12·75	13·94	14·00	16·90	10·84	9·55	15·98	10·47	.....	13·76
September	18·88	14·00	7·35	12·25	6·97	14·28	37·60	18·25	9·47	.....	15·45
October	19·99	13·38	15·01	10·70	11·25	10·06	19·58	14·72	11·87	.....	14·06
November	19·54	12·00	6·15	13·00	10·25	16·10	10·99	13·36	5·42	11·60	12·21
December	11·76	10·82	8·22	7·21	7·84	12·68	15·85	23·10	9·68	17·55	12·27
January	24·88	16·63	9·12	13·00	6·48	27·50	28·88	22·66	15·47	26·22	18·07*
February	19·91	18·08	12·82	12·03	13·09	15·12	8·84	24·39	10·44	15·33	16·71
March	18·32	12·15	8·29	18·60	28·07	17·09	33·25	20·63	9·71	12·25	17·72
April	24·63	19·87	11·72	14·82	8·19	24·20	8·94	28·43	14·10	37·09	17·45
May	25·17	21·26	18·49	24·66	18·04	23·00	13·44	23·55	18·62	20·28	18·77
June	33·25	20·84	23·49	22·88	23·22	28·70	25·89	20·17	12·15	40·95	22·87
July	15·29	16·54	19·55	37·85	15·53	18·58	13·08	26·10	16·78	23·00	20·23
August	21 46	17 40	19·71	25·25	20 77	23 29	16·88	17·33	15·79	22·04	19·92
September	13·35	15·17	31·66	27·01	25·27	22·79	18·39	30·28	16·14	21·29	23·13
October	27·10	21·74	23·62	38·87	16·40	26·53	27·19	30·49	20·52	19·79	25·22
November	27·66	21·91	.....	30·98 Inc. C, F	.....	38·55	14·02	38·24	20·57	16·98	20·89
December	25·06	19·35	.....	28·84 Inc. C, F	.....	28·86	15·19	24·34	21·25	22·49	18·53
Average	21·51	16·69	13·47	21·29	13·42	21·06	18·68	23·06	14·02	18·05	18·07

CHAPTER XIII.

AFTER-CARE AND RESULTS.

This chapter is devoted to a discussion of the results of industrial re-training.

There is no measure of the work done by Ward Aides or in the Curative Workshops except the opinion of the doctors. There is sufficient evidence in the form of unsolicited letters from the doctors to show that occupational therapy has attained remarkable results in the way of shortening the period of treatment, early discharge of the men, more permanent cures, and in the function of the muscles and nerves being restored to a greater degree of utility. The results of occupational therapy have been discussed more fully in the chapters treating on ward occupations and curative workshops.

Industrial re-training, however, has the definite object in view of re-training disabled men to restore their earning power, and the results would be definitely known if it were possible in every case to compare the man's wage earning power before he went to war with that after re-training.

In any enterprise conducted for gain, the results are finally measured by the profit and loss account. On the debit side is placed the expenditure, and set off against this on the credit side is the income, the balance being profit.

In industrial re-training, however, the debit side is ever present but the only credit is the number of men stabilized in civil life. This result can never be measured in dollars and cents. In order therefore, intelligently to administer the work of industrial re-training it was thought that the Department should make a serious endeavour to find out what became of the graduates. It was also thought that it would be unwise to spend money on training men without making some effort to see that they took advantage of the training. The work could not be considered as finished until the man was stabilized in employment.

The most critical time for these disabled men is the first month or two after they graduate from training and return to wage earning. In order to meet these objects the follow-up and after-care was organized. We also gain knowledge regarding our failures and faults, and information as to where improvements may be made. We find the courses which are successful and those which are unsuccessful.

The practical success of an industrial re-training scheme for disabled soldiers can be determined only by a study of averages. Individual success however brilliant can never be taken as proof that the system is efficient, nor can individual failure condemn. Only after a careful study of all the records of men who complete their re-training during a certain time, men of different ages and disabilities, can any definite conclusion be arrived at.

The follow-up officer should be notified a month before a man is about to graduate from his course, and if possible to have a position ready for him. He is then required to visit the graduate within a week or two after he has been placed in employment, and, if he finds the man satisfactorily employed, make the next visit a month after that, with visits at increasing intervals until it is determined that the man is stabilized in industrial life. If a man is placed in employment and at the end of a week or month, his employment is found unsuited to his disability, it is desirable for the follow-up officer to find another position more suited to him.

This follow-up system was not put in force until the work had been in progress for one and a half years and it was necessary to get in touch with men who had already graduated and left. This was done through the Pensions Board and their visitors, through writing letters to their addresses and through the Great War Veterans and other returned soldiers' associations.

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It is believed that Canada is the only country today having a complete follow-up system for the graduates of industrial re-training.

The following therefore is a discussion of the results of industrial re-training only, based on the information gathered through the follow-up and after-care sections.

Up to the 31st December, 1918, the Vocational Branch had interviewed 43,462 soldiers in regard to industrial re-training. Out of this number the Disabled Soldiers' Training Board recommended to Ottawa for training 9,223 soldiers. The head office concurred in granting 8,004 courses with pay and allowances. Out of the balance of 1,219—612 had been found ineligible and the balance were waiting the result of further information or further medical treatment.

The 8,004 courses granted on December 31, 1918, were distributed as follows:—

Courses not accepted	455
Courses discontinued	707
Courses not commenced	1,088
Men in training	3,469
Completed courses	2,285
	8,004

"Courses not accepted" refers to men who have been granted training but for some reason have declined to take advantage of it. It is well known that in Canada there is a large number of men who have at some time or other followed two or three occupations. When they are interviewed by the Disabled Soldiers' Training Board they do not always report all these occupations. Sometimes their disability unfits them for the occupation which they give when being interviewed, but they have another vocation which they can follow quite well notwithstanding their disability. Some of these men who have been granted a course refuse it and go back to their own occupation. Others find work which they can do quite well without training. A small number die before they are able to commence their courses, and others for various reasons do not present themselves for training at once, but turn up later when they find that they cannot carry on in civil life.

Seven hundred and seven left their courses before training was completed. In striving to find the weak points in the re-training system it would seem that this discontinuance might furnish the key to certain defects and therefore they were carefully examined and classified in 14 groups. The number and percentage of men in each group is as follows:—

—	No.	Per Cent.	No.	Per Cent.	Percentage of total men trained or in training Dec. 31 1918, which was 5,754.
1. Satisfactory work in other lines than that for which they were training	165	23·34			
2. In business for self	2	0·28			
3. To take up Land Settlement	14	1·98			
4. Taking further course	3	0·42	184	26	3·2
5. Deceased	17	2·41			
6. Re-attested in C.E.F	32	4·53			
7. Ill health	46	6,51			
8. Courses cancelled on account of bad attendance or misconduct	27	3·82			
9. Domestic troubles	10	1·41			
10. Gone abroad	94	13·30	226	32	3·9
11. No apparent reason for discontinuance	100	14·14			
12. No information given	175	24·75			
13. Course not suitable or man not satisfied	12	1·70			
14. Allowances insufficient	10	1·41	297	42	5·2
	707	100·00	707	100	

Of these, the first 184 men may be considered to be satisfactory. Of the first 165 a number will have gone back to their former occupations on account of improvement in health or a decrease in their disability.

Those 226 cases falling in groups 5 to 10 may be considered as having discontinued from causes beyond the control of the Department. Those who were re-attested entered the army again on account of ill-health for further treatment prior to March, 1917. It is worthy of note that only 78 had to discontinue on account of ill health. This is only 1·3% of the men trained, or taking training, on December 31, 1918.

In the next four groups (Nos. 11 to 14) of 297 men, will be found all the failures in the discontinued class. Most of these men simply left their classes; many of them doubtless went back to their old work due to improved health or decrease of disability; others were dissatisfied or courses were not suited to them. If they cannot carry on in civil life they may return for further training.

The small proportion of those discontinued to the total number trained or training should be noted.

One thousand and eighty-eight men have been approved for training but have not yet commenced. These are men who have gainful occupations at the present time—in munition work or some other work of a temporary character. They are doing well at the high wages at present ruling and they ask us to permit them to continue in their work for some time. Others have farms of their own and wish to attend to the completion of work on the farm before coming to take their courses. The Department feels that it is wise to allow these men to continue this work provided they are kept in touch with, and finally present themselves for training. A good deal of the work they are doing is of a temporary nature and when competition becomes keen they will be forced out and then come to us for assistance.

There are no men at the present time awaiting training on account of lack of facilities.

On 31st December, 1918, there were 3,469 men actually learning new occupations, and 2,285 had completed their training. The table herewith shows a summary of the follow-up reports from graduates from all units up to 31st December, 1918. The 2,285 graduates have been divided into:—

	No.	Percentage.	No.	Percentage.
1. Following line of training	.....	.....	1,491	65·2
2. Unemployed	.....	.....	110	4·8
3. Sick or deceased	.....	.....	56	2·5
4. Unable to trace	.....	.....	197	8·6
431 men not following line of training, distributed as follows:—				
5. Unskilled occupations (manual)	45	1·9		
6. Unskilled occupations (general)	199	8·0		
7. Skilled occupations... (manual)	54	2·3		
8. Clerical	4	0·1		
9. Professional	7	0·3		
10. Farming	12	0·5		
11. Soldier (re-enlisted for light duty)	12	0·5		
12. Civil service	24	0·1		
13. Student	7	0·3		
14. Returned to pre-war occupation	67	2·9	431	18·9
			2·285	100·0

Figure No. 1 page 171 shows graphically the distribution of these men. Those who are following the lines for which they have been trained need no further comment. All failures will fall into the other classes, and some explanation of these classes is necessary.

Among the 18·9% who are following other lines of occupation, will be found a number of men who went back to their old occupation. The fact should not be lost sight of that a number of men are awarded courses, who at

the time their cases come up for consideration, sincerely believe that they cannot return to their former work. They are not malingerers but their belief is due to a state of institutionalism induced by their life in the army and in the hospital. After a few months of training with the Department they find that their idea is false and go back to their old occupation, but if they had not been trained by the Department they would have persisted in their former state of mind and very likely have sunk lower and lower in the social scale.

Other men go back to some former occupation different from that given when they were interviewed. Others find remunerative employment in other lines of work for which little or no training is necessary.

Some men come to us from the hospital unable immediately to follow the work in which they were engaged before the war, for the reason that while the doctors have done everything possible for them their convalescent period is not yet over and they must be given work in the meantime, otherwise their disability would increase through idleness and they might become confirmed cripples. Having followed a course of training they have become physically fit and return to their previous or some other occupation. These all fall within the 18·9% and are regarded by the Department as successful.

It is significant that while these men may be following some other occupation than that for which they were trained, the fact remains that they are in employment, and that when they come to us they sincerely believed that they could not follow any gainful occupation.

An examination of the chart will show that 4·8% of the men trained are unemployed. This table was drawn up shortly after the 31st of December. A number of the men who had graduated within a week or so of this date and had not found employment, would be found to have employment later. Others are what might be called the unemployable, those who in civil life did not want to work and never would, while with others we have failed in our endeavour to train them.

It might be pointed out however, from this table, that in Quebec, the Maritime Provinces and the three Prairie Provinces the amount of unemployment among the graduates averages less than 1%, which is less than the normal unemployment among civilians.

The Province of Ontario shows the highest rate of unemployment, the average being a little over 9%, but these men are probably centred in the cities and we are informed that the unemployment in the cities of Ontario at the present time among the civil population and able bodied soldiers is equal, if not greater, than this amount.

The next highest is British Columbia with 4·28% of the graduates being unemployed. We are also informed that this amount of unemployment exists among the civilian population in that Province. These figures compared with those for the civilian population, show that unemployment among the re-trained disabled soldiers is as low, if not lower, than among the able bodied soldiers and civilians.

The sick need no comment, these men have broken down through a recurrence of their war disabilities and are no doubt carried on the strength of the Medical Branch of the Department.

We have been unable to trace 8·6% of the total number of graduates. In explanation of this it should be said that a considerable number of men leave the Department as soon as their courses are completed without giving an address. They are under no obligation to report their movements to the Department; they leave for the United States or other Provinces. Others have been lost track of through the lack of a follow-up system in the early days of the work, but are gradually being found. In time we should be able to trace practically all our graduates. We are finding, however, that we are able to trace some of these men through the Pensions Board and have reason to believe that if we were

able to trace this 8·6% they would be divided among the unemployed and employed as with the other 91·4%.

Among those we have been able to trace, therefore, the percentage is as follows:

—	No.	Per Cent.
Employed	1,909	92
Unemployed	110	5·3
Sick	56	2·7

However, the mere fact that men are employed is not a sufficient measure of the success or failure of industrial re-training. It is the aim of the Department so to train these men that they will receive the full going wage in the occupation in which they are placed. Also this wage must be sufficient to keep them respectably and comfortably in the station of life where they find themselves. The men should be put in as good a position or better, from the wage earning standpoint, as they were before the war, notwithstanding their disablement, and without regard to any pension they may receive.

Up to the date of writing we have not fully analyzed the results for all the graduates up to the 31st December, 1918, with regard to comparison of their wages before the war and after re-training, but in the Province of Quebec a careful comparison was made of the first hundred graduates. Out of the first hundred men this could only be made for 65 men; for the remaining 35 no comparison could be made owing to the following disposition of them:

Gone to British Columbia to take up land	4
Gone to United States for employment	2
Gone to England for family reasons	1
In hospital	2
In business for self	2
No previous wage, or previous wage unknown	4
No record	6
In position but wages not decided or known	5
No employment	8
Refused job to wait for a better one	1
	35

The 65 for whom a comparison could be made, are divided as follows:—

Number of men showing increase of wages after termination of course	34
Number showing decrease	24
Number earning same wages as before enlistment	7
	65
Average increase of 34 men was	42%
Average decrease of 24 men was	18%
Average increase (65 men)	15%

A close analysis of the first one hundred men gives some interesting figures regarding those who did not go back to their former occupation. In this particular lot of one hundred men 57 immediately found employment in the occupations for which they have been trained; the remaining 43 are accounted for as follows:—

Gone to British Columbia to take up land to apply work taken in course	4
College courses, to be continued	1
Temporary work waiting for vacancies	2
Starting business in line with course	1
Could have followed course but chose to change	1
Disability decreased took up former work	3
Refused jobs and found their own	3
Expecting jobs daily	2
Conduct unsatisfactory, looking out for self	1
Lost job through being drunk	1
In Munitions factory	3
Civil service (no positions)	3
Civil service (no record)	3
Gone to England	1
Gone to United States	1
Treatment I.S.C.	2
No record	6
New occupations	5
	43

During the latter months of 1918 a study was made of 59 men who had completed their courses of training in the Province of Saskatchewan, between the months of May and October, 1918. The ages were as follows:—

Number of men between the age of 20 and 25 years	22
" " 26 " 35 "	23
" " 36 " 50 "	13
" over 50 years	1
	59

All these men without exception secured employment. Out of the 59 men there were 16 for whom comparative data was lacking, as their pre-war wage was not ascertainable, due to the fact that they had been working for themselves, as farmers, or in other occupations, and in other cases men went back to farms of their own where the wage could not be ascertained.

For the remaining 43 the comparison stands thus:	
Number showing increase of wages	29
Number showing decrease	9
Number earning the same wages as before enlistment	5
	43
Average increase of 29 men was	34%
Average decrease of 9 men was	21%

An effort as made to find out why the 9 men whose wages were decreased were not receiving higher wages. They are as follows. Names for obvious reasons are not given.

1. A. Age 30 years. Former occupation: Bricklayer, former wage, $110 per month. Disability: shell shock and general debility, dizziness on stooping and pain in back of head. Trained in gas engineering and motor mechanics. Present work—garage repair man, salary $80 per month.

This man is likely as well off as he was before the war. The occupation of bricklayer is seasonable, and his wage probably did not average $110 per month throughout the year.

2. B. Age 32 years. Former occupation: Freight handler and waiter. Education poor, highest pre-war earnings, $95 per month. Disability: gunshot wound right arm resulting in paralysis of muscles of right hand, absolutely preventing his return to former occupation. Unable to write with right hand, taught to write with left hand. Course granted—commercial work. At

present employed as sorter in Post Office in Saskatoon, $95 per month, permanent employee of the Civil Service. In time will be better off than before the war.

3. C. Pre-war occupation—miner, age 22 years. Wages, $110 per month Disability: gunshot wound in leg, leg 1½" shorter. Impaired movement left knee, has to use a cane when walking; absolutely impossible to follow previous occupation. Took course in farming, going to take up land later; earning $60 per month. This man should not have been given a course in farming.

4. D. Age 54 years. Very little schooling. Occupation section foreman C. P. R. Average wage $80. Disability: general debility from strain and overage. Course – Gas engine operation. Present work: garage mechanic. Salary, $75. This man would likely have broken down if it were not for the war, owing to his age. He now has a light occupation.

5. E. Age 20. Claims former wage $20 per week as helper on brother's farm, although he was only 17 years old on enlistment. Course: Switchboard operating, $80 per month. This is likely more than his pre-war earnings since his present position affords a steady occupation.

6. F. Age 48 years. Meagre education. Previous occupation—plasterer, $115 per month. Disability: rheumatism, gas on lungs, poisoning and trench fever. Course granted: gas engineering. Present employment: Driving truck, $90 per month. Pre-war occupation seasonable, would probably not average $115 per month during the year. The man selected a course in which the going wage was below that of his former occupation.

The other cases are similar.

The following is an analysis of the graduates in the Province of Ontario made in the same way up to the end of 1918, showing comparison of pre-war and present wages where comparative data is available.

Summary of Units.

Following lines of training		555
		%
Show Increase	420	43·0
Show Decrease	50	5·0
Salaries Unknown	3	0·3
Business for self	30	3·0
Earning same as before war	35	3·0
Students before war	17	1·5
Remainder Disposed of as follows.—		
Unable to trace	79	8·0
Unemployed	99	10·0
D.S.C.R. Patients	30	3·0
Deceased	2	0·2
Employed along other lines	182	19·0
Returned to pre-war occupations	26	2·2
Total graduates	973	100

Average increase of 420 men	54%
Average decrease of 50 men	14%
Average increase of 470 men	46%

It has been stated before that results cannot be based on individual cases but only on averages. However, remarkable cases exist of men who were found from time to time with undiscovered ability and whose pre-war salaries have been doubled by the training received. The Department hopes to issue shortly figures showing the average increase and decrease in wages for all men for whom comparisons can be made who graduated up to December 31st, 1918.

This training of handicapped soldiers is new, it has never been done before the present war. The organization and carrying on of the work was undertaken under war conditions. The results are far from perfect, no system of this kind can ever be perfect, it always is in the process of development. The results, however, go to show that from now on few, if any, disabled soldiers need despair

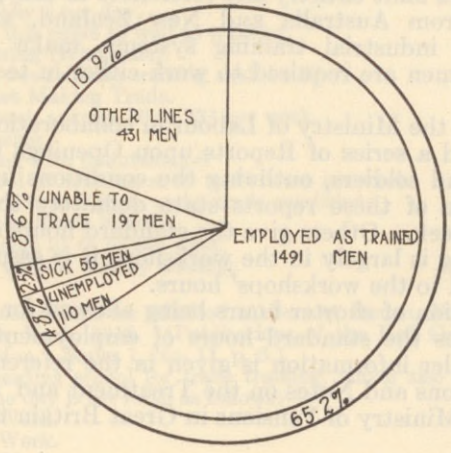
of being able to place themselves on a self-sustaining basis and become self-respecting producing members of society. The results, though far from perfect, lend the Department that encouragement which is necessary in undertaking pioneer work. It is to be hoped that the information given in this resume of the work will lead to helpful instructive criticism, which is always welcomed by the Department.

Summary of Follow-up Reports of Graduates received from All Units up to December 31, 1918.

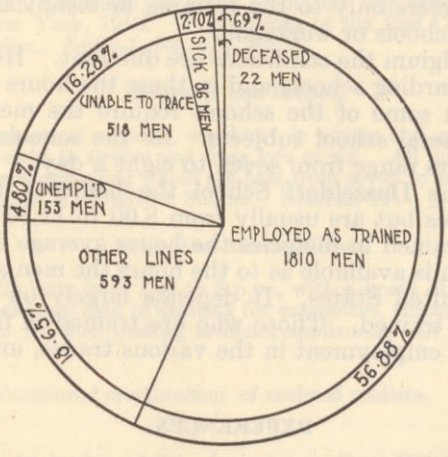
Unit.	Employed in line of Training.		Employed in other Lines.		Un-employed.		Sick.		Unable to Trace.		Total Graduates.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A Quebec	123	60	37	18	2	1	4	3	38	18	204	100
B Nova Scotia	60	70	11	13	1	1·17	5	5·83	9	10	86	100
C Eastern Ontario	98	58	42	24·8	14	8·20	1	8	14	8·2	169	100
D Central Ontario	382	58	137	20	70	10	22	4	56	8	667	100
F Western Ontario	75	54	29	21	15	10	9	7·5	9	7·5	137	100
G Manitoba	297	71·91	94	23	.....		Inc. 3 dead. 4	76	18	4·33	413	100
H Saskatchewan	141	80	24	13	1	1	Inc. 3 dead 8	4·54	2	1·46	176	100
I Alberta	201	84·1	18	7	.....		.....		20	8·9	239	100
J British Columbia	99	60·73	32	20	7	4·28	3	1·5	22	13·49	163	100
K New Brunswick	15	48·38	7	22·58	.....		.....		9	29·03	31	100
Total	1491	65·2	431	18·9	110	4·8	56	2·5	197	8·6	2285	100

STUDY OF DISPERSAL OF GRADUATES FOR ALL CANADA

TOTAL GRADUATES TO DEC 31, 1918 = 2285 = 100%



TOTAL GRADUATES TO MAR 31, 1919 = 3182 = 100%



APPENDICES

REQUIRED HOURS PER DAY OR WEEK FOR TRAINING DISABLED SOLDIERS.

Very little information as to the number of hours a disabled soldier should be required to spend each day or each week at his course of re-training, is available in the publications of the various countries. Some reports of the work in other countries omit entirely any references to this point. For instance the official reports from Australia and New Zealand, affording the fullest information on their industrial training systems, make no mention of the number of hours the men are required to work either in technical schools or in the factories.

In Great Britain, the Ministry of Labour in collaboration with the Ministry of Pensions has issued a series of Reports upon Openings in Industry suitable for disabled sailors and soldiers, outlining the conditions under which training may be given. Some of these reports state definitely the number of hours required per day or week. Others give the standard hours of work in the trade and where the training is largely in the workshops it is assumed that the hours of training correspond to the workshops' hours.

There is no mention of shorter hours being allowed for disabled men. For the majority of trades the standard hours of employment run into 52 or 54 hours per week. Fuller information is given in the references which follow.

In the "Instructions and Notes on the Treatment and Training of Disabled Men," issued by the Ministry of Pensions in Great Britain there is the following brief statement:—

> "The training should as a rule be given in the daytime and for a week of 30 hours at least. In most cases it will be found that a course of from 35 to 40 hours will be advisable."

This statement refers only to the training in technical schools and not to the training in trade schools or workshops.

In France and Belgium the conditions are different. Here the Re-education Schools are mainly boarding schools and in these the hours average about eight per day. In addition some of the schools require the men to spend an hour in the evening on general school subjects. In the schools of re-education in Italy the working hours range from seven to eight a day.

In Germany at the Dusseldorf School the hours in the workshops vary slightly for some trades but are usually from 8.00 to 11.30 and from 2.30–6.30. Where the men are trained in factories the hours average eight per day.

Little information is available as to the hours the men are required to spend in training in the United States. It depends largely on the occupations for which they are being trained. Those who are trained in factories must accept the standard hours of employment in the various trades, unless special arrangements are made.

REFERENCES.

Great Britain—

Ministry of Labour. Reports upon Openings in Industry suitable for disabled sailors and soldiers. Nos. 1–25.

Some of these reports make no reference to the hours per day or week required for training. Others indicate merely the standard hours of employment in the particular trade. The definite information obtained is set down in detail as follows:—

No. II. Cinematograph Industry.

Instruction partly at a technical school, partly practical teaching in projection. Such instruction shall be for a period of **not less than 30 hours per week.**

No. III. Tailoring.
Training given in day trade training schools **for the hours customary in such schools.**
No. VI. Leather Goods Trade.
Cordwainers Technical College is approved for this training.
A prospectus of Cordwainers College in a paragraph covering special day classes states: "Certain cases of disabled soldiers and sailors can be taken into special Day Classes from 9 to 1 and 2 to 6 daily (except Saturdays) and they will be trained on the intensive system to enable them to take their places in the trades concerned as wage earners."
No. VII. Boot and Shoe Making.
The maximum number of working hours shall be 52 hours per week.
No. VIII. Gold, Silver, Jewellery, etc.
Hours of work 50 per week.
Assume this refers also to training.
No. IX. Dental Mechanics.
Hours usually 8 per day.
Assume this refers as well to training.
No. XI. Tailoring (Wholesale).
Hours per week during training shall be 39.
No. XIII. Basket Making Trade.
Hours of work average 50 to 53½ per week.
No. XXII. Lettering.
(1) Training with maintenance.
(a) School of Art Course 30 to 40 hours per week
(b) Workshops Course under trade conditions.
No. XXIV. Hosiery Latch Needles.
Hours average 51 to 54 per week.
Assume this for factory training.

France—

Breuil, J. Vocational School for disabled soldiers at Rouen, France; translated by G. G. Whiteside, New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 1, No. 11, p. 6.)

This is a boarding school for trade training, which also receives day pupils. The programme for the day is set forth as follows:—

8 —10 Work.
10.15—12 Work.
1.30— 4 Work.
4.15— 5 Work.
5 — 6.30 Elementary School subjects.

Day pupils arrive 8 a.m. and leave at 6.30 p.m.

Hirschfeld, Gustave. Tourvielle: a Trade school for war cripples; translated by G. G. Whiteside. New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 1, No. 6, p. 5-6.)

Rules of the House.

"Pupils rise at six in summer, six-thirty in winter and go to bed at half-past nine. They work from eight to twelve and from two to six. All pupils are required to attend the classes in general schooling which are held from seven to eight every evening."

Hutt, C. W. Future of the Disabled Soldier. London, 1917, p. 27.

School at Montpellier.

"Work usually lasts from 7.30 to 5 p.m., with a break of two hours for dinner. In the evening classes are held in drawing for carpenters, turners and mechanics, anatomy and drawing for the men making artificial appliances, and in general subjects for the remainder."

Belgium—

Paeuw, Leon de. Vocational re-education of maimed soldiers. Princeton, 1918. pp. 124-5 and p. 135-6.

Agricultural Re-education at Port Villez.

"Every morning at half-past six the men assemble in the garden where for two hours the teacher gives them theoretical and practical instruction."

"From nine to six, with a rest of an hour and a half at noon and half an hour off at four, the pupils are busy with the work which the session requires. However for an hour in the morning and another in the afternoon they receive instruction in both national languages and in arithmetic."

School of Commerce at Port Villez.

"The school regime is as follows:—

7—8 Study.
8—10 Lessons.
10—11 Gymnastics, study or tests.
11—12 Lessons.
1.30—3.30 Lessons.
4.30—6 Gymnastics, study or tests.

Italy—

Chevalley, Giovanni. Report on the technical training of disabled soldiers and sailors in Italy. In: Inter-Allied Conference on the After-care of Disabled Men. Reports. London, 1918. p. 141.

"The working hours range from seven to eight a day."

Germany—

Gotter, Karl and Herold. Die Düsseldorfer Verwundetenschule. Düsseldorf, 1916.

The hours vary in this school according to the trade. In some cases instruction is given daily from 8.30 to 11.30 and from 3 to 7; again from 8.30 to 11.30 and from 2.30 to 6.30; in another trade from 7.30 to 11.30 and from 2.30 to 6.30; and in still another from 8 to 11.30 and from 3 to 7. Thus the time averages from seven to eight hours per day.

McDill, J. R. Lessons from the enemy. Philadelphia, 1918. p. 165-166.

Trades and Occupations Taught.

"Further opportunities for education and training in addition to the hospital-school and workshop instruction are furnished the men. For instance, in West Prussia there have been created Divisions for Disabled Workmen in the War Administration Office in Danzig. These were founded by the commanding general of the Reserve Corps Command.

They offer opportunities for learning the saddler, shoemaker and tailor trades. The men enter as apprentices and receive besides their pension a wage of 3.50 marks per working day. They are trained by masters eight hours a day for two years and at the end of their apprenticeship they take a journeyman's examination. They receive instruction in their trade for six hours a week from trade-school instructors."

"There are also opportunities to learn the trades in national, State, and private workshops . . . The theoretical and continuation instruction takes place twice a week from three to six o'clock. No wage deduction is made for this time. The pension is paid in addition to the wages which are 3.50 marks per working day of eight hours or 4 marks for nine hours."

Hutt, C. W. Future of the Disabled Soldier. London, 1917, p. 70.

"Agricultural work has been taught at a large State Colonization estate near Graudenz in East Prussia to ex-soldier agriculturists under treatment in the Military Hospital in Graudenz. . . Practical work was undertaken from 7–11 a.m. and 2–6 p.m. In addition four hours' theoretical instruction were given weekly, and lectures in the evening in the summer."

United States—

Federal Board for Vocational Education. Opportunity Monographs. Washington, 1918.

In this series of monographs only one statement as to hours per day or week required for training could be found.

No. 11. Automobile Maintenance.

Ignition experts.

"The courses will be from four to six months in length for about **seven hours per day** for five days in the week.

All the other monographs cite merely the standard hours of employment in various trades. These range on an average from eight to nine hours per day.

LENGTH OF COURSE OF TRAINING FOR DISABLED MEN IN OTHER COUNTRIES.

In most of the belligerent countries industrial training is being given to disabled soldiers at the expense of the government, or at least without expense to the disabled man. The period of training varies in length, however, in different countries. It also varies with different trades and occupations, and again with the conditions under which the training is given, whether in technical schools, in factories and workshops, or in both. Furthermore the question of pay and allowances and wages, if any, during training is one which has an important bearing on this subject. In a comparative study of the length of course of training given to disabled men, all of these factors must be taken into consideration.

At the Inter-Allied Conference held at Paris in 1917 a discussion of the subject led to the following resolution:—

"Trades for new apprentices should be selected from these which will yield a living wage in less than a year."

The inference is that those who are trained for an occupation closely related to their former one will require less training.

In Great Britain, training of disabled soldiers has been carried on under the Ministry of Pensions in technical schools, and in factories and workshops; also in the Lord Roberts Memorial Workshops, and in munition factories. The training in the Lord Roberts shops need not be considered in this connection as the men placed there are too disabled to compete in the open market and they remain in the workshops. The training in the munition factories may also be disregarded.

In the "Instructions and Notes on the Treatment and Training of Disabled Men," issued by the Ministry of Pensions it is stated that the period of training in technical institutes is not to exceed six months, without the sanction of the Ministry. In factories and workshops the period of training is restricted to four months. This means, of course, that only for such periods may a man receive allowances from the Ministry of Pensions.

The various other sources of information consulted all go to show that the period of training averages from three to twelve months, and where the period exceeds that and runs into two years or more, closer investigation reveals the fact that during the latter part of the training maintenance is withdrawn and the men are receiving wages.

In Australia and New Zealand the courses do not exceed twelve months; in Australia the period of training varies from three to twelve months; in New Zealand the period is restricted to twelve months, but the Government here has a subsidized wage scheme which must be taken into consideration. This is explained more fully in the reference listed at the end of this chapter.

In France conditions are somewhat different. The length of time required to train a man varies with different schools. At the Ecole Joffre and the Ecole Tourvielle in Lyons the courses are long, for the aim of these schools is to turn out thoroughly trained workmen capable of competing with sound men on equal terms. Six months is the length of the shortest course and some require eighteen months.

At the National Institute at Saint Maurice the aim is to fit men to earn a living wage in a shop where they can complete their knowledge through practice and so aspire to higher pay. Here the apprenticeship is shorter, there being courses of three, five and eight months.

Some of the special schools require a long apprenticeship, but during the latter part of the period wages are paid approximating an outside workmen's.

The Belgium National Institute at Port Villez has a yearly term for the elementary school department, the commercial and civil service department, and for the training of teachers. In the shops the length of time necessary for learning a trade is not fixed, but periods of six or seven months are frequently sufficient.

In Italy special arrangements are necessary if a man's training is not completed at the end of six months.

In Germany too, six months is estimated as the time necessary to give a man additional training in his old trade or in an allied one. It is not, of course, long enough to give a man a complete training in a new trade. For that other arrangements must be made.

Very little information is available as to the length of training to be given in the United States. Except in a few instances, the Federal Board for Vocational Education, which has charge of the rehabilitation work, has in its reports refrained from stating any set time for training. In those few cases as set forth in the reference following the length of time varies from four to nine months.

REFERENCES.

Great Britain.

Ministry of Labour. Reports upon Openings in Industry suitable for disabled sailors and soldiers. Nos. 1-25.

In connection with training for industry special advisory committees have been set up by the Ministry of Labour in conjunction with the Ministry of Pensions to advise these departments as to the conditions under which training can best be given. The reports of these committees are a valuable source of information regarding the trades. It must be remembered however, that these reports are largely recommendations, and not reports of the actual training given to men in these trades. Furthermore the recommendations include periods of training with maintenance plus periods of training without maintenance. For comparative purposes only the length of training with maintenance can be considered and in each particular trade it is necessary to look carefully into the question of pay and allowances and wages.

The reports yield the following information:

No. 1. Attendants at Electricity Sub-Stations. Now incorporated in No. XX.

No. II. Cinematograph industry.
Training for a maximum period of 13 weeks.
If unable to command an adequate wage after 13 weeks training extension may be applied for.

No. III. Tailoring.
Training for a period of 12 months.

No. IV. Agricultural Motor Tractor Work.
Theoretical and practical training at a technical school for 3 months, followed by a short course of actual driving.

No. V. Furniture Trade.
Probationary Period in School.
Improver's Period in Factory.
Length of training varies with the process.
Wages laid down according to a table.

No. VI. Leather Goods Trade.
Maximum period of training shall be 6 months whether in a technical school or in a factory.

No. VII. Boot and Shoemaking.
Training in a technical school for period not exceeding 12 months.
or
Training in Workshops.
Period of training 18 months during which man receive wages, according to schedule set down.
Training for Boot and Shoe Repairing only.
Period of training 12 months, 5 months without wages plus 6 months with wages.

No. VIII. Gold, Silver, Jewellery.
Period of training for certain processes set at maximum of 6 months and for other processes, maximum set at 12 months.
Where training is in Workshops a scale of wages is set forth.

No. IX. Dental Mechanics.
Maximum period of training shall be one year.
Scale of wages payable if training is given in private laboratory is set forth.

No. X. Aircraft Manufacture.
Scheme I.
Training for 12 months.
Wages but no maintenance.
Scheme II.
Training for three years.
18 months with maintenance.
Wages for last 12 months.
18 months without maintenance.

No. XI. Wholesale Tailoring.
Training with maintenance.
3 months in school.
3 months in workshops with wages.
Training without maintenance.
6 months.

No. XII. Boot and Shoe manufacture.
Length of training varies according to processes; some require 12 weeks; some 16 weeks and some 28 weeks.
One process requires a period of 52 weeks in a factory during which wages are paid.

No. XIII. Basket-Making Trade.

No. XIV. Building Trade.

No. XV. Engineering.

No. XVI. Printing and Kindred Trades.
No. XVII. Engineering. Pt. II.
No. XVIII. Picture Frame Making.
In Reports No. XIII–XVIII, the length of training extends from 1 to 5 years, covering two periods (a) With maintenance; (b) without maintenance. The regulations governing such training are set forth in the form of tables showing schedules for payment of wages and allowances. Within these trades there are processes in which full course of training is less than one year.
No. XIX. Brushmaking Trade.
Periods of training for this trade vary from 1 month to 6 months according to the branch of the trade.
Wages payable during training are set forth in a table.
No. XX. Electricity, Power and Light.
Periods of training run from 1 year to 3 years, and include periods with maintenance and without maintenance.
No. XXI. Distributive Trades.
Periods of training vary from 4 months to 12 months.
No. XXII. Lettering.
Length of training 2 years.
12 months with maintenance.
12 months without maintenance.
Scale of wages and allowance set forth.
No. XXIII. Pharmacists.
Length of training 3 years.
1 year with maintenance.
2 years without maintenance.
Scale of wages and allowances set forth.
No. XXIV. Hosiery Latch Needles.
Maximum training.
3 months in school with maintenance.
3 months in workshops without maintenance.
No. XXV. Musical Instruments Trade.
Length of training varies from 4 weeks to 3 years according to processes.
Processes requiring longer than 1 year's training include periods with maintenance and periods without maintenance.

Ministry of Pensions. Instructions and Notes on the Treatment and Training of Disabled Men. London, 1917, p. 44-46.
The following extract is quoted:—

LENGTH OF TRAINING.

"The period of training in a Technical Institute shall not, without the sanction of the Ministry of Pensions, exceed six months. If a longer period is desired in any case the Local Committee must show that the conditions of the trade require it. It is recognized that certain trades may require a longer period of training and in some of the "special" trades a longer period may be laid down as one of the conditions under which training may be given.

"* * * * * Similarly restricts the period of training in a factory or workshops to four months. Experience has shown that a shorter period of actual training is often advisable where the man is to continue working under the same employer after training. Here, however, also it is recognized that there are certain trades which may require a longer period, for this the sanction of the Ministry must be obtained.

"In all cases the training given should be of sufficient length to ensure that the disabled man will acquire such degree of skill that he will have a reasonable prospect of permanent employment. Only in exceptional cases should training be given for a shorter period than two months."

Mitchell, Major Robert. What has been done for the training of our disabled sailors and soldiers. In: Inter-Allied Conference on the After-Care of Disabled Men. Reports. London, 1918, p. 99-107.

TECHNICAL SCHOOLS.

"After obtaining their discharge from the hospital, the training of the men is usually continued at one of the many technical schools which are distributed throughout the country where the hours of attendance need not exceed thirty per week. After a course of training extending from three to six months, the disabled man is then invariably able to enter the factory and to keep the regular hours of work, which may not have been possible at an earlier stage. The facilities in these institutions are rapidly increasing as the scheme widens its activities, and at the present time the Ministry has sanctioned training in no fewer than 345 technical institutions and agricultural colleges as well as in 513 workshops and factories."

Retail Tailoring.—"Naturally a thorough training is necessary for this work, but the length of time varies with the learners adaptability. A full-time day training course has for some time been in existence at the Regent Street Polythechnic, and a special twelve months' course of training for disabled sailors and soldiers has recently been established."

Diamond Polishing.—"The men undergo a course of training for six months. At the close of their training the men are drafted by Mr. Oppenheimer into his factory where they start with a minimum wage of £2 per week, which is increased accordingly to proficiency."

Cinema Operating.—"The course is an intensive one of three months and the men are thoroughly taught not only the use of the projector, but also the working of motor generators, wiring and many other technical operations concerned with the trade."

Motor Traction Work.—"Courses of theoretical and practical training at a technical school for three months, followed by a short course of actual driving and ploughing under the local tractor representative of the Board of Agriculture are now provided."

Reveille. No. 1. London, August, 1918. p. 159.

The following table showing the maximum periods of training for certain occupations has been compiled from a record of men who have finished their courses:—

Agriculture—	
Farming	12 months.
Fruit growing	12 months.
Motor tractor driving	3 months.
Poultry farming	6 months.
Market gardening	12 months.
Gardening	12 months.
Arts and Crafts—	
Artistic woodwork	6 to 12 months.
Pottery (modelling, designing, etc.)	6 months.
Writing and Illuminating	6 months.
Baking and Confectionery	6 to 12 months.
Boot and Shoe—	
Boot-making and repairing	12 to 18 months.
Brushmaking	6 months.
Building—	
Builders' draughstmen	12 months.
Carpentry	6 months.
Masonry	3 years.
Sign writing	6 months.
Tool making	—
Cane and Willow—	
Basket making	1 to 2 years.
Cinematography	13 weeks.
Commercial	6 months.
Diamond cutting	6 months.
Domestic Service—	
Caretakers and Handymen	4 months.
Engineering (Electrical)	1 to 3 years.
Engineering (Mechanical)—	
Acetylene welding	6 months.
Draughtsmanship and tracing	6 months.
Motor mechanism	6 months.
Turning and fitting	3 years.
Whitesmith and tinsmith	6 months.
Furniture—	
Cabinet making	12 months.
French polishing	12 months.
Leather—	
Fancy leather goods	6 months.
Miscellaneous—	
Cricket-ball making	3 to 6 months.
Dental mechanics	12 months.
Hairdressing	6 to 12 months.
Sanitary inspecting	6 months.
Toy-making	12 months.
Printing	4 years.

Professional—	
Chemical analysis	1 year.
Massage	6 months.
Photography	6 months.
Tailoring	9 to 12 months. (wholesale) 12 to 18 months. (bespoke).
Textile Manufacturers—	
Cotton	8 weeks.
Designing	6 months.
Weaving	3 months.
Wool	48 weeks.
Transport—	
Motor drivers	6 to 12 months.
Tram Driver	1 to 2 weeks.

Australia—

Department of Repatriation. Vocational training; the Australian scheme, its scope and functions. Melbourne, 1918.

The following extract is quoted:

"The tuition provided is intended not to turn out an all-round finished tradesman, but to enable a trainee to earn a living wage within a reasonable period. Short intensive courses ranging from three to twelve months are provided. Students are therefore enabled to concentrate upon essentials and acquire a sound basic knowledge which ultimately with further experience can be expanded at will."

New Zealand—

Discharged Soldiers' Information Department. (Memorandum.) Wellington, 1918.

TRAINING IN WORKSHOPS, FACTORIES, ETC.

"An important training scheme was inaugurated in December last, when an Order in Council was gazetted authorizing the employment in workshops, factories, etc., at less than the union wage (for the purpose of training) of partially disabled soldiers who are unable to resume their pre-war occupations.

"Under this scheme the Department subsidizes the wage paid by the employer, in order to assure the disabled soldier an income (after the trial period) of £3 per week over and above his pension. During the trial period, which must not exceed two months, the man's wage is made up by this Department to £2 10s. per week.

"The wages to be paid by the employer are fixed by the Inspector of Factories after a conference at which the employer, the disabled soldier, the Labour Department, the labour union concerned, the Returned Soldiers' Association, and the Discharged Soldiers' Information Department are represented, and such wage is reviewed periodically, care being taken that the amount paid is an equitable one in relation to the work being done by the man.

"Half the Department's subsidy is paid to the man monthly, and the other half is retained by the Department, and is accumulated to his credit until such time as he satisfactorily completes the training, when the accumulated portion is paid to him as a bonus.

"During the period of training which (except in special cases), is limited to twelve months, the Inspector of Factories is required to visit, the man periodically in order that he may satisfy himself that the man is being properly trained and is making good progress. Any increase in wages granted by the employer during the training period does not affect the Government subsidy, but goes to increase the income of the soldier, who in most cases is receiving £4 to £5 per week, inclusive of pension."

TRAINING OF PARTIALLY DISABLED MEN WITH PRACTICAL FARMERS.

"The Department is fully alive to the importance of persuading partially disabled men, especially those suffering from nervous diseases, lung troubles, etc., to accept employment in the country, and with this end in view the Department assists such men under the subsidized wages scheme mentioned above.

"Employment is arranged with an approved farmer, and the man's wage is subsidized in order to assure him an income of £2 per week and found. Such assistance is granted, if necessary, for a period of twelve months, by which time it is reasonable to suppose that the man will have obtained a fair general knowledge of farm work."

France—

Harper, Grace. "Vocational re-education for War Cripples in France." New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 2, No. 1, p. 49-50).

"One of the guiding principles of this school is to make the period of apprenticeship as short as possible. The men are anxious to earn, and after prolonged absence they are restless to return to their homes.

"Dr. Bourrillon makes the following estimates as representing the maximum periods of training sufficient to earn a livelihood.

Bookkeeping	4 months.
Tinsmithing	6 months.
Shoemaking	8 months.
Agricultural mechanics	8 months.
Harness making	10 months.
Primary instruction	12 months.
Industrial design	12 months.

"Duration of apprenticeship in this last occupation varies greatly and is dependent in a great measure on the degree of previous knowledge within an allied field, on special ability, and other individual factors.

"Those are short periods of training from the point of view of the old apprenticeship system when a man spent three or four years before being considered proficient. Here men are not expected to be expert when graduated, but by concentration on the essentials they are supposed to have learned enough to take positions and acquire further experience at the same time that they are earning a reasonable wage."

Hutt, C. W. "The future of the Disabled Soldier." London, 1917. p. 37-40.

"Dr. Bourrillon considers that at the end of six months the vast majority of men who have undergone instruction in a trade are enabled to earn their living although not complete masters of the craft. Arrangements should he thinks, be made that the employer should undertake to arrange for the men obtaining practical experience of the whole of the work undertaken in his workshop.

"As an experience of the results obtained during training 700 men, he has found the following length of courses adequate:—

Clerical work	3 months.
Draughtsmen (architectural and mechanical)	10 to 12 months.
Leather worker	8 months.
Boot-maker	6 months for repair work.
Mechanic (to drive and repair agricultural motor-tractors)	6 months.
Tailor	8 months.
Tinsmith	4 months for an ordinary workshop. 8 months to work without supervision on his own account.

"Most of the Ecoles Professionnelles arrange for longer courses of training. At Montpellier the length of the courses are:—

Boot-makers	12-15 months.
Tailors	12-15 months.
Carpenters	15-18 months.
Wood-turners	8-12 months.
Mechanics	15-18 months.
Harness work and saddlery	11-15 months.
Orthopaedic work	15-11 months.
Draughtsmen	8-12 months.
Clerical work	8 months.

"At the Ecole Professionnelle of St. Etienne (Loire) the length of the apprenticeship for various trades is about twelve months, varying from ten months for instruction in business methods to eighteen months for tailoring.

"At Bordeaux, where long courses are provided for other occupations, it is considered that four to six months is sufficient to learn basket-making, and three to four months to learn the making of 'espadrilles', shoes with a cotton upper and string sole.

"At l'Ecole Nationale d'Osiericulture et de Vannerie at Fayl Billot, the length of the course is three months at the end of which a daily wage of 3-5 francs can be earned. Six months tuition enables a man to acquire a sufficient knowledge of the trade to act as foreman or to set up on his own.

"At l'Ecole Nationale d'Horlogerie de Cluses three courses of different length have been instituted:—

(1) An elementary course lasting six months in the use of a drill, watchmaker's hammer, etc., enabling a man to earn a small wage, 3-5 francs a day.

(2) An abridged course of twelve months in special parts of the work when the wage to be earned varies from 5-10 francs a day.

(3) A complete course of fifteen months in repairing, tool making, engraving, etc., when the wage earned varies from 8-15 francs a day.

"At Oyonnax where the comb industry is taught the length of the courses is from 3 to 6 months enabling a man to earn a wage of from 3 to 7 francs a day.

"At the Agricultural Schools the length of the courses is usually three months for milk-testing, basket making and fish-rearing: six months for bee-keeping, cowkeeping and harness work; twelve months for an agricultural machinist, vine grower, horticulturist and cheesemaker."

Whiteside, G. G. "Provision for vocational re-education of disabled soldiers in France." New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 1, No. 14, p. 17-18).

LENGTH OF COURSES.

"At the Ecole Joffre and the Ecole de Tourvielle in Lyons, the courses are long, for the aim of these schools is to turn out thoroughly trained workmen capable of competing with sound men on equal terms. Six months is the length of the shortest course offered in these schools, which is a course in beadwork organized for badly injured men incapable of vigourous movements. Eighteen months are ordinarily required for bookkeeping, radio-telegraphy, and galoche-making, a year for shoemaking, fur work, horticulture, paper-boxmaking and binding, and eighteen months for tailoring, cabinet making, toy-making, and the manufacture of artificial limbs.

"At the National Institute at Saint-Maurice the apprenticeship is shorter, the aim here being rather to fit and to earn a living wage in a shop where they can complete their knowledge through practice and so later aspire to higher pay. Bookkeeping is taught in three months at Saint-Maurice, shoemaking and saddlery in eight months, tinsmithing in five months, the use and repair of agricultural machinery in five months, and industrial design in one year.

"At Rouen the period of apprenticeship is not fixed. The Direction of the school aims to produce first-class workmen in each trade, and it leaves the foreman of each shop to decide when an apprentice has acquired the necessary knowledge and skill.

"Some of the special schools require a long apprenticeship, but during the latter part of the period pay wages approximating an outside workman's. This is the case in the diamond-cutting school at Saint-Claude, where the apprenticeship lasts one year. At the Ecole Nationale d'Horlogerie at Cluses the regular course is for three years, but for the benefit of the 'mutilés', this has been shortened to two years.

"At the Ecole Normale et Pratique of Bordeaux, which is considered a model school, the length of apprenticeship in the different trades is as follows:—

Machinists and metal-turners	10-12 months.
Locksmiths and forge-workers	10-12 months.
Agricultural machinery and automobiles	5-7 months.
Oxy-acetylene welding	4-5 months.
Shoemaking	6-9 months.
Sandal-making	3-4 months.
Pottery	10-12 months.
Binding, plain and artistic	8-10 months.
Gilding	4-6 months.
Paper-boxmaking	4-6 months.
Toy-making	3-5 months.
Tailoring	10-12 months.
Musical engraving	6-8 months.
Basketry and caning	5-8 months.
Industrial design	6-8 months.
Truck gardening	5-6 months.
Bookkeeping	9-10 months."

Belgium—

Whiteside, G. G. "Provision for the re-education of Belgium war cripples." New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 1, No. 15, p. 6–8.)

This bulletin has for its source Leon de Paeuw's, "La rééducation professionelle des soldats mutilés et estropiés." Paris, 1917, and from it is obtained the following information concerning the Belgium National Institute at Port Villez.

In this school there are four Departments; a primary department, a department preparing for civil service positions, a commercial department, a normal department for training of teachers.

The courses in the elementary department are divided into two terms of six months each; in the department preparing for civil positions, the work is

divided into three terms of four months each. The commercial department is divided into two terms of six months each, the training for teachers covers two terms of six months each.

TECHNICAL TRAINING.

"Over forty trades are taught in the shops managed by the Department of Technical training. The length of time necessary for learning a trade is not definitely fixed, so greatly does it depend on a man's native aptitude, and his handiness in overcoming his disability, but the management of the school has found that good teaching methods can greatly reduce the time supposedly required for an apprenticeship in a given trade. By beginning with simple operations and following them with more difficult ones in well-ordered gradation, by avoiding the repetition of processes that have been perfectly mastered, and by constantly stimulating the pupil's interest, the shop foreman has obtained excellent results in a comparatively short time. In the experience of the management, lessons in school subjects and theoretical instruction also quicken the progress of an apprentice."

A brief account of the different shops gives the following information:

"Apprentices in the shoemaking class entirely new to the trade, have learned to assemble and finish a pair of army shoes in five and a half months."

"A six months' apprenticeship in a saddler's shop enables a man to earn a living in it."

"In the basketry class were forty-six apprentices, and in addition the men in the horticultural class. The average length of apprenticeship is from six to seven months."

"Typesetting, by hand and by means of the linotype, and press work were being taught in the printing shop to twenty-one men, variously afflicted with paralysis of the hand, inability to open fingers, and anklylosis of the elbow and knee. Six of the linotypists after less than a year's work fitted for positions in large printing establishments. They were capable of deciphering manuscripts and setting them correctly; their knowledge of grammar and spelling was entirely adequate for good work, although their previous education had been of the most rudimentary sort. They had moreover a perfect understanding of the linotype machine and could take it apart and set it up as well as any mechanic. Pupils became competent pressmen after an apprenticeship of six months."

"Four months is long enough to learn ordinary binding, but much longer time is necessary for artistic binding."

Italy—

Underhill, Ruth. "Provision for war cripples in Italy." New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 1, No. 12, p. 6.)

In Italy the schools for re-education are all responsible to a National Board and are expected to receive all cripples who apply for re-education.

"When a man is accepted for re-education he remains as a regular member of the army. He may remain at the school for a maximum period of six months. During this time the War Department pays the school 3.50 lire a day for his maintenance, pays the man a regular sum, according to his rank, and maintains his family at the same rate as though he were in active service. If his training is not complete at the end of six months, the National Board may retain him longer at its own expense. If he is ready to go sooner, or if he is unruly or unfit for training, the local military commander may discharge him at any time."

Owing to the fact that the majority of the men to be re-educated are peasants with no experience in any trade and often illiterate, a much longer elementary school course is necessary, and for the same reason, the trades in which training is given cannot be very advanced.

No statement as to length of courses for various trades is given in this report.

Germany—

Underhill, Ruth. "Provision for war cripples in Germany." New York, 1918. (Publications of the Red Cross Institute for Crippled and Disabled Men. Series 1, No. 13.)

In Germany re-education goes on at the same time as medical treatment and the men attend schools in the vicinity of the hospitals. The arrangement of the school with the hospital is purely informal.

"The War Department has a right to dismiss a man from the hospital as soon as his physical treatment is over, without regard to the status of his trade training. This matter has to be arranged by informal co-operation between the civilian directors and the military hospital authorities. As a rule, the hospitals are willing to keep a man until his trade training is complete, even though they would otherwise dismiss him sooner.

"It is planned that none of the school courses shall take more than six months, the maximum time for hospital care. These short courses are intended for men of experience

who need further practice in their old trade or in an allied one. Six months is, of course, not long enough to give a man complete training in a new trade, since some require an apprenticeship of one or more years. If a man needs further training after the short school course, he becomes the charge of the local care committee, which supports him while he attends a technical school or pays the premium for apprenticing him to a master workman.

"The courses given in this way attain a high standard of efficiency, both because of the good school facilities and because a large number of the men dealt with are already trained workmen with a good foundation to build on. It is the plan of the schools that, when a man is dismissed, he shall be qualified to go back to work or to a higher school. Arrangements are made with the handicrafts guilds that men in their line of work shall be able to take their master test at the school and be graduated workmen. It is also seen to that every man has a fair common school education before he begins on a special trade."

United States—

Federal Board for Vocational Education. Opportunity Monographs. Washington, 1918.

This series of monographs has been prepared to aid disabled soldiers in choosing a vocation. The series includes various trades and professions. For each a description of the trade or occupation is given and of particular processes within a trade; also Requirements, Hours and Wages, and information as to Training are given. The length of training likely to be required is in most cases indefinite. The information obtained is set down as follows:—

No. 7—Metal Trades.

Moulders:

"Foundry employments are not generally employments for which any extended course of training is required."

Sheet-Metal Workers:

"Training will be given in the factory, only a short period of training will be required."

Machinists and Machine Operators:

"With a little training to overcome your handicap you may be able to resume your old employment or one in which your previous training and experience will count."

Bench Hands:

"Re-education for any line of bench work should take advantage of previous experience. If the school is provided with satisfactory benches of the proper height and with standard vises the course may require no longer than from three to six months, allowing for instruction in the reading of blue prints, the use of tools, and for getting accustomed to the work again."

No. 8—Factory Woodworking Trades.

Planing Mill Operators:

"The training required is usually obtained in a factory but disabled men can shorten the period of training necessary by taking a short course in a well-equipped school."

Cabinetmakers:

"If the disabled man arranges for a combination of shop and school training in which he will have the benefit of practical instruction for half of each day and will spend the remainder of the day in some factory, he will after perhaps six months schooling and training, be able to maintain himself at the trade."

Finishers:

"A short apprenticeship or tryout period in the factory will start many disabled men in the trade, but no school training is required."

No. 10—Forestry Pursuits—

Rangers:

"Those who have already had considerable practical experience can secure a sufficient foundation for their work in three or four months."

No. 11—Automobile Maintenance and Service.

Repair-shop Men:

"The time required to complete the course of instruction . . . may occupy from six to nine months."

Starting and lightning experts.

Four to six months.

Ignition experts.

Four to six months.

Storage battery men.

Four to six months.

Tire-repair men.

Four to six months.

No. 14—Electrical Employments with Utility Companies.
Shop-wiring—mechanical department.
"A man with little or no experience can develop into a good wireman. The length of time required to do this, will be determined by the man's knowledge of electricity and his efforts at self-improvement. It may require six months or a year or two years."

INDUSTRIAL RE-TRAINING OF DISABLED SOLDIERS.

A SELECTED BIBLIOGRAPHY.

This bibliography deals with the industrial retraining of disabled soldiers and some related topics. It does not aim to be an exhaustive list of the publications on the subject, but rather a selection of the more important literature. With the idea of making it more useful the material has been arranged under countries with one general group at the beginning. Some of the material listed under the general heading will also be found to contain information on the work in particular countries. All of the material, with the exception of those references which are starred, may be found in the library of the Department of Soldiers' Civil Re-Establishment.

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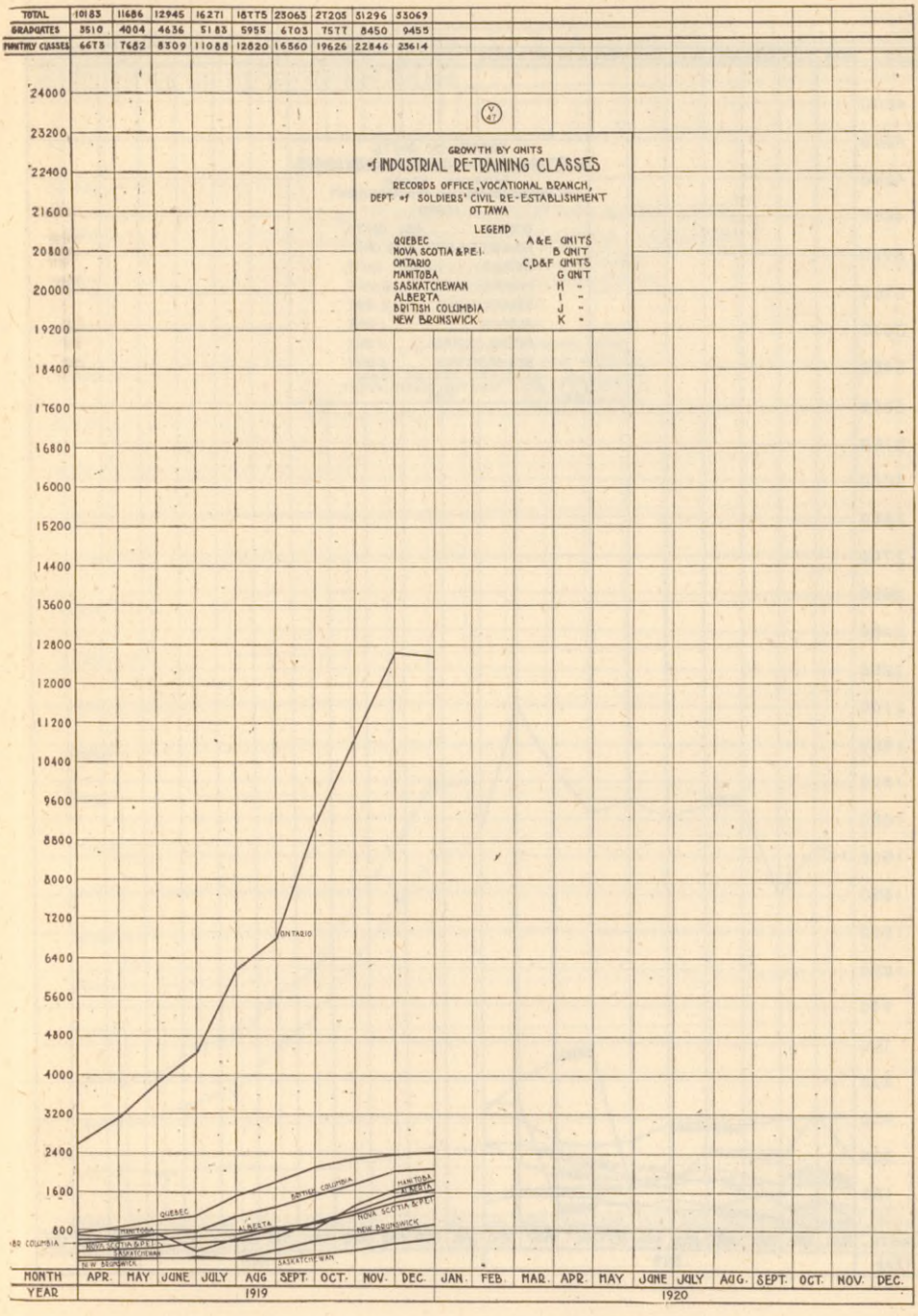
Records Office—Vocational Branch, Department of Soldiers Civil Re-Establishment, Ottawa, Canada.

	Canadian.			British.															Australia.			New Zealand.			U. S. A.		
				When Living with Dependents.						When Living away from Dependents.						When Living in a Govt. Institution.											
	When Living with Dep'ts.	When Living away from Dependents.	When Living in a Govt. Institution.	Private.	N.C.O. Class 4.	N.C.O. Class 3.	N.C.O. Class 2.	W.O. Class 2.	W.O. Class 1.	Private.	N.C.O. Class 4.	N.C.O. Class 3.	N.C.O. Class 2.	W.O. Class 2.	W.O. Class 1.	Private.	N.C.O. Class 4.	N.C.O. Class 3.	N.C.O. Class 2.	W.O. Class 2.	W.O. Class 1.	When Living with Dep'ts.	When Living away from Dependents.	When Living in a Govt. Institution.	When Living with Dep'ts.	When Living away from Dependents.	When Living in a Govt. Institution.	When Living with Dep'ts.	When Living away from Dependents.	When Living in a Govt. Institution.
Single man with no dependents	$ cts. 60 00	$ cts. 60 00	$ cts. 30 00	$ cts. 28 66	$ cts. 31 28	$ cts. 33 88	$ cts. 36 48	$ cts. 39 08	$ cts. 44 28	$ cts. 28 66	$ cts. 31 28	$ cts. 33 88	$ cts. 36 48	$ cts. 39 08	$ cts. 44 28	$ cts. 10 31	$ cts. 12 91	$ cts. 15 51	$ cts. 18 01	$ cts. 20 71	$ cts. 25 91	$ cts. 43 80	$ cts. 43 80	$ cts.	$ cts. 62 57	$ cts. 62 57	$ cts.	$ cts. 65 00	$ cts. 65 00	$ cts.
Single man with dependent parent	85 00	101 00	71 00	36 49	39 09	41 69	44 29	46 89	52 09	43 00	45 60	48 20	50 80	53 40	58 60	24 75	27 35	29 95	32 55	35 15	40 35				62 57	62 57		75 00	75 00	
" " " and one brother or sister	95 00	111 00	81 00	43 26	45 86	48 46	51 06	53 66	58 86	49 77	52 37	54 97	57 57	60 17	65 37	31 52	34 12	36 72	39 32	41 92	47 12									
" " " " 2 brothers or sisters	103 00	119 00	89 00	48 48	51 08	53 68	56 28	58 88	64 08	55 01	57 61	60 21	62 81	65 41	70 61	36 76	39 36	41 96	44 56	47 16	52 36									
" " " " 3 " "	110 00	126 00	96 00	52 83	55 43	58 03	60 63	63 23	68 43	59 35	61 95	64 55	67 15	69 75	74 95	41 10	43 70	46 30	48 90	51 50	56 70									
" " " " 4 " "	116 00	132 00	102 00	57 18	59 78	62 38	64 98	67 58	72 78	63 68	66 28	68 88	71 48	74 08	79 28	45 43	48 03	50 63	53 23	55 83	61 03									
" " " " 5 " "	122 00	138 00	108 00	61 53	64 13	66 73	69 33	71 93	77 13	68 02	70 62	73 22	75 82	78 42	83 62	49 77	52 37	54 97	57 57	60 17	65 37									
" " " " 6 " "	128 00	144 00	114 00	65 88	68 48	71 08	73 68	76 28	81 48	72 36	74 96	77 56	80 16	82 76	87 96	54 11	56 71	59 31	61 91	64 51	69 71									
	$6 per month, each child in excess of six.			$4.35 per month per child, each child in excess of six.						$4.35 per month per child, each child in excess of six.						$4.35 per month per child, each child in excess of six.												No provision yet made for paying allowances in respect to brothers and sisters or orphan brothers and sisters.		
Single man with 1 orphan brother or sister	80 00	88 00	58 00	35 43	38 03	40 63	43 23	45 83	51 03	35 43	38 03	40 63	43 23	45 83	51 03	17 18	19 78	22 38	24 98	27 58	32 78									
" " 2 " brothers or sisters	88 00	96 00	66 00	40 65	43 25	45 85	48 45	51 05	56 25	40 65	43 25	45 85	48 45	51 05	56 25	22 40	25 00	27 60	30 20	32 80	38 00	No provisions made for allowances for dependent parents or brothers or sisters.			The allowance of $62.57 is payable in all cases by the New Zealand Government.					
" " 3 " " "	95 00	103 00	73 00	45 01	47 61	50 21	52 81	55 41	60 61	45 01	47 61	50 21	52 81	55 41	60 61	26 76	29 36	31 96	34 56	37 16	42 36									
" " 4 " " "	101 00	109 00	79 00	49 34	51 94	54 54	57 14	59 74	64 94	49 34	51 94	54 54	57 14	59 74	64 94	31 09	33 69	36 29	38 89	41 49	46 69									
" " 5 " " "	107 00	115 00	85 00	53 69	56 29	58 89	61 49	64 09	69 29	53 69	56 29	58 89	61 49	64 09	69 29	35 44	38 04	40 64	43 24	45 84	51 04									
" " 6 " " "	113 00	121 00	91 00	58 03	60 63	63 23	65 83	68 43	73 63	58 03	60 63	63 23	65 83	68 43	73 63	39 78	42 38	44 98	47 58	50 18	55 39									
	$6 per month, ea. in excess of six.			$4.35 per month per child, each child in excess of six.						$4.35 per month per child, each child in excess of six.						$4.35 per month per child, each child in excess of six.														
Married man and wife	85 00	101 00	71 00	36 49	39 09	41 69	44 29	46 89	52 09	43 00	45 60	48 20	50 80	53 40	58 60	24 75	27 35	29 95	32 55	35 15	40 35	54 21	54 21					75 00	95 00	
" " and 1 child	95 00	111 00	81 00	43 26	45 86	48 46	51 06	53 66	58 86	49 77	52 37	54 97	57 57	60 17	65 37	31 52	34 12	36 72	39 32	41 92	47 12	57 28	57 28					80 00	105 00	
" " " 2 children	103 00	119 00	89 00	48 48	51 08	53 68	56 28	58 88	64 08	55 01	57 61	60 21	62 81	65 41	70 61	36 76	39 36	41 96	44 56	47 16	52 36	61 50	61 50					97 50	112 50	
" " " 3 "	110 00	126 00	96 00	52 83	55 43	58 03	60 63	63 23	68 43	59 35	61 95	64 55	67 15	69 75	74 95	41 10	43 70	46 30	48 90	51 50	56 70							112 50	117 50	
" " " 4 "	116 00	132 00	102 00	57 18	59 78	62 38	64 98	67 58	72 78	63 68	66 28	68 88	71 48	74 08	79 28	45 43	48 03	50 63	53 23	55 83	61 03							117 50	122 50	
" " " 5 "	122 00	138 00	108 00	61 53	64 13	66 73	69 33	71 93	77 13	68 02	70 62	73 22	75 82	78 42	83 62	49 77	52 37	54 97	57 57	60 17	65 37	No additional allowances for children in excess of the number of two.						122 50	127 50	
" " " 6 "	128 00	144 00	114 00	65 88	68 48	71 08	73 68	76 28	81 48	72 36	74 96	77 56	80 16	82 76	87 96	54 11	56 71	59 31	61 91	64 51	69 71							125 00	130 00	
" " " 7 "	134 00	150 00	120 00	70 23	72 83	75 43	78 03	80 63	85 83	76 70	79 30	81 90	84 50	87 10	92 30	58 45	61 05	63 65	66 25	68 85	74 05							No allowances for more than six.		
" " " 8 "	140 00	156 00	126 00	74 58	77 18	79 78	82 38	84 98	90 18	81 04	83 64	86 24	88 84	91 44	96 64	62 79	65 39	67 99	70 59	73 19	78 39									
	$6 per month, ea. child in excess of eight.			$4.35 per month per child, each child in excess of eight.						$4.35 per month per child, each child in excess of eight.						$4.35 per month per child, each child in excess of eight.														
Widower with 1 child	80 00	88 00	58 00	35 43	38 03	40 63	43 23	45 83	51 03	41 94	44 54	47 14	49 74	52 34	57 54	23 69	26 29	28 89	31 49	34 09	39 29	54 21	54 21					75 00	85 00	
" " 2 children	88 00	96 00	66 00	42 23	44 82	47 43	50 03	52 63	57 83	48 74	51 14	53 94	56 34	59 14	64 34	30 49	33 09	35 69	38 29	40 89	46 09	57 28	57 28					75 00	92 50	
" " 3 "	95 00	103 00	73 00	49 00	51 60	54 20	56 80	59 40	64 60	55 51	58 11	60 71	63 31	65 91	71 01	37 26	39 86	42 46	45 06	47 66	52 86	61 50	61 50					80 00	100 00	
" " 4 "	101 00	109 00	79 00	55 78	58 38	60 98	63 58	66 18	71 38	62 29	64 89	67 49	70 09	72 69	77 89	44 04	46 64	49 24	51 84	54 44	59 64							90 00	110 00	
" " 5 "	107 00	115 00	85 00	62 56	65 16	67 76	70 36	72 96	78 16	69 07	71 68	74 27	76 88	79 47	84 67	50 82	53 42	56 02	58 62	61 22	66 42	No allowances payable for children in excess of the number of two.						95 00	115 00	
" " 6 "	113 00	121 00	91 00	69 34	71 94	74 54	77 14	79 74	84 94	75 85	78 45	81 05	83 65	86 25	91 45	57 60	60 20	62 80	65 40	68 00	73 20							100 00	120 00	
" " 7 "	119 00	127 00	97 00	76 12	78 72	81 32	83 92	86 52	91 72	82 63	85 23	87 83	90 43	93 03	98 23	64 38	66 98	69 58	72 18	74 78	79 98							105 00	125 00	
" " 8 "	125 00	133 00	103 00	82 90	85 50	88 10	90 70	93 30	98 50	89 41	92 01	94 61	97 21	99 81	105 01	71 16	73 76	76 36	78 96	81 56	86 76							110 00	130 00	

The allowances paid by the Canadian and British Governments to dependents are subject to reduction if the circumstances of a case permit.
March 10, 1919.


GROWTH BY UNITS
of INDUSTRIAL RE-TRAINING CLASSES
RECORDS OFFICE, VOCATIONAL BRANCH,
DEPT. of SOLDIERS' CIVIL RE-ESTABLISHMENT
OTTAWA
LEGEND
QUEBEC A&E UNITS
NOVA SCOTIA & P.E.I. B UNIT
ONTARIO C,D&F UNITS
MANITOBA G UNIT
SASKATCHEWAN H -
ALBERTA I -
BRITISH COLUMBIA J -
NEW BRUNSWICK K -
TOTAL 10183 11686 12945 16271 18775 23063 27205 31296 33069
GRADUATES 3510 4004 4636 5183 5955 6703 7577 8450 9455
MONTHLY CLASSES 6673 7682 8309 11088 12820 16360 19626 22846 23614
24000
23200
22400
21600
20800
20000
19200
18400
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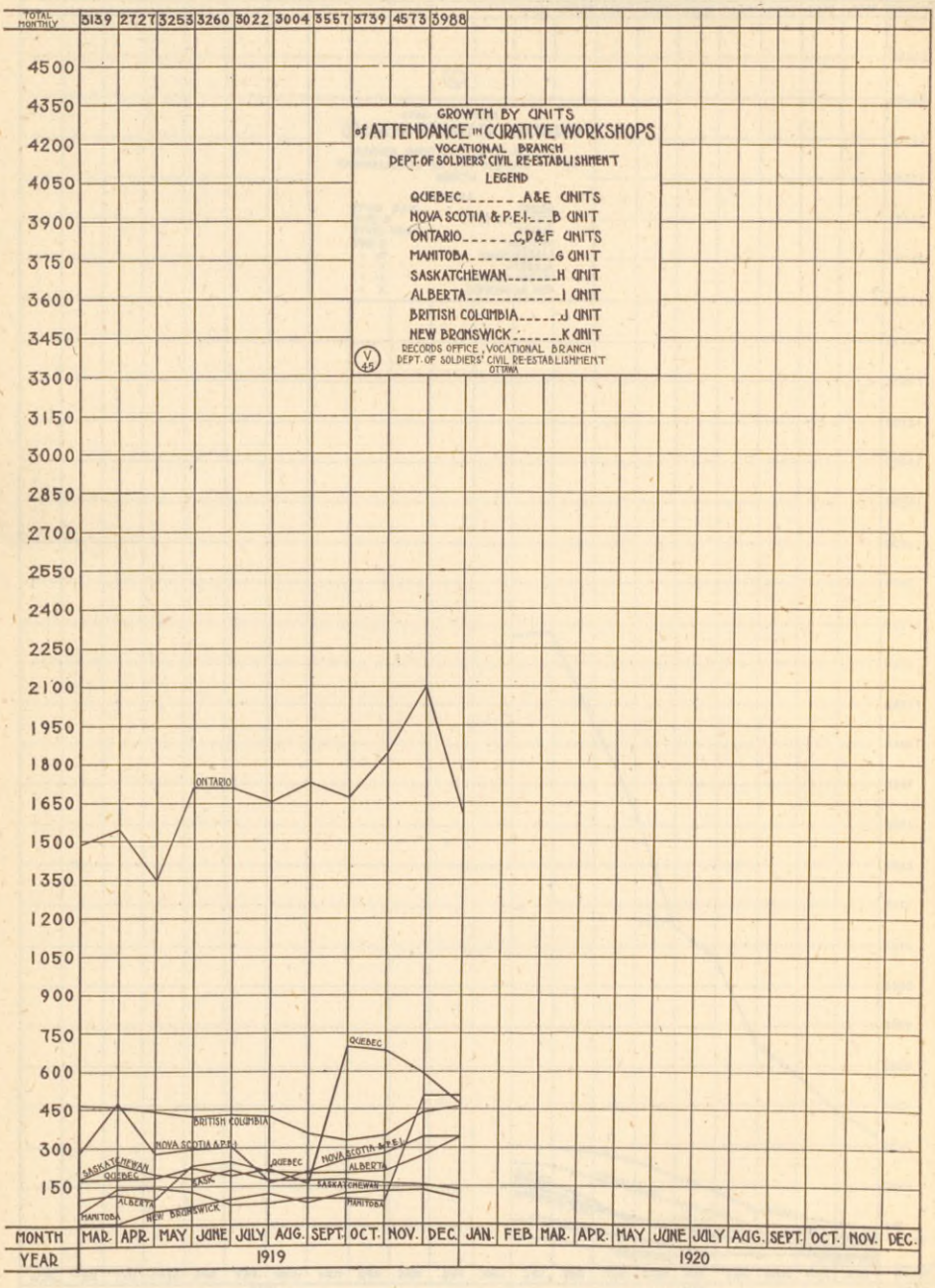
ONTARIO
BRITISH COLUMBIA
MANITOBA
ALBERTA
QUEBEC
NOVA SCOTIA & P.E.I.
NEW BRUNSWICK
SASKATCHEWAN
MONTH APR. MAY JUNE JULY AUG SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
YEAR 1919 1920


TOTAL MONTHLY
5139 2727 3253 3260 3022 3004 3557 3739 4573 5988
4500
4350
4200
4050
3900
3750
3600
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2250
2100
1950
1800
1650
1500
1350
1200
1050
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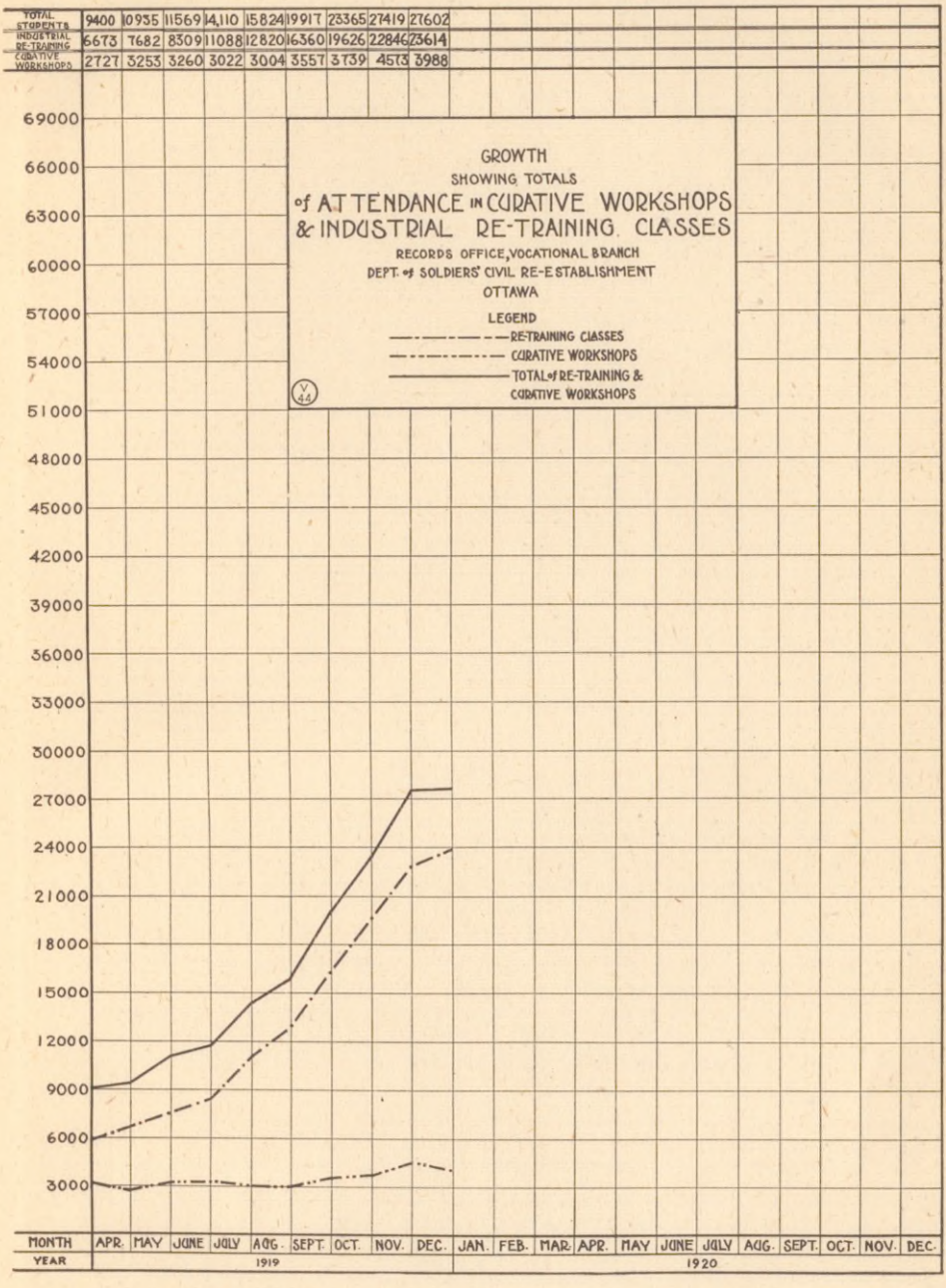
300
150
GROWTH BY UNITS
of ATTENDANCE IN CURATIVE WORKSHOPS
VOCATIONAL BRANCH
DEPT. OF SOLDIERS' CIVIL RE-ESTABLISHMENT
LEGEND
QUEBEC.....A&E UNITS
NOVA SCOTIA & P.E.I.....B UNIT
ONTARIO.....C,D & F UNITS
MANITOBA.....G UNIT
SASKATCHEWAN.....H UNIT
ALBERTA.....I UNIT
BRITISH COLUMBIA.....J UNIT
NEW BRUNSWICK.....K UNIT
V 45
RECORDS OFFICE, VOCATIONAL BRANCH
DEPT. OF SOLDIERS' CIVIL RE-ESTABLISHMENT
OTTAWA
ONTARIO
QUEBEC
BRITISH COLUMBIA
NOVA SCOTIA & P.E.I.
SASKATCHEWAN
QUEBEC
ALBERTA
MANITOBA
NEW BRUNSWICK
MONTH
MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
YEAR
1919
1920


TOTAL STUDENTS 9400 10935 11569 14,110 15824 19917 23365 27419 27602
INDUSTRIAL RE-TRAINING 6673 7682 8309 11088 12820 16360 19626 22846 23614
CURATIVE WORKSHOPS 2727 3253 3260 3022 3004 3557 3739 4573 3988
69000
66000
63000
60000
57000
54000
51000
48000
45000
42000
39000
36000
33000
30000
27000
24000
21000
18000
15000
12000
9000
6000
3000
GROWTH
SHOWING TOTALS
of ATTENDANCE IN CURATIVE WORKSHOPS
& INDUSTRIAL RE-TRAINING CLASSES
RECORDS OFFICE, VOCATIONAL BRANCH
DEPT. of SOLDIERS' CIVIL RE-ESTABLISHMENT
OTTAWA
LEGEND
RE-TRAINING CLASSES
CURATIVE WORKSHOPS
TOTAL of RE-TRAINING & CURATIVE WORKSHOPS
Y 44
MONTH APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
YEAR 1919 1920