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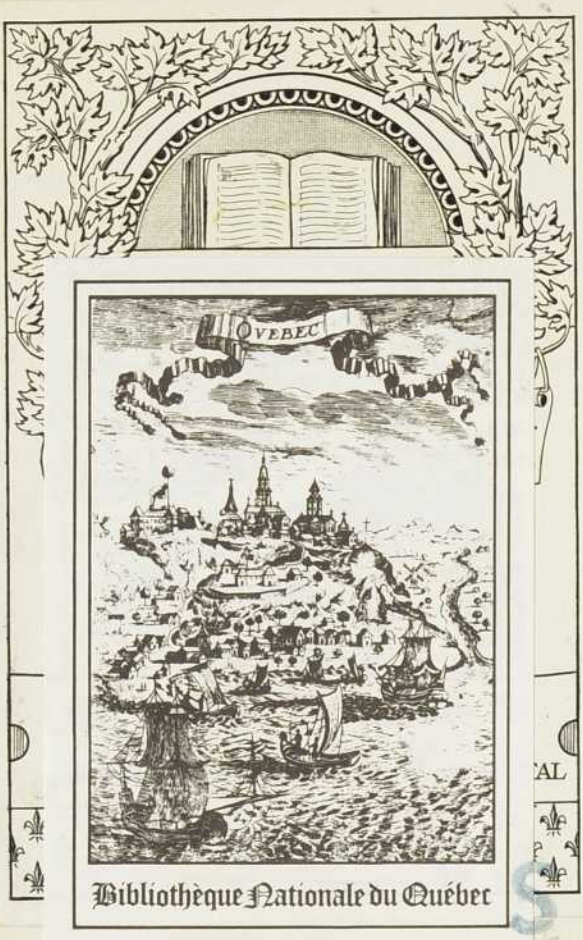

Col. H. S. Birkett presenting Officers of the Hospital to His Royal Highness the Duke of Connaught on the Campus of McGill University, April 22, 1915

No. 3
CANADIAN GENERAL HOSPITAL (McGILL)
1914 - 1919

EDITED AND COMPILED
BY

R. C. FETHERSTONHAUGH

WITH A FOREWORD FROM

FIELD-MARSHAL
HIS ROYAL HIGHNESS THE DUKE OF CONNAUGHT
K.G., K.T., K.P., G.C.B., G.C.S.I., G.C.M.G., G.C.I.E., G.C.V.O., G.B.E.

THE GAZETTE PRINTING COMPANY
MONTREAL
1928

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TO

THE ENDURING MEMORY OF THOSE
WHO GAVE THEIR LIVES IN THE
SERVICE OF

No. 3

CANADIAN GENERAL HOSPITAL
(McGILL)

THIS BOOK IS DEDICATED

PREFACE

WHEN decision to prepare this history of No. 3 Canadian General Hospital (McGill) was reached, two policies were adopted: first, that the book should tell the story of the unit with events in chronological sequence; second, that the material should be sufficiently non-technical to be of interest to any probable reader.

As the author had no medical training, the second policy was really settled automatically by his appointment. A hospital history would be incomplete without mention of professional accomplishment, but in this book those qualified to discuss such subjects speak for themselves. In no instance has the author advanced theories of his own.

In writing the book the official War Diary of the Hospital formed the basis of every chapter and almost every page. Private diaries and letters were also consulted, and to those who lent these documents the author gratefully acknowledges his deep obligation.

When completed, the text of the history was sent to the Historical Section, General Staff, Department of National Defence, under Col. A. Fortescue Duguid, D.S.O. The Historical Section checked the script carefully, noting errors and verifying facts, to the book's great advantage. To the Records Section, Department of National Defence, under Col. F. Logie Armstrong, O.B.E., the history also owes a debt for the data from which the appendices were compiled. To the authorities of McGill University thanks are similarly due for valuable memoranda regarding personnel and to Capt. A. H. Pirie and Sergt. H. P. Bickley for many striking photographs.

All who served on the Hospital's establishment desire in this Preface to express to His Royal Highness the Duke of Connaught their deep appreciation of his courtesy in writing a foreword to the unit's history. In their acknowledgement of indebtedness for this great honour, the author desires respectfully to join.

R. C. F.

MONTREAL, October 1, 1928.

In the preparation of this work the Department of National Defence has allowed the author free access to official diaries, messages, orders, medical reports, and other documents.

Bagshot Park
Aug: 30th/28.

I am glad to add my personal testimony to the splendid work done at the great McGill University in forming and maintaining No. 3 Canadian General Hospital during the Great War. Their services were most valuable, and reflected the utmost credit on all ranks.

I look back with satisfaction to my several inspections of No. 3 Canadian General Hospital in Canada, as well as my inspection of it in France.

Arthur
F. Ill.

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No. 3
Canadian General Hospital (McGill)
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CHAPTER I

THE CALL TO ARMS

I

"OWING to the summary rejection by the German Government of the request made by His Majesty's Government that the neutrality of Belgium should be respected, His Majesty's Ambassador at Berlin has received his passports, and His Majesty's Government has declared to the German Government that a state of war exists between Great Britain and Germany from 11 p.m., August 4th."

On August 5, 1914, after this statement by the British Foreign Office announced war between England and Germany, His Majesty the King addressed a message to his overseas subjects, thanking them for spontaneous offers of assistance: "I shall be strengthened in the discharge of the great responsibility which rests upon me," His Majesty stated, "by the confident belief that in this time of trial my Empire will stand united, calm, resolute, trusting in God."

King George's confidence in the solidity of his Empire was soon justified. The Dominions accepted Germany's challenge without delay, and prepared to fight. In Canada, within three weeks, troops were massing for overseas service at Valcartier Camp, sixteen miles northwest of Quebec. From Valcartier, the First Canadian Contingent, 30,000 strong, proceeded to Quebec in the last week of September and sailed overseas for a destination at the time unknown. Later it was announced that the Contingent had reached England in safety and was in camp on Salisbury Plain.

The rapid mobilization and despatch of the First Canadian Contingent has evoked sharp criticism. Officers and men, it has been pointed out, were ill-equipped and

ill-trained, with the result that four months elapsed before they could leave England to take over a section of line in France. That the training and equipment were open to criticism, few will deny. But those who maintain that the force should have been held in Canada until trained and properly equipped—that is until the early summer of 1915—overlook the obligation which departure of the Contingent placed on those who remained behind. Had the Contingent not sailed in 1914, it is doubtful if Canada would ever have placed voluntary forces in the field equal to those which finally composed the Canadian Expeditionary Force.

When the First Contingent sailed, Canadians of all classes enlisted, lest in some evil hour the men of what later became the First Canadian Division should find themselves deserted. This thought of loyally supporting comrades who had sailed away, trusting in the good-faith of the men they left behind, undoubtedly recruited many of the splendid units which crossed the Atlantic in 1915.

II

When war was declared in August, 1914, H. S. Birkett, Dean of the Faculty of Medicine of McGill University, was spending the summer on the lower St. Lawrence, at Metis Beach. For years he had served in the Non-Permanent Army Medical Services of Canada, and had risen steadily until, in 1910, he had retired from the Active List with the rank of lieutenant-colonel. Foreseeing that his services would now be required again, he abandoned his holiday and reported to Lieut.-Col. J. W. Bridges, Assistant Director of Medical Services, Montreal, who arranged that he be restored to the Active List and given immediate employment.

Not long after Lieut.-Col. Birkett reported for duty in Montreal, Lieut.-Col. Bridges was ordered to assume the post of A.D.M.S., Valcartier Camp, vice Lieut.-Col. H. R. Duff, who had suffered severe injuries when thrown from his horse. On the departure of Lieut.-Col. Bridges, Lieut.-Col. Birkett was appointed A.D.M.S., Montreal.

In those early autumn days of 1914, the duties of an A.D.M.S. were weighted with responsibility and involved

long hours of wearisome toil. Lieut.-Col. Birkett discharged his obligations to the entire satisfaction of authority, but, when the First Contingent sailed, he heard unmistakably the call to duty overseas.

In consequence of his experience in the medical branches of the Canadian Militia and his intimate knowledge of the Royal Army Medical Corps, gained at Aldershot and in London some fifteen years previously, he realized the necessity of providing adequate hospital accommodation to support the British Armies in France, Flanders, or wherever they might be called on to serve, and a plan to this end gradually formed in his mind. He spoke of his idea to a few members of the medical profession and to a few intimate friends, weighing the advice they offered and using constructive criticism of detail to improve the original plan.

Before many weeks had passed the scheme took definite shape. In brief, the idea was that McGill University should offer to the War Office, through the Canadian Minister of Militia and Defence, a completely equipped lines of communication general hospital, of the standard 520 beds; officered by men chosen from the staff of the Faculty of Medicine of the University; with the ranks including a high percentage of medical and other students; and with the nursing personnel selected from graduates of the Training Schools of the Royal Victoria and Montreal General Hospitals.

Such a plan implied a hospital equal in quality of personnel to the great civilian institutions of the country. Lieut.-Col. Birkett consulted a number of physicians and surgeons at McGill and soon found that to head each department of the proposed hospital he could secure a man outstanding in the professional life of Montreal and Canada. Many such expressed eagerness to serve in a unit which would bear the name "McGill" and would carry to work overseas the proud traditions of the University's Faculty of Medicine.

Confident, therefore, that his plan could be given effect, Lieut.-Col. Birkett sought Sir William Peterson, Principal of McGill University, and, as Dean of the Faculty of Medicine, formally offered to raise the proposed unit and command it overseas. Sir William expressed

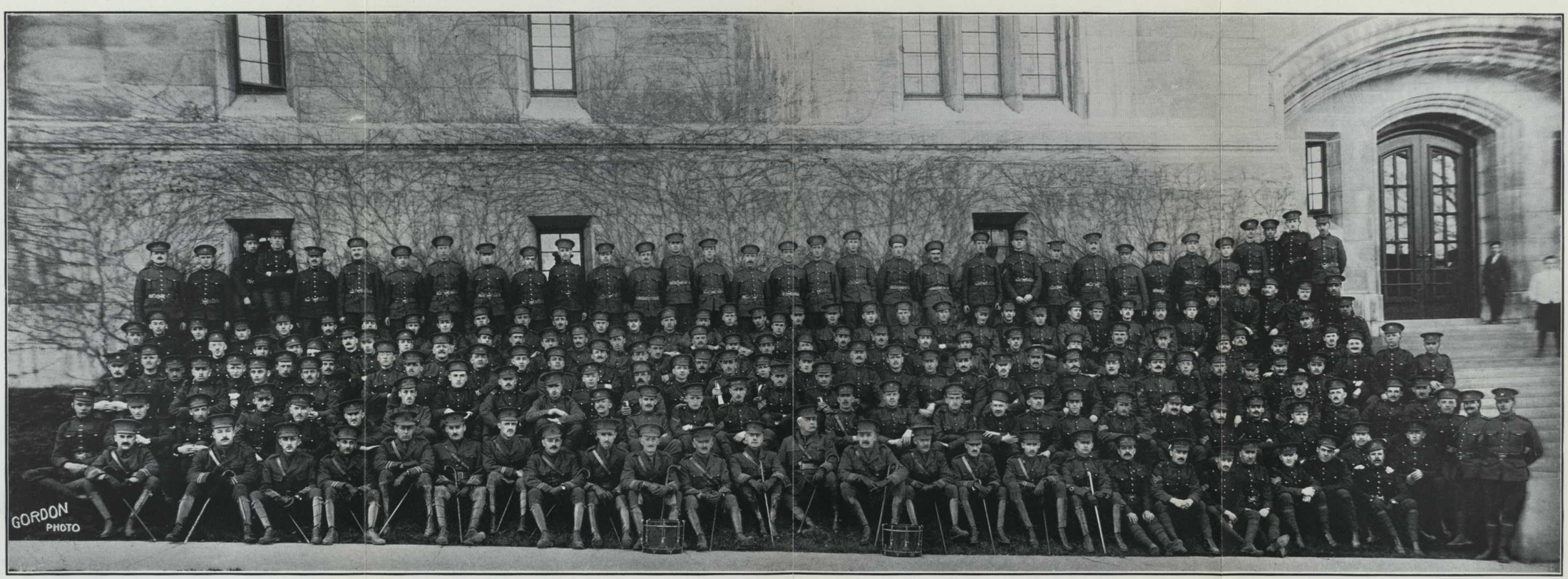
satisfaction when informed that the plan had developed to the point where a formal offer could be made, and promised to present the proposal to the Corporation of the University without delay. Meanwhile, he pointed out, no announcement should be made, but preliminary work could and should proceed. On October 21, 1914, Sir William presided at a meeting of the Corporation and duly presented the proposal of the Medical Faculty. The plan was approved; and Dean Birkett was instructed to refer the matter forthwith to the Department of Militia and Defence.

Losing no time, Lieut.-Col. Birkett presented his offer to Major-General Sam Hughes, Canadian Minister of Militia and Defence, who agreed to forward it to the War Office and recommend that it be accepted. Thus McGill was first of the universities of the Empire to offer a medical unit, bearing her name, for service overseas. In view of this, her graduates appreciated the honour when, at a later date, their hospital was the first university unit to take the field.

Meanwhile, following Lieut.-Col. Birkett's interview with Major-General Sam Hughes and despatch of McGill's offer overseas, a delay of several weeks tried the patience of those awaiting a reply. On November 18th medical students of McGill gathered in the Assembly Hall of the Medical Building for an announcement of what was planned. Lieut.-Col. Birkett addressed the meeting, as did Capt. Philip Burnett, C.A.M.C., and Major Alan Magee, of the McGill C.O.T.C. At this time no definite statement regarding acceptance of the hospital by the War Office could be made.

A few days later, Lieut.-Col. Birkett, certain that something was amiss, cabled to Sir William Osler, Bart., Regius Professor of Medicine, Oxford University, asking him to see if reply from the War Office could be expedited. Sir William, loyal as always to McGill, made enquiries and found that, through some failure of procedure, Sir Alfred Keogh, Director-General of British Army Medical Services, was unaware that McGill's offer had been made.

On December 5th Sir William wrote to Lieut.-Col. Birkett and reported how matters stood. Later in the day Sir Alfred Keogh granted Sir William an interview and



THE ORIGINAL UNIT

expressed deep satisfaction when informed of the McGill plan. He accepted the offer on behalf of the War Office, and stated that, in his opinion, such a hospital would be invaluable to the British Armies in the Field.

Continuing his conversation with Sir William, Sir Alfred said that it would be unwise for the McGill unit to cross from Canada before the spring. Tenure of the French Coast seemed probable, but establishment of further hospitals there was inadvisable during the winter. In the spring the McGill unit would be needed. To cross before the spring would involve temporary idleness and consequent disappointment. A summary of the opinions expressed by Sir Alfred was cabled by Sir William to Lieut.-Col. Birkett, enabling the latter to announce on December 9th that the McGill Hospital had been accepted and would undoubtedly proceed overseas in the spring.

III

Following acceptance of the Hospital by the War Office, selection of senior and junior officers proceeded, a deep impression being created when it was announced that Lieut.-Col. H. B. Yates had accepted the post of Second-in-Command and that Lieut.-Cols. J. M. Elder and John McCrae were to serve respectively as Officer in charge of Surgery and Officer in charge of Medicine.

These officers had seen previous military service. Following in the footsteps of Lieut.-Col. Birkett, Lieut.-Col. Yates had acted as Medical Officer of the 3rd Regiment, Victoria Rifles of Canada, for seventeen years; Lieut.-Col. Elder had served in the North-West Rebellion of 1885 and for thirteen years thereafter had held the post of Medical Officer to the 2nd (Montreal) Brigade, Heavy Artillery; Lieut.-Col. McCrae, who wore the Queen's Medal with three clasps for service in South Africa, had proceeded overseas as Medical Officer to the 1st Brigade, Canadian Field Artillery, 1st Canadian Division. His acceptance of the post of Officer in charge of Medicine had been cabled from England.

As has been noted, McGill offered to the War Office a general hospital on the lines of communication, with the regulation 520 beds. In January, 1915, the Director-

General of Medical Services, Ottawa, received notice from the War Office that the capacity of all general hospitals would in future be 1,040 beds. He was asked to see that Canadian general hospitals conformed to the new requirements.

Somewhat disturbed, the D.G.M.S. telephoned to Lieut.-Col. Birkett, asking how this increase would affect McGill. Could McGill double the capacity of her unit? Apologetically, the D.G.M.S. stated that he must ask an immediate answer. Lieut.-Col. Birkett was given no opportunity, therefore, to consult with those who could formally authorize the change. Relying, however, on the loyal co-operation which they had invariably afforded, he affirmed, without leaving the 'phone, that McGill's offer of a general hospital held good.

Doubling the bed-capacity of the Hospital permitted announcement that a number of doctors, nurses, and other ranks, who had placed their names on a reserve list, would be transferred to the overseas strength forthwith.

As construction of the unit progressed, it became known that the four senior officers, subordinate to the Commanding Officer, the Second-in-Command, and the Officers in charge of Surgery and Medicine, would be Majors W. H. P. Hill, E. W. Archibald, A. C. P. Howard, and J. C. Meakins. Of the 26 captains named to complete the establishment, a number had acquired military experience: Capt. A. H. Pirie with the R.A.M.C.; Capt. W. B. Howell with No. 4 Field Ambulance, C.A.M.C.; Capt. R. St. J. Macdonald with the 18th Battery, C.F.A.; Capt. H. C. Burgess as M.O. of the 5th Regiment, Royal Highlanders of Canada; Capt. J. W. Hutchinson as M.O. of the 17th Hussars; Capt. D. A. Hingston as M.O. of the Duke of York's Royal Canadian Hussars; Capts. H. C. Dixon, L. L. Reford, and J. G. Browne with No. 5 Field Ambulance, C.A.M.C.; and Capt. G. H. A. Stevenson, Officer in charge of Dentistry, with the 3rd Regiment, Victoria Rifles of Canada.

Amongst the enlisted men a number had also received a measure of military training, Sergeant-Major A. F. Marshall with the Canadian Permanent Army Medical Corps, Sergeant W. G. Hadley with the British Territorials, Lance-Corp. A. J. Drummond in the Royal Navy, and

Photo by Gordon

Capt. W. G. Turner, Capt. L. L. Reford, and Other Ranks of the Unit on the Steps of the McGill Medical Building

more than a score in units of the Canadian Militia. Many of the students who enlisted had trained for a time with the McGill C.O.T.C.

Meanwhile, progress was being made in selecting the nursing staff. Miss K. O. MacLatchy, of the Permanent Canadian Army Medical Corps, was appointed Matron of the Hospital and, under the supervision of Miss Livingstone and Miss Hersey, Lady Superintendents of the Montreal General and Royal Victoria Hospitals respectively, her 72 assistants were chosen, 36 from each hospital. Somewhat later these nurses were ordered to the Military Hospital at Quebec to acquire knowledge of those differences which distinguish military from civilian nursing.

On February 27, 1915, students who had been accepted for service with the McGill unit were ordered to report to the Medical Superintendent of the Montreal General Hospital for inoculation against typhoid. After inoculation, they were ordered to return to their homes by street car, to remain at home for 36 hours, and during that time to refrain from the use of alcohol. Three days later Lieut.-Col. Birkett announced that instructions to mobilize had been received and that the unit, to be officially known as "No. 3 General Hospital (McGill), C.E.F.," would henceforward receive daily orders as to training and routine.

IV

Order No. 1, issued on March 4th and signed by Capt. W. B. Howell, Acting Adjutant, instructed medical students of the Fourth and Fifth Years to parade for stretcher drill under Lieuts. J. G. Browne and H. C. Burgess at stated times and places. First, Second, and Third Year students were similarly ordered to parade for instruction under Lieuts. L. L. Reford and D. A. Hingston. Students, other than those in Medicine, were placed under the command of Lieut. W. G. Turner. The lieutenants named in this order became captains automatically when, on mobilization being completed, the Hospital ranked as a unit of the Canadian Expeditionary Force.

On March 5, 1915, the official date of mobilization, space in the McGill Medical Building was taken over for an Orderly Room, a temporary Officers' Mess was estab-

lished at the University Club, and attestation began. Each man, as his name was called, repeated the service oath: "I, ..., do make oath that I will be faithful and bear true allegiance to His Majesty King George the Fifth, his heirs and successors, and that I will, as in duty bound, honestly and faithfully defend His Majesty, his heirs and successors, in Person, Crown, and Dignity, against all enemies, and will observe and obey all orders of His Majesty, his heirs and successors, and of all the generals and officers set over me. So help me God."

Soon after mobilization, No. 3 General Hospital (McGill) occupied barracks in St. George's Home, Mansfield Street, whence the men marched daily to the Drill Hall on Craig Street for roll-call and training. On March 8th Lieut. David Law assumed the duties of Quartermaster; and on the 13th the men of the unit paraded in the Medical Building of McGill University to receive their first pay.

A few days later in the month Sir William Osler forwarded to Lieut.-Col. Birkett a letter from Sir Alfred Keogh. "I hope," the D.G.M.S. wrote, "that the McGill unit will not delay. Everything points to our wanting them as soon as possible. They *might* have to wait here, but their presence in England would make us feel safer." Sir William added that the D.G.M.S. was deeply interested in the McGill unit, which, consequently, could expect duty in France without undue delay.

On March 29th Lieut.-Col. Birkett was promoted to the rank of colonel. Three days later he granted leave to students on the Hospital staff in order that they might visit their families to say good-bye. Some took this to mean that departure was imminent; as a matter of fact, Sir Alfred Keogh, with the knowledge that the McGill unit was ready, had advised a short delay, lest the men should arrive in England and lack immediate employment.

Meanwhile, friends of McGill in Canada and the United States had subscribed $25,598.10 as a fund to be placed in the hands of Col. Birkett and used by him for the benefit of the Hospital's patients and staff in such manner as he might see fit. One hundred and seventy-five individuals contributed to this fund, their donations varying in amount from $2 to $3,000. At a later date, the

The Duke of Connaught Inspecting the Ranks of the Hospital's Nursing Sisters, April 22, 1915

American Laryngological Society, through J. Payson Clark, M.D., of Boston, Mass., forwarded $250 "in token of affection for Col. H. S. Birkett and what he has done for our common cause."

In addition to the splendid gift of money, four McLaughlin-Buick motor ambulances were presented to the Hospital, one by Mrs. W. R. Miller, one by Mrs. Huntly Drummond, one by Mrs. Dobell, on behalf of friends in Quebec, and one by Lady Allan, on behalf of subscribers in Montreal. Warm Jaeger blankets were presented by a group of Montreal women to the Matron and nursing sisters. This gift minimized the serious discomfort of life in flooded tents during the bitter weather of the subsequent autumn.

On April 11th the men of No. 3 General Hospital (McGill) paraded to Christ Church Cathedral, presenting a smart appearance in their progress through the streets. Drill on the Campus of McGill University and route marches over Mount Royal added to the satisfactory bearing of the unit, which, with drum and bugle band, attended Divine Service at Emmanuel Church on April 18th.

Reviews and ceremonial featured the week which followed. On the morning of the 20th, with Sir William Peterson taking the salute, the unit rehearsed an inspection to be held in the afternoon by Major-General Lessard. Next morning, in preparation for a review by H.R.H. the Duke of Connaught, the unit was carefully inspected by Col. E. W. Wilson, Officer Commanding the Montreal Military District.

Fine weather prevailed on the morning of April 22nd when the Hospital personnel paraded on the University Campus for the royal review. Sharp at 11 o'clock the Duke of Connaught commenced his inspection. He spoke to a number of the men and to several of the nursing sisters, who, though not called upon to execute any of the military movements, were drawn up in two files during His Royal Highness's progress through the ranks. All officers were presented to the Duke previous to marching past.

Following the review on the Campus, which was witnessed by many guests, including Their Royal High-

nesses the Duchess of Connaught and the Princess Patricia, the Duke, in his dual capacity as Governor-General of Canada and Visitor of McGill University, attended a special convocation of McGill and presented diplomas to twenty medical students, four students in agriculture, and three students in Arts, all of whom wore khaki and were to accompany No. 3 Hospital overseas. In addition, His Royal Highness, who wore over his field-marshal's uniform his robes as LL.D. (McGill), presented to Major A. A. Magee, B.A. (Toronto), the degree of B.A. (ad eundem) in recognition of his services to the McGill Battalion, C.O.T.C.

That evening the Duke, accompanied by Col. Stanton and Major Duff, dined at the Officers' Mess of No. 3 General Hospital, which had been transferred from the University Club to No. 5 Mansfield Street. Among the guests on this occasion was Dr. A. D. Blackader, who, in view of Col. Birkett's expected departure overseas, had assumed the duties of Dean of McGill's Faculty of Medicine.

Saturday, April 24, 1915, and the days immediately following brought news which implied that the period of winter inactivity in France had definitely ended. Neuve Chapelle had marked the beginning of the spring fighting. Now came news that the Germans, using poison gas, had driven against the Canadian Division at Ypres. Continuous fighting was expected, and hospital units would be needed. No surprise, therefore, greeted announcement that No. 3 General Hospital (McGill) had been summoned by the War Office and would proceed overseas early in the month of May.

Their Royal Highnesses the Duchess of Connaught and the Princess Patricia with Invited Guests Watching the Inspection, April 22, 1915

CHAPTER II

FROM MONTREAL TO SHORNCLIFFE

I

AT 4 o'clock on the morning of May 6, 1915, *reveille* wakened the men of No. 3 General Hospital (McGill), and at 8 o'clock the unit paraded outside barracks in heavy marching order. Colonel Birkett, accompanied by his Second-in-Command, Lieut.-Col. H. B. Yates, inspected the lines and, when satisfied that all was well, led the unit to the docks, where it embarked on the Canadian Pacific Steamship *Metagama*.

Crowds lined the route of the march and gave the unit an ovation, comparable to those which had sped formations of the First Contingent on their way in the late summer of the previous year. In reply, the men sang the marching ditties of the day and shouted the McGill yell. Amongst those hurling the defiant message of the old yell were Privates C. M. Yates and H. M. Elder, sons respectively of the Second-in-Command and the Officer in charge of Surgery.

Friends of officers and men and of the nursing sisters, who had proceeded individually to the dock, were admitted to the wharf to bid the unit farewell. The scene was animated, but little confusion prevailed, and at 11 a.m., amid waving of kerchiefs and roars of cheers, the ship glided from the pier and turned her bows downstream. On board the vessel, sombre in her war paint of dark grey, a band struck up *O Canada*, followed by *The Girl I Left Behind Me*, a tribute to those waving good-bye from shore.

In addition to No. 3 General Hospital (McGill), which embarked with a strength of 33 officers, 73 nursing sisters, and 205 other ranks, the *Metagama* carried 42 officers and 1,057 O.R. of the 21st Battalion, C.E.F., under command of Lieut.-Col. W. St. P. Hughes; also Nos. 4

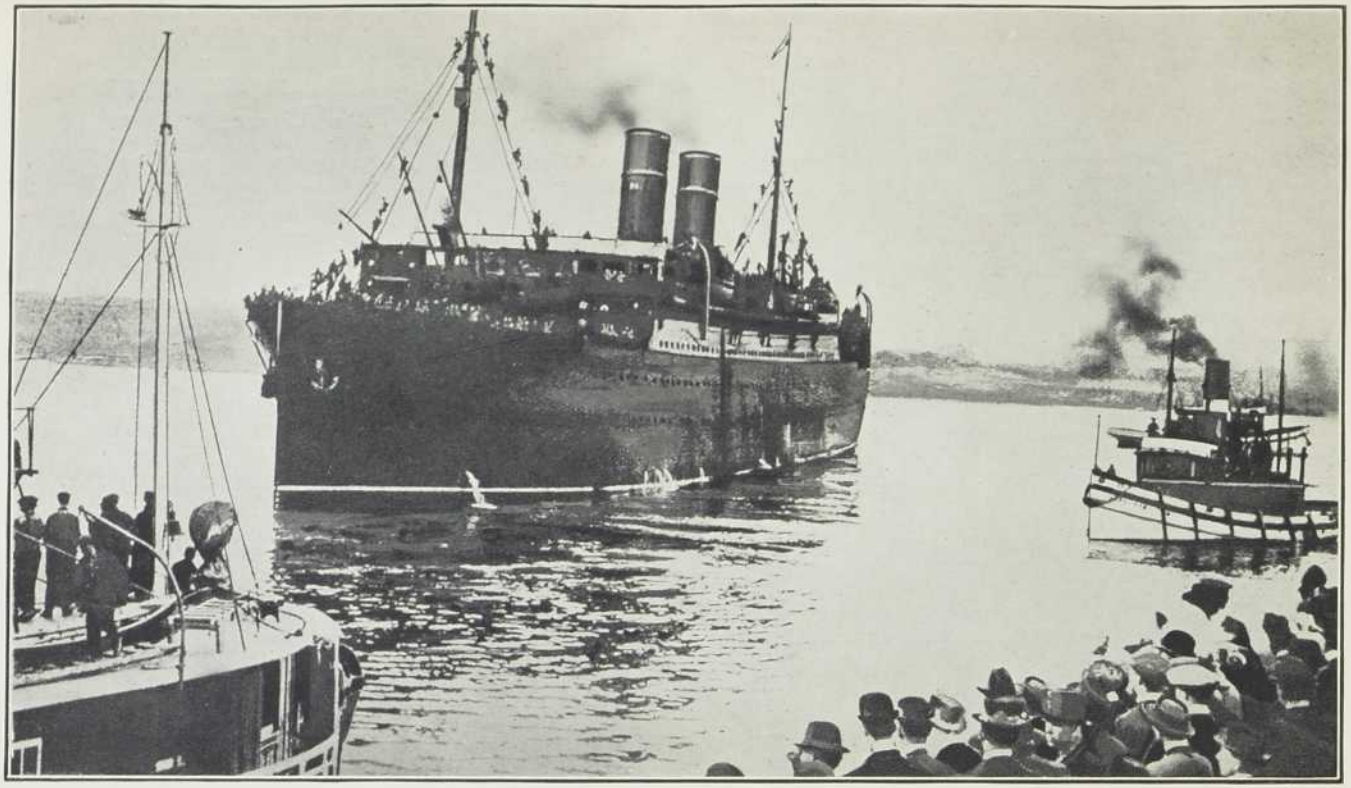
and 5 Stationary Hospitals, the former a unit raised by Laval University, Montreal, and the latter by Queen's University, Kingston. In all, troops on the *Metagama*, including nursing sisters, numbered approximately 1,700.

For the voyage, redisposition of commands was effected. Col. Birkett assumed duties as Senior Medical Officer of the ship; Lieut.-Col. Yates took command of No. 3 General Hospital; Lieut.-Col. W. G. Anglin, of No. 5 Stationary Hospital, was appointed surgeon on duty; Major J. C. Meakins was appointed physician on duty; Capt. A. T. Henderson, of No. 3, was placed in charge of the ship's hospital, with Capt. J. A. MacMillan as admitting officer.

On the whole, the voyage to England was uneventful. On the evening of the 6th the *Metagama* anchored for a half-hour at Quebec. Sports filled much time on the days which followed, a tug-of-war between the nurses of the Montreal General and Royal Victoria Hospitals arousing special interest. When the graduates of the Montreal General were victorious, an officer of the 21st Battalion, tried by court-martial on the charge of betting, was found guilty and ordered to provide sweets for the winners with the proceeds.

At 4 p.m. on the day following this event, Private Blyth, of the 21st Battalion, was operated upon by Lieut.-Col. J. M. Elder, with Lieut.-Col. Anglin, of No. 5 Stationary Hospital, assisting. Operation revealed a gangrenous appendix and peritonitis, a serious condition, despite which the patient was doing well as the ship neared England. Five days later, Company Sergeant-Major Lattion, of the 21st Battalion, developed appendicitis and was operated upon by Lieut.-Col. Anglin, assisted by Lieut.-Col. F. Etherington, the O.C. the Queen's University unit. In addition to surgical cases, the medical officers on the ship were called upon to treat Private Kerry, of the 21st Battalion, who developed lobar pneumonia, and one case of measles, which prompt isolation prevented from spreading.

When near the coast of Ireland the *Metagama* altered her course and swung far south, owing to activity of German submarines which some days previously had sunk the *Lusitania*. The Officer in charge of Surgery of No. 3



His Majesty's Troopship "Metagama" Sailing from Montreal, May 6, 1915

Hospital pays tribute to the manner in which news of the *Lusitania* disaster was received, referring particularly to the demeanour of the nursing sisters. The sisters, proud that Canada gave to nurses the rank and badges of an officer, permitted no uneasiness to mark their bearing.

After steaming on her new course for some time, the *Metagama* turned north and, under escort of four destroyers, entered Plymouth Sound, docking at Devonport early on the morning of May 15th. As the ship was warped to the pier her band played *O Canada*, changing to *The Wearing of the Green* when a battalion of the Dublin Fusiliers marched to the S.S. *Tunisian* alongside to embark for service at the Dardanelles.

At Devonport the personnel of No. 3 General Hospital divided, pending arrangements to send the unit to France. At 1 p.m. Lieut.-Col. Elder proceeded to London, with all nurses from the *Metagama*, and reported to Surgeon-General G. C. Jones at his headquarters, 36 Victoria Street. Five officers from No. 3 General Hospital and one each from Nos. 4 and 5 Stationary Hospitals were detailed as an escort.

Arriving at Paddington Station at 7 p.m., Lieut.-Col. Elder's party was met by a representative of the Canadian Red Cross, with busses to convey the nurses to billets in the neighbourhood of Southampton Row. Three days later 56 of the nursing sisters of No. 3 Hospital were ordered to proceed for temporary duty to units in France, and 15 were detailed to the Canadian Red Cross Hospital at Taplow. Miss K. O. MacLatchy, the Matron, remained in England until June 13th and then proceeded to No. 2 Canadian General Hospital, Le Tréport, to await the arrival in France of No. 3.

Meanwhile, the men of No. 3, after transferring their ordnance from the hold of the *Metagama* to the vans of a goods train, had travelled from Devonport to Moore Barracks, Shorncliffe. This destination was reached early on the morning of May 16th, and the men, weary after 24 hours without sleep, were promptly dismissed to obtain rest.

When the men were established in barracks at Shorncliffe, Col. Birkett and Lieut.-Col. Elder proceeded to London to discuss the unit's future. In London they

found some disposition on the part of authority to split up the unit and use the personnel to reinforce hospitals already established. The officers of No. 3 stated flatly that to such a plan they could not assent. It violated the basis of McGill University's offer, which, they pointed out, the War Office had unreservedly accepted.

Lieut.-Col. Elder discussed the matter with Surgeon-General G. C. Jones and with Lieut.-Col. Lorne Drum, Deputy Director of Medical Services, London, and Col. Birkett interviewed Sir Alfred Keogh, D.G.M.S. at the War Office. Sir Alfred was impressed by the professional standing of the men who appeared on the establishment of No. 3 and was interested to hear that other Canadian universities had followed McGill's lead and raised hospitals for overseas service. He expressed the opinion that such university units marked the beginning of a new era in the realm of army medicine.

As a result of the conferences in London, all thought of breaking up No. 3 General Hospital was abandoned, and preparations for employment of the unit in France proceeded. Early in the third week of May the men moved from Moore Barracks to camp on St. Martin's Plain, some two miles away, where, as one officer wrote, "we busy ourselves refitting our panniers, drilling, and with the minor details of camp routine."

From St. Martin's Plain many officers and men of the unit proceeded on leave to London, or elsewhere in the British Isles. St. Martin's Plain provided good accommodation, but all ranks enjoyed the luxury of leave in civilian surroundings. Contrast on return to camp greeted one diarist, who mentions that "after three marvellous days in London, my first duty was to attend a lecture on 'Lice, Fleas, and Itch.' "

On May 24th a number of officers of No. 3 accepted an invitation from Sir Arthur Markham to a badger hunt on his property nearby. One officer writes of the hunt: "It took 8 men and 6 dogs about half a day to dig the poor beast out, and then, after he had been worried by the dogs and had bitten some of them in return, he was killed with a shovel. Poor sport, I thought it." Many shared this opinion, but all appreciated the courtesy of their host and the kindness which had prompted his invitation.

Photo by Gordon

THE ORIGINAL N.C.O'S.

Between the 27th and 31st of May, Lieut.-Col. J. M. Elder studied the surgical organization of the Royal Victoria Military Hospital (1,100 beds) and the British and Welsh Red Cross Hospital (900 beds), near Southampton. On June 1st Lieut.-Col. John McCrae, who previously had accepted the position of Officer in charge of Medicine, was officially posted to the unit, as from April 17th.

Little of outstanding interest occurred during the early days of June. Preparations for service in France continued, but before these were completed, 15 other ranks, who had graduated from McGill University in the spring, accepted commissions in the Royal Army Medical Corps. Departure of these newly-appointed officers effected the first break in the nominal roll of those who had sailed with the unit from Montreal.

On June 14th officers of the unit detailed for temporary duty at hospitals in England were recalled to No. 3, and at 11 p.m. loading of equipment on motor lorries began. When this was completed the unit marched to the railway station and boarded a train, which pulled out for Southampton at 4 o'clock on the morning of June 15th. Silence, ordered and maintained, rendered the march from camp to the station unusually impressive.

At Southampton, which was reached about 8.30 a.m., the unit detrained and marched to a rest camp, whence fatigue parties were despatched to load stores on "a miserable, dirty, little steamer," the *Huanchaco*, which before the war had plied up and down the coasts of South America. Two days later Col. Birkett held a muster parade of the unit on deck, and at 4 p.m. tugs towed the vessel into the stream. Shortly thereafter the tugs cast off and the *Huanchaco* headed for the shore of France.

CHAPTER III

ACROSS TO FRANCE

I

WHEN the S.S. *Huanchaco*, loaded with the personnel and ordnance of the unit to be known in France as "No. 3 Canadian General Hospital (McGill), B.E.F.," and with five hundred horses and mules for the Army Service Corps, sailed from Southampton, an Admiralty pilot steered her carefully through a mine-field and past the great boom of chains, which closed the port at night. Three destroyers, two submarines, and two hydroplanes assisted in escorting the vessel to the open sea.

As the shores of England receded, the men of No. 3 Hospital were paraded before the Captain of the *Huanchaco*, who instructed them regarding procedure during the crossing. The voyage, he said, was to be considered as a night march. No smoking would be permitted on deck, no light must be shown, and no voice raised beyond normal tone. Torn-up paper, the Captain warned the men, must on no account be thrown over the ship's side.

On completion of the Captain's address, the men were formed into groups of 14, each under an officer, and carefully shown the position of life-boats, life-belts, and other objects associated with marine disaster. No disaster occurred, however, and early on the morning of June 18th the vessel docked at Boulogne. Unloading followed; the men afterwards marching to a dismal rest camp outside the town. At 10 o'clock next morning, the men of No. 3 Hospital paraded at the rest camp and marched through Boulogne to the "North Station," where the unit entrained for a run of approximately twelve miles to Dannes-Camiers.

The advent of No. 3 Hospital at Dannes-Camiers had

Photo by Gordon

Capt. A. T. Henderson, Capt. C. K. Russel, and a Section of the Original Unit

been announced to the authorities of that district but one-half hour before the unit appeared. No accommodation, therefore, had been provided, though a party of the Royal Engineers had begun to mark sites for tents of the various departments. Soon after arrival, officers and men of No. 3 pitched a number of tents, and by night shelter for all had been erected. Through the courtesy of a British general hospital nearby, hot meals for all ranks were provided.

When the men of the McGill Hospital explored the vicinity of Dannes-Camiers, they found a great camp of tented hospitals. Several units were at work nearby, and at Etaples, distant but a mile or two, No. 1 Canadian General Hospital and several fine British general hospitals had been established. Between the site chosen for No. 3 Hospital and the sea lay about a mile of dunes, planted with fir trees to keep the shifting sand in place and traversed by a railway track, over which, day and night, troops and material moved in endless procession to the front. Behind the Hospital the ground rose to a range of low hills.

Between the time of the unit's arrival at Dannes-Camiers and the end of June, roads were built and each day more hospital tents were erected. Some effort was also directed towards decoration of the grounds, Privates Gareau, Learoyd, and Farlinger contributing to this phase of the work by constructing a unique McGill crest out of crushed bricks, coal, and sea-shells, the last gathered on the beach whither splendid bathing drew many of the officers and men whenever their duties would permit.

Deep interest in the McGill unit's progress was displayed by senior officers of the Medical and Administrative Services. Col. A. G. Thomson, C.B., Commandant of the Etaples Administrative District, inspected the personnel on arrival, his visit soon being followed by official calls from Surgeon-General G. C. Jones, D.M.S. Canadians; Major R. C. L. Williams; Surgeon-General T. P. Woodhouse, Director of Medical Services, Lines of Communication; and Col. H. Carr, A.D.M.S., Etaples.

On July 1st, 28 other ranks of the unit were paraded before Lieut.-Col. Yates for disobeying standing orders regarding possession of cameras. Lieut.-Col. Yates

pointed out that the practice of concealing and using cameras must cease, but he realized that the men had offended more through thoughtlessness than deliberate intent and refrained from sharp punishment, awarding the guilty N.C.O.'s a reprimand only and the privates seven days' C.B.

Throughout July work in preparing the Hospital for patients continued, and by the 29th of the month 55 special marquees, 19 Neilson tents, 159 bell tents, and 24 ordinary marquees had been erected. The special marquees had been presented by the Viceroy and princes of India to the War Office. Each consisted of outer and inner shells, with a 3-foot air space between. Each shell was composed of three layers of material, the innermost of all being soft, brilliantly coloured cotton, with most beautiful Oriental designs. These tents each held between 50 and 60 beds.

On July 6th Hon. Capt. A. P. Shatford reported for duty with the unit as Church of England Chaplain; and on the 19th the Matron and 21 nursing sisters returned to No. 3 from the units to which they had temporarily been assigned. Fourteen additional nursing sisters reported on the following day, and twenty-four on July 23rd. On the 26th Capt. L. J. Rhea rejoined the unit from duty with the Director of Medical Services, London.

On the day following the return of the Matron and the first detail of nursing sisters, No. 3 Canadian General Hospital (McGill) was inspected by the Right Honourable Sir Robert Borden, Prime Minister of Canada, who expressed interest and satisfaction in the progress being made. He was particularly impressed by the manner in which Capt. D. Law, the Quartermaster, had effected arrangement of the unit's stores.

Two days after the Prime Minister's visit, the Hospital was inspected by Surgeon-General Sir Arthur Sloggett, K.C.B., Director-General of British Medical Services, France, who promised to take up with the Royal Engineers the question of water supply, which, at the time, was causing anxiety. Sir Arthur was also interested in the Hospital's appliances for administration of nitrous-oxide gas, which were explained to him by the anaesthetist, Capt. W. B. Howell.

On August 2nd Surgeon-General T. P. Woodhouse paid his second official visit to No. 3 Canadian General Hospital. He expressed satisfaction with what he saw and highly commended the sanitary arrangements, effected under the command of Capt. R. St. J. Macdonald.

Three days later the Hospital was again inspected, this time by the Hon. the Canadian Minister of Militia and Defence, Major-General Sam Hughes, who was accompanied by Major-General Lord Brooke, Lieut.-Col. Sir Max Aitken, and others. At night Major-General Hughes and staff dined in the Officers' Mess, other guests including Col. A. G. Thompson, C.B., Col. H. Carr, C.B., Col. Sir George Makins, C.B., Col. Guise-Moores, O.C. No. 20 British General Hospital, Col. Sir Allan Perry, O.C. No. 22 British General Hospital (Harvard), Col. R. J. Copeland, O.C. No. 25 British General Hospital, Col. Murray MacLaren, O.C. No. 1 Canadian General Hospital, Col. J. W. Bridges, O.C. No. 2 Canadian General Hospital, Lieut.-Col. Hanford McKee, O.C. No. 1 Canadian Stationary Hospital, and Lieut.-Col. A. T. Shillington, O.C. No. 2 Canadian Stationary Hospital.

II

On August 7, 1915, the staff of No. 3 Canadian General Hospital (McGill) rehearsed, with dummy patients, the arrival and disposition of a convoy of wounded. Col. J. G. Adami, in his book *The War Story of the C.A.M.C.*, has described the procedure of admitting patients adopted with but slight variation by all Canadian general hospitals:

"As the stretchers with patients, or the walking wounded, enter the admission tent, they are directed in order to one of four tables. At each is stationed a sergeant with two orderlies. The sergeant obtains the necessary particulars from the man, when he can speak, or if too ill to speak, from the card with which he has been tagged at the dressing station, or casualty clearing station. The sergeant dictates the details to the orderlies, one of whom inserts the particulars on the 'Hospital Card,' destined for the Registrar's office, the other upon the 'Diet Sheet,' which accompanies the patient to the ward. These two documents accompany the patient to the diagnosis table,

where are two or more medical officers, who make the provisional diagnosis, which determines whether the patient is to be treated as a medical, surgical, or special case. So soon as this has been made and entered on the documents, the patient passes to the final table, that of the Registrar, who has before him a list of beds vacant in the different wards, and assigns the patient to his particular bed in a particular ward. Without delay the man is then carried, or led, to his ward. There he finds waiting in a bundle pyjamas, dressing gown, and all necessary belongings." Walking cases then bathe and get to bed; stretcher cases are undressed by orderlies and put to bed.

Having rehearsed admission procedure, under direction of the Acting Registrar, Major J. C. Meakins, the personnel of No. 3 Hospital stood ready to receive patients. Nor was there prolonged delay, for at 6 p.m. notice of a convoy was received, and at half-past eight o'clock 36 patients arrived, 20 walking cases and 16 on stretchers. Almost the entire medical staff of the unit gathered to welcome these first patients to No. 3. Thanks to the care with which procedure had been rehearsed, the admission was well conducted, less than one minute being taken to each patient. Soon after 9 o'clock, therefore, all were in bed, with orderlies and nursing sisters caring for them. Nursing Sister M. F. Steele was appointed Night Superintendent of the Hospital by the Matron and assumed her duties forthwith.

An account of the arrival of the first convoy at No. 3 is given in *The Diary of Private MacMutchkin*, an unpublished document of great historic value: "I was wounded in the Salient," Private MacMutchkin states, "though the doctor says I was wounded in the Rolandic Area. They must have taken me there when I was unconscious. Anyway, I arrived eventually at No. 3 Canadian General Hospital and will never forget my reception. As I was helped out of the ambulance, the Colonel took my hand, then three lieutenant-colonels took my pulse, four majors hurried to take my temperature, and some blighter took my watch."

At 2 p.m. on August 9th Lieut.-Col. J. M. Elder performed the first operation in the Hospital's overseas history. More followed that same afternoon and the

arrangement of the operating hut worked well. The War Diary of the unit states that x-ray localization of foreign bodies, under the direction of Capts. A. H. Pirie and W. A. Wilkins, also proved highly successful, and adds that a gas-ether apparatus, presented to the unit by Mrs. Danforth, of Boston, U.S.A., was used by Capt. W. B. Howell in a thoracic case with excellent results.

On August 10th at 6.45 a.m. the first evacuation of patients from the Hospital took place, and later in the day two convoys of wounded arrived from the Ypres Salient. Sharp fighting had occurred near Hooge, and the Germans had used liquid fire. A number of the new patients had suffered from this form of Teutonic "frightfulness."

From August 10th until the end of the month, No. 3 Hospital continued to receive small convoys of wounded, and to evacuate patients, in accordance with regulations governing procedure at the time. On the afternoon of the 10th the hospital was visited by the Right Honourable H. J. Tennant, British Under-Secretary of State for War, and on the 19th by Sir Herbert Holt, of Montreal. On the 23rd Col. Sir John Rose-Bradford, K.C.M.G., Consulting Physician to the Etaples Area, visited the Hospital and examined a case of pneumo-pericardium. Capt. R. M. Shaw, Lady Hadfield, and Sir Thomas Oliver also called to discuss matters in their respective spheres of interest.

Previous to the advent of the last named visitors, Col. Birkett, Lieut.-Col. Yates, and Capt. H. M. Little had proceeded to Rouen to interview the Chief Paymaster and the Deputy Assistant Adjutant General of the 3rd Echelon regarding the filling-out and forwarding of the great mass of documents which operation of a general hospital entailed. Colonel Birkett records that he and his officers were most courteously received and that every assistance was given in securing the information they required. It is not possible to give here a complete list of the returns which the C.O. of a general hospital was required to file, but some realization of the work involved may be gathered from the partial list below:

Daily:

(1) List showing arrival and departure of officers.
(2) List of patients, showing number of officers and

other ranks, divided to show number of British and Indian Army patients, the number of patients belonging to the armies of the Allied Forces, and the number of German prisoner patients. These lists were each required to show the number of sick and the number of wounded.

Weekly:

Wednesday: Return of horses.

Thursday: Roll of officers.

Friday: Roll of officers, showing leave and appointments.

Saturday: (1) Roll of officers and number of other ranks, showing how employed.

(2) Return of railway warrants.

(3) Return of horse and motor transport.

(4) Triplicate roll of officers and nursing sisters, with details of their qualifications.

(5) Reinforcements required to complete establishment.

(6) Roll of dental personnel.

(7) Confidential report on chief medical occurrence of week.

(8) Roll of Class "B" men, and of British Red Cross personnel attached.

(9) Sanitary report.

(10) Return showing number of medical officers employed in hospital and number on outside duties.

(11) Return of trained nursing sisters and V.A.D.'s.

Sunday: (1) Field State and copy of Part II Orders.

(2) Ration return.

(3) Offence Report.

Monthly:

1st of month: (1) X-ray report.

(2) Return of horses and mules.

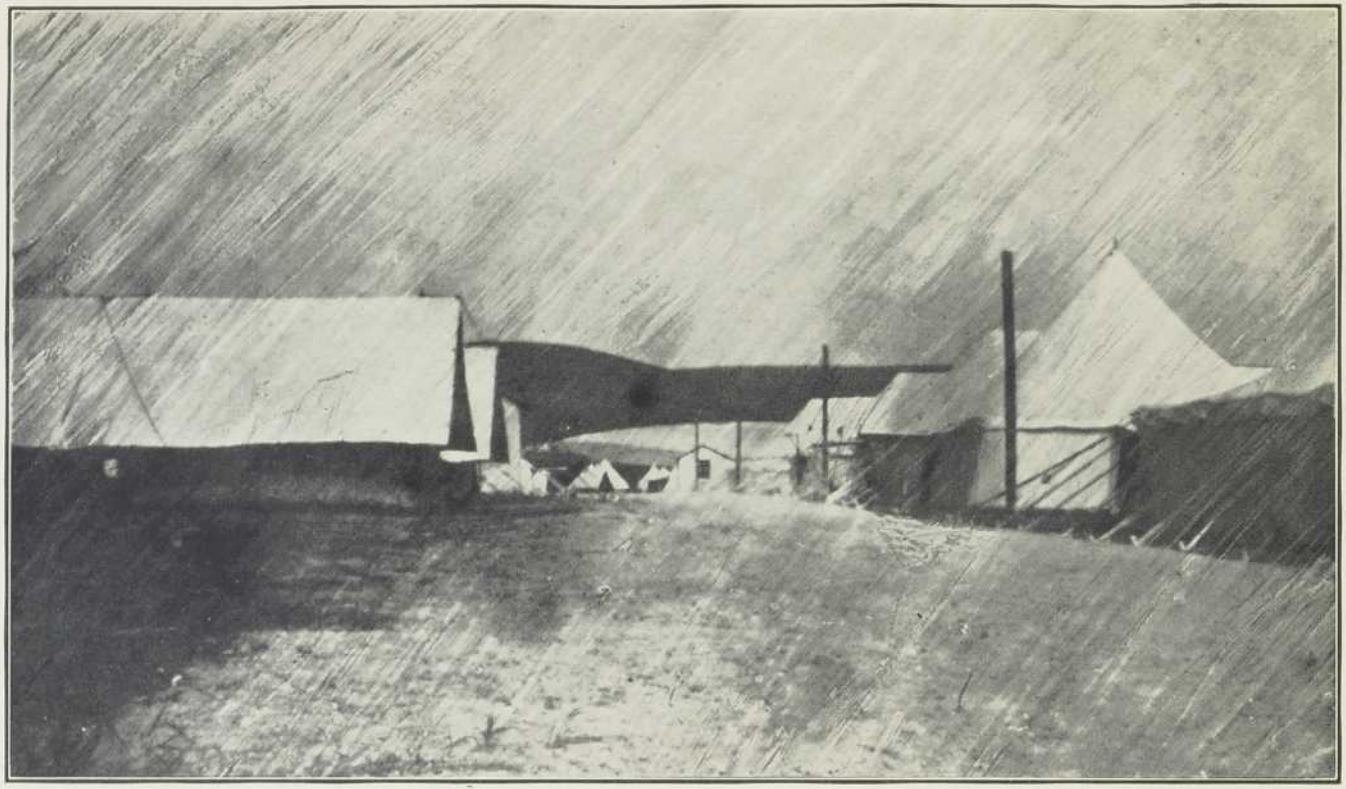
(3) Roll of warrant officers and N.C.O.'s, with details of their qualifications.

(4) Copy of War Diary.

2nd of month: Underdrawal of rations.

4th of month: Dental work performed.

7th of month: Certificate that War Diary has been despatched.



The Autumn Rains, Dannes-Camiers, 1915

(*Note:*—As cameras were forbidden at Dannes-Camiers, this photograph and the next were taken with an old biscuit box and a piece of X-ray film.)

15th of month: Roll of dispensers, lab. attendants, x-ray personnel, and cooks.

28th of month: (1) Roll of officers, showing their appointments.

(2) Strength of unit and weight of stores on hand.

(3) Number of officers and nurses in unit, showing number accommodated in billets.

(4) Number of anti-typhoid inoculations in unit during month.

Last day of month: (1) Nominal Roll of officers.

(2) Nominal Roll of personnel.

Quarterly:

25th of March, June, September, and December: Return stating that no cameras, other than those authorized, are in use in the unit.

1st of January, April, July, and October: Return regarding any venereal disease in the unit.

Early in September, 1915, heavy rain tested the Indian tents of the McGill Hospital. On the 3rd Nursing Sister Rachel McConnell mentions that in her wards conditions were far from satisfactory, leakage bothering the patients and compelling the nurses to work in raincoats, service hats, and rubber boots. The War Diary of the Hospital adds that many wards were similarly affected.

On September 4th Lieut.-Col. Lorne Drum and Lieut.-Col. J. G. Adami, of the Headquarters Staff in London, inspected the Hospital, their visit being followed on September 8th by an official call from the Matron-in-Chief of the Canadian Nursing Service, Miss M. C. Macdonald. This lady, born in Nova Scotia, had graduated from the New York City Training School for Nurses in 1895, had served in the Spanish-American and South African Wars and in the Panama Canal Zone, and had joined the Canadian Permanent Army Medical Corps in November, 1906. Her appointment as Matron-in-Chief of the C.E.F. dated from September, 1914.

On the day of her inspection No. 3 Hospital welcomed as a guest Lieut.-Col. Sir William Osler, Bart., whose son, Lieut. Edward Revere Osler, was serving as Assistant Quartermaster on the Hospital's establishment. Sir

William remained until the 15th of the month, enquiring with deep interest into all phases of the Hospital's work. On returning to England, he addressed students at the University of Leeds and referred to the speed with which convoys of wounded were handled at No. 3. In one instance, which he had timed, four patients had had their dressings changed and were lying comfortably in bed 27 minutes after the first of them had been lifted from a Red Cross train at Camiers Siding.

Previous to the departure of Sir William Osler from No. 3, Col. Birkett presided at a dinner given in his honour by the Officers' Mess, the guests including Col. R. J. Copeland, Col. Murray MacLaren, Lieut.-Cols. F. G. Finley and Kenneth Cameron, of No. 1 Canadian General Hospital, Col. Sir Allan Perry, Major MacKenzie Forbes, of No. 1 C.G.H., and Doctors Mosher and Fraser, of No. 22 British General Hospital, which was staffed by a medical unit from Harvard University.

On September 15th No. 3 Canadian General Hospital (McGill) was honoured by a visit from H.R.H. the Princess Louise, who was accompanied by Sir Almroth Wright. On the previous day a number of Canadian newspaper representatives had been shown through the wards, and on the following day Surgeon-General O. Chavasse, of the French Army, accompanied by a numerous staff, inspected the Hospital, paying particular attention to its surgical arrangements.

Two days after the delegation of French officers had visited No. 3, Col. Sir William Leishman arrived to inspect the pathological laboratory. Col. Leishman expressed satisfaction with what he saw and was much interested in data covering certain aspects of typhoid, para-typhoid A, and para-typhoid B. As a result of studies and tests by Capt. L. J. Rhea, more rapid identification of the organisms responsible for these fevers had been made possible.

At 3 p.m. on September 20th the McGill Hospital was visited by Her Majesty Queen Amelia of Portugal, who was accompanied by Lady Gifford. Queen Amelia walked through several wards, stopping frequently to speak to patients and to present little bags of sweet-smelling lavender.

Despite the number of distinguished visitors during September, work at No. 3 suffered no appreciable interruption. Convoys arrived regularly and evacuations to England were effected. For the most part, the surgery was of a routine nature, but occasionally a case aroused more than passing interest. On the afternoon of September 22nd Major E. W. Archibald removed a piece of shell from an abscessed brain cavity. He located the fragment with a telephone probe and, after much difficulty, brought it gently to the surface. Lieut.-Col. Elder, Major W. H. P. Hill, Capt. D. A. Hingston, and others watched this operation tensely. An observer records that when the fragment appeared, all present paid tribute to the operator's skill by an audible "Well done!" In a letter, an officer of the Hospital mentions that, in several cases of foreign body in the eye, Capt. J. A. MacMillan achieved equally striking success.

Pride in the work accomplished by his officers and nursing sisters was expressed by Col. Birkett in a report forwarded on September 24th, to Dr. A. D. Blackader, acting Dean of the Faculty of Medicine of McGill University. In addition, the C.O. of No. 3 paid tribute to the discipline displayed by the other ranks who had sailed with him from Montreal. "Though we have now been in France four months," he wrote, "and away from Canada five months, a charge sheet has never yet been sent in to H.Q. And I say this with great pride, as I believe that no other medical unit in France can boast of such a record."

CHAPTER IV

THE CASUALTIES FROM LOOS

I

AT noon on September 22, 1915, the Commanding Officer of No. 3 Canadian General Hospital (McGill) received orders to evacuate without delay all patients who could be moved. Three days later, at 1.30 p.m., the A.D.M.S., Etaples Administrative District, sent orders that "crisis expansion" must be effected and 500 extra beds provided. Stretchers and straw palliasses were accordingly placed in corridors, in the reading tent, in the chapel tent, and wherever space could be found.

Such orders could mean only that heavy fighting was taking place, or was expected in the near future. In obedience to the evacuation order, 290 patients were sent to England in three days, after which, with a bed capacity of 1,560, the Hospital stood prepared for any emergency. To help Miss MacLatchy in the work that was coming, Nursing Sister S. M. Hoerner was appointed Assistant Matron, and, as No. 11 General Hospital stood in need, Nursing Sisters Maude Wright, Sara Chisholm, Seaborn Robertson, and Ruby Graham were detailed for temporary duty there.

On the night of September 26th a convoy of 243 wounded from the opening stages of the Battle of Loos arrived at No. 3. It was obvious at once, as the patients were carried in bright moonlight to the admitting tent, that the Gordon Highlanders had suffered severely. One lad lay dead on his stretcher, and another died within a few moments of arrival. Many were only half conscious and several, fully conscious, were suffering great pain.

Arrival of this convoy marked the beginning of a week in which more than 1,000 patients were admitted to No. 3

and almost as many evacuated. Nursing Sister C. M. Watling noted that in her ward many of the newly-admitted cases were found to have suffered terrible wounds, and similar conditions existed throughout. A private writes in his diary: "This week—the busiest since we opened—is a confusion to me of blood, gaping wounds, saline, and bichloride. Few particular events remain clearly in my mind." Vivid to others, however, is recollection of the joy with which the early arrivals reported British success, and the bitter disappointment when later wounded brought news that the attack had failed.

The rush of patients following the fighting at Loos tested the Operating Room Staff of No. 3 to the utmost. For several consecutive days the personnel, under Nursing Sister Isabel Davies, assisted the surgeons to perform more than 30 operations a day. Lieut.-Col. Elder, in a report to the Commanding Officer, formally expressed his appreciation of the assistance rendered and elsewhere recorded the opinion that the work of Nursing Sister Davies and her assistants, Nursing Sisters Louise McGreer, M. J. Woods, and M. F. S. Park, was "beyond all praise." He also mentioned the good work of the Operating Room orderlies, formerly medical students, but now Privates K. O. Hutchison, N. T. Williamson, and D. E. Ross.

On September 29th the staff of No. 3 Hospital bade farewell to two nurses, who had sailed with the unit from Montreal. Nursing Sister J. F. Duncan returned to her home in the United States and Nursing Sister D. P. Cotton left to represent Canada on the staff of the Anglo-Russian Hospital, Petrograd. Following the Russian Revolution in 1917, Nursing Sister Cotton returned to England and was appointed Matron of the I.O.D.E. Hospital, London.

With the advent of October, the rush of wounded from the Battle of Loos abated. On October 2nd a private wrote in his diary: "Had there been no war, the first line-up rugby practice of the season would have taken place at McGill this afternoon." Somewhat wistfully he added: "Instead of football, I did a few dressings and cleaned and straightened up the ward."

On the following day another diarist wrote: "I wonder what the father who sits by the bed of his son in

Ward B thinks of war. Day after day he stays by the bed, sleeping fitfully in a chair, and waiting patiently for the inevitable end. This morning he crept away to chapel with us, and I saw him as he knelt at prayer."

On October 3rd Lieut.-Gen. Sir F. T. Clayton, K.C.M.G., formally visited the Hospital; being followed two days later by Surgeon-General Sir Arthur Sloggett; on the 8th by Surgeon-General T. P. Woodhouse; and on the 12th by the Duchess of Westminster, who enquired into many phases of the Hospital's work. Previous to the visit of Her Grace, Hon. Capt. G. C. Hepburn reported as Church of England Chaplain, in succession to Hon. Capt. A. P. Shatford, who proceeded to duty with the 5th Infantry Brigade, 2nd Canadian Division.

On October 13th, Capt. F. W. Tidmarsh developed appendicitis, and on the 14th Lieut.-Col. Elder operated. An acutely inflamed appendix was found, but no perforation had occurred. Later in the day Major W. H. P. Hill was operated upon for a badly infected finger, his surgical services being missed on the following day, when a convoy of 125 wounded arrived from fighting at the Hohenzollern Redoubt. Soon after these wounded arrived, the first woman patient was admitted to No. 3. She was a Belgian refugee, and had been referred by an Ambulance Corps to Col. Birkett for laryngological treatment.

October 25, 1915, was marked by a storm which the staffs of all hospitals at Dannes-Camiers will long remember. Rain and wind swept the tents of No. 3, tearing the canvas, pulling pegs from the soft ground, and flooding many of the wards. Nursing Sister Watling mentions that in her ward everything was floating and that the sisters on duty, "wet and dirty," carried out their work in "mud almost to the knees."

Matron K. O. MacLatchy confirms this description of conditions, adding that great pools of water gathered and that few tents failed to leak. Private C. B. Tinling mentions the efforts of other ranks to prevent the sodden tents from falling: "We spent the whole day," he states, "salvaging the contents of damaged tents and touring up and down the lines, driving and renewing tent-pegs." As a result of exposure suffered in this work, Private R. E. MacKechnie was evacuated to England with pleurisy.

Despite the flooding caused by the storm on October 25th, the work of No. 3 Hospital continued. On October 27th a British Tommy, who had lost much blood, sank to a condition where transfusion alone could save his life. Capt. W. B. Howell offered to give the required blood, and Major E. W. Archibald effected the transfusion, the first to be performed in the Hospital. Following the operation, the patient was too weak to be returned to his ward and remained in the Operating Room, with Nursing Sister Rachel McConnell on duty as a special nurse. Later, after he had been moved to his ward, he again had a haemorrhage, but Nursing Sister L. L. Gillis, on night duty, controlled the flow of blood by pressure. Some days after this, blood for other patients was supplied by Captains W. T. Ewing and W. G. Turner.

Following the heavy work of September and October, 1915, Capt. L. J. Rhea took cultures from the floor of the Operating Room, which, on the advice of a private, had been dressed with a compound of turpentine, linseed, and kerosene. Though many infected cases had passed onto the operating tables, the floor dressing was found to harbour no pathogenic bacteria. Lieut.-Col. Elder mentioned this to the Consulting Surgeon of the district, who had the composition of the dressing posted in hospital orders throughout the area.

Some impression of the type of infections prevailing at the time can be gathered from an entry in Lieut.-Col. Elder's diary on November 6th: "We have now done over 500 operations and admitted more than 3,000 patients. We have had many secondary haemorrhages, due, I fancy, to the disintegrating character of the organisms infecting the wounds. Some of the smells of the wounds are awful, and the necessary incisions are ghastly."

The Commanding Officer of No. 3 Canadian General Hospital adds to Lieut.-Col. Elder's statement in a letter to the Acting Dean of Medicine at McGill: "I have seen cases in the Operating Room in which the tissues are so rotten with infection that portions of muscle tissue can be removed by the handful." Similar conditions were reported throughout the war by hospitals serving in France. Madame Manoel, Bacteriologist of the Scottish

Women's Hospital, at Royaumont, reported in 1918: "The streptococcus has been the greatest enemy of the wounded, both by reason of its frequency and its tenacious resisting power. This last characteristic is probably due to the infinite number of streptococcus strains."

Explanation of the prevalence of infection is given by Sir Andrew Macphail in his official book on the Canadian Medical Services. "The surgeon," states Sir Andrew, "had no unfair advantage. From his point of view never was a filthier war waged. From time immemorial Flanders has been the battlefield of Europe, and in the intervals of peace the land was most carefully farmed. The inhabitants gather up all excreta, their own included," and use it to fertilize the land, with the result that the soil is deeply infected.

Despite infection, a report presented by the Officer in charge of Surgery on October 31, 1915, showed good results. At this time 1,650 patients had been admitted to the surgical wards, 450 operations had been performed, and but 21 of those operated upon had died. "These excellent results," Lieut.-Col. Elder stated, "are due especially to the technique and good judgment of Majors Hill and Archibald, who have done most of the operating."

Continuing, the report recorded gratifying results in the treatment of septic knee-joints. Only 2 cases out of more than 25 required amputation, and 7, after treatment by aspiration and injections of formalin and glycerine, were evacuated to England with good, movable joints. "These results," Lieut.-Col. Elder commented, "I have never seen equalled in civil surgery." For skill in the treatment of these cases, and in cases of fracture, the Officer in charge of Surgery warmly commended the work of Captains W. G. Turner, D. A. Hingston, and L. L. Reford.

The majority of the cases mentioned in Lieut.-Col. Elder's report were operated upon under chloroform, administered with a Vernon-Harcourt inhaler. Gas-oxygen, however, was used in desperate, or very short cases, and nitrous-oxide proved satisfactory when used to render painless dressings done in the wards. Spinal anaesthesia, in a number of cases, proved the reliability of a supply of stovaine purchased in Montreal.

In concluding his report on the surgery effected at No. 3 Canadian General Hospital (McGill) previous to October 31, 1915, Lieut.-Col. Elder acknowledged gratefully the assistance rendered by the Pathological Department, under Capt. L. J. Rhea, and the X-ray Department, under Capts. A. H. Pirie and W. A. Wilkins. By the rapid methods of staining used in the laboratory, the surgeons were informed of the exact nature of the infection present in wounds and were enabled to treat the patient with increased efficiency. Similarly, as a result of the excellent localization of foreign bodies by the X-ray Department, removal of bullets and shell fragments was simplified.

In addition to the report on surgery filed on October 31st, the Commanding Officer of No. 3 Hospital received a report from Capt. Rhea, who stated that, thanks to the assistance of Captains L. H. McKim and R. H. Malone, the work in pathology and bacteriology had shown highly satisfactory results.

Capt. Rhea's report showed that during the month of September his department had effected examination of specimens as follows: Urine—650, Blood—179, Faeces—20, Sputum—25, Gastric content (test meals)—12. In addition, his officers and trained other ranks had carried out constant work in diagnosing, by means of direct smears and examination of cultures, the type of organism infecting wounds. Despite the technical difficulties of diagnosis from direct smears, Capt. Rhea was able to state: "So far as we can learn, we have not advised conservative treatment at the sacrifice of a life, or even a limb, and we have been fortunate enough to see more than one case of gas infection of the tissues detected bacteriologically and operated upon in time to save both life and limb."

Continuing, Capt. Rhea expressed his conviction that practically all shell wounds were heavily infected, but that, on the other hand, bullet wounds were frequently sterile. With regard to bayonet wounds, the staff of No. 3 Canadian General Hospital had no opportunity to judge. As a rule such wounds were either slight, or so severe that the injured man died before reaching a general hospital. In an address delivered to the Montreal

Medico-Chirurgical Society in December, 1916, Capt. D. A. Hingston remarked that in the first year of No. 3 Hospital's overseas service only one bayonet-wounded man was admitted.

Concluding his report on the bacteriological and pathological work of the Hospital to October 31, 1915, Capt. Rhea referred to a study conducted by his staff of certain aspects of typhoid and para-typhoid fevers; to a number of bacteriological and cytological examinations of thorax cases; to a survey of the mosquitoes of the district, which established that none were of the malaria-bearing type; to post-mortem examinations, which had proved helpful to the medical officers of the Hospital; and to the fact that stock and autogenous vaccines had been supplied in numerous cases.

Following the pathological report in the War Diary of No. 3 Hospital is a statement regarding the four motor ambulances presented by friends of the unit to the Commanding Officer. Col. Birkett gives a report on the services these cars rendered in August, September, and October. In addition to working for No. 3 Canadian General Hospital, they were loaned to No. 20, No. 22, and No. 25. All expenses incident to their upkeep and work were paid by those who originally gave them. Their record of service for the three months in question was:

August	— 61 runs	259	patients	carried.
September	—142 "	844	"	"
October	—146 "	932	"	"

II

On November 1, 1915, Surgeon-General G. C. Jones, Director of Medical Services, Canadian Contingents, inspected the McGill Hospital, his visit being followed on the night of the 2nd by a masquerade dance, given by the nursing sisters to the N.C.O.'s and men. Unanimity in declaring this party a success is shown in all diaries and documents written at the time.

A few days after the masquerade, frost rendered many of the wards cheerless and uncomfortable, conditions growing worse thereafter until, on November 13th, high

Damaged Tents of No. 3 Hospital, Dannes-Camiers, after the Great Snowstorm of November 13, 1915

winds and rain wrought wide-spread havoc. The cotton ropes of the Indian tents shrunk, pulling the tent pegs from the ground, and the canvas, manufactured to meet conditions in a warmer clime, ripped to ribbons under the blast of the icy wind.

"When we woke," Private C. B. Tinling writes, "we found the Sergeants' Mess tents, the night men's sleeping tent, one of the Men's Mess tents, and several others flat on the ground. Wards A, B, C, J, L and P were torn beyond recognition, and only wards F, G, H, K and S are now open." Following the storm, Lieut.-Col. H. B. Yates, Second-in-Command of the unit, was admitted to the Hospital, suffering from bronchitis. He failed to improve during the next few days, and on the 22nd was evacuated to England, bearing with him the affection and good wishes of the Commanding Officer and all members of the unit.

Previous to Lieut.-Col. Yates's departure, snow and cold weather forced the closing down of the remaining wards. On November 17th, 6 patients only were in the Hospital and these were evacuated without delay. On the 20th Col. Birkett received definite orders from the Director of Medical Services,Lines of Communication, to close the Hospital entirely, to turn in the equipment provided for crisis expansion, and to report to the D.D.M.S., Boulogne, for further instructions.

In company with Lieut.-Cols. Elder and McCrae and Capt. D. Law, Col. Birkett proceeded to Boulogne on November 21st, and again on the 22nd, to inspect the Jesuit College, occupied by the Meerut (Indian) Stationary Hospital, as a possible site for the future work of No. 3. He and his officers, and Major J. C. Meakins, who accompanied the party on November 22nd, agreed that the site was suitable, provided extensive alterations were effected. Pending decision regarding these alterations, many of the officers and nursing sisters of No. 3 were transferred for temporary duty to other medical units in France and England.

Following the cessation of active work at Dannes-Camiers, a number of officers reported on the work of their departments. Capt. G. H. A. Stevenson, Officer in charge of Dentistry, stated that between July 19th and

October 31st he and Capt. L. H. Thornton had treated 350 patients, including 125 referred from other hospitals. Two hundred and twenty patients had had fillings effected, and 150 had had one tooth or more extracted. Treatment of a number of cases suffering from gastritis had proved helpful. Capt. Stevenson reported that his student-orderlies, Privates A. N. Jenks and A. C. Vaughan, had carried out their work in a highly satisfactory manner.

Another officer who filed a report at this time was Capt. A. H. Pirie, of the X-ray Department. Capt. Pirie stated that his two x-ray machines had been purchased from Messrs. Waite & Bartlett, of New York, who also supplied a number of the tubes, all of which were 7 inches in diameter, with solid tungsten targets.

The Department, under Capts. Pirie and Wilkins, with Privates C. K. Mathewson, H. C. J. Simkins, and R. L. Michell, and later Private C. G. Malcolm, assisting, opened on August 8th, when 14 radiographs were made. Two days later 83 radiographs were taken, many fluoroscopic examinations were made, and a number of foreign bodies were localized. On this occasion one machine was at work from 8.30 o'clock in the morning until 7 o'clock at night. At 7 o'clock the armature burned out. No precautions had been taken to prevent this, as the cases had been urgent and their requirements alone had been considered.

Continuing, Capt. Pirie mentioned that by the use of sensitive paper, instead of glass plates, it had been possible frequently to present to a surgeon an x-ray of his case one minute after exposure had been effected. Despite the speed with which cases had been handled and the fact that treatments for sycosis and rodent ulcers had been administered, no x-ray burn, or untoward effect on patient, had been reported.

In conclusion, Capt. Pirie stated his belief that every patient at No. 3 had been treated as satisfactorily as in a great civilian hospital. Recognition of this, and of work in the localization of foreign bodies with x-ray, was afforded by the Röntgen Society of London, which added Capt. Pirie's name to its roll of honorary members. Previously, this roll had included only Professor Röntgen

(discoverer of the x-ray), Sir William Crookes, Sir Oliver Lodge, Sir Ernest Rutherford, Professor Holznecht, and Professor Stephen Leduc.

In a report on the work of the Sanitary Department of No. 3 Canadian General Hospital at Dannes-Camiers, Capt. R. St. J. Macdonald referred to the serious difficulty which securing of an adequate water supply had presented, and to the measures taken for disposal of all waste materials. Steps to prevent the spread of infection by flies had been taken by his department, which had also supervised the ventilation and cleaning of huts and tents, and the disinfection and de-lousing of the clothing of patients.

Sanitary work at No. 3 had been carried on, under Capt. Macdonald's direction, by two non-commissioned officers and nine privates. "Every attention was given," stated the Sanitary Officer, "to the providing of a sufficient supply of good food, good air, and good water, to the disposal of all excreta, and to the complete destruction of all infected material." In the carrying out of his work, Capt. Macdonald reported, Corporals T. A. Payne and Norman Lennox and Private J. H. Bieler had rendered valuable assistance.

In the Medical Department, the work of the Hospital at Dannes-Camiers provided much of interest. Lieut.-Col. John McCrae, Officer in charge of Medicine, reported to the Commanding Officer at the close of the period and drew attention to the devotion to duty shown by Majors A. C. P. Howard and J. C. Meakins and by Captains J. G. Browne, C. K. Russel, and A. T. Henderson.

Rheumatic fever, pneumonia, and the exanthems, including scarlet fever, had occurred infrequently. Of enteric diseases, however, the Hospital had had a fair experience. Typhoid fever had not appeared, but paratyphoid A had developed on one occasion and paratyphoid B had provided a number of cases. Lieut.-Col. McCrae, in his report, acknowledged the debt of the Medical Department to the work of the laboratory staff in diagnosing these cases.

"Painful Shins," a malady more or less unknown and lacking a technical name, puzzled the officers of the Medical Department for some time. Lieut.-Col. Mc-

Crae described this condition in his report and mentioned that seven cases, observed by Capt. J. G. Browne, had formed the subject of an interesting address to the Etaples-Camiers Medical Society on the 27th of October. None of the usual analgesics had proved effective in the treatment of these cases, morphia being required to give relief from the pain. Two to four weeks usually elapsed before the symptoms vanished.

Arising possibly from circumstances similar to those which produced Painful Shins, were the cases of Trench Feet, a condition of chilblains, sometimes confused with frost-bite. In this malady, Lieut.-Col. McCrae stated, "the feet are covered by an eruption, or are swollen, bluish-red, hot, itchy, and painful. Many cases are febrile." Trench Feet were difficult to treat, but the Officer in charge of Medicine at No. 3 found that a measure of success followed when the feet were wrapped in hot cloths, bathed in hot water, and then treated with a mild astringent.

Referring to nervous cases, Lieut.-Col. McCrae commented that many patients arrived from the front bankrupt as to their nervous systems. No precise term was available at the time to describe their condition, which usually involved irregular heart action, with a pulse rising at times to 140 or 150 beats a minute. Though "shell shock" was the term most frequently applied to such a condition of exhausted nerves, the phrase was misleading, as the man had usually suffered no direct injury from explosives. More often the condition followed upon the severe, though possibly brief, strain of a battle, or the protracted effort of months in the forward areas. Cure of the cases required a stay longer than could be permitted in a general hospital in France. All sufferers, therefore, after preliminary treatment, were evacuated to England.

A few well-defined cases of malaria had been admitted to No. 3 Hospital in the period covered by Lieut.-Col. McCrae's report. For the most part, patients were found to have served previously in India or Africa, but in some instances no such explanation for the disease could be advanced, and the only conclusion possible was that infection had been contracted in France or Flanders.

Few cases of dysentery had arrived at No. 3, but diarrhoea with cramps and sometimes vomiting had been common. Lieut.-Col. McCrae stated that his officers had been warned to watch such cases with care, lest what appeared to be a simple case of diarrhoea should prove to be paratyphoid fever.

Though Lieut.-Col. John McCrae was respected throughout the world of medicine for the measure of his professional attainments, it is as one of the war poets that he commands a place in the hearts of those who use English as their mother tongue. One morning in November, 1915, he showed to Col. Birkett a torn piece of wrapping paper on which, after the Second Battle of Ypres, he had pencilled a few lines. Those lines, famous now, are given here by permission of London *Punch*, which printed them on December 8, 1915:

IN FLANDERS FIELDS

In Flanders fields the poppies blow
Between the crosses, row on row,
That mark our place; and in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.

We are the Dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved, and now we lie,
    In Flanders fields.

Take up our quarrel with the foe,
To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
    In Flanders fields.

CHAPTER V

DANNES-CAMIERS TO BOULOGNE

I

FOR the officers, nursing sisters, and other ranks of No. 3 Canadian General Hospital (McGill), December, 1915, was a month of disappointment. Work at Dannes-Camiers had ended and the scene of future labour for the unit remained unsettled. Moreover, the personnel, who had worked loyally together and had acquired esprit-de-corps, began to scatter, with no certainty of reunion, but rather with the certainty that duty would retain many elsewhere.

On December 1st Capt. C. K. Russel left for England to become Chief Neurologist at the Canadian Special Hospital, Ramsgate. Six days later, three non-commissioned officers and ten privates, all students in the Fifth Year of Medicine at McGill University, paraded on two hours' notice and left for England, whence, on War Office orders, they proceeded to Canada to complete their medical courses.

No sooner had the students left than fifteen nursing sisters were ordered for duty to the Duchess of Connaught Hospital, Taplow, England, and another fifteen to the Canadian Military Hospital, Shorncliffe. Eight officers, Capts. W. B. Howell, R. H. Malone, L. L. Reford, L. H. McKim, A. T. Henderson, J. W. Hutchinson, J. C. Wickham, and R. B. Robertson, were simultaneously ordered to England for temporary duty near Shorncliffe.

Meanwhile, at Dannes-Camiers, rain and cold weather continued. Early in December wooden huts were built for the nursing sisters, who moved from their sodden tents without regret. Matron K. O. MacLatchy, in *The Canadian Nurse,* paid tribute to the cheerfulness with

which her staff bore the subsequent inactivity and discomfort. The huts were warmer than the tents, she admitted, nevertheless the chill December winds were but partly countered by the only heating apparatus available, small blue-flame, oil stoves.

On December 19th Sir Douglas Haig succeeded Sir John French in command of the British Armies in France. Two days after this event, Col. Graham Thompson, C.B., Commandant of the Etaples Administrative District, inspected the men of No. 3 and congratulated them upon the discipline they had shown while in his area. He stated unreservedly that "no finer Medical Unit existed in the District."

Following Col. Thompson's inspection, six Fourth Year medical students, all privates, proceed to England, en route to Canada, to complete their studies at McGill. Later in the day, notice was received that Sergeant-Major G. L. D. Kennedy, Staff-Sergeant A. B. Wilkes, Sergeant R. D. Wilson, Sergeant H. K. Neilson, and Sergeant G. R. Baby had been granted commissions in the Canadian Army Medical Corps and would report for further orders to the C.A.M.C. Training School, Shorncliffe, on December 30th.

Previous to departure of the new C.A.M.C. officers, definite announcement was made that No. 3 Canadian General Hospital (McGill) would move to the Jesuit College in Boulogne. At 8.30 a.m. on December 18th, an advance party of 6 N.C.O.'s and 18 privates proceeded to Boulogne to install kitchens and to make other necessary changes. Two days later this party was reinforced by 4 officers and 10 O.R. Adaptation of the college buildings and grounds to Canadian use, therefore, was under way on December 22nd, when Col. H. S. Birkett temporarily handed over command of No. 3 Hospital to Lieut.-Col. J. M. Elder and proceeded to Canada to discuss matters vital to the welfare of the unit with the Principal and Governors of McGill.

II

On the night of December 24, 1915, carol singers from No. 18 British General Hospital, with mandolin and banjo

accompanists, made their way to the grounds of the McGill unit and invited the Canadians to join in welcoming Christmas Day. Describing the occasion, a diarist writes: "It was a sight not to be forgotten. Officers and nursing sisters stood in the deep mud to sing *God Save the King*, then, forming inner and outer circles, all joined in singing *Auld Lang Syne*."

Next morning Divine Service was held in the Operating Room of the Hospital, which had been stripped of all that pertained to surgery and decorated with holly, ivy, pine branches, and mistletoe. Later, the officers and nursing sisters dined together, all regretting the absence on duty elsewhere of many who had sailed with the unit from Montreal. Similarly, in the Sergeants' and Men's Messes, where special dinners were served, those who had received commissions, or returned to Canada, were sorely missed.

Two days after Christmas Lieut.-Col. Elder received orders from the A.D.M.S., Etaples, to cease preparations for a move to Boulogne and to stand fast at Dannes-Camiers. At 11 o'clock on the morning of the 28th the A.D.M.S. visited No. 3 Hospital to confirm his previous orders, which had arrived by 'phone. He added that No. 3 would take over the lines vacated by No. 22 British General Hospital and there prepare for patients who would arrive at some date in the future.

On December 29th Capts. A. H. Pirie and W. W. Francis proceeded on leave, Capt. J. A. MacMillan following them to England on the 30th, and four additional Final Year medical students on December 31st. At Dannes-Camiers, the staff of No. 3, though disappointed at the thought of opening another tent hospital, prepared to obey the orders they had received. On December 31st Sergt. C. B. Tinling was promoted to the rank of sergeant-major and, under his direction, beds were installed in tents where No. 22 British General Hospital had previously been at work.

In the diary of the Officer in charge of Surgery, the entry for the last day of 1915 reflects the disappointment felt by the unit at the prospect of life at Dannes-Camiers, without work enough to keep all ranks employed. Realizing that officers and men were chafing under enforced

idleness, Lieut.-Col. Elder had pointed out that, though all had behaved splendidly under the strain of heavy work, this greater test must not be permitted to affect morale.

III

Although the War Diary of No. 3 Canadian General Hospital (McGill) states that on January 1, 1916, "nothing worthy of comment occurred," private diaries and letters note that at 4 p.m. the Matron and nursing sisters of the unit were "at home" in the Operating Room, which, as at Christmas, had been decorated for the occasion. Col. Thompson, Commandant of the Etaples Area, was amongst those who called, as were Col. Sir Allan Perry, Col. Murray MacLaren, and Lieut.-Cols. F. G. Finley and Kenneth Cameron, of No. 1 Canadian General Hospital.

Though the New Year's reception held by the Matron and nursing sisters of No. 3 was marked for the most part by a cheerfulness suitable to the occasion, a note of regret was unavoidable, for Major A. C. P. Howard was leaving to resume duties at the University of Iowa, and many took the opportunity to bid him farewell. Previous to his departure on January 3rd, he rejoiced with all ranks of the unit when a telegram was received by Lieut.-Col. Elder late on the night of the 2nd:—"Cancel orders re Dannes-Camiers. No. 3 Canadian General Hospital will move to Jesuit College, Boulogne."

Though delighted at this order, Lieut.-Col. Elder wondered how the War Office had been induced to abandon the Dannes-Camiers plan and revert to the Boulogne scheme, now, for the second time, officially ordered. In a letter to Col. Birkett he said, "I don't know who worked the oracle for us, but I suspect the Oxford knight." No evidence exists to prove Lieut.-Col. Elder's theory, but it was at all times reasonable to "suspect" Sir William Osler of honourably using his great influence in favour of McGill, so Lieut.-Col. Elder may have guessed aright.

Be that as it may, the McGill men lost no time in taking over their new quarters. On January 4th a guard, under command of Major Hill, was assigned to duty in Boulogne, and on the 6th the Orderly Room and Headquarters of the Hospital were moved to the new location,

leaving Capts. Turner, Law, and Tidmarsh, with the nursing sisters and about 100 other ranks at Dannes-Camiers. On January 7th Lieut.-Col. Elder severed official relations with Dannes-Camiers and reported to the authorities in Boulogne.

The Marlborough Jesuit College, taken over by No. 3 Canadian General Hospital (McGill), stands on the heights north-east of Boulogne, facing on the Calais Road. Much of the college had been burned when the French Republic confiscated the Jesuit estates, but two wings remained, and in each an Indian hospital had been established. Later these had merged into a single 1,700-bed hospital, using both wings, also twenty 30-bed huts within the college walls. Outside the walls to the east, a 14-hut infectious department had been established, and north of this, across a road, a convalescent hospital, also in huts, had been erected.

Scattered through the huts of the Indian camp were kitchens, latrines, and bath houses, designed with little regard to sanitation, but in strict obedience to the laws of caste, so difficult for Western peoples to understand. No nursing sisters had served with the Indian units, so quarters for women were lacking, but officers' quarters existed in a house some distance away.

Taking over the camp as it stood, the staff of No. 3 Hospital converted the north wing of the college into barracks for the men, and the Indian operating room into a dental department. Wards of 25 beds each were commissioned in the huts that existed, and linen stores, clothing stores, and disinfector were established in huts amongst the ruins of the old quadrangle. Altogether, 650 beds were installed within the walls, and beyond the walls, in the south-west corner of what had been the Indian convalescent camp, quarters were provided for the nurses. In the south wing of the college the Operating Staff of No. 3 established a 3-table theatre.

These changes were not effected in a day, nor did they pass unnoticed by the population of Boulogne. Commenting, a local newspaper remarked: "Après les Jésuites les Hindous, après les Hindous les Canadiens, quelle page il a déjà notre vieil hameau de Marlborough dans l'histoire de ces années tragiques!"

At 3 p.m. on January 7th, Col. Kettle, Commanding No. 7 Officers' Hospital, Boulogne, visited Lieut.-Col. Elder to discuss the question of attaching his unit to No. 3 Canadian General and converting the combined units into an officers' hospital. In conversation with Surgeon-General G. C. Jones, Lieut.-Col. Elder expressed dislike of the proposal, but stated that No. 3 stood ready to work in whatever capacity the exigencies of the Service might demand. Eventually the amalgamation plan was dropped and No. 3 ordered to carry on as before.

Officials in the Boulogne Area welcomed the McGill unit to the district and commented on the men's excellent bearing and behaviour. On January 9th Lieut.-Col. John McCrae addressed a muster parade of the unit and spoke of the good name earned at Dannes-Camiers. Boulogne offered opportunity to tarnish this reputation, but so long as it was maintained, he promised that no irksome restrictions would be enforced.

At 8.30 o'clock on the morning of January 11th, six motor lorries arrived at Dannes-Camiers to move the Hospital equipment to the railway station. Fifty-two runs were made during the day and by night all mattresses, bedside tables, and similar equipment had been handled. On the following day the heavy packing cases of linen and clothing were moved to the station and loaded into 33 box cars and 3 flat cars. Sergeant-Major Tinling records that his men worked splendidly, a statement supported by the fact that approximately 200 tons of equipment were loaded in less than ten hours.

Next day, shortly before noon, Capt. F. W. Tidmarsh and 52 other ranks of No. 3 Hospital marched to Dannes-Camiers Station and there entrained for Boulogne. At 12.19 p.m. their train, including the 36 cars of equipment, pulled out and at 2.20 p.m. it reached Boulogne, where Major Hill met the men on the platform and announced that unloading must be accomplished by 5.50 o'clock.

Four steam lorries were on hand to transport the material to the new quarters. Faced with what seemed an impossible task, the McGill men accepted the challenge and set to work. Eight more lorries arrived, but supplies emerged so rapidly from the box cars that the platform was soon piled high with cases. At 5.49 o'clock, one

minute under the 2½-hour limit, the train was empty. At 8 p.m. fifteen lorries were added to the fleet already in operation, and at 10.25 o'clock the last bale of equipment left the station platform.

Meanwhile, at the Jesuit College, the lorries were unloaded and the goods distributed. By 11.30 at night the job was complete, and the men staggered wearily to bed, pleased that in eight hours they had accomplished work which the Boulogne Base officials had said would require two days.

On January 15th it was announced that, for work at Dannes-Camiers, Matron K. O. MacLatchy had been awarded the Royal Red Cross, 1st Class. Circumstances prevented formal celebration of this award, but congratulations from all ranks of the unit were forwarded to the Matron, who was still at Dannes-Camiers. Perhaps the secret of Matron MacLatchy's success lies in a sentence written about her by a nursing sister from Toronto, who, at a later date, served under her at No. 3: "She was the fairest and squarest matron I ever had over me."

In war-time sorrow often follows joy, and so it proved on this occasion, for on the 22nd of January a telegram announced that Lieut.-Col. H. B. Yates had died in England as a result of the illness contracted through exposure at Dannes-Camiers. Lieut.-Col. Yates held an unusual place in the hearts of the Hospital personnel and regret at news of his death was wide-spread and sincere. On February 16, 1916, he was buried from Christ Church Cathedral, Montreal, the 21st Westmount Battery, Canadian Field Artillery, providing the gun-carriage for his body, the 3rd Regiment, Victoria Rifles of Canada, sending its band in remembrance of his long service as M.O., and the 73rd Battalion, Royal Highlanders of Canada, under Lieut.-Col. Peers Davidson, providing the party to pay those military honours to which death in the service of the King had so abundantly entitled him.

Meanwhile, at Boulogne, No. 3 Canadian General Hospital, though saddened by the death of the Second-in-Command, was following the example he had always set of sincere devotion to duty. On January 27th Surgeon-General R. H. S. Sawyer paid an official visit to the unit, and on the 28th Surgeon-General T. P. Woodhouse,

Director of Medical Services, Lines of Communication, inspected the newly-established wards. Lieut.-Col. Elder showed him 880 beds in position and ready for use. He had expected less rapid progress and was agreeably surprised. Convoys of wounded, he promised, would be directed to No. 3 without further delay.

CHAPTER VI

WORK BEGINS AT BOULOGNE

ON January 28, 1916, Lieut.-Col. J. M. Elder, Commanding No. 3 Canadian General Hospital (McGill) in the absence of Col. H. S. Birkett, ordered the flags which mark a British military hospital in commission to be hoisted at the gate of the Jesuit College, Boulogne, and the lamps to be lighted at night. Fifty patients had been transferred from No. 14 Stationary Hospital, Wimereux, and the McGill unit was again at work.

On February 2nd His Eminence Cardinal Begin, of Quebec, visited the Hospital, and on the 3rd twenty-nine nursing sisters arrived from Dannes-Camiers. With the help of a party of charwomen, hired on February 7th, the nursing sisters prepared their new wards for patients, but failure of kitchen arrangements delayed the reception of further convoys until February 14th, when 86 wounded cases were admitted.

Previous to this, officers had been assigned to wards, and a draft of 26 privates, who reported from the C.A.M.C. Depot at Havre, had been instructed in the duties that would be required of them. On February 15th the X-ray Department opened, and on the same day there appeared No. 14 of *The McGilliken*, a unit newspaper, edited, under the supervision of Capt. R. St. J. Macdonald, by Privates J. H. Bieler, A. N. Jenks, C. W. Gallagher, and W. W. Beveridge.

At 11 o'clock on the night of the 15th, 144 patients arrived at No. 3, many of them requiring operation on the following day, with the result that the Operating Staff was on duty until 2 o'clock on the morning of the 17th. A further convoy of 116 patients arived at 11 p.m. on the 16th; and 28 nursing sisters reported back from temporary duty in London on the 19th, with the result that Col. Birkett, returning from Canada on February 21st, found his command working smoothly, with 550 patients in the wards.

Previous to the return of the Commanding Officer from

On January 28, 1916, the Flags that Mark a British Military Hospital in Commission were Hoisted over the Gate of the Jesuit College, Boulogne

Canada, Capt. W. B. Howell had left the unit for England. From England he sailed to Canada and thence returned to France with No. 9 Canadian Field Ambulance. Capt. W. G. Turner had also left to join a field ambulance, and Hon. Capt. G. C. Hepburn had been transferred to the 8th Battalion, Canadian Infantry. Following Col. Birkett's return, No. 3 Hospital was ordered to care for all sick cases in the Boulogne area, estimated at 100 a week. Capt. W. W. Francis, who was appointed Registrar of the unit on February 26th, arranged for registration of these additional patients, in accordance with the requirements of the Boulogne Base authorities.

On March 1st Capt. R. St. J. Macdonald left No. 3 Hospital to assume command of the Sanitary Section of the 3rd Canadian Infantry Division; and on the 3rd, Lieut. E. R. Osler, Assistant Quartermaster, proceeded to England to take a commission in the Royal Field Artillery. Capt. L. L. Reford left the unit on March 8th, being replaced on the establishment by Capt. G. R. Baby, an original private of the Hospital, who, as previously mentioned, had received a commission in the C.A.M.C.

Meanwhile, convoys had arrived steadily, several hundred wounded being admitted on March 2nd and 3rd, as a result of activity in the Ypres Salient. More than 700 patients had arrived by March 4th, and accommodation for 967 had been provided. The following table shows how distribution of this total had been effected:

Inside College Walls	Outside College Walls
Ward A—93 beds	Ward M—75 beds
B—43 "	N—75 "
C—48 "	O—56 "
D—93 "	P—28 "
F—75 "	R—28 "
G—75 "	S—28 "
H—72 "	
K—75 "	
L—75 "	
649 beds	318 beds

Total, 967 beds

March 7th and 8th, 1916, will be remembered by the staff of No. 3 Canadian General Hospital (McGill) for the convoys of Trench Feet cases that arrived. Stretcher after stretcher, each bearing a soldier with feet terribly swollen, was lifted from the ambulances, passed through the admission room, and carried to the wards, until more than 200 such cases had been put to bed. The majority of the patients were from battalions of the Royal Scots, the East Yorkshire Regiment, and the Shropshire Regiment. Enquiry revealed that new boots had caused the trouble, or so it appeared from the evidence. Many of the sufferers stated that they had been forced to discard the boots and remain with socks alone protecting their feet until their unit could be withdrawn from the line.

In the *Canadian Medical Association Journal* for June, 1916, Lieut.-Col. Elder discussed the treatment of Trench Feet and observed: "Infection is nearly always present, but surgical treatment is indicated only when a definite line of demarcation forms, or when the gangrene shows a tendency to spread rapidly up the leg. Strict cleanliness, warmth, and exposure of the feet to the air appear to give the best results."

Soon after the rush of Trench Feet cases had subsided, Surgeon-General T. P. Woodhouse visited No. 3 Hospital officially and notified Col. Birkett that the normal bed-capacity of the unit must be raised to 1,560 (equal to a general and a stationary hospital combined), with "crisis expansion" of 2,000 beds available in emergencies. Col. Birkett stated that such expansion could be effected by use of tents, and that his staff, with reinforcement of 4 officers, 15 nursing sisters, and 50 other ranks, could meet the new requirements.

During the third week in March Capt. D. W. McKechnie and Capt. F. G. Logie were posted to No. 3 Hospital, and on the 21st of the month Surgeon-General G. C. Jones and Lieut.-Col. J. G. Adami paid a visit of inspection, followed on the 22nd by Surgeon-General Sir Arthur Sloggett, and on the 28th by Col. Wilberforce, Base Commandant, Boulogne, who approved measures being taken for the expansion which Surgeon-General Woodhouse had ordered.

On March 28th Lieut.-Col. J. M. Elder received news

of the death of his daughter in Canada, and two days later, amid expressions of deepest sympathy, he left No. 3 to proceed to Montreal on six weeks' leave of absence. On the day following his departure, Col. Birkett mentioned his outstanding services in a report to headquarters, which also brought to the notice of authority the devotion to duty displayed by Capt. David Law, Quartermaster, Capt. L. J. Rhea, Pathologist, and by Sergeant-Major W. G. Hadley and Sergeant-Major C. B. Tinling.

Amongst the most interesting of the many cases which Lieut.-Col. Elder had operated upon in Boulogne was that of a private from the 1st Canadian Division. This man had been shot through the stomach and the bullet had lodged in the right lobe of his liver. The stomach wound had been closed at a casualty clearing station and had healed, but no bullet had been found. Capt. Wilkins located it with x-ray at No. 3, and Lieut.-Col. Elder, working from an anterior abdominal incision, evacuated a liver abscess and found the bullet in the abscess cavity. The cavity was then drained through a stab wound in the right loin, and the anterior abdominal incision was closed. Success attended the operation, and the patient recovered rapidly.

Equally successful was an unusual operation performed on a private of the Suffolk Regiment by Major W. H. P. Hill. The man had been wounded by shrapnel,[1] which had entered the posterior part of the apex of the right lung. The shrapnel fragment was located by x-ray in the lower lobe of the left lung, slightly behind, and opposite the seventh rib. On March 16th Major Hill removed the rib and sewed the pleura together. Four days later he used a telephone probe through the opening thus created in the chest wall and located the shrapnel, where the x-ray had indicated, in the left lung. He placed the probe in contact with the fragment of shell, and, using a Paquelin Cautery, burned a track down the probe to the fragment, which he then extracted.

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[1]In all reports covering the operation described above, the word "shrapnel" is used to denote the shell fragment in the patient's lung. The Germans used little shrapnel and, strictly speaking, the term, therefore, is probably inaccurate. Throughout the Medical Services, however, "shrapnel" described any fragment of a shell, or bomb, and this convenient arrangement has been followed in this book.

In a paper prepared for a medical journal, Lieut.-Col. Elder commented on the anaesthetics used at No. 3. "Members of our surgical staff," he wrote, "had been 'brought up' on ether as the standard general anaesthetic, yet I think I am safe in saying that in 90% of our cases we have used chloroform." Continuing, Lieut.-Col. Elder explained that with the Vernon-Harcourt inhaler, chloroform had proved dependable and safe. Furthermore, in circumstances where preparation of the patient for operation was often impossible, chloroform seemed to produce less vomiting and, being quicker than ether to take effect, had proved invaluable where time was an important factor.

In connection with the surgery at No. 3 Hospital, a report presented at this time to Col. Birkett by Capt. Rhea was of considerable interest. Referring to 15 post-mortems conducted on cases who had died from injuries to the brain, Capt. Rhea pointed out that in one case only was a fragment of shell found in the brain itself. In the other 14 cases fragments of the skull had been driven into the brain, but the projectile had been diverted, or had struck only with force sufficient to fracture the skull, without penetrating it.

From examination of these cases, Capt. Rhea drew the conclusion that steel helmets would save many soldiers, who, lacking such protection, died from injuries of the head. Similar findings had been reported by other hospitals, and the steel helmet for the Army in the Field was the result. In the Canadian divisions, these were issued in the spring of 1916, when the troops moved from the quiet Messines front into the Ypres Salient.

In addition to matters of surgical interest, Capt. Rhea's report mentioned that his staff had continued the bacteriological work begun at Dannes-Camiers and had improved methods of search for tubercule bacilli in samples of sputum. "When diseases of the lungs and bronchi are as common as they have been recently," the report stated, "too much emphasis cannot be put on careful sputum examination. The careful and prolonged search for tubercule bacilli in the sputum has resulted in our being able to make possible a definite diagnosis of tuberculosis in several suspected cases, and to exclude it, so far as

Staff of the Pathological Department

Back Row—Left to right: Capt. G. Shanks, Major L. J. Rhea, Capt. R. H. Malone. *Front Row:* Corp. J. H. Warner, Sergt. B. W. Culyer, Private George Sebire

active service laboratories can exclude it, in many others." In addition to carrying out this work for patients at No. 3 Hospital, the McGill pathologists effected all similar tests required for patients in No. 1 Convalescent Camp nearby.

In April, 1916, the number of Canadian patients in No. 3 Hospital increased, owing to the Canadian Corps moving to the Ypres Salient, where action was always to be expected. On April 2nd Capt. D. A. Hingston operated upon a private of the 42nd Battalion, Royal Highlanders of Canada, who had been riddled by a bursting shell, 80 fragments of which the x-ray revealed, and 20 of which were removed during the one operation.

Devoted in his ministration to the seriously wounded and sick at this time was Hon. Captain R. W. Ridgeway, attached to the Hospital as Chaplain. In the War Diary of the unit the Commanding Officer of No. 3 recorded appreciation of the services this officer rendered: "He spends the day visiting the sick and wounded, and on many occasions, with dangerously sick cases, has replaced the orderly in the ward, so that the patient might receive individual attention, often going without his meals to render to suffering patients all the service they might require." Col. Birkett added that Capt. Ridgeway had given much assistance in carrying stretchers and had rendered other services worthy of the highest commendation.

That the McGill Hospital as a whole was working to the satisfaction of the higher medical authorities is stated in a letter written to Sir William Peterson by Surgeon-General Sir A. T. Sloggett, Director-General of Medical Services, British Forces in the Field. Under date of April 2, 1916, the D.G.M.S. wrote: "The Commandant and all ranks have been indefatigable in performance of their duties, and their services have been appreciated by everyone from the Commander-in-Chief downwards."

Some impression of the work of one department of the Hospital is conveyed in a report which Captain A. H. Pirie presented to the Commanding Officer on April 24th. It covered the move of the X-ray Department from Dannes-Camiers to Boulogne and dealt interestingly with improvement in the methods used to localize foreign bodies in wounds. Between the time when the Department

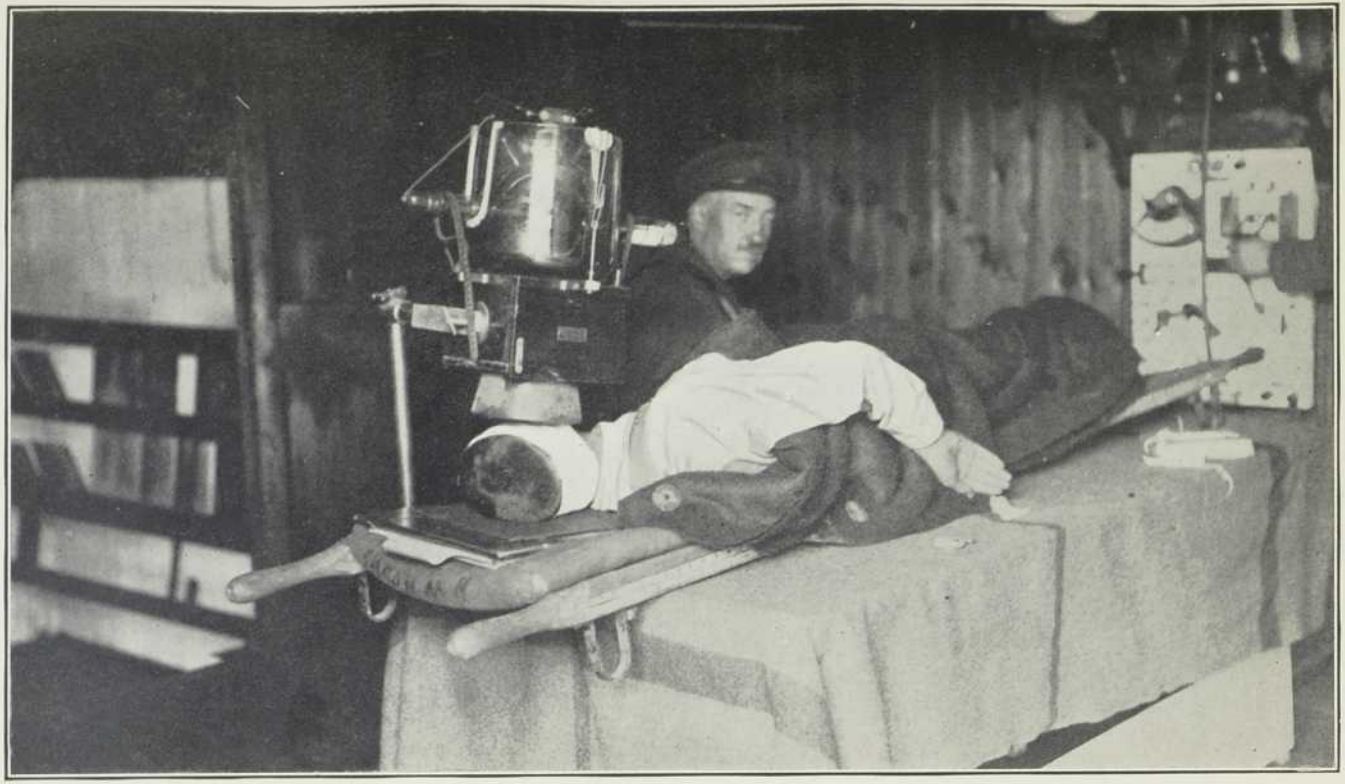
opened for action at Boulogne on February 15th and the date of his report, April 24th, Capt. Pirie stated that 1,841 radiographs had been taken. During the month of April, 936 plates of 703 patients had been made, and in May this number had been but slightly reduced, as 565 patients had been carried to the X-ray Department and 728 plates had been exposed.

The month of May, 1916, was marked by arrival at No. 3 of many convoys of sick and wounded, and the steady evacuation of patients to England. Little of outstanding interest occurred in the first week of the month, but on the 9th the Hospital was visited by Her Highness the Princess Victoria of Schleswig-Holstein, who delivered to the patients a message of appreciation for their services from His Majesty the King.

Two days after the visit of the Princess Victoria, Lieut.-Col. J. M. Elder returned from leave in Canada and resumed the post of Officer in charge of Surgery. Soon after taking up his work, Lieut-.Col. Elder developed a streptococcus infection in the first finger of his right hand. On May 18th the glands in the axilla swelled, and on the 19th Major Hill opened the finger, which required further incising on the 20th. On the 21st Lieut.-Col. Elder was admitted as a patient, and Nursing Sister C. M. Watling was ordered on duty as a special nurse, this duty being assumed at night by Nursing Sister Maude Wright, Night Superintendent of the Hospital. By May 26th the patient's condition permitted return to his own quarters, but the infection had taken a deep hold and on June 5th a medical board granted him two weeks' leave of absence.

On May 16th Capt. W. A. Wilkins, who had assisted Capt. A. H. Pirie in the X-ray Department of No. 3 and whose work in the localization of foreign bodies had proved most valuable, left the Hospital to proceed to Canada. The Commanding Officer in the Hospital War Diary recorded regret at the departure of this officer and emphasized his appreciation of the services he had rendered. Two days later Col. Birkett again used the Diary, this time to express satisfaction in the promotion of Capt. J. G. Browne, who was gazetted major, as from January 4th.

Soon after Major Browne's promotion had been announced, a group of Russian medical men, under the



X-RAYING A PATIENT SHOT IN THE HEAD

leadership of Professor L. Tarassovitch, visited No. 3 Canadian General Hospital and displayed deep interest in the work being done. Following their visit, Surgeon-General G. C. Jones inspected the wards, and Matron-in-Chief Macdonald consulted with Matron MacLatchy in regard to matters concerning the welfare of the nursing staff.

At 9.15 p.m. on May 22nd, 10 other ranks reported as a reinforcement from the Canadian Base Depot at Havre, and at 2.30 p.m. on the 24th Surgeon-General R. H. S. Sawyer and Surgeon-General G. C. Jones formally opened a recreation hut, erected, equipped, and presented to the Hospital by the Canadian Red Cross Society, which undertook to maintain the hut during the Hospital's service in Boulogne. As part of the ceremony, the Princess Victoria Concert Party entertained the guests, including 350 patients, who gathered from the wards. Many of these last remained in the Hospital until June 3rd, when all ranks were pleased by announcement that, for devotion to duty and for valuable service, Assistant-Matron S. M. Hoerner had been awarded the Royal Red Cross, 2nd Class.

CHAPTER VII

THE SALIENT AND THE SOMME

I

AT eight o'clock on the morning of June 2, 1916, German artillery in the Ypres Salient opened a violent bombardment of the Canadian front from Hill 60 to Hooge. Then, after five hours of concentrated fire, the enemy infantry advanced, confident that a path to Ypres had been smashed wide open. The story of how that path was barred forms a memorable page in Canadian military history, and the days following the feat of arms are memorable in the history of Canadian military hospitals.

At No. 3 Canadian General Hospital the first wounded from the engagement in the Salient arrived on June 3rd. In his diary, a student, serving as night orderly on a surgical ward, entered some details: "All night I washed dirty, bloody, lousy boys—lads from our own part of the world—brought them drinks, and sorted their grimy uniforms for disinfection. I finished just at dawn, and, looking out of the window, saw passing on a stretcher a still figure, covered with the Union Jack—another name added to the long roll of those who die for Canada."

As always when the Canadian Corps was in action, news of relatives killed and wounded soon reached members of the staff of No. 3. In the fighting in June, 1916, Nursing Sister E. J. Giffin and Nursing Sister S. McGreer had brothers killed, and two brothers of Nursing Sister D. P. Cotton were killed. In addition, many of the Hospital staff heard that those dear to them had been severely wounded.

In the counter-attacks following the German offensive on June 2nd, Lieut.-General the Hon. Sir Julian Byng, who had succeeded Lieut.-General Sir E. A. H. Alderson

in command of the Canadian Corps, employed the 1st and 3rd Canadian Divisions, with the result that in the convoys of wounded reaching No. 3 Hospital on June 4th every battalion in the two divisions was represented.

Referring to the bacilli found in the wounds of casualties at this time, and, indeed, at all stages of the war, Major E. W. Archibald wrote in the September, 1916, number of the *Canadian Medical Association Journal:* "At the base, by all odds the most frequent is what we call the 'mixed infection.' A culture from such a wound, which is usually very foul-smelling, shows a large number of organisms, most of which are demonstrably original in the intestinal tract."

On June 13th, at 1.30 a.m., the 1st Canadian Division, under Major-General A. W. Currie, advanced to complete the work begun by the counter-attacks on June 2nd and 3rd. The 1st Division swept to success, despite bitter opposition and the impediment of deep mud. "The boys coming in," stated the diary of a McGill orderly on June 14th, "are in an unspeakable condition from the awful mud," nevertheless, Sergeant-Major Tinling wrote, "they are a cheerful crowd, well pleased with their success."

On June 18th Private A. N. Jenks wrote: "The stream of wounded keeps pouring in," and confirmation of this is found in the War Diary of the Hospital, which shows the following table of convoys:

June 13,	9.30 p.m.	Convoy of	64	patients	received.
" 14,	3.40 a.m.	" "	94	"	"
" 14,	1.45 p.m.	" "	70	"	"
" 14,	8.00 p.m.	" "	45	"	"
" 15,	10.00 p.m.	" "	75	"	"
" 16,	3.00 a.m.	" "	86	"	"
" 16,	7.15 p.m.	" "	37	"	"
" 16,	10.15 p.m.	" "	43	"	"
" 17,	9.15 p.m.	" "	29	"	"
" 17,	10.30 p.m.	" "	57	"	"
" 18,	4.15 p.m.	" "	66	"	"
" 18,	7.00 p.m.	" "	41	"	"
" 19,	9.15 p.m.	" "	53	"	"
" 20,	7.30 p.m.	" "	34	"	"
" 20,	11.15 p.m.	" "	65	"	"

On June 21st no convoy reached No. 3 Hospital, but on the 22nd the flow of wounded was resumed, and continued thereafter until the end of the month. Meanwhile, on June 27th, orders for rapid evacuation of cases to England were received, and on the 28th these were emphatically repeated. On June 30th drastic orders to evacuate to England every patient who could live to get there convinced the most doubting of medical officers that great events were imminent. Realizing that "great events" implied endless casualties, the staff of No. 3 Hospital prepared to meet whatever demands the situation should present.

II

On July 1, 1916, Field Marshal Sir Douglas Haig, Commander-in-Chief of the British Armies in France, delivered the first blow in that series of great engagements officially known as "The Battles of the Somme, 1916." On a front of 15½ miles, with the main effort concentrated on the 10-mile front between the Somme and the Ancre, 13 British divisions, with 6 in close reserve, advanced, opening the battle, which waged for nearly five months. To the south, on a front of about 8 miles, General Ferdinand Foch attacked in support of the British effort, with 5 divisions of French infantry in the line and 11 available as reinforcement.

As a result of the Battles of the Somme, British casualties on the Western Front mounted sharply in July and averaged more than 39,000 a week. Naturally, this increased pressure on hospitals at the base. In a letter to friends in Montreal, Sergt. Harold White described events at No. 3: "The first week in July," he wrote, "taxed our efforts to the utmost. Convoys and evacuations went on at the same time, the bugle no sooner sounding 'Dismiss!' than it was followed by a peremptory 'Fall in!'"

Statistics support Sergt. White's statement. The first casualties from the battle reached No. 3 Hospital on July 3rd, and thereafter there was little rest, as the following table shows:

July 3,	400 patients admitted	and 472 evacuated.	
" 4,	320 "	"	" 206 "

Plus 400 hospital ship admissions, which do not appear on the Hospital books.

Bed Patients in the Sunlight Outside Ward G

July	5, 490	patients	admitted	and	117	evacuated.
"	6, 388	"	"	"	547	"
"	7, 321	"	"	"	243	"
"	8, 471	"	"	"	220	"
"	9, 442	"	"	"	356	"

After assisting in the surgery resulting from the first flow of casualties from the Somme, Major W. H. P. Hill and Capt. D. A. Hingston left No. 3 Hospital on July 6th to return to Canada. Both officers had served from the beginning with the McGill unit, and, throughout the year of active service in France, had conscientiously attended to the duties falling to their respective lots. It was with regret, therefore, that the unit bade them farewell.

Four hundred and thirty-six patients were admitted to No. 3 Hospital on July 10th and 644 were evacuated, the total establishing a record broken but once during the remaining years of the unit's service in France. On the following day the Director of Medical Services, Lines of Communication, visited the Hospital and conveyed to Col. Birkett a message from Sir Douglas Haig, expressing deep appreciation for what the Hospital had done for the wounded from the Somme. This recognition by the Commander-in-Chief was posted in Orders, as it concerned all ranks of the unit.

After a slight decrease on July 11th, admissions rose sharply again on the 12th, and on the 13th the Operating Staff, under Nursing Sister Davies, worked under pressure all day. Many of the cases brought to the tables had lain for three days in No Man's Land, or in the forward area, with the result that gas gangrene had developed and made tragic headway. Despite the rush of operating, Lieut.-Col. Elder received Col. H. C. Burghard, Surgical Consultant to British Hospitals in Boulogne, who wished to study results in a series of infected knee-joint cases, being treated by aspiration and injection of formalin and glycerine.

Following a great attack on July 14th, the first stage in the Battles of the Somme, 1916, ended. The attempt to force a gap through the German defence lines by a series of powerful attacks, pressed forward before the enemy could mass reserves, had definitely failed. By the

18th of the month the enemy had 138 battalions north of the Somme, as against 62 when the battle opened. Attrition, therefore, became the chief object for which the opposing forces strove.

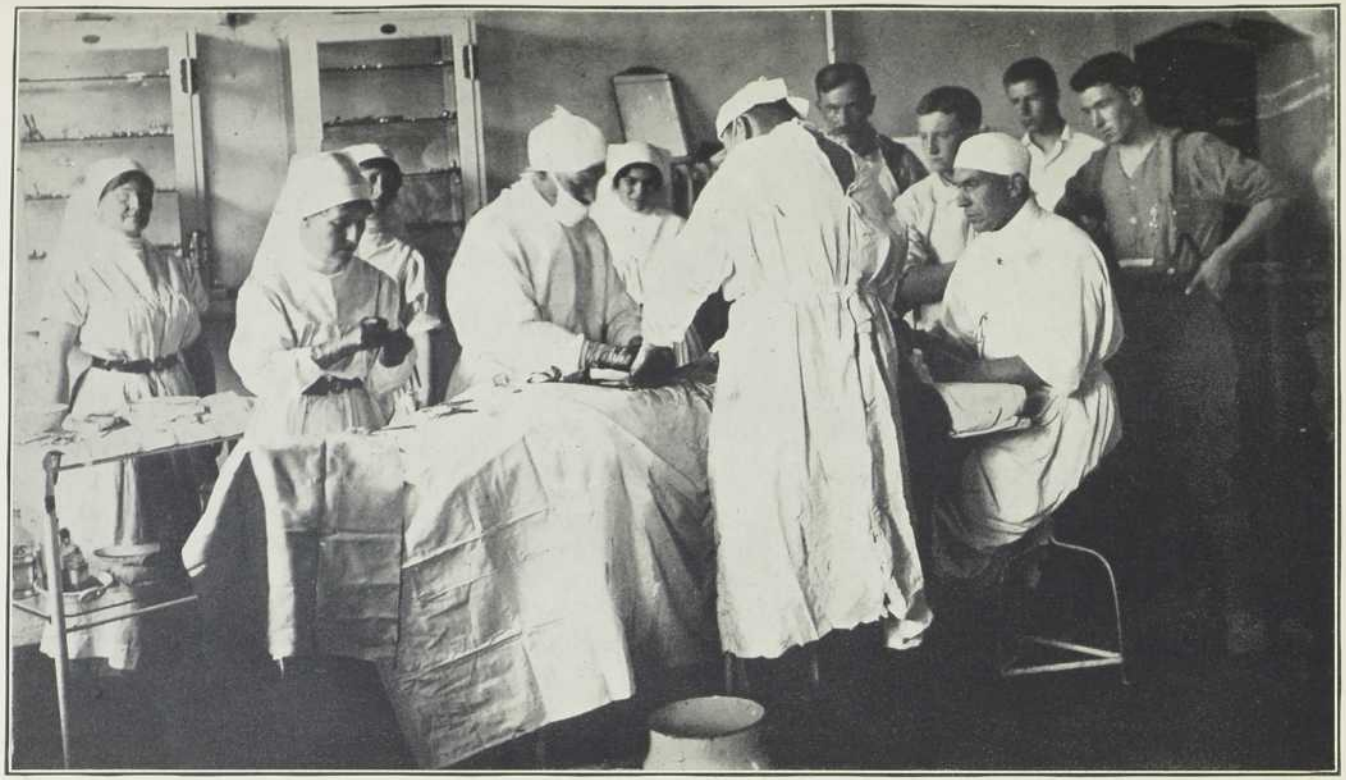
Between July 1st and 15th No. 3 Canadian General Hospital (McGill) received more than 4,600 patients, and the grand total of operations on the Hospital books rose to over 2,300. Rapid evacuations continued, however, with the result that by the night of July 16th, all but 700 patients had been shipped to England.

In a paper presented at this time for publication in the *Canadian Medical Association Journal,* Major E. W. Archibald discussed the antiseptics used at No. 3. Two, the hypertonic salt solution of Wright, and the Eusol (Edinburgh University Solution) of Lorraine Smith, which corresponded closely with Dakin's hypochlorite solution, were the most important additions to the stock of previously recognized antiseptic agents. As between the two, Major Archibald found Eusol the more satisfactory.

On July 20th, at 4 p.m., Her Majesty Queen Amelia of Portugal visited the Hospital and displayed deep interest in the unit's work. On the following day the Hon. N. W. Rowell, Leader of the Opposition in the Legislature of the Province of Ontario, inspected the wards, and on the 21st the Hon. Sir George E. Foster and a party of Members of the Dominion Parliament visited the principal departments.

On the day following the visit of the Canadian parliamentarians, the Hospital was inspected by a party representing the Parliament of the Commonwealth of Australia. These gentlemen were interested in all that was shown them and were particularly pleased to meet a number of patients from the Australian Forces engaged in the Battle of the Somme.

Four days after the Australian party's inspection, No. 3 was visited by Dr. Depage, Chief Medical Officer of the Belgian Hospital at La Panne, who was accompanied by Captain Vandeveld, Chief of the Belgian Ambulance Services. These officers were interested in the medical and surgical work of the Hospital, as were Col. A. E. Bradley, Major W. J. Lyster, and Major C. S. Ford,



An Operation of Unusual Interest

Left to right: Nursing Sister C. M. Watling, Nursing Sister Louise McGreer, Nursing Sister Isabel Davies, Major E. W. Archibald, Nursing Sister E. E. Carpenter, Capt. J. W. Hutchinson, Lieut.-Col. J. M. Elder, Pte. W. de M. Scriver, Capt. A. D. Campbell, Pte. H. M. Elder, Pte. W. M. Davidson

of the United States Army, who visited and inspected the unit on July 23rd.

Previous to the visit of the officers from the United States, the Hospital had had a busy day. In the 24 hours of July 21st, 670 patients had been admitted and 469 evacuated, breaking the record established eleven days before. These figures were not equalled on any other day in July, though once or twice the record was approached. On the last day of July the Officer in charge of Surgery entered some interesting comparisons in his diary. In five months at Dannes-Camiers, he noted, the Hospital had received just over 5,000 patients, on whom 513 operations had been performed. In July, 1916, alone, 7,674 patients had been received at Boulogne and 586 had required operation.

In August there occurred an appreciable lessening of the violence which had marked the July fighting at the Somme. In the period from July 28th to September 10th British casualties on the Western Front dropped to an average of less than 18,000 a week, and this decrease was promptly reflected in the total of admissions to all lines of communication and base hospitals.

On August 3rd Sir Frederick Williams-Taylor, of Montreal, visited the Hospital, which was enjoying a period of comparative quiet. Admissions on the 3rd totalled 195 and evacuations 120, nevertheless the Officer in charge of Surgery, remembering July, noted in his diary that all was quiet. Regular convoys of about 150 arrived each day for the next week, that of the 7th including 3 bad cases, shot through the spine, and 2 requiring immediate leg amputation on account of gas gangrene.

The momentary slackening in the work on the surgical wards of No. 3 came as a relief to the nursing staff, who had been on duty for long hours each day. "Some of our nurses," a diarist wrote, "have stayed up for hours at night when they should have been off duty, writing letters for patients who could not write themselves." Many letters from ex-patients to nursing sisters express appreciation for kindness received at No. 3 and admiration for the devotion which the sisters brought to their work.

Sometimes these letters were written by the patient himself, sometimes by a wife, mother, or daughter, grate-

ful for the care which husband, son, or father had received. Occasionally a letter demanded of the sympathetic nursing sister verification of wonders at No. 3. Nursing Sister E. H. M. Powell received such an appeal from a private of the Warwicks, who had confused "pulse" with "temperature." "I was telling the sister here about Mike's temperature being 120°, and she wouldn't believe me. Please write so as to convince her and the other patients in the ward. They all think I'm a liar when I talk about No. 3."

On August 11th more than 1,200 patients showed on the books of the Hospital, over half being medical cases, many of whom were suffering as a result of enemy gas used in the Ypres Salient. While these patients were still in the Hospital, Sir William Peterson, K.C.M.G., Vice-Chancellor and Principal of McGill University, arrived to spend a week inspecting the unit and meeting those who could tell him what had been accomplished.

Through the courtesy of Surgeon-General R. H. S. Sawyer, D.D.M.S., Boulogne Base, Sir William inspected several hospitals in the district, and compared their methods of administration and procedure with those in existence at McGill. Sir William also called upon Surgeon-General Sir Arthur Sloggett and Surgeon-General T. P. Woodhouse, and heard from these officers of the high position which No. 3 held in their professional esteem.

Writing of his overseas experiences in the *University Magazine*, Sir William Peterson stated that, to his great joy, the highest authorities told him that No. 3 Canadian General Hospital was "the best medical unit in France." That Sir William carried away vivid memories, not only of the professional work of the unit, but of the lighter aspect of its life, is shown by his University Lecture of the following year, in which he referred to thoughts born of hearing the McGill yell in France: "The McGill yell is at all times an appealing cry," he declared, "but to hear it, as I heard it, on French soil, gives one to think of the far-reaching influence of a wisely-directed bequest to education. Truly, James McGill builded better than he knew."

On the day following the termination of Sir William Peterson's visit to No. 3 Canadian General Hospital

(McGill), Capt. Shields, Surgical Specialist at No. 8 Stationary Hospital, visited Lieut.-Col. Elder and the surgical staff and asked to see the cases of infected knee-joint, in which he displayed deep interest. Next day Lieut.-Col. Elder and Major Archibald returned the visit and were shown elaborate mechanism which No. 8 had had installed for treating fractures of the thigh.

At 8 a.m. on August 27th, Lieut.-Col. Elder operated upon Private K. O. Hutchison, an original member of the unit, who had developed an inflamed appendix. Many wounded cases required operation on the following day, the Officer in charge of Surgery declaring that it was the busiest day the Operating Room had ever seen. Admissions to the Hospital dropped somewhat in August, but the surgical work showed only a slight decrease, 550 cases being brought to the tables, compared with 586 in July.

Little of outstanding interest marked the final days of August, though on the 30th Colonel Daru, Governor of Boulogne, accompanied by Lieut.-Col. Marin, Chief of the Medical and Sanitary Services of the town, and their respective staffs visited No. 3 and inspected carefully. At the conclusion of his visit, the Governor expressed himself as highly pleased with what he had seen, and the Sanitary Officer complimented Col. Birkett on the cleanliness which the Sanitary Squad of No. 3 maintained in the kitchens, latrines, and grounds of the Hospital.

CHAPTER VIII

THE AUTUMN OF 1916

WITH the advent of September, 1916, work on the surgical wards of No. 3 Canadian General Hospital (McGill) slackened appreciably, though, owing to a proportionate increase in medical cases, the total of admissions continued fairly high. During the first week of the month, 1,368 patients were admitted and 1,169 evacuated. On September 5th the Officer in charge of Surgery had under his care but 150 patients, all others being medical.

Sunday, September 10th, was outstanding as the first day on which no operation was performed in No. 3 Hospital at Boulogne. To mark the event, Lieut.-Col. Elder and the entire staff of the Operating Room attended Divine Service in the city. Previous to this, it had been announced that Capt. L. J. Rhea had been promoted to the rank of major. In the War Diary of the unit Col. Birkett stated that this promotion followed a recommendation in which the outstanding character of Major Rhea's work as Officer in charge of the Pathological Department of No. 3 had been drawn to the attention of those commanding the Medical Services of Canada.

On September 13th Mr. J. Watts, surgeon at the City of London Hospital for Diseases of the Chest, Dr. G. W. Hamilton, of the National Hospital for the Paralysed and Epileptic, London, Dr. W. Smith, of the Hospital for Epilepsy and Paralysis, London, and Dr. W. Kershaw, Gray's Inn Road Hospital, visited No. 3 Hospital to study matters pertaining to their respective spheres of professional endeavour.

In army hospital work no phase presented greater difficulty than certain recognition of malingering. In a medical journal, Capt. C. K. Russel described a case which

he observed at No. 3. The man was admitted with a diagnosis of epilepsy, and later sent to a convalescent camp, whence he returned with a note, saying that he was not convalescent, but had suffered two sharp attacks. Capt. Russel waited patiently and eventually the man went into one of his fits, which the medical officer saw was feigned. He told the man that the game was up, and got the following story:

The man had been 12 months at the front; had had no leave; his brother had been severely wounded; his aged mother had written saying she was praying constantly for his return. He then had had an attack and, realizing the possibilities, had "thrown" others deliberately. He seemed relieved when confession had been made, and no further attacks occurred.

On the day following the visit of the mental and nerve specialists, No. 3 Hospital was visited and inspected by the Right Honourable David Lloyd George, British Secretary of State for War, and by Lord Reading, Lord Chief Justice of England, accompanied by Col. Sir Arthur Lee. After a comprehensive tour of the Hospital, Mr. Lloyd George and Lord Reading signed the Visitors' Book of the unit and congratulated the Commanding Officer on what they had seen.

The morning of September 15, 1916, brought orders to No. 3 Hospital to evacuate to England all cases able to travel. Three hundred and thirty patients were accordingly moved without delay, and 433 followed on September 16th, including a number from a convoy of 184 non-serious surgical cases, admitted the previous night.

Explanation of the urgent evacuation order was provided by the fact that on the 15th the British at the Somme had attacked on the 15,000-yard front from Leuze Wood, west of Combles, to beyond Courcelette. Twelve divisions had taken part in the engagement, including troops from New Zealand and the 2nd and 3rd Divisions of the Canadian Corps.

Two hundred and thirty-six patients, mostly from the new engagement at the Somme, were admitted to No. 3 Hospital on September 16th, and 510 on the following day. Many of these were visited in the wards by the Hon. W. H. Hurst, Prime Minister of the Province of

Ontario, the Hon. R. A. Pyne, Ontario Minister of Education, and Lieut.-Col. H. A. Machin, M.P.P., who arrived to inspect the Hospital on September 18th, and a number remained when Fleet Surgeon F. S. Pleadwell, of the United States Navy, accompanied the D.D.M.S., Boulogne Base, through the wards on September 21st.

On September 25th nine divisions of the British Army, in conjunction with a French attack south of the Peronne-Bapaume Road, drove forward on a front of 15,000 yards between Combles and Courcelette, where the Canadian Corps, with the 1st and 2nd Divisions in line, continued the attack on September 26th. Casualties from this engagement did not reach No. 3 Canadian General Hospital in "crisis expansion" numbers, but 993 were admitted between the 27th and 30th of the month, and 951 were evacuated. On the 30th of the month the Hospital Diary recorded that, in recognition of his long and devoted service in the Medical Branches of the Canadian Militia, Col. Birkett had been awarded the Colonial Auxiliary Forces Officers' Decoration, as from the 15th of July.

October 1, 1916, witnessed sharp fighting at the Somme, with the inevitable flow of wounded to hospitals at the base. Fighting continued throughout the month and into the next, a brilliant action on November 18th resulting in the capture of Desire Trench by the 4th Canadian Division, which soon thereafter moved to the Vimy front and took its place alongside the 1st, 2nd, and 3rd Divisions in the Canadian Corps.

Meanwhile, at No. 3 Hospital, admission, treatment, and evacuation of patients had kept all ranks busy. In a report forwarded on October 7th, Col. Birkett commended the outstanding services rendered by Lieut.-Col. J. M. Elder, Lieut.-Col. John McCrae, Capt. David Law, and Major L. J. Rhea. In the same report the Commanding Officer of No. 3 mentioned the loyal services of Sergeant-Major W. G. Hadley and Sergeant U. J. Gareau.

By mid-October the strain on the surgical staff of No. 3 Hospital had again eased, nevertheless the Department missed the services of Major E. W. Archibald, who proceeded to Canada on October 16th. Major Archibald had served with the unit from its earliest days and had performed work excellent to a high degree. It was with

THE OFFICERS OF THE HOSPITAL, NOVEMBER, 1916

Left to right—Front Row: Capt. A. H. Pirie, Capt. W. T. Ewing, Capt. G. H. A. Stevenson, Lieut.-Col. J. M. Elder, Col. H. S. Birkett, Lieut.-Col. John McCrae, Major L. J. Rhea, Capt. A. J. Martin. *2nd Row:* Hon. Capt. William Barton, Capt. H. C. Dixon, Capt. L. H. McKim, Capt. A. T. Henderson, Capt. G. C. Main, Capt. H. C. Burgess, Capt. F. W. Tidmarsh. *3rd Row:* Capt. F. G. Logie, Capt. H. M. Little, Capt. W. W. Francis, Capt. D. S. Lewis, Capt. C. K. Wallace, Capt. C. F. Walt, Capt. A. D. Campbell. *4th Row:* Capt. G. Shanks, Capt. J. W. Hutchinson, Capt. R. H. Malone, Capt. Rogers, Hon. Capt. David Law, Capt. R. B. Robertson, Capt. J. B. Gallagher, Hon. Capt. H. E. Law, Capt. T. A. Malloch, Hon. Capt. J. N. A. Desjardins

the deepest regret, therefore, that the Commanding Officer and the Officer in charge of Surgery bade him farewell.

Eight days after Major Archibald's departure, No. 3 Hospital received a surprise visit from His Excellency the Duke of Devonshire, G.C.V.O., who had been appointed to succeed H.R.H. the Duke of Connaught as Governor-General of Canada. The Duke of Devonshire visited all departments of the Hospital and promised to bear witness in Canada to the excellence of the work being accomplished.

As October drew to a close, medical work at No. 3 Canadian General assumed heavier and heavier proportions, and the symbol "P.U.O." (fever of unknown origin) more and more frequently appeared as the diagnosis attached to patients arriving from the front. On October 27th Col. Sir William Leishman, Advisor in Pathology, visited the Hospital and discussed the problem of these cases with the officers of the Hospital staff. That the question was serious is shown by the fact that 372 cases appeared on the books of No. 3 on a certain day in October, and the daily number as the month ended averaged about 275.

On November 1st Major J. G. Browne, who had been evacuated to England suffering from para-typhoid fever, was struck off the strength of the Hospital, and Capt. C. F. Walt, of the Canadian Army Dental Corps, was taken on strength to replace Capt. G. H. A. Stevenson, C.A.D.C., who had been granted special leave to Canada. Two days later Staff-Sergt. F. White was appointed Sergeant-Major, vice Sergeant-Major W. G. Hadley, who had been evacuated sick to England.

To mark All Saints' Day, November 1st, the British authorities combined with the French citizens of Boulogne in impressive ceremonial in the British Military Cemetery. Less public, but hardly less impressive, was a funeral, described by Hon. Capt. G. A. Kuhring, Church of England Chaplain at No. 3 Canadian Stationary Hospital: "I officiated at a funeral at No. 3 Canadian General Hospital (McGill) at 6 o'clock this morning. I found Col. Birkett ready to attend. The lad had died in his Hospital and, but for the Colonel, the father would have been the

only mourner. The Colonel had set aside his rest and work to share the father's sorrow."

Throughout the first week in November work at the Hospital continued without unusual incident. On the 10th, however, a guard of honour was paraded to receive H.R.H. the Duke of Connaught, whose term as Governor-General of Canada had expired, permitting him to follow the desire of his heart and visit all branches of the Army in the Field. On arrival at No. 3, His Royal Highness, accompanied by Lieut.-Col. Stanton and Major Duff of his staff, and by Surgeon-General Sir Arthur Sloggett, D.G.M.S., British Armies in France, inspected the guard of honour, after which the officers of the unit were presented to him.

Following this ceremony, the Duke inspected all departments of the Hospital, including the Operating and X-ray Rooms, where the mechanical fixtures aroused much interest. In the wards the Duke spoke to many of the patients and afterwards referred to the friendly comment about the Hospital which had reached him. He spoke of having reviewed the unit on the Campus of McGill University and expressed satisfaction at having seen the Hospital at work. During His Royal Highness's inspection, Sir Arthur Sloggett remarked that, without question, he was seeing "one of the finest medical units in France."

On the day after the Duke of Connaught's visit to the McGill Hospital, Lieut.-Col. John McCrae, Officer in charge of Medicine, suffered a severe attack of pleurisy and was ordered to No. 14 British General Hospital at Wimereux, by Sir Bertrand Dawson, who had been called to attend him. No. 14 British General was an officers' hospital with accommodation which No. 3 Canadian General could not provide. At No. 3, an officer, or nursing sister, might remain in quarters during a minor illness, but when serious sickness developed the patient was invariably transferred, usually to No. 14.

Sir Bertrand Dawson always took an interest in No. 3 Hospital and its personnel. Years later, in 1925, when he had become Lord Dawson of Penn, G.C.V.O., McGill University acknowledged indebtedness for much courtesy overseas by bestowing upon him the honorary degree of

LL.D. In November, 1925, the *British Medical Journal* printed the speech in which Lord Dawson replied. "The Hospital," he stated, referring to No. 3, "established a reputation unsurpassed for professional achievement, organization, and public spirit." Continuing, Lord Dawson said that Boulogne had lain in his zone as Consulting Physician, and that he had never visited the McGill unit without being inspired and encouraged by the devotion and enthusiasm of the personnel. Much of the success of the Hospital's work he attributed to the splendid leadership it enjoyed.

On November 13, 1916, in the Battle of the Ancre, a brilliant local operation, Sir Douglas Haig captured over 7,000 prisoners and brought to an end the Battles of the Somme, 1916, in which the British had suffered approximately 463,000 casualties. The Ancre battle sent many wounded to No. 3 Hospital, including one man with gas gangrene in his shattered fingers. This soldier had been captured by the Germans and held for four days, but had been released on the 13th when his comrades drove forward. He reached No. 3 Hospital on the 14th, and on the 15th Lieut.-Col. Elder drained the hand, set the broken bones, and repaired, so far as possible, the serious injuries he had sustained.

For a day or two following the Ancre battle, admissions to No. 3 Canadian General Hospital rose to over 200 a day, then the figures dropped again to "normal," which meant at this time, anywhere from 500 to 1,000 a week. In the week subsequent to the days in which the Ancre casualties were received, the Hospital books show that admissions totalled 874.

On November 21st Lieut.-Col. J. M. Elder, Officer in charge of Surgery, received orders to report to Argyle House, Regent Street, London, to sit on a board of enquiry investigating the organization and administration of the Canadian Army Medical Corps in England. The Corps had been torn by internal strife, which, for a time, threatened to impair its record of splendid service to the sick and wounded. As a result of the report which Lieut.-Col. Elder and the other members of the board presented, the situation regarding the work of the C.A.M.C. in England was improved appreciably.

On the day that Lieut.-Col. Elder received orders to report in London, Lieut. P. W. Leathart, of the Royal Army Medical Corps, who had been attached to No. 3 Canadian General to carry out specialist work in diseases and injuries of the ears, nose, and throat, was ordered to report for duty to the Highland Casualty Clearing Station. The work of this officer had given entire satisfaction to the Commanding Officer of No. 3, who, from his own experience, was singularly qualified to judge of such a specialist's ability.

Previous to Lieut. Leathart's departure, Col. Sir William Leishman again visited No. 3 to discuss the fever of unknown origin (P.U.O.) situation. For three hours he and the officers of No. 3 consulted regarding all phases of these cases, both parties to the conference giving and receiving information of value. After lunching at the Hospital, Sir William proceeded to study a number of cases in the wards.

Coincident with the increase of medical cases in the wards of the Hospital, autumn saw an increase in the number of those on the staff who fell ill. On November 12th Nursing Sister N. J. Enright was admitted to the Princess Louise Convalescent Home, Hardelot, whither, on the 23rd of the month, Nursing Sister M. E. Engelke followed. Nursing Sister H. N. Smith was admitted to No. 14 General Hospital on November 29th, four days after news arrived that Capt. C. K. Wallace, who was on leave in England, had been admitted to No. 3 London General Hospital with para-typhoid.

Lieut.-Col. John McCrae had recovered from the attack of pleurisy by this time and had been granted three weeks' sick leave to Cap Martin. Major L. J. Rhea and Capt. J. A. MacMillan had also recovered from illnesses and had returned to duty with the Hospital, which had missed both during the period of their enforced absence. Amongst the other ranks of the Hospital severe colds were numerous throughout the month, 23 being serious enough to compel the man to seek admission to the wards. Notwithstanding the resultant shortage of staff, the Commanding Officer, in reporting on the month, stated that the work of the unit had been carried out in a highly creditable manner.

Col. H. S. Birkett, C.B.
The Commanding Officer in his office at No. 3 Hospital, Boulogne

The principal problem causing Col. Birkett uneasiness at the time was not the working of his staff, but the diagnosis and treatment of the P.U.O. cases. On November 3rd, 382 of these showed on the books, and the number remained high all month. "P.U.O." (pyrexia of unknown origin) was a diagnosis which a casualty clearing station, or advanced dressing station, might tender with complete satisfaction. "Unknown origin," however, presented a challenge, which a general hospital could not ignore. Accordingly, the medical and pathological staffs of No. 3 moved to attack the enemy which "P.U.O." represented.

Early in December, 1916, Nursing Sisters H. T. Drake, E. M. Austin, and L. J. Brand, all original members of the unit, were admitted sick to No. 14 General Hospital and from there evacuated eventually to England. Somewhat later, Nursing Sisters M. A. Cooper and D. E. Bradley, also "originals," and Nursing Sister G. S. Usborne followed. Prior to this, Capt. H. M. Little, an original officer, had been struck off the strength to permit return to Canada. As Acting Paymaster of the unit, and for the five months previous to his departure as Company Officer, he had rendered valuable and faithful service. Col. Birkett recorded in the War Diary of the Hospital his appreciation of the support this officer had given and his regret in accepting his resignation.

On December 14th Capt. T. A. Malloch was granted three weeks' sick leave to England by order of the President of the Standing Medical Board, Boulogne, and on the 15th Lieut.-Col. John McCrae returned to duty from sick leave at Cap Martin. Two days later, three officers of the unit, Capts. W. T. Ewing, F. W. Tidmarsh, and A. D. Campbell, proceeded from the Hospital to duty with the 1st Canadian Division. This left No. 3 Hospital establishment 9 officers short, despite the fact that at no time during the remainder of the month did the number of patients fall below 1,100.

On Christmas Day just 1,100 were in the Hospital. Most of these were medical cases and the majority were able to enjoy the good dinner provided in the decorated wards. In the evening officers and nursing sisters of the unit dined together in the Red Cross Hut and danced afterwards. Six Portuguese officers visited the Hospital

during the day and were much impressed at the dinner given to the patients. Perhaps the impression created on this occasion explains the popularity of No. 3 with the Portuguese authorities later on. That story, however, must await its own time and place.

As December drew to a close, the P.U.O. situation showed a measure of improvement, due to the work of the Medical Staff of the Hospital, in conjunction with Surgeon-General T. P. Woodhouse and Col. Sir William Leishman. Lieut.-Col. John McCrae, Officer in charge of Medicine, was no novice where fever was concerned and gave fearless expression to his opinion of what should be done. As a result, certain decisions were reached.

In the first place, all cases which in the opinion of the Officer in charge of Medicine belonged clinically to the Enteric Group were evacuated immediately to No. 14 Stationary Hospital. If the symptoms were not marked, one agglutination test was made and the patient then evacuated to No. 14, the laboratory work at No. 3 being recognized by No. 14. Patients with a moderate degree of temperature were segregated and three stool examinations made. When these proved negative, patients were evacuated to a convalescent depot, or to base details.

December 31st was a quiet day in the Hospital, activity consisting chiefly of the admission and discharge of some two dozen local sick. The day was quiet, but the year had been marked by heavy work, as is shown by the table of statistics below:

STATISTICS FOR 1916

Number of sick patients admitted	18,943
Number of wounded patients admitted	17,198
Total patients admitted	36,141
Number of deaths	151
Percentage of deaths	0.41
Number of Operations	3,704

CHAPTER IX

THE BEGINNING OF A NEW YEAR

IN the Honours List published on New Year's Day, 1917, His Majesty the King appointed Col. H. S. Birkett to the Most Honourable Order of the Bath. The appointment was to the Third Class, Military Division, of the Order and entitled the Commanding Officer of No. 3 Hospital to the suffix, C.B. News of this honour reached Boulogne on January 2nd and was enthusiastically received at No. 3, all ranks joining in congratulations on an appointment which recognized the outstanding service Col. Birkett had rendered in raising the Empire's first university hospital unit and commanding it in France.

Two days after the honour had been announced, Lieut.-General H. M. Lawson, from the War Office, arrived at No. 3 with Surgeon-General R. H. S. Sawyer, D.D.M.S., Boulogne Base, to enquire whether women could be used in the Hospital to free men for service at the front. After a careful check, Col. Birkett decided that about 50 cooks, ward-workers, and cleaners could be replaced, if women to do the work were secured and properly trained.

Throughout January, 1917, changes in the personnel of No. 3 Hospital occurred even more frequently than had been usual. Nursing Sisters M. J. Fortescue, M. F. Bliss, and M. J. Ross took ill and were admitted to hospital, and Capt. H. B. Rogers was granted sick leave to England. Capt. G. Shanks was struck off the strength on proceeding to take out a commission in the Medical Services of India, and Capt. H. C. Burgess left to assume duties at No. 3 Canadian Stationary Hospital. Capt. Shanks had accomplished valuable laboratory work with the unit, and Capt. Burgess had served from the time of the Hospital's formation in Montreal. Col. Birkett recorded in the War

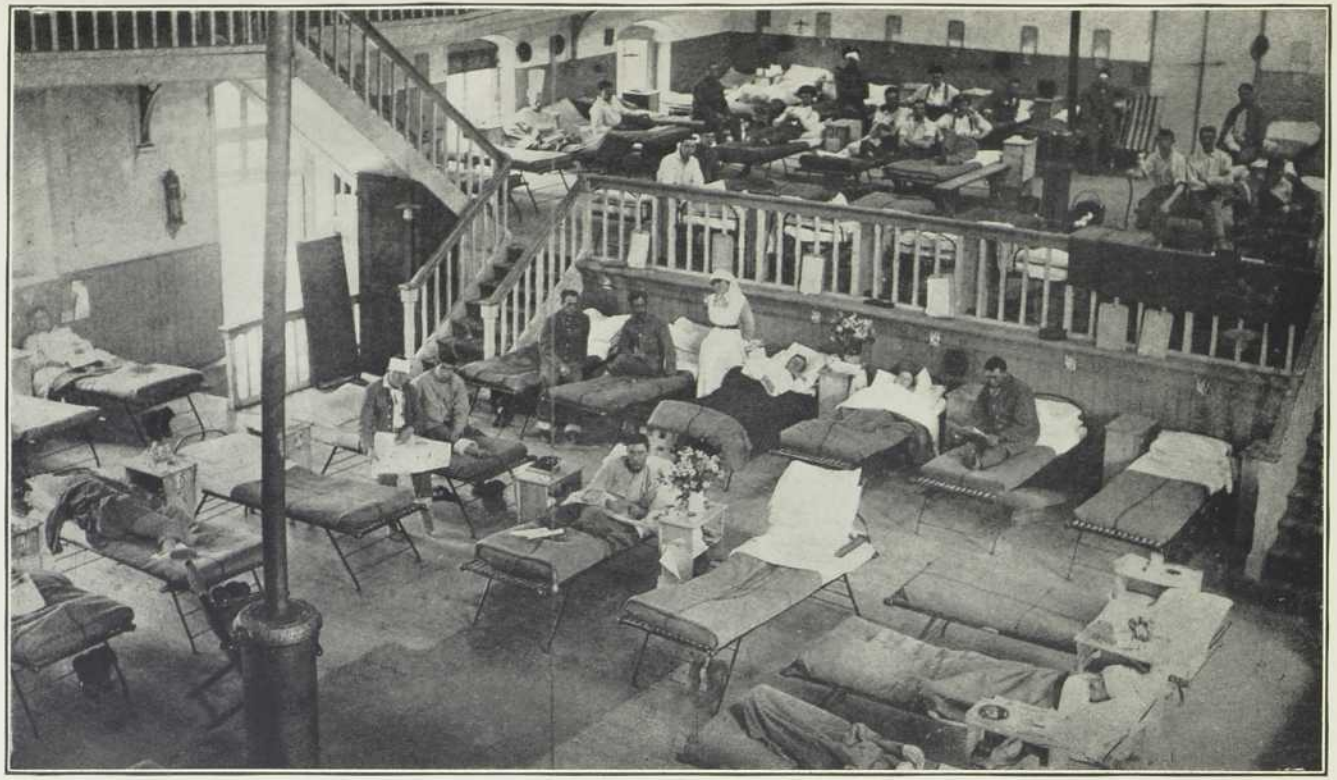
Diary that Capt. Burgess's ward had always been splendidly managed and that his surgical work had been excellent.

In offset to the losses through illness and transfer in January, the staff of No. 3 Hospital was strengthened by return from sick leave of Capt. T. A. Malloch, Capt. C. K. Wallace, and Major J. G. Browne. Nursing Sisters E. H. M. Powell and H. T. Meiklejohn also reported for duty, and Nursing Sister Ross returned from the Princess Louise Convalescent Home. Six officers, Captains T. A. Briggs, D. R. Dunlop, J. F. L. Fuller, J. K. Mossman, A. A. Parker, and A. Blais, joined the unit, but five of these officers and Capt. F. G. Logie were later transferred to the 2nd, 3rd, and 4th Canadian Divisions, leaving the establishment of officers still under strength.

On January 11th, at dawn, the 91st British Infantry Brigade attacked on the Ancre front, where quiet had prevailed for some weeks. A number of wounded from this engagement reached No. 3 Hospital, but the main flow was directed elsewhere, as the mouth of Boulogne harbour was blocked by a sunken vessel, and direct evacuation from the Boulogne area thereby rendered impossible.

Two days after renewal of hostilities on the Ancre, No. 3 Hospital received a convoy of 102 medical cases, one of whom was reported to have been in contact with cerebro-spinal meningitis. Cultures on a special medium were made from the nose, pharynx, and throat of the contact case, but were negative. On the same day a member of the Hospital staff developed nasal diphtheria, with pharyngeal involvement. The source of infection could not be discovered, but all contacts were isolated and measures taken to prevent the disease from spreading. Five days later a case of cerebro-spinal meningitis arrived at the Hospital, and contacts were examined. No carriers were found, nor did any of the contacts show symptoms suggesting that the disease had spread.

On January 18th the mouth of Boulogne harbour was cleared of its sunken obstruction, and the flow of patients from No. 3 Hospital to England was resumed. Orders on this date announced that Col. H. S. Birkett, C.B., had been mentioned in despatches, as had Matron K. O. MacLatchy, R.R.C., and Nursing Sisters S. M. Hoerner,



Surgical Ward D. Occupying a Section of the Buildings of Marlborough Jesuit College, Boulogne

Mary Bliss, Victoria Eastwood, Isabel Davies, and Lilian Pidgeon, all original members of the unit. Private A. J. Quinn had received a similar honour.

Cold weather marked the month of January, 1917, in France. On the 21st a diarist mentioned that: "It is still very cold, and ice is bursting pails in all directions. Water taps are frozen in many huts, and more blankets have been issued to the patients." Writing four days later, Lieut.-Col. John McCrae, Officer in charge of Medicine, said: "The cruel cold is still holding. Everyone is suffering, and the men in bed in the wards cannot keep warm. For my own part, I do not think I have ever been more uncomfortable. Everything is so cold that it hurts to pick it up. To go to bed is a nightmare and to get up a worse one."

As a result of the cold, chilblains affected many of the Hospital staff, and sore throats were numerous. Most of the latter soon yielded to treatment, but Lieut.-Col. Elder developed a quinsy, which confined him to bed for days. Fire protection during this period was complicated by the freezing of many pipes, but piquets were organized from the "convoy group" of each day, and a test fire outside Ward H was "extinguished" 2½ minutes after a bugle sounded the alarm.

Sanitary arrangements were also affected by the cold, the sediment tanks, across the Calais Road, requiring frequent repairs. More serious, however, was the difficulty of providing warmth for the patients. In the wings of the old Jesuit College, built of stone, a measure of heat was preserved, but in the hutments, with few stoves, and with the necessity for strict economy in the use of coal, the patients suffered, despite efforts to make them comfortable.

While the cold was at its worst, No. 3 Hospital was visited and inspected by Lieut.-Col. Y. Inowy, of the Japanese Army, and Major S. Golo, of the Imperial Japanese Army Medical Corps. These officers called on the same day as Surgeon-General T. P. Woodhouse and Surgeon-General R. H. S. Sawyer, who came to ascertain whether any wounded in No. 3 required Carrel's type of irrigation.

On January 30th tetanus developed in a patient with a

gunshot wound in the left shoulder and upper thorax. Referring to the treatment of tetanus in his official *Medical Services,* Sir Andrew Macphail says: Surgeons of No. 3 Canadian General Hospital "observed from their experience that 1,500 units"—three times what had previously been given—"was the proper average preventive dose of serum." "The Commandant of this hospital also observed that patients might be saved after definite signs of tetanus had disclosed themselves, as in cases of cephalic involvement and primary spasms of muscle. But it was necessary to administer the serum in doses that seemed incredibly large. Several hundred thousand units must be injected into veins, into the thorax, into the sheath of the spinal cord, and under the skin."

February 1, 1917, was an uneventful day at No. 3 Hospital, but on the 2nd Lieut.-Col. Elder received orders to serve on a special board enquiring into the conduct and management of Canadian hospitals in Paris. Three days later Nursing Sisters M. L. MacDermot and C. Geen left No. 3 to proceed to No. 2 Canadian Casualty Clearing Station. Both had worked well at No. 3, and the Commanding Officer recorded regret that duty had called them away.

Meanwhile, on the Ancre battle front, an attack had been launched by the 189th Brigade, 63rd Royal Naval Division. A rise in admissions at No. 3 Hospital suggests that wounded from this engagement passed to England by way of Boulogne, but the point is not definitely established. In the convoys from the front, in addition to wounded, came another batch of Trench Feet cases, caused probably by the wet and cold prevailing in the trenches.

Admissions from the front were not abnormally heavy in January, but the number of patients in the Hospital rose by February 8th to 1,401, though the winter scale of 1,273 beds was presumably still in force. To meet the overflow, Col. Birkett ordered wards opened and stretchers placed on the floor, wherever the comfort of the patients permitted.

Between the 1st and 15th of February a half-dozen officer reinforcements were taken on the strength of No. 3 Hospital and struck off again when the officers were

ordered to the front. In reporting on reinforcements, Col. Birkett observed that the situation was far from satisfactory. Officers were sent to No. 3, but remained at most a week and were then ordered up the line. This inflicted unnecessary hardship on No. 3, as each new officer required instruction, which, in the circumstances, was wasted. Col. Birkett suggested that a depot for officers proceeding up the line should be established and that the practice of attaching them to No. 3 should cease. Reinforcements of a more permanent nature were what the establishment of No. 3 needed. Unfortunately, Col. Birkett's well-considered recommendation could not be given effect.

On February 12th admissions to No. 3 Hospital rose to 269, some of the wounded coming from the Ancre front, where the 11th Battalion of the Border Regiment, the 2nd Battalion of the King's Own Yorkshire Light Infantry, and a company of the 16th Battalion, Northumberland Fusiliers, all of the 97th Brigade, 32nd British Division, had attacked and captured a German trench, known as Ten Tree Alley.

Just previous to arrival of the casualties from the Ancre, the cold weather which had prevailed for weeks yielded to warm sunshine, which all at No. 3 enthusiastically welcomed. Despite the change, effects of the cold were still manifest, and two of the staff, Nursing Sisters E. C. Bolster and H. N. Smith, came down with illness which necessitated hospital treatment. Some days later Nursing Sister L. Pidgeon was forced to accept three weeks' sick leave, and on the 20th Nursing Sister M. F. S. Park, whose work the Commanding Officer found worthy of the highest commendation, was struck off strength on proceeding to England.

Previous to the departure of Nursing Sister Park, No. 3 Canadian General Hospital was visited and inspected by Lieut.-Col. G. E. Armstrong, Chief Surgeon of the Royal Victoria Hospital, Montreal, who remained over-night as the guest of the Commanding Officer and studied with deep interest the work of Lieut.-Col. Elder and the surgeons under his command.

Early in the morning on February 17th, troops of the 2nd, 18th, and 63rd British Divisions attacked on a 2½-

mile front astride the Ancre. Though not entirely a successful operation, few casualties from the engagement seem to have reached No. 3 Hospital. Admissions on the days following the fighting showed no sharp rise, and the total of patients remained constant at about 1,200.

Towards the end of the month renewal of activity at the front was reflected by an increase of surgical patients. Between the 24th and 28th, 777 cases were admitted, a single convoy on the night of the 27th including 4 privates with broken backs, and many with severe wounds. Fortunately, at this time, the surgical staff of No. 3 was strengthened by the reposting from England of Captains H. M. Little and L. L. Reford, who had sailed with the Hospital from Canada and served previously in France. In view of the increasing surgical activity, these officers were doubly welcome.

II

At the end of February, Lieut.-Col. J. M. Elder presented to Col. Birkett a report on the surgery effected under his command. Regarding wounds of the lung, he stated that such cases seldom reached No. 3 Hospital earlier than five days after the injury had been inflicted. Bullet wounds, he found, were seldom complicated. Shell wounds, on the other hand, were frequently complicated.

In wounds of the lung, Lieut.-Col. Elder stated, the rapidity with which blood was spat up depended on whether the upper or lower part of the lung was injured. If the upper part were affected, haemorrhage was often prompt. If the lower part proved the scene of injury, haemorrhage was usually much longer delayed.

Fever, the Officer in charge of Surgery reported, was nearly always present in the early stages of a lung wound, but often disappeared by the 6th or 7th day. When it continued, the procedure adopted at No. 3 was to draw off blood by aspiration on about the 10th day. Sometimes the blood so drawn from the lung was replaced by oxygen, the outflow of blood and the inflow of oxygen being effected through separate needles at the same time. An uncomplicated case of this type, the surgeons at No. 3 found, was fit to travel about the 13th or 14th day, though

the possibility of vomiting from sea-sickness necessitated care, as the healing of lung wounds was comparatively slow.

In cases of shell wounds of the lung, or in cases where the foreign body remained in the chest cavity, no set method of treatment could be laid down. In such cases the x-ray and the fluoroscopic screens were used to the utmost, each case requiring careful study and procedure being governed by factors differing with every patient.

Accompanying Lieut.-Col. Elder's report on the surgery at No. 3 Hospital, was a report by Lieut.-Col. John McCrae, Officer in charge of Medicine. Lieut.-Col. McCrae commented on the prevalence of infections of the respiratory tract during the previous months, but stated that the absence of lobar pneumonia had been remarkable. Many severe cases of bronchitis, tracheitis, and laryngitis had been received, and to distinguish some of these from broncho-pneumonia had presented a problem.

The presence of pneumococcus bacilli did not solve the difficulty, and the diagnosis had to be made on other grounds. Most frequently, Lieut.-Col. McCrae stated, a diagnosis of broncho-pneumonia was made when fever continued high and when blood streaks, blood, or rose colour appeared in the sputum.

An unusual feature of such cases, observed by the medical officers of No. 3 Hospital, was a tendency of the disease to extend from one part of the lung to another at different times in the course of the malady, with the result that patients were sometimes ill for weeks. The chart when this happened, Lieut.-Col. McCrae remarked, so strikingly resembled a typhoid, or para-typhoid, chart, that agglutination tests for typhoid and para-typhoid could not conscientiously be avoided, though negative results were reported almost every time.

In concluding his remarks on the cases of disease of the respiratory tract, Lieut.-Col. McCrae observed that recovery of many patients seemed slower than usual. Explanation, in his opinion, was to be found in the absence of clear sunlight, little of which had blessed Northern France since the summer of the previous year.

After discussing diseases of the respiratory tract, Lieut.-Col. McCrae's report dealt with the difficulties

presented by the P.U.O. (fever of unknown origin) cases. As previously mentioned, a large number of these had reached No. 3 and had provided material for continued study. Such study appealed to the scientific mind of the Officer in charge of Medicine and to the Pathological Officers, Major L. J. Rhea and Capt. R. H. Malone.

As the whole British Army in the Field had been inoculated against typhoid, Lieut.-Col. McCrae pointed out that a physician was no longer able to determine on clinical grounds whether a case of continued fever was typhoid, para-typhoid, or some other. Signs which he had been accustomed to find in the past, such as an enlarged palpable spleen, or rose spots, were frequently absent. A dirty tongue implied gastro-intestinal disturbance, but did not identify the cause. Furthermore, the old-fashioned Widal test, once of the greatest value, was useless, as, owing to the patients having been inoculated, it was positive in all cases.

Diagnosis of typhoid, para-typhoid, and other fevers, therefore, became possible only after complicated tests in the Hospital laboratory. Regarding the charts of fever patients, Lieut.-Col. McCrae observed that the typical typhoid temperature sheet was no longer to be seen. Regular, more or less continued fever, or even an acutely relapsing fever, appeared frequently instead.

Patients in the P.U.O. group suffered often from myalgic pains, pain in the back, pain in the thighs, and pain in the shin bones, all these symptoms being common to a number of diseases, including typhoid, para-typhoid, and the so-called trench fever. By means of laboratory tests during the winter, about 68% of the P.U.O. cases admitted to No. 3 Hospital were definitely shown to be suffering from typhoid, or para-typhoid.

Following Lieut.-Col. McCrae's report in the War Diary of No. 3 Canadian General Hospital (McGill), is a document by the Commanding Officer summarizing developments in the X-ray Department of the unit, more particularly those dealing with the localization of foreign bodies in wounds. As Col. Birkett observed, much of the operating in a war hospital involved removal of such foreign bodies from patients.

The less traumatism the patient must endure the

Lieut.-Col. John McCrae

The horse "Bonfire" and the dog "Bonneau" were Lieut.-Col. McCrae's constant companions in France

better, and to reduce this to a minimum it was essential for the operator to know the position of the bullet, or shrapnel, he sought, before starting his work. For use where the dimensions of the foreign body were known, that is when the body was a rifle bullet, or shrapnel ball, Capt. A. H. Pirie had devised an ingenious scale, based upon the fact that the x-ray shadow of the foreign body increased in size as the distance between the body and the x-ray plate was increased.

In localizing a foreign body of known dimensions, therefore, all that was necessary was to place the plate in contact with the skin and on the resulting skiagram to measure the foreign body and compare the result with Capt. Pirie's scale. The depth of the foreign body below the skin was at once indicated, and its exact position could be ascertained by reference to a cross-section atlas. Where the measurements of the foreign body were unknown, as in jagged pieces of shrapnel, the McKenzie-Davidson method of triangulation from a mark placed upon the skin had been used with good results.

If the localization tests mentioned above suggested that the foreign body was in the thorax, or the abdomen, a stereoscopic view was taken and examined in an adjustable apparatus brought with the unit from Canada. In most cases, this had determined the position of the shrapnel, or bullet, beyond further doubt.

Continuing his report on the localization and removal of foreign bodies at No. 3 Hospital, Col. Birkett stated that in the Operating Room a large electro-magnet, manufactured by Bergonie, of Paris, had proved of the greatest value. By its use, the discovery of the position of all electro-magnetic substances was simplified. German bullets were electro-magnetic, and even when these were so deeply situated that their vibration could not be distinguished by the hand, it could be heard, like a steamboat whistle, when a stethoscope was placed on the skin opposite the magnet.

When the foreign body was non-magnetic, or when it was buried in bone and unable to vibrate, a telephone probe had been employed with marked success. In the cases of foreign bodies lodged in joints, the operation for

removal had frequently been effected under the fluoroscopic screen, which enabled the operator to reach his object with the least possible delay.

III

March, 1917, brought no solution to the difficulty presented at No. 3 Hospital by the arrival and quick departure for the front of officers from England. On the 4th of the month Lieut.-Col. F. W. E. Wilson, Lieut.-Col. Harwood, and Major A. W. McPherson reported for temporary duty, and on the 5th they proceeded to the 4th Canadian Division. Establishment of a reinforcing depot, such as Col. Birkett had suggested, would have eliminated the appreciable burden which arrival and quick departures of this nature forced on the clerical staffs of all hospitals at the base, but for some reason this proved impossible.

During the first week in March a number of cases of broncho-pneumonia died at No. 3 Hospital, and four cases of infectious disease were diagnosed, two of German measles, one of scarlet fever, and one of cerebro-spinal meningitis. All these, in accordance with the regulations prevailing, were transferred to No. 14 Stationary Hospital.

On March 7th erection of tents to accommodate 300 overflow patients was begun, in anticipation of increased activity on the battle fronts with the coming of spring. On the same date the Commanding Officer filed a report covering the activities of the previous three months. In it he mentioned that Lieut.-Col. Elder, Lieut.-Col. McCrae, Sergt.-Major F. White, and Staff-Sergeant B. A. Fauvel had, each in his respective sphere, rendered services that were outstanding.

On the day following the filing of this report, No. 3 Hospital was visited and inspected by the Right Honourable Sir Robert Borden, P.C., G.C.M.G., Prime Minister of Canada, accompanied by the Hon. Robert Rogers, Minister of Public Works, and the Hon. J. D. Hazen, Minister of Marine and Fisheries. These gentlemen, following a tour of the Hospital, took afternoon tea with the nursing sisters and later dined in the Officers' Mess.

Some days after the visit of Sir Robert Borden and his colleagues, Professor H. H. Turner, F.R.S., of Oxford

University, arrived to lecture in the Y.M.C.A. Hut on "The Stars as Guides." A large number of patients and several officers attended this entertainment, which was announced in Orders, alongside a statement that, for men of the Jewish faith, a service would be held in the Synagogue, 63 Rue Charles Butor, Boulogne, at 3.30 p.m. on March 17th.

On March 21st Lieut.-Col. E. H. Nielsen, of Denmark, and Lieut.-Col. G. Chenevix-Trench visited No. 3 Canadian General Hospital. At the time quiet prevailed, though preparations to handle 2,000 patients at short notice had just been completed. Fifteen hundred and seventeen fully-equipped beds were in commission, 162 emergency stretchers were available, and 321 field-service beds and palliasses had been arranged.

Some days after the Danish officers visited No. 3, Capt. J. W. Page, Inspector of Army Catering, arrived to advise on the saving of refuse. Capt. Page studied the kitchens of No. 3 and commended the cleanliness maintained. He then pointed out several methods of saving refuse, the conversion of which would prove of value to the Ministry of Munitions.

At this time, waste of material and of man-power was receiving earnest attention. Commenting on a phase of wasted man-power, Lieut.-Col. Elder reported to the Commanding Officer that amongst the local sick admitted in March to No. 3 were many labour battalion troops suffering from severely infected vaccination marks. The men had been vaccinated in England and sent to France before the vaccination had reached its height. As a result of heavy work with the newly-vaccinated arms and of negligence in caring for the scars, infection had occurred, the arms becoming inflamed and swollen, with involvement of the axillary glands sufficient to make the men seriously ill. A week or more was required to cure these cases, and Lieut.-Col. Elder suggested that the attention of authorities in England be called to the resulting loss of valuable time.

A summary of Lieut.-Col. Elder's report was attached to the War Diary of No. 3 Hospital for March and duly forwarded to the proper authorities. In the same volume of the Diary, the Commanding Officer of No. 3 filed a

summary of his own work as Consultant Specialist to the Boulogne Area in diseases and injuries of the nose, ears, and throat. For more than a year, he had given an average of four consultations a day to officers, nursing sisters, and other ranks, who stood in need. In cases where the patients had subsequently to appear before the Standing Medical Board of the district, Col. Birkett's diagnoses and recommendations had invariably been accepted as final.

So ends the story of the first quarter of the year 1917. To the Hospital in this period there had been admitted 8,166 patients, of whom but 46, or a percentage of 0.56, had died. Operations had totalled 549, and post-operative deaths 18. These figures show that during the winter months the Hospital staff had been fairly busy. All realized, however, that with the coming of spring greater activity was to be expected.

CHAPTER X

THE AFTERMATH OF VIMY

APRIL, 1917, opened at No. 3 Canadian General Hospital (McGill) without perceptible change in the routine which had characterized the earlier months of the year. On the 1st of April Capt. C. K. Wallace was struck off the strength, as a result of illness, and on the 2nd Capts. R. B. Robertson and A. T. Henderson were granted sick leave to England. Later in the month Nursing Sister A. S. Morewood, an original member of the unit, was sent to No. 14 British General Hospital with diphtheria, and Nursing Sister E. P. Babbitt was permitted to resign to be married.

On April 4th, fourteen other ranks reported for duty, and on the 5th Major Robert Wilson, Officer in charge of the X-ray Branches of the Medical Services of Canada, visited the Hospital and inspected the X-ray Department, which he found in first-class condition. He was particularly interested in the methods used at No. 3 to localize foreign bodies in wounds. A number of such bodies—shrapnel balls—removed on April 6th, were made of cast-iron, which suggested that in Germany supplies of lead were running low.

Easter, April 8, 1917, was observed at No. 3 Hospital by Divine Services in the Y.M.C.A. Hut. At 6.30 a.m., and at 8 a.m., Major William Barton, Church of England Chaplain, celebrated Holy Communion, and at 9.30 o'clock he conducted Morning Prayer. At 8.30 o'clock in the morning, Mass was celebrated by Capt. N. J. Desjardins, Roman Catholic Chaplain, and at 5.45 p.m. Major A. L. Burch, Presbyterian Chaplain, held a service, which many of the personnel attended.

Referring to the Chaplains who conducted the services at Easter, Col. Birkett recorded in the Unit Diary his appreciation of the character of the men and of the work they performed at No. 3. Each ministered faithfully to the spiritual and temporal needs of those under his charge and gave freely of time and effort in bringing the benefits of religion to those who stood in need.

At No. 3 Hospital, Easter Sunday was marked not only by the observance of Divine Services, but by the arrival of a convoy of 51 patients from the Portuguese Army Corps operating in France. This was the first admission of Portuguese troops to the McGill Hospital, though not the last, as the pages of this book will reveal. The convoy reached No. 3 at midnight and difficulty in obtaining the medical particulars of the cases at once arose, as Col. Birkett's admitting staff spoke no Portuguese and the patients spoke no English. Eventually, a French-speaking patient was used to interpret, and details regarding the ailments of the entire convoy were thus secured.

Previous to admission of the Portuguese, Orders had announced that leave for nursing sisters was cancelled, and this had been correctly interpreted to mean that action on the battle fronts was imminent. Actually, at the moment when the Portuguese reached No. 3, the four divisions of the Canadian Corps, under Lieut.-General Sir Julian Byng, and a number of British corps to the south were straining at the leash, preparatory to advancing in that series of engagements known as the Battles of Arras, 1917, or more familiarly to Canadians as the Battles of Vimy Ridge.

At 5.30 o'clock on the morning of Easter Monday, April 9th, the British advanced astride the River Scarpe, employing prearranged "leap-frogging" tactics for the first time in the war. North of the Scarpe, Sir Julian Byng launched the Canadian Corps, with all four divisions in line, against Vimy Ridge, famous as the scene of bitter fighting by the French in 1915, and believed by the Germans to be impregnable. Early in the morning the Corps swept over the crest of the Ridge, driving the enemy from his entrenchments and capturing many prisoners. South of the Scarpe the Vimy success, outstanding as one

A Convoy of Stretcher Cases Ready for Evacuation to England

of the most brilliant in 1917, was not equalled. Troops in this area encountered stubborn resistance and suffered a sharp check.

On the morning of April 10th the first casualties from the Battles of Arras reached No. 3 Hospital. These came from the Vimy section of the attack and were, for the most part, Canadians, slightly wounded in the opening phase of the engagement. They were mud-soaked, for the battle had been fought amid showers of rain and driving snow, but, as nearly all were "sitting" cases, they were cheerful, and brought thrilling tales of victory.

All night on April 10th, convoys of wounded continued to reach No. 3. Reports of the Canadian Corps' success were confirmed by the newcomers, nevertheless it became clear that Vimy Ridge had been purchased only at a price, reasonable, perhaps, according to the scale of values that prevails in war, but costly when consideration is turned to the aggregate of pain and suffering demanded.

By 8.30 o'clock on the morning of April 11th the Operating Room at No. 3 Hospital was in action, and for fourteen hours thereafter it functioned without a halt. Meantime, many beds which had been filled were kept so by a gale which prevented evacuations to England. Continuous operating marked April 12th, when 256 patients were admitted, and April 13th, when the number rose to 383. On each of these days, 30 or more serious cases were operated upon, the majority for injury from machine gun fire. Commenting on the injuries, the Officer in charge of Surgery at No. 3 wrote that, as a whole he found them more serious than those from the Somme in the summer of the previous year.

On April 14th admissions to No. 3 Hospital totalled 613, and discharges 363. Such activity tested the staff severely, but all ranks met the emergency in a manner that permitted the Commanding Officer to express deep satisfaction. No individual failed, and the 2,000 patients in Hospital when the day closed lacked nothing that care, forethought, or devotion could provide.

In addition to the flow of surgical cases following the Battle of Vimy Ridge, the staff of No. 3 were called upon to admit and treat the usual number of sick. On April 10th a case arrived with symptoms of spinal meningitis.

Fluid was promptly drawn from the spine, and evidence tending to confirm the diagnosis was obtained. Accordingly, an injection of meningococcus serum was given, and the patient was transferred to No. 14 Stationary Hospital. There were no immediate contacts amongst other patients, but, as a precaution, naso-pharyngeal cultures were taken from the nursing sisters and orderlies who had attended the case in the ward.

On the day when the greatest rush of wounded from Vimy occurred, four cases of infectious disease were discovered in the Hospital, three of measles and one of mumps. No evidence of extension by contact could be found, so isolation was effected without further disturbance of routine.

Meanwhile, in preparation for maintenance of the Hospital on a 2,000 bed basis throughout the summer, construction of storage huts for ward utensils and of a large ablution hut had been begun. In addition, a fatigue party, under Capt. Robertson, Royal Engineers, was employed in relining one of the great Horsfall Destructors in which refuse from the Hospital was burned.

On April 16th Col. Birkett announced in Orders the promotion of No. 450, Sergt. F. Miller to the rank of Acting Sergeant-Major (Warrant Officer, Class I). Sergt. Miller, a medical student, had been in charge of the nursing orderlies and had earned promotion by marked efficiency in carrying out the duties assigned to him. Some days before his promotion, good conduct badges, as from various dates, had been awarded to the undermentioned members of the rank and file:

GOOD CONDUCT BADGES—AWARDED APRIL, 1917

L.-Corp.	H. C. Simkins	Private	J. Holman
"	C. C. Stewart	"	G. E. Hume
"	L. J. Martin	"	R. G. Hale
"	B. W. Culyer	"	W. D. Marshall
"	R. Thomson	"	E. W. Macguire
Bugler	H. M. Elder	"	W. H. D. Mitchell
Private	G. F. Adams	"	C. K. Mathewson
"	B. W. Bell	"	H. R. McDonald
"	J. H. Bache	"	R. W. H. Owers

Private H. W. Billington	Private R. J. Offord
" J. H. Bowie	" W. J. Rose
" J. H. Bieler	" J. Robertson
" A. Boxendale	" A. L. Richards
" C. Craigie	" W. G. Stockless
" A. Christy	" H. Simms
" W. A. Duley	" A. J. Spiller
" H. E. Eaton	" W. H. Wilkinson
" G. A. Felix	" J. H. Warner
" W. J. Humphreys	

On April 18th Lieut.-Col. Elder mentioned in his diary that the rush of patients from the Vimy battle had ceased and that the total number in Hospital had dropped from 2,000 to the neighbourhood of 800. Despite decrease in the total of beds occupied, the Operating Room continued to work under pressure, and the Officer in charge of Surgery recorded fear that, owing to the ghastly nature of many of the wounds, the percentage of post-operative mortality would rise. Up to this time, 70% of the casualties reaching the Operating Room in April had come from the Canadian Corps.

Though work at the Hospital eased momentarily after Vimy, Col. Birkett knew that crisis expansion might again be required at any moment, and prepared accordingly. Capts. R. B. Robertson and A. T. Henderson were summoned to duty from convalescent leave in England, and Nursing Sisters D. H. Wilkes, G. B. Mayhew, C. R. Peers, G. P. Foster, J. Haycock, J. Pringle, and N. P. Wilkins were taken on strength from London. Nursing Sister M. E. Engelke was also reposted to the unit from England, and a day later Nursing Sisters I. H. Dawson, E. McKinnon, M. B. McKinnon, C. McKenzie, C. T. Macdonald, L. M. Acheson, and H. Fogarty followed. Unfortunately, the majority of these nursing sisters were soon transferred to other units for permanent duty, leaving No. 3 somewhat understaffed.

On April 20th Capt. H. M. Little left No. 3 Hospital and was replaced by Capt. A. J. Lomas, who reported on the 24th. On the same date Major H. B. Roderick, Major Cook, Major Burton-Fanning, Capt. Tyson, Capt. Michael-Foster, and Capt. Cookson, all of No. 55 British

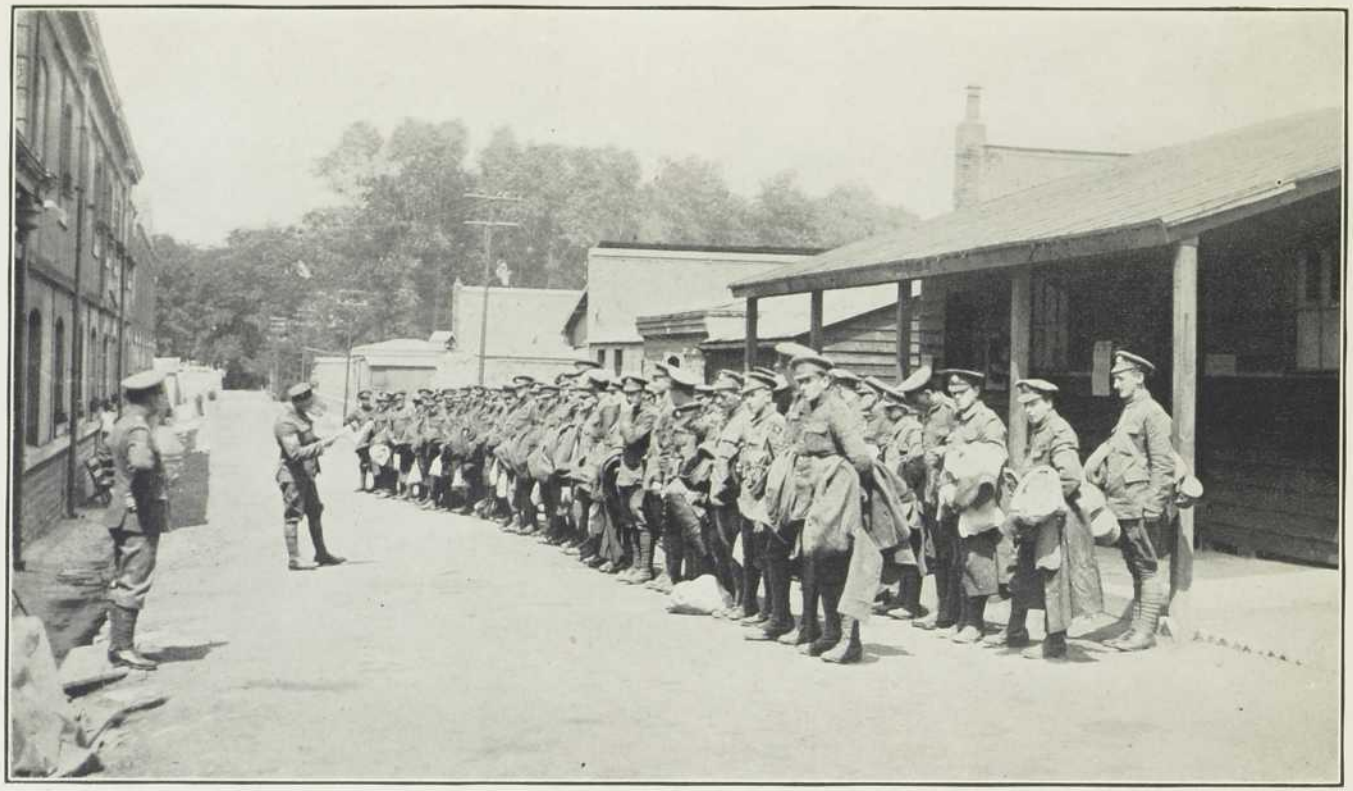
General Hospital, were attached to No. 3 for temporary duty and special instruction. On the day following the arrival of these officers, Capt. N. M. Guiou, C.A.M.C., an original private of the unit who for a month had been serving with No. 3 as an officer, was ordered to report for duty to the Deputy Director of Medical Services, Canadian Corps.

A day or two before Capt. Guiou's departure, Lieut. Tinner and an assistant of the Canadian Auditor General's Department arrived at No. 3 to audit accounts covering money voluntarily subscribed to the Hospital. Audit did not mean that the Dominion had assumed control of such accounts, but merely that the Government desired to know how the money had been spent. Lieut. Tinner expressed entire satisfaction with the administration of the Donation Fund at No. 3, and promised that a copy of his audited report would be forwarded by the Government to McGill University.

That Col. Birkett's preparations for renewed activity were timely was proved on April 23rd when 9 British divisions attacked on a front from Chérisy, on the Sensée, to Gavrelle, north of the Scarpe. Little success attended this effort, the British troops being checked, and then driven back by counter-attacks. Casualties were severe and were reflected at once by a rise in admissions at No. 3, where 324 patients arrived on April 24th, followed by 357 on the 25th.

Amongst those admitted on the two dates many were badly wounded, and several died within a few hours. In the Operating Room the rush of Vimy week was resumed, cases following one another rapidly to the tables. "Never before," wrote the Officer in charge of Surgery, "have I been called upon to do so many amputations at the thigh." All such cases he performed under spinal anaesthesia, with a high percentage of satisfactory results.

As so often happened when a rush of wounded took place, infectious disease appeared simultaneously. On April 26th a case of cerebro-spinal meningitis was diagnosed, and swabs were taken from all direct contacts and from the personnel of the ward, but no evidence of spread of the disease was found. A case of tetanus was also discovered, and promptly treated with huge doses of serum which proved effective.



Patients Parading for Transfer to No. 7 Convalescent Depot

On April 28th Sir Douglas Haig, with 7 divisions in line, attacked on an 8-mile front from Monchy-le-Preux northwards. The 1st and 2nd Canadian Divisions were engaged in this operation, which captured Arleux, but elsewhere suffered a check. To some extent this fighting affected admissions at No. 3 Hospital, which in the three last days of the month totalled 763. For the entire month admissions numbered 7,000, operations 520, post-operative deaths 18, and deaths from all causes 51.

On the last day of April Nursing Sisters M. J. Fortescue and E. J. Stuart left No. 3 Hospital to assume duties at No. 3 Canadian Casualty Clearing Station, which stood in need of reinforcement. Just previously it had been announced in Orders that for devotion to duty Corporals C. L. Roman, A. G. Ross, and M. Benger had been promoted to sergeants; that Lance-Corporals R. Thomson and B. W. Culyer had been made corporals, as had Acting Lance-Corporals R. J. Offord, H. R. McDonald, and J. Macaskill; that Acting Lance-Corporals A. E. Bell and A. T. Wilson had been confirmed in that rank; and that Privates V. M. Merrill and J. H. Bieler had been promoted to lance-corporals.

In the War Diary for April, 1917, Col. Birkett recorded a protest against an order of the Deputy Assistant Director of Transport, Boulogne Base, as a result of which the Hospital's motor ambulances and Ford cars had been commandeered for Government service. As these cars had been maintained by private funds and had been used only for the purposes for which they were originally presented, the action of the D.A.D.T., Boulogne, seemed unwarranted, but was governed, no doubt, by war-time necessity, regarding which explanation was considered inadvisable.

During April, results from the visit to No. 3 Hospital in March of Capt. J. W. Page, Inspector of Army Catering, began to appear. Capt. Page had particularly asked that all fatty refuse be saved, and this had been done, with the result that 1,525 lbs. had been accumulated and sold, an increase of 100% over the figure for the previous month.

Early in May, 1917, spring weather came at last to Boulogne. The howling winds and rain, which had marked the month of April, gave way to warm sunshine,

permitting issues of fuel to cease and fires, other than those in the kitchens and destructors, to be extinguished. The change was welcome at No. 3 and at the front, where, on May 3rd, 14 British divisions, including divisions of the Canadian and Australian Corps, drove forward. At Fresnoy, Canadian troops gained ground, and east of Bullecourt an advance was recorded, but elsewhere a check was suffered, similar to that of April 28th.

On the day following the attack, Capts. W. C. Oram, H. Armstrong, and J. Hay, all of No. 57 British General Hospital, together with 38 other ranks, were attached for temporary duty to the staff of No. 3, and later the Hospital was visited and inspected by Surgeon-General Sir William Babtie, V.C., K.C.M.G., accompanied by Surgeon-General R. H. S. Sawyer, D.D.M.S., Boulogne Base. Still later, Capt. G. B. Burney, Assistant Director-General of the Voluntary Supply Organization, visited the Hospital to discuss the services of his society, which, Col. Birkett assured him, had proved of the utmost value. A few days afterwards, Surgeon-General Woodhouse arrived and expressed interest in the Canadian Red Cross Hut, reserved exclusively for wounds of the chest.

May 6th was marked at No. 3 Hospital by the burial with Mohammedan rites of an Egyptian patient, a member of a labour corps recruited in that country. The day also brought from the Right Honourable Sir Auckland Geddes, K.C.B., British Minister of National Service, and one time Professor of Anatomy at McGill University, a letter, in which he said: "It is splendid to hear what a great reputation the unit has got. I always point out on these occasions that your hospital is the 'McGill Hospital' and that I, too, come from McGill."

On May 11th Majors A. Cook and Burton-Fanning, and Captains H. C. Cookson, W. Tyson, and Michael-Foster left No. 3 Hospital to rejoin No. 55 British General Hospital, which had been established at Wimereux. Some days later Major H. B. Roderick, Officer Commanding No. 55, wrote to Col. Birkett, as follows: "I wish to thank you and all your officers for the great kindness and hospitality you showed to me and my officers whilst we were attached to you for duty. All my officers are enthusiastic about your organization and work in general. I

feel that we have an excellent model to work on. Any measure of success we attain will be attributed to our initial training at No. 3 Canadian General Hospital (McGill)."

A day or two before this generous tribute from the Commanding Officer of No. 55 was penned, Capts. R. Coutts, J. A. M. Hemmeon, and W. F. Abbott had been posted to No. 3 Hospital for temporary duty, and Orders had announced the promotion to acting major in the Canadian Army Medical Corps of Capt. J. W. Hutchinson, and to temporary major in the Canadian Army Dental Corps of Capt. G. H. A. Stevenson. Col. Birkett mentioned in the War Diary of the Hospital the satisfaction with which news of these promotions was received.

Meanwhile, much work in and about the grounds and buildings of the Hospital had been accomplished. Systematic rodding of all drains had been effected, and new bins, to contain refuse until destroyed, had been built at the Destructor Houses. In addition, the Admission and Discharge Room of the Hospital had been limewashed and the woodwork treated with creosote.

As a relief from heavy work of this nature, other ranks of the Hospital were delighted on May 13th when Orders announced that sea-bathing, forbidden during the winter, would again be permitted. Conditions governing such bathing were laid down by the authorities of the Boulogne Base and included the stipulations that a safe spot be chosen, that picquets be on duty, that expert swimmers be present, that dressing and undressing be suitably screened, and that all bathers wear bathing drawers.

On May 14th a case of mumps was transferred to No. 14 Stationary Hospital, and on the 15th two cases of meningitis followed. One of these proved to be pneumococcal and the other meningococcal. Following removal of the second case, all patients, orderlies, and nursing sisters who had come in contact with the man had swabs taken from the nose and throat. Three swabs proved suspicious, and precautions were taken accordingly.

By this time many of the staff had turned their attention to gardening in spare time, and others had been assigned to the work as a matter of duty. Extensive

vegetable beds had been planted wherever space could be found, and flower beds had been sown in prominent locations. On the 18th of May the Officer in charge of Surgery noted the growth and commented that the Hospital grounds looked more beautiful than ever before. Appearance, however, was a secondary consideration. Sir Douglas Haig had called to the attention of the British Army in the Field the vital importance of preserving and adding to the supply of foodstuffs grown on French soil. To this appeal the vegetable beds at No. 3 were an answer.

On May 24th the other ranks attached from No. 57 British General Hospital completed their duties at No. 3 and returned to their own unit, bearing knowledge of what a Canadian university hospital was accomplishing. Such knowledge was not widely shared in the British Isles, as was shown by newspapers from England, which suggested that hospitals bearing the famous names "Oxford," "Cambridge," and "Edinburgh" would prove valuable to the Medical Service in France. Continuing, the newspaper articles remarked that the idea might be extended to the Dominions and that hospitals from McGill University, Melbourne University, and the University of Bombay might be recruited. In the Messes of No. 3 Canadian General Hospital (McGill), which had existed for nearly three years and had taken the field in 1915, these articles provoked no little amusement.

No. 3 Hospital had been in the field nearly two years and had performed yeoman service, but the Commanding Officer had no intention of resting the reputation of the unit on laurels already gained. In May, Sergeant-Major Miller suggested that the efficiency of ward orderlies would be increased if a course of instruction in matters pertaining to their duties could be arranged. Col. Birkett approved the suggestion, and lectures were prepared. Orderlies were divided into two groups, to permit of all attending, and between 9.00 and 9.30 p.m. instruction was given in (1) Ward Ethics; (2) Ward Sanitation; (3) Care of Patients; (4) Reception of Convoys; (5) Evacuations; (6) Enemata; (7) Preparation of a Cadaver, and (8) Screen Dressings and Use of Triangular Bandages.

While other ranks of the Hospital were studying, officers continued to give to the profession the benefit of

experience gained at No. 3. Capt. A. H. Pirie, Officer in charge of the X-ray Department, wrote an article on "Marching Fracture," which, together with explanatory photographs, was submitted to Headquarters with request for permission to publish in the *Royal Army Medical Corps Journal* and the London *Lancet*. A second article, on the x-ray characteristics of bullets and other foreign bodies, was similarly submitted, with request for permission to publish in the *Archives of Radiology and Electrology*.

Nor were these the only valuable reports compiled by officers of No. 3 Canadian General at this time. As has been mentioned, chest wound cases had been segregated in a special hut maintained by the Canadian Red Cross Society, and to these cases Acting Major J. W. Hutchinson had devoted special attention.

During the six weeks previous to May 31st, 146 cases in which bullets had penetrated the chest had been treated. In 144 of the cases blood was found in the pleural cavity, and 2 had serum. Infection had followed the bullet wounds in 31 cases, but the majority had remained uncomplicated. Of the 31 infected cases, as proved by staining and cultures, 20 were due to streptococcus, 9 to the bacillus aerogenes capsulatus, and 2 to pneumococcus.

Major Hutchinson reported that 27 of the infected cases had been operated upon and that 8 had died. The remainder, at the time of the report, had been evacuated to England in improved health, or were still under treatment at No. 3. Three cases on which no operation had been performed had died, and one, a case of pneumococcus infection, was being treated and was doing well, under aspiration and irrigation with eusol.

Of the 20 cases in which streptococcus was the infecting organism, 11 had done well. The other 9 had died from the following causes: 3 from abscess of the lung, 1 from septicaemia, 1 from multiple wounds and purulent pericarditis, 3 from pneumonia, and 1, who was almost dead when admitted, from an open pyo-pneumothorax.

Of the 9 cases infected with the bacillus aerogenes capsulatus, 8 had been operated upon, the remaining patient being in such bad condition that operation was impossible. One of the two cases infected with pneumococcus had

been operated upon, and the other, as mentioned previously, was being treated by aspiration and irrigation with eusol.

The operations performed on the first 22 cases consisted of resection of a rib and thorough cleaning out of all blood and blood-clot from the pleural cavity. While working on these cases, Major Hutchinson came to the conclusion that better results would be obtained if the chest could be kept closed. He therefore attempted in cases which followed to sterilize the infected haemo-thorax by repeated aspirations and irrigations with eusol.

The first case was one infected with the bacillus aerogenes capsulatus, which was discovered before serious symptoms had developed. Under aspiration and irrigation, Major Hutchinson controlled the condition for a few days, but finally aspiration of the fluid from the chest grew more and more difficult, owing to the presence of blood-clot. It then became necessary to open the chest and clear out the blood and clot, after which the pleural cavity was again closed. Four times during the following two weeks the chest was aspirated and irrigated, the patient improving steadily until, at the time of the report, he was almost well.

Encouraged by success in this instance, Major Hutchinson had performed similar operations on three cases with aerogenes capsulatus infection. By May 31st one was practically cured, one was doing well, and one had so completely failed to improve that opening of the chest and drainage was essential.

As a result of his study of the 146 cases mentioned, in conjunction with observation of cases previously treated, Major Hutchinson drew certain conclusions: First, that in every case in which a haemo-thorax can be demonstrated clinically, aspiration should take place as early as possible after the 5th day, and as much fluid as possible should be withdrawn. Second, that an early diagnosis of infection of the haemo-thorax is important, and should be suspected when the temperature, pulse, and respirations begin to rise. Third, that as soon as there is the least suspicion that infection may have occurred, fluid should be withdrawn and a bacteriological examination made. If this examination prove negative, but the patient's

symptoms show no amelioration, more fluid should be withdrawn and the bacteriological examination repeated.

As his fourth conclusion, Major Hutchinson emphasized that, so soon as infection has been proved, an operation should be performed and all blood and blood-clot thoroughly removed, though pneumococcal infection, when accompanied by little clot, might be treated by aspiration and irrigation. Cases infected with a pure culture of the bacillus aerogenes capsulatus might be opened, cleaned of all blood and clot, irrigated, and closed, provided occasional aspiration and irrigation followed, but cases where streptococcus was the infecting organism must be opened, cleaned of blood and clot, and left draining.

This exceedingly interesting report on the treatment of wounds of the chest was handed to the Commanding Officer of No. 3 and by his orders attached to the Hospital War Diary for May. Similarly attached, was a memorandum showing that in May 4,570 patients had been admitted to the Hospital, 389 operations had been performed, 19 patients had died following operation, and 39 had died from all causes. A reduction appeared in most of the totals compared with those of April, but the serious nature of the wounds treated found reflection in the rise of post-operative deaths from 3.46% to 4.88%, and in the percentage of total deaths, which rose from 0.70 to 0.86.

CHAPTER XI

THE FIRST APPEARANCE OF MUSTARD GAS

I

SPRING and summer in 1917 brought developments in the political world which soon found reflection in the sphere of the armies in France. In April the United States declared war on Germany, and soon there flowed across the Atlantic units representing the auxiliary services of the American Army, which, in great strength, was to follow and take part in the fighting of 1918.

On June 1st, a hospital unit of the American Army, the first to reach Boulogne, arrived under command of an officer whom Lieut.-Col. Elder, of No. 3, recognized with pleasure as "Rob Patterson, my old house-surgeon at the Montreal General Hospital." Accompanying this unit, as Director of Medical Services, was Dr. Harvey Cushing, whose name and reputation were held in high esteem throughout the medical profession. On the same day that officers of this unit visited No. 3, M. Duval, the French specialist in lung surgery, visited and inspected the Canadian Red Cross Hut, where the chest cases under Major Hutchinson's care were lodged.

Meanwhile, on June 2nd, orders were received at No. 3 Hospital for a special evacuation of Irish patients to Ireland, instead of to England, as had been the custom in the past. On the same date Orders warned personnel of the Hospital against intercourse and conversation with German prisoners, many of whom were employed in and about the town. Conversation with a prisoner might seem harmless, but the Intelligence Department was aware that communications in code, or by secret paths, were occasionally smuggled to Germany. All ranks, therefore, were forbidden to talk to prisoners, except when duty so demanded.

In an issue of the London *Gazette* appearing early in June, Lieut.-Col. J. M. Elder and Nursing Sister M. I. MacIntosh, of No. 3 Canadian General Hospital (McGill), were mentioned in despatches by the Commander-in-Chief of the British Armies in the Field, Sir Douglas Haig. Soon after announcement of these distinctions, No. 3 Hospital was visited by Major-General G. L. Foster, Director-General of Medical Services, Overseas Military Forces of Canada, who was accompanied by Brigadier-General P. E. Thacker and by Col. A. E. Ross, D.D.M.S., Canadian Corps. Following the visit of these officers, Lieut.-Col. J. A. Pollock, President of the Boulogne Fire Committee, inspected the fire equipment of the Hospital, which he found adequate and in good condition.

Previous to this inspection, several large convoys of wounded reached No. 3. None of the patients had been newly wounded, but all had come from hospitals in the Ypres Salient, a circumstance which suggested to the veteran staff of No. 3 that action in the Salient was imminent.

On June 5th Bugler H. M. Elder, who had served with the Hospital from the beginning, was struck off the strength on proceeding to Home Establishment, and on the 9th Capt. A. T. Henderson, an original officer, left the unit for duty with the 2nd Canadian Division. Testimony to the fact that Capt. Henderson had proved "particularly efficient" was paid in the Diary of the unit by the Commanding Officer, who added, "I am very sorry indeed to lose his services." Somewhat later in the month, Nursing Sisters C. H. Hague, M. R. Heath, and A. A. Taylor reported for duty from Toronto. All remained at No. 3 for many months and accomplished work of a high order.

All day on June 7th officers, staff, and patients at No. 3 heard a roar of distant guns, which came, it seemed, from the direction of Armentières. Such gunfire indicated a large-scale attack, and preparations for the inevitable aftermath were accordingly effected. Somehow, the mutter and roar of the far-away guns stirred all hearts, just as the heart of Sir Arthur Conan Doyle was touched when, on another occasion, the thunder of guns in France rolled across the Channel to England:—

But still I gaze afar, and at the sight
My whole soul softens to its heart-felt prayer:
"Spirit of Justice, Thou for whom they fight,
Ah, turn in mercy to our lads out there!"

Official accounts of the attack on the Messines-Wytschaete Ridge on June 7th explain why the noise of battle was heard afar. Between May 31st and zero hour, 2,374 guns fired 92,264 tons of ammunition, and at zero 19 mines, containing 470 tons of high explosives, were fired. Seventy tons of gas were discharged in advance of the 9 British and Australian divisions which attacked, with many tanks in support. The operation had limited objectives and was an entire success. There was, stated an official report, "no mounting up of casualties at the end," so characteristic of most great battles.

Casualties did not mount up at the end, but they were not entirely avoided. "A busy night with convoys from the Messines fighting," was the comment a diarist at No. 3 entered on June 8th, followed by "We had 1,860 patients in at noon to-day (June 9th), and they are still coming, but on the whole the wounds are not as bad as in the Vimy show."

Convoys continued to arrive at No. 3 on June 11th, but on the 12th the stream diminished. Attention of the staff was accordingly diverted, in part, to maintenance of the buildings and grounds. The kitchens, cupboards, and all store-rooms were limewashed, a cesspit in rear of the Operating Room was connected with a main sewer, the lining of one of the Horsfall Destructors was renewed, and, in view of the hot weather prevailing, additional ventilation in many huts was provided.

On June 27th two non-commissioned officers of No. 3 Hospital, Sergts. C. Wienke and C. L. Roman, left the unit to resume medical studies at McGill University, their departure preceding by a few hours the arrival, to inspect the Hospital, of Hon. Lieut.-Col. W. Gow, Deputy Minister of the Overseas Military Forces of Canada. Lieut.-Col. Gow's inspection coincided with the arrival of instructions to No. 3 Hospital to retain all cases of fractured femur for prolonged treatment.

Two days later, the London *Spectator* printed verses

by Lieut.-Col. John McCrae which many consider the equal of *In Flanders Fields.* When informed that a history of No. 3 Canadian General Hospital (McGill) was being prepared, the proprietors of the *Spectator* granted permission for the lines, written at No. 3, to appear:—

THE ANXIOUS DEAD

O guns, fall silent till the dead men hear
  Above their heads the legions pressing on:
(These fought their fight in time of bitter fear,
  And died not knowing how the day had gone.)

O flashing muzzles, pause, and let them see
  The coming dawn that streaks the sky afar;
Then let your mighty chorus witness be
  To them, and Caesar, that we still make war.

Tell them, O guns, that we have heard their call,
  That we have sworn, and will not turn aside,
That we will onward till we win or fall,
  That we will keep the faith for which they died.

Bid them be patient, and some day, anon,
  They shall feel earth enwrapt in silence deep:
Shall greet, in wonderment, the quiet dawn,
  And in content may turn them to their sleep.

II

From the haunting beauty of John McCrae's verse to consideration of prosaic facts, dealing with the commissariat of No. 3 Hospital, is a step difficult to take, but one consistent with the contrasts which war provides. On the day when *The Anxious Dead* appeared in the *Spectator*, a report by Hon. Capt. H. E. Law, Officer in charge of Provisions at No. 3, was presented to Col. Birkett.

In opening his report, Capt. Law stated that one of the first improvements effected after he had joined the unit in March, 1916, had been the installation of shelves in the Hospital bread room. Use of these had resulted in notable saving, as previously the bread had arrived in sacks and had been piled on the stone floor, whence,

naturally, the topmost sacks had first been removed for distribution, leaving those of earlier date beneath. Much bread had moulded and been lost, but, under the shelf system, this waste had been altogether eliminated. In all, 430,700 loaves of bread had been handled by Capt. Law's department in the year which his report covered.

In addition to improvement of the bread room, Capt. Law had supervised transformation of what had been an ordinary meat room into an effective cold-storage room. Plans for this room had been drawn by Major L. J. Rhea, and construction had cost only £36. Use of the room had reduced by one-half the unit's consumption of ice and had improved immeasurably the condition of the food stored. During the year, 154,150 lbs. of meat had passed through the room, together with 9,648 fowls, 2,974 lbs. of fish, 45,787 lbs. of butter, and 227,355 eggs. All had been stored without waste, and with ice consumption of only 13,459 kilos.

Continuing, Capt. Law reported that it had been found desirable to provide separate store-rooms for vegetables and groceries, owing to the rapid decay and smell from the vegetables in hot weather. As the Hospital covered approximately 25 acres of ground, it had been found that two diet-kitchens were necessary. Under Capt. Law's supervision, the second of these had been constructed, with the result that patients in many wards of the Hospital received their meals hotter and in better condition.

Turning to the salvage accomplished by his department, Capt. Law reported that between March and November, 1916, sale of dripping had netted 795.50 francs. From December, 1916, to March, 1917, inclusive, the amount realized was 836.05 francs, despite the fact that obligatory sale of the product to England had reduced the income per pound previously received from buyers in France. In addition to dripping, Capt. Law had found a market for bones, and in five months had sold these to the value of 232.50 francs. From all sources and by all means, Capt. Law reported that, during the period of his control, saving in the cost of foodstuffs issued to wards, kitchens, and personnel had amounted to £14,672. 14. 7½.

Different in nature from Capt. Law's report, but of

equal interest, was a report presented at this same time to Col. Birkett by his Officer in charge of Surgery. Lieut.-Col. Elder had received from the United States a small supply of Flavine and had used it as an antiseptic in the treatment of infected wounds. He employed a 5% solution, and found it superior to Eusol, or solution of Brilliant Green, in that blood serum did not inhibit its action as a germicide, and a high degree of leucocytosis was produced.

Lieut.-Col. Elder stated that, although the Flavine had showed some good results, he had not had enough at his disposal to conduct convincing tests. Brilliant Green he had tested more thoroughly, but, both as a germicide and regenerator of tissue, he had found superior a 2% solution of ether in boiled (not boiling) water, used either as a bath or irrigation. No solution in his experience, he stated, was equal to this for cleansing foul wounds and replacing dirty sloughs by healthy, granulated tissue.

Continuing, Lieut.-Col. Elder discussed the rendering aseptic of the field for an operation. For this purpose he found most effective a 5% solution of picric acid. Provided this was applied 12 hours before operation, and the skin kept dry, the desired action was obtained, but if moist dressings were applied to the picric-treated area, irritation of the skin, amounting almost to eczema, would often follow. In cases where it was desired to cleanse the skin for immediate operation, Lieut.-Col. Elder reported that he found a brisk rubbing with ether, followed by a light swabbing with "l'eau Mencière," most effective.

In addition to the reports on foodstuffs and antiseptics, the War Diary of No. 3 Hospital for June, 1917, contained a report on the formation from the Hospital staff of a Surgical Team, composed of a surgeon, an anaesthetist, a nursing sister, and a trained operating room orderly. This team was prepared on call to carry out emergency work at casualty clearing stations in the forward area. Under authority dated June 22, 1917, the team from No. 3 Hospital was designated "No. 1 Surgical Team," and, in preparation for service in the fighting zone, its members were instructed at the Gas School, St. Martin's Camp, Boulogne. In June the Commanding Officer of No. 3 also received special instruction at this School, as did the majority of those on his establishment.

III

Sunday, July 1, 1917, was the 50th birthday of the Dominion of Canada. At No. 3 Canadian General Hospital (McGill), Divine Services were held, with thanksgiving for blessings granted to the Dominion in the past and with prayer for her well-being in the years still to come. On the following day, Sir Arthur Sloggett attended unit sports, featured by a baseball game in which No. 3 Hospital defeated No. 7 Canadian Depot. Following the sports, tea was served on the lawn, the Hospital Orchestra of 30 pieces providing music suitable to the occasion.

On the day after the sports, No. 3 Hospital was honoured by a visit from Her Majesty the Queen, who was accompanied by Lady Airlie, and escorted by Surgeon-General Sir Arthur Sloggett, Surgeon-General R. H. S. Sawyer, and Surgeon-General Sir Bertrand Dawson. Col. Birkett, concealing the pain of a severe illness, received Her Majesty and guided her in a tour of the Hospital, which included visits to Wards D and B, the Operating Room, the X-ray Department, the Pathological Laboratory, and the Red Cross Hut. Many officers, nursing sisters, and patients in these and other departments of the Hospital were presented to the Queen, who signed the Visitors' Book and, on leaving, wished Col. Birkett continued success in the splendid work being carried out under his command.

On the day following Queen Mary's visit to No. 3, the work of the nursing sisters was inspected by Matron-in-Chief Macdonald, who expressed to Matron MacLatchy and to the Officer Commanding the unit satisfaction with conditions as she found them. On the day of her inspection, three cases of the enteric group of fevers, one of cerebro-spinal meningitis, and one of diphtheria were diagnosed in the wards and isolated to await transfer to infectious hospitals.

Another case belonging to the enteric group was diagnosed on July 5th, also a case of mumps. The usual measures were taken to prevent spread of these diseases and the wards where they occurred were disinfected with sprayers, presented to the Hospital not long before.

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QUEEN MARY'S VISIT TO NO. 3, JULY 3, 1917

Left to right: Col. Fullerton (Surgical Consultant), Col. H. S. Birkett, Lieut.-Col. John McCrae, Her Majesty the Queen, Nursing Sister M. I. MacIntosh, Surgeon-General Sir Bertrand Dawson

Similar precautions were taken on the 8th, when three additional cases of the enteric group were transferred to No. 14 Stationary Hospital, and on the 12th, when two similar cases followed.

On July 10th German artillery laid a sudden barrage behind a British position at Nieuport. Two battalions, the 1st Battalion, Northampton Regiment, and the 2nd Battalion, King's Royal Rifle Corps, 1st British Division, were holding the position and suffered heavily. Many were killed, more were badly wounded and captured, and 74 escaped. Of these last a number, badly wounded, reached No. 3 Hospital on July 12th, bringing details of the near-annihilation their units had suffered.

On the day when these wounded reached No. 3 the Germans surprised the British by the first use of mustard gas. Ypres was shelled with this new type of gas, and 1,500 casualties resulted. A few days later, numbers of the new shells, containing "Yellow Cross," or "mustard," gas, were fired in the Nieuport Sector, and 2,000 British troops were affected.

On July 23rd the Officer in charge of Surgery at No. 3 recorded details about the new shells in his diary: "The Germans have sprung a new kind of gas shell. It affects the eyes and nose, but *not at first*, so the men don't put on their helmets till the damage is done. It also blisters the skin like a mustard blister, specially between the legs. The eyes get to a purulent conjunctivitis, but recover rapidly. The bronchitis is not marked and the lethal power of the shell is apparently low."

That the shells were not deadly in most cases proved a fact, but they were highly effective none the less. On July 24th Lieut.-Col. Elder wrote: "Several hundred cases gassed with the new shells came in to-day"; and on the 25th, "More gassed cases coming in"; followed by, "Gas cases still coming, but not so many," on the 26th. On the 30th, the record read: "We have had 300 of the new gas cases. Only 2 died. They showed membraneous tracheitis and bronchitis with pneumonia. The membrane looked diphtheritic."

In an effort to discover means of combating the new gas successfully, careful post-mortems were conducted on the bodies of the two men who had died, one of whom was

a bombardier in the 26th Battery, Royal Field Artillery, and the other a private in the Yorkshire Light Infantry. The artilleryman died after four days at No. 3 Hospital, and the infantryman after two days. Both had suffered from coughing, shortness of breath, headache, pain in the chest and throat, vomiting, and conjunctivitis. Unconsciousness had preceded death in both cases.

To enter into greater detail, physical examination of one of the patients on admission showed marked cyanosis, great difficulty in breathing, a pus-producing condition of the eyelids, excoriation about the sides of the face and ears, a dry coated tongue, dry lips, inflamed tonsils, profuse purulent secretion from the nose, and frequent cough. The sputum of this patient was not blood-stained, and the heart showed no great change, other than increased rate of action. With regard to the lungs, the report of the physician in attendance stated that there was "dulness and diminished breathing at the right base; with scattered moist râles."

On the day following admission of this gas case, fifteen ounces of blood were drawn from a vein, and breathing immediately thereafter was easier, but by night the dulness of the lungs increased. There was bronchial breathing, and crepitant râles were discernible. Col. Birkett, in his capacity as Consultant for the Area in affections of the ears, nose, and throat, saw the case on this day and removed from one side of the nose a large fibrinous cast.

This operation afforded the patient a measure of relief, but within forty-eight hours dulness over the lower and middle lobes of the right lung increased and the breathing became tubular. In the evening ten more ounces of blood were withdrawn from a vein, and again, for a time, breathing became easier. All further efforts to afford relief failed, however, and on the next day the patient died.

Following the death of the patient, as previously mentioned, a careful post-mortem examination was made. It is not necessary to give here a complete report of the conditions autopsy revealed, but certain aspects are significant. Under the heading, "Larynx" the finding was: "Extensive membraneous exudation, which obscures the normal anatomical markings. This membrane

Daily Mail Photo *Crown Copyright*

HER MAJESTY'S TOUR OF THE HOSPITAL, JULY 3, 1917. LEAVING THE OPERATING ROOM

Left to right: Surgeon-General Sir A. T. Sloggett, Her Majesty the Queen, Matron K. O. MacLatchy, Col. H. S. Birkett

is but slightly adherent and can be detached as large or small plaques. The underlying surface is deeply injected and shows numerous small haemorrhagic areas."

With regard to the trachea, an exudation similar to that in the larynx was found. The exudation was not as thick, but was of sufficient density to permit removal in plaques. Underneath, a bright red surface, with small haemorrhages discernible, was revealed.

Throughout the bronchial tree, even in the smaller branches, the same general picture was disclosed, the purulent fluid material becoming more marked as the bronchii became smaller. Even the smallest of the bronchii contained this fluid, as was shown by the small points of tenacious purulent material that escaped from the cut surface of the lungs.

In conclusion the report of the autopsy stated that the following anatomical diagnoses had been made:

Acute membraneous rhinitis.
" " " laryngitis.
" " " tracheitis.
" " " bronchitis.
" broncho-pneumonia.
" pleurisy, bilateral.
" congestion of the lungs.
" congestion of the abdominal viscera.
" conjunctivitis.

In the case of the second man who died as a result of the new mustard gas, post-mortem findings resembled closely those listed above. About the only difference worthy of note was that in the second case there was appreciably less exudation throughout the respiratory tract.

Though the gas cases provided the most unusual feature of the work of No. 3 Hospital in July, much scientific study of other cases took place, and several technical papers were compiled by members of the staff. One such, by Capt. T. A. Malloch, dealing with a case of "Acute Tuberculous Broncho-Pneumonia, with Pneumothorax Secondary to Tuberculosis of the Peribronchial Lymph Nodes," was forwarded through official channels for publication in the *British Medical Journal*, the *R.A.*

M.C. Journal, and the *Canadian Medical Association Journal*, Montreal.

Scientific study of x-ray developments was also continued, and was furthered by formation of a Society of Radiologists, with twelve members, which met at No. 3 Hospital, under the chairmanship of Capt. A. H. Pirie, to discuss x-ray problems, more particularly those dealing with the urgent necessity of satisfactorily localizing foreign bodies in wounds. Arrangements for the new society to meet at least once a month were made, and radiologists of hospitals in the district were enthusiastic about the benefits which would accrue

Meanwhile, the Hospital's routine work had continued. On July 19th Lieut.-Col. A. G. Doughty, Archivist of the Dominion of Canada, visited the unit to collect data for preservation and for the information of the Government. Some days previously Col. F. D. Lumley had called to estimate the vegetable crop in the Hospital grounds. Knowledge of the growth expected in the area was desired, in order that purchases for future months might be governed by consideration of local production.

Following the visit of the Dominion Archivist to No. 3, Col. Birkett and Capt. A. J. Lomas, who had replaced Capt. R. St. J. Macdonald as Sanitary Officer of the Hospital, took up with the Royal Engineers the question of providing more satisfactory partitions between some of the medical wards and the ward-kitchens, from which the patients' meals were served. Danger of infection reaching food in preparation existed, and more substantial protection was desired.

Shortly after the inspection of serving-kitchens had been completed and arrangements for the necessary alterations made, Capt. Lomas left No. 3 Hospital to proceed to duty with the Canadian Corps. He had proved exceedingly efficient in the discharge of his duties at No. 3 and had supervised satisfactorily the extensive sanitary arrangements which approximately 25 acres of hospital accommodation required. The Commanding Officer, in the unit Diary, paid tribute to his work and expressed appreciation of the services he had rendered to McGill.

Meanwhile, orders had been received for No. 1 Sur-

gical Team, composed of Capt. H. C. Dixon, Nursing Sister I. Davies, Lance-Sergeant C. C. Stewart, and Private H. W. Winder, to proceed to No. 2 Canadian Casualty Clearing Station for duty. On departure of this group, a second team was immediately organized and ordered to stand by, awaiting possible orders from the front.

On July 23rd, two days after No. 1 Surgical Team had gone forward, Col. Birkett received orders to clear all possible beds. Accordingly, accompanied by Lieut.-Col. Elder, his Officer in charge of Surgery, and Lieut.-Col. McCrae, Officer in charge of Medicine, he visited the wards of the Hospital and arranged for immediate evacuation to England, to base details, or to convalescent camps of every patient whose condition permitted.

Realizing from experience that orders for urgent evacuation meant that battle would soon be joined somewhere on the British front, and anticipating that before this happened sudden evacuation of more cases might be ordered, Col. Birkett instructed his officers to fill up, sign, and leave in readiness the Field Medical Card of any patient who might be moved. Wardmasters were similarly ordered to keep a list of such patients at all times and to have clothing drawn from stores, ready for instant use.

By this time the total of chest wound cases treated by Major J. W. Hutchinson in the special Canadian Red Cross Hut had risen to 288. All these had given clinical signs of intrathoracic injury, and Major Hutchinson had compiled statistics regarding them, which, coupled with his previous report in May, were of unusual interest. The following is a synposis of the cases treated:

Haemothorax proved by aspiration	188
Pneumo-haemothorax proved by aspiration	7
Pleural effusion serous, proved by aspiration . . .	13
No fluid obtained by aspiration, but proved clinically	40
Not aspirated, on account of the small amount of fluid demonstrated clinically	40
Total	288

Of the 288 cases, 57 were proved to be septic by bacteriological examination, the following organisms being found:—

Bacillus aerogenes capsulatus	18
Streptococcus	19
Pneumococcus	12
A Diplobacillus	1
Mixed infection	7

Of the 57 septic cases, 47 were operated upon, 5 recovered without operation, and 5 died without operation. The infected cases were operated upon by two methods: first, drainage in 31 cases; second, immediate closure in 16 cases. The non-infected cases were closed immediately, and all did well. Of the total of 288 cases, 102 were wounded by bullets, 149 by shell, 36 by shrapnel, and 1 by a knife. In 98 cases the missile causing the injury had been retained in the body, and in 190 cases it had passed out.

Total deaths amongst the 288 cases treated had numbered 18. Major Hutchinson attached to his report the following list, giving the causes of the fatalities:

	Infection	*Cause of Death*
(1)	Streptococcus	Pericarditis—amputation of leg.
(2)	Bacillus aerogenes capsulatus	Secondary infection.
(3)	Mixed infection	Abscess of lung and secondary haemorrhage.
(4)	Bacillus aerogenes capsulatus	Acute gas gangrene.
(5)	Mixed infection	Septicaemia.
(6)	Streptococcus	Septicaemia, pericarditis, and mediatinitis.
(7)	Pneumococcus	Septicaemia from cellulitis of abdominal wall.
(8)	Pneumococcus	Septicaemia.
(9)	Streptococcus	Abscess of lung.
(10)	Streptococcus	Suddenly, on operating table.
(11)	Streptococcus	Pneumonia, and empyema of opposite side.

(12) Mixed infection	Gangrene of lung, gas gangrene in chest wall.
(13) Streptococcus	No post-mortem.
(14) Streptococcus	Infection of lung (no operation).
(15) Mixed infection	Moribund when admitted.
(16) Pneumococcus	Double broncho-pneumonia (no operation).
(17) Bacillus aerogenes capsulatus	Pneumonia—empyema opposite side (no operation).
(18) Sterile serum	Pneumonia (no operation).

Meanwhile, increased efficiency in all phases of work was the objective which Col. Birkett and members of his staff sought determinedly. Mention has been made of savings effected in the kitchens and store-rooms for food. Statistics compiled by Hon. Captain H. E. Law, Officer in charge of Provisions, show that economy in this department had been maintained. In June, 1917, as figures presented to the Commanding Officer in July proved, savings of £1,261. 14. 4¾ on provisions, and £248. 12. 5½ on rations for personnel had been made.

At the end of July Col. Birkett ordered his clerical staff to compile statistics covering the month, and a second set, covering the entire period from June, 1915, when the unit arrived in France, to July 31, 1917. The first set showed that 2,820 patients had been admitted to the Hospital in July, that 200 operations had been performed, and that 16 patients had died. In addition, 598 "detained" cases, that is cases from hospital ships detained in the harbour, had been admitted, but did not appear on the Hospital's books.

Of the total admitted, 1,624 had been surgical cases, divided into 734 walking patients and 890 stretcher cases; and 1,196 had been medical cases, of whom 478 had walked from the ambulances to their beds, and 718 had been carried. When the 598 detained cases were added, the number of patients handled in the month totalled 3,418.

Detained cases, of which thousands had been handled, were not included in the Hospital statistics for the two years, but the figures were impressive none the less. They appear to better advantage when removed from the

body of the text and are, therefore, given in table form below:

Statistics June, 1915, to July 31, 1917

Total Admissions	65,952
Total Operations in Theatre	6,180
Total Deaths	359
Percentage of Deaths	0.54
Died After Operation	176
Percentage of Post-operative Deaths	2.84

These figures prove the claim that war surgery and war medicine were extraordinarily effective. Certainly, few great civilian general hospitals could present more favourable statistics for a two-year period. The total death percentage, but slightly over one-half of one per cent., had been achieved despite the prevalence of virulent infections and was, for that reason, even more satisfactory than in a civilian hospital, where in surgical cases infection is the exception rather than the rule.

CHAPTER XII

THE OFFENSIVE IN FLANDERS

I

ON July 23, 1917, as stated in the previous chapter of this book, Col. H. S. Birkett, Officer Commanding No. 3 Canadian General Hospital (McGill), received orders from Medical Headquarters to clear all possible beds in preparation for some event, foreseen by the General Staff. Evacuations were effected in obedience to these orders, and the staff of the McGill Hospital stood by, awaiting developments. The unexpected rush of more than 300 mustard gas cases filled many emergency beds, but further evacuation of "ordinary" cases took place, leaving the Hospital able to cope with what all knew was coming.

By the last week in July rumours, backed by testimony of wounded, reached Boulogne regarding a great concentration of guns and troops in Flanders. Ypres, it appeared, was once more to be the scene of heavy fighting by the British Armies in the Field. Between July 22nd and 31st, 2,300 guns on a front of 3,700 yards fired 65,000 tons of ammunition, clearing a way for the infantry.

Then, at 5.50 o'clock on the morning of July 31st, the British attacked. French units also advanced, but the main blow was struck by General Sir Hubert Gough's Fifth Army on a front between the Zillebeke-Zandvoorde Road and Boesinghe. It seemed the fate of the British in the Great War to meet with unfavourable weather whenever an offensive was attempted. Rain and mud had seriously hampered progress in the Battles of the Somme, 1916; rain and bottomless mud were destined to check advances in the forthcoming Battles of Ypres, 1917.

From the beginning the obstacle presented by rain and mud was seriously felt. On July 31st the Fifth Army drove forward through beating rain, which turned the shell-torn soil of the Ypres Salient into a deep swamp, impassable without effort beyond what human beings could exert. Ceaseless rain during the next three days brought the opening drive of the Flanders Battle to an unsatisfactory close.

Early in the morning on August 16th, nine British divisions, in conjunction with French troops on the left, renewed the battle, attacking on a 9-mile front from the Ypres-Menin Road to north of Steenstraat. On the left the attack met with appreciable success, nullified by a complete check on the right and right centre.

Originally, objectives in the Flanders Offensive had included that part of the Belgian coast which provided bases for the operation of German submarines, but, as autumn approached, it became clear that attainment of these remote objectives was impossible. Accordingly, other objectives, including the crest of Passchendaele Ridge, were substituted.

Probably no series of engagements in the Great War, not excepting even the Battles of the Somme, 1916, aroused more criticism of the British Staff than did continued prosecution of the Flanders Offensive. Long after it became clear that the German submarine bases were beyond reach, Sir Douglas Haig assembled and launched his divisions against objectives of seemingly little value. With official statements recording gains, sometimes of only a few yards, the battle continued all the remainder of the summer and late into the autumn. At last, in November, divisions of the Canadian Corps swept over the crest of Passchendaele Ridge, and the long-drawn-out agony ended.

Criticism of the British Staff and bitterness over the tens of thousands dead and wounded followed, and was stilled only when the end of the war permitted factors which had governed the situation being made known. Foremost amongst these was the fact that in 1917 the French Army, for the first time in the War, had "cracked" under the terrific strain imposed, first by the Battle of Verdun, then by large-scale support of the main British

attacks in the Battles of the Somme, 1916, and finally by the disastrous failure of General Nivelle's offensive on the Aisne.

Failure had resulted in Nivelle's dismissal, and General Petain had assumed his post, but the damage had been done and the morale of the French Army had been seriously affected. Mutiny in more than one division followed, and in others, General Petain admitted, the situation was distinctly "unsafe." If time were given him, General Petain undertook to restore his troops to their former level of morale, but, meantime, he must be freed from any threat of serious attack.

Accordingly, to Sir Douglas Haig and the British Army fell the duty of occupying the Germans so fully that no forces could be spared to smash the French. Realizing that at Verdun and in the failure on the Aisne, the French Army had suffered severely enough to shake the strongest morale, the British Army engaged the enemy in Flanders and held him fast, battering somehow through the maze of his concrete pill-box defences, plunging through the swamps that guarded them, dying by thousands in the water-filled shell holes of the stricken district, but grimly exacting payment in kind and remorselessly pinning the German Army to the Ypres front. While the British thus held the enemy in a heart-breaking struggle of endurance and suffering, General Petain accomplished his vital work, almost undisturbed.

II

On the night of August 1, 1917, the first casualties from the Battle of Flanders reached No. 3 Canadian General Hospital (McGill). All night the admitting staff was at work, receiving convoys and assigning the wounded to beds. Simultaneously, nurses, ward orderlies, and ambulance drivers were busy transferring patients to hospital ships bound for England. Urgent evacuation orders had arrived, proving that more casualties from the battle front were expected.

Over 600 patients, the great majority from the Flanders Battle, reached No. 3 in the first twenty-four hours of the rush. Convoys continued to arrive on the

night ofAugust 2nd, and by morning on the 3rd a heavy schedule of surgery faced the Operating Room Staff. All through the day and far into the night pressure continued, 44 serious cases being operated upon before it was possible to call a halt.

Steady work marked the days which followed. Then, on August 15th, the Canadian Corps captured Hill 70, near Lens, and a rush of casualties from this engagement merged with those wounded in a renewal of the Flanders Offensive on August 16th. Orders for continued urgent evacuation reached No. 3 Hospital on the afternoon of the 19th, and every patient who could stand the journey to England was moved; with the result that by August 21st many surgical beds in the Hospital had been emptied. Small convoys arrived immediately thereafter, but the rush which urgent evacuation orders had foretold failed momentarily to materialize.

Meanwhile, the routine of the Hospital's life continued. On August 4th a Service, attended by many officers, nursing sisters, and other ranks of No. 3, was held in Boulogne to commemorate the third anniversary of Great Britain's entry into the war. Two days later the Commanding Officer supervised in his private office the casting of ballots by those entitled to vote for candidates seeking election to the Legislative Assembly of the Province of Alberta.

On August 11th Nursing Sisters M. I. MacIntosh, C. W. Harrison, J. M. Sedgewick, C. P. Archibald, M. J. Ross, and K. McKay were struck off the strength on proceeding to Home Establishment, Nursing Sisters F. M. Whitaker, E. A. G. Bishop, and P. H. Fox being taken on the strength from Home Establishment two days later. Still later in the month Nursing Sisters E. V. MacKay, J. D. Quinn, M. G. Foss, M. J. Kingston, and F. M. Fear also reported for duty.

Previous to this, Capt. A. W. Trefry had returned to No. 3 from temporary duty at Henriville Camp, and Capt. D. S. Johnstone had arrived to assume the duties of Officer in charge of the X-ray Department, vice Capt. A. H. Pirie, who, after more than two years of distinguished service, was returning to Canada.

On August 17th Surgeon-General G. L. Foster,

Director of Medical Services, Overseas Military Forces of Canada, visited the Hospital and expressed satisfaction with the manner in which the unit was carrying out its work. Five days later Col. Fullerton, Surgical Consultant, and Col. Taylor, President of the Royal College of Surgeons (Ireland), called to see the work being done on fractured femurs. Twenty-two such cases were shown to the visitors, who were deeply interested.

On the night of August 28th Boulogne was struck by a storm, which caused much damage. None of the buildings at No. 3 Hospital suffered severely, but the outer roofs of 20 marquees were torn to ribbons, as were a number of tents sheltering personnel. Many trees fell, windows were smashed, and a number of sky-lights were lifted from their moorings.

Though No. 3 Hospital suffered the loss of some tents and marquees, space for refugees was quickly provided when news arrived that No. 32 Stationary Hospital and Nos. 54 and 55 General Hospitals had been well-nigh levelled to the ground. In the afternoon some 250 walking patients and 400 stretcher cases from these hospitals were given shelter at No. 3, where, owing to the urgent evacuation orders previously received, emergency beds were available.

Including the refugee cases, No. 3 Hospital in August admitted 5,109 patients, and evacuated an almost equal number. Throughout the month the discipline maintained was of the highest order. Few offenders came before the Commanding Officer for minor offences, and in no instance was a serious charge laid. Officers and nursing sisters had been granted leave in satisfactory numbers, but other ranks had failed to benefit. A summary showed that many had been on duty, without leave, for 18 months, and Col. Birkett expressed to higher authority the hope that means to correct this situation would soon be found.

III

At intervals throughout August, 1917, officers of No. 3 Hospital presented reports to Col. Birkett covering events in the departments under their command. Early in the

month Major L. J. Rhea submitted the pathological findings of a post-mortem on a private of the Royal Inniskilling Fusiliers, who had died from the effects of the new mustard gas. This soldier had been gassed on July 21st, but had noticed no ill effects until three hours after the gas shelling had ceased. Some time thereafter he had been admitted to No. 1 Casualty Clearing Station with vomiting, eyes glued and inflamed, discharge from the nose, sore throat, and coughing. Five days after admission to the Casualty Clearing Station he reached No. 3 Hospital, where he died on August 2nd.

As a whole, the pathological report in this case differed little from those presented in the two cases in July. There was the same acute condition in all branches of the respiratory tract, the same congestion of the abdominal viscera, the same superficial excoriations, and the same acute inflammation of the eyes and eyelids. In addition, there was a more pronounced dilation of the heart.

Some weeks after Major Rhea handed his report to Col. Birkett, Lieut.-Col. Elder filed a report on surgery, with special reference to that effected on wounded from the Battle of Flanders, but with observations resulting from experience gained during the entire period of the Hospital's service in France.

In opening his report, Lieut.-Col. Elder remarked that, since the time of his arrival in France he had noted with satisfaction progressive improvement in the condition of wounds arriving from the front, showing that more complete knowledge and better technique had been employed in the field ambulances and casualty clearing stations. Lieut.-Col. Elder emphasized, however, that, though improvement had been effected, better work was still possible and greatly to be desired.

In support of his point, the Officer in charge of Surgery at No. 3 stated that drainage of wounds at the front was frequently faulty. He had found that, during transfer, provision of dependant drainage was often neglected, and in other cases that principles governing various forms of drainage, such as Carrel's tubes, salt packs, and B.I.P., were insufficiently understood.

Patients sometimes arrived at No. 3 Hospital with one or other of the forms of drainage mentioned packed in

on some septic foreign body. Moist dressings and drainage gauze he had also found in wounds which had been treated with B.I.P. Despite such errors, the wounded arriving at Boulogne in 1917 had received vastly more skilled care than those received at Dannes-Camiers two years before. As Lieut.-Col. Elder observed, it was rare in 1917 for a septic knee-joint stuffed with rubber drainage tubes to arrive, or a septic abdomen with a drainage tube leading down to a faecal fistula.

Referring specifically to the cases received during August from the Battle of Flanders, Lieut.-Col. Elder stated that the major cases had been splendidly treated, in many instances, no doubt, by the trained surgical teams provided to meet just such emergencies. Treatment of minor cases, however, had not been entirely satisfactory, and Lieut.-Col. Elder called attention to the mediocre care some of the less seriously wounded had received.

Turning from the Flanders Battle cases to more general aspects of the surgical work at No. 3 Hospital, Lieut.-Col. Elder stated that 90% of war surgery at the base involved a fight against sepsis. If the fight were to succeed, two processes were essential: first, the wounds must be cleaned and drained; second, healthy granulation must, as speedily as possible, be produced to replace sloughs.

To combat sepsis, the surgeon had at his disposal two main methods: (1) the use of an antiseptic, and (2) phagocytosis. Referring to the first of these, Lieut.-Col. Elder remarked: "This war has produced more so-called antiseptics than have been evolved in all the previous history of surgery. We began, two years ago, by irrigating wounds with Eusol and Dakin's Fluid, hypertonic salines, five per cent. solution of ether and warm water, the use of B.I.P., and lately Flavine (one to five thousand)."

Eusol, Flavine, and hypertonic salines, Lieut.-Col. Elder continued, would clean up a sloughing wound in shorter time than any other antiseptics, particularly if a bath were used. Mencière Fluid, or five per cent. ether, would promote granulation better than Eusol or Flavine. Once such granulation had started, if B.I.P. could be

applied and the wound partially closed, healing became more rapid than under any other form of treatment, and, what was even more important, the patient had painless and less frequent dressings.

In many instances, notably in the case of the large serous cavities, the surgeon could rely only on phagocytosis to control sepsis, and his efforts, therefore, were directed towards securing an abundant output of healthy leucocytes to overcome the bacteria. In the case of the peritoneum, Lieut.-Col. Elder stated, all that was necessary was to remove the gross sepsis. The mechanical stimulation of the peritoneal cells would then produce sufficient leucocytosis to overcome the remaining infection.

Free catharsis, induced by alternating rectal salines and stimulating enemas, Lieut.-Col. Elder found, was the only efficient drainage of the peritoneal cavity. Two hundred and fifty successive cases of appendicitis had been treated in this manner by the Officer in charge of Surgery, without the loss of a patient from subsequent peritonitis.

Confirming Major J. W. Hutchinson's earlier reports of infection of the pleural sac, Lieut.-Col. Elder stated that he agreed that removal of the septic material and closure of the sac was not sufficient, but that the introduction of an antiseptic was necessary to induce recovery. Lieut.-Col. Elder further reported that in some cases a solution of iodoform in ether had proved effective, when introduced into the sac before closing, in others a solution of 1 to 5,000 of Flavine had given satisfactory results.

Bacteriological examination of fluid removed later by aspiration had proved most instructive. Where Flavine had been used, marked phagocytosis had resulted, and in a few days the bacteria had become intracellular, and therefore harmless. Where iodoform had been introduced, the aspirated fluid had shown no growth, from which it was reasonable to presume that the iodoform had inhibited development of the bacteria.

Referring to cases of septic knee-joint, which, as the reader will remember, had deeply interested the surgical staff of No. 3 Hospital from the earliest days of their service in France, Lieut.-Col. Elder reported that success-

ful treatment continued. Twelve hours before operation an aseptic irritant, either two per cent. formalin and glycerine, or pure ether, was injected into the joint, which could then be opened, treated, and closed, in the same manner as the serous sacs already mentioned.

From consideration of infected knee-joints, Lieut.-Col. Elder turned to the subject of shock. To combat shock was one of the urgent duties of a surgeon in a war hospital, and to do so successfully he was forced to consider carefully the various causes to which the condition of shock might be due. If it were due to direct haemorrhage, the bleeding point had first to be secured and the blood vessels then speedily filled with fluid. Transfused blood, *provided there was no sepsis present*, was the best possible fluid to give, but an intravenous saline would often satisfactorily tide the patient over a critical time before the blood transfusion could be arranged.

When shock had resulted from the traumatism of some large nerve trunks, and an amputation was necessary, the giving of an intravenous saline, combined with glucose (one per cent.), before the operation was advisable, as this, with the addition of pituitryn would bring the blood pressure up sufficiently to enable the patient to stand the amputation. Further saving of the patient, when amputation of a lower limb was necessary, was effected at No. 3 by well-nigh invariable use of spinal anaesthesia.

When the condition of shock was due to sepsis, notably in cases of gas gangrene, Lieut.-Col. Elder had noted that use intravenously of five per cent. solution of bicarbonate of soda, before and after operation, had proved most valuable. Sir Almroth Wright had suggested this treatment to the surgeons of No. 3, and had explained that the bicarbonate of soda checked the acidosis which most observers agreed was present in such cases, and prevented the alarming fall in blood-pressure always associated with shock. Spinal anaesthesia, Lieut.-Col. Elder found, helped him in operating on this type of case, as the blood-pressure was maintained after operation, instead of being lowered by general anaesthesia. In concluding his report, the Officer in charge of Surgery at No. 3 Hospital stated that he was able to regard with satisfaction a table, cover-

ing all cases, showing a mortality but slightly in excess of one-half of one per cent.

In view of a statement that soldiers in Canada and England had claimed pensions on grounds of disability caused by inoculation for typhoid fever, or that such inoculation had stirred into activity latent disease of various types, or had hastened, in the case of latent syphilis, such later consequential disabilities as general paralysis of the insane, Col. Birkett, in August, 1917, called on Lieut.-Col. Elder, his Officer in charge of Surgery, Lieut.-Col. John McCrae, Officer in charge of Medicine, and Major L. J. Rhea, Officer in charge of Pathology, for a report.

All three officers stated that they had met with no instance where inoculation against typhoid had caused the recrudescence of previously existing but latent disease, nor in syphilis had they encountered a case where inoculation had led to any of the conditions typical of the advanced stages of the disease. They further agreed that they had no evidence that inoculation had caused, or precipitated, any disease, or adversely affected the healing of any wound. Twice-inoculated cases, who previously had suffered from syphilis, had been observed by the officers, as had inoculated men, who at one time had had tuberculosis. In none of these cases had the typhoid inoculation produced ill effects.

In addition to co-operation in producing the special report on typhoid inoculation and its effect on latent diseases, Col. Birkett at this time asked Major Rhea for a report covering the work of the Pathological Department. No expense from the private funds of the Hospital had been spared in making the laboratory as efficient as possible, and Major Rhea and Capt. R. H. Malone had developed a department of which members of the Hospital staff were truly proud.

In opening his report, Major Rhea emphasized that, though research was conducted when possible, the first consideration of the Laboratory was to give to the sick and wounded on any one day the maximum benefit of the Department. In other words, the shadowy cause of general knowledge must stand aside when the interest of a sick or wounded soldier so demanded.

Determination that patients should not suffer through failure of the Department, entailed a heavy routine, for, in addition to the work of No. 3 Hospital, Major Rhea and his staff carried out the laboratory work for two convalescent depots nearby. This consisted chiefly of examinations for suspected venereal disease, examination of sputum where tuberculosis was suspected, and examinations of direct contacts when contagious disease had appeared.

Throat swabs, diphtheria contacts, cerebro-spinal meningitis contacts, patients requiring vaccines, urethral smears, urine, sputum, and blood were forwarded to No. 3 Laboratory from Nos. 1, 5, and 7 Convalescent Depots, from Nos. 2 and 3 Canadian Stationary Hospitals, from Base Details, from the Central Medical Inspection Room, the Emergency Stretcher Bearers' Camp, the Transportation Depot, local units of the Army Service Corps, and from a half-dozen other sources. A polite request for immediate report usually accompanied the patient, or specimen, and to the great credit of No. 3 Canadian General Hospital (McGill) prompt reply was invariably forthcoming. The only man who could not be satisfied was a hopeful subaltern of the A.S.C., who sent a patient with the request: "This has not been working well lately. Cut a few hunks off him, will you, and let me have him back in time for a fatigue at half-past three."

In his report, Major Rhea discussed, from his point of view, the chest wound and infected knee-joint cases mentioned previously by Lieut.-Col. Elder and Major Hutchinson. Where no infection existed, as in certain of the chest cases, Major Rhea found that the fluid removed, if largely serous, was inclined to clot so rapidly that accurate cell counts were impossible and bacteriological examinations difficult. To overcome the difficulty he arranged that the fluid should be drawn into a citrate solution of sufficient strength to prevent clotting. When this was done, fluid instead of a clot was available for examination, centrifugalization was possible, and more accurate conclusions could be reached.

Commenting further regarding fluids drawn from serous cavities, such as the thorax and knee-joint, Major Rhea stated that the last fluid withdrawn was better for

examination than the first. In numerous instances the pathological staff of No. 3 Hospital had found organisms in later fluid of which the first specimen had shown no signs.

In addition to examination of fluid in chest cases, Major Rhea had found that valuable information was to be gained from examination of the clots formed in the thoracic cavity before any fluid was withdrawn. This point was illustrated by one case in August, 1917, when fluid drawn from a chest proved negative, but when a microscopical colony of streptococci was found growing in the centre of a clot which the fluid had surrounded.

Leaving the subject of fluids and clots, Major Rhea's report turned to consideration of malaria, more particularly those cases of the disease where the patient, before the war, had never left the British Isles. Study of this subject, mentioned once before, had proceeded, and again mosquitoes in the district had been examined. Live mosquitoes had been used and a large number of others had been specially hatched, but in no instance could malaria carriers be discovered.

Towards the end of August a tabulation of the last forty-six cases of malaria to be diagnosed in the Hospital laboratory had been compiled. Thirty-five of the patients, it was found, had contracted the disease in Salonika, one at the Dardanelles, one in Macedonia, one in Egypt, one in Malta, and one while serving at the Boulogne Base. In the remaining cases proof of where the disease originated could not be obtained. All 46 cases showed Tertian parasites; two cases suffered a double infection; and in two cases the temperature during the chill had risen to 107°.

Continuing his report, Major Rhea remarked that, in addition to a study of malaria, certain special investigations had been conducted. Capt. T. A. Malloch had analysed, and in a short time would have ready for publication, the clinical, bacteriological, and pathological findings in 26 cases, who had died from pneumonia. Capt. R. H. Malone had started, but at the time of the report had not completed, a series of investigations into the types of streptococcus recovered from wounds of all descriptions.

From the time when the Hospital opened in France to

The Pathological Laboratory

August 10, 1917, the pathological staff had conducted 246 post-mortem examinations, including cases of injury and cases of disease. So far as possible, post-mortems had been carried out at times when it was possible for the surgeons or physicians who had attended the patients to be present, thus assisting the medical officers in the diagnosis and treatment of similar cases under their care.

In 1916, Major Rhea's Department had examined the sputum of 498 cases where tuberculosis was suspected. Thirty-two of these had resulted in a definite diagnosis of tuberculosis, the percentage of positive results showing a slight rise in the first seven months of 1917 when, of 438 cases examined, 39 had been found to harbour the disease.

Extensive as the work in examination of sputum specimens had been, even greater time and labour had been devoted to agglutination tests for the enteric group of fevers. In 1916, 1,992 such cases had been examined; in 1917, 1,481 had been examined by July 1st. Each had required at least two careful tests, involving a great total of time.

In concluding his report, Major Rhea mentioned one unusual case. The patient, a private, had been wounded in the lower portion of the neck, the bullet then passing above the thoracic cavity, fracturing the second rib, and fracturing and penetrating the right scapula. The track of the missile was rapidly clearing up when the patient developed a temperature of 105°, and died with pulmonary involvement. At the post-mortem there was found lobar pneumonia of the left lower lobe and acute tuberculous broncho-pneumonia of the right lower lobe, also an old tuberculous cavity of the right apex. The fractured rib had penetrated the central portion of the old tuberculous cavity and had, apparently, caused the old lesion to flare into activity, the resulting tuberculosis affecting the right lower lobe, which had been uninjured by the bullet.

CHAPTER XIII

AIR RAIDING BEGINS

IN the autumn of 1917, German pilots began bombing Allied hospitals and hospital districts from the air. Official denial that hospitals were deliberately bombed has been made, and in explanation of what took place the enemy has offered the excuse that troops, munition factories, supply dumps, and repair shops were often found close to buildings and encampments protected by the Red Cross, and it was the former, not the latter, at which the raids of his air squadrons were directed. Germany has always formally pleaded this justification, but individuals have admitted that hospitals were often bombed deliberately, and it seems probable, at least in some instances, that their confession reveals the truth. It was to the enemy's advantage to kill wounded troops together with trained hospital personnel, and even when wounded soldiers and hospital attendants were not killed, frequent bombing retarded recovery of the former and reduced efficiency of the latter, both factors affecting the strength and morale of the armies in the field. If by attacking hospitals the possibility of victory were increased, then, according to German theories of war, no scruple or treaty should stand in the way.

On September 3rd the Hon. Sir George Perley, Minister of the Overseas Military Forces of Canada, visited No. 3 Hospital, and next evening a German air squadron attacked Boulogne. As the enemy planes approached, searchlights turned enquiring beams into the blackness of the sky and soon a huge Gotha machine, flying at a great height, was sighted. Immediately anti-aircraft guns opened fire, the shells bursting high among the clouds, but, so far as observers could judge, inflicting

no damage. Doubtless, however, as in most raids, the barrage forced the enemy to maintain height and thus hindered his choice of targets.

Soon after the German plane was first sighted, several houses on the Calais Road near No. 3 Hospital were bombed, as were a number of buildings in the town. One piece of shell struck near the officers' quarters and shrapnel fell at intervals on many of the huts, but none of the occupants was injured. Immediately outside the Hospital grounds civilian property was badly damaged, and a French hospital nearby also suffered severely.

On the day following the air raid Sir Rickman Godlee and Lieut.-Col. Stiles, R.A.M.C., visited No. 3 Hospital to consult with Col. Birkett on medical matters of common interest. Three days later Nursing Sister Frances MacKeen, who had joined the unit on mobilization and had served in a manner which the Commanding Officer described as "splendid" and "worthy of the highest praise," was struck off the strength on proceeding to Home Establishment. On the day when Nursing Sister MacKeen left, Nursing Sisters E. D. Handcock and C. M. Watling, original members of the unit, were reposted to No. 3, after serving for some time at No. 1 Canadian Casualty Clearing Station.

On September 8th the staff of No. 3 Hospital watched with interest and a measure of curiosity the burial of 22 Egyptian Labour Corps troops, who had been killed in a mutiny on September 6th. No. 3 Hospital had inherited from the Meerut Indian Hospital a Mohammedan cemetery, and in this the bodies of the Egyptians were buried, to the accompaniment of a strange, unmusical funeral dirge sung by a large number of their countrymen.

On the day following the Egyptian funeral, two cases of cerebro-spinal meningitis were transferred from No. 3 Hospital to No. 14 Stationary Hospital and, as always, contacts were examined for possible infection. Four days later Sir Henry Burdett, K.C.B., K.C.V.O., visited the Hospital to collect statistics covering phases of the work in which he was interested. Sir Henry was impressed by the figures quoted to him at No. 3, particularly by those showing the total of patients admitted and the low percentage of deaths.

Following the visit of Sir Henry Burdett, Col. Birkett repeated orders previously issued regarding the strict screening of all lights at night. German air squadrons had approached on several occasions and, although the bombing of September 4th had not been repeated, it was realized that the enemy would raid when opportunity offered. Evidence of his intention was furnished on the night of September 18th, when a large convoy, including many troops from the British West Indies, was admitted to No. 3 Hospital after the bombing of a casualty clearing station on the coast of Belgium.

Not many days after this convoy of air raid casualties had been admitted to No. 3 Hospital, Col. Birkett and his officers were hosts to a gathering of the Boulogne Base Medical Society, which met for discussion of medical and surgical matters in the Red Cross Recreation Hut. After refreshments had been served by the nursing staff, clinics and the reading of papers began. The first item consisted of a number of cases of yaws, with comment by Major J. G. Browne. Major J. W. Hutchinson then lectured briefly on the chest cases under his care, the pathological aspect of these being covered by Major L. J. Rhea, who also, in conjunction with Capt. R. H. Malone, lectured on the types of streptococci found in wounds. Lieut.-Col. John McCrae, Officer in charge of Medicine, then discussed the diagnosis and treatment of pneumonia, and Lieut.-Col. Elder, Officer in charge of Surgery, lectured on the treatment of septic peritonitis. This address brought proceedings to a close.

While the members of the Boulogne Base Medical Society were in session at No. 3 Hospital, heavy convoys of wounded were in transit from the front. On September 20th, in the Battle of the Menin Road Ridge, the Flanders Offensive had been renewed, with the result that by the 22nd of the month 700 cases, including a large number wounded by machine-gun fire, had reached Boulogne.

All day on September 23rd, and again on the morning of the 24th, the Operating Staff of No. 3 worked over the cases from Flanders. By 3 o'clock in the afternoon all urgent surgery had been completed and the staff prepared to receive Her Royal Highness the Princess Louise. Accompanied by Surgeon-General R. H. S. Sawyer,

D.D.M.S., Boulogne Base, the Princess toured the Hospital, stopping frequently to hear from patients about the most recent fighting at the front. To Col. Birkett, the Princess expressed deep appreciation of what she had seen and of the devotion which obviously inspired officers, nursing sisters, and other ranks in their work.

On September 26th Sir Douglas Haig struck once more in Flanders, in the Battle of Polygon Wood, and again backwash from the engagement flowed to the wards of No. 3 Canadian General Hospital (McGill). At the moment when the first convoys of wounded arrived the alarm sounded, as anti-aircraft guns flashed in the direction of Calais, and sounds of heavy firing drifted in from the sea. No raiders arrived over Boulogne, which, apparently, was not their objective.

Previous to the air raid alarm, Mr. Colmer, of the Canadian War Contingents Association, had visited the Hospital, and subsequent to it two fine concerts were given in the Y.M.C.A. Hut by the Lena Ashwell Concert Party, whose splendid performances are mentioned in the unit War Diary. In a report on the work of the Hospital, compiled on the following day, Col. Birkett drew to the attention of higher authority the valuable services rendered by Lieut.-Col. John McCrae, Major L. J. Rhea, and Sergt.-Major F. G. Miller. In a previous report he had mentioned service of equal distinction rendered by Lieut.-Col. J. M. Elder and the surgeons under his command.

That night, helped by the light of a full moon, German air raiders approached Boulogne, but were driven off by anti-aircraft guns. At noon on the following day, September 30th, an enemy pilot flew high over the town, ignored bursts of shrapnel, and dropped a note, announcing his return at a more convenient season.

This incident marked the last day of a month in which the Hospital had received 4,192 patients, 24 less than in August, when admissions had totalled 4,216. In September surgical cases had exceeded medical cases by more than 2 to 1. Continued preponderance of wounded seemed probable as the month drew to a close, and Col. Birkett made preparation accordingly.

About noon on October 1st, two German planes, flying so high that no sound of engines reached earth, appeared like silver birds over Boulogne, reconnoitring, it seemed, against the hour when darkness would permit approach at a lower altitude. Following the visit of these planes, Col. Birkett issued instructions to all under his command regarding behaviour during raids. All ranks were ordered to remain under cover while enemy planes were overhead, and nursing sisters and orderlies on duty were instructed to see to it that patients did not leave the wards, which provided protection against falling shrapnel.

That night two German machines, presumably those which had reconnoitred during the day, arrived over Boulogne and attacked the docks. Many bombs were dropped, but the aim was poor, and little damage resulted. Some casualties were inflicted, however, as 4 wounded were brought for treatment to No. 3.

Two days after the raid, Professor Roberto Alepandri and Professor Leonardo Dominici, of Rome, accompanied by Capt. W. G. Shakespeare, R.A.M.C., arrived at No. 3 Hospital to study the work of the various departments. The visit of the Italian professors coincided with arrival of urgent evacuation orders from the Headquarters of the Medical Services. Sir Douglas Haig was attacking again in Flanders, and beds for wounded would soon be needed.

Meantime, as always, the routine work of the unit continued. On October 4th one officer and five men paraded before Col. Birkett, who, as Commanding Officer of the Hospital, had been commissioned to register their votes in the Province of Saskatchewan elections. On the same day a number of cases of tuberculosis were discovered in Huts 1 and 2 of Ward S. All were transferred, after which equipment of the huts was carefully disinfected. Later in the day the Hospital water supply failed, necessitating special measures to guard against fire and infection.

On October 5th Major J. G. Browne was struck off strength on proceeding to Home Establishment, his departure coinciding with the arrival of wounded from the latest fighting in Flanders. Soon after these had been admitted, orders arrived cancelling all leave to

England, from which veterans on the Hospital staff concluded that the great battle in Flanders was to continue.

Meanwhile, No. 3 Hospital received instructions to admit 300 Portuguese patients, whom a storm had deprived of hospital tents. Orders stated that the Portuguese must be sheltered in huts, owing to the cold, and that provision must be made to accommodate their medical officers, who would arrive with them. These officers would appear on the establishment of No. 3 Canadian General Hospital as attached.

In the Diary of No. 3 Hospital it is mentioned that the weather on October 9th was "abominable," with heavy rain and wind, increasing at times to a driving gale. Unfortunately, the 9th had been chosen for an attack by the British Army between Broodseinde and St. Janshoek, with the French First Army co-operating. In weather similar to that prevailing at Boulogne, the British and French advanced, but rain and the resulting mud soon brought their effort, known officially as the Battle of Poelcappelle, to a standstill.

Following the action, the inevitable stream of wounded flowed back to the base. More than 800 patients were admitted to No. 3 Hospital in twenty-four hours, but all were not from the front, as the number included 250 Portuguese, who brought to 1,800 the total of patients in the Hospital on the morning of October 11th.

Once again on October 12th the British Army, with 2 Australian, 1 New Zealand, and 5 Imperial divisions, including the Guards Division, in line, plunged into the mud of the Ypres Salient and drove against the German defences in an engagement known as the First Battle of Passchendaele. Once again, however, mud provided an obstacle more difficult than human bravery could surmount and at mid-day the operation was broken off.

Again heavy convoys of wounded reached No. 3 Hospital, their arrival preceding a visit by Major Penrose and Lieut. Bailloy, of the United States Medical Services, who, in company with Capt. McIntosh, R.A.M.C., inspected the Hospital's sanitary arrangements on October 13th. On the same day Lieut.-Col. A. T. Bazin, C.A.M.C., visited old friends amongst the officers of No. 3, and remained for treatment of a severe bronchitis. He

brought news that the Canadian Corps, which had been operating near Lens, was moving towards the Ypres Salient, presumably to take part in the great offensive in Flanders.

In the week preceding Lieut.-Col. Bazin's visit to No. 3, 13 cases of the enteric group of fevers had been sent to No. 14 Stationary Hospital, and 15 additional cases followed on October 17th. Work on the medical wards increased at this time, but the majority of beds in the Hospital, exclusive of Portuguese beds, were still occupied by, or kept ready for, surgical cases from the front.

On October 14th the Hon. Philippe Roy, Canadian High Commissioner to France, visited No. 3 Hospital in company with Capt. the Hon. W. J. Shaughnessy, of the Canadian Staff. Five days later Dr. Vald Moison, of Copenhagen, Denmark, arrived to inspect, accompanied by Capt. Dickenson, of the R.A.M.C. The visit of these gentlemen coincided with that of four Swiss medical officers, accompanied by Lieut.-Col. J. V. Forrest, D.A.D.M.S., Boulogne Base, and preceded by a few days that of Surgeon-General G. L. Foster, Director of Medical Services, O.M.F.C., who was accompanied by Lieut.-Col. J. L. Potter, C.P.A.M.C.

In addition to the visitors mentioned above, No. 3 Hospital in mid-October extended hospitality to the President of the Portugese Republic, whom one diarist describes as "a genial cut-throat, with a most engaging smile." The President visited the wards where the Portuguese patients were lodged, and expressed deep appreciation of the care his countrymen were receiving.

Late on the night of October 19th enemy planes approached Boulogne, and at noon on the 21st a lone scout flew high over the town. On both occasions anti-aircraft guns pursued the raiders, but, so far as observers could judge, no damage was inflicted.

Five days after the reconnaissance of the lone scout, Col. Birkett received a request from the British Ministry of Munitions for supplies of slightly soiled cotton bandages to be used in the manufacture of explosives. Accordingly, on October 26th, all wards were ordered to save used dressings and to deliver the supplies collected to the non-commissioned officer in charge of the disinfector on Friday of each week.

High explosive in huge quantities was required, as the Flanders Offensive was consuming ammunition steadily. On the day when Col. Birkett's order was issued, 6 British divisions, including the 3rd and 4th Canadian Divisions, renewed the offensive and achieved notable success. Four days later the line was carried to the outskirts of Passchendaele, then, on November 6th, the 1st and 2nd Canadian Divisions swept over the crest of Passchendaele Ridge. Four days again intervened, then the 1st British Division and the 1st and 2nd Canadian Divisions seized positions which improved the situation and brought the long, muddy, bloody battle to a close.

Following each phase of the fighting, wounded arrived at No. 3 Hospital, heavy admissions on October 31st taxing the strength and endurance of the 29 officers, 119 nursing sisters, and 229 other ranks, who, at the time, appeared on the nominal roll. During the month this staff had admitted and cared for 2,107 walking surgical cases, 1,755 surgical stretcher cases, 851 walking medical cases, 1,055 medical stretcher cases, and 960 cases detained in Boulogne when, for one of a dozen reasons, hospital ships to England were unable to sail. The total of 6,728 cases meant that work throughout October had been arduous, but the Commanding Officer testified in the War Diary of the unit that it had been cheerfully and efficiently performed.

On November 1st Col. Birkett published in Orders a circular, issued under authority of the Director-General of Medical Services of the British Army, and repeated by the Deputy Director of Medical Services, Boulogne Base. This circular, addressed to all British medical units in the field, resulted from study carried out at No. 3 Canadian General Hospital (McGill) and was, therefore, of great interest to the Commanding Officer and his staff.

In part, the order read: "In some cases, wounded men who have lain out for several days are given no more than the customary prophylactic dose of tetanus antitoxin when they are first admitted to a medical unit. As the danger of tetanus is greater in these cases on account of the unavoidable neglect, and of the delay in giving the prophylactic dose, such cases are to receive at the earliest possible moment an injection of not less than

1,500 units, and if there is any reason to anticipate onset of tetanus, intensive antitoxin treatment should be commenced forthwith."

It was fitting that publication of this order, which represented a notable contribution to Army Medical practice by No. 3 Canadian General Hospital (McGill), should precede by a few days departure from the unit of the man by whom, more than by any other, the plan of great war-time hospitals, bearing the name of famous universities, had been evolved. On November 7, 1917, Col. H. S. Birkett, C.B., yielded to pain which had racked him for many months, and, after consultation with specialists, who agreed that surgical treatment alone could restore his health, left No. 3 Hospital for England.

Thoughtful as always of his staff, Col. Birkett, before departure, placed on record his appreciation of the services rendered by Nursing Sister S. M. Hoerner, who, after a long period of duty as Assistant Matron, was proceeding from No. 3 General Hospital to duty with No. 3 Canadian Casualty Clearing Station. Then, in a final report, Col. Birkett recorded his gratitude for the faithful support afforded him from the earliest days by Lieut.-Col. J. M. Elder, Officer in charge of Surgery, and, from the day when he joined, by Lieut.-Col. John McCrae, Officer in charge of Medicine.

In his report, Col. Birkett also spoke warmly of the conduct of his officers, nursing sisters, non-commissioned officers, and other ranks, who, throughout the period of his command, had, by their loyal co-operation, combined to give the unit a name and reputation than which better could not be desired. Col. Birkett expressed regret that recognition of his officers' work had not been afforded by more frequent mentions in despatches, but acknowledged with satisfaction that Matron MacLatchy and nine nursing sisters had been so honoured.

On the eve of Colonel Birkett's departure for England, Sir William Peterson, Principal of McGill University, cabled to express the regret with which he and the Governors of McGill had heard that the Commanding Officer of No. 3 would be compelled to resign. Similar messages from the Medical Staff of the Boulogne Base, from the surgical and medical consultants, from a number

of the 428 individuals whom Col. Birkett had personally treated in his capacity as Consultant, and from the commanding officers of nearby hospitals flowed to No. 3 as news of Col. Birkett's illness spread.

Sincere as these messages were, the regret they expressed was exceeded at No. 3. It seemed impossible to think of the unit without Col. Birkett at its head, and, as the Commanding Officer's old comrade-in-arms, Lieut.-Col. J. M. Elder, wrote in his private diary: "It was hard when the day came for all of us to say good-bye." Perhaps no words chosen with care could convey more convincingly than this unstudied phrase an understanding of the place that Col. Birkett held in the regard and affection of those serving under his command.

CHAPTER XIV

THE AUTUMN OF 1917

WHEN Col. H. S. Birkett, C.B., left France to undergo surgical treatment in England, command of No. 3 Canadian General Hospital (McGill) passed to Lieut.-Col. J. M. Elder, Officer in charge of Surgery, who was promoted to colonel's rank, as from the date of Col. Birkett's departure. Simultaneously, it was announced that the duties of Officer in charge of Surgery would be assumed by Lieut.-Col. A. T. Bazin, who had served with distinction in the medical forces of the Canadian Corps.

In the War Diary of No. 3 Hospital, Col. Elder added, as a postscript to the routine entries for November, the statement that Col. Birkett had undergone operation in England and was convalescing at Bath, previous to departure for Canada, where prolonged rest would be necessary if his health were to be restored. Though the staff of No. 3 rejoiced that operation upon the original Commanding Officer had proved successful, regret that he had been compelled to resign endured, none feeling his loss more deeply than the officer who had succeeded him.

Continuing his remarks in the Hospital Diary, Col. Elder wrote: "Every member of this unit regrets Col. Birkett's absence each day. Since I assumed command my task here has been a fairly light one, thanks to the perfection of the organization he bequeathed to me. So far as the help rendered to me in the initial stages of my new office is concerned, I can only reiterate what Col. Birkett has already said regarding the ability and loyalty of all those under my command."

One of the first duties that fell to Col. Elder's lot was to revise orders previously issued regarding procedure during air raids. On November 8th medical officers were instructed that, when firing began, each would take up a

post in the ward to which he was assigned and would remain there, on duty, until the firing ceased.

On November 10th Lieut.-Col. A. T. Bazin, who had been appointed Officer in charge of Surgery, assumed his duties, and on the 15th Sergeant-Major F. G. Miller, the last of the Third Year medical students who had crossed with the unit from Montreal, was struck off the strength on proceeding to Canada to complete his course at McGill. Col. Elder wrote that Sergeant-Major Miller had proved an unusually efficient N.C.O., and paid tribute to the work he had accomplished. On his departure his duties were assumed by Sergt. Harry Slack.

On November 13th No. 3 Canadian General Hospital (McGill) was ordered to replace No. 1 Surgical Team, which since July 21st had been on duty at No. 2 Canadian Casualty Clearing Station, at Remy Siding. Accordingly, No. 2 Team, composed of Capt. L. H. McKim, Capt. A. M. Yeates, Nursing Sister M. J. Woods, and Private J. E. Miles, was formed and despatched, relieving No. 1 Team, which reported back on November 16th.

Soon afterwards a letter arrived from Lieut.-Col. J. E. Davey, Officer Commanding No. 2 Canadian Casualty Clearing Station, where No. 1 Team had served. It was addressed to the Officer Commanding No. 3 Canadian General Hospital (McGill) and read as follows:

"I wish to express my deep appreciation of the work done by the undermentioned team from your unit, who have been serving with us here. Their devotion to the arduous duties of the past season, together with the efficiency of their service is worthy of every commendation."

At the end of his letter Lieut.-Col. Davey named the members of the team. Capt. H. C. Dixon, it will be remembered, was the officer in charge, with Nursing Sister I. Davies as his chief assistant, Sergt. C. C. Stewart as N.C.O., and Private H. W. Winder as orderly.

On his return, Capt. Dixon presented to Col. Elder a report on the team's work. This showed that 870 operations had been performed, with 26 as the maximum number on any one day. Shells had wounded most of the cases, but, particularly during offensives, bullet wounds had also been numerous. Bayonet wounds, on the other hand, had proved surprisingly rare

Among the 870 cases Capt. Dixon had operated upon and dressed, head wounds had been the most frequent, stomach wounds coming next in order, followed by injuries of the chest, arms, and legs. During engagements the team had remained on duty for 16 hours at a time; when work had been less urgent, duty had lasted for 12 hours, with the following 12 hours off.

In general, the procedure adopted in the treatment of wounded had been to excise the track of the missile causing the injury, to remove the foreign body if possible, and to provide drainage, either by open tubes, Carrel's tubes, or B.I.P. In 46 cases of infected knee-joint, Capt. Dixon reported that the joint had been opened, the foreign body removed, the synovial membrane cleaned with an ether swab, the entrance of the wound excised, the joint closed, and subsequently injected with two per cent. formalin and glycerine. Fifty per cent. of the cases so treated had given satisfactory results, even though some had been complicated by fracture into the joint.

In regard to compound fractures of the skull, Capt. Dixon reported that he and his team had had 15 cases, twelve opening the dura and three with the dura not involved. Of the cases in which the dura was opened, 65 per cent. died at the casualty clearing station; the cases in which the dura was not involved recovered.

Compound fractures of the femur had provided 25 cases. In 3 of these immediate amputation had been necessary. The remaining 22, when treated on the general principles mentioned previously, and then put into a Thomas splint with extension, had left the casualty clearing station for the base in good condition.

Under the heading "Ligation of Large Vessels," Capt. Dixon reported: femoral artery, 6 cases, of which 1 required subsequent amputation; popliteal artery, 10 cases, 2 requiring subsequent amputation; posterior tibial artery, 8 cases, of which one subsequently lost a foot; subclavian artery, 1; axillary artery, 3; brachial artery, 8, in all of which the limb was saved.

In all, Captain Dixon performed 20 amputations, 8 of the thigh, 4 of the leg, 2 of the arm, 3 of the forearm, and 3 of the hand. Most of the abdominal and chest cases at the casualty clearing station had been operated

upon by a surgeon specially appointed, but 8 abdominal cases, of whom 4 recovered, had passed through Capt. Dixon's hands, as had 9 chest cases. In the chest cases, Capt. Dixon removed the foreign body when possible, cleaned out the pleural cavity, and closed the wound without drainage. He was impressed by the favourable results this method had shown when used as soon after wounding as possible and before sepsis became general

In concluding his report, Capt. Dixon remarked that anaesthesia had usually been induced by a mixture of two parts of chloroform to three parts of ether, given by the open drop method, followed by warm ether vapour, administered by means of a modified Shipway apparatus. Gas-oxygen anaesthesia had been reserved for bad cases only; and for short cases ethyl-chloride had proved both rapid and safe. When intravenous injection had been required, Capt. Dixon reported that normal saline had given good results. Acidosis had been much more common than at the base, and in cases showing this condition soda bicarb. had been added to the normal saline with satisfactory results.

Shortly before the return of No. 1 Surgical Team to No. 3 Hospital, Col. Elder dined with the nursing sisters on day duty and addressed them regarding details of their work. He thanked them for the loyal service they had rendered in the past and stated that, once in each month, he intended to repeat his visit to their mess to address them and to hear, without formality, suggestions whereby co-operation between the nursing, medical, and other staffs might be improved. Previous to dining with the day sisters, Col. Elder spoke to the sisters on night duty, so that they, too, might be informed about his plan.

Three days later, on November 18th, the staff of No. 3 Hospital bade farewell to Major J. W. Hutchinson and Nursing Sister A. G. Hutchinson, his wife, who, owing to the illness of the latter, had been transferred to Home Establishment ([1]). Major Hutchinson, one of the few original officers remaining at No. 3 up to this time, had

([1]) NOTE:—"Home Establishment" had no official existence. The term is used in the War Diary of No. 3 Hospital and in this book to indicate establishments of the Canadian Army Medical Corps in England, or in Canada.

succeeded Major E. W. Archibald as First Assistant to the Officer in charge of Surgery on October 16, 1916, and had rendered valuable service, more particularly in the field of chest surgery, where a large number of wounded had benefited through his professional skill Nursing Sister Hutchinson had joined from a Belgian unit soon after No. 3 had arrived in France, and had served as senior Home Sister, her work receiving Matron MacLatchy's high commendation. In view of their devotion to the duties assigned to them, it was with regret that all ranks of No. 3 saw them depart.

Two days before they left, Surgeon-General Sir T. P. Woodhouse, K.C.B., inspected the Hospital and expressed appreciation of the work being accomplished, particularly that affecting the treatment of fractured femur cases, to whom special wards, under the charge of Capt. L. L. Reford, had been assigned. Col. A. E. Ross, D.D.M.S., Canadian Corps, who visited the Hospital on November 18th, also expressed interest in the careful and skilful treatment these cases were receiving.

In a document covering the period from July to November, 1917, Capt. Reford reported to Col. Elder that 78 cases of fractured femur had been admitted to No. 3, of whom 34 had been treated to a conclusion, that is to the stage when Col. Fullerton, Surgical Consultant, felt satisfied that union of the broken bones had been secured; or when an amputation stump had healed and was free from danger of secondary complications, or haemorrhage; or when the patient had died. Capt. Reford reported that 24 cases had been certified "fit to travel," and had been evacuated; 44 were still under his care; 2 had been transferred; and 8, including 3 amputations, had died.

At the beginning, Capt. Reford's work had been greatly handicapped by absence of stationary appliances to which apparatus for extensions of the broken legs could be fastened. Repeated requests having produced no results, private funds had been used to purchase timber, out of which the Hospital carpenter had cut and installed the overhead and standard uprights required.

A further difficulty had been presented by the fact that Thomas splints with an inner ring circumference of 25 inches or more were alone available. As the average

man's thigh measured but 21 inches, the 25-inch splints had failed to immobilize some of the legs and had consequently been only partially effective. After several reports on this point had been presented to authority, 19-inch and 17-inch splints had been provided.

Adhesive plaster had also given trouble, as good glue was difficult to obtain. The adhesive had little sticking power and, owing to acid impurities, caused blisters to the skin. Good pulleys for the necessary extensions and suspensions had also been obtained in France only with the greatest difficulty, but the Canadian Red Cross Society had heard of this and had shipped 200 to the Hospital, where use had promptly been made of them.

In treating the first 25 cases, Capt. Reford had been compelled, through lack of timber, to use Balkan splints for suspension and extension of the legs held in Thomas splints. This method, as mentioned above, failed to give immobility and results had been less satisfactory than at a later date when the permanent overhead beams had been installed. Not only were results with the beams infinitely better, but the treatment gave the patient less discomfort and gave the nursing sisters and orderlies a simpler task.

Referring to the condition in which fractured femur cases reached No. 3 from the front, Capt. Reford remarked that nearly all arrived in Thomas leg splints with various types of extension. In nine cases out of ten the extensions were too tight, causing bad pressure sores, which might easily have been avoided. Sometimes the sores had been caused by swelling of the foot and ankle after the Thomas splint had been adjusted. More often the use of perforated zinc strips, without sufficient padding at the ankle, or behind the knee, caused the trouble.

In few cases had Capt. Reford found it possible to leave on the extension straps of adhesive applied at the front. The casualty clearing stations suffered from the same lack of good adhesive as did No. 3, and blisters from strapping were common in consequence. Accordingly, removal and reapplication of extension straps became an accepted procedure, an additional factor which made this advisable being found occasionally in the presence beneath the edges of adhesive, or in bandages, of large colonies of

lice. These, presumably, had been acquired by the patient from blankets used during his transit from the casualty clearing station to the base.

Most of the 78 cases which reached No. 3 Hospital came with Carrel's tubes, or packing gauze, in their wounds. In 15 cases foreign bodies remained in the patient, and in 2 of these B.I.P. was packed in on top of the fragment of steel. In 2 cases a large fragment of dead bone was found in the wound. Fifteen of the abovementioned cases required operation at No. 3 for the removal of the foreign body, or bone, and in this group 5 out of the total of 8 deaths occurred. Two cases had arrived without splints, diagnosed simply as "gunshot wound of the thigh," the fracture not having been identified by the surgeons at the front.

Of the 34 fractured femurs covered in Capt. Reford's report, 12 had been caused by rifle or machine-gun bullets, 9 of which had struck the patient and passed on through. Shell fragments had caused 15 cases, 3 were due to shrapnel balls, and 4 were the result of accidents. Of the 8 cases who died, 2 died from causes other than those directly connected with the fractured femur, one from a bullet which fractured the vault of the skull and lodged in the brain, and one, after a 60-foot fall, from abdominal haemorrhage, rupture of the spleen, fractured ribs, and haemothorax, in addition to two compound fractures of the right thigh.

In further comment on the cases of amputation, as well as the cases resulting in death, Capt. Reford pointed out that 7 of the 10 amputations, and 3 of the 8 deaths, had occurred in October, following the Battle of Passchendaele. Weather and ground conditions during this engagement had been appalling, and the patients mentioned had lain out unattended, and in some instances without food, for from 3 to 5 days. Complication of the injury in such circumstances had been well-nigh inevitable.

Of the cases treated to a conclusion and evacuated, Capt. Reford reported that 5 had suffered shortening of the leg of less than 1 inch; 6 of about 1 inch; and 3 of more than 1 inch. On an average the patients had remained 60 days under his care. Of those who died, the average span of life after the wounds had been received had

A Fractured Femur Case

Capt. W. D. Cruikshank viewing a patient in a Sinclair frame. Ward A

totalled 12 days. Few, therefore, had been at No. 3 Hospital for more than about a week.

Two cases, as previously mentioned, had been transferred, both to No. 8 Stationary Hospital. The first of these had been wounded about 3 weeks and had been under treatment at No. 3 Hospital for some time when acute religious mania developed. It was impossible to treat this man satisfactorily in a ward with other patients and his transfer had accordingly been effected. After a week at No. 8 his religious mania had disappeared.

The second case was one with such shattering of the hip-joint and such extensive buttock wounds that he could not lie in a Thomas splint. He was put on a Sinclair net frame at No. 8 and a few days later passed a large fragment of shell per rectum. At the time when he had been admitted to No. 3 Hospital no net frames were included in Capt. Reford's equipment, but ten had later been secured, and, at the time when report to Col. Elder was made, five were in use, one giving relief to a man who without such support would undoubtedly have lost his leg and probably his life.

In concluding his report, Capt. Reford stated that splendid work on his cases had been effected by a mobile x-ray plant, devised by Major Hiram-Cooper, of No. 8 Stationary Hospital. Just previous to the filing of his report, on December 8th, forty cases had been x-rayed as they lay in bed at No. 3. The plates had proved excellent, and the patients had not been disturbed. Capt. Reford further recorded that Major Sinclair, of No. 8 Stationary Hospital, had rendered to him and to the nurses and wardmasters in charge of the fractured femur cases at No. 3 courtesy and advice of the utmost value. Col. Fullerton, Consulting Surgeon, had also advised most helpfully.

In forwarding the report on fractured femurs to higher authority, Col. Elder stated: "Capt. Reford has worked indefatigably to obtain the best results possible, often with inadequate appliances at his disposal. It was a new departure to treat these cases here and the Base Depot Medical Stores could not supply our needs. Private resources were accordingly drawn upon to fit up the fractured femur huts satisfactorily, otherwise our results

could not have been as good as they were. In presenting this report, I wish to commend very highly the work of Capt. Reford in regard to this class of case."

While the fractured femur cases were under treatment at No. 3, routine work of the Hospital had continued. On November 19th three cases of mumps, sent to the unit as "local sick," were admitted from the Portuguese base at Ambleteuse, and promptly isolated. Two days later Capt. J. T. Lewis was taken on the strength from Home Establishment, and on November 26th Capt. F. Munroe reported to fill the post vacated by Major J. W. Hutchinson. Nursing Sister B. Mattice reported for duty on the same day, and on the 29th Nursing Sister H. E. Carman left No. 3 for duty at No. 3 Canadian Casualty Clearing Station. Previous to her departure, Major K. F. Rogers was posted to No. 3 Hospital from No. 2 Canadian Stationary Hospital.

Meanwhile, at the front, activity had been renewed. At 6.20 o'clock on the morning of November 20, 1917, General Sir Julian Byng's Third Army had struck a blow at Cambrai. On a 6-mile front, 6 infantry divisions, supported by 324 tanks, had swept forward in one of the great surprise attacks of the war. Immediate success had attended the effort and thousands of prisoners had been captured, together with parks of artillery and vast supplies of shells. Unfortunately, troops were not available to exploit the initial success. In a few days the Germans summoned reserves and launched a counter-attack, which recaptured much of what had been gained. By December 3rd the British, in the offensive and ensuing defensive, had employed a quarter of a million troops and the Germans at least an equal number. A balance of success from the action accrued to British arms, but disappointment attended the set-back which followed the first few days of smashing victory.

Casualties from the engagement of November 20th did not reach No. 3 Hospital in great numbers. On the 22nd urgent evacuation was effected, but convoys of wounded failed to arrive. On the morning of the 23rd, 1,550 patients showed on the books of the unit, but the majority of these were medical cases and 530 were Portuguese. To entertain these last, the Portuguese Base

Band, a first-class musical organization, played in the Canadian Red Cross Recreation Hut each Wednesday afternoon.

By November 27th the total of patients in No. 3 Canadian General Hospital (McGill) had risen to 1,624, of whom more than 1,000 were medical cases. Lieut.-Col. Lorne Drum, A.D.M.S., 5th Canadian Division, visited the Hospital on this day, and so did Matron-in-Chief Macdonald, who discussed with Col. Elder and Matron MacLatchy matters concerning the unit's nursing personnel.

On November 30th Col. Elder devoted much time to explaining to officers, nursing sisters, other ranks, and Canadian patients the conditions under which they might vote in the Dominion elections. He visited all the Messes, and saw to it that circulars sponsored by the Liberal and Unionist Parties were distributed. At the same time he rigidly excluded from the wards and Hospital grounds electioneering agents of all political persuasions. In his addresses, he refrained from partizan comment, but urged his hearers to exercise the franchise as their consciences might dictate.

In the morning of December 1st Capt. D. Law cast the first ballot, followed by patients, who were polled by special deputies. On the morning of the 3rd Col. Elder supervised the voting of his office staff, and at 2 p.m. did the same for members of the Hospital personnel. At 5 p.m. the night sisters voted, followed at 8 o'clock by the sisters who had been on duty throughout the day. In all, exclusive of patients, 333 ballots were cast before the poll was closed on December 17th.

Amongst the visitors who called at No. 3 on the first day of the elections were Major Mozier and Major de Schwenitz, of the United States Army Medical Corps. These officers were accompanied by Capt. Dickinson, R.A.M.C., and were most anxious to gather information regarding the conduct of a general hospital at the base.

On December 4th Nursing Sisters Olive Fitzgibbon and A. M. Stewart, original members of the unit, were struck off strength on proceeding to Home Establishment. Nursing Sister J. Haycock also left, but the strength of the establishment was maintained, as Nursing Sisters M. I.

MacIntosh and J. M. Sedgewick, who had crossed with the unit from Canada and served previously in France, were reposted on the 4th, and Nursing Sister C. P. Archibald, another original, on December 7th. A fourth original member of the unit, Nursing Sister M. J. Fortescue, rejoined from No. 3 Canadian Casualty Clearing Station on December 12th.

Changes also occurred amongst the medical staff. On the 4th Capt. L. T. Ainley relieved Capt. F. Hogan, and on the 8th Capt. J. R. Atkinson was struck off strength on proceeding to Home Establishment. Later in the month Capt. R. B. Robertson, who had served with the unit since mobilization and had accomplished first-class work, left to assume duties with the 1st Canadian Division. On December 15th Capt. G. M. Foster arrived to replace Capt. Robertson, and on the 16th Capt. H. C. Dixon, whose work with No. 1 Surgical Team has been mentioned, left for Home Establishment.

Meanwhile, in preparation for the winter, a party of the Royal Engineers had begun to build huts to replace the tents in which other ranks of the Hospital were lodged. The work could not be rushed, owing to demands for labour and material elsewhere, but the Engineers promised to do their best and thought that the huts would be ready by December 31st.

Early in December evacuation of patients to England was halted for a time by storms at sea. On the night of the 2nd, 275 patients were admitted to the Hospital, bringing occupied beds on the morning of the 3rd to a total of 1,458. By the following day, despite local discharges, this figure had risen to 1,560, but before night the wind fell, and evacuations to England relieved the strain. This was fortunate, for soon heavy convoys arrived from the final stage of the Cambrai fighting, increasing the total of patients in the Hospital to more than 1,600.

Meanwhile, Col. Elder had interviewed the D.D.M.S., Boulogne Base, regarding a problem which had troubled Col. Birkett in the past and had not been solved, namely, the presence of acute pulmonary tuberculosis amongst Portuguese patients admitted to No. 3 Hospital. Though the Portuguese tuberculosis patients were attended by

their own physicians and cared for by orderlies chosen from amongst the convalescent of their own personnel, Col. Elder felt that the presence of acute infectious disease menaced his own staff and the patients under his care. He urged, therefore, that tuberculosis should be treated as were other infectious diseases and the sufferers removed to a hospital, or sanitorium, specially equipped to meet their needs. Lieut.-Col. John McCrae, Officer in charge of Medicine, forcefully supported this proposal, stating that, in his opinion, the situation demanded prompt action.

Following the interview with the D.D.M.S., Col. Elliot, Consulting Physician to the Boulogne Base, was instructed to study the question and report on what he found. He investigated carefully, and reported that Col. Elder's protests were entirely reasonable. Accordingly, soon after his report was filed, No. 3 Hospital received orders to transfer 12 of the most infectious cases to another centre. Eleven were moved in obedience to this order, but the twelfth was too sick, and remained at No. 3 to die.

When the most dangerous cases had been transferred, the remaining tuberculous Portuguese were quarantined in a special hut, under the care of Portuguese medical officers, who assumed professional, but not executive, control. These officers, stating that they considered the presence of tubercular patients in a general hospital highly undesirable, forwarded to the Portuguese army authorities a request that some special provision for treatment of the cases be made.

On December 10, 1917, it was announced that Australian patients in No. 3 Hospital could vote in the Commonwealth Military Service Referendum on December 12th. Walking patients entitled to vote were instructed to do so in the Orderly Room at 9 a.m., and arrangements were made to poll bed-patients in the afternoon. In all, 122 voted.

Four days later, Col. Elder and a number of officers from No. 3 Hospital attended a Te Deum Service in the Boulogne Cathedral in honour of the taking of Jerusalem from the Turks. General Sir Edmund Allenby had driven forward, forcing the enemy to evacuate the Holy

City and take refuge in the hills beyond. To the bravery of the attacking army, to the skill displayed in its leadership, and to the certainty that Divine assistance had accompanied it, the Bishop of Arras referred in a striking and powerful address.

Some days after this event, No. 3 Canadian General Hospital (McGill) was visited by five Canadian lady journalists, Mrs. Florence McPhedran, of the Toronto *Daily Star*, Miss Roberta MacAdams, M.P.P. (Alberta), Miss M. E. MacLeod-Moore, representing Toronto *Saturday Night*, Miss Beatrice S. Nasmyth, of the Vancouver *Daily Province*, and Miss E. Montizambert, of the Montreal *Gazette*. After lunching with Matron MacLatchy, these ladies toured the Hospital and expressed deep interest in what they saw.

Two days after the newspaper party had visited No. 3, Capt. F. Munroe was despatched to No. 55 Casualty Clearing Station to replace Capt. A. M. Yeates, of Surgical Team No. 2, who had taken ill and been sent to Rouen Base Hospital. On the following day Capt. H. S. White reported from Home Establishment, vice Capt. H. C. Dixon, and on the 23rd Capt. A. W. Hunter was taken on strength and posted to the Department of Pathology.

At 9 o'clock on the cold, moonlit night of December 22nd, an air raid alarm sounded and at once, in obedience to Col. Elder's orders, medical officers stood to in their respective wards. Col. Elder inspected and found all to his satisfaction just before the raid began. No bombs struck No. 3 Hospital, but four crashed into huts occupied by troops of the Army Service Corps near Boulogne, and 40 men were killed. Several wounded from the raid were admitted to No. 3, including one man with a fractured shoulder and a knee-joint ripped wide open.

On Christmas Day, 1917, Surgeon-General R. H. S. Sawyer, D.D.M.S., Boulogne Base, and Brigadier-General H. W. Wilberforce, Base Commandant, visited No. 3 Hospital to wish the Commanding Officer and all ranks the compliments of the season. At 11 o'clock special dinners were served to the 1,300 patients in their respective wards, each man receiving a substantial ration of turkey, plum pudding, or mince-pie, nuts, raisins, oranges, and tobacco, or cigarettes.

When the patients had been given their meal, the other ranks of the Hospital sat down to a dinner served in the Red Cross Hut by nursing sisters of the unit. In the evening the officers and nursing sisters dined together, each being received on entry by Col. Elder, Lieut.-Col. A. T. Bazin, Lieut.-Col. John McCrae, and Matron MacLatchy, all of whom, earlier in the day, had visited the wards of the Hospital to wish patients the best of luck.

For the officers' and nursing sisters' dinner the Recreation Hut had been polished, cleaned, and decorated. Holly, mistletoe, evergreens, and ivy were used to cover the ceilings and walls, and someone had secured gorgeous roses for the table. At the head of the board Col. Elder sat, with Matron MacLatchy on his right, and on her right sat Col. A. E. Ross, D.D.M.S., Canadian Corps.

Storms of cheering rose when Col. Elder announced that good wishes had arrived from Col. Birkett by cable, and further applause when it was stated that, since the unit's arrival in France, more than 93,000 patients had been treated. At 10 p.m. tables were moved from the Hut and supper, at a special table, was served to those who had waited on the feast and to the Hospital Orchestra, which had played during the dinner and was to play dance music until 11.45 p.m. An interesting feature of the Christmas celebrations in 1917 was provided by the fact that all expenses were paid out of funds originating in the sale of waste fats to munition factories in England.

On the day after Christmas, Col. Ross, D.D.M.S., Canadian Corps, delivered a lecture on the medical aspect of the Battle of Passchendaele. As many wounded from this great fight had been sent to No. 3, and as officers and nursing sisters retained vivid memories of the muddy, wearied convoys that arrived, Col. Ross's account of the difficulties which the medical services had faced was heard with the deepest interest.

That afternoon convalescent patients celebrated "Boxing Day" in the Canadian Red Cross Hut; and at 4 p.m. on December 30th, the Matron and nursing sisters of No. 3 Canadian General Hospital (McGill) were "at home" to a number of guests, including Surgeon-General R. H. S. Sawyer, C.M.G., who, much to the regret of all, was vacating the post of D.D.M.S., Boulogne Base. Matron

Pope of No. 2 Stationary Hospital, Matron Hall of No. 5 American Base Hospital, the Assistant Matron of an Australian hospital, and many officers serving with units in the Boulogne Area joined with the staff of No. 3 in wishing Surgeon-General Sawyer the best of fortune and in thanking him for many courtesies in the past.

Following the Matron's reception, a number of the guests dined with the officers of No. 3, and some remained to attend a Watchnight Service and celebration of Holy Communion in the Medical Library of the Y.M.C.A. Hut. With the passing of the old year, Col. Elder issued statistics regarding the work that 1917 had seen accomplished. As these are of no little interest, they are given in full below:—

STATISTICS FOR YEAR 1917

Total Admissions	55,140
Total Deaths	301
Percentage	0.5
Portuguese Admitted	1,953
Total Operations	3,383
Post Operative Deaths	102
Percentage	3.01

STATISTICS COVERING ENTIRE PERIOD OF HOSPITAL'S SERVICE IN FRANCE TO DECEMBER 31st, 1917

Admissions	87,387
Detained Cases Admitted	6,933
Total Admissions	94,320
Deaths	491
Percentage	0.5
Operations	7,601
Post Operative Deaths	218
Percentage	2.86

CHAPTER XV

THE WINTER OF 1918

JANUARY, 1918, opened at No. 3 Canadian General Hospital (McGill) with the problem presented by the care of large numbers of Portuguese patients growing more acute each day. On January 1st Surgeon-General H. Carr, Director of Medical Services, Lines of Communication, accompanied by Col. F. Kiddle, of the Boulogne Base Staff, visited the Hospital and discussed all aspects of the question with Col. Elder, Commanding Officer, and Lieut.-Col. John McCrae, Officer in charge of Medicine.

No policy regarding the Portuguese could be settled by such a conference, but the visitors were given the benefit of the Canadians' considered opinions on the subject and agreed that the Portuguese, at all costs, must be maintained in huts to themselves. In the tuberculosis, venereal, and other infectious cases such a precaution was taken for granted, but, even in non-infectious cases, the British "Tommy" and the Portuguese private could not be warded together without inviting trouble. "Tommy" had his own point of view, and as a ward-mate the Portuguese soldier did not appeal to him.

Such being the situation, Col. Elder was at his wits' end to find accommodation for the soldiers of "Britain's Oldest Ally." On the night of January 2nd, 140 additional Portuguese arrived, filling a series of marquees outside the Hospital walls. Oil stoves were borrowed from the nursing sisters' quarters to heat these tents, and four blankets a bed were issued, but the results were far from satisfactory

On January 4th more Portuguese arrived, bringing the number at No. 3 Hospital to 490. Many of the newcomers had been seriously affected by mustard gas, and 2 died during the night. Mortality amongst the gassed

cases continued, and on the 10th Col. Elder recorded in his diary that broncho-pneumonia was killing four or five of them each day.

Col. Thurston, who had succeeded Surgeon-General R. H. S. Sawyer as D.D.M.S., Boulogne Base, called at No. 3 Hospital on January 6th and again the subject of the Portuguese was canvassed. Col. Thurston agreed that no further reception of Portuguese was desirable, but circumstances proved too strong for him, and on the 12th he was compelled to ask Col. Elder to admit 300 additional cases.

Following the message from Col. Thurston, Professor Cushman, of the War Research Committee, accompanied Col. Elliot, Consulting Physician, on a visit to No. 3, and inspected the Portuguese gas cases. Both officers agreed with Col. Elder and Lieut.-Col. McCrae that many of the patients were too sick to move and that accommodation for the additional Portuguese could not be secured by their transfer

Realizing this, Col. Elder had installed additional beds in tents in the outer compound. Col. Thurston called on the morning of January 13th, and saw what had been done. He agreed that the arrangements were the best that circumstances would permit, and admission of the Portuguese cases followed. By the evening of January 15th No. 3 Hospital was accommodating a total of 576 Portuguese, despite evacuation of a large number to their own convalescent depot.

Though reception and treatment of the Portuguese provided the major problem in the first fortnight of January, 1918, other departments of No. 3 Hospital were by no means idle. On the night of January 1st two convoys were admitted from the front, including some bad cases of Trench Feet. So serious were these and to such an extent had gangrene developed that on the morrow a number required the amputation of both feet.

Meanwhile, patients in the chest ward of the Hospital had been made more comfortable by special beds, furnished, as was all chest ward equipment, by the Canadian Red Cross. Throughout the Hospital, discomfort at this time was caused by cold weather, but oil stoves were provided wherever possible and the patients were kept as warm as blankets and similar coverings could make them.

On January 3rd all ranks of the Hospital were pleased by announcement that, for services previously rendered with a field ambulance of the Canadian Corps, Lieut.-Col. A. T. Bazin, Officer in charge of Surgery, had been mentioned in despatches and awarded the D.S.O. Keen satisfaction was also felt in the mention in Sir Douglas Haig's despatches of Nursing Sisters H. E. Carman and M. J. Woods, who had sailed with the Hospital from Montreal and served with marked devotion to duty in France. Nursing Sister Maude Wright, also an original member of the unit, had received similar mention in the Commander-in-Chief's despatch, dated November 7, 1917.

Two days after announcement of these honours, Major-General G. L. Foster, C.B., Director of Medical Services, O.M.F.C., notified Col. Elder that General Headquarters desired to appoint Lieut.-Col. John McCrae, Officer in charge of Medicine, a Consultant Physician to a British Army in the Field. On the date when Major-General Foster wrote, Lieut.-Col. McCrae was absent from No. 3, delivering a lecture on "Fevers" to field ambulances of the Canadian Corps. As a Consultant Physician's appointment was a high honour, however, there was no doubt that he would accept the post when the offer was formally made.

On January 8th Col. A. E. Webb-Johnson, D.S.O., Consulting Surgeon, visited No. 3 Hospital and discussed with the Commanding Officer and the Officer in charge of Surgery procedure in connection with the secondary suture of wounds. On the following day Col. Elliot, Consulting Physician, called for a long discussion of medical matters with Lieut.-Col. McCrae.

Twenty-four hours later the staff of No. 3 Hospital, with sincere regret, bade farewell to Capt. J. A. MacMillan, who had been transferred to duty with the Canadian Corps. Capt. MacMillan had served with No. 3 Canadian General Hospital (McGill) since mobilization and had accomplished valuable work in diseases and injuries of the eyes, ears, nose, and throat. In eye work he had specialized, but, after Col. Birkett's resignation, he had also assumed charge of the ear, nose, and throat consulting work for the Boulogne Base. On his departure, Capt. J. A. M. Hemmeon took over the Boulogne Base

oto-laryngological work, and Col. William Lister, Consulting Ophthalmologist, was appointed to examine and treat eye cases at No. 3.

About 9.30 o'clock on the evening of January 11th, No. 3 Canadian General Hospital admitted four Australian soldiers injured in a smash of motor cars. Two of the Australians were badly bruised, but not otherwise injured; one had a fracture of the leg below the knee; and one, with a broken arm and fractured skull, was injured beyond hope of recovery, and was placed at once on the list of those whose death was momentarily expected.

Some days after the casualties from the motor accident were admitted, Nursing Sister J. E. McLeod, of Queen Alexandra's Imperial Nursing Service, Acting Sister C. Spence, and Acting Sister A. Rennison, all from the staff of No. 7 British Stationary Hospital, reported at No. 3 Hospital to take a course in general anaesthesia, under Lieut.-Col. A. T. Bazin and Capt. L. H. McKim. For some time Nursing Sister N. J. Enright had been giving anaesthetics at No. 3 so satisfactorily that prejudice against a woman anaesthetist had been dispelled. Officers of No. 3, therefore, were entirely willing to train the English nursing sisters and, from experience, were confident that first-class results would accrue.

On January 18th orders reached No. 3 that all fractured femur cases were to be treated in future at No. 8 British Stationary Hospital, where splendid arrangements had been made to accommodate them. Patients at No. 3 at the time the order was received were to be treated to a conclusion, but all fractured femurs would in future be sent direct to No. 8. Col. Elder was informed of this decision in order that he might prepare to use his femur wards for other purposes.

Following receipt of the orders regarding fractured femurs, Col. A. E. Ross, D.D.M.S., Canadian Corps, visited No. 3 and remained until January 20th, when the Hospital was inspected by Sir E. A. Kemp, Minister of the Overseas Military Forces of Canada, accompanied by Brigadier-General R. Manley Simms, Canadian Representative at G.H.Q. On the day after this inspection, the Hospital was visited by the Medical Commissioner, O.M.F.C., Surgeon-General G. C. Jones.

On January 21st Capt. A. J. Lomas was reposted as Sanitary Officer of No. 3 Hospital from duty with the Canadian Corps. Later in the day H.R.H. Prince Arthur of Connaught, accompanied by his aide, The Master of St. Clair, honoured the Matron and nursing sisters by taking tea with them, after which he dined in the Officers' Mess. Prince Arthur had for some time been serving under Lieut.-General Sir Arthur Currie on the Canadian Corps Staff and news of his work there had preceded him to Boulogne. From his demeanour and bearing in the wards and Messes of No. 3, officers and other ranks concluded that his popularity had been gained through personality, rather than through the goodwill which all members of the British Royal Family enjoy.

Two days after Prince Arthur had come and gone, Col. Elder consulted with Lieut.-Col. John McCrae regarding matters of concern to the Medical Department of the Hospital. Desiring further advice, Col. Elder sought McCrae later in the day and found him asleep in a chair in the Officers' Mess. He complained of a slight headache, and Col. Elder, noticing that he appeared distinctly unwell, advised him to go off duty and to bed.

That night information reached No. 3 Hospital that Lieut.-Col. McCrae's appointment as Consulting Physician to the First British Army had been confirmed. Col. Elder hurried to McCrae's quarters to offer congratulations and to state that news of the honour would be announced at dinner in the Officers' Mess. Lieut.-Col. McCrae was deeply pleased, but said that, as his temperature was around 99° and as he was feeling miserable, he would remain in bed until the morning.

Early next morning Col. Elder looked in to Lieut.-Col. McCrae's room, but the Officer in charge of Medicine was sleeping soundly. Judging that this was better than any alternative treatment for the malaise of the day before, Col. Elder left him undisturbed. Later in the morning he called again, and the patient reported that he felt much better.

That afternoon, however, he sent for Col. Elder and stated that he feared that pneumonia was developing. His sputum had become rusty and his temperature had risen to 100½°. A temperature of 100½° was not in

itself alarming, but Col. Elder knew that McCrae was not the man to express ill-founded fears. He accordingly instructed Major Rhea to examine the sputum microscopically, and Capt. Rogers to go most carefully over the patient's chest. Major Rhea reported that the microscope revealed what appeared to be pneumococci in the sputum, but Capt. Rogers could find no sign of pneumonia in the chest. Realizing that, despite absence of physical signs, Lieut.-Col. McCrae was seriously ill, Col. Elder ordered Nursing Sisters Lilian Pidgeon and Mary Bliss to leave their routine duties to act as day and night special nurses.

In the evening Col. Elder telephoned to Surgeon-General Sir Bertrand Dawson, who came and conducted a most careful examination. Sir Bertrand could find no physical signs of pneumonia, but agreed that an undiscoverable patch of the disease probably existed. That night the temperature rose to over 101° and the patient complained of headache, but towards morning he fell into a calm and apparently normal sleep.

In the morning, with the consent of the Deputy Director of Medical Services, Boulogne Base, Lieut.-Col. McCrae was placed in an ambulance, under the charge of Capt. D. S. Lewis, and transferred to No. 14 British General Hospital for Officers, where Sir Bertrand Dawson could give him unremitting personal care. That night Sir Bertrand telephoned to No. 3 and stated that the patient seemed appreciably better.

Unfortunately, the improvement was not maintained. On the afternoon of January 26th the illness became more serious, and symptoms of cerebral irritation appeared. About 2 o'clock on the following morning the patient's temperature dropped suddenly to 97°, and his pulse weakened alarmingly, but responded to cardiac stimulation. That afternoon, however, the sleepiness which had marked his illness from the beginning increased to coma, and all knew that the end was near. Col. Elder and Major Rhea arrived, at Sir Bertrand Dawson's invitation, to do a blood culture and a lumbar puncture, but, as no benefit could accrue, the plan was abandoned. A few hours later, at 1.30 o'clock on the morning of January 28th, Lieut.-Col. McCrae died.

Confirming the diagnosis which his own professional skill had enabled him to announce in advance of nearly all physical signs, it was found that pneumonia had affected both lungs. Meningitis, too, had developed, explaining the cerebral symptoms, which, from an early stage of the illness, had aroused his brother officers' alarm.

News of Lieut-Col. McCrae's death, spreading through the Boulogne Base, from there to the units of the Canadian Corps, thence to all sections of the British Armies in the Field, and finally throughout the English-speaking world, brought messages of profound regret from friends and colleagues, and from others, to whom the magic of his verse had made irresistible appeal. Much was written about him; nothing more genuinely descriptive than the comment of Dr. A. D. Blackader, Acting Dean of the Faculty of Medicine at McGill: "As a teacher," Dr. Blackader wrote, "John McCrae was trusted and beloved; as a colleague he was sincere; as a physician he was faithful unto the end."

Sorrow at Lieut.-Col. McCrae's death was widespread, but nowhere was it more keenly felt than at No. 3 Canadian General Hospital (McGill). No. 3 had been proud of its Officer in charge of Medicine, had shared the Army's delight in *In Flanders Fields* and *The Anxious Dead*, had admired the keen professional skill, which won appointment as Consulting Physician to the First British Army, and had recognized the quality of the officer moving unostentatiously about his daily work. No man had toiled more selflessly in the service of those committed to his care, and none could less easily have been spared.

With such thought uppermost in all minds, the staff of No. 3 attended the funeral on January 29th. "It was," Col. Elder wrote, "one of the most impressive funerals I have ever seen. Surgeon-General Sir Bertrand Dawson and I walked first as chief mourners. Following the coffin on its gun-carriage came 'Bonfire', McCrae's horse, decked with white ribbons, and led by Dodge. Then came Sir Arthur Currie, the Corps Commander, accompanied by Major-General E. W. B. Morrison, of the Corps Artillery, Brigadier General W. O. H. Dodds, Capt. the Hon. William Shaughnessy, Major

J. F. Lash, Assistant Canadian Representative at General Headquarters, and a number of officers from Corps Headquarters.

"Surgeon-General Sir Arthur Sloggett was also there, as were General Sir. H. S. Horne, Commanding the First Army, Sir Almroth Wright, and all the officers commanding units in this district, as well as a large delegation from the Harvard Unit. Following the officers of the Corps Staff, marched 75 of our other ranks, then a large number of our officers, followed by the men of No. 14 British General Hospital and their officers. Seventy of our nursing sisters, including the Matron, also attended at the start and at the grave."

In beautiful weather the procession marched to the cemetery at Wimereux and there, after final military honours, committed the body to the grave. Description of the scene as officers laid their tribute of flowers on the ground and, saluting, turned sorrowfully away, brings to memory those lines which the dead officer penned in 1904:

> But yesterday the tourney, all the eager joy of life,
> The waving of the banners, and the rattle of the spears,
> The clash of sword and harness, and the madness of the strife;
> To-night begin the silence and the peace of endless years.

John McCrae, soldier, physician, poet, and gentleman, was dead, and for him the peace and quiet of the endless years had begun; but his message had reached the far corners of the Empire. *In Flanders Fields* was, probably, the war poem that touched most human hearts. No man dare estimate the number of recruits that these lines, spoken in the name of the Flanders dead, brought to the service of the King, but that it totalled many thousands seems impossible to doubt.

In the United States, too, the lines touched a chord which vibrated at once in sympathy. Responses were numerous, but no verses so clearly expressed the sentiment stirred as R. W. Lilliard's *America's Answer*. In these lines John McCrae might well find a measure of his unsolicited reward:

The Funeral of Lieut.-Col. John McCrae, January 29, 1918

"As a teacher John McCrae was trusted and beloved; as a colleague he was sincere; as a physician he was faithful unto the end."
—*Dr. A. D. Blackader*

AMERICA'S ANSWER

Rest ye in peace, ye Flanders dead.
The fight that ye so bravely led
We've taken up. And we will keep
True faith with you who lie asleep,
With each a cross to mark his bed,
And poppies blowing overhead,
Where once his own life-blood ran red—
So let your rest be sweet and deep
In Flanders' fields.

Fear not that ye have died for naught—
The torch ye threw to us we caught.
Ten million hands will hold it high
And Freedom's light shall never die:
We've learned the lesson that ye taught
In Flanders' fields.

R. W. Lilliard.

II

During the period when No. 3 Canadian General Hospital watched anxiously the struggle for life which the Officer in charge of Medicine was waging, routine activity could not be suspended. On January 23rd Capt. R. H. Malone, Assistant Pathologist, proceeded "on command" to the India Office, London, there to interview authorities regarding his transfer to the Indian Medical Service. At approximately the same time Capt. H. S. White was struck off the strength on proceeding to duty with the Canadian Corps, Capt. H. D. Livingstone on transfer to Home Establishment, and Nursing Sister I. I. Clark on evacuation to England.

On January 25, 1918, No. 3 Hospital received Col. Joseph A. Blake, of the United States Army Medical Service, who carefully inspected the Operating Room and the ward where the fractured femur cases were completing their period of treatment. That night a full moon brought air raiders, who attacked the Boulogne area between 10 and 11.30 o'clock. Much shrapnel fell in the Hospital grounds, but no bombs struck the unit and no damage was done to huts, or personnel.

Next morning Capt. A. M. Yeates rejoined No. 3 from hospital at Rouen, and in the afternoon Messrs. Cassils and Cambie, Directors of the Canadian Red Cross Society, visited the unit and dined in the Officers' Mess. The Red Cross had accomplished splendid work at No. 3, and the directors were pleased to hear how well the Recreation Hut and the special Chest Hut had functioned. They were impressed by the efficiency of the whole unit and assured Col. Elder that the support of their Society would be continued.

On January 29th Nursing Sister A. M. Cooper proceeded to No. 1 Canadian Casualty Clearing Station for duty, and Majors W. A. McIntosh and D. M. McLaughlan were struck off strength on reporting to the Deputy Director of Medical Services, Canadian Corps. On the same day Capt. F. A. Brockenshire was taken on strength in relief of Capt. H. S. White. Two days later Hon. Capt. and Quartermaster David Law was struck off the strength of the Canadian Army Medical Corps on transfer to duty with the Canadian Red Cross Society. Col. Elder, in the Hospital Diary, referred appreciatively to the work which Capt. Law had accomplished with No. 3 ever since he joined the unit on mobilization in Montreal.

Previous to Capt. Law's departure from No. 3, Hon. Lieut.-Col. Walter Gow, Deputy Minister of the Overseas Military Forces of Canada, arrived to assume charge of the personal effects of his late kinsman, Lieut.-Col. John McCrae. Lieut.-Col. Gow had made every effort to reach Boulogne in time for Lieut.-Col. McCrae's funeral, but circumstances had rendered this impossible. He paid his respects at the grave, therefore, accepted the hospitality of the unit overnight, and returned to London on the following day.

On the afternoon of January 30th Col. Elder took part in a meeting of the Camiers Medical Society at No. 22 General Hospital. Surgeon-General H. Carr, Director of Medical Services, Lines of Communication, was present and joined in discussion of the subject chosen for the day, namely, "Blood Transfusion." Interesting as the conference at Camiers proved, Col. Elder was more deeply concerned in a discussion at No. 3 on the following day, when Lieut.-Col. Adolph Arbayeth, Acting Deputy Director of

Medical Services, Portuguese Army, called to inspect the Portuguese wards. Lieut.-Col. Arbayeth expressed gratitude for the manner in which his soldiers had been treated, but agreed, in the interest of all concerned, to recommend further transfer of cases suffering from acute tuberculosis.

Following the visit of Lieut.-Col. Arbayeth to No. 3 Hospital, Lieut. A. G. Legge, 14th Gloucester Regiment, was attached to the unit as Portuguese Interpreter. As a rule, French provided a means of communication between the Canadian officers and the Portuguese, but at times difficulties arose which the presence of an interpreter would minimize. The appointment of Lieut. Legge, therefore, was a source of satisfaction to all concerned.

Just previous to the day when he reported for duty, Orders announced that three original members of the unit, Capts. W. W. Francis, L. L. Reford, and L. H. McKim, had been promoted majors, as from January 10th. All had served devotedly, and congratulations, therefore, were spontaneous and markedly sincere.

On February 4th the D.D.M.S., Boulogne Base, visited the Hospital and inspected the wards occupied by the Portuguese. He also enquired carefully into provisions made for the safety of patients during air raids, and requested No. 3, during such enemy activity, to keep a Surgical Team standing by to attend possible casualties amongst the Hospital personnel, or amongst patients in two convalescent depots nearby.

Following the visit of the D.D.M.S., Col. Webb-Johnson, Consulting Surgeon, called to arrange for the closing down of the wards for fractured femurs. Few of these cases remained, and Col. Webb-Johnson was informed that all but four would be ready for evacuation, or transfer, by some time in the following week.

The next day Col. Webb-Johnson and Col. Elliot, Consulting Physician, again visited No. 3, where, for the first time in many months, the number of patients had dropped to less than 1,000. Evacuations still further reduced the total in the next few days, and on the 8th all but four of the surgical wards were closed. February 9th, Col. Elder wrote in his diary, was the quietest day the Hospital had seen since May, 1916.

Advantage of this situation was taken to hasten erec-

tion of huts for the unit personnel. Air raiding had rendered tent accommodation unsafe, and Col. Elder was anxious to get his men under more solid cover before the next full moon. Comparative inactivity also provided opportunity for a number of professional conferences with officers from other units. On February 9th members of No. 13 General Hospital (Harvard, U.S.A.) were invited to No. 3, where, after tea had been served by the nursing sisters, Major Rhea exhibited a large and interesting collection of pathological specimens.

Previous to the visit of the Harvard officers, Col. Elder had concentrated his surgical patients in wards close to the Operating Room and had ordered that all outlying wards be given a thorough cleaning. This process had begun when Sergt.-Major F. White was struck off the strength on proceeding to Home Establishment for a commission. On his departure, Quartermaster-Sergeant W. Finlay was appointed in his place.

On February 11th the Rev. Dr. Neill, Moderator of the Presbyterian General Assembly, Canada, arrived to visit No. 3 Hospital, in company with the Bishop of Fredericton and Hon. Major A. P. Shatford. The Hospital was quiet at the time these clergymen inspected, but convoy and evacuation groups were undergoing special training. Two days later the Royal Artillery Band visited the Hospital and played in Ward D and in the Red Cross Recreation Hut. Brigadier-General H. W. Wilberforce, Base Commandant, attended the second concert and congratulated the Bandmaster on the excellent programme provided.

As mid-February arrived, with the number of patients in Hospital still below 1,000, cleaning, scrubbing, and painting of wards and ward-kitchens continued. Under the direction of Capt. Lomas, Sanitary Officer, work in the grounds was also effected, a number of roads being built, others straightened, and several old garden patches cleaned up. In addition, all ward huts were sandbagged to protect the occupants from air raid shrapnel, or fragments of bombs.

On February 15th Capt. W. A. Costain was struck off the strength on proceeding to duty with the Canadian Forestry Corps. Hon. Lieut. and Quartermaster J. E. C.

Carruthers was taken on strength the same day, and on the 16th Capt. G. Cuzner reported from Home Establishment. On the following day Nursing Sister C. P. Archibald was assigned to the special duty of supervising all ward diet sheets.

On February 17th Cols. Fullerton and Elliot visited the Hospital officially, their inspection following a friendly call from Surgeon-General Burtchaell, who was interested to hear that huts for the other ranks had been completed and that the latter were preparing to move from the bell tents, so exposed to air raid fire. He was also informed that dug-outs for the nursing sisters not on duty had been planned and would soon, it was hoped, be constructed.

In view of the splendid manner in which his nursing sisters had worked throughout the war and of the fact that newcomers amongst the orderlies and personnel were occasionally puzzled as to just what authority the nursing sisters possessed, Col. Elder published in Orders the following paragraph: "The Matron and Nursing Sisters are to be regarded as having authority in and about military hospitals next after officers of the Army Medical Corps, and are at all times to be obeyed accordingly. The attention of all wardmasters and orderlies is drawn to this extract from Standing Orders."

On February 13th Major Rhea, Officer in charge of Pathology, proceeded to Canadian Corps Headquarters to lecture to officers of the Corps medical units on "Pathology at the Base," and to exhibit the specimens he had collected. In a letter to Col. Birkett, Col. Elder said: "Rhea's work in mounting pathological specimens is at present engaging the attention of his whole staff, and is really something wonderful. He is going to give a demonstration to medical officers at Corps Headquarters, and a treat is surely in store for them."

Two days after Major Rhea left for Corps Headquarters, the last of No. 3 Hospital's other ranks moved from tents into the huts prepared for them. Col. Elder was relieved of much anxiety by this move, and of further uneasiness when, on the same day, about 50 Portuguese patients, including all those suffering from tuberculosis, were evacuated for repatriation to Portugal. Following departure of the Portuguese, the tuberculosis hut was

fumigated, cleaned, and made ready for other occupants. At the same time the remaining Portuguese were transferred from tents within the college walls to tents outside.

On the day when these changes were effected, Orders announced a number of promotions, some dating from as early as September, 1917. Corporals J. G. LeFebvre and E. A. Bell became sergeants; Lance-Corporals J. W. Snell, G. Smith, W. J. Lucas, and H. W. Atkins became corporals; and Acting Lance-Corporals C. Bausch, W. S. Lewis, M. J. Fay, H. P. Bickley, and G. H. Ratledge were confirmed in their rank.

On the last day of February the Officers' Mess of No. 3 Canadian General Hospital (McGill) entertained officially for the first time in over two years, the guests including the Base Commandant, Brigadier-General H. W. Wilberforce, the D.D.M.S., Col. H. S. Thurston, and the Surgical and Medical Consultants. During dinner the Hospital Orchestra played creditably in the ante-room.

Following the dinner, statistics for the month were announced. On the whole, the work of the Hospital had been light. Since January 1, 1918, 4,315 patients had been admitted, and 11 had died, but this represented a total far below that of previous months and one which had permitted to ward staffs a measure of relaxation and rest. The clerical staff, too, had received orders from the new D.D.M.S., Boulogne Base, to cease compiling many long returns. The number of these at one time demanded, as mentioned previously in this book, had menaced efficiency, and the clerks at No. 3 rejoiced at the sane point of view which had cancelled them.

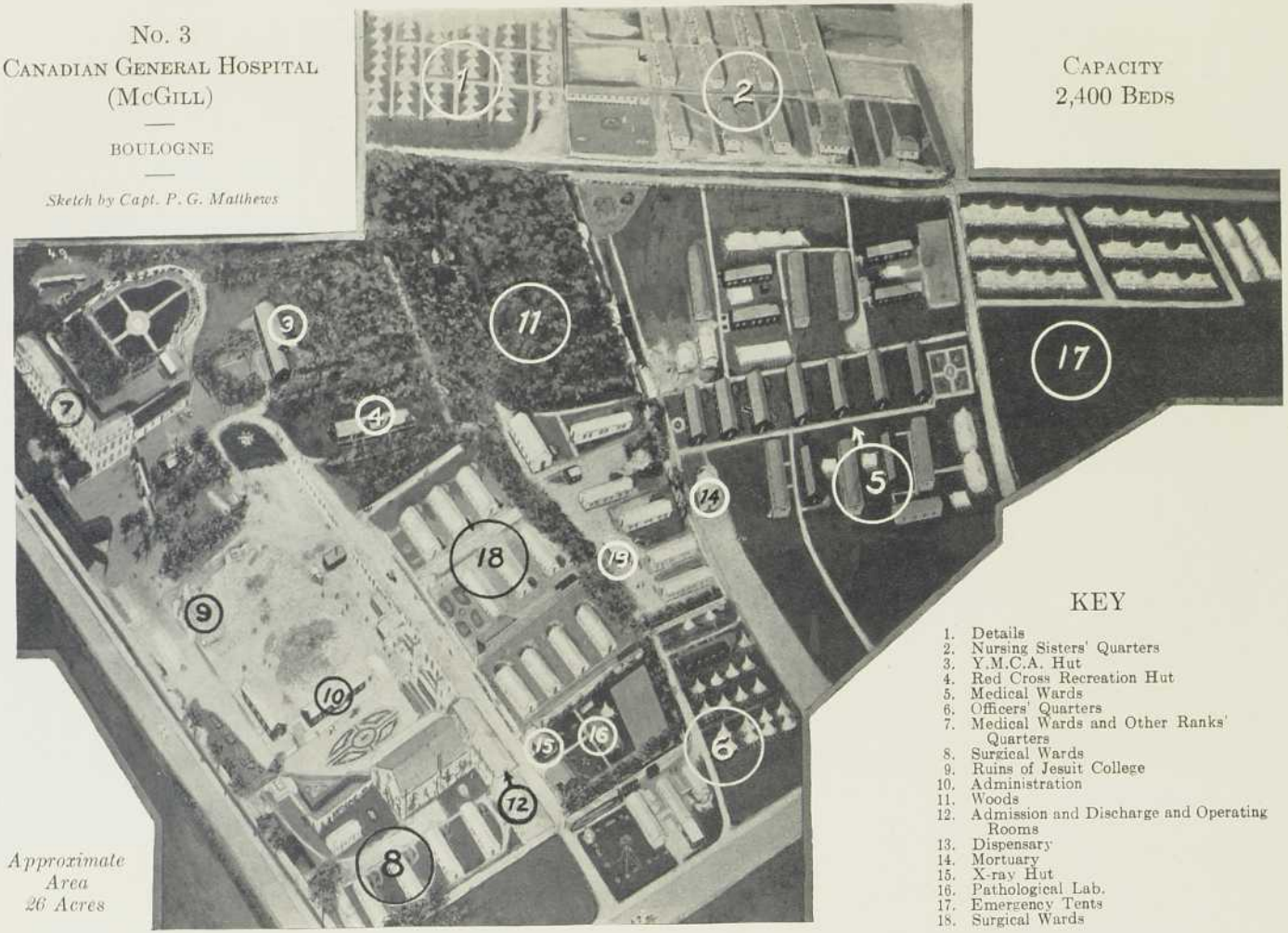
During February, Col. Elder reported, the morale of the Hospital had been excellent. There had been an entire absence of crime amongst the other ranks, and few had even been paraded for infringement of minor regulations. All had worked well, had appreciated the relaxation from the strain of the summer and autumn, had taken the opportunity to perfect themselves in the details of their work, and now stood ready for whatever effort the spring and summer might demand.

No. 3
Canadian General Hospital
(McGill)

BOULOGNE

Sketch by Capt. P. G. Matthews

Capacity
2,400 Beds



Approximate Area 26 Acres

KEY

1. Details
2. Nursing Sisters' Quarters
3. Y.M.C.A. Hut
4. Red Cross Recreation Hut
5. Medical Wards
6. Officers' Quarters
7. Medical Wards and Other Ranks' Quarters
8. Surgical Wards
9. Ruins of Jesuit College
10. Administration
11. Woods
12. Admission and Discharge and Operating Rooms
13. Dispensary
14. Mortuary
15. X-ray Hut
16. Pathological Lab.
17. Emergency Tents
18. Surgical Wards

CHAPTER XVI

GERMANY'S GREAT OFFENSIVE

I

WHEN March arrived in 1918, tension on the battle front in France increased perceptibly. All realized that Germany would attempt to secure victory before the strength of the United States could be applied, and that the enemy would spare no effort to defeat the Allied armies as soon as weather conditions would permit. No one could say with certainty where the enemy would strike, but the British Staff predicted with amazing accuracy both the scene of enemy endeavour and the weight with which the blow would be delivered.

In the rear areas, no less than at the front, it was realized that in Germany's desperate straits no humanitarian considerations, or treaty obligations would govern the enemy in his attempt to achieve military victory. Hospitals and other non-combatant units, therefore, prepared for extensive air raids and bombing. It is significant that in the War Diary of No. 3 Hospital for March, the first entry mentions that lights in the Operating Room had been connected with a dynamo in the X-ray Department, so that, during air raids, operating might continue, even if the normal sources of current should fail.

On March 4th Col. Elder left to spend ten days on leave in England. Immediately before departure, he prepared a report on the work of the Hospital in which he mentioned particularly the services rendered by Major L. J. Rhea, Officer in charge of Pathology, Major W. W. Francis, Registrar, Sergeant B. A. Fauvel, Chief Clerk in the Orderly Room, and Sergeant P. L. Gibson, Sergeant-Dispenser.

Some days after Col. Elder left, a party of British Munition Workers visited the Hospital, and similar parties inspected the unit after his return. Referring to these last, Col. Elder reported that what interested them most was not the patients, whom they rather avoided, but the food served and the measures taken to effect economies. To the astonishment of the delegations, the Commanding Officer of No. 3 was able to show figures proving that in the cost of food an average of more than £1,000 a month had been saved.

Deep interest was displayed by the munition workers in the vast quantities of dripping and other fats salvaged, also in the rag and paper collections, which netted the Hospital appreciable sums. Members of one deputation were enthusiastic in their praise of such good work, and promised to report to their trade unions that unimagined regard for the rights of taxpayers was being exercised by base hospitals in France.

When Col. Elder, replying to a question, informed one delegate that a sick or wounded patient was given whatever diet a medical officer prescribed, the munition worker expressed polite disbelief. The Commanding Officer of No. 3 thereupon led the way to the Steward's Stores and showed the supplies of beef essence and other invalid delicacies available, explaining that all such were given to any man whom a medical officer deemed in need. The munition worker, convinced at last, stated what was true, namely, that in no war of the past had the wounded received similar consideration.

The willingness of the munition workers to visit and talk with the Portuguese and their extreme reluctance to enter British wards puzzled Col. Elder, until in one ward an unmistakable shout of "Slacker!" revealed the underlying cause. The leader of the party thereupon explained that the troops resented the presence of munition workers, whom they regarded as "slackers," avoiding service at the front. Actually, so far as officers at No. 3 could judge, the workers who visited their Hospital were serious-minded men, anxious to learn what was taking place in France, in order that the story might be told correctly to their fellow-craftsmen in England.

At 9.30 o'clock on the night of March 12th German

planes attacked Boulogne, and for twenty minutes bombs dropped in and near the town. A number crashed into fields near No. 3 Hospital, but no serious damage resulted. A few days later, in anticipation of further raids, Orders announced that, on approach of the enemy, the French authorities would warn all concerned by four quick rounds of gun-fire. When the raiders had retired, the "all clear" would be sounded by bugles. The Hospital bugler, it was stated, would also sound the "all clear" in the inner compound and outer camps.

Meanwhile, work on the kitchens, wards, and grounds of the Hospital had continued, with highly satisfactory results. When he returned from leave in England, Col. Elder noted the improvements and wrote in his diary: "I have never seen the place look as well as it does now—and all the credit for the fine appearance of the grounds is due to the hard work of Capt. Lomas, the Sanitary Officer, and Sergt.-Major Finlay."

One of the first announcements made in Orders after Col. Elder's return was that Sergt. F. Matthews and Private L. M. Wade had completed a special course at the Army School of Cookery and had received first-class certificates. Efforts to improve the food served to patients and personnel had been continuous, and the men mentioned had been sent to take the special cookery course with this object in view.

On the day when this announcement was made, 400 officers of Boulogne Base units gathered in the Red Cross Recreation Hut of No. 3 Hospital, under the chairmanship of Major-General H. Carr, D.M.S., Lines of Communication, to hear Major-General C. H. Burtchaell lecture on "Wastage," the comprehensive term which denoted loss to the Army from death, wounds, sickness, and other causes. Close attention was paid to the lecturer's remarks, which included comment on the organization and conduct of hospital units similar to those operating at Boulogne.

On the day following Major-General Burtchaell's lecture, Matron-in-Chief E. M. McCarthy, of the British Nursing Service, visited No. 3 Hospital, accompanied by Matron Conyres and Matron E. B. Ridley, of the Australian and Canadian Nursing Services respectively. The

three ladies were shown over the Hospital and remained to take tea with Matron MacLatchy in the Nursing Sisters' Mess.

Soon after the visit of the British Matron-in-Chief and her associates, Nursing Sister McLeod and Acting Sisters Rennison and Spence, who had been attached to No. 3 for two months, completed their practical course in general anaesthesia and were ordered to proceed for duty to No. 44 Casualty Clearing Station. On the same day, Nursing Sisters M. J. Fortescue and M. Nunn were evacuated sick to England. Nursing Sister Janet Rodd, an original member of the unit, had crossed to England some days previously.

Meanwhile, surgical work at the Hospital had shown an ominous increase. In the week ending on March 3rd British casualties in France totalled 2,500; in the following week the number rose to 4,000; in the next week an increase to 9,500 occurred; and these figures had been reflected at No. 3 Hospital. Realizing that before long the storm indicated by the rising figures would burst in its fury, Col. Elder urged the Portuguese officers attached to No. 3 to arrange for more rapid evacuation of their cases to the Portuguese Base. As a result of his representations, 130 cases were transferred on March 20th, bringing the number in the Hospital down to 429.

In addition to the transfer of Portuguese, No. 3 Hospital received orders to move all remaining fractured femur cases to No. 8 Stationary Hospital, where, as previously mentioned, special provision had been made for them. Reduction in the number of Portuguese beds in the Hospital resulted in less work for the Registrar's Department. In accordance with arrangements existing between the governments, a special account, covering every item of expense, was required for each Portuguese soldier in a British Hospital. Endless book-keeping was involved, and Col. Elder, reporting on the subject, expressed the hope that establishment of a separate Portuguese hospital would soon free his staff of this burden.

On the night of March 20th a prolonged alarm kept patients and staff of No. 3 Hospital on the alert for over two hours. Aeroplanes raided Calais, and for a time it was thought that Boulogne also would suffer. Heavy

firing was heard and far-away gun flashes were seen, but, so far as could be judged, none of the raiders approached the neighbourhood of No. 3.

Soon after the air raid ended, Germany struck the blow which the Allied Armies had been expecting. At 5.30 o'clock on the morning of March 21, 1918, a great bombardment burst on the Third and Fifth British Armies, followed by an infantry attack, which threatened to sweep all before it. Overwhelmed, the British forces were driven from their front line trenches, then from secondary defences, and finally from battle positions of the utmost importance. Casualties in the week ending on March 24th rose sharply to 24,000, and hospitals at the base were soon affected.

From the fact that the great German offensive of March 21st struck the British line at a point far to the south, no wounded reached No. 3 Hospital during the first forty-eight hours of the fighting. On March 23rd a party of medical officers from New Zealand visited the unit, which was preparing to receive large convoys. Hospitals to the south were filling rapidly and it could be only a matter of hours before backwash from the great battle reached Boulogne.

As if to herald the approach of strenuous times, German air raiders bombed Boulogne that night for nearly three hours. In clear moonlight the enemy planes circled overhead, undeterred by the barrage fire of anti-aircraft guns. At No. 3 Hospital one bomb crashed into the grounds, driving a 15-pound stone through the corrugated iron roof of the Matron's sleeping quarters and smashing many windows. No injury to personnel resulted, but elsewhere casualties were numerous. About midnight, as the French hospital in Boulogne was closed on account of the raid, No. 3 was called upon to admit four wounded French artillery officers and three French civilians.

On the morning following the raid, Col. Elder noted in his diary: "The big battle is beginning to tell on us now, so hospitals to the south must be pretty full." On the following day, leave was cancelled, and the D.D.M.S. visited the Hospital with the warning that all possible beds must be held ready for instant occupation. That night about 200 British patients and 100 Portuguese

arrived. For the most part the British were badly wounded, but the Portuguese, fortunately, were not seriously injured and required little attention.

Just as the first flow of wounded reached No. 3, Major L. J. Rhea, Officer in charge of Pathology, reluctantly admitted that he was seriously ill, and that tests had showed a condition curable only by prolonged rest. No man had worked harder for the Hospital than he, few had brought such distinction to its name, and none would leave a gap more difficult to fill. Accordingly, with regret deeper than spoken words could convey, the McGill unit bade him farewell, and wished him all good fortune in the trying days that lay ahead.

On the day after Major Rhea's departure, Major John Todd, Canadian Pensions Commissioner, visited the Hospital to secure data for use in drafting a Pensions Act for the Government of the Dominion. While he was at No. 3 the flow of patients from the great engagement to the south increased in volume. Some 250 arrived in the evening, their admission being witnessed by Lieuts. Greer, Oglesby, O'Neal, and Ousler, American officers who, owing to a failure of train service, had been stranded in Boulogne and attached temporarily to No. 3.

On March 28th the D.D.M.S., Boulogne Base, again visited the McGill Hospital and announced that heavy convoys of wounded would arrive that night. More would follow, and space would soon become of the utmost value. Accordingly, he ordered the Portuguese medical officers to evacuate 230 cases on the morrow. Col. Elder was ordered to prepare the vacated beds for reception of British troops as soon as the Portuguese departed.

While the D.D.M.S. was at No. 3 Hospital arranging for additional British beds, between Puisieux and Oppy and on both sides of the Scarpe the British Army was defeating a great German attack, planned to supplement the success of March 21st. The significance of this engagement has never been appreciated by the public. All eyes at the time were turned to the surge of the March 21st battle, which was approaching Amiens. Had the new attack succeeded as did that of the 21st, disaster must have followed. Instead, on the whole 20-mile front, the enemy was smashingly defeated.

To defeat the Germans, however, the British were forced to pay a price. Wounded from the new battle did not reach No. 3 at once, but 490 mixed cases arrived that night, proving that urgent evacuation was taking place further forward. On the morrow the D.D.M.S. inspected the Hospital and expressed satisfaction with the manner in which the patients were being handled. He stated that crisis expansion was now demanded, and ordered large marquees to be erected on the Hospital football ground. Forty beds were also installed in the Canadian Red Cross Recreation Hut.

While these preparations were being effected at No. 3 Hospital, news from the front was brought to the unit by Major F. A. C. Scrimger, V.C., Capt. W. Lyall, Nursing Sister E. E. Carpenter, and Privates John Parkinson, Harry Shipman, and A. H. Coles, all members of a surgical team who had walked 30 miles, pushing their equipment on a wheeled stretcher, after having been driven out of Roye by the enemy. Pending further orders, this team was taken on the strength of No. 3. Major Scrimger, who had won the Victoria Cross at the Second Battle of Ypres, while serving as Medical Officer to the 14th Battalion, Royal Montreal Regiment, thus appeared on the establishment of No. 3 for the first time. Nursing Sister Carpenter, however, knew the unit of old, having sailed with it from Canada and served previously on its strength in France.

On the day following the arrival at No. 3 Hospital of Major Scrimger's team, Sir John Gibson, late Lieut.-Governor of Ontario, visited the unit, which, owing to dense fog, had admitted a large number of patients from hospital ships detained in the harbour. Heavy evacuation had taken place on March 29th, so beds for these cases were provided without difficulty. Following their admission, the Hospital took temporarily on its strength from No. 3 Canadian Casualty Clearing Station another surgical team, composed of Major W. H. MacDonald, Capt. H. W. Strong, and Privates F. Lawrence, H. Willings, and A. A. MacDonald.

Meanwhile, further reduction in the number of Portuguese patients had been ordered. On March 30th, 259 were transferred to the Portuguese Base at Amble-

teuse, leaving only 186 under Col. Elder's command. All quarters vacated by the Portuguese were immediately prepared for the reception of British troops, for whom, as previously mentioned, 12 marquees of 16 beds or more had also been ordered. When the indent for these was forwarded, the bed capacity of the Hospital stood at 2,049; when they arrived and were erected the total rose to 2,250, a larger figure than had appeared at any previous time in the Hospital's existence.

Writing to Col. Birkett on March 30th, Col. Elder mentioned the activity which the spring battles had caused: "This second Battle of the Somme," he reported, "has been like the first, so far as our activity here goes; but everyone has worked with the good old spirit of this Hospital, which you know so well and which you established from the very beginning. The D.D.M.S. is immensely pleased with our efforts. He has been up here almost daily hunting for beds, and we have never failed him."

Considering that battle had been joined only on March 21st, statistics for the month confirm Col. Elder's statement that busy days had been experienced. During the month 3,280 patients had been admitted, 3,115 had been evacuated, 707 cases had been admitted from detained hospital ships, and 231 operations had been performed. Busy as the final ten days of the month had been, however, officers, nursing sisters, and other ranks realized that still busier days and nights lay ahead.

II

Despite the fact that in the final week of March, 1918, British casualties on the Western Front rose to 47,000, the first few days of April were comparatively quiet at No. 3 Canadian General Hospital (McGill). Every possible bed had been cleared and, with less than 900 patients on the books, the staff stood by awaiting developments. On the night of the 1st, enemy raiders bombed Boulogne, but no damage resulted in the Hospital area.

On the morning after the raid a large marquee outside the college walls was commissioned as a dining tent for those Portuguese who could walk to their meals. This

relieved congestion in the Portuguese wards at meal hours, and was an arrangement agreeable to both patients and personnel. Meanwhile, plans for further reducing the total of Portuguese beds at No. 3 were slowly maturing. On April 6th Col. Elder received orders to evacuate 100 cases to the Portuguese Base at Ambleteuse, and, as had been done in other instances, to convert the beds at once to British use.

Previous to this, on April 4th, Major F. A. C. Scrimger, V.C., and his surgical team had been struck off the strength on returning to duty at the front. On the following day Lieut.-Col. Campbell, O.C. No. 1 Convalescent Depot, called to ask for assistance from the nursing staff of No. 3 in the work of his unit. Provision of such assistance was not simple, but No. 3 undertook to help to the limit that circumstances would permit.

In the week ending on April 7, 1918, British casualty returns reached the highest point of the war. Throughout the week an average of more than 10,000 soldiers daily were killed, wounded, or captured. Such losses at once filled the hospitals in the neighbourhood of the great battles to overflowing and soon affected those further away. On April 6th heavy convoys of wounded reached No. 3 from fighting near Albert and before Amiens. Blood-soaked, muddy, and completely exhausted, the lads and older men of these convoys sank gratefully into the beds prepared for them. Great congestion in the forward areas meant that many had passed through no field ambulance, or casualty clearing station, on the way from the front.

Following the arrival of the wounded from the Somme district, No. 3 bade farewell to Acting Sergt. R. W. H. Owers and Lance-Corp. A. L. Richards, original members of the unit, who were proceeding to duty as mechanics in the Royal Air Force. Lance-Corporal Richards had had charge of the Y.M.C.A. Hut and had carried out his duties with tact and discretion. Sergeant Owers, too, had rendered valuable service and had at all times faithfully performed the duty assigned to him.

Soon after departure of these original members, the Hospital was visited and closely inspected by Col. Powell, Officer Commanding No. 2 Australian General Hospital,

accompanied by two of his officers, Lieut.-Cols. Hurling and McClure. Col. Fullerton, Consulting Surgeon, also called officially at this time and was interested to see how beds for crisis expansion had been prepared. To him Col. Elder showed a plan of the Hospital with 2,206 beds in commission, including those occupied by the Portuguese. That same night a number of the beds were filled by a heavy convoy of tear-gas cases from near Armentières.

Gas shelling on this front heralded a shift northward of the great German offensive. On April 9th the enemy struck on an 11-mile front in the Lys Sector, shattering completely the resistance offered by the Portuguese Army Corps and sweeping forward in a great attack, which broadened to 24 miles as it progressed and involved many British divisions in bitter fighting. Within a few days Germany had thrown 21 divisions into the battle, and, by the first week in May, 49 divisions, of which 40 were fresh, had been employed. Before the impact, the British Army staggered and, for a time, disaster threatened. Somehow, however, as in the great battle to the south, the defence stiffened and the German effort failed to attain its final objectives.

From the area of the new battle, two large convoys of gassed and wounded cases reached No. 3 Hospital on the night of April 10th. More followed, and within twenty-four hours 597 beds had been filled. As in the fighting near Amiens, many of the wounded had passed through no field ambulance, but had been collected from the spots where they fell and hurried straight to the base.

To make room for wounded from the Battle of the Lys, Col. Elder was ordered to evacuate his Portuguese patients to their own base at Ambleteuse. By April 12th all but 37 cases, too sick to move, had been transferred, and the five Portuguese medical officers, Capt. McBride and Lieuts. McBride, Da Costa, Pittschieller, and Freitas, had bidden No. 3 Hospital a regretful adieu. Two days later the books of the Hospital still showed the 37 sick Portuguese, but 31 were transferred on the following day, and by April 18th none remained.

To claim that No. 3 Hospital saw the Portuguese depart with regret would be untrue. Their presence had added tremendously to the work of the unit, whose per-

sonnel, in temperament and point of view, differed from the Portuguese widely. All ranks, however, had recognized their claims to hospitality, and, to the best of their ability, had helped the Portuguese soldiers in their sickness and the medical officers in their work. In all 4,505 Portuguese troops had been admitted, of whom 3,538 were sick and 967 wounded. At one time, as previously mentioned, the Hospital had supported 630 Portuguese beds.

That the Government of the Portuguese Republic appreciated the care and attention given to its men was demonstrated later when the rank of Commander in the Portuguese Military Order of Aviz was conferred upon Col. Elder. Some impression of the gratitude of the Portuguese medical officers for the courtesy and consideration shown them by the Commanding Officer and Staff of No. 3 is conveyed in a letter to Col. Elder from their chief, Capt. McBride. As Col. Elder spoke no Portuguese, Capt. McBride wrote in French:

Ambleteuse,
No. 1. Port. Gen. Hospital,
20–1–1919.

Mon cher Colonel:

Je m'empresse à vous faire part que je viens d'apprendre par le Bulletin du Ministère de la Guerre que le gouvernment Portugais vous a decerné le grade de Commandeur de l'Ordre Militaire de Aviz.

Je suis très heureux de voir que mon pays vous a rendu la preuve de la reconnaissance pour les soins distingués qui ont reçu les cinq mille soldats portugais qui sont passés au No 3 Canadian General Hospital (McGill).

Mieux que personne je connais tout ce que nous devons a cet hôpital modèle, où j'ai passé le meilleur temps en France et dont je garde les plus agréables souvenirs.

Je me rappelerai toujours de l'accueil bienveillant que les officiers portugais ont eu de vous et de vos officiers, le dévouement de Miss MacLatchy et des Sisters pour nos malades et blessés.

Je ne saurais méconnaitre aussi ce que nous avons appris pendant le séjour chez vous, grâce auquel j'ai pu

prendre la tâche de faire l'installation de mon hôpital. C'est votre magnifique organisation que j'ai pris pour modèle.

C'est pour tout cela que la Gouvernement Portugais a voulu vous honorer avec un des plus anciens Ordres de l'Europe. Il a été fondé par des Moines Cavaliers au XIIIème siècle. Les plus grands princes du Portugal, parmi eux le prince D. Henrique, le Grand Navigateur, sont fils du Roi Jean I. Grand-Maitre de l'Ordre de Aviz, qui a donné le nom à la dynastie la plus brillante du Portugal.

La couleur de l'Ordre c'est le vert et vous comme Commandeur vous avez la gravale et la plaque. Je crois que vous recevrez les insignes par le War-Office mais je vous demande la permission de vous offrir la plaque que très facilement je ferai venir de Lisbonne.

Veuillez, mon Colonel, agréer l'hommage de mes meilleurs sentiments, de mon profond respect, et de mon dévouement le plus sincère.

A. M. McBride.

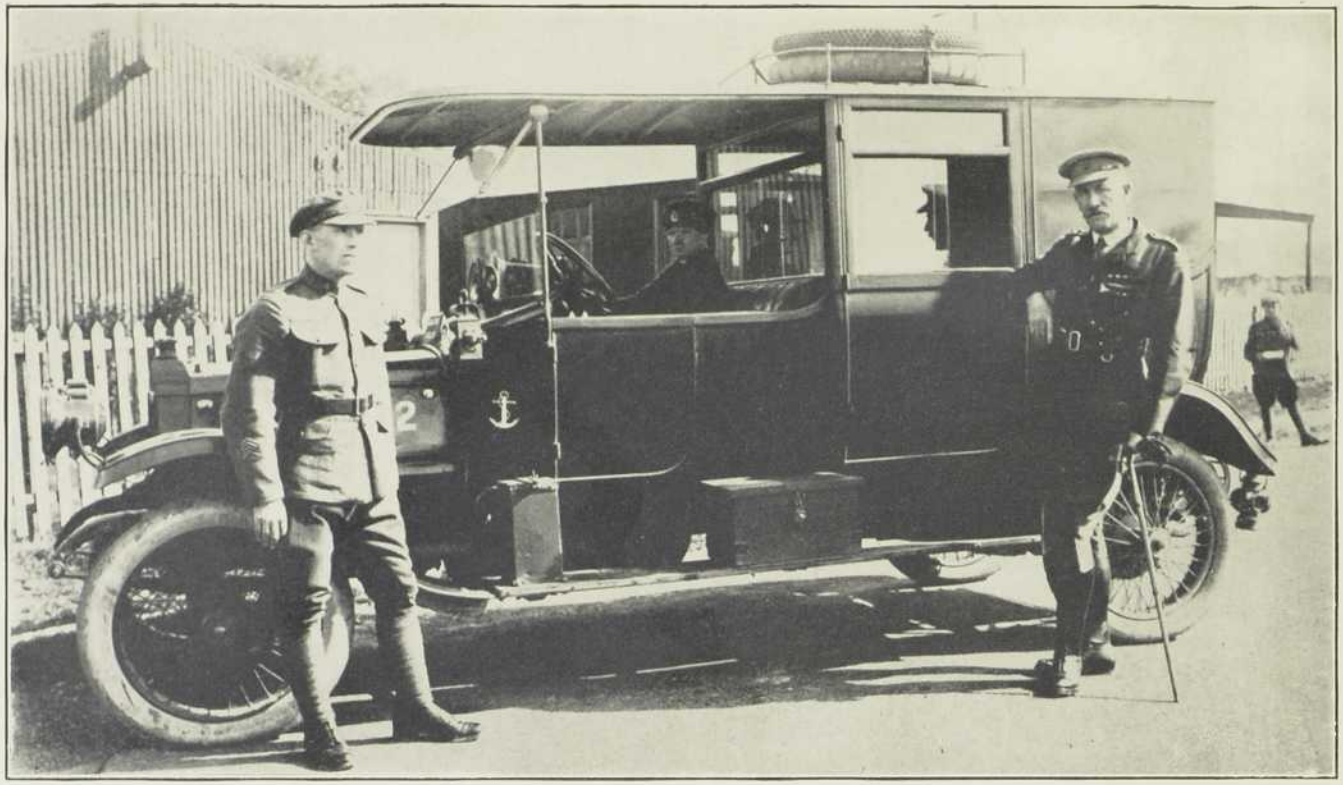
At a later date, after the war was over, Capt. McBride wrote again, repeating his thanks and referring to the agreeable memory of his work at No. 3:

Lisbonne, 17 Septembre, 1919.

Mon cher Colonel:

D'abord, je vous prie de m'excuser d'écrire en français, mais malheureusement mon anglais est encore très réduit et il m'est très difficile de l'écrire d'une façon passable. Il m'est aussi nécessaire de demander votre pardon pour le retard dans l'envoi des insignes de Commandeur de l'Ordre de Aviz, que je suis très heureux de pouvoir vous offrir, comme souvenir de l'accueil que vous m'avez fait au No 3 Canadian, aussi bien comme hommage de mon respect pour vos hautes qualités.

Je suis arrivé à Lisbonne au mois de mai et j'ai fait de tout mon possible pour obtenir la décoration. Je suis tombé en pleine grève des ouvriers de décorations et c'est seulement il y a quelques jours que j'ai pu l'obtenir. Avec elle vont les rubans à rosette de Commandeur que vous pouvez mettre dans la boutonnière de votre costume



Col. J. M. Elder, C.M.G.

Photograph taken at No. 3 after Col. Elder's appointment as a Consulting Surgeon to the British Army, Rouen Area

civil. Vous devrez aussi dans un bref délai, recevoir une petite réduction des insignes qu'il est d'usage de mettre dans l'habit pour quelques réceptions plus intimes. Elle n'est pas encore prête, mais aussitôt qu'on me l'aura fait parvenir, je vous l'enverrai.

Je crois que vous serez bien content de la plaque. Elle est jolie et la croix qu'elle a au milieu c'est la croix de l'Ordre. L'écusson des membres de la dynastie d'Aviz porte au milieu des Armes du Portugal la même croix. Il m'a été impossible de trouver en français ou en anglais une histoire de l'Ordre, qui date du XIIIème Siècle.

A Lisbonne j'ai eu le plaisir d'apprendre que le Gouvernement Britannique m'a décerné la Military Cross. Je suis bien sur que c'est grâce à vous qu'une si haute distinction m'a été conféré. Pendant le temps où j'ai eu l'honneur de servir sous vos ordres je n'ai fait que le possible pour accomplir ma mission avec le zèle correspondant au bienveillant accueil avec lequel les portugais ont été reçus. C'est votre bonté qui vous avait fait regarder mes services comme dignes de récompense, et très profondément ému je vous adresse tous mes remerciements. Il m'est très agréable de vous dire que tous les portugais qui sont passés au No 3 Canadian General Hospital, se souviennent de son séjour avec les plus chauds mots de sympathie.

Il y a quelques jours je suis allé visiter un Institut de rééducation professionelle pour les mutilés de guerre. J'y recontrais beaucoup de soldats qui sont passés dans votre Hôpital. Tous m'ont demandé des nouvelles de vous, de la Matron, des Sisters, et même des orderlies.

Les officiers de mon team me parlent toujours de la bonne compagnie de leurs camarades canadiens et ils s'appellent encore *portuguese-canadian medical officers* comme au temps où ils servaient sous vos ordres!

La plupart d'eux sont dispersés par le pays, à Lisbonne je ne vois que Pittschiller et Da Costa. J'ai conseillé celui-ci de s'adresser à vous, parce qu'il veut passer quelque temps en Amérique pour étudier les maladies de l'estomac. Même de loin vous serez pour nous encore un maître et j'espère bien que vous ne refuserez pas ces humbles élèves portugais.

Moi, je n'ai pu encore prendre ma vie. Les troubles

politiques inquiètent aussi la vie des hôpitaux. Dans quelques jours je vais à Paris pour assister au Congrès français de Chirurgie qui est pour nous chirurgiens des pays du Midi, le grand congrès, où tout le monde se rencontre.

Au retour je reprends ma place à l'Hôpital S. José qui est le plus grand hôpital général de Lisbonne, très riche en malades et en cas, mais malheureusement très vieux et très mal accommodé. Mais j'y m'accommoderai de mon mieux et je me rappellerai toujours du modèle d'organisation hopitalière des pays de langue anglaise.

J'aimerais bien aller au Canada, vous rendre visite mais pour le moment il m'est impossible d'entreprendre un long voyage. Mais j'y irai bien sûrement.

Vous seriez bien aimable de présenter mes compliments au Colonel Bazin et à Miss Davies et de leur dire toute ma sympathie pour eux.

Veuillez, mon cher maître, agréer, avec l'hommage de mes sentiments les plus dévoués l'assurance de ma plus haute considération.

A. M. McBride.

Just before the last Portuguese patients left No. 3 Hospital, Major W. H. Tytler reported from No. 2 Canadian Casualty Clearing Station to assume the duties of Officer in charge of Pathology, vice Major Rhea. On the same day Major W. A. McIntosh was struck off strength on proceeding for duty to the Canadian Forestry Corps, and on the following day Capt. H. E. Law, Quartermaster, was posted to No. 9 Stationary Hospital, St. Omer. On April 13th, Hon. Lieut.-Col. H. W. Blaylock, Assistant Commissioner of the Canadian Red Cross Society, left Boulogne to become Red Cross Commissioner in England. As he had proved a true friend, No. 3 Hospital witnessed his departure with regret, tempered only by the fact that Capt. D. Law, an original member of the McGill unit, had been appointed in his place.

In view of the ordeal through which the British Army was passing at this time and the tremendous effort Germany was making to spread defeatist propaganda behind the front, it is interesting to note that on April 12th all ranks of No. 3 Hospital were warned that repetition of

false and alarming rumours would be considered a serious offence, involving trial by court-martial. Similar warning was issued to patients, including a number of American soldiers who had been admitted not long before.

On April 14th laundry arrangements in Boulogne broke down, forcing No. 3 Hospital to conserve linen in every way possible. Such an event would not seriously have troubled the unit a few weeks before, but, happening when it did, sharp inconvenience resulted. Heavy convoys arrived from the front each night and all surgical departments of the Hospital were using much linen in consequence. In the Operating Room the strain was particularly felt, as, owing to a large number of gas gangrene cases, the staff were frequently at work until late at night, and the demand for linen supplies was accordingly increased.

On April 15th Cols. Elliot and Fullerton, Consultants, visited the Hospital, which was extremely busy. Medical wards were light, but more gas gangrene cases had arrived and emergency operating had of necessity followed. Similar conditions prevailed on the 19th, when Hon. Major and Quartermaster H. J. Adair was taken on strength, vice Hon. Capt. and Quartermaster H. E. Law, and when the unit was inspected by Sir Arthur Farley, British Red Cross Commissioner, France, accompanied by his chief assistant, Major Wynch.

Previous to the arrival of the British visitors, the Commanding Officer of No. 3 Hospital had been asked to report how far women could be employed in the Sisters' Compound to release men on duty there, and how far "A" Class men in the unit could be replaced by "B" Class soldiers from the front. In answer to the first question, Col. Elder reported that, with the exception of one man for heavy duties, all men in the Sisters' Compound could be replaced. To the second question he replied that since January 1, 1918, he had exchanged with medical units farther forward 16 men of Class "A" for an equal number of men classified "B," or lower. He suggested that exchanges should be confined to units of the Medical Service, as otherwise long training would be wasted.

On the morning of April 22nd, 250 patients were

evacuated, bringing the total in the Hospital down to below 1,000. Writing to Col. Birkett on this date, Col. Elder mentioned the work of the previous month. "In the latter part of March and the first three-quarters of April we have had a busy time. Between March 22nd and to-day we have admitted 5,857 patients and performed 574 operations. Owing to the large amount of gas gangrene, our death rate has been rather higher than usual. With all the rush of patients, we kept evacuating steadily, and never had less than 800 empty beds, much to the delight of the D.D.M.S. and the D.G.M.S., Sir Arthur Sloggett, who called personally to congratulate the unit and instructed me to put out a Special Order to that effect. All of which goes to show, I hope, that your old unit is keeping up its good reputation."

When Sir Arthur Sloggett visited No. 3, as mentioned above, he expressed deep interest in the work being accomplished by Nursing Sister N. J. Enright, Anaesthetist, and by Nursing Sister C. P. Archibald, Dietitian. Anaesthetics he understood and could appreciate; diets and the work of a dietitian were new to military hospitals in France and required explanation. Accordingly, he asked Col. Elder to prepare a report.

In compliance with Sir Arthur Sloggett's request, the Commanding Officer submitted a statement regarding Nursing Sister Archibald's qualifications and work. In the first place he pointed out that the Dietitian had acquired experience in her specialty before enlisting for service in France. Civil hospitals in Canada had found that by paying attention to diets more value could be extracted from foods prepared for patients' use. As Col. Elder remarked, the feeding of sick patients was a different matter from rationing an army. The value of the food to the patient depended entirely on the number of calories he could be induced to *consume*. Such being the case, and to avoid waste, the food must be good, appetizingly served, and must suit individual need.

The first duty of the Dietitian, therefore, was to supervise the food in the wards, and, so far as possible, to order one of four standard diets, as seemed advisable. She would note, for example, that a certain patient, owing to defective teeth, could not satisfactorily masticate

straight beef, but that, when the beef was minced, he ate his entire ration with relish. On a diet of soft, or softened, foods, this patient would gain rapidly. On a diet suitable to a man with sound teeth, his recovery would be perceptibly retarded.

Then, the Dietitian visited the wards during the serving of meals to make sure that food supposedly hot reached the patient in that condition. Nothing discouraged a sick man more than cold and soggy dishes, with gravy solidifying to grease, or with lukewarm drinks, as an accompaniment. Nursing Sister Archibald's attention to this phase of her duties resulted in improvements much appreciated by the patients under her care.

In addition, she frequently inspected the kitchens while food was being cooked. Army cooks, as Col. Elder remarked, are taught to prepare food for men in robust health, but know little of how to stimulate the appetite of a man sick in bed. As a result of Nursing Sister Archibald's visits to the kitchens of No. 3, however, and of the support given her by the Commanding Officer and Quartermaster, cooks in the McGill unit took pride in their work and realized that the welfare of patients depended in a marked degree on how the kitchens functioned.

In concluding his report on the work accomplished by his Dietitian, Col. Elder stated that in three months the food-value of meals supplied to patients had been increased from 20,000 calories to over 30,000 calories, without increasing by a penny the average cost, which remained constant at approximately 36 cents a day for each patient.

At the time when Col. Elder presented his report, No. 3 Hospital was caring for 1,000 patients. Convoys kept arriving, but steady evacuations maintained the number of occupied beds at this low figure until the last week in the month. On April 26th, 225 lightly gassed cases were admitted, and in the twenty-four hours ending on April 27th, 420 gassed and badly wounded cases from the Kemmel front arrived. These raised the total of patients to approximately 1,300.

Among the cases from the neighbourhood of Kemmel, a large number showed signs of gas gangrene, and deaths from this cause as the month ended averaged three a day.

Tetanus also made its appearance, and on the 29th Col. Elder recorded that four cases, 3 of local tetanus and 1 generalized, were undergoing treatment. "All are doing fairly well," the Commanding Officer of No. 3 wrote, "under huge doses of anti-tetanus serum—300,000 units in one case—given intra-thecally, intra-venously, and subcutaneously all at once. The object is to get in as much serum as one can as soon as one can."

On account of the tetanus and gas gangrene cases, April drew to a close with a larger number of patients than usual on the "Dangerously Ill" and "Seriously Ill" lists. Fifty-seven were so posted on the 28th, and this figure, despite a number of deaths, was not appreciably changed by the 30th.

On the 29th Capt. W. J. McEwen, Canadian Army Dental Corps, was attached to the Hospital, vice Major G. H. A. Stevenson, and on the 30th Capt. A. J. Lomas, Sanitary Officer, was transferred to Home Establishment. After noting these changes, the War Diary of the unit tabulates the statistics for the month. Admissions numbered 4,725, plus 608 "detained" cases, bringing the total to 5,333. On the cases admitted, 583 operations were performed, a total greater than in any previous month of the Hospital's existence. Unfortunately, gas gangrene raised the number of deaths to 33, not a high percentage of the cases treated, but higher than that of former months and correspondingly disappointing. Not even in war days, when death was ever calling the flower of the nation's manhood, could the staff of a great base hospital accept without deep regret the tragedies they toiled so selflessly to avert.

CHAPTER XVII

AIR RAIDING CONTINUES

I

MAY, 1918, opened at No. 3 Canadian General Hospital (McGill) as April had closed, with a large number of cases on the list of those seriously, or dangerously, ill. Gas gangrene lay at the root of the trouble, but, as previously mentioned, tetanus also had appeared in four cases, a larger number than the Hospital had so far treated at any one time. All were receiving the huge doses of serum that experience had shown to provide the only possible hope of cure.

On May 2nd Major-General G. L. Foster, D.M.S., O.M.F.C., called at No. 3 Hospital, accompanied by Lieut.-Col. J. G. Adami, of his Staff. Later in the day Major-General C. H. Burtchaell and Hon. Lieut.-Col. H. W. Blaylock arrived, both parties remaining to dine in the Officers' Mess and afterwards consulting with Col. Elder on many aspects of the Hospital's work.

Following departure of the visitors, a convoy of medical patients was admitted, similar cases predominating in the convoys of the next few days, much to the relief of Lieut.-Col. A. T. Bazin, Officer in charge of Surgery, Major L. H. McKim, his principal assistant, and Nursing Sister I. Davies, in charge of the Operating Room Staff, on whom the brunt of the heavy surgical work of the previous weeks had fallen.

On May 2nd Major W. W. Francis, Registrar of the Hospital, was granted three weeks' sick leave, and on the 3rd the unit was visited by Col. Westmacott, Officer Commanding No. 57 General Hospital. Three days later the Hospital celebrated the third anniversary of its sailing from Montreal. To mark the occasion, the four remain-

ing original officers of the unit dined with the original nursing sisters, 39 in number, two officers who had crossed from Canada with the Hospital joining the party from units at the front. After dinner, a dance for all officers and nursing sisters on the establishment was held in the Red Cross Hut.

Next day, Orders notified the nursing sisters of the Hospital that air raid dug-outs in their compound, though not completed, were available for use and would be lighted by a lantern each night. Some nights later a raid alarm was sounded and the dugouts were occupied, but no hostile planes appeared and before long the Hospital bugle sounded the "all clear."

By the morning of May 11th the number of patients in No. 3 had dropped to 929. Col. Elder believed that this gave him an adequate number of emergency beds, but at 1 p.m. orders arrived to expedite evacuations. Accordingly, more than 100 patients were transferred to England, and further evacuations on the following day reduced the total number in Hospital to approximately 700.

Frequent air raid alarms marked the early morning of May 13th, but no bombs were dropped near No. 3, and admission of convoys from the neighbourhood of Ypres proceeded without interruption. In a letter to Col. Birkett on this date, Col. Elder mentioned a new establishment for general hospitals issued not long before. Under the terms of this document, other ranks at No. 3 Hospital were increased by 63, but officer strength was reduced from 36 to 28, giving each practising officer on the establishment approximately 100 beds to care for, instead of 75. Col. Elder stated that, from his point of view, the change was satisfactory, the increase of other ranks giving help where most needed and more than offsetting any disadvantage resulting from the decrease of officers.

On May 15th No. 3 Hospital received orders to evacuate all possible cases to England. This was done, and on the following day three convoys arrived from casualty clearing stations at the front, most of the cases being "sweepings," the graphic term used by the Hospital Diary to denote mixed classification.

At noon on the day when these patients were admitted,

a German plane visited Boulogne and was greeted with intensive anti-aircraft fire. Shrapnel rained down on the ground of No. 3 and a large "dud" shell fell near the Y.M.C.A. Hut, but patients and staff kept under cover and escaped injury.

Two nights later moonlight brought the German planes again. No bombs fell near No. 3, but anti-aircraft guns were in action not far away and explosions were heard from the direction of Marquise. A short time later the sky in the same direction reflected the glow of a fire. Apparently the raid had not failed to reach some vulnerable objective.

No convoys reached No. 3 Hospital on May 19th. Casualties on the whole British front dropped to 10,000 in the week ending on this date, and had been but 1,000 higher in the week before. This situation, in conjunction with the urgent evacuations that had taken place, explains why the unit Diary on the 19th bore the entry: "Hospital daily becoming more empty."

As enemy activity on the battle fronts decreased, air raiders spread death and destruction in the British rear areas. In clear moonlight on the night of May 19th, German planes appeared over Boulogne. No bombs were dropped on No. 3 Hospital, but for nearly three hours all ranks were forced to remain under shelter to avoid injury from falling shrapnel

Morning brought the news that Canadian hospitals at Etaples had been less fortunate than No. 3. At No. 1 Canadian General Hospital a bomb had dropped in the men's quarters, killing a number of other ranks and setting the quarters on fire. Guided by the flames, the raiders had then set about their business in earnest, bombing until 1 officer, 3 nursing sisters, 54 other ranks, and 6 patients lay dead or dying in the wreckage of the unit, together with 2 officers, 5 nursing sisters, 39 other ranks, and 30 patients, more or less seriously injured. At No. 7 Canadian General Hospital (Queen's), 2 officers, 20 other ranks, and 20 patients were wounded

Following the raid at Etaples, it became known that the dead included Capts. D. E. Howe and W. F. McIsaac, the latter a graduate in Medicine of McGill University; also Nursing Sisters M. Lowe, G. M. M. Wake, and K. M.

Macdonald. Before the end of May the Canadian Army Medical Corps was to suffer further heavy loss when, on the night of the 29th, air raiders attacked No. 3 Canadian Stationary Hospital, at Doullens.

Details of this disaster reached No. 3 General Hospital on the morning of May 31st. On that date Col. Elder entered in his diary the following comment: "General Burtchaell tells me that they bombed No. 3 Can. Stat. Hosp. at Doullens the night before last. They got the Operating Room, killing 2 officers, 2 nursing sisters, the sergeant-major, and about 30 others." Unfortunately, these details were true. A ground flare had been dropped, lighting up the hospital, and thereafter, as at Etaples, the raiders had smashed the unit with bombs. In the Operating Room, Capt. E. E. Meek, a graduate in 1901 of the University of Manitoba, and Lieut. A. T. H. Sage, who received his degree from Jefferson Medical College in 1913, stuck to their work, assisted by Nursing Sisters D. M. Y. Baldwin, E. L. Pringle, and A. Macpherson, until all were killed. Four patients and 16 orderlies were also killed during the raid, and many of the patients and staff were wounded.

Meanwhile, at No. 3 Canadian General Hospital (McGill) the routine of a base hospital had continued. On May 20th Nursing Sisters C. R. Fisher and A. M. H. Fleming reported to receive instruction in general anaesthesia. On the 21st their course started, and on the 29th they were joined by Nursing Sister A. White. The previous course, which Lieut.-Col. Bazin, Major McKim, and Nursing Sister Enright supervised, had satisfied the authorities, who had decided that delay between courses should be eliminated.

On the day before the course in anaesthesia began, the men of No. 3 Hospital took possession of an athletic field, which the Base Commandant, Brigadier-General H. W. Wilberforce, had set aside for their use. A few days later the Hospital played No. 2 Canadian Stationary Hospital at baseball on the new field and, after each had scored 4 runs in 8 innings, batted in the winning run in the ninth.

Casualties on the British front continued at about 10,000 a week as May drew to a close, and these figures, as always, found reflection in comparatively quiet days

A Group of the Nursing Sisters, 1918

at the Base. On May 21st the Diary of No. 3 Hospital noted that for five days no convoys had arrived from the front, admissions having been limited to a small number of local sick and to cases from detained hospital ships. Not including the detained, the number of patients had dropped to 550, less than had appeared on the books on any one day for many months.

This situation lasted but a short time. On May 22nd several convoys were admitted from the Ypres Sector, some badly wounded, but the majority of them "sweepings" from the casualty clearing stations, which had received orders to evacuate rapidly. These cases passed through No. 3 without delay, being replaced by 100 more patients from Ypres on the 27th, and by a few convoys of gassed and slightly wounded cases from the same neighbourhood on the 29th.

Previous to this, news arrived that Germany, having failed in her great effort to defeat the British army, had struck against the French. Just how this would react on British base hospitals was not clear at the moment, but the most probable result was that admissions would not rise above normal figures. As statistics compiled at the end of the month show, May had provided No. 3 Hospital with less action than had been expected. Over 2,660 patients had been admitted, operations had totalled 151, and 25 patients had died, but these figures reveal a month much quieter than all ranks had feared.

On May 28th Col. Elder was gazetted as "Mentioned in Sir Douglas Haig's Despatch of April 7th." At the time when news of this honour reached No. 3, other ranks were employed, under orders from higher authority, in constructing a huge white cross, with arms 60 yards long and 20 feet wide, so that air raiders would know the establishment was a hospital. Col. Elder obeyed orders and placed this cross in position, though he had no faith in its protective value, and said so unequivocally. A few days later his judgment was upheld. Germany refused to abstain from bombing marked hospitals, and orders to complete the cross were accordingly cancelled.

In the evening on May 31st, Col. Elder attended a dinner in Boulogne to bid farewell to Lieutenant-General Sir A. T. Sloggett, who was relinquishing his appointment

as Director-General of Medical Services, British Armies in the Field. Following the dinner, an air raid kept all ranks at No. 3 Hospital under cover from 10.30 p.m. until half-past one o'clock on the morning of June 1st. No casualties to Hospital personnel resulted, but one badly wounded man was admitted from a camp nearby. In mentioning this raid, and others which had occurred during the month, Col. Elder reported that, notwithstanding the slaughter of officers, nursing sisters, patients, and other ranks in hospitals not far away, all under his command had faced the possibility of similar disaster with courage worthy of high commendation.

II

In company with the commanding officers of all hospitals in the district, Col. Elder proceeded to the docks in Boulogne on the day when Sir Arthur Sloggett crossed to England. At the request of the retiring officer, the following message to Col. Elder was promulgated in Orders on June 2nd: "On relinquishing my appointment as D.G., I wish to express to you and to all ranks under your command my sincere thanks and great admiration for the splendid work which has been done at Boulogne for the sick and wounded. I hope that the same standard will be maintained and I wish you all every success.—A. T. Sloggett."

In the week ending on the day when this message appeared, British casualties on the Western Front dropped to below 10,000 for the first time since the opening of the German offensive on March 21st. A slight increase occurred in the following week, but thereafter, until the end of the month, the weekly total was maintained between four and six thousand. These figures meant that throughout June no undue strain was imposed on the surgical departments of hospitals at British bases.

On June 3rd, His Majesty's birthday, all ranks at No. 3 Hospital were delighted to hear that Col. J. M. Elder, for services in command of the unit, had been created a Commander of the Most Distinguished Order of St. Michael and St. George. Equal satisfaction was felt a few days later when Nursing Sisters Isabel Davies and

Mary Bliss were awarded the Royal Red Cross, 2nd Class. These sisters had crossed from Canada with the unit, and all ranks agreed with Matron MacLatchy, who recorded the opinion that the honours were "singularly well deserved." On the same date award of the Royal Red Cross, 1st Class, to Nursing Sister Lilian Pidgeon was announced. She, too, had sailed with the unit from Montreal and from September, 1917, to May, 1918, had served as Assistant Matron. From this post she had proceeded to duty with No. 2 Canadian Casualty Clearing Station.

To offer congratulations on these awards and to discuss questions of routine, Matron E. B. Ridley, Matron-in-Chief, Canadian Nursing Service, France, visited No. 3 Hospital on June 6th. On the same date 48 other ranks reported for duty and were taken on strength. As only 800 beds were occupied, these reinforcements benefited by comparatively quiet days in which to master the duties assigned to them.

Almost before they had reached their quarters, however, realization that life at the base might offer opportunity for the display of courage under fire was brought to them by German air raiders, who bombed the neighbourhood industriously. For two hours motors overhead droned their threat of death, a possibility by no means remote, as a "dud" bomb which crashed through the roof of an ablution hut gave convincing proof.

About 150 patients were admitted to No. 3 Hospital on June 8th, the majority being lightly gassed, who, after a few days' treatment, were discharged to convalescent camps, without evacuation to England. Much gas was being used at this time, and treatment became more important every day. Recognizing this, a meeting of hospital commanding officers discussed the problem at No. 14 Stationary Hospital on the afternoon of June 10th.

Surgery continued to be light at No. 3 Hospital as mid-June approached, but the gas and other medical cases increased, with the result that by the 13th the total of patients had risen from 800 to 1,100, and several medical wards, closed for weeks, had been opened. Medical convoys continued to arrive and, despite evacuations, the number of patients under treatment rose in forty-eight

hours to 1,250. An unusual number of "detained" cases were also admitted, with the result that the Hospital, after a short period of quiet, resumed its wonted activity.

On June 14th the Hon. T. C. Norris, Premier of Manitoba, the Hon. Charles Stewart, Premier of Saskatchewan, and the Hon. W. M. Martin, Premier of Alberta, visited No. 3 Hospital and remained to tea in the Nursing Sisters' Mess. All three inspected the unit and commented favourably on the appearance of the wards and on those aspects of the patients' treatment which appealed most to civilian visitors

On the day when the prime ministers of the western provinces inspected No. 3, Orders announced that the Government of the Dominion of Canada had named Sunday, June 16th, as a day of national prayer for the success of Allied arms. In accordance with this proclamation, Capt. Costello, Roman Catholic Chaplain at No. 3 celebrated Mass in the Red Cross Hut at 8.30 a.m., Capt· Ball, Church of England Chaplain, conducted Divine Service at 10 a.m., and at 5.45 o'clock in the afternoon a united Protestant Service was held, after which Capt. Ball and Capt. Naylor (Methodist Chaplain) celebrated Holy Communion.

At the time of these services the Canadian Corps lay in reserve, training for the day when the British forces, under Sir Douglas Haig, should turn from defensive action and strike at the enemy. To assist the training, sports were held whenever circumstances would permit, those of the 1st Canadian Division taking place at Tinques on June 17th.

On June 16th Col. A. E. Ross, D.D.M.S., Canadian Corps, and Lieut.-Col. Templeton, D.A.D.M.S., 1st Canadian Division, visited No. 3 Hospital with an invitation for Matron MacLatchy and all nursing sisters who could be spared to attend the sports at Tinques on the following day. Work at the Hospital was light, and Col. Elder was willing, but, for a time, the problem of transport offered a serious obstacle.

Col. Ross, however, was not to be denied. On the morrow two old London busses arrived, and into these climbed Matron MacLatchy, Matron S. C. McIsaac, of No. 9 Stationary Hospital, about 40 nursing sisters, and

Majors L. H. McKim and W. H. Tytler. At 8.30 a.m. the busses left for Tinques, where the Matron was presented to Major-General A. C. Macdonell, the Divisional Commander, and where all enjoyed the varied programme of a memorable occasion. After the sports the party from No. 3 embussed once more and reached Boulogne at 3.30 o'clock on the morning of June 18th.

While the party of nursing sisters was absent at the sports Major-General Sir Bertrand Dawson visited No. 3 Hospital to see a number of interesting medical cases. Col. Gordon Holmes, Consultant in Neurology, also called, as did Major Harvey Cushing, of No. 13 General Hospital (Harvard, U.S.A.), who was leaving for duty at the American Base.

To mark June 18th, the third anniversary of the Hospital's arrival in France, 200 other ranks dined in the Canadian Red Cross Recreation Hut at noon, with the original nursing sisters serving, and with the Hospital Orchestra, organized by Sergeant White, playing most creditably. After dinner, all whose duties permitted proceeded to the athletic field to witness a programme of sports. At football, the team from No. 3 was defeated 1-0 by a team from No. 7 Convalescent Depot, but at baseball the McGill unit defeated a team from No. 18 General Hospital (Chicago, U.S.A.). At the end of the seventh inning the score favoured the Americans by 6-1. They scored another run in their half of the eighth, but No. 3 rallied, batted in 8 runs, permitted the visitors but 1 additional run in the ninth inning, and won the game by 9-8, much to the delight of the side-line crowd, which included the Base Commandant, Brigadier-General H. W. Wilberforce.

In the 5-mile run No. 3 Hospital also scored a splendid win. This race was open to all units of the Boulogne Base, and 40 runners started. Thirty-six of these finished, but, from the beginning, the race lay between Lance-Corp. S. R. Smith, Orderly Room Clerk at No. 3 Hospital, and a man from No. 13 General Hospital (Harvard, U.S.A.). The American ran a plucky race, but Smith wore him out and won with a margin to spare. Other members of No. 3 Track Team finished not far behind the Harvard man and brought the team prize to McGill.

By 6 p.m. all events had been decided and Matron MacLatchy was called upon to present the prizes. Refreshments were served and all present agreed that the sport had been of first-class quality. In the evening, with Sergt. White's orchestra again performing excellently, a dance was given in the Red Cross Hut. Previous to this, announcement was made that, in the three years of the Hospital's service, 112,000 patients had been treated.

Surgery at No. 3 Hospital continued to be light in the days following the third anniversary sports, but influenza convoys arrived from the front, and local cases were admitted in a steady stream. For the most part treatment of these patients presented few difficulties, and nearly all were transferred to No. 7 Convalescent Depot after 48 or 72 hours. From the Depot a few returned to the McGill unit with complications, but the great majority were discharged fit to serve with their units in the field.

On June 19th the Concert Party of the 7th Australian Brigade presented two programmes in No. 3 Hospital's Red Cross Hut. Onlookers agree that in ability the actors rose far above the usual, and the Matron stated that the concerts were the best the patients and staff of No. 3 had seen. The Commanding Officer shared this opinion and wrote: "Both concerts were splendid—quite out of the ordinary—and were enjoyed by audiences which filled every available seat."

The day after the visit of the Australians was marked by the admission of a large number of local influenza cases, in addition to 91 patients from No. 136 Field Ambulance. Convoys of sick from the front followed on June 20th and 21st, bringing the total of patients in the Hospital to over 1,200. As the McGill unit maintained on its strength at this time about 30 extra nursing sisters, refugees from the Canadian hospitals wrecked by German air raids, no difficulty in providing nursing care for the rush of front line and local influenza cases was experienced.

As a relief from the care of the sick, many of the personnel of No. 3 attended a lecture by Monsieur Veermersch in the Y.M.C.A. Hut on the evening of June 21st. The subject was "Belgium," and the lecturer covered aspects of his country's geographical situation, commerce, and people in a manner that held attention

throughout. Following the lecture announcement was made that Nursing Sister Seaborn Robertson, an original member of the unit, had been mentioned in despatches by the Commander-in-Chief, Sir Douglas Haig.

On June 23rd the War Diary of No. 3 Hospital stated that steady convoys of sick arrived from the front and that many local cases were also admitted. Evacuations to England were light, but transfer of large numbers of convalescents to No. 7 Depot maintained the total of patients in the neighbourhood of 1,200. On this day the strength of the Hospital was increased by the arrival from England of Capts. J. M. Baldwin and F. G. Banting, the latter a physician destined after the war to win international fame by discovery at the University of Toronto of the product "insulin."

Within twenty-four hours after the two officers reported for duty, Capt. J. S. Sutherland was taken on strength, with the result that, for the first time in over two months, the Hospital possessed its full complement of 28 medical officers. On the day when this satisfactory condition was reached, Orders announced that, in view of air raids, the lights used to mark the Hospital at night would no longer be hoisted on the flag-pole at the main gate.

On June 26th Field Marshal His Royal Highness the Duke of Connaught paid a visit to the unit. Time did not permit a prolonged inspection, but he visited as many wards as possible and expressed to the nursing sisters from the bombed hospitals at Etaples his indignation at the enemy's act. Following His Royal Highness's visit, a concert party from No. 13 General Hospital (Harvard, U.S.A.) arrived at No. 3 to entertain the patients and personnel.

As a result of continued influenza, 182 local sick were admitted to the McGill Hospital on June 27th, and the total of occupied beds rose to 1,337, a number but little changed on the following day, when the Hon. Smeaton White, Member of the Canadian Senate, from Montreal, visited the unit and was entertained at lunch in the Officers' Mess.

Medical cases continued to arrive on the 29th, and these, together with a convoy of 100 wounded from a

British offensive at Nieppe Wood, brought the total of patients in Hospital to 1,423, despite numerous transfers to No. 7 Convalescent Depot. More wounded from the Nieppe fighting arrived on the afternoon of the 30th, filling surgical beds empty for some weeks. Few of the patients were seriously injured and all seemed confident that before long the British would adopt the offensive and hammer the German Army in return for the mighty blows endured in the spring.

Interest in the latest opinions from the front was displayed on June 29th by the Right Honourable Sir Robert Borden, Prime Minister of Canada, and the Hon. Arthur Meighen, Minister of the Interior, who took tea with the Matron in the Nursing Sisters' Mess and dined in the Officers' Mess. To meet the Prime Minister and Mr. Meighen, Col. Elder invited Brigadier-General Wilberforce, Commandant of the Boulogne Base, Col. Thurston, the D.D.M.S., Col. Lee, Commanding No. 13 General Hospital (Harvard, U.S.A.), and Lieut.-Col. Donald, O.C. No. 2 Canadian Stationary Hospital.

Beautiful weather marked the following afternoon when the Canadian chaplains at the Boulogne Base supervised the decoration of Canadian graves in the local cemetery. Impressive services were held, and flowers were placed on the graves by nursing sisters from hospitals in the area. Brigadier-General Wilberforce attended the ceremonies to represent that bond, strengthened by common sorrow, which existed between the people of the British Homeland and those of the Overseas Dominions.

That night Boulogne suffered the most severe air raid in months. Six planes arrived at 10 p.m. and until 1 o'clock in the morning the noise of their engines never ceased. Bombs crashed in different sections of the town, and 8 fell close to the nursing sisters' quarters of No. 3 Hospital. Windows were smashed by the explosions, but the personnel escaped injury. All ranks behaved well during the ordeal, and no delay occurred when 22 wounded were brought to the Hospital from a labour camp at Henriville. One of the 22 died soon after admission and another, wounded in the abdomen and chest, lived only until morning. Several with severe wounds were placed at once on the list of patients "dangerously ill."

German Prisoners of War Sandbagging one of the Hospital Huts to Protect the Occupants during Enemy Air Raids

As June closed, statistics showed that there had been admitted to the Hospital during the month 164 Canadians, 4,314 other British troops, and 30 soldiers of Allied countries. On an average 1,065 patients had been in the Hospital each day. Operations had totalled 152, post-operative deaths 1, and deaths from all causes 22. Adding the June figures to those of previous months gave the following results for the first half of 1918:

Admissions	19,497
Total Deaths	100
Percentage	1.94
Operations	1,341
Post-Operative Deaths	17
Percentage	1.27

As mentioned previously, gas gangrene had raised the total of deaths during the heavy fighting of the spring. Influenza was to affect the figures even more strikingly in the fall, but at the end of June this could not be foreseen. P.U.O. cases arrived daily at No. 3, but all were of a mild influenza type, responding to treatment rapidly and exhibiting no symptoms to cause alarm.

CHAPTER XVIII

THE ALLIED OFFENSIVE

I

AS a result of the raid on the night of June 30th, Dominion Day, 1918, dawned at No. 3 Canadian General Hospital (McGill) with the water supply and electric current cut off. Reserve tanks of water were quickly exhausted, and a serious situation threatened, but late in the afternoon repairs to the damaged sources of supply were effected and before night conditions had been restored to normal.

Meanwhile, the Matron, the two matrons attached from the bombed hospitals at Etaples, and about 45 nursing sisters had attended the Dominion Day sports of the Canadian Corps at Tinques. These sports, outstanding amongst all similar events conducted by the Canadian forces in France, were witnessed by more than 40,000 spectators, including H.R.H. the Duke of Connaught, Lieut.-General Sir Arthur Currie, the Corps Commander, the Right Honourable Sir Robert Borden, Prime Minister of Canada, General John Pershing, Commanding the American Forces in France, and many other Allied soldiers and statesmen.

Local sports were also held on Dominion Day by Canadian units at points on the lines of communication and at the bases. At Le Touquet, a baseball team from No. 3 Hospital suffered defeat by 7-3 at the hands of a team from the Canadian Base at Etaples. Consolation for the loss of this game was provided to the McGill unit athletes when Lance-Corporal S. R. Smith, at sports conducted by No. 2 Canadian Stationary Hospital, won the 5-mile road race in 66 minutes. When the heat of the day and the rough nature of the course were considered, judges agreed that this time was remarkable.

Hot weather marked the 2nd of July, when the fire-fighting apparatus of the Hospital was inspected by Lieut.-Col. Pollock, under whose charge such equipment in all units of the Boulogne Base had been placed. Fourteen hundred patients were in the Hospital at the time and many, well enough to be interested, praised the smart manner in which members of the personnel responded to a test alarm.

This same day brought news to the Hospital of the sinking at sea on June 27th of His Majesty's Canadian Hospital Ship *Llandovery Castle*, and the resultant death of 5 medical officers and 14 nursing sisters, including Nursing Sister M. J. Fortescue, an original member of the McGill unit, who, after prolonged service with No. 3 Hospital in France, had assumed duties on ships carrying the wounded back to Canada.

In the sinking of the *Llandovery Castle*, the German Navy accomplished a feat which will forever blot its name and reputation. Submarine U-86, with First Lieutenant Helmut Patzig in command, fired on survivors and circled about, endeavouring to sink the life-boats and hide all traces of the crime. In addition to Nursing Sister Fortescue, who graduated from the Montreal General Hospital in 1906, the staff of No. 3 mourned Nursing Sister A. Dussault, who graduated from the Royal Victoria Hospital in 1910, and several other sisters intimately known to them. In the Canadian Corps the sinking of the *Llandovery Castle* and the bombing of the hospitals at Etaples and Doullens lit a flame of indignation which burned ever brighter until, in the late summer and autumn of the year, the slaughter of the medical officers, patients, and nursing sisters was abundantly avenged.

On July 3rd Col. Elder reported to Col. Birkett in a letter that approximately 1,400 beds were occupied, the majority by medical cases, but an appreciable number by wounded men from the most recent fighting on the British front. To handle the 1,400 cases, Col. Elder stated that, as on July 1st, his strength was 33 officers, 145 nursing sisters, 41 non-commissioned officers, and 249 other ranks. His ordinary bed capacity, he stated, was almost filled, but 759 crisis expansion beds had been prepared and could be commissioned at a few hours' notice.

In a baseball game on the afternoon of July 3rd, No. 13 General Hospital (Harvard, U.S.A.) secured revenge for the defeat inflicted on the Chicago unit earlier in the year by winning from No. 3 Canadian General Hospital (McGill) 5–4. Just previous to this event, Lieutenant-General T. H. J. C. Goodwin, who had succeeded Sir Alfred Keogh as Director-General of Army Medical Services at the War Office, officially visited No. 3 Hospital for the first time. Later in the day Major-General Sir Anthony Bowlby, accompanied by Col. Webb-Johnson, Consultant, visited the Hospital to gather surgical statistics bearing on the recent British attack at Nieppe Wood.

On the day when Major-General Sir Anthony Bowlby and Col. Webb-Johnson visited No. 3 announcement was made that the Royal Red Cross, 2nd Class, had been awarded to Nursing Sisters S. M. Carr-Harris, M. F. Parkins, and M. E. Wilkinson, all of whom had joined the unit in France and served with distinction on its establishment. All ranks appreciated the honours, and the nursing sisters received congratulations from officers and men alike.

By July 4th the influenza epidemic showed signs of abating. Local evacuations on this date totalled 190, and the number of occupied beds in the Hospital dropped to approximately 1,200. Satisfaction at this development was qualified, however, by heavy mortality amongst the gassed patients admitted not long before. Bronchopneumonia developed rather alarmingly amongst these cases and the percentage of deaths was higher than the Hospital could view without deep regret. As Col. Elder noted in his diary: "It is the worst experience with gas cases we have had yet."

July 4th, United States' Independence Day, was fittingly celebrated by all American units in France. At Boulogne No. 13 General Hospital (Harvard, U.S.A.) entertained in the afternoon, and invited a number of officers from the McGill unit to attend. In the evening, the programme included a dinner at the Boulogne Officers' Club, to which Col. Elder conveyed greetings and good wishes from the staff of the unit under his command.

Influenza continued to abate on July 5th. Few local

cases arrived at No. 3, and evacuations brought the total of patients down almost to 1,000. In the Operating Room on this day interest centred about a man wounded during an air raid at No. 1 Convalescent Depot. Doubt existed whether his wound had been caused by German machine-gun fire, or Allied anti-aircraft shrapnel. Some even claimed that in air raids the German planes did not use machine-guns. These last were silenced when from the wounded man's body a bullet of unmistakably Teutonic origin was extracted.

July 6th was marked at No. 3 Hospital by a visit from two Canadian Cabinet Ministers, the Hon. J. A. Calder and the Hon. N. W. Rowell, who inspected the unit in the morning and remained to lunch in the Officers' Mess. In the afternoon Lieutenant-General Burtchaell telephoned to say that Col. Elder had been appointed Consulting Surgeon to the British Army, Rouen Area, and that orders to this effect would arrive forthwith.

At No. 3 Canadian General Hospital (McGill) news of Col. Elder's promotion was received with mixed feelings. He had served with the unit from the beginning, first as Officer in charge of Surgery, under Col. H. S. Birkett, then as Commanding Officer, from the time when Col. Birkett had been compelled by ill-health to resign. All rejoiced in the honour accorded him, but regretted that to accept the new post he must sever connection with the McGill unit and those who had worked so enthusiastically under his command. Pending the completion of arrangements to appoint his successor, he was instructed to remain at No. 3 until the morning of July 10th.

Meanwhile, the number of patients in the Hospital continued to decline. British casualties in France totalled 6,000 in the week ending on July 7th, and 3,000 in that ending on the 14th. This meant little surgery at No. 3, and on the morning of July 7th returns from the wards showed but 900 occupied beds. Lieut.-Col. Noel Marshall, Chief Commissioner of the Canadian Red Cross Society, accompanied by Dr. Robertson and Mr. Hudson, visited the Hospital on this day and lunched in the Officers' Mess. Previously, the visitors had inspected the Canadian Red Cross Recreation Hut and the special Chest Wound Hut, which their Society maintained.

In the afternoon on July 9th the Matron and nursing sisters of No. 3 gave a farewell tea for Col. Elder, to which the Base Commandant, the Surgical and Medical Consultants of the area, and the Commanding Officers of all hospitals in the district were invited. At 10.30 a.m. on the following day Col. Elder left for Rouen, and command of No. 3 Hospital passed temporarily to Lieut.-Col. A. T. Bazin, D.S.O., Officer in charge of Surgery, pending the arrival of Lieut.-Col. Lorne Drum, A.D.M.S., Canadians, Witley Camp, who was eventually to take over.

II

For a few days after Lieut.-Col. A. T. Bazin assumed command of No. 3 Canadian General Hospital (McGill) the routine of the unit proceeded without incident. On July 13th Capts. C. F. Martin and W. J. Kirby were taken on strength from Home Establishment, and on the 14th Capt. F. G. Banting proceeded to duty with the 4th Canadian Division, being replaced on the establishment of No. 3 by Capt. J. C. Clark. On the following day Sergt. C. C. Stewart, Sergt. E. A. Bell, Sergt. H. R. McDonald, Corp. T. A. Croft, and Privates W. E. Gregson, H. H. Hart, and J. R. Lockhart were struck off strength on returning to complete their medical studies at McGill University. Private E. Laurin, Canadian Army Dental Corps, also left to complete his course in dentistry. These students were commended by Lieut.-Col. Bazin in the War Diary of the unit for the quality of their work in France.

Meanwhile, on July 13th, No. 3 Hospital had been visited and inspected by the Rev. Dr. Wallace, Baptist Minister, of Montreal, who was accompanied by Capt. Lorimer, of the Canadian Chaplains' Service, London. Some days after the visit of these clergymen, the Boulogne Base Medical Society met at No. 14 Stationary Hospital to hear an address by Col. Fullerton, Consultant Surgeon, on "Injuries to the Bladder in Warfare." A number of officers from No. 3 attended this lecture, which was illustrated by lantern slides carefully selected.

July 18th brought more visitors to the McGill Hos-

pital. In the morning Col. Carless, Consultant in Surgery in the Eastern Command, England, arrived, in company with a fellow-surgeon, Mr. Rutherford Morrison, of Newcastle; and in the afternoon the Hon. C. C. Ballantyne, Canadian Minister of Marine and Fisheries, and Major-General E. W. Wilson, G.O.C. No. 4 Military District, Montreal, called to inspect. On the afternoon of the 20th these visitors returned, accompanied by Major-General S. C. Mewburn, Canadian Minister of Militia, and remained to tea in the Nursing Sisters' Mess.

July 20th was also marked by arrival of a detachment from the 1st Canadian Railway Battalion, who pitched tents and prepared to start work on bomb-proof dugouts for the nursing sisters. The advent of these troops had been hastened by a letter despatched some days previously by Lieut.-Col. Bazin to the Canadian Representative, G.H.Q., 2nd Echelon. In this letter the Officer Commanding No. 3 brought forcibly to the attention of authority the fact that his nursing sisters off duty were inadequately protected. He pointed out that, though normally only 110 nursing sisters appeared on the establishment of No. 3 Hospital, 150 were on the strength at the time, the surplus coming from Nos. 7 and 9 Canadian Stationary Hospitals, destroyed by air raids. Approximately 25 nurses would be on duty in the wards at night, the remainder being in the Sisters' Quarters. It was for these off duty in quarters that protection was sought, as casualties amongst them were *preventable.*

The authorities of the Boulogne Base had provided two dugouts and a covered trench, with headcover of loose earth and sandbags, not exceeding four feet in depth, with the floor excavated about five feet below surface level. However, as the dugouts were placed side by side, both would be affected by a direct hit. Lieut.-Col. Bazin stated that the nursing sisters habitually took refuge in the dugouts during air raids, believing that they gave protection, though he believed, from eighteen months' experience with a field ambulance at the front, that the possibility of a débâcle would be less if they remained distributed in their own huts.

Following the arrival of the troops from the 1st Railway Battalion, Lieut.-Col. Bazin wrote again, asking that,

in addition to dugouts for the nursing sisters, satisfactory cover for personnel might be provided. Fifty men were on duty each night, and these must take their chance; but 250 were off duty in quarters and required protection, both for their own sake and for that of the patients, who might stand in urgent need of their assistance.

Meanwhile, German air raiders continued to threaten the Hospital. In bright moonlight on the night of July 21st enemy squadrons twice approached Boulogne, but on each occasion measures taken to protect the area proved effective. The "alert" was sounded, and the off-duty nursing sisters moved to the raid dugouts existing, but before long the "all clear" notified them that danger for the moment was past.

Previous to the alarms on the night of the 21st, Mr. Rutherford Morrison, of Newcastle, operated on two cases in the Hospital to demonstrate his special technique. Capt. A. G. Thompson was taken on strength on the same day in exchange for Capt. W. D. Cruikshank, who proceeded to duty with the 3rd Canadian Division. On the following day the promotion of Hon. Lieut. and Quartermaster J. E. Carruthers to the rank of honorary captain was announced, and on July 23rd Capt. J. S. Sutherland was struck off strength on reporting for duty to the D.D.M.S., Canadian Corps. Simultaneously, Nursing Sister W. C. Riddell proceeded from No. 3 Hospital to No. 2 Canadian Casualty Clearing Station. Some days previously Nursing Sister A. C. Stark, an original member of the unit, had also left.

Next day Capt. C. A. Verge, of No. 2 Australian General Hospital, was attached temporarily to No. 3 to permit Capt. J. A. M. Hemmeon, ear, nose, and throat specialist, to proceed on leave to the United Kingdom. From the time of Col. Birkett's command, oto-laryngological work for the Boulogne Base had been conducted by the McGill unit. Many cases had presented themselves to Capt. Hemmeon, who had maintained the reputation for care and thoroughness which Col. Birkett had brought from civil practice into the field of military endeavour. Some days after Capt. Hemmeon left for England, Capt. L. P. MacHaffie reported to assume the duties of Assistant Pathologist, his arrival coinciding

with the departure of Capt. J. M. Baldwin, who proceeded to duty with a section of the Canadian Forestry Corps operating in the Vosges district.

Previous to Capt. Baldwin's departure, patients and personnel at No. 3 Canadian General Hospital had enjoyed two programmes presented, through permission of the G.O.C. the 3rd Canadian Division, by the "Dumbell" Concert Party. The "Dumbells" were famous in France, and their performances at No. 3 Hospital justified the expectation which announcement of their coming had aroused. To the leader of the party, appreciation was expressed by many of the audience, which packed every seat in the Red Cross Hut.

Two days after the "Dumbell" concerts, Nursing Sisters C. R. Fisher, A. M. H. Fleming, and Agnes White ceased to be attached to No. 3 Hospital and proceeded to No. 3 Canadian Casualty Clearing Station to complete their course in general anaesthesia. On the same day Mr. Stewart, Canadian journalist, visited the Hospital, and on the 31st Lieut.-Col. Lorne Drum arrived from England to assume command. He found 32 officers, 138 nursing sisters, and 235 other ranks on the strength, with 28 men from the Canadian Labour Pool attached. Fourteen hundred beds were in commission, and 600 additional could be provided on a few hours' notice. In short, conditions appeared to warrant the comment which Col. Elder, on revisiting the unit three days before, had written in his private diary: "I found No. 3 looking particularly well. Without doubt, it is the best hospital in Northern France."

III

On the morning of August 1, 1918, Lieut.-Col. A. T. Bazin, D.S.O., handed over command of No. 3 Canadian General Hospital (McGill) to Col. Lorne Drum and reassumed his own duties as Second-in-Command of the unit and Officer in charge of Surgery. Referring to the transfer, Col. Drum stated: "During the period of Lieut.-Col. Bazin's temporary command he had collected all the information that a new O.C. would naturally require, and he presented it to me in such clear, precise form that,

thanks to him, I was able quickly to grasp the work of the immense unit, which was of the greatest help to me in assuming my new duties."

In the letter from which the above extract is quoted, Col. Drum refers to the services Lieut.-Col. Bazin rendered after the transfer of command had been effected: "During the remainder of his service with the unit, I leaned with the utmost confidence on his counsel and judgment, and when he left in response to the call of duty, his loss, though deeply felt by all the staff, was felt by none more deeply than by his O.C."

On the first day of Col. Drum's command No. 3 Hospital was visited by Hon. Lieut.-Col. Gerald Birks, O.B.E., Chief Supervisor of the Y.M.C.A. Overseas, and by J. W. Ross, Esq., and Abner Kingman, Esq., who were also associated with the Canadian Y.M.C.A. At the Hospital they met Sir William Peterson, K.C.M.G., Principal and Vice-Chancellor of McGill University, who, as in 1916, was inspecting the work which the unit bearing the name "McGill" was accomplishing in France.

That night at 10.30 o'clock the alarm sounded in Boulogne, and German planes raided. At 11 p.m. a number of enemy machines were sighted directly over No. 3 Hospital and bombs crashed into the fields not far away. Glass was shattered and shrapnel fell, but casualties to personnel were avoided. At 1 a.m. bugles sounded the "all clear," and at once the dead and injured from nearby camps began to arrive. Four men from the 798th Area Employment Coy. were dead when brought to the Hospital, and 6 were seriously injured. Seventeen others had suffered wounds severe enough to render prolonged hospital treatment essential.

Two days after the raid Col. Drum, Sir William Peterson, Capt. C. F. Martin, Professor of Medicine, McGill University, and J. W. Ross, Esq., Treasurer of the Corporation of McGill, discussed a plan to convert the Pathological Department at No. 3 Hospital into a Research Laboratory to be used by all Canadian units in France. All approved of the plan and agreed that funds possessed by the Hospital should be used to purchase the equipment required.

On August 4th, Volume II of the "Visitors' Register"

at No. 3 Canadian General Hospital (McGill) was formally opened by Sir William Peterson, who, at the request of the Commanding Officer, addressed a message to all ranks of the unit: "On this Anniversary Day," Sir William wrote, "the fourth since our entrance into the greatest war in the world's history, I am glad and proud to find myself with the McGill Medical Unit. Its past record is known, and forms an enduring monument to splendid organizing capacity and devoted service. The friends and supporters of No. 3 Canadian General are confident that its future is no less assured. When this war is ended there is no department of university service on which McGill men will look back with greater pride than the achievements of this unit in medicine, surgery, and research."

In addition to the formalities accompanying the opening of Volume II of the "Visitors' Register," the fourth anniversary of the entry of the British Empire into the war against Germany was celebrated at No. 3 Hospital by a united religious service at which chaplains of the Anglican, Methodist, and Roman Catholic Churches officiated. In accordance with instructions, the 154 francs collected on this occasion were donated to the British Prisoners of War Fund.

Next morning Sir William Peterson bade the Hospital staff farewell and crossed to England. Following his departure, Col. Leonard, of the Canadian Red Cross Society, visited the unit and inspected the Red Cross stores, his call preceding that of Col. Ripley, O.C. No. 1 Battalion, Canadian Railway Troops, who found that No. 3 Coy. of his unit was working well at the construction of the nursing sisters' bomb-proof shelters.

August 7, 1918, brought to No. 3 Hospital a hint that a British offensive was being mounted. The week previous had witnessed fewer admissions and discharges than usual. British casualties in the week ending on July 28th had totalled 13,500, but in the week between that date and August 4th the figures had fallen to 2,500, less than in any seven-day period for many months. At the Hospital the number of patients had dropped to 701, a situation which permitted the Officers in charge of Surgery and Medicine to arrange a number of conferences with their subordi-

nates and with Capt. J. H. Slayter, whom Col. Drum had appointed Company Officer.

Warning that quiet would not long prevail reached No. 3 in the form of orders to maintain a surgical team ready at short notice to report for duty at No. 2 Stationary Hospital. Next day the team, composed of Major L. H. McKim, Nursing Sister O. G. Nicholson (Anaesthetist), Nursing Sister E. I. MacDougall (Operating Assistant), and 4 orderlies, received instructions to proceed, and simultaneously news arrived that the Battle of Amiens had begun. Since March, with the exception of certain counter-attacks in force by British, French, and American troops, Germany had held the offensive. A thrill, therefore, greeted announcement at the end of the day that the new battle was going well.

Reports that the Battle of Amiens had resulted in a British success were soon confirmed. With the Canadian Corps acting as a spear-head, General Sir Henry Rawlinson's Fourth British Army, assisted by the First French Army, under General Debeney, had crashed through the German front and thrown the enemy back to his Roye-Chaulnes line of 1916. Prisoners by the thousand were captured as the engagement progressed, together with guns and material of tremendous value. In addition, the battle definitely established connection between the British and French forces, disengaged the all-important Paris-Amiens railway, and brought the great German junction at Chaulnes under Allied gunfire. These factors caused General Ludendorff, in reviewing the war, to speak bitterly of August 8, 1918, as "the black day in the history of the German Army."

Proof that success at Amiens was gained without disproportionate loss is found in the British casualty return for the week ending on August 11th, which showed losses totalling but 24,000, and in that of the following week, when the total dropped to 21,000. Indication of how the battle affected hospitals at the base is discernible in the patient total at No. 3 Canadian General Hospital (McGill), which rose from a low point of 618 on July 28th to 913 on August 11th, 999 on August 18th, and, following the Battle of Albert, to 1,205 on August 25th.

Pressure as a result of the Battle of Amiens was not

Surgical Team, 1918

Left to right: Nursing Sister O. G. Nicholson, Major L. H. McKim, Nursing Sister E. I. MacDougall. *Second Row*: Lance-Corp. G. A. Felix, Pte. D. Holgate, Pte. W. A. Duley

applied to the work of No. 3 Hospital for some days. On the 8th W. H. Gardner, Esq., of the Manitoba Branch, Canadian Red Cross, visited the unit, where routine had as yet received no interruption. Two nights later at 6 o'clock, and again at 10.55 o'clock, German air raiders approached Boulogne, but were driven off by a powerful and well-directed barrage. Electric light, shut off at the time of the second raid, became available at 11.40 p.m., but failed at 12.30 a.m., though no further raiders appeared.

By this time several convoys of wounded had arrived from the front. In the War Diary of the Hospital on August 10th Col. Drum noted that the newly-arrived patients, many of whom had come direct from the casualty clearing stations without treatment, were cheered by the magnitude of the victory they had helped to win. For the first time in 1918 the enemy had been routed, and few of the patients failed to rejoice in what they had seen of his downfall. Victory, as officers at No. 3 observed, provided a powerful aid to rapid convalescence.

At 10.45 o'clock on the night of August 11th, the "alert" sounded and the staff of No. 3 Hospital prepared to endure the uneasy hours inevitable when bombing planes were overhead. No raiders reached Boulogne on this occasion, but clear starlight two nights later provided the conditions they required. At 10.50 p.m. several bombs exploded near the Hospital, some in camps adjoining. Firing ceased 40 minutes later, but at midnight it recommenced, doors and windows banging violently as a series of bombs burst in a valley to the rear. At 1.15 in the morning the raiders finally withdrew, leaving behind them a number of dead and injured, including three men of the Canadian Railway Troops, who were admitted as patients to No. 3.

Air raid "alert" sounded again on the night of August 14th, but soon the "all clear" brought the welcome news that the enemy had turned back, or had sought other objectives. Three days later the officer in charge of the construction of bomb-proof dugouts for the other ranks of No. 3 notified Col. Drum that water had filled his excavation. He stated that the work would have to be abandoned, adding that, when the nursing sisters' dugout was finished, his orders were to cease all work at No. 3.

This information caused Col. Drum to file a protest with the Canadian Representative at General Headquarters. As Lieut.-Col. Bazin had done before him, Col. Drum pointed out that the dugout was needed badly, and that failure to provide it exposed both the off-duty personnel of No. 3 and the "walking patients" to danger from which it was his duty to protect them, so far as his powers would permit. He asked that his letter be considered urgent and that orders cancelling the proposed departure of the Railway Troops be issued without delay.

In response to this letter, Brigadier-General J. F. Embury, C.M.G., Officer in charge of the Canadian Section, G.H.Q., called at the Hospital on August 20th and, in company with Col. Drum, inspected the nursing sisters' dugout, which was almost completed and would afford protection even from direct bombing. The General and the Commanding Officer of No. 3 then visited the splinter-proof cellar set aside for the off-duty personnel of the Hospital and the abandoned workings of the bomb-proof dugout which the water had flooded.

Next, the two officers visited the site where Col. Drum proposed that the Railway Troops should build a bomb-proof shelter in place of the one on which work had stopped. Brigadier-General Embury promised to take up the matter with Brigadier-General J. W. Stewart, C.O.C. the Canadian Railway Troops, and with Brigadier-General A. E. Ross, Director of Canadian Medical Services in France, but could not promise that the answer of these officers would be favourable. All desired to provide hospitals at the base with adequate protection, but it was possible that urgent requirements elsewhere would interfere.

Two days later the nursing sisters' dugout was completed. Work by No. 3 Coy., 1st Battalion, Canadian Railway Troops, had begun exactly one month before and completion of the dugout, which would accommodate 150 persons seated, with overhead cover of 22 feet, including 10 feet of rock, represented a fine piece of work. In Orders on the 22nd Col. Drum instructed all off-duty nursing sisters to proceed to the dugout the moment an air raid was signalled and to remain there until notified by the Hospital bugle that the raid was over.

Previous to completion of the nursing sisters' dugout, Major W. H. Tytler, Officer in charge of Pathology, had proceeded to England to discuss with the Canadian Director-General of Medical Services details in connection with establishment of the new Canadian Research Laboratory, which Sir William Peterson and the Treasurer of McGill University had sanctioned. Major Tytler was given authority to inspect the equipment offered for sale by dealers in London and to purchase what would be required.

Two days after his departure, Lieut.-Col. A. T. Bazin, D.S.O., Major E. C. H. Windeler, and Major H. J. Adair were appointed as a board to audit the accounts of the Officers' Mess, the Nursing Sisters' Mess, the Sergeants' Mess, the Men's Mess, the By-Product and Refuse Fund, the Unit Fund, the Hospital Postage Fund, the Fund of the Athletic Association, the local Y.M.C.A. Fund, and the Special Dietitian's Fund.

As a relief from the tiresome duties these audits imposed, members of the board, in company with others amongst the patients and staff of No. 3, greatly enjoyed a series of performances presented at the Hospital by the Concert Party of the 4th Canadian Division. For the benefit of patients too seriously injured to attend, the performers repeated individual "turns" from their repertoire in the Hospital wards.

At 10.20 o'clock on the night of August 24th warning of air raiders sounded at No. 3 and soon thereafter the ominous drone of enemy machines was heard from overhead. A strong barrage hindered the Germans in their attack on Boulogne, but before long they penetrated the defence and dropped their bombs, a number of which fell in fields near No. 3 Hospital, shattering many panes of glass, but effecting no other damage. Later in the night the enemy attacked again, and nine bombs struck between the Hospital and the town. Fires sprang up where these missiles struck and fifteen casualties, two severely wounded, were brought to No. 3. As a result, the staff of the Operating Room finished their night's work just as dawn proclaimed a new day.

Undeterred by the nerve-wracking strain of frequent air raids, the Boulogne Area Agricultural Society's show

and sports were held on the grounds of No. 7 Convalescent Depot on August 25th. As these grounds adjoined those of No. 3 Hospital, walking patients from the McGill unit were permitted to attend. Much to the delight of the patients, who were loyal in their support, a Canadian tug-of-war team, organized by Capt. Wood, the Hospital's Roman Catholic Chaplain, won second place in a contest marked by keen rivalry.

On the day of the sports Sir George H. Perley, Canadian High Commissioner to England, visited the Hospital and took lunch in the Officers' Mess. The Hon. Sir Edward Kemp, Minister of the Overseas Military Forces of Canada, also visited the unit, accompanied by Brigadier-General J. F. Embury and Major E. Bristol, his Military Secretary. All the visitors displayed interest in the Hospital and were impressed by the work the Canadian Railway Troops had accomplished in building the nursing sisters' bomb-proof shelter.

In addition, the visitors were struck by the appearance of a great Red Cross emblem, which, in obedience to orders from Base Headquarters, Col. Drum had had constructed. On a white background, 96 feet wide, the Red Cross, measuring 72 feet from tip to tip, marked the nature of the camp. Col. Elder had felt that a cross of this nature would help air raiders and would in no way protect the Hospital, but Headquarters had decided otherwise and had instructed Col. Drum to place it in position.

From the time of the visit of the Canadian officials on August 25th until the end of the month, the War Diary of the Hospital reveals no entries of outstanding interest. As always, patients from the front arrived and others were evacuated to England. As always, too, officers and nursing sisters reported, and others were struck off the strength on proceeding to Home Establishment, or to duty with units of the Canadian Corps.

No attempt can be made to chronicle all these changes, but some call for mention. On August 10th Capt. C. F. Martin proceeded to temporary duty with the 2nd Army, and on the following day Nursing Sisters R. R. Graham, A. M. Tate, and M. J. Woods reported to No. 2 Stationary Hospital, Nursing Sisters S. M. Hoerner and H. E.

Carman, original members of the unit, replacing two of them on the strength of No. 3 on August 13th. On the 15th Matron S. C. McIsaac left No. 3 to take over duties at No. 3 Canadian Stationary Hospital, and on the 29th Major Tytler returned from his purchasing expedition to England. Just before this, Capt. C. F. Martin had returned from duty with the 2nd Army and left again to take over temporary duties at Lamorlaye. On the 30th Major L. H. McKim, of No. 6 Surgical Team, rejoined the unit, and on the same day Nursing Sister D. E. Bradley reported from No. 2 Canadian Casualty Clearing Station, and Nursing Sisters A. S. Morewood and I. B. Smith from No. 3 Canadian C.C.S.

Despite changes, about one-tenth of which are mentioned above, the end of the first month of Col. Lorne Drum's command found the Hospital working smoothly and efficiently. In the thirty-one days of the month 387 Canadian soldiers, 3,466 other British troops, 58 Allied troops, and 1 civilian had been admitted, and a total of 3,364 cases had been discharged. Operations had numbered 568, and post-operative deaths 13, giving a percentage of 2.2. Total deaths, numbering 28, equalled 0.71% of the admissions. Considering all circumstances, these figures were satisfactory and proved that the unit was functioning in a manner creditable to the new Commanding Officer and to those whom he had appointed, or confirmed in the posts they previously held.

CHAPTER XIX

THE ARMISTICE

I

AT No. 3 Canadian General Hospital (McGill) September 1, 1918, was marked by announcement of several temporary changes of command. Lieut.-Col. A. T. Bazin, D.S.O., had been granted 14 days' leave to the United Kingdom and during his absence Major L. H. McKim was appointed Acting Officer in charge of Surgery. Similarly, during the temporary absence of Capt. T. A. Malloch, Acting Officer in charge of Medicine, Capt. D. S. Lewis was named to discharge the responsibilities of that post. In addition to these announcements, the War Diary recorded that Nursing Sister S. P. Johnson had been awarded the Royal Red Cross, 2nd Class.

On the following day, Major-General Sir W. P. Herringham, Consulting Physician, visited the Hospital, and on the 3rd Lieut.-Col. E. R. Brown, Assistant Inspector of Canadian Drafts, called to examine other ranks rated physically below Class A. On the same date the Commanding Officer of No. 3 addressed a letter to Matron MacLatchy, expressing appreciation for the services of Nursing Sister A. C. Sargeant and others, who had made nearly 700 opaque window screens, enabling the unit to comply promptly with urgent instructions regarding procedure during air raids.

Meanwhile, activity on the British front and elsewhere on the long line between the sea and Switzerland had continued. No sooner had the Battle of Amiens ended in August than Sir Douglas Haig opened the Battle of Bapaume, which drove down behind the old battlefields of the Somme, 1916, and forced the enemy to yield much territory captured in the spring of the year. Following

the Battle of Bapaume, the British Army, with the Canadian Corps again acting as a spearhead, pierced the German lines before Arras and advanced determinedly against the strongest defences on the Western Front.

In the week ending on September 1st, casualties in the attacking British Army totalled 44,500, but in the following week, despite success near Arras, the number fell to 27,000. In obedience to orders, No. 3 Hospital, in the first week of the month, evacuated fewer patients to England and more to convalescent depots, whence they would return sooner to units in the line. With the greatest offensive in history under way, the wounded were needed, as soon as they recovered, to maintain the strength of the Army in the Field.

On September 6th Capt. R. M. Janes was attached to No. 3 Hospital for duty in the Pathological Department, which, under Major Tytler, was being transformed into the Canadian Research Laboratory. Four days later Matron E. Campbell, R.R.C., of No. 1 Canadian General Hospital, was attached temporarily; and on the 15th Matron L. M. Hubley ceased to be attached on proceeding to No. 8 Canadian General Hospital.

Meanwhile, on September 10th, Major-General Sir David Watson, K.C.B., General Officer Commanding the 4th Canadian Division, had arrived at No. 3, where he remained overnight as the guest of the unit. While at the Hospital Sir David witnessed a performance by his Divisional Concert Party, the "Maple Leaves," and heard with satisfaction of the pleasure his men had given to patients under the McGill unit's care.

As September advanced, activity on the front of the British Armies in France decreased, as Sir Douglas Haig, following the Battles of Amiens and Bapaume and the initial stages of the Battle of Arras, gathered strength for that series of blows destined, in conjunction with offensives by France and the United States, to shatter the last resistance of Germany and bring the war to an end.

In the week ending on September 15th, casualties on the British fronts dropped sharply to 14,000, a reduction which, as usual, found a measure of reflection in the patient total at No. 3 Canadian General Hospital (McGill) where figures on the 15th showed 1,047 occupied beds,

nearly 150 less than the week before. On this same date Orders announced that Major Milton Mandel, United States Army, had been appointed Senior Divisional Consultant in General Medicine to the 11th Corps, American Expeditionary Force. All ranks at No. 3 Hospital were instructed to receive this officer, should he call, and to facilitate his visiting American patients in the wards.

It is a far cry from the wards of No. 3 Canadian General Hospital in 1918 to the boardwalk of Atlantic City, New Jersey, in 1928, but a Montreal gentleman found a link between the two, when a clerk, recognizing the Montrealer as a Canadian, expressed the hope that some day he might cross the border of the United States and set foot on Canadian soil. In explanation, he stated that, as an American soldier, he had been a patient at No. 3 Canadian General Hospital and had received attention for which ten years had in no degree lessened the measure of his gratitude.

At 10.45 o'clock on the moonlit night of September 15th, the "alert" warned patients and staff at No. 3 that an air raid was expected. No enemy planes reached the district, but again on the following night the "alert" sounded, giving notice that the Germans had been sighted on the way. Again, however, they failed to reach Boulogne, or changed direction and attacked some other objective.

On the day after the second of these "alerts," Surgical Team No. 6, composed of Major L. H. McKim, Nursing Sister N. J. Enright (Anaesthetist), Nursing Sister E. R. MacDougall, and Privates G. A. Felix, D. Holgate, and J. A. Farquhar, was ordered to proceed at once to No. 41 Stationary Hospital. On the same day Major W. W. Francis, Registrar, was admitted to No. 8 British Red Cross Hospital, whence, on September 19th, he was evacuated to England. On the day before this, Orders announced that Sergeant-Major H. Slack had been declared medically unfit for further service and that Sergt. H. W. Atkins had been promoted to fill his place.

In a document filed at this time, Matron MacLatchy reported the admirable work of Nursing Sister A. M. Cooper and Nursing Sister M. E. Austin. After a prolonged period of work under pressure, these original

sisters were offered safer and more comfortable wards, but refused, stating that they preferred to remain where they were. By such action they upheld traditions reflecting credit on all ranks of the unit.

At 2 o'clock on the morning of September 18th lights at No. 3 Canadian General Hospital were switched off as enemy planes raided the area. At the moment when a German machine was overhead, Private George Sheriff, 20th Battalion, Durham Light Infantry, who had had his arm amputated at the shoulder on account of gas gangrene, discovered that blood was pouring from his wound. He called; and in the dark, Nursing Sister B. F. Mattice, R.R.C., at once responded. With one hand she checked the haemorrhage from the axillary artery; with the other she tore off bandages and dressings to get a better grip. All the time anti-aircraft guns were banging viciously, and the drone of the enemy motors came distinctly from overhead. In reporting the incident to the Commanding Officer, Lieut.-Col. Bazin stated that the patient owed his life to the action of the nursing sister, whose courage the Officer in charge of Surgery considered worthy of the highest commendation.

On the day preceding this incident, Col. Lorne Drum forwarded to Headquarters a report in which he cited the valuable surgical work accomplished by Lieut.-Col. Bazin upon patients from the Battle of Amiens, the Battle of Bapaume, and the more recent engagements before Arras. Lieut.-Col. Bazin had supervised the surgical work of the whole unit and had himself operated successfully upon many of the most serious cases.

In the same report, Col. Drum called to the attention of the higher command the work of Capt. T. A. Malloch, who, during the influenza epidemic earlier in the year and since that time, had ably carried out the duties of Acting Officer in charge of Medicine. Capt. D. S. Lewis, of the Medical Department, had also displayed devotion to duty and marked professional skill in dealing with the patients allotted to him. Both the Medical and Surgical Departments had benefited, too, from the attention to duty of other ranks, for which Sergt.-Major W. Finlay deserved no little credit.

At this time the "Maple Leaves" departed to Rouen,

and the Concert Party of the 1st Canadian Division arrived in Boulogne to replace them. At 5 o'clock on the afternoon of September 19th the new party presented an entertainment in the Y.M.C.A. Hut, where, on the following day, some 50 men of No. 3 attended a meeting at which plans for establishment of a branch of the Khaki University of Canada were discussed. Orders on the same day announced that Col. Drum, Commanding Officer, had, in addition to his own duties, assumed those of Deputy Director of Medical Services, Boulogne Base, during the absence on leave of Col. H. S. Thurston.

On September 21st Surgical Team No. 6 rejoined from duty in the forward area, in time to welcome Col. J. M. Elder, former Commanding Officer, who arrived on a visit from the Rouen Base. Col. Elder maintained a deep interest in his old command and rejoiced to find all going well. A few familiar faces had disappeared since his previous visit, and he noted in his diary that of the 33 officers who had sailed with the unit from Montreal, Major L. H. McKim alone remained. Three years and more had changed the personnel,but the spirit of the unit, he found, remained as in the days when Col. Birkett first inspected his recruits on the campus of McGill University.

Two nights after Col. Elder's visit, the "alert" sounded at 10.30 o'clock, and soon German planes were engaged in their work of destruction. Again No. 3 escaped; but again mangled victims of the bombing were brought to the unit for treatment. Thirty-five British other ranks from a camp nearby arrived on stretchers, together with 3 British civilians, and 1 man, who could not be identified. Examination showed that 2 of the British soldiers were dead, and the unidentified man died not long after. The remainder were carried to the wards, or to the Operating Room, where surgeons and nursing sisters worked over them far into the night.

On the day following this raid Nursing Sister H. T. Drake, a member of the unit who had sailed with the original personnel from Canada, was struck off the strength, having proceeded previously to No. 2 Canadian Casualty Clearing Station to complete a course of instruction in general anaesthesia. Two days later Surgical Team No. 6 proceeded to No. 21 Casualty Clearing Station for

duty, and, later in the day, Capt. C. F. Martin rejoined from temporary duty with French medical formations. On reporting to No. 3, Capt. Martin was promoted to major's rank, and on the 29th he was appointed Officer in charge of Medicine. This same date was marked at the Hospital by arrival of a convoy of "walking wounded." the first such to reach the unit since the British offensive on August 8th.

Statistics for the month of September indicate that No. 3 Hospital had been kept busy. The strength of the unit, as on October 1st, is given as 33 medical officers, 1 dental officer, 3 chaplains, 118 nursing sisters, including 16 attached, and 246 other ranks. To these had come 3,568 patients, including 3,173 Imperials, or troops from the British dominions overseas, 294 Canadians, 93 soldiers of the Allied Armies, including a number of Americans, and 8 civilians.

Discharges for the month had numbered 3,488, and 1,206 patients remained under treatment as the month closed. Deaths had numbered 46 and the percentage of deaths 1.31, figures brought about in part by the severity of many wounds and the presence of the deadly gas gangrene. As a result of gas gangrene and other complications, post-operative deaths had numbered 13, or 3.81%.

II

At midnight on September 30th, 1918, the Continental system of time, with the 24-hour clock, was adopted by the British Army in France. Orders at No. 3 Canadian General Hospital (McGill) announced the change, with the explanation that times would always be represented by four figures. Thus 12.10 a.m. became 0010 o'clock; 3.25 a.m. became 0325 o'clock; and 3.25 p.m. became 1525 o'clock. Five days later a further change was ordered, and clocks were put back one hour to end the summer period of daylight saving.

On October 3rd Matron E. Campbell, R.R.C., and Nursing Sisters E. M. Auger, R.R.C., F. K. Whittick, R.R.C., N. C. Donohue, and L. Herrington ceased to be attached to No. 3 Hospital and rejoined their own unit,

No. 1 Canadian General Hospital. On the same date Major F. A. C. Scrimger, V.C., reported from No. 3 Canadian Casualty Clearing Station to replace Lieut.-Col. A. T. Bazin, D.S.O., Officer in charge of Surgery, who, after a prolonged period of loyal service in France, both at the front and at the base, was proceeding to duty on Home Establishment.

Two days after Lieut.-Col. Bazin was struck off strength Col. H. S. Thurston returned from leave and relieved the Commanding Officer of No. 3 Hospital of his duties as Acting Deputy Director of Medical Services, Boulogne Base. Col. Drum had discharged the responsibilities of the position in addition to his own, but the latter now became heavier than in the immediate past. On September 27th the Canadian Corps drove across the Canal du Nord, and, in the fighting of the week ending on October 6th casualties rose to 41,000, which imposed appreciable strain on all medical units. In addition, influenza, which had waned after the mild outbreak earlier in the year, now reappeared in a more serious form and filled the wards of hospitals in France to overflowing.

At No. 3 Hospital the heavy fighting and the epidemic of influenza shot the total of patients up from 875 on September 29th to 1,458 on October 6th. Casualties of 34,500 on the British front in the following week and a continuation of influenza meant that, despite every effort to clear beds, the total could be but little reduced. A drop in casualties to 21,500 in the following week, however, enabled the McGill unit to bring the number of occupied beds down to 1,261.

Meanwhile, on October 2nd, Major W. H. Tytler, Officer in charge of Pathology, proceeded for temporary duty with the American Medical Research Committee, Paris, whence he returned on October 7th, one day after Lieut.-Col. Bazin and Capt. J. H. Slayter, Company Officer, had left for England. On Capt. Slayter's departure, the duties of Company Officer were assumed by Capt. A. S. Lamb.

Tuesday, October 8th, was marked at No. 3 Hospital by establishment of a course of lectures for wardmasters and orderlies of the Medical Division. Orders announced that the first lecture would be delivered at 1500 o'clock

and that the subjects to be covered in the course would include, (1) Anatomy of the body, (2) the circulation, (3) the digestion, (4) sanitation, (5) infectious diseases, (6) charts, (7) poultices and wet packs, (8) shock, unconsciousness, and fits, (9) wounds and burns, (10) dressings and bandages, (11) haemorrhage, and (12) venereal disease.

Simultaneously, Orders stated that for wardmasters and orderlies of the Surgical Division lectures would begin on Monday, October 14th. As a whole, the course prepared corresponded closely to that for the Medical Group, the chief difference lying in the added emphasis given to post-operative conditions, fractures, splints, improvisation of splints, and surgical nursing. For the wardmasters of both groups, it was announced, demonstrations would be given in (1) catheterization, (2) lumbar puncture, (3) transfusion, and (4) hypodermic injections.

On the day following the opening of the courses of instruction, Nursing Sister Seaborn Robertson, an original member of the unit, was reposted from No. 46 Casualty Clearing Station, and Miss Helen Mathewson, V.A.D., in charge of the Canadian Red Cross Recreation Hut, ceased to be attached on proceeding to other duty. Next day 12 Class A men were sent to duty with field ambulances of the Canadian Corps in exchange for an equal number of men of a lower physical rating.

At 8.20 o'clock on the evening of October 10th a meeting in the Officers' Mess was addressed by the Officer in charge of Medicine, Major C. F. Martin, who discussed developments in war medicine, referring specially to his own observations during a visit in the previous month to medical centres of the British, French, and American Armies. In all centres, Major Martin had been given opportunity to study phases of the work appealing to him, with the result that his report covered the most interesting aspects of medicine as practised in the different areas on the Western Front.

Three days after the address by the Officer in charge of Medicine, Orders announced that a branch of the Khaki University of Canada had been organized at No. 3, with Col. Drum as President, Capt. the Rev. J. W. Melvin as Vice-President, Capt. the Rev. A. B. Wood as

2nd Vice-President, Capt. the Rev. G. H. Broughall as Registrar, and Sergt. J. W. Snell as Secretary. In addition it was announced that subjects to be taught would include, (1) Business, by Sergt. J. Macaskill and Private Newton, (2) Latin, French, and Greek, by the Chaplains, (3) Agriculture, by Capt. Melvin, (4) Draughtsmanship, by Private F. H. Keeling, (5) Economics, by Capt. Wood, and (6) Elementary Work, by Privates Smith and Newton.

A week later, Col. H. M. Tory, Director of Canadian Educational Services and President of the Khaki University, visited the unit to address officers, nursing sisters, and other ranks in the Canadian Red Cross Hut. Col. Tory's remarks gave to the new branch the stimulus required, and on the morrow classes began with more than 60 other ranks in attendance.

Meanwhile, the work of the Hospital continued to be heavy, and changes in personnel presented the usual difficulties. On October 16th Capt. A. S. Lamb proceeded to duty with the 3rd Canadian Division and was succeeded as Company Officer by Capt. L. C. Fallis. Next day Capt. E. M. Blair followed to the 3rd Division, and Nursing Sisters M. E. Gray and M. W. Ferguson proceeded to duty at No. 8 Canadian Stationary Hospital. Simultaneously, Major McKim and No. 6 Surgical Team reported back from the front, and Nursing Sister C. M. Mowbray was taken on strength from No. 1 Canadian Casualty Clearing Station.

In a letter, written somewhat later in the month, Col. Drum called to the attention of the Director of Medical Services, Canadian Section, 1st Echelon, G.H.Q., the hardship which the endless transferring of officers imposed on the unit under his command: "At present," he stated, "the officers in charge of my wards are continually changing, and I feel that in my anxiety to allow every officer who has not been to the front to proceed there in his turn, and to retain no such officer for duty here, that I am scarcely fair to myself, or my unit, and am unduly adding to the burden of my responsibilities as O.C. a large and important general hospital."

Continuing his letter, Col. Drum asked that officer reinforcements destined to remain for a considerable time

THE SENIOR OFFICERS, OCTOBER, 1918
Major F. A. C. Scrimger, V.C., Col. Lorne Drum, Major C. F. Martin

on the establishment of No. 3 be sent to him, either from units at the front, in which case junior officers on his strength would be sent forward in exchange, or from Home Establishment. He stated that he would prefer officers with their professional career still before them, and secondly, graduates of McGill University, the second condition to apply, however, only if the McGill officer were the professional equal, or superior, of any alternate candidate.

In conclusion, Col. Drum requested that fifteen officers on his staff be exchanged at the rate of two or three a week. The officers in question were young, active, and anxious to proceed to the front, and were only at No. 3 awaiting orders. While at the Hospital they carried out the duties assigned to them, but it was impossible for them to take the interest in their work which officers expecting to remain would develop as a matter of course.

On October 20th Orders announced that the Athletic Association of No. 3 Canadian General Hospital (McGill) had undergone reorganization. In the new Association, Col. Drum became the Honorary President, Major E. C. H. Windeler the President, and Capt. J. E. Carruthers Secretary. On the same date Dr. E. Napier Burnett, F.R.C.S. (Edin.), Hospital Economy Expert, visited the unit and invited the Commanding Officer, the Quartermaster, the Matron, and the Dietitian to a lecture at No. 14 Stationary Hospital, where he explained how savings could be effected in hospital administration.

By October 22nd the epidemic of influenza had reached alarming proportions. Cases showed more complications than during the previous outbreak of the disease and deaths from pneumonia became frequent. On the 26th of the month 5 patients died, and during the night of the 31st 7 additional deaths occurred. Difficulty in treating the 1,671 patients in the Hospital, as on the 27th of the month, was increased when 4 officers and 12 nursing sisters came down with the disease and were evacuated to No. 14 General Hospital.

In view of the difficulty, Col. Drum wrote to the D.M.S., Canadian Section, 1st Echelon, G.H.Q., asking if 3 officer reinforcements could be sent to him for duty while pressure from the epidemic lasted. Owing to the

fact that the recall of Major C. F. Martin, Officer in charge of Medicine, to duty in London was expected, he also requested that Major R. H. M. Hardisty, D.S.O., M.C., of No. 6 Field Ambulance, be posted to No. 3, to assume command of the Medical Department. Major Hardisty had served with distinction at the front and had expressed willingness to accept the position at No. 3 so soon as arrangements to replace him at No. 6 Field Ambulance could be completed.

Two days after Col. Drum wrote as above, Nursing Sister A. M. H. Fleming proceeded to Abbeville to act as anaesthetist at No. 3 Canadian Casualty Clearing Station, and Nursing Sisters H. J. McArthur and N. P. Wilkins rejoined from No. 2 Canadian C.C.S. Next day Nursing Sister E. V. McKay was evacuated to No. 14 General Hospital with influenza, and on the 29th news arrived that she was seriously ill. Influenza was sweeping a deadly path, and it was realized that "seriously ill" indicated a truly grave condition.

As the month of October ended, the influenza epidemic showed some signs of abating. Cases continued to arrive, but between October 27th and November 3rd more than 300 beds were emptied .A number of seriously wounded cases reached No. 3 in this same period, but thereafter the flow lessened appreciably, reflecting faithfully the type of fighting, which had changed remarkably. In the week ending on November 3rd, the British Army drove forward at many points, yet casualties dropped to 18,000. No longer was Germany capable of serious resistance.

Accurately indicating the general trend of events, statistics of No. 3 Hospital's work in October reveal the large amount of surgery accomplished and the deadly inroads of influenza. Convoys brought 5,726 patients to the Hospital, 1,206 remained over from the previous month, 5,515 were discharged, and 1,362 remained on October 31st. Operations totalled 788 and post-operative deaths 9, giving a percentage of 1.14, but total deaths rose to 55, owing to influenza, and this gave a death percentage of 0.97, a high figure destined, unfortunately, to be surpassed in the month immediately ahead.

III

As November opened at No. 3 Canadian General Hospital (McGill) it became clear that all hope for the recovery of Nursing Sister E. V. McKay must be abandoned. Reports from the Chateau Mauricien at No. 14 General Hospital indicated that pneumonia had developed and that the end was near. Nursing Sisters Walters and Stewart and the medical officers in charge did what was possible, but nothing could check the disease, and at 11.30 o'clock on the morning of November 4th the patient died.

With deep regret Col. Drum and Matron MacLatchy announced the news to the staff of No. 3. Two days later, at 10 o'clock in the morning, 35 nursing sisters, with a detachment of officers and other ranks, attended the funeral at Terlincthun Cemetery. Despite the nature of the times, no honour was omitted, and glorious wreaths from the Matron and nursing sisters of No. 3, from the staff of No. 7 Convalescent Depot, from the Matron and nursing sisters of No. 2 Canadian Stationary Hospital, from the Matron of the Chateau Mauricien, and from the officers of No. 3 testified to the sorrow shared by all to whom Nursing Sister McKay had been known.

Meanwhile, at No. 3 Hospital all ranks were working under a severe strain. Some relief was furnished on November 2nd, when Nursing Sisters E. M. Beamish, E. E. Alway, B. A. Petch, A. K. Frollick, M. C. MacIntosh, and A. E. McIlwraith were attached for temporary duty, and Capt. F. W. W. Hipwell reported from Home Establishment; and on the 4th when the D.M.S., Canadian Section, 1st Echelon, G.H.Q., sent Capts. J. M. Burnett, J. A. Davies, and T. R. Wellwood from No. 8 Canadian Stationary Hospital.

That these reinforcements arrived opportunely is shown by the Hospital Diary, which, on November 7th, stated that 96 patients were listed as dangerously, or seriously, ill. To cope with this situation, further reinforcements were supplied, Nursing Sisters M. J. Allwood and R. E. McKay reporting from Home Establishment and Capt. L. C. Reid from No. 73 General Hospital. Unfortunately, however, the nursing staff was soon de-

creased by orders which sent Nursing Sister C. W. Harrison to duty at No. 1 Canadian Casualty Clearing Station, Nursing Sister E. L. Dickie to No. 25 Stationary Hospital, and Nursing Sister N. G. Foss to England.

On November 10th the commissioned strength suffered a blow when Major Martin, Officer in charge of Medicine, received orders to report to the Director-General of Medical Services, Overseas Military Forces of Canada, London, to assume the duties of Chief Consultant in Medicine. Major Martin's recall had been expected, but it came inopportunely. As Col. Drum wrote in the unit Diary, Major Martin's energy, initiative, and high professional ability had proved of the utmost value at a time of urgent need, and would be sorely missed.

Amid the scenes of death which the influenza epidemic and a series of heavy surgical cases caused at No. 3 Hospital, the unit personnel lost sight in some degree of the forward sweep of the British and Allied Armies at the front. On November 10th, however, realization spread that the long, weary years of warfare were probably coming to an end.

To the 24 officers, 99 nursing sisters, 227 other ranks, and 4 officers attached, as well as to the 15 members of the Red Cross personnel, reports of an armistice seemed at first too good to be true. In the wards, too, 1,217 troops from the United Kingdom, 78 Canadians, 10 Australians, 20 New Zealanders, 5 South Africans, 20 Royal Air Force soldiers, 4 Royal Navy sailors, 2 British West Indians, 4 British civilians, and 83 Americans discussed the rumours with doubt and disbelief. A few expressed hope; others were too sick to care what happened; but the majority flatly stated their belief that the proposed armistice was a scheme by which Germany hoped to save her shattered and defeated army from annihilation.

November 11, 1918, however, dispelled all doubt, not of Germany's motives, but of the fact that the war had come to an end. In the morning the following message reached Col. Drum from the D.D.M.S., Boulogne Base: "Allied armistice terms were accepted by German plenipotentiaries at 5 o'clock this morning. Hostilities cease at 11 a.m. Mons captured early this a.m. by Canadians."

November 11, 1918

Armistice Ceremony at the Gate of No. 3 Canadian General Hospital, Boulogne

At 1.30 p.m. Col. Drum paraded the unit and formally announced the news. Cheers for the King and for Canada followed, after which the flags flying from the Hospital staff received a triumphant salute. Then, amid a silence tense with feeling, the Hospital bugle sounded "Cease fire!". This call, marking the end of the war, marked also the last bugle call for three of the Hospital's pneumonia patients, who died before the day was done.

CHAPTER XX

AFTER THE ARMISTICE

I

AT No. 3 Canadian General Hospital (McGill) the Armistice brought an hour of rejoicing into a month clouded by the shadow of influenza. Boulogne celebrated on November 11th; but, even as church bells pealed in honour of the victory, medical units of the British and Allied Armies toiled, almost despairingly, against the microscopic enemy which influenza presented.

On November 12th Capt. T. A. Malloch proceeded to London, "on command" to take part in consultations on influenza. That the disease presented complications absent in the summer outbreak was obvious. In June and the following months the majority of cases had remained in hospital but a few days, and deaths had been rare. At No. 3 Hospital in mid-November, deaths were averaging three a day.

Previous to resigning the post of Officer in charge of Medicine, Major C. F. Martin filed a report on "Clinical Impressions of the Epidemic of Influenzal Pneumonia," in which he stated: "The pneumonias that have occurred in the present epidemic are so varied in their clinical characters that it is impossible to group them in definite types, nevertheless, the following varieties have been noted, and may form a tentative grouping:

(1) Mild cases with fever lasting from four to six days and terminating usually by lysis.

(2) Severe cases with symptoms and signs of lobar pneumonia.
   (a) There are those apparently due to the bacillus of

influenza, which is demonstrated in the sputum and lungs,

(b) Those showing pneumococcus or streptococcus in preponderating numbers in the sputum and lungs.

(3) Septicaemic types:

(a) Fulminating types, fatal in from three to five days, with symptoms suggesting a generalized septicaemia, where the respiratory system in general shows signs of involvement late in the disease.

(b) Cases with irregular, intermittent fever, running a severe course for one to four weeks, and terminating either fatally, or else very gradually in recovery. In these cases the whole respiratory tract is involved, and the signs of pneumonia appear late. In other words, the physical examination reveals evidences of acute involvement of the whole respiratory tract. There is frequent epistaxis, pharyngitis, laryngitis, and synchronously a diffuse bronchitis of the finer tubes, and some invasion of the alveoli. In these cases, the pulmonary involvement is nearly always bi-lateral, and the physical signs of serious pulmonary disease are usually delayed. To say the least, the ordinary methods of physical examination yield results that are far from satisfactory, and the careful physical findings are often quite at variance with the post-mortem disclosures."

Continuing his report, Major Martin stated that the onset of the disease varied as much as its course. Frequently the patient developed symptoms after prolonged exposure, but in other instances, seemingly as severe, no relation between exposure and onset of the illness could be established. Chills were one of the commonest early symptoms; genuine rigour and skin eruptions were less frequent.

As the disease advanced, Major Martin noted that general pains over the body and especially in the back predominated over localized chest pains, where the sensation was more of oppression than of actual pain. Early in the disease an irritating, but non-productive, tracheal cough usually appeared, and gave the patient little rest.

This, the Officer in charge of Medicine observed, was a frequent cause of the supervening exhaustion. Marked hoarseness usually accompanied the cough and was a striking feature of the general picture.

Continuing, Major Martin stated that in the early stages of the disease sputum was often rare. He described the change in specimens as the days passed, and then proceeded to a description of the appearance of patients and the type of their breathing. Practically all patients, he found, showed marked cyanosis, which began at an early stage and increased steadily in fatal cases. In others, the discoloration persisted for many days after recovery had started.

Under a sub-heading, "The Pulse," the report drew attention to the fact that the beat in the early stages, despite high temperatures, was frequently fairly slow, often not more than 100, where it sometimes remained for days, accelerating only in the later period of the disease. Delirium had occurred seldom amongst the patients at No. 3, and when it did appear, the type was invariably of the low, muttering variety. Apathy, on the other hand, was a constant symptom. Nearly all patients were drowsy from the start and some were most difficult to rouse at all.

After discussing the mental state of the patients, Major Martin's report took up the "Physical Signs" and said: "The physical signs in the chest are characteristic of the disease, insofar as they are most varied and unreliable. Owing to the multiplicity of the pathological changes that may occur concurrently in the same lung over a short period of time, the accuracy with which one may determine the underlying conditions is limited. The outstanding feature of the physical signs is this, that, with an extensive infiltration of the alveoli, there may be no other physical signs than those of a fine bronchitis, or bronchiolitis. In other words, for four or five days, and longer, from the onset of serious symptoms, one will find nothing more than a few fine râles at both bases, or perhaps in the interscapular regions. Or again, for a number of days, there may be no other physical signs than suppressed breathing, even when the sputum is haemorrhagic for days; one gains the impression, then, that a central

The Officers of the Hospital, November, 1918

The senior officers in the middle row are, left to right: Major E. C. H. Windeler, Major L. H. McKim, Major F. A. C. Scrimger, V.C., Col. Lorne Drum, Major C. F. Martin, Major N. G. Cooper, Major W. H. Tytler

pneumonia has existed, accompanied by a generalized fine bronchitis, and moderate oedema of the lungs. In the fulminating cases, this may be the only evidence up to the end, but the lungs will demonstrate at autopsy widespread acute interstitial changes."

Major Martin discussed physical signs at length and then turned to percussion, remarking that, when dulness occurred, he had found it most frequently in the infra-scapular region, less often in the inter-scapular region and in the base. Anteriorly, and in the apices, dulness was infrequent, even late in the disease. With regard to auscultation, the most noteworthy signs were the shortness of the inspiratory murmur, which ended abruptly and before the normal duration of the excursion. "It is," Major Martin stated, "often more of an inspiratory grunt, while expiration is feeble and sometimes moderately prolonged. This, too, appears to be in keeping with the idea that the disease is primarily in the nature of a bronchiolitis."

Concluding his report, Major Martin stated: "The course of the disease may be fulminating, acute, subacute, or even chronic (i.e. lasting for four weeks, or even more), with favourable results, or otherwise. Death has occurred in four days, while in a few of our patients, irregular high fever has continued for many weeks, terminating in ultimate recovery. In the unfavourable cases, the continued mild asphyxia leads to exhaustion. Recovery usually occurs by lysis in the mild cases, by crisis in the types simulating lobar pneumonia, and in the prolonged septic cases by all varieties of descent in the temperature."

Despite the influenza epidemic, patients and staff of No. 3 Hospital were not insensible to the relief from anxiety which the Armistice afforded. Moonlight flooded the gardens, compounds, and groves of the unit on the night of November 13th and diarists mentioned that it was wonderful to view the moon, as in the period before aerial bombing had turned every moonlit night into a time of anxiety and peril.

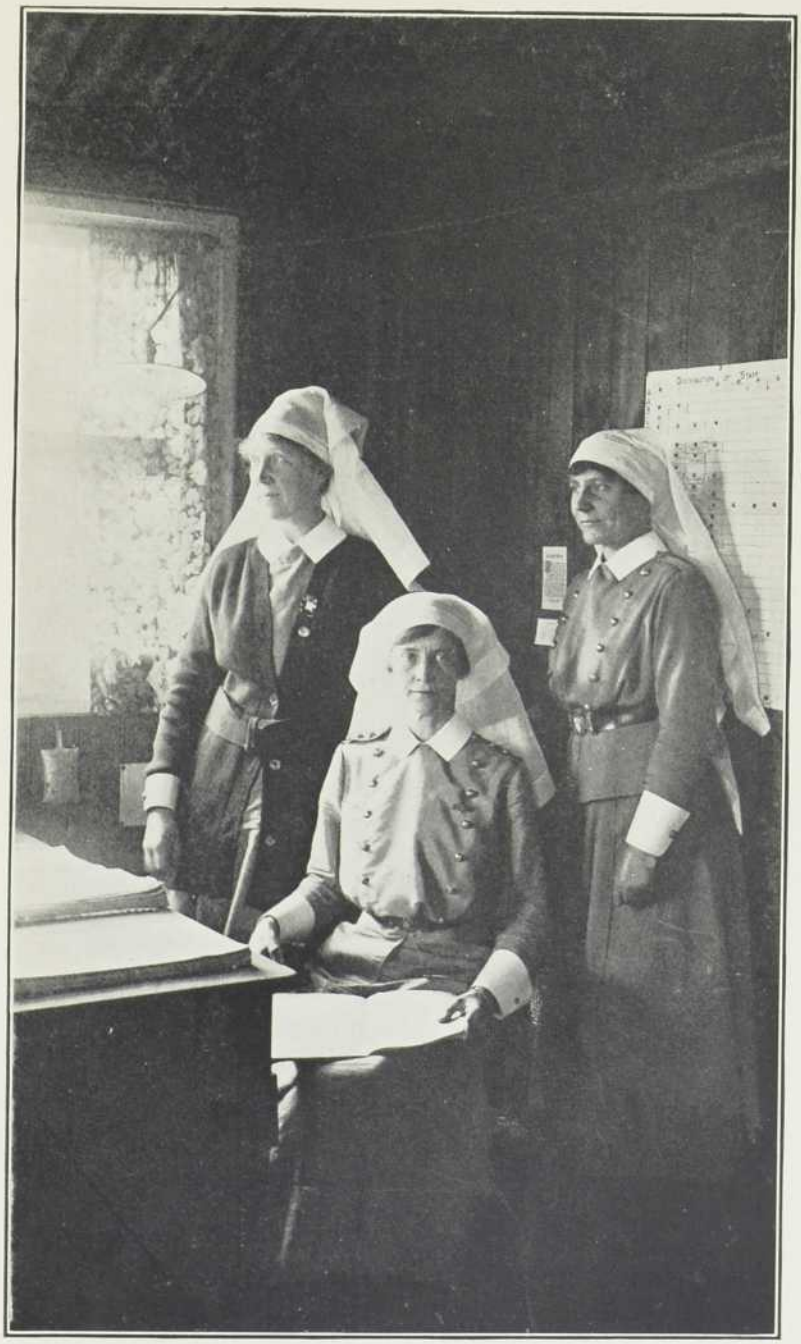
By November 18th the flow of wounded cases from casualty clearing stations at the front showed a marked decrease. Influenza, too, abated somewhat, but released

prisoners of war arrived from Germany in large numbers. All looked weary, worn, and hungry, and nearly all told of ill-treatment by the enemy and of rations too scant to do more than keep a man alive. Many of the cases were not "sick" in the strict sense of the word, but orders had been issued that all were to be sent to England under medical care. When the first rush of these cases had passed, several wards in the Hospital were closed, including all tent accommodation. On the 18th, 876 beds were occupied, and on the 19th normal accommodation was placed at 1,440 with a "crisis expansion" of 210 extra beds available.

On November 20th Lieut.-Col. C. H. Reason, O.C. No. 3 Canadian Stationary Hospital, visited the McGill unit to study the diet system employed. Next day Capt. T. A. Malloch assumed the duties of Officer in charge of Medicine, vice Major C. F. Martin, and simultaneously Orders announced that regulations prohibiting the use of cameras had been cancelled. Soon thereafter cameras appeared in considerable numbers, as members of the unit took photographs to preserve memories of their service in France.

In a letter to Col. Birkett, written on November 26th, Col. Drum reported that the epidemic of influenza was rapidly dying away: "As a result," he stated, "we are in our first slack period since I took over this command." Statistics compiled on the 30th of the month demonstrate clearly the strain which both the Medical and Surgical Departments had endured. Admissions had numbered 3,596 and 90 patients had died, a total greater than that of any previous month in the Hospital's existence. Influenza had caused the great majority of deaths, but 13 patients in the Surgical Department had succumbed, following operations necessitated by the nature of their wounds.

In his letter to Col. Birkett, Col. Drum mentioned with pride the manner in which the personnel of the unit had at all times carried out the duties assigned to them. The esprit-de-corps of the Hospital, he claimed, remained as strong as that established by Col. Birkett in the earlier days of the war. Continuing, Col. Drum mentioned the notable services rendered in the Surgical Department by Major F. A. C. Scrimger, V.C., and Major L. H. McKim;



THE SENIOR NURSES, 1918

Left to right: Nursing Sister S. M. Hoerner, Matron K. O. MacLatchy, Nursing Sister Maude Wright

and in the Medical Department by Capts. T. A. Malloch and D. S. Lewis. Capt. J. A. M. Hemmeon's work in the Laryngological Department was also mentioned, as was that of Major W. H. Tytler, Capt. R. M. Janes, and Capt. G. M. Dobbin, of the Pathological Department.

Cases of chest wound, Col. Drum stated, had received splendid attention from Capt. A. M. Yeates, and the Radiological work had been most successfully carried out by Capts. D. S. Johnstone and G. T. Wilson. Capt. L. C. Fallis had discharged the duties of Company Officer efficiently; Major N. G. Cooper had satisfactorily filled the Registrar's post, left vacant by the illness of Major W. W. Francis; and Capts. Sims, L. P. MacHaffie, and C. G. Main, in their respective spheres, had accomplished work which their Commanding Officer considered of the greatest value.

Amongst the nursing sisters mentioned in Col. Drum's letter were Miss MacLatchy, the Matron; Nursing Sisters S. M. Hoerner and Maude Wright, two of her chief assistants; and Nursing Sister Isabel Davies, head of the Operating Room Staff. Sergt.-Major W. Finlay is stated to have given faithful and ungrudging service to the unit; and this comment applied equally to Sergt. H. White, of the Orderly Room, Staff-Sergeant J. H. Bieler, of the Registrar's Department, Staff-Sergeant B. A. Fauvel, the O.C.'s Chief Clerk, Quartermaster-Sergeant H. C. Elsmore, and Staff-Sergeant P. L. Gibson, Chief Dispenser. In conclusion, Col. Drum stated that No. 3 Canadian General Hospital (McGill) headed the list of Canadian hospitals for total admissions from the first of the year to date.

II

Early in December, 1918, Orders at No. 3 Canadian General Hospital (McGill) announced that Major F. A. C. Scrimger, V.C., Officer in charge of Surgery, had been promoted to the rank of acting lieutenant-colonel; and that Capt. T. A. Malloch, Officer in charge of Medicine, had been named an acting major. Owing to the cessation of hostilities, surgery decreased in December, but the medical wards of the Hospital continued to be busy.

As mentioned previously, released prisoners of war began to arrive soon after the Armistice, and this flow continued into December. In all 1,382 such patients reached No. 3; 1,234 from units of the Imperial Army, 30 from the Canadian Expeditionary Force, 15 from other dominions of the British Empire, 21 from the American Expeditionary Force, and 82 from formations of the French, Russian, Belgian, and Italian Armies.

In a report based upon observation of the first 300 consecutive cases admitted to the medical wards of No. 3 Hospital, Major T. A. Malloch stated that the period of imprisonment undergone varied from one month to four years, but that the majority had been captured during the great German drives of the previous March, April, and May.

The condition of the men depended on the type of food the Germans had given them and on the nature of the work in enemy territory they had been compelled to perform. Many had been worked to the limit of human endurance, and were in a state of complete physical exhaustion. Classification of the maladies afflicting the 300 cases presented difficulties, but was roughly accomplished as follows:—

Debility	161
Diarrhoea	68
P.U.O.	5
Myalgia	10
Influenza	19
Tonsilitis	2
Gastritis	4
Tuberculosis	3
Bronchitis	15
Oedema of feet and legs	3
Pleurisy	2
Constipation	1
Broncho-pneumonia	5 (of whom 4 died)
Chronic Nephritis	2

Commenting on the above diagnoses, Major Malloch remarked that 90% of the patients looked paler and thinner than normal and were weak as a result of overwork and insufficient food. Loss of weight was particularly notice-

able in the younger lads, whose cheek bones stood out gauntly and whose limbs were wasted away. Nearly all patients were starvingly hungry, and care on the part of nursing sisters and medical officers was essential to keep them from immoderate and harmful eating.

In the cases diagnosed as tuberculosis, one showed marked involvement of both lungs, and was evacuated to the United Kingdom with little hope of recovery. Amongst the 15 cases of bronchitis, Major Malloch suspected that several actually had tuberculosis. Sputum examination had failed to reveal Koch's bacillus, but numerous signs indicated to the Officer in charge of Medicine that tuberculosis was present, though unrevealed.

The cases of oedema of the feet frequently showed swelling beneath the eyes as well. From reports of such cases treated in Germany and Austria, Major Malloch concluded that the underlying cause was insufficiency of carbohydrate diet. Proof of this seemed to be forthcoming at No. 3 Hospital when, after 48 hours in bed with appropriate food, the cases so diagnosed showed marked improvement. At the request of Major Malloch, Capt. Keith, Royal Army Medical Corps, attached to the laboratory of Col. Sir Almroth Wright, estimated the amount of urea in the blood of one patient and reported that, though low, the amount was within normal limits.

Four patients out of five admitted with bronchopneumonia died, giving a percentage much higher than that observed at No. 3 Hospital during the severe epidemic of the previous month. The percentage, Major Malloch considered, was explained by the exhausted physical condition of the patients prior to onset of the disease, and secondly, by the fact that in their eagerness to reach home after months, or years, of imprisonment, the patients made light of their troubles, concealing symptoms until the disease had progressed too far and taken too firm a hold to permit of successful treatment. In bringing his report to a close, the Officer in charge of Medicine at No. 3 recorded his appreciation of the cooperation afforded by his officers, particularly Capt. Hipwell, whose notes on the condition of the released prisoners had proved of the greatest value.

In addition to the statement from the Officer in charge

of Medicine, Col. Drum received a report on released prisoners of war from Lieut.-Col. F. A. C. Scrimger, Officer in charge of Surgery. Without doubt the most striking features in the condition of the 200 patients first admitted to the surgical wards were marked emaciation and the prevalence of skin diseases. Generally speaking, the patients received during the first two weeks after the Armistice were in a worse condition than those arriving later, a fact explained by employment of the former immediately behind the German lines in France and Belgium. Work there had been exhausting, and food had been entirely inadequate. Prisoners coming from the heart of Germany, on the other hand, had been maintained during captivity by food parcels from England.

As mentioned, skin disease amongst the released prisoners was common, and many suffered in addition from boot galls and infected sores on feet, arms, and legs. Sixteen of the cases had been wounded at the front and had undergone treatment in medical units of the German Army. In most instances, Lieut.-Col. Scrimger reported, the wounds showed that reasonably good care had been given them. Owing to the starved condition of the majority of the patients, however, mental dulness was most noticeable.

On December 5th Nursing Sister Isabel Davies, R.R.C., head of the Operating Room Staff, was struck off the strength of No. 3 Hospital on proceeding to Home Establishment. Nursing Sister Davies had accomplished work of a high order with the McGill unit, and the Commanding Officer recorded in the Hospital Diary his appreciation of her services. Previous to her departure, Capt. E. Fidlar had been attached to No. 3 for duty in the laboratory, Capt. N. M. Halkett had joined and been appointed Company Officer, Nursing Sisters W. Ross, M. Clint, R.R.C., and Seaborn Robertson had proceeded to casualty clearing stations, and Major E. C. H. Windeler had been ordered temporarily to duty at Etaples.

Capt. F. E. McKenty arrived at No. 3 Hospital on December 7th, and on the 8th Capt. A. W. Wood, Roman Catholic Chaplain, proceeded to duty with the Canadian Corps. Three days later Hon. Major and Quartermaster H. J. Adair was seized with an acute illness, and Nursing

The Funeral of Hon. Major Hamilton John Adair, December 15, 1918

"A splendid soldier and a reliable and efficient officer, he was straight as a die and true as steel."—*Col. Lorne Drum*

Sister Maude Wright was appointed his special nurse. Major Malloch attended him and, realizing that the case was serious, ordered his transfer to No. 14 British General Hospital for Officers at Wimereux.

On December 12th a telephone message stated that Major Adair was doing well. Col. Drum, Lieut.-Col. Scrimger, and Major Malloch visited him during the day and received a favourable report from the officer in charge of the case, who anticipated recovery in about two weeks. Next day a message informed the Commanding Officer of No. 3 that the patient's condition had changed for the worse. Major Malloch, Capt. D. S. Lewis, and Capt. G. H. Broughall, Church of England Chaplain, thereupon proceeded to No. 14, but there was nothing they could do. Major Adair was unconscious and his pulse was so feeble that it could be felt only with the greatest difficulty. No improvement occurred, and death took place at 3.15 o'clock in the afternoon.

Two days later, officers, nursing sisters, and other ranks of No. 3 Hospital attended the funeral at Terlincthun Cemetery. Major W. H. Tytler, Major N. G. Cooper, Capt. A. M. Yeates, Capt. R. M. Janes, Capt. D. S. Lewis, Capt. F. A. Brockenshire, and Capt. D. C. Lochead acted as pall-bearers, and Capt. Broughall read the burial service of the Church of England. In the Hospital Diary, Col. Drum noted these details, and added: "I lose an old and tried comrade, with whom I have served for many years and at many stations. A splendid soldier and a reliable and efficient officer, he was straight as a die and true as steel." That this opinion was shared by others was proved at the funeral, when officers and other ranks from all units in the area gathered voluntarily to pay their last respects.

Some days after the burial of Major Adair, Col. H. S. Thurston, D.D.M.S., Boulogne Base, visited No. 3 Hospital officially and addressed the personnel, who had paraded to receive him. He expressed satisfaction with the manner in which the unit had carried out its duties throughout the war, especially during the influenza epidemic of the previous month. He reminded the men that they formed part of "the finest expeditionary force ever sent overseas," and thanked them for their loyal

service. He then shook hands with the officers and proceeded to the Nursing Sisters' Compound, where Matron MacLatchy had assembled those of her staff who could be spared momentarily from duty on the wards. To the nursing sisters, Col. Thurston again expressed gratitude for what the Hospital had accomplished. He then shook hands with the sisters, bidding them farewell and wishing them good fortune in the years to come.

Soon after the official visit of the D.D.M.S., Boulogne Base, the thoughts of the personnel and patients at No. 3 Hospital turned to Christmas celebrations. Col. Elder, who had completed his duties as Consultant in Surgery to the British Armies in the Field, arrived from Rouen Base on December 24th; and Lieut.-Col. W. G. Turner, M.C., an original member of the unit, who, after service at the front, had been appointed Orthopaedic Surgeon to the Granville Canadian Special Hospital, Buxton, England, also arrived to take part with old friends in celebration of the last Christmas the Hospital would spend in France.

December 25th dawned bright and clear, to the joy of the 1,165 patients at No. 3 Hospital. At 9.30 a.m. Col. Drum, Col. Elder, Lieut.-Col. Scrimger, Major Malloch, Capt. Fallis, Matron MacLatchy, Nursing Sister Hoerner, Nursing Sister Wright, and Sergt.-Major Finlay commenced an official tour of the wards and departments of the Hospital, which were decorated more elaborately than ever before.

At 11 a.m. patients were given a Christmas dinner that left little to be desired; and at noon other ranks of the Hospital dined joyously in the Canadian Red Cross Recreation Hut. By kind permission of Lieut.-Col. T. M. Carter, R.A.M.C., ten pieces from the orchestra of No. 7 Convalescent Depot played during the meal. After visiting this feast, the Commanding Officer and his party proceeded to the Sergeants' Mess, where a warm welcome awaited them.

At 6 p.m. the nursing sisters on night duty dined in the Red Cross Hut; and at 7.30 p.m. a dinner for officers and the remaining nursing sisters was held. Guests on this occasion, in addition to Col. Elder and Lieut.-Col. Turner, included Brigadier-General J. F. Embury, C.M.G., D.S.O.,

Col. Drum and Staff Visiting the Wards on Christmas Morning, 1918

and Brigadier-General A. E. Ross, C.B., C.M.G., of the Canadian Section, G.H.Q. After the toast to the King had been drunk, "Absent Friends" was proposed by the Commanding Officer and honoured with traditional ceremony. Tables were then cleared for a dance, which continued until midnight. As the clock struck twelve, a full orchestra, loaned by Col. Marshall, O.C. No. 1 Convalescent Depot, led in the singing of *Auld Lang Syne*.

Three nights later, other ranks of No. 3 Hospital were hosts at a dance, arranged by Capt. N. M. Halkett, M.C., who had assumed the duties of Company Officer. Nursing Sister M. A. Cooper and Miss Wanklyn, V.A.D., received the guests, amongst whom were included some 50 members of Queen Mary's Women's Auxiliary Corps. Music was provided by the orchestra of No. 1 Convalescent Depot and dancing continued from 6.30 to 9.30 p.m.

Two nights after the other ranks' dance, a concert party, organized at No. 3 Hospital by Capt. L. C. Fallis and Capt. Halkett, appeared in public for the first time, in the Concert Hall of the British Red Cross Garage. Sergt. A. F. Morrison, known on the professional stage as "Jock Hunter," was the "star" of the performance, which pleased a large and enthusiastic audience. The party had previously performed in the Hospital, where all ranks had agreed that success would attend a performance given outside.

Though the surgical wards at this time were not so full as in the days when convoys of wounded arrived regularly from the front, the total of patients in No. 3 Hospital decreased less than had been expected. On the 29th of December there showed on the unit books 782 troops from the United Kingdom, 141 Canadians, 31 Australians, 56 New Zealanders, 6 South Africans, 3 Newfoundlanders, 28 members of the Royal Air Force, 1 sailor of the Royal Navy, 1 Belgian, 16 Frenchmen, 7 Russians, 1 Italian, and 11 Americans. Some of these had been discharged by the night of December 31st, but the majority remained at No. 3, watching the Old Year out, and wondering what fortune the New Year of Peace held in store for them.

CHAPTER XXI

DEMOBILIZATION

SOON after January 1, 1919, the battalions of the 1st and 2nd Divisions of the Canadian Corps moved back into Belgium from bridgeheads on the Rhine and joined the 3rd and 4th Divisions, which lay not far from Brussels. Demobilization of the Canadian Expeditionary Force had begun, and one by one brigades of the Corps crossed to England in preparation for return to Canada. Medical units were amongst the last to go, and at No. 3 Canadian General Hospital (McGill) all realized that a protracted period of service still lay ahead.

On the whole, the first month of 1919 was marked in the unit by little departure from routine. Surgical work continued to decrease, but medical convoys arrived regularly and activity in and about the wards was maintained. On January 6th Major W. H. Tytler was instructed to act as Assistant Advisor in Pathology to the Boulogne Base, while continuing his duties as Officer in charge of Pathology at No. 3. A week later Capt. L. P. MacHaffie proceeded to No. 1 Canadian Casualty Clearing Station, Bonn, Germany, to collect specimens for the Canadian War Museum, and on the same day Major E. C. H. Windeler was struck off the strength on reporting for duty to the Assistant Director of Medical Services, 3rd Canadian Division.

Next day Nursing Sister M. E. Engelke proceeded to No. 3 Canadian Casualty Clearing Station, and on the 18th Nursing Sister E. D. Ross, whose service as Home Sister the Commanding Officer warmly commended, left No. 3 and crossed to England. In all, 11 nursing sisters were taken on the strength during the month and 13 were

struck off on transfer to other units, or to Home Establishment. Recognition of the work the nursing staff of the Hospital had accomplished was afforded when the Royal Red Cross, 2nd Class, was awarded to Nursing Sisters N. J. Enright, D. H. Massey, and C. M. Watling; and when Matron K. O. MacLatchy and Nursing Sisters L. McGreer and A. S. Morewood were mentioned in despatches.

On February 1st Major E. C. H. Windeler returned to No. 3 Hospital from the 3rd Canadian Division, and on the 3rd Major T. A. Malloch, whose work the Commanding Officer considered "most excellent," relinquished his appointment as Officer in charge of Medicine and proceeded to Home Establishment. On his departure, his duties in charge of the Medical Division of the unit were assumed by Capt. D. S. Lewis.

A week later 16 nursing sisters were attached temporarily to No. 3, and on the 12th Major W. H. Tytler proceeded to Home Establishment. Previous to departure, Major Tytler presented a report to Col. Drum covering the pathological and bacteriological findings in those cases of death from pneumonia during the influenza epidemic of October and November, 1918. The report was compiled from a series of 86 cases, which occurred between October 1st and November 30th.

Major Tytler reported that in the vast majority of the cases purulent bronchitis had been found, and in many, scattered through the tissue of the lungs, or more commonly in clusters in relation to areas of broncho-pneumonia, were small white spots, which, on close examination, were found to represent true abscess formation. In the series of cases, the type of nodular broncho-pneumonia existing seemed to Major Tytler to be anatomically identical with that which had affected American troops following an outbreak of measles on the Mexican Border in 1916, and to which the name "interstitial broncho-pneumonia" had been given.

Continuing, Major Tytler reported that lobular pneumonia had appeared frequently during the influenza epidemic. He described in detail the pathological findings in a number of cases and proceeded to discuss the various manners in which the tissue of the patients had been

affected. Much of the report was of great professional value, though beyond the range of the layman's comprehension. Charts attached showed the organisms identified by research at No. 3, among the most frequent being the influenza bacillus, pneumococcus, green streptococcus, haemolytic streptococcus, and staphylococcus. Other bacilli appeared, but were not positively identified.

February 16th was marked at No. 3 Hospital by receipt of orders to clear all patients by March 1st. Officers in charge of departments were accordingly given instructions to close down their work and to turn equipment into stores, as opportunity offered. Measures to this end continued for a few days, but on the 19th a message from the D.G.M.S. stated: "Instructions issued for the closure of your Hospital have been cancelled. Please make necessary arrangements to remain open and notify this office when you are ready to receive patients."

On receipt of this message Col. Drum changed his instructions to the officers in charge of departments, and work proceeded as before. Meanwhile, in a number of reports, one dated as early as January 3, 1919, the Commanding Officer had brought to the attention of the Canadian Medical Command the services rendered to the Hospital by Major W. H. Tytler, Pathologist, Major L. H. McKim, of the Surgical Department, Capt. L. C. Fallis, of the Medical and Administrative Departments, and Major N. G. Cooper, Registrar.

During the temporary absence of Col. Drum, Lieut.-Col. Scrimger, Officer in charge of Surgery and Second-in-Command of the unit, also filed a report in which the services rendered by Major McKim, Capt. F. A. Brockenshire, Capt. A. M. Yeates, Capt. D. S. Lewis, Capt. J. A. M. Hemmeon, and Capt. Fallis were noted.

For the Canadian War Records, photographs of the officers, nursing sisters, non-commissioned officers, and other ranks of No. 3 Canadian General Hospital (McGill) were taken on February 24th. Two days later married other ranks of the unit, whose wives were in England awaiting return to Canada, were instructed to report at the Orderly Room, so that arrangements to demobilize them promptly might be effected.

Meanwhile, influenza, which had abated in December

and January, had swept back with renewed strength. Several special wards for the resulting pneumonia cases were opened at No. 3, and on February 13th Matron MacLatchy reported that the work on these was heavy indeed. Two patients died on this date and, from all causes, deaths during the month totalled 49.

During February the health of the personnel of No. 3 Hospital was good. Matron McLatchy reported that 11 of her nursing sisters had been ill at one time or another, but that none of the cases had proved serious, and that all were prepared to leave for England when decision to close the Hospital should be reached.

In view of the opening of several wards for venereal cases and the closing down of surgical and some medical wards, 21 nursing sisters were released from duty on March 4th and proceeded at once to Home Establishment in England. Twenty-eight others followed on March 6th, and 22 on March 8th. On the last named date Capt. D. S. Lewis relinquished his position as Officer in charge of Medicine and proceeded to Home Establishment.

Before leaving, Capt. Lewis presented to Col. Drum a detailed report on the influenza epidemic, which, he pointed out, had shown three definite exacerbations, with periods of intermission between. The first outbreak in April, May, and June, 1918, had shown a large morbidity, but a comparatively low rate of mortality. July, August, and September, 1918, had been marked by no activity of the disease, but in October influenza admissions to No. 3 Hospital had risen and had continued to rise until mid-December. The rate had then fallen sharply for three weeks, but had risen again as January, 1919, advanced.

Capt. Lewis's report agreed with others filed previously, that pulmonary complications during the first phase of the epidemic had proved surprisingly rare. During the second and third phases, however, bronchopneumonia had become more and more frequent, until special wards for such cases had proved necessary

During February, Capt. Lewis reported, the character of the pneumonias had been unusually severe. Previously, the death rate had been maintained between 25% and 30%, but in February, despite all that could be done, the rate had risen, and, for the period January 20—February

20 had reached 55%. Some improvement followed, and for the whole of January and February and the first week in March, deaths averaged but 41%.

To some extent, Capt. Lewis pointed out, the rise and fall in the total of cases at No. 3 Hospital reflected not only an actual increase or decrease in the number of troops affected, but a change in the ability of the casualty clearing stations to handle them. For example, a number of severe cases, which would ordinarily have been held at a casualty clearing station, had arrived when the stations received orders to accompany the Canadian Corps to Germany. Conversely, when the stations reached Germany, they kept such cases and treated them on the spot.

With regard to precaution against infection from pneumonia patients, Capt. Lewis stated that, beyond the wearing of masks and ordinary attention to hygiene, officers, nursing sisters, and orderlies on the pneumonia wards at No. 3 had employed no preventive measures. Full ventilation had been maintained even in the coldest weather, and this, seemingly, had proved superior to prophylactics in warding off infection, as no member of the personnel had developed even the mildest "flu."

In general, Capt. Lewis's report stated, the types of pneumonia encountered in the 1919 period had corresponded with those described by Major C. F. Martin when reporting on the epidemic of the previous autumn. The 1919 wave of influenza had witnessed a higher incidence of complications, but the clinical pictures of the two phases of the epidemic showed no appreciable variation. In some cases in February, death had followed onset of the disease in from 3 to 6 days. The majority, however, had been of a more chronic type, with fever lasting 10 to 15 days. One patient had recovered after fever lasting almost 6 weeks. The acute cases had recovered by a rapid lysis; the chronic cases had shown a very gradual return to normal temperature.

Following Capt. Lewis's departure from No. 3 Hospital, Capt. R. A. Jamieson was appointed Officer in charge of Medicine. Two days later Capt. J. A. M. Hemmeon, Officer in charge of the Ear, Nose, and Throat Clinic, was struck off the strength on proceeding to Home Establishment; whither, on March 10th, Capt.

L. P. MacHaffie followed. This officer, for some time, had been engaged in collecting specimens for the Medical Branch of a proposed Canadian National War Museum.

From British and Australian medical units 315 moist specimens had been sent to his headquarters at No. 3 Hospital for classification and arrangement. Canadian units had forwarded 172 similar specimens, American units 19, and New Zealand units 5. Bone specimens from the same sources had totalled 663, in addition to which 724 samples of captured German medical supplies, such as crutches, bandages, serum, splints, gas masks, and field dressings had been collected, making a grand total of 1,898 specimens.

Previous to the departure of Capt. MacHaffie from No. 3, Sergt. Harold White was struck off strength and granted permission to attend a special course of instruction at Ripon Khaki College. Sergt. White had served Col. Birkett, Col. Elder, and Col. Drum as confidential clerk and had faithfully carried out the duties assigned to him. In compiling the War Diary of the Hospital with care and skill he provided much of the material on which this history of the unit is based.

On March 10th, 21 other ranks proceeded to the Canadian General Base Depot for demobilization; and on the 13th Lieut.-Col. F. A. C. Scrimger, V.C., relinquished the post of Officer in charge of Surgery and proceeded to Home Establishment, being succeeded by Major L. H. McKim. Throughout the month other officers followed to England, some being replaced on the strength, which on April 1st totalled 23 medical officers, 1 quartermaster, 1 dental surgeon, 2 chaplains, 1 matron, 15 nursing sisters, and 185 other ranks.

Early in April, 10 nursing sisters were struck off strength, leaving only Matron K. O. MacLatchy and Nursing Sisters H. E. Carman, E. Watters, S. M. Hoerner, L. S. McGreer, and C. M. Watling on the establishment. To this group fell the sad duty of attending the funeral of Acting Lance-Corporal H. E. Eaton, an original member of the unit, who died of cerebro-spinal meningitis at No. 14 Stationary Hospital, and was buried in Terlincthun Cemetery, Boulogne, on April 4th. Twenty men from No. 3 Hospital, under command of Sergt.-Major P. L.

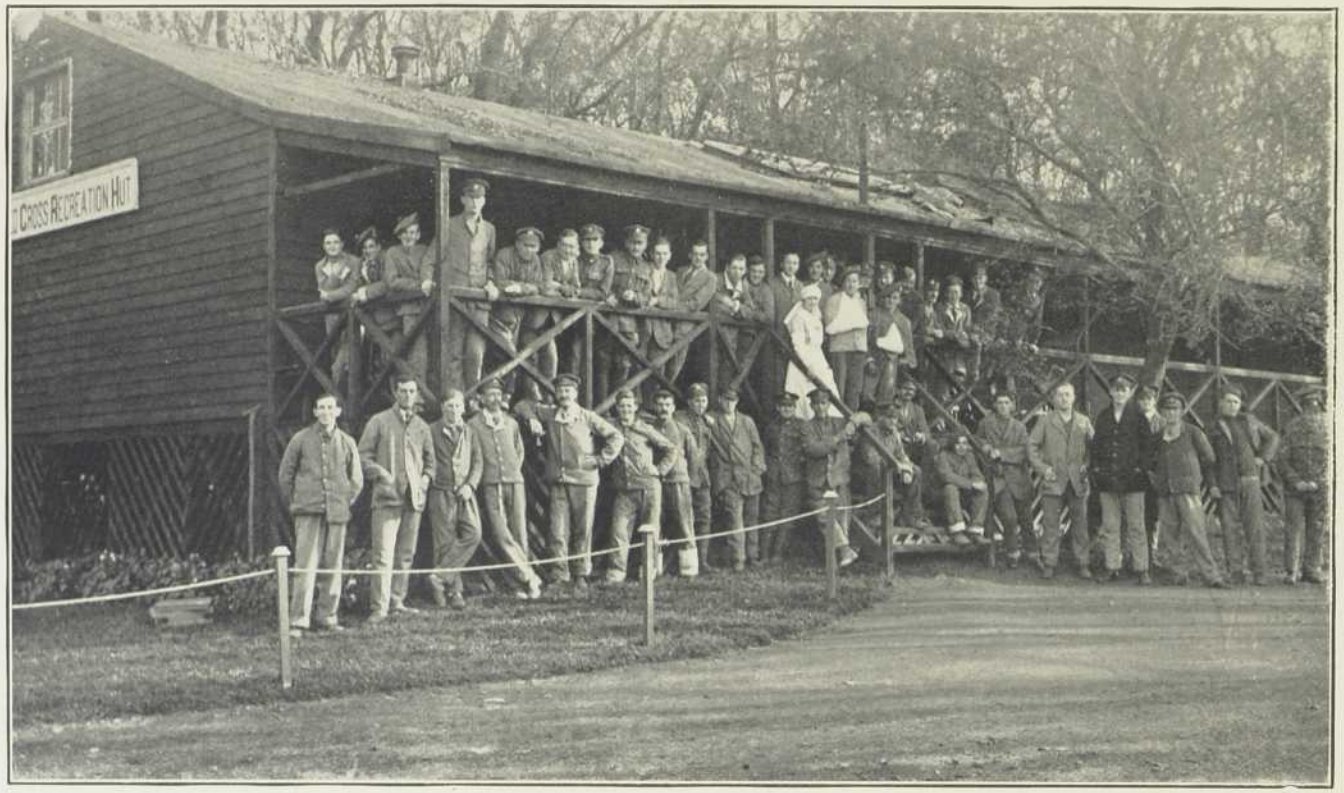
Gibson, attended the funeral in a body, and a number of officers represented the commissioned establishment. Wreaths from the officers, the nursing sisters, and Lance-Corporal Eaton's comrades were placed on the grave as the committal service ended.

In the War Diary of No. 3 Hospital for April, the Commanding Officer recorded his appreciation of services rendered to the unit by Sergt. J. W. Snell, who joined in September, 1916, as a private, rose to the position of wardmaster, and then succeeded Sergt. C. C. Stewart in the Operating Room, where, after a course of instruction, he assisted in the administration of anaesthetics. To the work of Staff-Sergeant J. H. Bieler, Col. Drum also paid tribute. Staff-Sergeant Bieler had served faithfully from the day when the unit accepted its first recruits in Montreal, and on May 10, 1918, had succeeded Staff-Sergeant J. Bisset in the Registrar's Department.

With deep regret on April 4th the personnel of No. 3 Hospital heard that Nursing Sister J. N. King had died of cerebro-spinal meningitis at No. 14 Stationary Hospital. Nursing Sister King had been ill for more than a month and had received the special care of Nursing Sister G. W. Paget in the daytime and Nursing Sister H. G. Kidd at night. On April 3rd Matron MacLatchy and Nursing Sister Hoerner had visited her and had come away knowing that her courageous fight for life could last but little longer.

Under command of Capt. N. M. Halkett, M.C., the officers, the Matron, the five remaining nursing sisters, and the other ranks from No. 3 Hospital attended an impressive funeral service at Terlincthun Cemetery on April 7th. Full military honours were paid and wreaths were deposited, not only by members of the McGill unit, but by the sisters of Imperial hospitals in the area, and by the staff of No. 14 Hospital. Nursing Sister King's loyal service in the Canadian Army Medical Corps commanded the respect of all and her death in the hour when others had returned, or were daily expecting to return, to Canada evoked the deepest sympathy.

On the day following the death of Nursing Sister King, a party of 50 other ranks from No. 3 Hospital paraded in Boulogne to witness the departure from France of Field



Miss Marie Meagher, V.A.D., and Patients of the Hospital Outside the Canadian Red Cross Recreation Hut

Marshal Sir Douglas Haig, who, having led the British Armies to victory in the field, was returning to the United Kingdom. Two days later Capt. N. M. Halkett, Company Officer of No. 3 Hospital, crossed to England, on his way to Canada for duty on the Pensions Board, Ottawa; and on April 9th the staff of No. 3 began to pack documents for despatch to the Records Office, London.

Among the documents filed at this time, was a report by Capt. A. M. Yeates on the last batch of cases of chest wound treated in the McGill unit. Following Major Hutchinson's departure, Capt. Yeates had assumed command of the Special Chest Hut and had treated 228 cases. From these, over 600 specimens of chest fluid had been sent to the Pathological Department for examination, as well as a large number of sputum specimens. In his report Capt. Yeates acknowledged the debt he owed to the careful reports invariably returned to him.

In 214 of the cases one side of the chest only had been penetrated by the bullet, or fragment of shell. Four cases had suffered penetration of both sides, 8 showed chest wounds without penetration, and 2 showed injuries in which penetration was not definitely established. In the cases when one side only was involved, 113 showed injuries on the right side, and 101 on the left. Thirty-nine cases suffered from air in the tissue in the immediate vicinity of the wounds, this number including 3 in which the ballooning spread up into the neck and down into the abdomen, thighs, and legs. In all but one case the air absorbed under treatment in from a few days to two, or three, weeks.

In the X-ray Department, 21 of Capt. Yeates's cases were shown to have suffered definite fracture of ribs, 10 were discovered with fractured scapulae, and 4 with fractured clavicles. One case had a fracture of the 10th dorsal vertebra, and another a fracture of the sternum. Both these cases died. In 69 cases the chest wound was complicated by wounds in other parts of the body, including 10 with fracture of bones, 7 with multiple wounds, and 5 in which joints had been penetrated.

In the series of 228 cases, haemothorax was present in 217 instances, or 95.1%. Seven out of eight non-penetrating wounds failed to give positive indication, but

one man, struck by the nose-cap of a shell, which had bruised him severely, but had not broken the skin, was diagnosed clinically as suffering from haemothorax, and the diagnosis was confirmed by the aspirating needle.

After reporting at length on further aspects of the 228 cases, Capt. Yeates stated in general, that each patient on admission to the ward had been placed in a sitting position with a back rest and encouraged to keep as quiet as possible. When pain, or distress, produced restlessness beyond the power of the patient to control, morphine was used freely. As a rule, the relief afforded by the simple aspiration of haemothorax fluid, together with a hypodermic of morphine, was most gratifying. This was particularly noticeable in patients who had just arrived after a long, wearisome train journey from the front.

With regard to food, Capt. Yeates found that in a few days, after the more urgent symptoms had worn off, the majority of the patients could be placed on a plain, wholesome diet, including meat, without ill effects. Under the supervision of Nursing Sister C. P. Archibald, the Dietitian, suitable food for the sicker patients was provided, and, when the condition of the patient warranted, alcohol was used freely with beneficial results.

When the weather permitted, Capt. Yeates moved his patients into the open and kept them there day and night. They seemed to do better in the open, and all preferred the fresh air treatment. On an average, aspiration was performed 3 times on each patient. Some required but one withdrawal of fluid and many but two; others required as many as eight or nine; and one man needed fifteen. In all, aspiration was performed 628 times, without a death, or even alarming symptoms.

In the whole series of 228 cases, there were 13 deaths, or a mortality of 5.87%. This represented a satisfactory figure, as the percentage expected at a base hospital treating chest wounds had been placed by authority at from 6% to 8%. Seven of the 13 deaths followed operation, the cases, apart from the severe nature of their infection, being complicated respectively as follows:

1. Broncho-pneumonia.
2. Laceration and collapse of lung.

3. Pneumonia of the uninjured lung.
4. Secondary haemorrhage (intercostal artery).
5. Purulent bronchitis.
6. Peritonitis.
7. Pericarditis and fracture of sternum.

On April 14, 1919, No. 454663, Private Gregory Burns, 26th Canadian Infantry Battalion, was evacuated to England from the pneumonia ward of No. 3 Canadian General Hospital (McGill). Private Burns was the last patient requiring nursing attention, so on the 18th of the month Matron K. O. MacLatchy and Nursing Sisters H. E. Carman, S. M. Hoerner, L. S. McGreer, C. M. Watling, and E. Watters bade farewell to the unit and, with Capt. L. C. Fallis as escort, proceeded to England, whither they were followed, on April 19th, by Quartermaster-Sergeant H. C. Elsmore, an original member of the unit who had served faithfully throughout the period of the Hospital's work in France.

For some time after the departure of the Matron and the last nursing sisters, No. 3 Hospital kept wards open for venereal and special cases, extremely valuable work in the treatment of these being accomplished, under the direction of Major L. H. McKim, by Capt. A. M. Yeates, Capt. F. A. Brockenshire, and the officers subordinate to them. Eventually, at 10.30 o'clock on the morning of May 12, 1919, the last patient was discharged and the Hospital's active career ended. Five days later farewell sports were held and that evening a dance was given by other ranks of the Hospital for members of Queen Mary's Army Auxiliary Corps. The Commanding Officer of No. 3 and Mrs. Drum attended this entertainment, the last given by the McGill unit in France.

In obedience to orders received from the Officer in Charge, Canadian Section, General Headquarters, 1st Echelon, 10 officers and 100 other ranks of No. 3 Hospital proceeded to England on May 23rd and reported at Witley Camp. Preparation for the movement of Hospital Headquarters was effected on the following days, and on the 27th Col. Drum submitted to the Boulogne Base authorities a report of shortages and surplus in ordnance and medical equipment. Deficiencies showed little more

than "1 fly trap, 1 rat trap, and 1 fly swatter," and clearance permission for the unit to move on the 29th was accordingly granted, the authorities congratulating the Commanding Officer of No. 3 on the exceptionally fine condition shown by his return. In their experience, they stated, no unit had presented a more satisfactory statement and few had produced documents as efficiently compiled.

On May 29th, 6 officers and 54 other ranks, all that remained of the Hospital personnel in France, bade farewell to Boulogne and crossed to Folkestone, where the other ranks billeted for the night at No. 1 Rest Camp. Leaving Folkestone at 9.15 o'clock on the following morning, the party proceeded to Witley Camp, there to rejoin the Advance Party of the unit and await orders for return to Canada.

Three days later Col. Drum reported to the Regimental Funds Board, 19 Cowley Street, London, and presented the accounts of No. 3 Hospital for audit. All were found correct, and a clearance receipt was issued. A balance at the credit of the Unit Fund in the Bank of Montreal was transferred in trust to Brigadier-General H. S. Birkett, C.B., original Commanding Officer of the Hospital, who, after recovering in Canada from his serious illness, was carrying out the duties of Assistant Director-General of Medical Services, Overseas Military Forces of Canada, London.

On June 3, 1919, His Majesty the King appointed Col. Lorne Drum, Commanding Officer of No. 3 Canadian General Hospital (McGill), to the rank of Commander in the Military Division of the Order of the British Empire, in recognition of valuable services rendered in France. A week later Col. Drum relinquished command of the Hospital and was succeeded by Lieut.-Col. L. H. McKim, who rejoined from hospital to take the unit to Canada.

Not long after Lieut.-Col. McKim assumed command, dissatisfaction amongst troops in the camp resulted in serious rioting and much damage to property. To the great credit of No. 3 Canadian General Hospital (McGill), the men refused to join in the rioting, but accepted arms and employment as part of the camp guard. For splendid support during this time of unexpected trial, Lieut.-Col.

McKim has acknowledged his deep indebtedness, not only to the men, against none of whom was a charge laid, but also to Major F. A. Brockenshire, Second-in-Command, Capt. L. C. Fallis, Adjutant, and Capt. W. LeM. Carter, Company Officer. Major Brockenshire, Capt. Fallis, and Capt. Carter, the two former graduates of the University of Toronto and the last a graduate of McGill, demonstrated the qualities of loyalty and courage, which, despite keen rivalry, have always linked the two universities together.

On June 25th, 19 officers and 133 other ranks of No. 3 Hospital proceeded to Liverpool and there embarked on the SS. *Caronia* for Halifax. Arriving safely on July 2nd, the unit entrained for Montreal, where, on July 4th, the men were granted honourable discharge.

Statistics issued some days before this presented a record of the Hospital's service between August 7, 1915, when the first patient was admitted at Dannes-Camiers, and May 12, 1919, when the unit closed its doors in Boulogne:

ADMISSIONS

Sick	*Wounded*	*Total*
81,689	52,389	134,078
Admitted from Detained Hospital Ships		9,684
	Grand total	143,762

Operations	11,395
Deaths from illness	409
Deaths from wounds	577
Deaths from all causes	986
Death Rate	1 in 135

In these figures, representing work loyally and faithfully accomplished, more than in honours and awards, more even than in the eulogy of those entitled to judge, officers, nursing sisters, and other ranks find justification for their deep pride in having served on the staff of No. 3 Canadian General Hospital (McGill).

APPENDICES

(Compiled from data supplied by courtesy of the Director of Records, Department of National Defence, Ottawa, and from information furnished by McGill University)

APPENDIX A

No. 3 Canadian General Hospital (McGill)

ROLL OF HONOUR

DIED

The following members of No. 3 Canadian General Hospital (McGill) died while serving with the unit:—

Lieut.-Col. John McCrae
Lieut.-Col. Henry Brydges Yates
Major Hamilton John Adair
Nursing Sister Jessie Nelson King
Nursing Sister Evelyn Verrall McKay
Lance-Corp. Harry Edward Eaton

The following original members of No. 3 Canadian General Hospital (McGill) died after transfer to other units:—

Capt. A. F. Marshall (C.A.M.C.)
Lieut. T. W. Bale (British Army)
Lieut. D. A. Blunden (Canadian Machine Gun Corps) (Killed in Action)
Lieut. Edward Revere Osler (Royal Field Artillery) (Killed in Action)
Lieut. C. B. Tinling (42nd Battalion, Royal Highlanders of Canada) (Killed in Action)
Lieut. C. H. C. Woods (Royal Air Force) (Killed in Action)
Nursing Sister M. J. Fortescue (Killed in Sinking of H.M.C.H.S. "Llandovery Castle")
Corp. L. Gibson
Private J. Crichton
Private J. L. Halley (42nd Battalion, Royal Highlanders of Canada)
Private G. E. Hermon
Private Max Martin (Correct name Max Marlieb) (28th Battalion, C.E.F.)
Private J. R. Stewart
Private K. H. Toovey (British Army) (Killed in Action)

The following original officers of No. 3 Canadian General Hospital (McGill) died in Canada of illness induced by war service:—

Col. J. M. Elder, C.M.G.
Major W. H. P. Hill

APPENDIX B

HONOURS AND AWARDS

(Honours granted for service with No. 3 Canadian General Hospital (McGill).)

COMPANION OF THE ORDER OF THE BATH

Brig.-Gen. Herbert Stanley Birkett

COMPANION OF THE ORDER OF ST. MICHAEL AND ST. GEORGE

Col. John Munro Elder

COMMANDER OF THE ORDER OF THE BRITISH EMPIRE

Col. Lorne Drum

THE ROYAL RED CROSS, 1st CLASS

Matron Katherine Osborne MacLatchy
Nursing Sister Sophie Mary Hoerner
Nursing Sister Lillian Pidgeon

THE ROYAL RED CROSS, 2nd CLASS

Nursing Sister Mary Bliss
Nursing Sister Louise J. Brand
Nursing Sister S. M. Carr-Harris
Nursing Sister Isabel Davies
Nursing Sister Mary Evelyn Engelke
Nursing Sister Nellie Josephine Enright
Nursing Sister Jane Glendenning
Nursing Sister Lilly Naomi Gray
Nursing Sister Sophie Mary Hoerner
Nursing Sister Sarah Persis Johnson
Nursing Sister Katherine Annie MacLeod
Nursing Sister Dolores Hope Massey
Nursing Sister Rachel McConnell
Nursing Sister Louise Caroline Stanton McGreer
Nursing Sister M. F. Parkins
Nursing Sister Mary Farmer Steele
Nursing Sister Alice Mary Stewart
Nursing Sister Annette Maude Tate
Nursing Sister Christina Mary Watling
Nursing Sister Eveline Mary Whitney
Nursing Sister M. E. Wilkinson
Nursing Sister Margaret Jane Woods
Nursing Sister Maude Matilda Wright

BROUGHT TO THE NOTICE OF THE SECRETARY OF STATE FOR WAR

Col. Lorne Drum
Major Arthur John Lomas
H/Capt. & Q.M. James Ewart Carruthers
Nursing Sister Ruby Rutherford Graham
A/Sgt. Davis Semple Christie

MENTIONED IN DESPATCHES

Brig.-Gen. Herbert Stanley Birkett
Col. Lorne Drum
Col. John Munro Elder
Lieut.-Col. Ronald St. John Macdonald
Major John Alexander MacMillan
Major Thomas Archibald Malloch
Major William Howard Tytler
Matron Katherine Osborne MacLatchy
Nursing Sister Mary Bliss
Nursing Sister Eva Bradley
Nursing Sister Harriet Edith Carman
Nursing Sister Ellen E. Carpenter
Nursing Sister Isabel Davies
Nursing Sister Victoria Eastwood
Nursing Sister Margaret Jane Fortescue
Nursing Sister Edna Jean Giffen
Nursing Sister Sophie Mary Hoerner
Nursing Sister Ada Gladwin Hutchinson
Nursing Sister Margaret I. MacIntosh
Nursing Sister Anne Broderick McDiarmid
Nursing Sister Louise Caroline Stanton McGreer
Nursing Sister Louise Frances McLeod
Nursing Sister Anne Saumarez Morewood
Nursing Sister Lillian Pidgeon
Nursing Sister Marion Robertson
Nursing Sister Seaborn Christine Robertson
Nursing Sister Julia Marjorie Ross
Nursing Sister Louise Myrtle Stevens
Nursing Sister Margaret Jane Woods
Nursing Sister Maude Matilda Wright
S/Sgt. Jean Henry Bieler.
Pte. A. J. Quinn

FOREIGN DECORATIONS

PORTUGUESE MILITARY ORDER OF AVIZ (Commander)

Col. John Munro Elder
Col. Charles F. Martin

APPENDIX C

HONOURS AND AWARDS

(Honours granted to original members of No. 3 Canadian General Hospita (McGill) for service with other units.)

DISTINGUISHED SERVICE ORDER

Capt. Hugh Alston Johnston

ORDER OF THE BRITISH EMPIRE

Major Russell Butler Robertson

MILITARY CROSS AND BAR

Capt. Philippe Bernard Belanger

MILITARY CROSS

Lieut.-Col. William George Turner
Major Otto Demuth
Major William Theodore Ewing
Capt. George Raymond Baby
Capt. Hugh Alston Johnston
Capt. George Albert Lyons
Capt. Ernest Andrew McCusker
Capt. Lorne Cuthbert Montgomery
Capt. Frank Gordon Pedley
Capt. Loudon Corsan Reid
Capt. Albert Davis Sharp
Lieut. William Wentworth Beveridge
Lieut. Homer Dean Mitchell
Lieut. Henry Gordon Spohn

MILITARY MEDAL

Lieut. Oliver Stanley Craik

MENTIONED IN DESPATCHES

Major Russell Butler Robertson
Capt. George William Bissett
Capt. Harry Ilsley Evans
Capt. Hugh Alston Johnston
Capt. Albert Davis Sharp
Lieut. Charles Barnaby Tinling

BROUGHT TO NOTICE OF THE SECRETARY OF STATE FOR WAR

Lieut.-Col. John Campbell Meakins
Lieut.-Col. Colin Kerr Russel

FOREIGN DECORATIONS

CROIX DE GUERRE (French)

Capt. Philippe Bernard Belanger

APPENDIX D

COMMISSIONS

The following officers of the Canadian Expeditionary Force were granted commissions after service in the ranks of No. 3 Canadian General Hospital (McGill):—

CANADIAN ARMY MEDICAL CORPS

Major Alfred Burton Wilkes
Capt. Murray Clement Abell
Capt. George Raymond Baby
Capt. Alexander Neil Chisholm
Capt. Cyril Klock Church
Capt. Harold Archibald DesBrisay
Capt. Harold Francis Hope Eberts
Capt. Norman Miles Guiou
Capt. George Lionel Dent Kennedy
Capt. George Frederick Laing
Capt. Wilbur Clouston Lowry
Capt. Ernest Andrew McCusker
Capt. Henry Kenneth Neilson
Capt. William Erling Ord
Capt. Reginald Francis Price
Capt. Loudon Corsan Reid
Capt. Robert D. Wilson
H/Capt. and Q.M. Albert Frederick Marshall
Lieut. Herbert Lemuel Logan

OTHER UNITS OF THE C.E.F.

Capt. Harry Ilsley Evans (Canadian Army Service Corps)
Capt. Hugh Alston Johnston (13th Battalion, Royal Highlanders of Canada)
Capt. Lorne Cuthbert Montgomery (42nd Battalion, Royal Highlanders of Canada)
Lieut. William Wentworth Beveridge (87th Battalion, Canadian Grenadier Guards)
Lieut. Denis Alfred Blunden (Canadian Machine Gun Corps)
Lieut. Oliver Stanley Craik (Canadian Grenadier Guards)
Lieut. Henry Stockwell Day (Canadian Field Artillery)
Lieut. Henry Stevenson Fry (42nd Battalion, Royal Highlanders of Canada)
Lieut. Eric Mason Hersey (Canadian Field Artillery)
Lieut. George Maxwell Hobart (Canadian Garrison Artillery)
Lieut. Keith Ogilvie Hutchison (73rd Battalion, Royal Highlanders of Canada)
Lieut. Benjamin Charles Keeping (Canadian Garrison Artillery)
Lieut. Archibald James Rankin (19th Battalion)
Lieut. William Harold Rose (38th Battalion)
Lieut. Stewart F. St. George (Record List, R.C.)
Lieut. Henry Gordon Spohn (Canadian Field Artillery)
Lieut. Charles Barnaby Tinling (42nd Battalion, Royal Highlanders of Canada)
Lieut. Henry Stanley Wright (Canadian Infantry)
H/Lieut. Frederick White

The following original other ranks of No. 3 Canadian General Hospital (McGill) were granted commissions in the British Army or Navy:—

Sergt. Philippe Bernard Belanger
Sergt. Hugh Arthur Egan
Sergt. Urban Joseph Gareau
Sergt. Cecil Darling Kean
Acting-Sergt. Davis Semple Christie
Acting-Sergt. Charles Gordon Malcolm
Acting-Sergt. Archie Loveluck Richards
Corp. Moise William LeBel
Corp. Walter de Monfield Scriver
Corp. Archie Lovell Phillips
Acting-Bdr. Victor R. Lapp
Lance-Corp. Douglas R. Learoyd
Lance-Corp. Clinton Edgar Manning
Lance-Corp. Norman Trenholme Williamson
Pte. Thomas William Bale
Pte. Charles Lennox Brooks
Pte. Gordon Francis Collingwood
Pte. Chester Sessions Day
Pte. Otto Demuth
Pte. Charles Blanchard Henry
Pte. Archie Nathaniel Jenks
Pte. Lavell Hall Leeson
Pte. Robert Lee Michell
Pte. Homer Dean Mitchell
Pte. Henry George Clarence Paine
Pte. John Hammond Palmer
Pte. Walter Stanley Parsons
Pte. Irving Daniel Ramsay
Pte. Dudley E. Ross
Pte. Albert Davis Sharp
Pte. Lee Smith
Pte. William Templeman
Pte. Harold Scott Trefry
Pte. Francis Sharp Walcott
Pte. Cecil Owen Walsh
Pte. Harold Clifford Wert
Pte. Harold Freeman Williamson
Pte. Charles Halkett Carson Woods

APPENDIX E

No. 3 GENERAL HOSPITAL (McGILL), C.E.F.

THE ORIGINAL UNIT

COMMANDING OFFICER

Colonel Herbert Stanley Birkett

SECOND IN COMMAND

Lieut.-Col. Henry Brydges Yates

OFFICER IN CHARGE OF SURGERY

Lieut.-Col. John Munro Elder

OFFICER IN CHARGE OF MEDICINE

Lieut.-Col. John McCrae
(Appointed from the 1st Brigade, Canadian Field Artillery)

OFFICERS ATTACHED

Lieut.-Col. J. G. Adami
Major John Lancelot Todd

SENIOR OFFICERS

Major Edward William Archibald
Major Walter Henry P. Hill
Major Allan Campbell P. Howard
Major John Campbell Meakins

OFFICERS

Burgess, Capt. Harry Clifton
Browne, Capt. John George
Dixon, Capt. Howard Chancellor
Ewing, Capt. William Theodore
Francis, Capt. William Willoughby
Henderson, Capt. Arthur Theodore
Hingston, Capt. Donald Alexander
Howell, Capt. William Boyman
Hutchinson, Capt. John William
Law, Hon. Capt. David (Q.Master)
Little, Capt. Herbert Melville
Macdonald, Capt. Ronald St. John
MacMillan, Capt. John
Malone, Capt. Reginald H.
McKim, Capt. Lawrie Hamilton
Pirie, Capt. Alexander Howard
Reford, Capt. Lewis L.
Rhea, Capt. Lawrence Joseph
Robertson, Capt. Russell Butler
Russel, Capt. Colin K.
Stevenson, Hon. Capt. George Henry (Dental Officer)
Thornton, Hon. Capt. Lawrence H. (Dental Officer)
Tidmarsh, Capt. Frank Wendell
Turner, Capt. William George
Wickham, Capt. John Cuthbert
Wilkins, Capt. Walter Ashby
Osler, Hon. Lieut. Edward Revere
(Commissioned in England, Feb., 1915)

MATRON

Matron Katherine Osborne MacLatchy

NURSING SISTERS

Archibald, N/S Cora Peters
Armitage, N/S Beatrice Louise
Austin, N/S Mrs. Maud Emilie
Babbit, N/S E. Pearl
Bliss, N/S Mary
Bradley, N/S Eva
Brand, N/S Louise J.
Carman, N/S Harriet E.
Carpenter, N/S Ellen E.
Chisholm, N/S Sara
Clark, N/S Muriel Maud B.
Cooper, N/S Alice Mary
Cotton, N/S Dorothy McL. P.
Davies, N/S Isabel
De Cou, N/S F. I. Gertrude
Dickie, N/S Elizabeth Lillian
Drake, N/S Harriet T.
Duncan, N/S Jennette F.
Eastwood, N/S Victoria
Engelke, N/S Mary Evelyn
Enright, N/S Nellie J.
Fitzgibbon, N/S Olive
Forgey, N/S Bertha
Fortescue, N/S Margaret Jane
Gass, N/S Clare
Giffin, N/S Mrs. Edna Jane
Gillis, N/S Louella Louise
Glendenning, N/S Jane
Gourlay, N/S Roberta
Graham, N/S Ruby Rutherford
Gray, N/S Lilly Naomi
Handcock, N/S Eleanor
Harrison, N/S Constance W.
Hoerner, N/S Sophia Mary
Jack, N/S Charlotte Christina
Lindsay, N/S Mabel
Leslie, N/S Edith
Loggie, N/S Ruth
MacDermot, N/S Mary Langdon
Macdonald, N/S H. Hilda
MacIntosh, N/S Margaret I.
MacKay, N/S Kaireen
MacKeen, N/S Frances
MacLeod, N/S Claire S.
MacLeod, N/S Katherine A.
Macnaughton, N/S Charlotte Louise
Mann, N/S Jane Elora
McConnell, N/S Rachel
McDiarmid, N/S Anne B.
McGreer, N/S Louise
McLeod, N/S Louise Frances
Morewood, N/S Anne Saumarez
Muir, N/S Mary Middleton
Park, N/S Margaret F. S.
Pidgeon, N/S Lilian
Robertson, N/S Seaborn
Rodd, N/S Janet M.
Ross, N.S. Julia Marjorie
Sampson, N/S Violet Eleanor
Sedgewick, N/S Jessie M.
Sewell, N/S G. Hope
Stark, N/S Anne
Steele, N/S Mary F.
Stevens, N/S Louise Myrtle
Stewart, N/S Alice Mary
Stuart, N/S Constance Mary
Tate, N/S Annette M.
Watling, N/S Christina Mary
Watters, N/S Everetta
Whitney, N/S Eveline Mary
Woods, N/S Margaret J.
Wright, N/S Maude

OTHER RANKS

Abell, Pte. Murray Clement
Adams, Pte. George Frederick
Apps, Pte. Carl O.
Archibald, Pte. William Charles
Baby, Pte. George Raymond
Bache, Pte. Joseph Henry
Bale, Pte. Thomas William
Bankier, Pte. John Patrick
Barnes, Sergt. Ernest
Bausch, Pte. Charles Joseph
Baxendale, Pte. Albert
Belanger, Pte. Philippe Bernard
Bell, Pte. E. H.
Benger, Pte. Manfred
Beveridge, Pte. William Wentworth
Bieler, Pte. Jean Henry
Billington, Pte. Horace Winsland
Bisset, Pte. George William
Bissett, Sergt. James
Blunden, Pte. Denis Alfred
Bolland, Pte. William
Bowie, Pte. Gordon Harper
Brand, Pte. Maxwell Stanley
Brooks, Pte. Charles L.
Budd, Pte. Henry William J.
Chapple, Pte. Hugh
Chisholm, Pte. Alexander Neil
Christie, Sergt. David Semple
Christy, Pte. Arthur
Church, Pte. Cyril Klock
Clarke, Pte. George Ernest
Collingwood, Pte. Gordon Francis
Craigie, Pte. Charles
Craik, Pte. Oliver Stanley
Crediford, Pte. Harry Thomas
Crichton, Pte. James

Culyer, Pte. Bertram William
Currie, Sergt. George Selkirk
Davidson, Pte. Walter M.
Day, Pte. Chester Sessions
(Injured and did not sail with unit. Rejoined later)
Day, Pte. Henry Stockwell
Demuth, Sergt. Otto
Dodge, Pte. William
Drummond, Lance-Corpl. Alfred J.
Duley, Pte. Walter Albert
Eaton, Pte. Harry Edward
Eberts, Sergt. Harold F. H.
Egan, Corpl. Hugh Arthur
Elder, Pte. Herbert Munro
Elsmore, Pte. Hugh Cochrane
Evans, Pte. Harry Ilsley
Farlinger, Pte. Anderson C.
Farquhar, Pte. John Alexander
Fauvel, S/Sergt. Bertram Auguste
Felix, Pte. Gordon Adolphe
Fitzgerald, Pte. William Victor
Fraser, Pte. John Weldon
Freeman, Corpl. Frederick William
Fry, Pte. Henry Stevenson
Gall, Pte. George Lockhart
Gallagher, Pte. Cedric Aubrey W.
Gardner, Pte. Alexander John
Gareau, Pte. Urban J.
Gibson, Corpl. Lawrence
Gibson, Pte. Percy Leopold
Giroux, Pte. Joseph
Guiou, Pte. Norman Miles
Hadley, S/Sergt. William George
Hale, Pte. Richard G.
Halley, Pte. John Lockyer
Hartwell, Pte. Arthur
Hefferman, Sergt. John Maurice
Henry, Pte. Charles Blanchard
Hermon, Pte. George Ernest
Hersey, Pte. Eric Mason
Hobart, Pte. George Maxwell
Holman, Pte. John
Hopkins, Pte. Robert Charles
Hume, Pte. George Edward
Humphreys, Pte. William James
Hunter, Pte. William Andrew
Hutchison, Pte. Keith Ogilvie
Jenks, Pte. Archie Nathaniel
Johnson, Lance-Corpl. John
Johnston, Pte. Hugh Alston
Kean, Sergt. Cecil Darling
Keeping, Pte. Benjamin Charles
Kelly, Pte. Frederick Joseph
Kendall, Pte. Carson J.
Kennedy, Pte. Archibald Philip
Kennedy, S/Sergt. George Lionel D.
Kinsman, Pte. Reginald Price
Lalonde, Pte. Lionel
Laing, Sergt. George Frederick
Lapp, Pte. Victor R.
Laurin, Pte. Earl M.
Learmonth, Corpl. James
Learoyd, Pte. Douglas R.
Le Bel, Pte. Moise William
Leeson, Pte. Lavell Hall
Lefebvre, Pte. John Gordon
Lennox, Corpl. Norman
Lockhart, Pte. James R.
Logan, Pte. Herbert Lemuel
Lowry, Pte. Wilbur Clouston
Lyons, Pte. George Albert
Macaskill, Pte. John
Macdonald, Pte. Douglas Ogilvie
MacDonald, William Alexander
Mack, Pte. Harold James
MacKechnie, Pte. Richard Edey
Macnaughton, Pte. Benjamin F.
Macguire, Pte. Ernest Warren
Malcolm, Pte. Charles Gordon
Manning, Pte. Clinton Edgar
Marshall, Sergt.-Major Albert F.
Marshall, Pte. William David
Martin, Pte. Leslie John
Martin, Pte. Max
Matthews, Corpl. Frederick
Mathewson, Pte. Cornelius Kelly
McCleery, W.O. Edward Jenner
McCormick, Pte. Robert Roy
McCusker, Pte. Emmet Andrew
McDonald, Pte. Hugh Reid
McKenzie, Sergt. William
Michell, Pte. Robert Lee
Miller, Pte. Fred Gus
Mitchell, Pte. Horner Dean
Mitchell, Pte. William Hector D.
Montgomery, Pte. Lorne Cuthbert
Mungall, Corpl. William Silvester
Neilson, Pte. Henry Kenneth
Nolan, Pte. Joseph
Offord, Pte. Robert James
Ord, Pte. William Erling
Owers, Pte. William Heath
Paine, Pte. Henry George C.
Palmer, Pte. John Hammond
Parmalee, Pte. Arthur Granville
Parsons, Pte. Walter Stanley
Payne, Corpl. Thomas Albert
Pedley, Pte. Frank Gordon
Peterson, Pte. Clyde Forington
Phillips, Corpl. Archie Lovell
Poirier, Pte. Henry
Price, Pte. Reginald Francis
Ramsay, Pte. Irving Daniel
Rankin, Pte. Archibald James
Redman, Pte. Rupert Cheesman
Reid, Pte. Loudon Corsan
Richards, Pte. Archie Loveluck
Rigg, Pte. Charles Henry
Riley, Pte. Richard
Robertson, Pte. John
Roman, Pte. Charles Lightfoot
Rose, Pte. William Harold
Rose, Pte. Walter James
Rosenthal, Pte. Solomon
Ross, Pte. Alexander G.

Ross, Pte. Dudley E.
Scriver, Pte. Walter de M.
Sharp, Pte. Albert Davies
Simkins, Pte. Henry Charles J.
Simms, Pte. Hans
Skinner, Pte. Bernard Woodworth
Slack, Corpl. Harry
Smeall, Pte. James Edward
Smith, Pte. Frederick Samuel
Smith, Pte. Herbert Henry
Smith, Pte. James Henry
Smith, Pte. Lee
Smith, Pte. Stanley Rowan
Spiller, Pte. Albert John
Spohn, Pte. Henry Gordon
Stewart, Pte. Charles C.
Stewart, Pte. James Reid
St. George, Corpl. Stewart F.
Stockless, Pte. Willis George
Suter, Sergt. Albert Ernest
Templeman, Pte. William
Tennant, Pte. Percy S.
Terry, Corpl. Gilbert Shire
Thomson, Pte. Roswell
Tinling, Corpl. Charles Burnaby
Toovey, Pte. Kennedy Hamilton
Trefry, Pte. Harold Scott
Valentine, Pte. John Baptist
Vaughan, Pte. Arthur Cecil
Walcott, Pte. Francis Sharpe
Walsh, Pte. Cecil Owen
Warner, Pte. James Harrison
Warner, Sergt. Joshua William
Wert, Pte. Harold Clifford
White, S/Sergt. Frederick
White, Sergt. Harold
White, Pte. William Horace
Wienke, Pte. Charles
Wilkes, Sergt. Alfred Burton
Wilkinson, Pte. William Henry
Williamson, Pte. Harold Freeman
Williamson, Pte. Norman Trenholme
Wilson, Sergt. Robert D.
Woods, Pte. Charles Halkett C.
Wright, Pte. Henry Stanley
Yates, Pte. Christopher Montague

APPENDIX F

No. 3 Canadian General Hospital (McGill), B.E.F.

REINFORCEMENTS

So far as can be ascertained, the following list gives the names of all officers, nursing sisters, and other ranks who reinforced the McGill Unit in France:—

OFFICERS

Adair, A/Major Hamilton John (Quartermaster)
Ainley, Capt. Laurence Thorton
Angrove, Capt. Richard Harvey
Baldwin, Capt. John MacLeod
Banting, Capt. Frederick Grant, M.C
Bazin, Lieut.-Col. Alfred T., D.S.O.
Beech, Major Stuart Eccles
Blayney, Capt. York
Branner, Capt. John Peter
Briggs, Capt. Tillman Alfred, M.C.
Brockenshire, Capt. Freeman Albert
Brothers, Capt. William Henry
Burnett, Capt. J. M.
Campbell, Capt. Alexander R., M.C.
Campbell, Capt. Archibald Donald
Campbell, Capt. Edwin Harold
Campbell, Capt. Donald Sinclair
Carruthers, Hon. Capt. James Ewart (Quartermaster)
Carter, Capt. W. Le M.
Clarke, Capt. James Christopher
Coates, Capt. Llewellyn Herbert
Conklin, Capt. John Henry
Cooper, Major Nelson George
Costain, Capt. William Alfred
Cowan, Capt. Richard Davidson
Coy, Capt. Filmer Engers
Cruikshank, Capt. William Douglas
Cuzner, Capt. George
Davies, Capt. J. A
Delahaye, Capt. Allan Leslie
Densmore, Capt. Lambert D., M.C.
Denyes, Capt. Gerald Foster
Desbrisay, Capt. Harold Archibald
Dobbin, Capt. Gordon Murray
Drum, Col. Lorne, C.B.E.
Dunlop, Capt. Daniel Rolston
Edwards, Capt. Harold Romney
Fallis, Capt. Leslie Clinton
Falls, Capt. Franklin Nelson Kidd
Ferg, Capt. Edwin James
Fidler, Capt. Edward
Foster, Major George May M.C.
Foster, Capt. Lowell Shields
Freel, Capt. Herbert Barnes
Fuller, Capt. George Frederick L.
Gallagher, Capt. Joseph Bernard
Graves, Capt. Charles Allan
Gross, Capt. Charles Joseph
Guest, Capt. Wilbur Evans
Halkett, Capt. Norman McL., M.C.
Harwood, Lieut.-Col. R.
Hemmeon, Major James Albert M.
Henderson, Capt. Joseph Edwin C.
Hipwell, Capt. F. W. W.
Hogan, Capt. Fred
Howson, Capt. Christopher
Hunter, Capt. Archibald William
Jamieson, Capt. Ross Alexander
Janes, Capt. Robert Meredith
Jenkins, Capt. Roy Bertram
Jepson, Capt. Gordon Leigh
Johnstone, Capt. David Scott
Kirby, Capt. Walter James
Law, Hon. Capt. Henry Edward (Quartermaster)
Learmonth, Capt. George Everett
Leith, Capt. George
Lewis, Major David Sclater
Lewis, Capt. John Taylor
Lochead, Capt. Daniel Cameron
Logie, Major Frederick George
Lomas, Major Arthur John
Lowe, Capt. William Arthur
Main, Capt. Charles Gillilard
Malcolm, Capt. Donald C., M.C.
Malloch, Major Thomas Archibald
Martin, Capt. Arthur John
Martin, Col. Charles F.

Meek, Capt. Ethelbert Eldridge
Moore, Capt. Joseph Derby
Moses, Capt. Harry Clarke
Mossman, Capt. James Kilburn, M.C.
Moyle, Capt. Robert Davies, M.C.
Munroe, Capt. Finlay, M.C.
Murtagh, Capt. Andrew Patrick
McAlpine, Capt. Thomas Kent
McCourt, Capt. James Arthur
McCullough, Capt. William Laughton
Macdonald, Lieut.-Col. Ronald Hugh, D.S.O., M.C.
Macdonald, Capt. Thomas Gladstone
Macdougal, Capt. Charles Spurgeon
MacHaffie, Capt. Lloyd Phillips
McIntosh, Major Wilfred Alonzo
McKay, Capt. Donald George S.
MacKay, Capt. John St. Clair
McKechnie, Major David W., D.S.O.
McKenty, Capt. Francis Edmund
MacKenzie, Capt. Archibald E.
Mackenzie, Capt. Robert D., M.C.
Maclaren, Capt. Archibald H.
McLaughlin, Major Donald
McLean, Capt. William John
McLeod, Capt. John Knox
McPherson, Major A. W.
McQuay, Capt. Russell Bateman
O'Connell, Capt. John Ignatius
Paine, Capt. George Clarence
Parker, Capt. Arthur Allan, M.C.
Parney, Capt. Fred Schlanker
Pennington, Capt. John Wesley
Perez, Capt. Thomas Endore
Rehill, Capt. James Ross
Roberts, Capt. Alexander Boyd
Robinson, Capt. Howard Parker
Rogers, Capt. Herbert Burritt
Rogers, Major Keith Forrester
Ross, Capt. George Munro
Scrimger, Lieut.-Col. Francis A. C., V.C.
Shanks, Capt. G.
Shirton, Capt. George Kirk
Sinclair, Capt. Fred Douglas
Sims, Capt.
Slayter, Major John Howard, M.B.E.
Smith, Capt. William Adams
Stobie, Capt. George Herbert
Sutherland, Capt. James Stanley
Thomas, A/Major Robert Arthur
Thompson, Capt. Arthur George
Torrance, Capt. Charles William
Trefry, Capt. Alfred Wade
Tytler, Major William Howard
Walker, A/Lieut.-Col. Smith Layton
Wallace, Capt. Charles Kenneth
Weldon, Capt. Richard C., M.C.
Welwood, Capt. Thomas Richard
White, Capt. Herbert Spencer
Wilson, Lieut.-Col. F. W. E.
Wilson, Capt. George Thomas
Windeler, Major Eric Charles Harry
Wood, Major Harry Gardner
Yeates, Major Allan Martindale
Young, Capt. Harvey Gordon, D.S.O., M.C.

NURSING SISTERS

Acheson, N/S L. M.
Aldous, N/S Ethel May
Allan, N/S Marguerite Martha
Allwood, N/S Mary Jane, R.R.C.
Alway, N/S E. E.
Anderson, N/S Edith Crockett
Anderson, N/S Minerva
Auger, N/S E.M., R.R.C.
Barwick, N/S/ Kathleen Monica C.
Beamish, N/S E. M.
Bethune, N/S Lottie
Biggar, N/S Effie Beatrice
Bishop, N/S Eleanor Augusta G.
Black, N/S Emma Gertrude
Blackmore, N/S Lucy Emma
Bolster, N/S Effie Christina
Brady, N/S Leile, R.R.C.
Brown, N/S Myrtle Melissa
Bruce, N/S Grace Isabel
Burt, N/S Myrtle Celia
Campbell, Matron E., R.R.C.
Canning, N/S Anna Loretta
Carr-Harris, N/S Silla M., R.R.C.
Carscallen, N/S Abigail Annie
Carson, N/S Annie Delle
Chisholm, N/S Minnie May
Chisholm, N/S Nellie Belle
Clark, N/S Irene Isabel
Clarke, N/S Jessie Ainslie
Clint, N/S Mabel, R.R.C.
Cotter, N/S Evadne Kilgour, R.R.C.
Craig, N/S Abigail Christina
Davidson, N/S Jessie Ann
Dawson, N/S S. H.
Deason, N/S Edith Mary
Dickson, N/S Edna Leah
Doherty, N/S Mary Helen
Donohue, N/S N. C.
Doyle, N/S Elizabeth Cecilia
Dufault, N/S Marie Almira
Dulmage, Matron Helena E., R.R.C.
Elliott, N/S Annie Isobel
Elliott, N/S Susie Mae
English, N/S Mary Catherine, R.R.C
Fear, N/S Florence Morgan
Fleming, N/S Anna Maria Hickman
Fogarty, N/S H.
Ford, N/S Elizabeth Jeanette
Foss, N/S Nora Gleeson
Foster, N/S Georgie Perkins
Fox, N/S Pearl Hazelton
Frollick, N/S A. K.

Fraser, N.S. Edith Morrow, R.R.C.
Gallagher, N/S Edith A.
Geen, N/S Celestina
Gillian, N/S Hazel F.
Graham, N/S Catherine Moffat
Greer, N/S Amelia Jane
Hague, N/S Catherine Helen
Harper, N/S Norma Louise, R.R.C.
Hawley, N/S Ethel Maria
Haycock, N/S Josephte
Hayhurst, N/S Annie, R.R.C
Heath, N/S Miriam Ruxton
Henderson, N/S Margaret Cameron
Herrington, N/S L.
Hofstrand, N/S Esther
Hogan, N/S Eva May
Hubley, Matron L. M., R.R.C.
Hutchinson, N/S Ada Gladwin
Jennings, N/S Isabel
Johnson, N/S Sarah Persis, R.R.C.
Jones, N/S Annie Elizabeth
Joyce, N/S Martha
Kemp, N/S Ada Andrews
Kennedy, N/S Euna Pearl
Kennedy, N/S Margaret
Kidd, N/S Hazel Grace
King, N/S Jessie Nelson
King, N/S Josephine Frances
Kingston, N/S Margaret Jane
Lamonte, N/S Barbara
Larter, N/S Lily Geraldine
Larter, N/S Violet
Leamy, N/S Margaret, R.R.C.
Lee, N/S Lualla Blanche
Lilly, N/S Eva Ottilie
Linton, N/S Alice Mabel
Lord, N/S Isabel Mary
Lordly, N/S Edwina Ratcliff
Lunn, N/S Margaret Helena
MacIntosh, N/S M.C.
Mackie, N/S Louise Henrietta
Magness, N/S Ruth
Marsh, N/S Marion Rose, R.R.C.
Marshall, N/S Etta Almere
Massy, N/S Dolores Hope, R.R.C.
Matheson, N/S Gladys Elizabeth
Mattice, N/S Brenda F., R.R.C.
Mayhew, N/S G. B.
Meiklejohn, N/S Harriet T., R.R.C.
Mingay, N/S Minnie Isabel
Moag, N/S Margaret Laura
Montgomery, N/S Nora Brown
Morkill, N/S Eva Lillian, R.R.C.
Mowbray, N/S Christine M., R.R.C.
Murduff, N/S Ethel Lena Maud
McArthur, N/S Hanna Jean
McCallum, N/S Lilly
McCammon, N/S Lora
McCarthy, N/S Harriett Jane
McCulloch, N/S Rachel, R.R.C.
McDonald, N/S Catherine Tulloch
Macdonald, N/S Jessie Belle
Macdougall, N/S Estelle Irene
Macfarlane, N/S Jessie Pollock
Macguire, N/S Mary
McIlroy, N/S Mary
McIlwraith, N/S Agnes Evelyn
McKay, M/S Evelyn Verrall
McKay, N/S Ruth Esther
McKenna, N/S Mary
McKenzie, N/S C.
McLaren, N/S Helen Margaret
McLeod, N/S Emma Charlotte
McKinnon, N/S E.
McKinnon, N/S M. B.
McLeod, N/S Mary Watson
McWilliams, N/S Marjorie Alide
Nicholson, N/S Ona Gore
Nixon, N/S Charlotte Isabelle
Nunn, N/S Mary
Oliver, N/S Alice Theodora
Outterson, N/S Bernice Pearl
Page, N/S Veronica Estelle
Paget, N/S Gertrude White
Parkins, N/S Mildred F., R.R.C.
Parrish, N/S Ada May
Payne, N/S Sarah
Peers, N/S C. R.
Perreault, N/S Emily Walsh
Perry, N/S Meta Adele
Powell, N/S Edith Harriet Marion
Pownceby, N/S Florence Hannah
Pringle, N/S J.
Quinn, N/S Julietta Doherty
Radcliffe, A/Matron G. S., R.R.C.
Ramsay, N/S Jane Torrance
Riddell, N/S Wooynetha Cecil
Roberts, N/S Ellen
Robertson, N/S Marion
Rodger, N/S Margaret A. W.
Ross, N/S Evelyn Doris
St. James, N/S Ruth
Sargeant, N/S Agnes Calista
Savard, N/S Louise Annie
Scott, N/S Katherine
Scriver, N/S Mary Augusta
Sewell, N.S. Violet Alice
Shannahan, N/S Mary Catherine
Sharpe, N/S Edyth Hemsworth
Smith, N/S Hazel Noel
Smith, N/S Ida Beatrice, R.R.C.
Smith, N/S Rebecca Lewisa
Spinks, N/S Eva Louise
Stewart, N/S Catherine Isabell
Stewart, N/S Emily A.
Stuart, N/S Edith Jane
Swanston, N/S Alice
Tate, N/S Ethel Francis
Tate, N/S Margaret Evelyn
Taylor, N/S Ada Amelia, R.R.C.
Thompson, N/S Marie Louise
Thompson, N/S Mary Monica
Trottier, N/S Fernande
Usborne, N/S Gertrude Seton
Wall, N/S Rosanna

Waters, N/S Grace Brown
Watkins, N/S Sophia Alice
Watson, N/S Agnes Maud
Weber, N/S Mabel Elsie
Weldon, N/S Ada Everilda
West, N/S Florence Caroline, R.R.C.
Whitaker, N/S Francis Marion
Whittick, N/S F. K., R.R.C.
Whitton, N/S Kathleen Emily
Wiggins, N/S Maude Ethel
Wilkins, N/S Nellie Penman
Wilkinson, N/S Maude E., R.R.C.
Wilks, N/S Dorothy Hemsworth
Willett, N/S Ella Edra
Wilson, N/S Ann Webster
Wilson, Matron E. M., R.R.C.
Wilson, N/S Harriet Edith
Wishart, Joyce Thomson
Wood, N/S Mary Evelyn
Wright, Edith Violet

CHAPLAINS ATTACHED

Ball, Hon. Capt. William Albert R.
Barnett, Hon. Capt. John Hilary
Barton, Hon. Major William
Broughall, Hon. Capt. George H.
Brydges, Hon. Capt. Ralph Lionel
Burch, Hon. Major Arthur Lafayette
Costello, Hon. Capt. Frederick R.
Denoon, Hon. Capt. Alexander Hugh
Desjardins, Hon. Major J. N. A.
Harrison, Hon. Capt. Ralph Douglas
Hepburn, Hon. Major, C. G., M.C.
Labonte, Hon. Capt. Arthur James
Letang, Hon. Capt. Henry Edward
Melvin, Hon. Capt. James Wilfred
Macdonald, Hon. Capt. E. J., M.C.
McFarlane, Hon. Capt. Hugh
Naylor, Hon. Capt. Isaac Bramwell
Oliver, Hon. Lieut.-Col Edmund H.
Owen, Hon. Major Cecil Caldbeck
Pickett, Hon. Capt. Michael Joseph
Planet, Hon. Capt. Henry Edward
Ridgeway, Hon. Capt. Robert W., M.C.
Ross, Hon. Major David Graham
Shatford, Hon. Major A. P., O.B.E.
Whitaker, Hon. Capt. George D., M.C.
White, Hon. Major James Hunter
Wood, Hon. Capt. Anselm Bertie

OFFICERS ATTACHED

McEwen, Capt. William James (Canadian Army Dental Corps)
McNevin, Capt. William Gordon (Canadian Army Dental Corps)
Murray, Capt. Arthur Huson (Canadian Army Pay Corps)
Scatcherd, Hon. Capt. Edwin C. (Canadian Army Pay Corps)
Walt, Major Charles Finlay (Canadian Army Dental Corps)
Yeo, Capt. Robert John (Canadian Army Dental Corps)

OTHER RANKS

Abbott, Pte. Charles Frederick
Absolam, Pte. Morgan Edward
Adams, A/Sergt, Joseph William
Adler, Pte. Jack
Allen, Pte. Thomas Daniel Charles
Allison, Pte. Herbert Bland
Allison, Pte. William
Almon, Sergt. James Mather de Wolfe
Anderson, Pte. David Wilson
Anderson, A/Lance-Corp. Walter C.
Anions, A/Sergt. Montague
Armstrong, Corpl. John Wesley
Ashby, Pte. Harry
Aslatt, Pte. Edwin
Astley, Pte. William Henry
Atkins, R.S.M. Herbert William
Attfield, Pte. Herbert Jesse
Baker, Pte. George Frederick
Balcombe, Pte. Sidney Henry
Barclay, Pte. Vernon Clarke
Barker, Pte. Dixon
Barnes, Pte. David
Barnes, Pte. Edmund
Bell, Pte. Alphonse
Benard, Pte. Adelard
Bennett, Pte. Arnold
Benoit, Pte. Joseph Arthur
Berensohn, Pte. Jean
Bergin, Pte. John Thomas
Bernard, Corp. Arthur Ratcliffe F.
Berry, Corp. Robert Henry
Bevan, Pte. Charles Frederick
Bickley, Sergt. Herbert P.
Biggs, Pte. Percy Armstrong, M.M.
Birch, Pte. Richard
Bjarnason, Pte. John Helgi
Boutilier, Pte. Edward Francis
Boyd, Pte. James Hollywood
Bradbury, Pte. John
Breen, Pte. Michael
Brett, Pte. Harold Frederick, M.M.
Briggs, Pte. Milville Gratton
Brighton, Pte. Harris Weir
Brine, Pte. Leo Albert
Brockington, Sergt. Charles Septimus
Brookbank, Pte. George William

Brooks, Sergt. William Arthur
Buckley, Pte. William Richard
Bull, Pte. William Isaac
Bullock, Pte. Daniel
Burch, Pte. Benjamin McKenzie
Burtt, Pte. Frederick James
Butlin, Lance-Corp. William Albert
Butt, Corp. Harry
Buxton, Pte. Ronald
Cameron, Pte. George Douglas
Campbell, Pte. Nate
Campbell, Pte. Robert George
Carruthers, Gnr. George Arthur
Carson, Pte. Frederick
Carter, Pte. Walter
Cartwright, Pte. William
Chandler, Pte. Archie Edward
Chantler, Pte. Lawrence Thirkle
Chennell, Lance-Corp. Cecil Alec.
Clark, A/Sergt. James Alfred
Clarke, Pte. Ernest
Coles, Pte. Robert
Coley, Lance-Corp. Joseph
Collins, Corp. Harry
Connors, Pte. John
Cosgrove, Pte. James William
Cox, Pte. Leonard
Crate, Pte. John
Crean, Pte. John
Creighton, Sergt. Edward MacD.
Croft, Corp. Thomas Arthur
Cromack, Pte. Percy
Cross, Sergt. John Christie
Cruickshank, Lance-Corp. Herbert W.
Dael, Pte. Emile
Dapp, Corp. Harry George
D'Arville, Pte. Edward Leamington
Davidson, Pte. Thomas
Davis, Pte. Arthur Stanley
Dean, Pte. Arthur
Defehr, Pte. John
Dejausserand, Pte. John
Dejohn, Pte. Fred
Dent, Pte. John
Dixon, A/Corp. Henry
Dodding, Pte. David
Dolbec, Pte. Louis
Donnelly, Pte. James
Donnison, Pte. Joseph
Donoghue, A/Sergt. Henry
Driver, Pte. Charles Gordon
Dunlop, A/Sergt. David Archibald
Durrant, Pte. Richard
Easton, Lance-Corp. William G. G.
Elliott, Corp. Harry Hingston
Farley, Pte. George Thomas
Farr, Pte. Gordon
Faulder, Pte. John Murray
Faulkner, Pte. Arthur
Fay, Sergt. Martin James
Findlay, Pte. John Reginald
Finlay, R.S.M. William
Finlayson, Lance-Sergt. James
Fisher, Pte. William
Flynn, Pte. Roy John
Ford, Lance-Corp. Victor George
Fox, Pte. Walter George
Fraser, Pte. Alexander
Freeland, Pte. Vernial Clifford
Freeman, Pte. Frederick Marshall
Frieze, Pte. Jack
Fyfe, L/Sergt. Louis
Gallagher, Pte. Cedric Aubrey W.
Gallipeau, Pte. Norman
Garner, Pte. Thomas James
Gibson, Pte. Alexander
Gibson, A/S.M.W.O.1, Percy L.
Gilmour, Lance-Corp. John Haddow
Gipson, Pte. Leslie Herbert
Giroux, Pte. Hector
Goodchild, Pte. Francis Joseph
Gosnell, Pte. Wilfred Bertram
Gough, Pte. William
Gower, Pte. Frederick
Grant, Pte. Charles
Gray, Pte. Harry Bosworth
Green, Pte. Joseph
Gregson, Corp. William Ewart
Grinham, Sergt. Charles Reynold
Guegan, Pte. Theobald Henry H.
Habel, Lance-Corp. Harry
Halligan, Pte. Arthur Ernest
Halton, Pte. Harold Saxon
Hamilton, Pte. Royal Victor
Hammett, Pte. Walter Leslie
Hargreaves, Pte. James Paul
Harris, Pte. Frederick
Harris, Pte. William
Harrison, A/Corp. Harold
Hart, Pte. Ernest John
Hart, Pte. Harry Harper
Harvard, Pte. Ferrell
Higginbotham, A/Sergt. John Ross
Higgins, A/Lance-Corp. William
Higginson, Pte. William
Hill, Pte. George Hugh
Hirsch, Sergt. Frederick William
Hogg, Pte. Robson
Holgate, Pte. Dennis
Holloway, A/Sergt. Norman Mark
Holloway, Pte. Samuel
Holst, Pte. Jacob
Hood, Pte. George
Hoppe, Pte. Andrew Charles
Hopwood, Pte. William Clifford
Horsman, Pte. Harry Leslie
Hughes, A/Sergt. Albert Ernest
Hughes, Lance-Corp. Arthur Owen
Hughes, A/Sergt. Henry Edward
Hutchinson, Pte. Earl
Inglis, Pte. William Wilson
Irwin, Pte. C. C.
Irwin, Pte. Edward
Irwin, Sergt. Thompson B.
Isaac, A/Sergt. John Harold
Isenor, Pte. Eugene

Jackson, Pte. Morris Nicholas
Jacobs, A/Lance-Corp. Charles W. A.
Jamaiken, Pte. Algernon John
Jarrett, Pte. George
Jefferys, Corp. Edwin James
Jenkins, A/Corp. James
Johnston, Pte. James Bruce
Johnson, Pte. Juno Carlton
Jones, Pte. David Thomas
Jones, Pte. Gordon
Kalte, Pte. Clayton George
Kavanagh, Pte. Albert Edward
Kayes, A/Corp. Abraham
Keeling, Pte. Frederick Henry
Kent, Pte. Cyril Horace W.
Kerley, Pte. William
Kerr, Sergt. Clarence Cecil
Kerr. A/Sergt. Malcolm
Kidd, Pte. George
Kilty, Pte. Thomas Elgin
King, Pte. Alfred John
Kinnard, Pte. Murray Mitchell
Kitchener, Pte. George
Kneller, Lance-Corp. Horace John
Knowles, Pte. Harold
Krowitz, Pte. Simon
Laplonte, Pte. Michael J.
Laporte, Pte. Albert
Larter, Pte. George Shirley M.
Lawrence, A/Q.M.S. Samuel Arthur
Lawrence, Pte. Sidney George
Lea, Pte. Frederick
Leah, Lance-Corp. Charles Alma
Leake, Pte. Charles Edward
Lee, Pte. John Douglas
Lewis, Pte. John Spalding
Lewis, Lance-Corp. Wm. Stanley
Lickley, Pte. Wm. Fraser
Little, Pte. Edward Charles
Long, Pte. George
Longworth, Pte. Mark Fielden
Lovell. Pte. Hubert Wm.
Lucas, Sergt. Wm. Joseph
Lyons, Corp. Albert Roy
Lyons, Pte. George
Madder, Sergt. Frank
Main, Pte. Wilmot Balloch
Mann, Pte. Albert
Mansfield, Sergt. Victor
Margach, Pte. William
Marshall, Lance-Corp. Reuben Floyd
Martin, Pte. George
Matthews, Pte. Wesley Bradford
Maxwell, A/Sergt. Gordon
Maxwell, Pte. Robert
Meade, Pte. Richard Edward
Melhuish, Corp. Percy Francis
Merrill, Corp. Volney Norris
Metcalf, Pte. Ernest
Metcalf, Pte. Harry
Middlemiss, Pte. Wm.
Midgley, Sergt. Wm.
Miles, Pte. James Edward
Miller, Pte. Albert
Miller, Pte. James
Millerson, Pte. Edward
Mills, Pte. Dickie Isham
Mills, Pte. Richard Walter
Millwood, Pte. Joseph Edward
Mitchell, Pte. John Henderson
Moisse, Pte. Frank Thomas
Montgomery, Pte. Arthur
Moore, Pte. Ellis Hazen
Moore, Corp. George
Moore, Pte. Harold Webster
Morris, Pte. Herbert Edward
Morris, Pte. Walter Whitfield
Morrison, Pte. Alexander Gordon
Morrow, Pte. George Joseph
Munro, Pte. John
Murdoff, Pte. Stanley Albert
Murphy, A/Sergt. Frederick
Murphy, Pte. Patrick Joseph
Myers, A/Corp. Edward Wm.
MacAskill, Pte. Peter
McCallum, Pte. Clair Llewellyn
McCluskey, Pte. James
McCombie, Pte. George Murray
MacCurdy, Pte. Albert Archibald
MacDonald, A/Corp. Hugh
McDougall, Pte. Albert John
McDougall, Pte. Charles Ross
McEnturff, Pte. Lonie Thomas
McFadyen, Pte. George
McGeary, Pte. Charles
McGovern, Pte. Phillip James
MacInnis, Sergt. John Angus
MacKay, Pte. Joseph Robert
MacKenzie, Pte. Alexander Grant
MacKenzie, S/Sergt. William James
McKinnon, Pte. John
McLeod, Sergt. John M.
McLeod, A/Corp. Norman
McLeod, Corp. Roy Lauchlin
McManus, Pte. James
McQuay, Pte. Peter
Newman, Pte. Wyndale
Newton, Pte. John Ward
Noonan, Pte. Joseph Michael
Norris, A/Sergt. Charles Ernest J.
Northcott, Pte. James
O'Brien, Pte. William George
O'Toole, Pte. Edward
Park, Pte. John
Parker, Pte. William
Parkes, Pte. George
Parkinson, Sergt. John Henry
Parks, Pte. Robert
Parks, Pte. Thomas
Parmiter, Corp. Edward Joseph
Parry, Pte. Thomas Edward
Parsons, Pte. Thomas Frederick
Pascoe, Pte. Albert William John
Patterson, Pte. James Cowden
Payne, Bdr. George William
Payne, Pte. John Franklin

Payne, Gnr. Percy Frank
Pearson, Gnr. Fred Beverley
Peer, Pte. William James
Penfold, Pte. Peter
Pennington, Pte. Albert
Pepperdine, Pte. Joseph Henry
Perry, Pte. Edwin Thomas John
Peterson, Pte. George Calvin
Phillips, Pte. Arthur C.
Pihen, Pte. Marcel
Pistorius, Pte. Fred Augustus
Plunkett, Pte. Joseph Thomas
Pollock, Corp. Andrew
Potts, A/Sergt. Lewis Vincent
Poulton, Pte. Arthur
Pratt, Pte. Charles
Prentice, Corp. John Albert
Price, Pte. Arthur Edward Lewis
Pritchard, Pte. Samuel
Pritchard, Pte. Sidney Clifford
Prodger, Pte. William Frederick
Quinn, Sergt. Arthur James
Raby, Pte. William
Radermacher, Sergt. Herbert
Ramsay, Spr. Thomas Richard
Rankin, Pte. Norman Scott
Ratledge, A/Sergt. George Harry
Reardon, Pte. John
Read, Pte. John
Reid, Sergt. Clarence Dixon
Reidy, Pte. Joseph Philip
Renaud, Pte. Fabien
Rennie, Pte. Jack
Richard, Pte. Joseph
Ritchie, Pte. Hugh
Roberts, Pte. James
Roberts, Pte. John
Robertson, Pte. David
Robinson, Pte. Henry
St. George, Pte. Percival T.
Scott, Pte. Arnold Russell
Scott, Gnr. James Workman
Sebire, Pte. George
Selkirk, Pte. Montague John
Senecal, C.Q.M.S. Henri
Seymour, Pte. Frederick M.
Sharp, A/Sergt. John Ernest
Shaw, Pte. Peter
Shawcross, Sergt. Stanley
Shearer, Corp. Charles Fallon
Shuel, Pte. Banford David
Sibun, Pte. Alfred Edward
Simons, Pte. William
Sinclair, Pte. Andrew
Smith, Pte. David Lancoct
Smith, Pte. Gordon
Smith, Pte. James
Smith, Pte. Kenneth
Smith, A/Corp. Lorne
Smith, Sergt. Samuel
Smith, Pte. Sydney
Smuck, Sergt. John Wesley
Snea, Pte. Michael Joseph Anthony
Snell, Sergt. Jerrold Webber
Snowdon, Spr. Watson
Snuggs, Pte. John
Somers, Pte. Albert Archibald
Sponenburgh, Pte. James Ira
Sproule, A/Corp. Crawford John
Stairs, Sergt. Edward Geoffrey
Steele, Pte. Arthur Henry
Steer, Pte. Charles George
Stephen, Pte. Herman Charles
Stephen, Sergt. Hubert
Stephen, Pte. R. William
Stephenson, Pte. John Thomas
Stokes, Gnr. John Hubert
Stoneham, Pte. Samuel
Sullivan, Pte. Thomas
Sundborg, Pte. Ernest John
Swettenham, Pte. Isaac
Taylor, Pte. Archibald
Taylor, Pte. Arthur
Taylor, Pte. Earl
Taylor, Pte. John King
Taylor, S/Sergt. Lewis
Taylor, Lance-Corp. William
Tessier, Spr. Joseph
Testar, Pte. Henry James
Thom, Pte. William
Thomas, Corp. Charles Joseph
Thomas, Spr. Charles Wesley
Thomas, Pte. Henry Charles
Thomson, Pte. Harvey Carter
Thorman, Pte. Frederick Pelham
Thornton, Pte. William
Timmings, Pte. Joseph
Timms, Pte. Frank Mathew
Tindley, Pte. Walter
Tingey, Lance-Corp. George
Tingey, Pte. Henry
Tingey, Pte. Phillip J.
Treleaven, Pte. George Bertram
Tremblay, Pte. Victor
Trevett, Pte. William Charles
Trites, Spr. Rollie
Tunstall, Pte. Henry-John
Turnbull, Pte. William
Vanstone, Pte. Harry Edward
Vidito, Pte. Arthur
Vincent, Pte. Henry
Wade, Pte. Leo Martin
Wake, Pte. Harry
Walker, Pte. Albert George
Walker, Pte. Alexander Peter
Walker, Pte. Charles Stanley T.
Walsh, Pte. James William
Walsh, Pte. Osborne Stanley
Walsh, Pte. Vincent John
Walton, Pte. Jacob Smith
Ward, Lance-Corp. Thomas Forsyth
Warnock, Pte. Charles Anthony
Waters, Pte. Sydney
Watherston, Corp. Wm. Dunlop
Watkins, Pte. Herbert George
Watson, A/Sergt. Ralph B.

Waude, Pte. Bertram
Webb, Pte. Albert John
Webb, Pte. William Barnett
Webster, Lance-Corp. Norman C.
Weeks, Pte. George Edward
Weir, Pte. William
Weiss, Pte. Frank
Weiss, Pte. Reginald
Welham, Pte. Cecil
Wert, Pte. Harold Clifford
Whalen, Gnr. James P.
White, A/Corp. Elvin Benedict
White, Pte. George Albert
Whitehouse, Pte. William Joseph
Whittle, A/Corp. John Edward S.
Wiedeman, Pte. Thomas
Wilkes, Pte. Frank
Williams, Pte. Frederick E.
Williams, Corp. Oscar
Wilshire, Lance-Corp. Jack William
Wilson, Pte. Albert
Wilson, Sergt. Allan Thacker
Wilson, Corp. David Gordon
Wilson, Pte. John
Wilson, Pte. Raymond
Winder, Corp. Edward Attree
Winder, Pte. Henry Wakeford
Withers, Pte. Herbert Warwick
Wolfenden, Pte. Royle
Wood, Pte. Vernon Henry
Woolatt, Gnr. Raymond McCullough
Wright, Pte. James
Wright, Pte. John Scott
Wroe, Pte. James Albert
Wyatt, Pte. Cecil George
Young, Pte. Ernest John
Zaccarelli, Pte. Rommie

V.A.D.'s

Miss Brown
Miss Helen Mathewson
Miss Marie Meaghar
Miss Phoebe Wright

APPENDIX G

No. 3 Canadian General Hospital (McGill)

DEMOBILIZATION ROLL

OFFICERS

Lieut.-Col. Laurie Hamilton McKim, Commanding Officer
Major Freeman Albert Brockenshire
Capt. York Blayney
Capt. Edwin Harold Campbell
Hon. Capt. James Ewart Carruthers
Capt. William LeMesurier Carter
Capt. James Christopher Clarke
Capt. Llewellyn Herbert Coates
Capt. Gordon Murray Dobbin
Capt. Leslie Clinton Fallis
Capt. Herbert Barnes Freel
Capt. Charles Joseph Gross
Capt. Ross Alexander Jamieson
Capt. George Leith
Capt. Lloyd Phillips MacHaffie
Capt. Archibald Edwin MacKenzie
Capt. Thomas Endore Perez
Capt. George Thomas Wilson
Capt. Robert John Yeo (Canadian Army Dental Corps)

SERGEANTS

Bausch, Sergt. Charles Joseph
Brand, A/Sergt. Maxwell Stanley
Creighton, Sergt. Edw. MacDonald
Cross, Sergt. John Christie
Fay, Sergt. Martin James
Gibson, SM. Percy Leopold
Hirsch, Sergt. Frederick William
Johnson, S/Sergt. John
Kennedy, S/Sergt. Archibald Phillip
Kerr, Sergt. Clarence Cecil
Kerr, Sergt. Malcolm
Lawrence, Sergt. Samuel Arthur
LeFebvre, Sergt. John Gordon
Lennox, Sergt. Norman
Lucas, Sergt. William Joseph
McKenzie, Sergt. William
Moore, Sergt. George
Riley, Sergt. Richard
Terry, S/Sergt. Gilbert Shire
Vaughan, Sergt. Arthur Cecil
Warner, Sergt. James Harrison
Winder, A/Sergt. Edward Attree
Wilson, Sergt. Allen Thacker

OTHER RANKS

Abel, Pte. Clifford Grant
Adams, Corp. Joseph William
Armstrong, Corp. John Wesley
Attfield, Pte. Herbert Jesse
Barclay, Pte. Vernon Clarke
Bell, Pte. Alphonse
Bennett, Pte. Arnold
Benoit, Pte. Joseph Arthur
Bernard, Pte. Arthur Ratcliffe
Berry, Pte. Plympton Ross

Blenkarn, Gnr. William Joseph
Briggs, Pte. Melville
Brown, Pte. George
Campbell, Pte. Ora Parsons
Chennel, Lance-Corp. Cecil Alex.
Clarke, Pte. Ernest
Crate, Pte. John
Cromack, Pte. Percy
Dapp, Corp. Harry George
DeFehr, Pte. John
Delany, Pte. John Frederick
Dent, Pte. John
Deveau, Corp. James Edward
Dixon, Pte. Henry
Dodding, Pte. Davis
Dolbeck, Pte. Louis
Donnelly, Pte. James
Driver, Pte. Charles Gordon
Easton, Lance-Corp. William Geo. G.
Elliott, Corp. Harry Hingston
Farley, Pte. George Thomas
Farquhar, Pte. John Alexander
Farr, Pte. Gordon
Felix, Corp. Gordon Adolph
Fitzgibbon, Pte. William Henry
Flynn, Pte. Roy John
Ford, Corp. Victor George
Fraser, Pte. John
Gallipeau, Pte. Norman Edward
Gibson, Pte. Leslie Herbert
Giroux, Pte. Hector
Gosnell, Pte. Wilfred Bertram
Grant, Pte. Charles
Hargreaves, Pte. Paul James
Harris, Pte. Fred
Heading, Pte. Henry Chinery
Holloway, Pte. Samuel
Hughes, Lance-Corp. Arthur Owen
Hughes, Pte. Thomas Bartram
Humphreys, Corp. William James
Inglis, Pte. William Wilson
Jacobs, Lance-Corp. Charles Wm. A.
Johnson, Pte. David Bruce
Kayes, Pte. Abram
Kilty, Pte. Thomas Elgin
Kinnard, Pte. Murray Mitchell
Leah, Corp. Charles Alma
Lovell, Pte. Hubert William
MacQuire, Pte. Ernest Warren
Matthews, Pte. Wesley Bradford
Maxwell, Pte. Robert
Melhuish, Corp. Percy Francis
Millwood, Pte. Joseph Edward
Mitchell, Pte. John Henderson
Moore, Pte. Frank
Moore, Pte. Harold Webster
Morrison, Pte. Alexander Gordon
Morrow, Pte. George Joseph
Noonan, Pte. Joseph Mitchell
Morris, Pte. Charles Ernest John
Northcott, Pte. James
O'Toole, Pte. Edward
Parry, Pte. Thomas Edward
Pascoe, Pte. Albert William John
Payne, Pte. John Frank
Payne, Pte. Percy Frank
Parmiter, Corp. Edward Joseph
Pepperdine, Lance-Corp. Joseph Henry
Pollock, Corp. Andrew
Porter, Pte. Frank Daniel
Pritchard, Pte. Sydney Clifford
Reed, Pte. John
Rhodes, Pte. Cecil John
Robertson, Pte. David Cuthbert
Simms, Pte. Hans
Snook, Pte. Gilbert
Somers, Pte. Albert
Spillar, Pte. Albert John
Sponenburgh, Pte. James Ira
Stephen, Pte. Herman Charles
Stephen, Pte. William Vaughn
St. George, Pte. Percy
Sundborg, Pte. Ernest John
Taylor, Lance-Corp. Archibald
Taylor, Pte. Stanley Wyvern
Thornton, Pte. William
Timms, Pte. Frank Matthew
Tingey, Pte. George
Tingey, Pte. Philip
Trembley, Pte. Victor
Vanstone, Pte. Harry Edward
Wade, Pte. Leo Martin
Ward, Corp. Thomas Forsyth
Waude, Pte. Bertram
Webb, Pte. William Barnett
Webster, Lance-Corp. Norman C.
Weir, Pte. William
Wilshire, Pte. Jack William
Wilson, Pte. John Raymond
Wood, Pte. Vernon Henry

APPENDIX H

No. 3 Canadian General Hospital (McGill), B.E.F.

ESTABLISHMENT

	1915	1918
Colonel in Command	1	1
Lieutenant-Colonels	2	2
Majors—		
Registrar	1	1
General Duties	4	4
Captains or Subalterns	24	24
Quartermasters	2	2
Matron	1	1
Nursing Sisters	72	100
Warrant Officers	2	2
Sergeants—		
Nursing Duties	8	6
Stewards	2	1
Dispensers	4	1
Cook	1	1
Pack Store-keeper	1	1
Linen Store-keeper	1	1
Clerks	4	4
Laboratory Attendant	0	2
Buglers	2	2
Corporals—		
Stewards	2	2
Cooks	2	2
Clothing Store-keeper	1	1
General Duties	5	5
Supernumeraries	3	3
Privates—		
Steward's Stores	3	3
Cooks	6	6
Pack Stores	2	2

	1915	1918
Privates		
Linen Stores	2	2
Clothing Stores	2	2
Clerks	4	4
Ward Duties	86	86
Batmen	39	25
General Duties	14	25
Supernumeraries	5	5
Attached—		
Chaplains	3	3
Batmen	3	3
Attached—		
Dental Corps Officers	..	2
Pay Corps Officers	..	1
Dental Corps, Other Ranks	..	4
Pay Corps Other Ranks	..	2
Women Employed (Authorized)	0	97
Totals—		
Officers	34	34
Officers Attached	3	6
Nursing Service	73	101
Warrant Officers	2	3
Staff Sergeants and Sergeants	21	20
Rank and File	179	173

(Note:—The above figures show the establishment of the Hospital on a basis of 1,040 beds. Automatic increase of staff took place when the number of beds increased, as shown in the tables below. When women were employed, as shown above, the number of other ranks was reduced proportionately.)

AUTOMATIC INCREASE

Canadian Army Medical Corps

For each 100 beds above normal capacity of 1,040 for a General Hospital when authorized as a permanent increase:—

Medical officer (captain or lieutenant)	1
Nursing sisters	4
Sergeant (g)	1
Corporals	2
Privates (h)	8
	16

(g) 1 sergeant to be replaced by a staff-sergeant for each 1,240 beds increase.

(h) Includes 1 clerk for each additional 100 beds.

For every increase of 500 beds 1 major and 1 assistant matron may be included in the additional officers and nursing sisters respectively, allowed.

When the bed capacity is 2,000 or over, 1 quartermaster, 1 warrant officer and 1 quartermaster-sergeant, additional to the normal establishment, will be allowed.

Canadian Army Dental Corps

For each additional 500 beds the C.A.D.C. personnel may be increased as follows:—

Dental officer	1
Dental mechanic (sergeant)	1
Dental orderly (private)	1
	3

Canadian Army Pay Corps

For each additional 1,000 beds the C.A.P.C. personnel will be increased as follows:—

Officer (assistant paymaster)	1
Sergeant	1
Private	1
	3

AUTOMATIC DECREASE

Canadian Army Medical Corps

When the bed capacity is below 1,040 beds, the personnel will be reduced in proportion to the scale of Automatic Increase, given above.

On each reduction of 200 beds, 1 sergeant (clerk) and 1 private (clerk) will be included among the personnel deducted from the normal establishment of clerks.

In addition to the above decreases, further reductions in personnel will be made as follows:—

For each decrease of 200 beds—1 major.

For each decrease of 400 beds—1 lieutenant-colonel.

On decrease of 500 beds—1 colonel, 1 quartermaster, 1 warrant officer.

Canadian Army Dental Corps

Dental officer	1
Dental mechanic (sergeant)	1
Dental orderly (private)	1
	3