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# Equipment of the Canadian Infantryman, 1939-1982 A Material - Historical Assessment

## Andrew Iarocci

Nhe history of Canada's soldiers in the twentieth century tends to incorporate a few recurrent themes. One of these is the changing nature of the soldier's experience of war, from the Boer War through to the Second World War and beyond. Another is the gradual transition of Canadian military forces from British to American spheres of influence, a theme that has become particularly relevant since 1939. This article will explore these two themes from a material history perspective, an approach that is generally absent from the broader historiography. The focus will be the transformations in the Canadian infantry soldier's personal field equipment and kit from the Second World War through to the 1980s. The evidence from this period points to two conclusions: first, that the experience of war and the growing professionalism of the Canadian infantryman has been reflected in his equipment; and second, that there has been an American influence on the equipment of the Canadian soldier since the outbreak of the Second World War.

Canadian soldiers have found themselves engaged in combat or peacekeeping operations under a wide range of circumstances since 1939. The Second World War saw Canadian troops in the mountains of Italy, the wheat fields of Normandy, the flooded coastal areas of the Netherlands, and even in the Aleutian Islands. In Korea, Canadian troops defended some of the most difficult mountain terrain imaginable. And from the 1960s to the present, Canadian soldiers have served in many regions as United Nations peacekeepers or members of the North Atlantic Treaty Organization. Yet no matter where a foot soldier finds himself, there are certain items which he must always carry with him at the sharp end. Of course, the soldier will never be without his personal weapon. But he must also be able to carry on his person adequate quantities of ammunition, water, provisions, and the other tools required to accomplish the mission at hand. What has differentiated the infantryman from the gunner or tank crewman is the fact that the former has had to carry all of his kit on his own back, at least part of the time. Although the soldier's load has fluctuated to some degree, according to terrain, weather conditions, and other local circumstances, there have been, and will continue to be, particular items that remain indispensable. Interestingly, the increasing mechanization of armies since the First World War has not necessarily reduced the soldier's burden. In fact, the Canadian infantryman of the post-1945 era has probably been loaded down with even more equipment than his grandfather during the Great War. The Canadian Army, like most others, has provided its soldiers with a variety of field equipment systems during the past 60 years. Some have been more efficient and ergonomic than others.

To better appreciate the historical implications of Canadian infantry paraphernalia, we must return to the primary sources: military manuals, vintage photographs, and the equipment itself, many examples of which survive in private collections and museums. The purpose of this article is not to explain every

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technical detail of the equipment. Rather, it will analyze the equipment with a view to isolating evidence that is relevant to the broader historical themes outlined in the introduction: the impact of the soldier's experience of war, and the increasing American influence on the Canadian military. To discuss equipment developments from the Boer War through to the end of the Great War would require far more space than is presently available, so for the sake of brevity, the discussion is limited to four case studies: the 1937, 1951, 1964, and 1982 pattern webbing equipment systems.



**Plate A** - **The 1937 Pattern Equipment**: This equipment was used by all British Commonwealth countries during the Second World War, but most of the items shown here are of Canadian manufacture. From left to right across the belt: basic pouch (with Sten magazine), torch, mess tins (in waterbottle carrier), waterbottle, and second basic pouch (with 2 inch mortar bomb). Above the belt is the small pack with shoulder straps, mounted over top the main left and right belt braces. The entire system can be put on and removed as a single assembly. The weapon is the Sten Mark II.

**Plate B - The 1937 Pattern Equipment in Use**: This photo was taken during training at the Canadian Assault School, Bordon, Hants, England in late 1941. The man with the Bren LMG (on left) carries the 1907 pattern bayonet, 1937 pattern canteen, small pack and chest-type respirator in ready position. Just visible at his left side is a 1937 pattern two-pocket rifle ammunition pouch, a pair of which could be worn in place of the larger basic pouches. The man on the right is similarly equipped, and is armed with an SMLE No. 1 Mk III with 1907 pattern bayonet fixed. Note the webbing ankle gaitors worn by both men.

**Plate C - The 1937 Pattern Basic Pouches**: These infantrymen illustrate how the basic pouches were worn. Note how the pocket flaps can be unfastened with one hand simply by pulling downward on the small snap-tab.

By the late 1930s, the western democracies began to update their military equipment, as another world war seemed increasingly likely. The British Army adopted a new system of sturdy cotton webbing equipment, known as the 1937 pattern, to replace the 1908 pattern, which had served British and Empire forces throughout the Great War.<sup>1</sup> The components of the new pattern included a waist-belt, braces, two ammunition pouches, canteen<sup>2</sup> and carrier, bayonet frog, small pack, and large pack (plates A, B, and C). As the first Canadian soldiers arrived in England during 1939-40, they were re-equipped with the 1937 pattern gear already in service with their British counterparts.

One key difference between the 1937 pattern and the earlier 1908 pattern was the incorporation of two relatively spacious universal, or "basic," ammunition pouches. Each of these pouches could accommodate a variety of items: a pair of mortar bombs, or two full bandoliers of .303 cartridges (50 rounds per bandolier), or two 30-round Bren magazines, or even three or four hand grenades. In contrast, the 1908 pattern ammunition pockets could accommodate individual rifle clips only (plates D and E).<sup>3</sup> It is true that Canada's adoption of the British 1937 pattern equipment demonstrates the influence of the British Army on the Canadian Army. Logistical concerns must also have influenced the decision, as the British gear was available in quantity in 1940. But the Canadian endorsement of the "basic pouch" concept also reflects the increasingly specialized battlefield tasks developed within the Canadian



Expeditionary Force during the later years of the Great War. In theory, all types of soldiers equipped with the 1937 pattern equipment could fulfil their specialist roles, whether they were riflemen, mortarmen, machine gunners, or grenadiers.

Of particular interest with regard to the 1937 pattern equipment is the entrenching tool. During the Great War, British and Imperial troops were equipped with the small, collapsible 1908 pattern pick-mattock. The tool was barely effective for digging a hole of any significant depth, and was declared obsolete by the British Army in 1923. It appears that when the 1937 pattern equipment was accepted into service, a more effective shovel-type entrenching tool, referred to as the Pattern No. 3, was also adopted. However, it is not clear how widely it was used. Photographic evidence shows that at some point after the outbreak of war, the earlier 1908 pattern pick-mattock re-surfaced in British and Canadian service. Furthermore, aside from

**Plate D - British Soldiers in Tobruk, 1942 (left)**: This Bren gunner marching into Tobruk (right) in December 1942 has slung over his shoulders the extra-large auxiliary basic pouches, which could accommodate three Bren magazines each. The regular basic pouches could carry two magazines. The man to his rear carries extra rifle clips in a cloth bandolier. The points of two clips are just visible.

**Plate E** - **British Guardsmen, 1937 (below)**: These men of the 2<sup>nd</sup> Bn, Grenadier Guards, are returning from Egypt in December 1937. They are still equipped with the 1908 pattern equipment. Note the 5-pocket rifle pouches worn at the men's left and right fronts. Unlike the more flexible 1937 pattern basic pouches, the 1908 pattern could accommodate rifle clips only. Grenades, mortar bombs and MG ammunition could not be so easily carried.





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Plate F - Entrenching Tools: At right is a 1941-dated 1908/ 37 pattern entrenching tool with carrier (tool shown disassembled). In the middle is the American Model 1943 entrenching tool and at left is the Canadian 1951 pattern. Clearly the 1951 pattern is based on the design of the Model 1943.

Plate G - Ken Bell Digs In: Here the famous Canadian Army photographer Ken Bell digs a slit trench in Normandy on 10 June 1944. Note the G.S. shovel, and G.S. pick resting on the earth behind him.

Plate H - Carrying the Entrenching Tool: This 3rd Canadian Division NCO has suspended his entrenching tool in its carrier at the rear of his equipment. On the left side of his belt is a

> photographs of training exercises, the author could locate no images depicting the No.3 shovel in general Canadian use.4

On the contrary, photographic evidence shows that Canadian infantrymen often carried full-sized General Service (GS) shovels in the field as an alternative to the 1908/37 type (plates F, G, H, and I). The GS shovel was a critical piece of equipment that might save a man's life during the next mortar bombardment or enemy counterattack. Clearly, experience had taught Canadian citizen-soldiers to modify and

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binocular case (just visible); at right is a compass pocket, below which is suspended the waterbottle and carrier. A basic pouch is just visible below his right elbow, forward of the SMLE No. 4 Mk I rifle. The rifle bayonet scabbard is visible beneath the entrenching tool carrier. The strap of a cloth ammunition bandolier is visible next to his right cross brace.

Plate I - General Service Shovel: This soldier of the South Saskatchewan Regiment operating along the Oranje Canal in April 1945 carries a full-sized G.S. shovel slung in typical fashion through his braces. The man in front of him has a G.S. shovel tucked behind his left basic pouch. There was at least one type of purpose-designed cover for this tool, but it is rarely scene in period photographs.

supplement their equipment as circumstances dictated, in a manner that is the trademark of professionalised troops.

Despite the very British appearance of Canadian soldiers operating in Northwest Europe during 1944-45, evidence suggests that Canadian relations with Great Britain and the United States were undergoing a process of change during the war years. In particular, the Canadian Army began to look toward its American counterpart for innovations in field uniforms and equipment. A comprehensive study conducted by the Canadian Chiefs of Staff Sub-Committee on Protective Clothing and Personal Equipage during 1943 - 44demonstrates this trend. The first volume, Cold Weather Operational Trials of Rations and Equipment, reveals that just as many American items as British items were tested.<sup>5</sup> And in the second volume, Cold Weather Operational Trials of Body Clothing, there is a similar trend, except that the number of American items tested exceeded the British items by about 50 percent.<sup>6</sup> As a result, it is not surprising that strange Anglo-American hybrids appeared as the Canadian government rushed to re-equip its Army at the outbreak of the Korean War. Period photographs of Canadian soldiers outfitted with a mixture of Canadian and American kit are not uncommon (plate J).

Ultimately the 1951 pattern equipment system would replace the 1937 pattern in Canadian service (plate K). Unlike the 1937 pattern, the 1951 pattern was a Canadian design, and was not used by any other army. This fact in itself suggests that the Canadian Army was moving away from the British sphere of influence. We also begin to recognize greater evidence of American influences. Although the basic shape of the 1951 pattern superficially resembled the 1937 pattern, features of the American model 1910 equipment family are obvious.<sup>7</sup> The 1951 pattern canteen and carrier are almost identical to the American type. And the hooks with which pieces of equipment (such as the canteen carrier) are suspended from the belt are identical to the American style (plate L). Finally, the folding entrenching spade included in the 1951 pattern equipment is a near exact copy of the American model 1943 (plate F). However, the general shape of the basic pouches, resembling the British pattern, was preserved.

The retention of the basic pouch concept suggests some uncertainty about the type of small arms that would be used by the Canadian Army in the immediate future. By 1951, the Canadian Army was equipped with a mixture of British and American small arms.<sup>8</sup> The 1951 pattern ammunition pouches were thus designed so that any variety of small arms ammunition could be carried. Unfortunately, it appears that the pouches were too deep to be suitable for any one type of rifle ammunition stored in magazines rather than charger clips. While bulky items such as mortar bombs and grenades could also be carried, the durability of the 1951 pattern

**Plate J** - **Canadians in Korea**: Canadians in Korea often made use of American arms and equipment. The man firing the American rocket launcher wears the M-1 steel helmet introduced into American service early in the Second World War. He also carries a Canadian mess kit in a 1937 pattern waterbottle carrier, but his companion at left has an American mess tin and drinking cup suspended from his web belt at his rear and left side. Just visible is the bottom of a G.I. bag for carrying spare bazooka rounds.

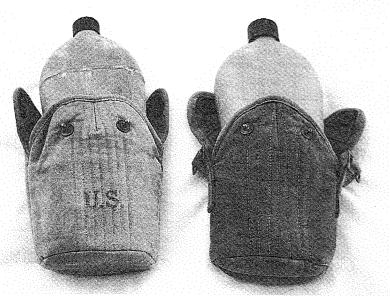
**Plates K1 and K2 - 1951 Pattern Equipment**: Based on the 1937 pattern gear. the 1951 pattern also displays fresh innovation and American influence. Next to the left basic pouch on Plate K1 is the new canteen and cover, patterned after the U.S. Model 1910. Beside this is the bayonet for the No. 4 rifle, and then the new pattern carrier for the mess tins. At right is the second basic pouch. The small pack has changed little from the 1937 pattern, except that a tool frog has been added so that the 1951 pattern entrenching tool could be carried, as shown. This arrangement is taken directly from the American Model 1944 and 1945 combat packs. The canteen and mess tin carrier are suspended from the belt in the American fashion, with bent-wire hooks. However, these two pieces are also supported by the left and right brace ends, as in the 1937 pattern. Plate K2 shows a Canadian soldier wearing the basic pouches and small pack.





pouches was inferior to the 1937 pattern. The newer type could not sustain intensive field use.

After settling upon the Belgian-designed 7.62 mm self-loading rifle during the 1950s, the Canadian Army adopted a new system of equipment designated the 1964 pattern (plate M). In some ways, the 1964 pattern displays continuing American influence. For instance, the American-style canteen was retained from the 1951 pattern. At the same time, the 1964 pattern lacked essential components. Although a special

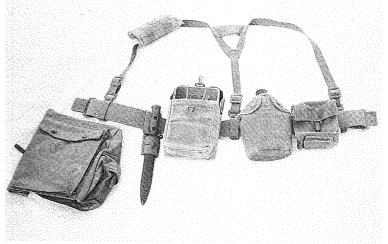


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Plate L - Comparison of U.S. Model 1910 and Canadian 1951 Pattern Canteens and Carriers

pocket for hand grenades was included, there were *no* pouches for rifle magazines. Instead, magazines were to be carried in the field jacket pockets, a somewhat unsatisfactory arrangement. Also missing was any form of small field pack, in which the soldier could carry rations or other personal articles during short-range patrolling or reconnaissance operations. Overall, the equipment was poorly designed and cheaply constructed. Items attached to the belt tended to shift from side to side, and the narrow braces distributed the weight of the belt equipment uncomfortably on the shoulders.

Increasing military mechanization during the 1950s and 1960s probably explains the inadequacies of the 1964 pattern equipment. Since it appeared that infantry soldiers of the future would ride to battle in armoured fighting vehicles, the designers of the 1964 pattern may 40 have opted to reduce the amount of personal equipment issued to each soldier. In this case, military logisticians failed to account for the Second World War legacy. Experience from that conflict showed that infantrymen were often compelled to fight over ground that no roadbound vehicle could negotiate. The difficult conditions of the Italian campaign or the battle of the Scheldt estuary come to mind. Under such circumstances, or in the instance of airborne operations, the soldier required some means to carry enough supplies to sustain him for 24



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**Plate M - 1964 Pattern Equipment**: From left to right: the respirator carrier, bayonet for the FN rifle, mess tins and carrier, canteen, cup and carrier, and hand grenade pouch. A field dressing is taped to the left brace strap. The inadequacy of the equipment is obvious. There are no small arms ammunition pockets, and the braces distribute the load very poorly on the shoulders. The large field cargo pack originally issued with the equipment was unsatisfactory because it lacked a frame. Thus, the American-style C-2 rucksack was adopted as a stopgap measure (see Plate O).

to 48 hours. In any event, the Army would correct its mistake only after the 1964 pattern had been in service for almost two decades.<sup>9</sup> The solution then adopted by the Canadian Forces was the 1982 pattern equipment. This was the first pattern of modern nylon equipment issued to Canadian soldiers, and it remains in service to the present.<sup>10</sup>

The basic 1982 pattern consists of belt, braces (or "yoke"), ammunition pouches, entrenching tool and carrier, canteen and carrier, bayonet frog, small field pack, and large frame-mounted rucksack (plate N). More than

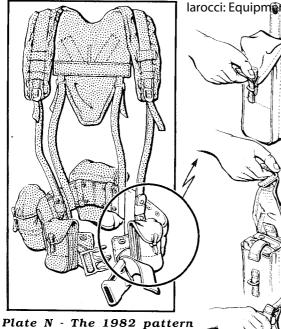
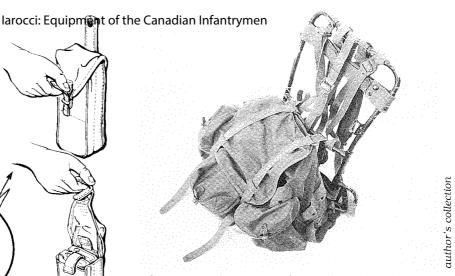


Plate N - The 1982 pattern webbing equipment: The threedimensional diagram shows the basic 1982 pattern assembly, with left and right magazine pouches, canteen carrier (at left), and mess tin carrier (at rear). The small field pack is not shown, nor

is the large rucksack. Attached to the rear of the well-padded shoulder yoke is the case for the tri-fold entrenching shovel, another item patterned after an American model. Note the modern "Fastex" belt buckle. At right are instructions for the quick removal of rifle magazines from the pouches.

any previous type, the 1982 pattern system offers perhaps the strongest evidence of both American influence, and a rational design based on the soldier's experience. Since the Second World War, the United States Army has founded its individual load-bearing doctrine on the principles of "Fighting Load" and "Existence Load." Fighting Load, as outlined in a 1977 U.S. Army field manual, includes the items required by the soldier to achieve his immediate, shortrange mission: waist-belt, suspenders, ammunition pouches, canteen, entrenching tool, small field pack, and rations.11 Existence Load includes all of the other kit issued to the soldier for extended field operations, such as sleeping bag, protective mask, spare clothing, and additional ammunition supply. In order to carry his Existence Load, the soldier requires a large volume, frame-mounted rucksack, similar to those used by civilian campers.<sup>12</sup>

The Canadian 1982 Pattern Webbing Users Field Manual clearly illustrates that the Canadian Army has accepted the American principles of Fighting and Existence Load, in



**Plate O** - **The C-2 Universal rucksack**: This rucksack is a near-exact copy of the American type used during the 1960s and 1970s. A sleeping bag can be fastened to the frame above the pack body.

the wake of apparent confusion surrounding the designs of the 1951 and 1964 patterns. Canadian tables of issue for the 1982 pattern are very similar to those in American manuals. The differences are superficial; the Canadian Army refers to the two load bearing principles as "Fighting Order" and "Marching Order," in place of Fighting Load and Existence Load. An intermediate condition termed "Battle Order" is also used. In fact, Battle Order is the same as Fighting Order, with the addition of a small field pack, similar to the American type.<sup>13</sup>

Further American influences on Canadian doctrine and equipment can be discerned by comparing U.S. and Canadian manuals. First, the Canadian manual for the 1982 pattern equipment states that the system was, in part, designed and tested at the U.S. Army Natick Laboratories, clear evidence of cooperation between the Canadian and American militaries.<sup>14</sup> Moreover, in the introduction to the American manual, we read:

Here are the simple rules... Keep your load as light as possible. Know your equipment. Assemble the equipment properly. Keep every item in its proper place. AND REMEMBER--IT'S YOUR BACK!<sup>15</sup>

The introduction to the Canadian 1982 Pattern Webbing Users Field Manual states exactly the same rules in different order:

FOLLOW THESE RULES Know the equipment. Assemble the equipment properly. Keep each item in its proper place. Keep the load as light as possible. REMEMBER...IT'S YOUR BACK!<sup>16</sup> It is obvious that the authors of the Canadian manual copied the format of the American manual once the Canadian Forces had adopted equipment based on American doctrine and design.

The adoption of the 1982 pattern webbing illustrates a rational choice on the part of the Canadian Army. Rather than expend time and scarce resources independently developing a new system to replace the inadequate 1964 pattern, the Canadian government co-operated with U.S. military laboratories to design a set of equipment based on principles already established by the U.S. Army as early as the 1950s. It appears that the Canadian Army first began to draw the distinction between the modern "Fighting" and "Existence" concepts sometime during mid-1960s, when a lightweight rucksack with mounting frame was copied from the Americans and dubbed the "C-2 Universal Rucksack" (plate O). But as late as 1966, Canadian training manuals still narrowly discussed the rucksack in an Arctic operational context, since exposure to extreme cold weather required that each man carry a sleeping bag and additional clothing. According to a Canadian Army arctic operations manual, "the rucksack is...normal winter pack equipment for the Arctic and Sub-Arctic. It is ideally suited for carrying medium weight loads of 30 to 50 pounds."17 Thus, the rucksack was originally envisioned as a special piece of equipment, intended primarily for use in arctic conditions. At the same time, a 1967 U.S. Army manual makes it clear that American soldiers were using the rucksack to carry "Existence" equipment in Vietnam:

The lightweight rucksack is designed for use in arctic, mountainous and jungle areas (or operations)...The lightweight rucksack is adaptable for use with arctic loads, mountain loads, jungle loads, and for use as a packboard.<sup>18</sup>

The Canadian Army would eventually recognize that modern warfare necessitated the general issue of a rucksack, regardless of operational locality. The soldier's load had increased considerably since the Second World War, when most soldiers went into battle with nothing larger than the 1937 pattern small pack. Self-loading and fully automatic personal weapons required that soldiers carry more ammunition. Other innovations, such as the disposable light anti-tank weapon, added to the infantry soldier's burden. And yet the 1964 pattern equipment issued to Canadian soldiers during the 1960s and 1970s could not accommodate some of the soldier's most basic requirements. Clearly, the adoption of the 1982 pattern equipment, with its frame-mounted rucksack, was a consequence of the common soldier's previous experience with the 1964 pattern.

The 1982 pattern also incorporated major improvements over any previous Canadian or American type, further evidence of a rational design based on the soldier's experience. For instance, a more stable, three-inch-wide waistbelt is used, similar to that of the now ancient 1908 pattern. The buckle is a modern Fastex type, which is easily fastened and unfastened, but will not come open inadvertently. The suspender yoke is well padded around the shoulders. All of these improvements suggest that Canadian logisticians considered the soldier's experience with previous patterns.

The evolution of Canadian Army field equipment during the 60 years since the outbreak of the Second World War demonstrates both increasing professionalism and greater American influence. The experiences of the Great War, coupled with those of the Second World War and beyond, are reflected in the soldier's equipment. The Canadian infantry soldier of the Second World War would be more of a specialist than his predecessors, so his equipment was designed with flexibility in mind. During the postwar era, mechanization appeared to be the way of the future, and less attention was apparently devoted to the development of robust and functional field equipment; the 1964 pattern was the unhappy result. However, the Canadian soldier's experiences around the globe led to the development of the more sophisticated 1982 pattern and, more recently, the modern gear of the "Clothe the Soldier" program. All of these developments have occurred in the shadow of our neighbour to the south, and there is ample evidence of American influence on Canadian equipment designs. In fact, taking advantage of American research and development facilities represents a rational choice on the part of Canadian military planners, who have been perpetually challenged by budgetary constraints; clearly, logistical and functional concerns should take precedence over nationalistic tendencies.

We hope that the Canadian infantry soldier of the twenty-first century will be well equipped to accomplish whatever missions may arise.

#### Notes

- 1. Aside from the United States and other British Commonwealth nations, most armies continued to use leather equipment well into the middle of the twentieth century.
- 2. Although the term "water-bottle" is virtually always used in British military manuals, the more modern "canteen" will be used in this article for the sake of consistency. Refer to *Infantry Training* (London: HMSO, 1914), p.116.
- 3. Infantry Platoon Weapons Pamphlet No. 8, *The 2-Inch Mortar* (London: War Office, 1949) shows soldiers operating a mortar with spare bombs packed in basic pouches.
- Edward Storey, "Pattern No. 3 Entrenching Tool," Military Artifact 3/3 (September 1998), p.89.
- 5. Chiefs of Staff Sub-Committee on Protective Clothing and Personal Equipage, *Volume 1, Cold Weather Trials of Rations and Equipment* (Ottawa: Department of National Defence, 1943-44), pp.1-3.
- 6. Chiefs of Staff Sub-Committee on Protective Clothing and Personal Equipage, Volume 2, Cold Weather Operational Trials of Body Clothing (Ottawa: Department of National Defence, 1943-44), pp.1-2.
- 7. When referring to items of equipment, the Americans use "model" while the British and Commonwealth countries use "pattern."
- 8. A training pamphlet for the 3.5-inch rocket launcher dating from 1952 depicts Canadian soldiers armed with American M-3 submachine guns in place of the British

#### CMH Mailbox - continued from pg.5

indeed considered as shock troops by both Douglas Haig and his German counterparts, but implying that we defeated the German armies alone is the type of navel-gazing that simply clouds our understanding of the Canadian role in the Great War. Despite these observations, I think review articles like this one are profitable tools in bringing to light new books and sources while also stimulating debate among military historians.

> Tim Cook National Archives of Canada Ottawa, Ontario

#### Notes

1. Ian Brown, British Logistics on the Western Front (London, 1998); Robin Prior and Trevor Wilson, Command on the Western Front: The Military Career of Sir Henry Rawlinson (Oxford, 1992); Tim Travers, The Killing Ground (London, 1987); Shelford Bidwell and Dominick Graham, Fire-Power: British Army Weapons and Theories of War, 1904-1945 (London, 1982)

2. See Ian McCulloch, "The 'Fighting Seventh': The Evolution and the Devolution of Tactical Command and Control in a Canadian Infantry Brigade of the Great War," (Royal Military College of Canada: unpublished MA thesis, 1997); Shane

Sten SMG. The soldiers are also equipped with American-type sacks for carrying spare 3.5-inch rockets. Canadian Army Training Pamphlet 11-7, *Rocket Launcher 3.5 Inch M-20* (Ottawa: Canadian Army Headquarters, 1952), pp.11-18.

- 9. Brig. Gen. Jack L. Summers, *Tangled Web: Canadian Infantry Accoutrements*, 1855-1985 (Alexandria Bay: Museum Restoration Service, 1992), p.124.
- The U.S. Army began to experiment with nylon equipment as a substitute for conventional cotton webbing during the Vietnam War. See Shelby Stanton, U.S. Army Uniforms of the Vietnam War (Harrisburg, PA: Stackpole Books, 1989), pp.143-144.
- 11. FM 21-15, *Care and Use of Individual Clothing and Equipment* (Washington, DC: Headquarters, Department of the Army, 1977), pp.85, 202. Refer to Appendix A.
- 12. FM 21-15, pp. 85, 204-205. Refer to Appendix A.
- C-87-248-000/MB-001, 1982 Pattern Webbing Users Field Manual (Ottawa: Department of National Defence, 1983), p.6-0. Refer to Appendix B.
- 14. C-87-248-000/MB-001, p. 1-2. Refer to Appendix B.
- 15. FM 21-15, p. 84. Refer to Appendix A.
- 16. C-87-248-000/MB-001, p.1-3. Refer to Appendix B.
- A Soldier's Guide to the North (Ottawa: Directorate of Military Training, 1966), p.23.
- TC 10-8, The Lightweight Rucksack: Nylon OG106 (With Riveted Frame) (Washington, DC: Headquarters, Department of the Army, 1967), p.19.
- 19. Tom Hawkins, "Twenty-Five Years of Borrowed Time."

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> 3. Dan Jenkins, Winning Trench Warfare: Battlefield Intelligence in the Canadian Corps, 1914-1918, (Carleton: unpublished PhD thesis, 1999) and Wesley C. Gustavson, Missing the Boat? Colonel A.F. Duguid and the Canadian Official History of World War I, (University of Calgary, unpublished MA thesis, 1999).

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