
CANADIAN
Army
JOURNAL
VOLUME 5 NUMBER 5
AUGUST 1951
Bernard Reilich

CANADIAN Army JOURNAL

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The Cover

Naval engagement at Kingston, Ont., during the War of 1812. (See the article on page 2 of this issue).

The object of the Canadian Army Journal, which is published by the Directorate of Military Training under authority of the Chief of the General Staff, is to provide officers of the Active, Reserve and Supplementary Reserve Forces with information designed to keep them abreast of current military trends and topics, and to stimulate interest in current military affairs.

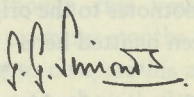
"CURRENT AFFAIRS"

To combat the spread of false ideas and confused thinking fostered by the tenseness of the present world situation, it is of the greatest importance that the personnel of the armed forces of this country be assisted and guided to a true perception of the basic principles upon which our country is founded, and also that national and international events are presented at their true values. The training programme of the Canadian Army will make provision for instruction in such matters.

Beginning 15th of October, 1951, there will be issued every two weeks "Current Affairs" pamphlets produced by the Bureau of Current Affairs, Department of National Defence. These pamphlets will be used by officers who are to be leaders in the discussion group hours which are now a part of the training programme for all ranks of the Army.

Officers will make use of the "Current Affairs" pamphlets as source material for the topics to be presented and discussed during the hour which will be assigned each week for this purpose. These discussion hours will provide not only an opportunity for Service personnel to be kept informed about national and international events, Canadian citizenship and topics of a general nature, but also for officers to develop their position as leaders.

A high morale is the most important of all military attributes. All effort on physical training, weapon training and tactical training is wasted unless the soldier is imbued with a high morale based upon a conviction of the rightness and importance of the cause for which he must be prepared to fight. Officers of all ranks must understand that it is just as much their responsibility to instruct their men in these matters as it is to teach them fieldcraft. No soldier is "battle worthy" or fit for the duties required of the Canadian Army unless his morale is sound.



(G. G. SIMONDS)
Lieutenant-General
Chief of the General Staff

NOVEMBER 10, 1812

THE AMERICAN ATTACK ON KINGSTON HARBOUR

By Colonel C. P. Stacey, OBE,
Director of the Historical Section, Army Headquarters, Ottawa.

Many Canadian soldiers are well acquainted with the city of Kingston, Ontario, which is the headquarters of Eastern Ontario Area and the seat of the Royal Military College of Canada, the Canadian Army Staff College, the National Defence College and other military establishments. Kingston has been a military station since 1673. In the War of 1812 it was the British naval base on Lake Ontario. The dockyard was on the site on Point Frederick now occupied by R.M.C.

This account of the only engagement which actually took place at Kingston in that war is reprinted from the *Canadian Historical Review* of June 1951, by kind permission of the Editorial Committee and the University of Toronto Press. Detailed references to sources, which will be found in the footnotes to the original article, have been omitted here.

* * *

The first considerable naval engagement of the War of 1812 on Lake Ontario took place in the mouth of the harbour of Kingston, the British naval station for that lake, on November 10, 1812. On that day the American squadron, attacking in the hope of cutting out the *Royal George*, the largest British vessel on the lake, was beaten off by the ship and the Kingston garrison in an afternoon of long-range cannonading. It was a small affair, and the authors of the "standard" books have not taken the trouble to ferret out the facts about it. Nevertheless, it was an action of some significance; and it has its own interest, the more so as it provides a particularly fine example of those contradictions between British and American accounts which are so common in the records of this war. In this case the opposing commanders differed even on the date of the engagement![1]

[1] *Colonel Vincent's report to Major-General Sheaffe gives the date correctly as November 10. Chauncey's first report gives it as November 9, and has misled many historians. However, in a subsequent report to the Secretary of the Navy, dated November 17, Chauncey corrected himself, explaining that he had been "much hurried in taking notes" from his journal. He also gives the date correctly in his letter of 17 November to Governor Tompkins.*

Only *five* firsthand accounts of this engagement seem to have survived: two by Commodore Isaac Chauncey, commander of the American squadron; one by Colonel John Vincent, commander of the Kingston garrison; one by an anonymous "officer under Commodore Chauncey;" and one in the local newspaper, the *Kingston Gazette*. All of them except perhaps one are in print, although in several cases the print is very obscure and in some it is inaccurate.

I

Before attempting to describe the action, let us try to establish the strength of the opposing forces. It is a point on which there was considerable difference of opinion at the time.

It may be recalled that the British enjoyed a decided advantage on the Great Lakes at the outset of the war, as the result of the existence of the naval force known as the Provincial Marine of Upper Canada. This force, however, was far from being a proper fighting navy; it was primarily a transport service and was administered by the Quartermaster-General's Department of the Army. Before it was taken over by the Royal Navy the initial British superiority had been largely overcome by the arrival on the Lakes of United States naval officers and crews who proceeded to improvise squadrons. Commodore Chauncey reached Sackett's Harbor on October 6, 1812. He found to hand one U.S. naval vessel, the 18-gun brig *Oneida*, built in 1809, but apparently never manned until 1811; and—displaying an energy in administration which he was never to show in action—he took up half-a-dozen merchant schooners (which were re-named *Hamilton*, *Governor Tompkins*, *Conquest*, *Growler*, *Julia* and *Pert*) and armed them with one or more heavy long guns apiece. It was with this queer but dangerous force that he attempted the Kingston operation. According to his own account, his squadron's strength amounted altogether to "40 guns of different Calibres, and 430 men including Marines." One of his subordinate officers raises the number of guns to 45.

Chauncey gave his superiors a very inflated estimate of the strength of the British squadron, which he credited with 108 guns and 890 men. His intelligence concerning his adversaries was queerly defective; he includes in their force the *Toronto* (which he designates by the Italianate form *Taranto*), although this vessel had been broken up many months before. It is amusing to compare his account of their gun strength with that given in contemporary British records. Incidentally, his figures add up, not to 108 guns, but to 106:

	British Records	Chauncey's Estimate
Royal George	22	26
Earl of Moira	14	18
Prince Regent	10	18
Duke of Gloucester	6	14
Toronto	broken up	14
Governor Simcoe	merchant vessel	12
Seneca	?????[2]	4
TOTAL	52	106

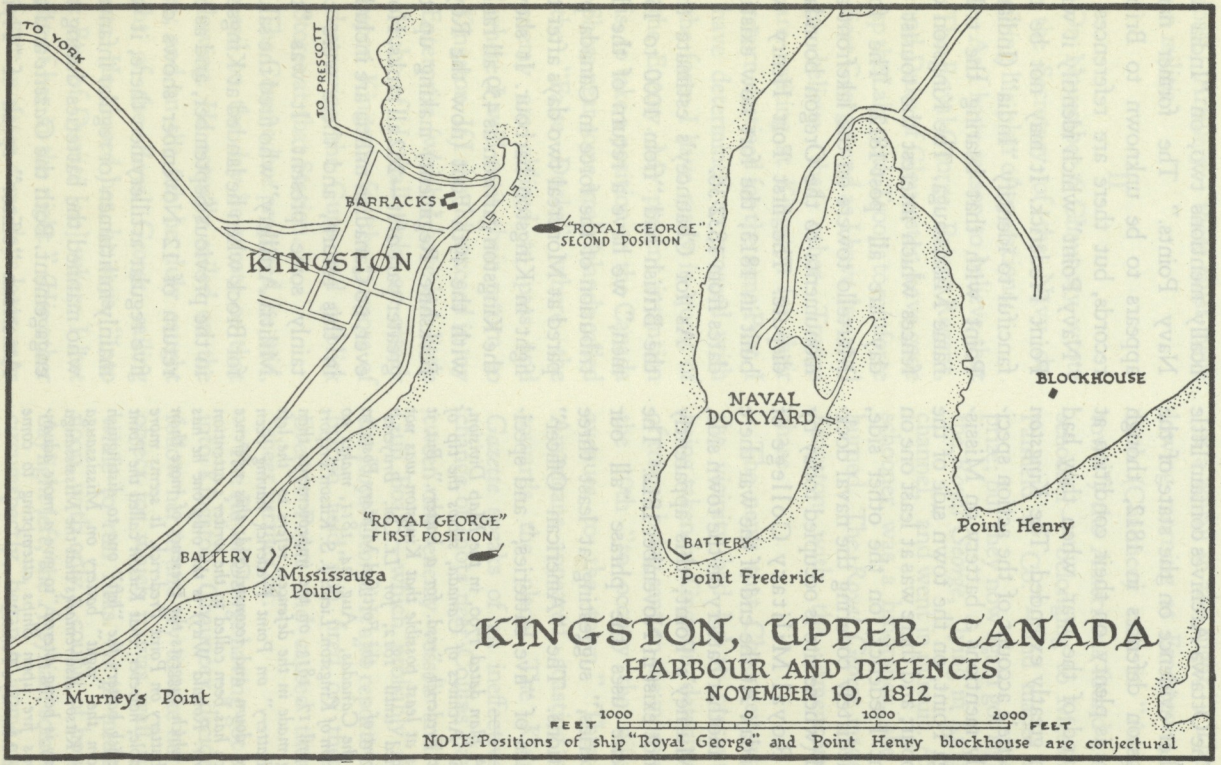
As for crew strength, in April 1813 the combined crews of *Royal George*, *Earl of Moira* and *Prince Regent* were recorded as 230 officers and men, including troops shipped as marines. And there is no doubt that by naval standards the *quality* of the officers and crews of the Provincial Marine was very low. Shortly after the engagement at Kingston, Capt. A. Gray, Acting Deputy Quartermaster General, wrote thence to the Governor General, "The officers of the Marine appear to be destitute of all energy and spirit, and are sunk into contempt in the eyes of all who know them. The want of seamen is so great that the Royal George has only 17 men on board who are capable of doing their Duty, and the Moira only 10 able seamen . . . " The squadron was in fact largely manned by soldiers. In the previous April, General Prevost (the Governor General and Commander of the Forces) had ordered five companies of the Royal Newfoundland Regiment to Upper Canada "for the purpose of being employed in the Marine Department afloat;" and it was reported after the fight in Kingston harbour that the one man killed in the *Royal George* was a soldier of this corps. The senior officer of the Marine (called generally the Commodore) was Commander Hugh Earl, the *Royal George's* captain.[3]

After his withdrawal from before Kingston, Chauncey reported the strength of the defences and the garrison in terms just as exaggerated as his appreciation of the power of the British ships. "It was thought by all the Officers of the Squadron," he writes, "that the Enemy had more than 30 guns mounted at Kingston and from 1000 to 1500 men." This contrasts strangely with the account of Capt. Gray in the same letter already quoted:

> As to the Works of Defence here, but little can be said; about 6 or 8 small ship guns are mounted in the Batteries, and a Blockhouse is built upon the high ground [on Point Henry] for the protection of the Harbour, mounting at present a 6 and a 9 pounder, the whole capable of making but a feeble resistance to the force the enemy has the power of bringing against us . . .

[2] *This vessel is very obscure. She was a merchant schooner which was taken over in June 1812 and was sunk by the fire of Fort Niagara on Nov. 21 of the same year. She was probably used only as a transport.*

[3] *The tombstone of "Hugh Earl, Esqr. Commander in the Provincial Navy of Upper Canada" was still legible recently in St. Paul's Churchyard, Kingston, though broken across and rapidly perishing. He lived until 1841. His name is frequently mis-spelt Earle.*



Map by Capt. C. C. J. Bond

The Ottawa Archives contain little further evidence on the state of the Kingston defences in 1812, though there is plenty on their condition at the end of the war, when they had been greatly extended. The *Kingston Gazette*'s account of the action specifically mentions a battery on Mississauga Point, on the town side of the harbour; and there was at least one on Point Frederick, on the other side, immediately covering the naval dockyard (whose site is occupied today by the Royal Military College of Canada). At the end of the war there was another battery on the town side, at Murney's Point; this apparently did not exist in November 1812.[4] The *Gazette* uses the phrase "all our Batteries," suggesting at least three positions. The "American Officer" speaks of "five batteries," and specifically mentions two, on "India and Navy Points." The former name appears to be unknown to British records, but there are references to "Navy Point" which identify it with Point Frederick. It may not be too fanciful to identify "India" (Indian?) Point with that bearing the tribal name Mississauga. The Kingston defences which interest the tourist today are all post-1812. The four Martello towers on the lakefront are monuments to the Oregon boundary dispute. The first Fort Henry was built in 1813; the fort now existing dates from 1832-36.

As for Chauncey's estimate that the British had "from 1000 to 1500 men," we have a return of the distribution of the force in Canada prepared at Montreal two days after the fight in Kingston harbour. It shows the Kingston garrison as 459 all ranks, with the 49th Foot (now the Royal Berkshire Regiment) making up the greater part of it—262 all ranks. However, no Canadian militia are included in this return, and there were certainly some present. It was "the Militia Artillery" who fired the salute for Brock when he landed at Kingston in the previous September, and as the return of 12 November shows only five regular artillerymen there, it was mainly militiamen (or regular infantry) who manned the batteries during the engagement. Both the *Gazette* and the American "officer" speak of "Flying

[4] *A plan dated 1790, in the Map Division, Public Archives of Canada, shows the tip of Point Frederick "resd. for a battery." But it seems at least possible that Kingston was not fortified until 1812, for Lt.-Col. Bruyeres' "Report of . . . the Fortified Military Posts in both the Canadas," Aug. 24, 1811, makes no mention of Kingston. Lieut. J. S. Kitson's report of April 17, 1813, on the improvements then being made in the defences, refers to "the left old Battery" on Point Frederick having been pulled down and reconstructed; this reference (which has been called to the writer's attention by Mr. Ronald Way) is the only one he has seen which suggests the presence of more than one battery on Point Frederick. It seems more probable, however, that Kitson called the Point Frederick battery the "left" one to distinguish it from the "right" battery on Mississauga Point. Kitson also remarks that the Mississauga battery is being altered "to give a more advantageous fire upon Ships attempting to come round Murney's Point."*

[Horse] Artillery;" these must have been militia.

II

On November 6 Chauncey wrote to the Secretary of the Navy describing his plan of operations:

> As I have reason to believe that The Royal George, Prince Regent, and Duke of Gloucester, have gone up the Lake with Troops to reinforce Fort George, and as I have [reason] to believe that other Troops are waiting at Kingston for their return destined for the same Post, I have determined to proceed with the force I have ready in quest of the Enemy. My present intention is, to take a position on the Canada Shore near some small Islands called the "False Ducks" where the enemy are obliged to pass and where I will wait their return to Kingston. If I should succeed in my Enterprize (which I have but little doubt of) I shall make an attack upon Kingston for the purpose of destroying the Guns and publick Stores at that Station.

The Commodore proposed, he said, to sail on the day he wrote or that following. He actually sailed on the 8th; and on the 9th he duly caught sight of the *Royal George*, sailing alone. He chased her, he says, "into the Bay of Quanti [*sic*] where I lost sight of her in the night." (His other account, written some days later, says "in a squall in the night.") The following morning at Ernestown, now Bath (Chauncey calls it "Armingstown") the Americans found a small schooner—"belonging to Messrs. B. Fairfield & Co."—and made her a prize; but they now again got sight of the *Royal George*, "lying in Kingston channel," and went in pursuit. As the schooner was a hindrance, she was burned. The *Royal George* made for Kingston with the Americans in chase.

The news that Chauncey was in the vicinity had led to precautions being taken in Kingston, detachments of troops being sent on the morning of the 10th "to occupy the different avenues to the town." Then the Americans appeared, coasting along towards the place. The *Kingston Gazette* speaks of an ineffective exchange of shots near Collins Bay between the enemy vessels and "our Gun Boat"—which probably means the *Royal George*. It also reports that a British field gun fired on them at Everett Point and caused them to "sheer further off."

The *Royal George* having got safely into Kingston, Chauncey decided to follow her in and try to take her—an object for which it was well worth while to run risks. So in mid-afternoon, with only a couple of hours of daylight left, the Assyrian, somewhat circumspectly, began to come down.

III

Here the Yankees come, then: making in slowly in the light air, their big battle ensigns flapping against the November sky. The brig and the six schooners are not very imposing; but no doubt they look formidable enough to the watchers on shore. We know from the *Gazette* that Kingston was in a state of unsuppressed excitement. People had come flocking in from the country round. "The veteran Loyalists who had manifested their zeal for their Sovereign during the American rebellion, shewed that age had not extinguished their ardor . . . Before night the town was crowded with brave men, who insensible to fatigue, were anxious only to grapple with the enemy." But it is with the eye of imagination alone that we can see a more important factor in the situation, Vincent's red-coated professionals, going about their preparations with the calm bred of discipline and custom, and the confidence that stems from memories of Detroit and Queenston Heights.

If the reader will bear with us, we will let the men who were there tell the story of the engagement. First, the anonymous American officer, whose account, dated from Sackett's Harbor November 15, and originally printed in the New York *Statesman* of November 28, 1812, is, for a reason which he explains, the most detailed we have:

. . . I have not the smallest doubt had the wind been such as to have enabled our gallant little squadron to have come out of the Bay with a leading breeze, but that we should have brought the Royal George out with us. We were engaged one hour and fifty minutes, most of the time pretty closely. The day was mild—the scenery around us very beautiful, and the *tout ensemble* of the view in the heat of action was as grand as any thing I ever witnessed. I took notes during the action, which I beg leave to subjoin. In going in our commander, much to his honor, directed the squadron to level their fire as much as possible against the ship and forts, as it was not his wish to injure individuals by beating down the houses of Kingston.

50 minutes after 2 set top gallant sails—5 minutes after 3, the batteries on India and Navy Points opened their fire on the leading vessel,[5] Lt. Elliot of the *Conquest*, pushed forward and went in in the handsomest style: he was followed by the *Julia*, Frant—*Pert*, Arundel—*Growler*, Mix—next came the brig bearing the Commodore's broad pennant—then the *Hamilton*, Lieut. M'Pherson, and *Governor Tompkins*, Lieut. Brown, who was far astern having been dis-

[5] *These were doubtless ranging shots.*

patched in the early part of the day on particular business.—12 minutes after 3, Lieut. Elliot opened his fire —15 minutes after 3, Pert, Growler and Julia commenced their's—20 minutes after 3, batteries opened on the brig, and she sustained the principal part of the fire during the remainder of the action—22 minutes after 3, signal, "*engage closer*," thrown out, and *answered* by all[6]—25 minutes after 3 Pert's gun burst —Arundel wounded badly—(he was afterwards knocked over by the boom and drowned!)—30 minutes after 3, Garnet killed aboard the brig—40 minutes after 3, brig opened her fire on the ship [*Royal George*], and the ship on the Hamilton—fire continued with most astonishing alacrity.

At 4 o'clock, ship George cut her cables and run away, further up the bay. The squadron is now exposed to the cross fire of five batteries, of flying artillery, of the ship with springs on her cables so as to enable her to bring her guns to bear. The Governor Tompkins now bears up into the bay and opens her fire! And the firing becomes general and very warm! Showers of round and grape fell around us.

Half past 4, hauled by the wind, and began to beat out of the bay as night was closing in and the prospect blowing weather—anchored 2 miles out in full sight—heavy gales all night—continued in sight next day—the Royal George was too prudent to venture out.

The anonymous officer continues in terms which betray the young seaman describing his first action, and which excited the scorn of the British naval historian William James:

> . . . Our sailors had no grog—they want no stimulus of that kind, they seem to have no fear of death. I was by the side of Garnet, a few moments before he fell. He was laughing heartily, and in that act was cut in two by a nine-pound shot. I afterwards saw his countenance, it seemed as if the smile had not yet left it. This disaster only exasperated our Seaman[*sic*], they prayed and entreated to be laid close aboard the Royal George only for 5 minutes "just to revenge Garnet's death." . . .

Finally, the officer's postscript may be taken with more than one grain of salt, although (except for the references to the views of the inhabitants of Kingston and to the Sackett's Harbor fifth column) there is very similar information in

[6] *John Lewis Thomson, a contemporary writer whose highly-coloured account of the action is clearly based on this one, here makes a slight but important divagation from his source: "the commodore gave the signal, 'engage closer;' which was instantly obeyed"* (Historical Sketches of the late War between the United States and Great Britain, *5th ed., Philadelphia, 1818,* 93). *One wonders whether the letter-writer's italics are ironical!*

Chauncey's letter to Governor Tompkins:

> *November* 16, 1812.
>
> A cartel has arrived this day from Kingston with dispatches from Colonel Vincent, commandant at Kingston, requesting permission to exchange Captain Brock.[7]
>
> The men on board the cartel state, that 7 or 8 houses were nearly demolished at Kingston—that our shot passed thro' and thro' the Royal George and killed some sick men in their hammocks. The inhabitants of Kingston blame Col. Vincent very much for opening the fire of the batteries to protect the ship, which, in fact, they secretly and sincerely wish might fall into our hands—or be *destroyed!* The Royal George was so afraid of being boarded by us, that she gave repeated signals for a fresh supply of men, and received 2 boats full during the action—her tops were crowded with men.
>
> We are, I am sorry to say it, surrounded here by spies—traitors—and (I fear) *assassins!* But more of this hereafter . . .

Commodore Chauncey's own report reflects the haste in which it was written, and not only in its confusion about the date of the action. After describing the second encounter with the *Royal George*, it proceeds:

> We gave chace and followed her into the harbor of Kingston where we engaged her and the batteries for 1 hour and 45 minutes. I had made up my mind to board her, but she was so well protected by the batteries and the wind blowing directly in, it was deemed imprudent to make the attempt at that time: the pilots also refused to take charge of the vessels. Under these circumstances and it being after sundown I determined to hawl off and renew the attack the next morning. We beat up in good order under a heavy fire from The Royal George and Batteries to 4 mile point where we anchored. It blew heavy in squalls from the westward during the night, and there was every appearance of a gale of wind. The pilots became alarmed and I thought it most prudent to get into a place of more safety. I therefore (very reluctantly) deferred renewing the attack upon the Ship and Forts until a more favorable opportunity . . .
>
> We lost in this affair [in the *Oneida*] 1 man killed and 3 slightly wounded, with a few shot through our sails. The other vessels lost no men and received but little injury in their Hull and sails with the exception of the Pert, whose gun bursted in the early part of the action and wounded her Commander (sailing master Arundel)

[7] *See page 13, note 9.*

badly, and a midshipman and 3 men slightly. Mr. Arundel who refused to quit the Deck although wounded, was knocked overboard in beating up to our anchorage and I am sorry to say was drowned.

The Royal George must have received very considerable injury in her Hull and in men, as the gun vessels [each armed] with a long 32 pounder were seen to strike her almost every shot, and it was observed that she was re-inforced with Troops four different times during the action . . .

I think I can say with great propriety that we have now the command of the Lake and that we can transport Troops and Stores to any part of it without any risk of an attack from the Enemy, although the whole of his naval Force was not collected at Kingston, yet the force at the different Batteries would more than counterbalance the Vessels that were absent . . . The Royal George protected by this force was driven into the inner harbor, under the protection of the Musquetry[8] by The Oneida and 4 small schooners fitted as gunboats, the Governor Tompkins not having been able to join in the action until about sundown owing to the lightness of the winds, and the Pert's gun having burst the 2d. or 3d. shot . . .

So much for the American accounts. Now let us look at Vincent's letter to General Sheaffe. It is brief and unvarnished—the sort of document a sailor might produce if sailors were the plain, bluff people they are supposed to be. Chauncey, at least, clearly did not belong to this school.

Sir,

I sent off an express yesterday to the Commanding Officer at York, that some very suspicious Vessels had appeared and were making for the Bay of Quinty.—I had reason to suppose that a landing was intended. I since find it was the American Brig the Oneida, and six small Vessels with one or two heavy Guns each,—a twenty four, and thirty two pounders.—From their actions, I must suppose their visit was only intended to cut out the Royal George. The Commodore did not think his force sufficient as a match for the Fleet against him, and placed his Vessel between our Batteries. At two o'clock yesterday they passed this Post, exchanging shots with our Batteries and several broadsides with the Royal George until it was dark. They returned for the night to the four mile point, and there anchored. This morning

[8] *It seems quite probable that the* Royal George's *second anchorage was off the barracks, the site of the present Fort Frontenac.*

they left us, we suppose, to return into Port.

It is to be lamented, that the Guns we have here are only nine pounders, and the Enemy kept at too great a distance,—still a few of our shot struck them, and notwithstanding the whole of their fire was directed against the Royal George, she suffered but little. One man killed,—a two and thirty pound shot lodged in her bottom, and her rigging much cut.

I have to request some arms may be sent to this post and Prescott. On this late business I had no arms to give out of Store if an Enemy had landed. Two hundred and thirty men came in as Volunteers to join the Militia . . .

P.S./ The Simcoe is reported to have just come in. She met the American Fleet, who chased her for some time, and got in safe. I suspect this Fleet will return to Sackett's Harbour without having any thing to boast of.

No account whatever from Commander Earl or any other officer of the Provincial Marine seems to have survived, and for some details of the engagement we have only American evidence. In particular, no British account mentions the *Royal George's* retreat up the harbour; but there seems no reason to doubt that this took place. And it may be true that she was reinforced with troops, although the two American witnesses differ considerably on the extent to which this was done.

IV

Surveying the incident as a whole, one forms the impression that Chauncey fought a cautious fight. In spite of his Nelsonian signal, he obviously engaged at comparatively long range, with the evident object of getting the maximum advantage from his schooners' long guns, which were his best weapons. (The *Oneida* was armed with short carronades, as was also the *Royal George*. The British ship's two long guns were only 9-pounders.) Yet the long thirty-twos did much less execution than Chauncey claimed. He seems, moreover, to have been fairly easily discouraged. In justice to him, however, it must be remembered that it was getting late in the season for operations on the Lakes, and we may accept his statement that his pilots (presumably civilians) were timorous — though perhaps they were more afraid of Vincent's grapeshot than of the forces of nature.

As for the results of the engagement, the losses were very small, and would apparently have been essentially the same on either side—one man killed and a few wounded—had it not been for the additional American casualties resulting from the bursting of the *Pert's* big gun. Chauncey's report tends to exagger-

ation; having failed to obtain the results forecast in his hopeful dispatch of November 6, he now felt it necessary to offer lengthy explanations. He writes as one anxious to create an impression at the Navy Department, whereas Vincent's letter, agreeably unpretentious, is designed merely to supply his superior with early and accurate information. The colonel, on balance, had much more reason for satisfaction than the commodore.

Nevertheless, Chauncey's assertion that he now controlled the lake was not unfounded. The *Earl of Moira* got through to Kingston from York just after the action and joined the *Royal George;*[9] but the American commander (who now had acquired three more schooners, *Ontario*, *Scourge* and *Fair American*) was soon able to boast that he was blockading both British vessels with the *Governor Tompkins*, *Hamilton*, *Conquest* and *Growler*. We find it reported from Kingston on December 2, "The enemy's vessels are frequently seen at the mouth of the harbour on the look out." Commander Earl made no attempt to engage them, and this is doubtless the origin of Capt. Gray's caustic comment on the Provincial Marine penned just at this time. Nor was Gray alone in his opinion. The Rev. John Strachan wrote, " . . . as to our Navy it is worse than nothing—the Officers are the greatest cowards that have ever lived, and would fly from a single Batteau." The same clear-sighted and outspoken observer gave his congregation at York on November 22 a very accurate appreciation of the unpleasant significance of the recent events: "Notwithstanding our brilliant success upon land, we are critically situated; our exertions by water have not been equally prosperous, and our naval superiority appears now to be gone . . . "

On October 17 the Governor General had called the attention of the Imperial Government to the importance of having "tried Officers of the Rank of Lieutenant and trusty men from the Navy" available for the Lakes next spring. On October 26 Prevost recommended his brother, "a Post Captain in the Royal Navy at present unemployed" to super-

[9] *The story in* C. H. J. Snider, In the Wake of the Eighteen-Twelvers (*Toronto, 1913*), *that the* Oneida *allowed a sloop which the* Moira *was convoying to pass unharmed because it carried the dead General Brock's effects, is repeated in* Freshwater (*Toronto, 1931*) *by* G. A. Cuthbertson, *who calls it "one of the most chivalrous incidents of the war." It is, alas, a pleasant romantic invention. The* Moira *allowed the sloop* Elizabeth *to be captured by the* Growler, *and it was not released* (*Chauncey's letter to Tompkins, Nov. 17*). *However, after British representations* (*above, postscript to letter of the "officer under Commodore Chauncey,*)" *the General's relative, Capt. James Brock, who is said to have been in charge of his property, was paroled* (Quebec Gazette, *Dec. 10 and 31, 1812;* The War, *Dec. 12, 1812*). *But James Brock, in a letter printed in the* Quebec Gazette, *Dec. 31, 1812, denies that he had any of the General's "baggage" with him.*

intend the establishment. Now, reporting the engagement at Kingston to London, he again urged that the Marine on the Lakes should be taken over by the Royal Navy. This was done. In 1813 Chauncey was faced by Commodore Sir James Yeo, R.N., a foeman eminently worthy of his steel. Throughout the war, however, there was never a real battle on Lake Ontario. The control of this lake was so supremely important that neither side would risk a decisive engagement without feeling certain of victory. The contest between Yeo and Chauncey was a battle of ship carpenters rather than of tacticians.[10] The note of caution struck in the little action in Kingston harbour remained to the end the keynote of the war on Lake Ontario.

[10] *At the end of the war, Yeo was flying his broad pendant in H.M.S.* St. Lawrence, *a ship larger than Nelson's* Victory. *Two more great three-deckers were under construction at Kingston, and two even larger ones at the American base at Sackett's Harbor.*

COMBAT CONVEYOR BELT

[U.S.] Army Transportation Corps conveyors may carry the output of America's production lines direct to future fighting fronts. Projects engineers under Col. Richard D. Myers, commanding officer of the Transportation Research and Development Station, Fort Eustis, Va., are considering plans for fast delivery of combat cargo by conveyor system from ports, beaches, and railheads. At these distribution points, portable, mobile, or sectionalized conveyors would start rolling the goods forward toward the fighting man in the lines via loading and dispatching points near the front.

The system would be basically power-driven with interchangeable gravity roller sections where possible, specialists at the station explained. It would run from ten feet to ten miles or more and would be designed to provide protection against theft, exposure, and marine or tropical conditions. At least four branch lines with switches would be installed at the receiving end and eight at the discharge end so that a number of cargo vehicles could be operated simultaneously, Research and Development Station engineers said.

Of rugged construction, the system could be shipped in parts by land, sea, and air to the area needed. There it would move containers weighing up to 500 pounds at the rate of 150 tons per hour on grades up to 36 per cent. Systems over 1,000 feet in length would have a signal to warm personnel of a stoppage.—*Army-Navy-Air Force Journal (U.S.).*

SOVIET MILITARY ORGANIZATION

V: Mobility of the Soviet Soldier*

Unburdened by luxury items and carrying minimum rations and the bare essentials of equipment, the Soviet soldier marched more campaign miles than any of his allies during World War II. While the Soviet infantryman generally trains with a heavy pack—sometimes weighing as much as 70 pounds—in combat the burden of his clothing and equipment is considerably lighter.

He can move easily because his field uniform fits loosely and his rifle, the M1944 carbine, is light.** Crawling and creeping are likewise made easier because of the fullness of his clothing and the total lightness and distribution of his equipment. The Soviet soldier's combat gear is as simple and practical as his dress uniform is smart and colorful. From the standpoint of individual mobility, comfort and practicality, the present-day Soviet infantryman is far better outfitted than Russian foot soldiers of the past.

In 1938 the individual equipment of Soviet troops was redesigned. When the German armies attacked in 1941 the Soviet equipment programme was still in the early stages of procurement. Normally boots are worn by the Soviet infantryman because the poor roads of his country are often knee-deep in mud, and theoretically every Soviet Army soldier should have been provided with leather boots and the standard field pack. The circumstances of war, however, forced improvisations and substitutes upon the fighting man.

Mentally and physically the Soviet soldier was never spoiled by the luxury of ample motor transport. His reliance on machines was inconsequential. Not only did the soldier march on foot most of the time but he also demonstrated greater ability than the German in traversing difficult terrain. In the swamps of Byelorussia the Soviet soldiers—labelled "swamp rats" by Hitler—fastened boards to their feet to maintain footing while building corduroy roads.

In the broad expanses of the plains which comprise so much of the USSR, the Soviet Army man had little use

*This series is reprinted by courtesy of the Army Information Digest (U.S.). The illustrations were also supplied by the Digest.—Editor.

**The Soviet M1944 carbine, a short-barrelled rifle with a folding bayonet, is gradually replacing the old M1891/30 rifle.

for tents which were so easily discernible in any season and which failed to provide the warm shelter required in winter. Shelter halves therefore were not carried in World War II. Instead rain capes or ponchos designed to fit together to form a tent covering were issued. With a genius for improvisation engendered by his hard existence, the soldier improved his various shelters by using locally available materials.

Even in the burning heat of summer he kept his long-skirted overcoat with him. Serving as coat and blanket, it was the most valuable article of his equipment next to his rifle and canteen. So marked was this habit of carrying the overcoat in summer that the Germans found it of great assistance in distinguishing enemy soldiers from their own at long range.

Due to the breakdown of the equipment procurement programme in World War II, the grenade pouch, the rations pouch and suspenders for the uniform belt were not issued in quantity. Many Soviet soldiers carried grenades in their pockets or hung them on their belts. As an expedient to compensate for the lack of pouches and suspenders the Army issued a drawstring rucksack for carrying rations, mess kit, rain cape and other accessories. A variety of combinations of individual equipment resulted and, while not originally intended, some Soviet soldiers carried rucksacks in summer combat. Generally, however, these were used in winter.

During World War II Soviet infantrymen were armed mainly with the unhandily long M1891/30 rifle and bayonet which is about a pound heavier than the M1944 carbine now in use. For quick, automatic fire power, ease of carrying and availability, the 7.98 pound submachine gun* favours infantry efficiency and mobility. Soviet troops did not like the United States submachine guns they received via lend-lease. They complained that the weapon was much too heavy, that the sling strap would not permit carrying the gun across the chest in the manner to which they were accustomed.

Like all combat soldiers, the Russian infantryman learned to separate the necessary from the unnecessary. The light or combat equipment—because of its simplicity and its more ready availability for procurement and issue—was the equipment of the majority of Soviet soldiers in World War II. In the summer, combat gear weights the infantryman with a total of about 55 pounds; in winter about 65 pounds.

On his uniform belt the soldier carries 70 rounds of ammunition, two hand grenades, a filled canteen, first-aid packet, entrenching tool, rations pouch, mess kit and cup. This places a

**The 7.62mm Model PPS-1943 submachine gun fully loaded.*

total of about 15 pounds on the man's belt, including the pouches filled with grenades and ammunition. The overcoat is slung in a horseshoe roll over the shoulder and the rain cape may or may not be added to this. With this load he carries a total of about 45 pounds. Normally he also carries rations, tobacco and toilet articles plus extra clothing. These bring the grand total up to 55 pounds. The extra clothing is not always carried, however, and the rations may consist of only a piece of bread.

Despite its annoying shoulder straps, the crude but practical rucksack is still in use. In winter it is a normal part of the soldier's equipment. A loose fitting white cape is issued if the soldier is operating in snow-covered regions and those so outfitted are required to turn in their rain capes. Foot gear takes the form of fur felt boots (*valenki*) in the dry sub-zero zones.

In training the combat pack may be worn on long marches; normally, however, the full or field pack is prescribed for all training exercises in summer or winter. The Soviet, like soldiers of other nations, is still burdened with the gas mask.

In the Russo-Japanese war of 1905 the marching capability of the Russian infantryman was impeded by the bulk and weight of his equipment which included a minimum of 120 rounds of rifle ammunition. This number of rounds per soldier remained standard until about the middle of World War II when it was reduced to only 70. One hundred rounds is the unit of fire for the rifle or carbine; 300 rounds for the submachine gun. The rifleman carries 70 of these rounds with him while the remaining 30 rounds are left on the battalion and regimental trains. The Soviet soldier today may sometimes carry 90 to 120 rounds of rifle ammunition with the field pack but this is not the standard procedure.

The Soviet paratrooper jumps heavy and fights light. The average Russian paratrooper jumps with a 60-pound combat load exclusive of his parachutes. Those lightest equipped are officers and senior non-commissioned officers who jump with about 53 pounds. Light machine gunners carrying 65 pounds are the heaviest equipped of any individual trooper. Wearing a jump suit over the usual Army uniform, the paratrooper carries this equipment into combat:

Carbine
200 rounds of ammunition
2 hand grenades with pouches
1 mortar shell (50mm)
400 grams of explosive
Mess kit and canteen
Entrenching tool
Weapon cleaning set
First-aid packet
Anti-gas set and mask
Signal lamp
Signal panels
Haversack
Rain cape
Compass

Knife
Rations

The infantryman trains with a combat load heavier than he carries in battle. Individual clothing and equipment are simple and well adapted to the needs of the soldier whose mobility is not usually impaired by an overstuffed pack. Abandonment of equipment is not a combat characteristic of the Soviet fighting man. On the contrary, he more often seeks to supplement his own meagre supply with scavenged bits of equipment.

The marching capacity of the Soviet soldier is enhanced by his generally good physical condition and stamina and the common-sense design of his equipment which stresses looseness and comfort in clothing and lightness and practicality in equipment.

In World War II, the mobility of the Soviet soldier lay not alone in his ability to cross difficult terrain but in his ability to move forward against heavy fire amid his own staggering losses.

VI: Soviet Partisan warfare

Underground resistance by Soviet armed partisans during World War II was so closely co-ordinated with the operations of the regular armed forces that it was virtually an integral part of Soviet planning and operations. The partisans had two principal missions: to harass the enemy and to procure information on the enemy forces.

Guerrilla warfare waged by irregular forces is nothing new either in Russia or elsewhere. It was practiced in Russia as long ago as the invasion of that country by Napoleon's armies in 1812. Irregulars also had figured prominently in both the American Revolution and the Civil War. More recently the Russian Civil War from 1918 to 1921 had been essentially a series of guerrilla campaigns. Other examples from history illustrate the fact that when skillfully directed and employed in conjunction with regular forces, underground units may present a serious menace to opposing armies.

Russian partisan groups on the eastern front in World War II were at first isolated bands of relatively minor strength which operated in the rear of German forces. Remnants of overrun Red Army units, local Communist Party functionaries and a miscellaneous collection of other persons gathered to harass the German invaders. As the German army drove deeper into Soviet territory, these bands were forged into closely knit organizations. Trained underground leaders and technicians were dropped behind German lines to tighten and direct the control of their activities. A unified command of all underground units was established in Moscow

under the personal direction of Generalissimo Stalin and partisan operations became progressively more extensive and important.

This secondary or "shadow army" assisted in the war effort primarily by mining main thoroughfares, demolishing railroads, disrupting communications, mining railroad beds, delivering small arms and mortar fire on trains and supply transport, looting derailed railroad cars, waylaying truck convoys and troop columns and burning ration, ammunition and fuel depots. Less frequently raids on command posts of higher enemy staffs also were carried out. Such tactics undermined German morale and made efficient operations practically impossible.

One of the basic principles of all partisan tactics is to avoid open battle whenever possible. Soviet partisans seldom functioned near the battle front except in areas where extensive pathless forests provided favourable approaches. Generally they moved in wooded and swampy terrain near highways and railroad lines, avoiding open territory and regions occupied by enemy troops yet keeping the latter always under close scrutiny. When large-scale enemy breakthrough or withdrawals took place, there was frequent co-operation between strong partisan groups and Red Army troops.

So intense was the harassment of the Germans by partisans that at the peak of the war several infantry and panzer divisions had to be diverted from the fighting front to cope with them. War plants had to be moved back to Germany to escape the wrath of the irregular forces. In 1944 guerrillas with the assistance of infiltrated Soviet troops conducted operations of such scope in the swampy country of eastern Estonia that the left flank of the German northern front had to be withdrawn to form a shorter and more easily guarded line. Before major Soviet offensives, strong guerrilla forces would often infiltrate into the areas that the Soviets intended to take. These movements, however, sometimes had the saving feature of forewarning the Germans of Russian intentions. As an example, the Germans anticipated the Soviet attack of July 1944 in East Galicia because beforehand numerous partisan units worked their way into the wooded Carpathian Mountains southwest of Lvov, the Red Army objective.

During Russian withdrawals and after battles of encirclement innumerable Soviet soldiers, cut off from their own forces, and sometimes entire combat units, would slip through the lines to join and fight with the guerrillas. Such operations naturally posed a serious threat to the Germans.

The winters of World War II found strong armed civilian groups extremely active in the vast snow-

Soviet parachutists—like these in formation for a move—jump into action, each loaded with two parachutes and approximately 60 pounds of combat equipment. On the ground, they strip to essential items to facilitate movement.

covered wooded areas of the eastern front. They were organized along military lines, highly trained, bound by a strict disciplinary code and directed by specially trained leaders. Even a partisan's handbook was prepared and given wide distribution among the civilian populace taking part in this type of warfare.

These bands normally were organized into main groups or "brigades" comprising from 3000 to 5000 men. Soviet women also were assigned special roles within the organization. As long as the front was static, a group would remain in the same location. They were quartered in well-protected camps hidden from the enemy and constructed in such a manner as to provide adequate shelter from the elements. Each main group was made up of a number of smaller units of varying strengths—often around a hundred men. Units shifted their positions as necessary, making it even more difficult to detect their location in the large rear areas occupied only lightly by enemy troops.

The camps of larger partisan groups were secured on all sides, sometimes to a depth of several hundred yards, by thick underbrush, briar obstacles, felled trees and wire entanglements. All routes leading to the camps were blockaded or camouflaged and traffic followed paths known only to the initiated. Often the camps were protected by bodies of water with crossings built beneath the water's surface or by large stretches of swamp which could be crossed only on swamp skis. Movement of strangers was carefully watched by sentries stationed far from the camp and disguised as peasants. A network of agents also kept under surveillance all unknown persons in the neighboring villages.

Guerrilla strongholds were normally well supplied with weapons, ammunition, explosives and rations. Only the most reliable members would be placed in charge of these supplies. Food was obtained by forced requisition upon nearby villages; those villages refusing contributions were ruthlessly burned, the male inhabitants dragged into the woods and the women and children dispersed. Aircraft were used to drop supplies in the vicinity of the camps in accordance with prearranged signals. Raids on enemy supply trains and stores helped to augment the stock of ammunition and small arms.

Excellent camouflage prevented detection of the camps from the air. Shelters were heated only at night so that during the day no smoke disclosed their location. Attention was drawn away from the hiding places through the appearance of small bands in remote villages and by the circulation of false rumours concerning partisan movements. The mere suspicion of betrayal by any individual

was sufficient cause for his execution. The same fate often threatened the family of the condemned person. Collaborators were marked for liquidation. Such stringent measures partly explain the success of the secrecy of all partisan operations. Those who joined a guerrilla group, whether voluntarily or not, left it only at the risk of their lives.

The partisans were well supplied with signal equipment and larger units received their instructions by short-wave radio. Also through the use of air couriers—brought in by parachute or by airplane landings at carefully concealed air strips—they were continually informed of developments in their sectors.

Almost without exception partisan operations were conducted under cover of darkness. Daytime raids, when made at all, were carried out in sectors not occupied by German troops. Such attacks would be directed against individual vehicles carrying men or supplies.

One example of the methods employed by Soviet guerrillas against the Germans is illustrated in the destruction of a bridge guarded by enemy sentries. On this occasion a column of women and children moved along the railroad line in the direction of the bridge. Presuming them to be refugees, the guards permitted them to approach. As the head of the column reached the bridge, heavy machine gun fire suddenly opened on the Germans from the rear of the column. Under cover of this fire and using the women and children as shields, the partisans installed heavy demolition charges and destroyed the bridge.

Unusual developments at the front would result immediately in lively guerrilla activity behind enemy lines aimed primarily at the disruption and destruction of German supply routes. At the height of one of the major German attacks, a rail line being used to bring up supplies and replacements for three German armies was blasted by partisans at two thousand points in a single night. Traffic was disrupted so effectively that it was halted completely for several days.

The results of Soviet partisan operations were so effective that considerable credit is given this Russian "hidden army" for the victory on the eastern front in World War II.

But in a future war Soviet partisan activities, hitherto most effective within the Soviet Union itself, will hardly be confined to the USSR. Organized Communists outside of Russia undoubtedly will be called upon to wage subversive warfare against Soviet enemies whenever and wherever the opportunities present themselves.

(To be continued)

THE GOOD COMMANDER

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Gentlemen, you will have read in the papers and heard over the radio, snide remarks concerning "THE BRASS". This phrase appears to cover all officers of all corps from the youngest lieutenant to the field marshal and is generally used in a disparaging sense. It is my considered opinion that in the majority of cases such an attitude is unwarranted. Any person who thinks that to be an efficient officer is an easy task is, in my opinion, a fool with little or no knowledge of the facts. No civilian employment asks more of its employees nor pays off in as satisfactory a fashion. The civilian job carries set hours and demands only that and no more, when the day's stint is completed. In the Service the officer is on duty and must seek and accept responsibility every hour of the twenty-four, day in and day out for a life time. You as officers can never relax, can never feel "that is that and I am on my own now." Remember, I said a *good officer*—there are fools and laggards in the Service as in any business, but they are few in number and their days are numbered.

Unfortunately there is a feeling among a certain proportion of civilians that the life of an officer is one of well-paid ease and luxury. Free rations, free housing, clothing, medical services, etc., drop into his lap as soon as he assumes the badges of his rank. The only time they see an officer is when he is attending a social function and the life looks very cushy. It is a lack of knowledge that engenders the feeling that the average officer is one who could not otherwise earn a fair living. There is much each one of you can do to correct this unfortunate attitude, but remember it will not be easy because the idea is a popular one, particularly during times of peace.

Why Did I Join the Army?

In the dark of the night when your resistance is low and there is more of a tendency to be honest, you may well have asked yourself "why did I join the Army?" At 3 a.m. you may be honest and admit that at least originally you applied for a commission because you felt the life would be

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relatively pleasant with light responsibility and good security in your old age. Barring a war, when it can become dangerous, it is a secure life in that it is difficult to get fired and the pension plan is sound. You will find that breast of guinea fowl under glass is seldom seen on your table, but by the same token it is unlikely that you and yours will starve. Gentlemen, if that continues to be your primary reason for remaining in the Army, I warn you now, get out, resign, and do it now. You will *not* make a good officer and will sooner or later be found out and discharged for the good of the Service.

Being Canadians and therefore somewhat shy, you may find it difficult to break down and confess to yourselves that the only acceptable reason for wanting to become an officer must be a desire to serve your Country. This, gentlemen, can be the only valid reason for acceptance into the Army in commissioned rank. With this feeling in your heart and mind you can, other things being equal, become an efficient officer. Without it you can never be more than a drone and deserving of the civilian sneer that "he is an officer and therefore of little account." You must have this high ideal else you must admit to yourself I am the lily of the field who toileth not neither do I spin, I am a non-producer of anything essential to my fellow man and if I die tomorrow there will be none to mourn my passing.

Love of Mankind

What else is required to make an efficient officer and leader of men? A love of mankind, in the sense that you are engrossed to the exclusion of all else in the men of your command. You are downcast when one of them fails to make the grade. You are visibly pleased and proud when one is successful in his attempt to improve himself. If you see the men of your command as so many numbers, figures or automatons you cannot hope to become a leader of men. We say that all men are born equal. This is a resounding phrase, but fails to tell the whole story. The change in the man begins with his mother's milk and by the time he comes into your hands he is an individual with individual and separate characteristics in appearance, ability and outlook on life. You will have fat ones, thin ones, tall ones, short ones, quick, slow, cheerful, bitter, clever, stupid: a diversity of men given into your hand for life —yours and theirs. These you must accept, know, understand, train and mould into a team that will fight under your leadership. It will not be easy and calls for continual and continuing work and vigilance on the part of every one of you.

Know Them as Individuals

You may well ask "how can I

be expected to carry out this requirement?" My answer is "by never flagging interest, study and work." It takes time and effort to know your men, but you must know each one as an individual rather than as a name on a list. It is not easy. Most men, quite understandably, will resent any undue prying into their private affairs. A policy of parading the man in order to conduct a searching inquiry into the details of his private life is not the answer. Better a casual question or remark at an opportune moment, a chance remark overheard remembered and gradually the picture is made complete in its detail. This man is having money troubles, this one's promotion seems to have been delayed unduly, this one's trades pay hasn't come through. You must know the man who needs prodding and the one who needs to be disciplined. Continual study and continual interest is essential. If you are wondering of what value is this mass of detail, how else can you form an opinion on the matter of posting, promotion and the fitting together of your team? Remember always and remember again these men of yours are *not* mass produced, but are individuals and must be formed into units and teams with no loss of individual attributes—the joining together of different shapes to form a pliable but strong whole.

This principle will apply best and is particularly important on the troop and squadron level when it is possible to actually know each man as an individual. It applies too in the regiment, brigade, division and higher but with modification. On these levels the commander must study national and racial characteristics. Study, thought and continual interest are essential at all grades of command.

So now you say, "I have a burning and somewhat shame-faced ideal in my heart. I also know all the gory details of the inner thoughts of my men. Now what, for Lord's sake?"

Incidence of Crime

You must understand that you will always have some crime in your unit. A fair amount of minor offences and, it is hoped, few major offences will occur in spite of your best efforts. Human nature, being as it is, and the rules being made for the majority, an incidence of crime is to be accepted. How much is reasonable I can't tell you nor can anyone else, but you will know when it is unreasonable and must then look for the reason. Are you and your junior leaders reasonable in all things? Do you watch to see that credit is given where credit is due? Do you listen to reasonable suggestions for improvement, accept them no matter the source and give credit for all to see and hear? Do you explain policy and future plans to the men of your command? Do you make certain that no man of your command

is lost in the shuffle and left in a soul-destroying job longer than is fair and reasonable? You do? Then you will only have an acceptable amount of crime in your unit. If your crime docket is heavy look to yourself for failure to observe any or all of the above points. Having done so at 3 a.m. when resistance is low and having had a reasonable answer, then and then only look to your junior commanders for the trouble and you will find the answer.

Remember, too, that there are more than two colors: black—you are wrong and must be punished; white—you are innocent and all is forgiven! There are thousands of shades of grey between black and white; these shades are the extenuating circumstances. A man on charge in front of you is in a tough spot. His education, home background, experience and general intelligence is not as highly developed as yours. Yet there he stands accused of any one of a number of crimes and expected to defend himself. Be sure you are fair and do your utmost to find out why he did what he is accused of doing. Here again your background knowledge of the man may well stand you in good stead in arriving at a reasonable and just decision. What shades of grey are present? What extenuating circumstances can be produced to temper justice with mercy? Had he been drinking, how much service has he had, how is his wife and family, is he in debt, was the sergeant unduly rough? Remember always and remember again these are men, human beings with all the frailties and natural failings. Better to let the odd sly fox get away with it than unduly punish the simple soul who didn't know he was loaded.

Be Firm but Fair

Now, some of you may feel that I am advocating a policy of softness and mollycoddling. Nothing could be further from the truth. In spite of your best efforts there will be occasions when stringent action is required. When you are convinced that the time has come you must be hard. If it is an individual on the hook don't hesitate to pull out all the stops. When you are finished there should be no doubt in the man's mind that he has had a going over. Most important, he should feel that he had it coming and should know that there will be no loose ends hanging about. Once he has paid for his crime the matter is closed and will not be referred to again. This I consider a vital point, for it is possible that a man may develop a persecution complex and his attitude and work will deteriorate. Be fair, be firm, be definite. Lay down as few general rules as possible, ensure that every man understands them and make certain that they are obeyed.

From time to time you will see officers who tend to avoid the responsibility of their rank. It can start in a small way as when they see a man whose dress is untidy and they don't check him. A man passes and doesn't salute — they let it go. They do this because they are not sure of themselves and are not up to the responsibility of their rank. Don't do it, gentlemen. Don't go looking for trouble but when you see it take the necessary action at once. If you let the small things go by you will find it increasingly difficult to deal with the more serious ones. Remember always that the responsibilities of an officer are with him day and night.

So now you have:

1. High ideals.
2. Complete and sympathetic understanding of your men.
3. The velvet hand in the iron glove.
4. A willingness to accept responsibility.

The efficient officer is beginning to take shape, but there is more required of you—much more.

Your own attitude, dress and bearing are tremendously important. The effect on troops of a surly, sloppy, ill-mannered officer is enormous. They quickly realize that he is not a gentleman, in the proper sense of the word, and this, in spite of our so-called democratic attitude, is most important. Be tough and severe when it is necessary, but an unshaven chin and dirty collar never betokens anything else but a bum. Pay attention to your dress, carriage and general deportment at all times. Adopt a cheerful attitude towards your work and life in general. By this I do not mean that you should wear a fatuous smile at all times, but rather a wholesome, straightforward attitude towards the problems of every day.

Don't Alibi

From time to time you will receive orders from higher authority that seem foolish or unduly difficult of execution. If the circumstances permit and in the light of local knowledge it may be quite proper to question them at the time. If further explanation is forthcoming it will probably make the order seem more reasonable, but there will be occasions when time and circumstances do not permit and you must accept them as they come. Whatever you do, don't apologize to your juniors when passing on orders that you know are going to be dangerous or difficult to carry out. It is too easy to say "listen chaps, we have to do this and I don't agree, and it isn't my idea but the old man says thus and so." Never apologize. Give the orders firmly and quietly as if the idea was your own and as if there there were no doubts in your mind. Then only will there be a chance that

they can be carried out successfully. Alibi yourself to your juniors and all is lost, for the plan will not be carried out and you are still held responsible by your superiors for results, and remember you will always have someone senior to you demanding results.

Don't be afraid to admit that you have made a mistake. Too often we see some rule or policy that may have been reasonable when first evolved that now is obviously outmoded and crying for change. When suggestions for its improvement are made the answer is "it is policy and must remain." Such a situation is arrant nonsense of the most serious nature. Time and events may well change a good order into nonsense. *A corpse is the only thing that makes no mistakes.* It takes a big man to acknowledge his own mistakes. Be big, gentlemen, be big.

Following on from this I feel that the question of your personal relations with the troops of your command are of paramount importance. It is not an easy matter to discuss, but there are one or two points that come to mind. Each one of you will have to work out his own solution to this problem which is more difficult for some than for others. Young officers may fall into the bad habit of using first names and nicknames when talking to individual NCO's or troops. Long John, Black Pete, Mac, Sam and the rest should never under any circumstances be used by an officer when talking to an other rank. If the man concerned has any service he will know that it is incorrect and will be embarrassed rather than pleased. It singles him out from his fellows and places him in an odious position with his mates who are too prone to brand him a toady. In fairness to him don't do it, as it is impossible to call him by his first name today and tomorrow put him on fatigues. It is a sign of weakness in an officer and pays no lasting dividends.

Avoid the dance halls and other places of entertainment around town frequented by the troops, unless on duty. If you go to a dance hall frequented by troops you are asking for trouble; your presence is not wanted and may be resented in such a manner that you are forced to take action.

Competition in Sports

Competition in sports is something else again and by all means *do* take an active part in sports with the troops of your command. If you excel in one or more sports so much the better, but a good try is worth almost as much and the experience gained in taking a hard knock from your batman or driver will be valuable to both concerned.

Quite a handsome figure is appearing as we have an officer with the

following essentials:

1. High ideals.
2. A complete and sympathetic understanding of his men.
3. The velvet hand in the iron glove.
4. A willingness to accept responsibility.
5. A good turnout and a healthy attitude.
6. Ability to make decisions.
7. A wholesome degree of humility for his own shortcomings.
8. Respect for his men.
9. Ability to take a crack on the shin.

A point that may not have been fully realized by some of you is that for better or worse each one of you is now a teacher and will, God willing, continue to be one until put out to grass. The number of times that you will wave a sword crying "follow me" will be few and far between. Rather, you will sharpen your pencil repeating for the nth time "two and two are four." You will lecture on a large variety of subjects to a large number of men. Obviously, it is essential that you become a good lecturer. Some officers are born to it but any officer can and must become a good lecturer. Born or made, it takes practice. Be careful how you handle humour in your talks, for it is a double-edged weapon. Too much is worse than too little, although some is essential. Avoid using a student to put over a joke unless you can be certain that the class is laughing with and not at your victim. Avoid the use of sarcasm when correcting a student. It is too easy to nail some poor wretch to the cross when hammering home a point and that man is lost to you for ever and a day. If stuck by a question, and you will be stuck, admit it and don't try to bluff your way around the problem. Admit that you don't know the answer but be certain that you produce it in time for the next period. In any class you may well find a man who knows more about the subject than you do yourself. Don't worry about this but use him and his knowledge to make your points, being careful not to hand the class over to him. I do not propose to discuss further the fine points of lecturing and wish only to impress upon you the urgent necessity for knowing how to lecture.

It's the Man Who Counts

Many of you when accepting a commission had little or no idea of what you were getting into. In today's army a man's background is of little importance in that it is the man himself who counts. This was not always the case, as in years gone by only the sons of the well-to-do were accepted for commissions. As this line of thought changed so did a code of rules of behaviour take shape. It is still taking shape and every one of you

here will have some effect on its future as your service continues. The rule of calling on your seniors when posted to a new appointment at one time was rigidly laid down and woe betide any young officer who neglected it. With time the rule has become more reasonable, but I consider that a modified form of calling is a good thing. When posted to a new unit be sure you call on your CO to drop your cards within ten days or two weeks of your arrival. Why is this a good thing? Simply so that you and your wife will become more than a name to the people in the new station.

Be punctilious in repaying any kindnesses done you by friends and acquaintances. Having accepted hospitality be sure that you phone or write to say that you enjoyed it. Single officers may feel that they, having no home in which to entertain, are unable to return hospitality. Nonsense. Get together and lay on a small cocktail party or tea in the mess and invite the wives of the married people who have been kind to you. Once or twice a year will do but don't neglect it; if you do you will be put down as a churlish lout with no proper appreciation.

Relations With Civilians

Your relations with civilians are most important. Everyone of us must create a good impression on each and every civilian with whom we come in contact. Mix freely to your mutual benefit whenever the opportunity presents itself. As I mentioned at the beginning, there is still a great deal of misunderstanding on both sides. I find this rather surprising when you think of the numbers of ex-soldiers now back in Civvy Street. I am convinced that we must correct this situation and am certain that most of the fault lies on our side of the fence. I abjure you to take every opportunity to spread the good word of the inherent sincerity of the men of the Service.

There are many points that I have not touched, but if I can make you take a close look at yourselves as would-be officers I will be certain that the time was not wasted. If you will accept what I believe in my heart "the regiment is the father and mother of all of us here" then there is no doubt that each one of you will leave the regiment the better for your having served with it.

FLEXIBILITY

The word flexibility is a good one and the principle of flexibility, properly applied, has many advantages, especially when one's resources are slender. But it is well to be flexible only if at the end of the period of flexibility there is a firm intention of doing something definite.—*Lt. General Sir Frederic Morgan.*

UKIO Photograph

On the left is the newly-designed rifle, EM2, calibre .280 (7mm), for use in the British Army. It is being demonstrated at the School of Infantry at Warminster, England, alongside the rifle No. 4, calibre .303, the present British weapon. The new rifle is self-loading and has a magazine capacity of 20 rounds of the smaller and lighter ammunition, the magazine being inserted behind the trigger mechanism. The optical sights need no mechanical adjustment for use at different ranges, and the rifle is almost 1 lb. lighter than the No. 4.

A COMPARISON

ARMY AND BUSINESS ADMINISTRATION

Lieut.-Colonel T. R. Craig, O.B.E., T.D.,
in The Army Quarterly (Great Britain)

Views on a subject such as this are obviously largely a matter of individual opinion, therefore I feel it is essential to explain my own background and so allow the reader to assess what value he is prepared to grant to what are my personal views.

My army administrative experience is limited to having attended the wartime Staff College and been AA and QMG of a Division during about three years of active service from 1942 to 1945. As the particular Division was the 52nd (Lowland) which trained for special roles of mountain, snow and airportable warfare before finally going into action under 21st Army Group in North-west Europe, the administrative problems were probably more complex than those of an ordinary Division, but I cannot claim to be able to discuss military administration on a higher level.

My business experience is based on some fifteen years as a director of Colvilles Ltd., one of the larger steel manufacturing firms in this country. I hasten to say that these views are based on steel making as a private enterprise. Whether they will change when I have experience of nationalized industry I hesitate to forecast.

Generally speaking, the technique of administration is the same in the Army and in industry; that is to say, there is a chain of authority which carries out policies, set on the one side, I presume, by the War Cabinet, and on the other, by boards of directors. The Army, of course, is very much larger and consequently there are many more steps before the stage is reached where the job is actually carried out in the field. Even in the biggest industrial companies in Britain, the number of steps is comparatively small; a typical example would be Managing Director, Works Manager, Departmental Manager and Foreman. The same system of having specialist advisers also prevails in both. While in the Army there are for example, engineers, supply and transport, ordnance, etc., there are in industry, accountants, engineers, publicity experts, etc.

This "size aspect" is in itself one of the factors which slows up military

administration as compared with industry. The inevitable use of every step with a human being in each is bound to be slower where these steps are more numerous. Bigness in itself is by no means a measure of efficiency. Indeed, there is a considerable volume of opinion which considers that the optimum size of any unit from a production point of view is a medium-sized factory, and where this is exceeded, administrative efficiency drops. It is usually found that the increase in size had been dictated by other factors, such as market, or finance, where the resultant economies at least partly offset the adverse administrative factor.

This question of size and the resultant slowness in administration which I think is apparent to any industrialist coming in touch with army administration, is, of course, only one of the fundamental handicaps which military administration has to face. For example, the mention of finance in the previous paragraph brings to light another point. The Army is a spending machine and has to rely on the Treasury to produce the necessary funds. This makes it essential for a system of block allocations to be made at a very high level. When these are broken down to smaller formations, they can sometimes be of a haphazard nature and bring about rulings which are very difficult to understand when viewed only in the light of local circumstances. In industry, on the other hand, there are not many steps before an individual is reached who has the dual responsibility of finding, as well as spending, the money. This means that he is in a much better position to assess priorities, and accordingly his decisions are quicker and often more understandable to his subordinates.

Another feeling I had, when I came into touch with military administration, was that it was much more ponderous than I was used to in industry. The factor of size, which has been discussed, is of course one of the reasons for this, but there is also another—namely, that the Army is a very much more complex organization than even the largest and most complicated industrial company. For example, one of the complexities involving military administration is the very presence of an enemy. While in industry we have to face competition and be very sensitive to movements in various markets, both buying and selling, we have not to deal with a hostile organization which is actively seeking to destroy both our operatives and our plant. This complexity is inevitable in military administration in war-time, and it is difficult to see how it can be reduced.

Another complexity is that industry normally confines its duties to dealing with the *working hours* of its employees, and leaves the civilian

administration and the other parts of the commercial world to cater for the living and social needs of its employees —such as the provision of food, clothing, transport and recreation. There are a few examples where a company has been forced to provide housing, etc., but these are very much in the minority. The Army, on the other hand, has to assume full responsibility for all its soldiers for their every need, both spiritual and physical, throughout twenty-four hours of every day. To do this means the creation, usually at short notice, of a very complex administrative machine which inevitably adds to the difficulties in obtaining a quick moving and simple administration.

Another adverse factor which I experienced in military administration was the fact that the job is given more importance than the individual. In industry, the amount of work and the amount of responsibility given to an individual varies very largely with that individual's capabilities. If he is able to take a bigger load, adjustments are made in the administrative machine and he is given additional duties. There is, therefore, a flexibility throughout industrial administration which is lacking in the Army. There a certain post with very fully defined duties is created, and is not varied even although an individual filling it may be twice as brilliant as his predecessor. It usually happens, therefore, that the duties have to be pitched for the average, and are sometimes above the capabilities of the duller officer; but they can equally well be much lighter than could be easily tackled by a more gifted or better trained officer. I presume that because the Army has to be organized to cater for casualties happening unexpectedly, and for changes in personnel being made quickly, it is inevitable that the job and the organization are given precedence over the individual. In industry, on the other hand, where changes in personnel are much less frequent, it is quite feasible to adapt the organization to the individual in the fairly sure knowledge that it will be a very unlikely circumstance which means a change which has not been planned. I think most people will agree that this factor is one of the main ones in making industrial administration more flexible and faster working than military administration.

However, these foregoing comments—dealing with the size and complexities of the Army—reveal that the causes are mainly fundamental, and that it would not be possible to put an industrial administrative specialist and expect him to reorganize the Army to obtain the advantages mentioned, as inevitably he would come up against some of these fundamental differences which are inherent in the whole problem

of handling a large army under active service conditions. It might, however, be possible in certain cases in another major war to pay more attention to how an individual is fitting into the type of job, rather than using the officer posting machine blindly as was to some extent the practice in the last war. To give a personal example: the 52nd Division had the good fortune to be a specially earmarked formation right from 1941, and therefore did not suffer changes in personnel to anything like the extent as was the experience of other formations. It became possible to keep the same men in the same staff posts and the result was that not only did they know their own work extremely well, but they knew the other individuals who were working in conjunction with them. This meant that administrative orders as such were not required and all that was sent out from Divisional HQ during six months of active service was details as to where the various supply and ammunition points, etc., were. I do not think this would have been possible had the staff been subject to constant postings and individuals not been long in their respective jobs and, therefore, not personally acquainted with their neighbours. I am afraid that much more guidance would have been necessary from Divisional HQ, with a resultant slowing up of the whole administration machine.

I have given this illustration to show that if individuals were allowed more scope, some of the inherent defects of army administration could be mitigated.

On the question of individuals, I have been asked to give my views as to the different motives which act as an inspiration to individuals in the Army and in industry. This I do with some hesitation. In the first place, my experience, as I stated at the outset, has been confined to a period of war when naturally the main instinct was patriotism, and in the case of the non-regular officer, the desire to get finished with the whole interruption to his normal way of living as quickly as possible. However, in attempting to answer this particular point, I feel that the broad generalization which used to be made before the war was correct—namely, that the soldier served out of a traditional sense of duty, coupled with the advantage of an assured social position and prestige, whereas the industrialist was mainly concerned with the financial results of his efforts. Obviously this is an over-simplification of the problem, but, by and large, it was correct.

Alterations to living conditions have, however, been taking place in the social revolution through which we are now passing, and I am doubtful whether this particular generalization will stay correct indefinitely. At the outset of the industrial age, in

Victorian times, the individual who rose to the top in industry was the owner-manager. A slow, but continuous, trend has taken place and a separate class of managers, who are not in any way owners of the businesses they control, has come into being. This new type of specialist manager could never expect to get the financial rewards which fell to the owner, but the competition for the real expert was such that he would certainly be able to command a remuneration many times more than could be obtained by officers of the most senior ranks, even including the very substantial benefits which they obtain in their pensions. Taxation, however, is largely responsible for altering this position, and a high salary, bearing as it does the very severe levy of surtax, means that the net spendable income is much closer between the senior service officer and the senior industrial executive.

This change is of too recent origin for any definite forecast to be made as to what its effect will be in the future. There is the danger that the attractions of high office in industry will be so reduced as to make an individual doubt whether it is worth his while assuming all the worries and responsibilities of controlling a large concern, or whether such factors as a sense of power will be compensation for this. It would certainly be a bad thing for this country, dependent as it is on efficient industry, if it failed to attract the brighter individual to the ranks of management. Without in any way disparaging the officer class of between the wars, it has to be admitted that the percentage who could fulfil the responsibility of really high rank was a very small one, although fortunately there were sufficient of those who would have been successful in any walk of life, to provide the required top leadership. I repeat that due realization must be given to the fact that we are still in the midst of a very big social revolution, and how individuals will react to this will largely decide whether Britain is going to have the leadership which is necessary for her to remain among the leading nations in the world.

I have been dealing mainly with fundamentals and I hope I have made it clear that, in my opinion, while I think industrial administration is quicker and more flexible than military administration, I am no out and out critic of the latter. Indeed, when the tremendous successes which the British Army achieved between 1939 and 1945 is considered, it must be obvious that the administration was definitely sound and workable. However, there are one or two points of detail where I think some amendment to army administration could be made which would bring about an improvement.

For example, one adverse feature

which struck me was the passion for uniformity which existed in army administration. Uniformity is one of those dangerous illusions which in theory can have the appearance of being efficient but which can quite frequently be the reverse in practice. I feel that a lot of this was a carry-over from peace-time administration, when Treasury control had to adhere very rightly to the annual Budget and administration could afford to be fairly slow without being seriously inefficient. In war-time, when the expense factor has to take second place, I feel a good deal could be done without in any way weakening the national position.

One glaring example lies in War Establishments. I think most staff officers will have had experience of putting in long hours of work creating War Establishments for units which were to have only a temporary life and which were often disbanded before the W.E. was settled. These W.Es. were obviously required for accounting purposes, but if more authority were delegated down to, say, officers of Major-General rank, to sanction special establishments for temporary purposes, a good deal of time and trouble could be saved. I do not think there would be any weakening in control, as my experience of the calibre of the individuals who held such rank, whom I met during the War, is very high; and I am quite sure they could, and would, handle this matter with a full sense of responsibility. Again, a departure from this fetish of W.Es. would avoid what was frequently happening, namely, where units of a special W.E. were thrust on to some other formation, or district, where the local conditions required a completely different set-up.

Another aspect of army administration where I think the desire for uniformity is taken too far with a resultant loss of efficiency is that of unit stores and equipment. In this I again trace the influence of peacetime soldiering. Obviously, if in peace-time a crisis arises and a unit has to be put on a war footing, there must be arrangements made to equip it and the simplest thing is to have a general purpose equipment lying ready. When a major war is in progress, however, a different set of circumstances comes into operation. Requirements for each field of operations naturally vary, and the equipment and stores should be "tailor made" to suit. In this way stores and equipment would be very much smaller for each unit, because behind them would lie the resources of the ordnance services ready to meet the specific demands at short notice. This would greatly simplify administration in the fighting units. At the same time, it would considerably reduce the amount of transport required forward, and which, often in my experience, simply carried around,

week after week, items of stores which were never used and never likely to be used. The fact that there would be no general purpose G. 1098 List should not upset the planning for mobilization during war, or the planning on a high level by ordnance services of campaign requirements. In the first case special indents could be worked out at short notice by the planning staffs dealing with the particular campaign. In the second place, the ordnance staffs have always to plan items in quantities of a specific type, and number, to handle the "G" staff forecasts of the expected operations, i.e. so many days "intensive" and so many days "normal," etc.

The explanation I arrived at myself as to the fairly rigid planning of stores and equipment which was met during the last war, was that each unit, no matter how small, seemed to be planned to enable it to operate as an independent body. In a major war this is quite absurd, and only creates an unwieldy administrative tail with its inherent increased amount of office work.

Industry would not adopt such methods, as each particular problem would be worked out in the light of its own circumstances, and given the minimum amount of stores and equipment required for its job. In addition, the amount of stores would take into account the availability of replacement supplies and where these were ample, the stores held by the productive unit would be correspondingly smaller than if replacement supplies were difficult. I think the same type of planning could easily be applied to the Army during a major war, and there would be great savings of paper work, especially in the forward units where such saving is most necessary. In addition, there would be an appreciable saving in the amount of stores held in the forward area, with a corresponding saving in transport.

Another comparison between military and business administration on which there is a good deal of misconception is that of handling labour. Since returning to business life, I have seen several applications for jobs from regular officers, in which they put forward as one of their attributes "experience in handling men." I am afraid this shows a complete misunderstanding of the vast gulf between this problem in industry and in the Army. Certainly, a regular officer's training in man management, where he is taught to treat the soldier as an individual and to look after his welfare, is a good basis, and to have similar interests is of value in industry. This is demonstrated by the great steps which have been taken in what might be termed "personnel relations", which cover many points such as education, recreational and cultural activities, health and convalescent facilities. However, when it comes to dealing with the man

and his actual job, the two problems are poles apart. In the Army there is a well defined chain of authority from the commissioned ranks down through NCOs, and behind it all the powers of military discipline—with the man left as an individual human being, having no rights to co-operate with others in any action whatsoever against authority. In industry, while orders are passed down through a chain of authority, usually reaching the workman finally through his foreman or leading hand, the man has the full authority of the law to combine with others in order that his point of view may be represented as strongly as possible. This has brought about the trade unions, and the power which they wield is, I think, now appreciated by everyone. This requires a quite different technique in the handling of men. Not only can the trade unions deal on behalf of the workman on such questions as wages, hours of labour and holidays, but they can—and do—deal with specific individual cases regarding working conditions. In the past, when the trade unions were establishing their position, they frequently used their most powerful weapon, i.e. the right to strike, with only their local aims in view. In recent years, several of the more important unions have realized that their great power has brought with it great responsibility, and they are beginning to act accordingly.

However, I can never see this problem becoming the same in the Army as in industry. I should dislike intensely seeing army discipline, with its corresponding powers, introduced into industry. We would certainly then be in a slave state. Similarly, I cannot imagine the Army functioning successfully in fighting battles, where men's lives were at stake, if the men had the right to organize themselves along trade union lines. The situation of an armed force during a war will always be such that the rights of the individual have to be curtailed and left in the hands of Parliament; but in normal industrial life I cannot see any situation ever arising which would need such drastic powers.

When a regular officer, therefore, comes into industry he requires to completely re-orientate himself and acquire a new technique in handling men, who have every right to dispute his rulings, and who have also every right to band themselves together and by doing so to add considerably to their power. If he is prepared to accept these different conditions, the ex-regular officer should find that the basic lessons of man management which he learned in the Army can be applied successfully.

I wish to repeat that I am not one of those who criticized administration in the Army unduly and felt that everything would be better on business lines. In my opinion it is

quite impossible to apply strictly business methods to a system where there are inherent differences in circumstances. These differences are those of size, complexity, and the fact that the job has to be largely given precedence over the individual. When these are realized, it is difficult to suggest any radical alteration in method, but there are one or two points of principle and detail where changes would bring about more speed, simplicity and flexibility.

The following is an attempt to summarize these points:

(1) The realization by those in authority that during a large-scale war there is absolutely no place for purely peace-time administration and that everything must be put on a footing of urgency. This would mean the acceptance of short-term views on questions of accountancy. It would also mean the granting of much greater administrative powers to senior officers.

(2) A modification of the present system of uniformity as regards War Establishments, store and equipment lists. This would entail a policy giving authority to senior officers to create temporary War Establishments and to order further improvisations.

(3) A reduction, wherever possible in the number of links in the chain of authority in order to cut down clerical work, reduce the load on signals and speed up communications.

(4) To leave individuals in jobs which they are filling successfully for as long as possible. This would procure some of the advantages resulting from continuity such as are found in industrial administration, where the actual job is considered subordinate to the individual, and adjustments are made freely.

(5) A change in the principle of administration whereby senior officers are not slaves to regulations but are encouraged to be adaptable as regards methods, while still being fully responsible that the correct policy or aim is being carried out. They should leave to their subordinates the responsibility of carrying out orders, limiting themselves to organizing and supervising, and not attempting to control methods in detail.

THE TEST OF VALUE

More than most people in positions of leadership military commanders must subject every aspect of their commands to the test of practical value. In a military unit, the practical value of any activity, policy, or procedure, rests on the simple question: Does it help us perform our mission? Whatever fails to meet this test has no place; whatever stands the test is militarily valuable and thereby an essential function of command.—*Officers' Call (U.S.).*

A PICTURE-STORY

COMMANDO CLASSROOM

PREPARED FROM INFORMATION SUPPLIED BY THE UNITED KINGDOM INFORMATION OFFICE, OTTAWA. ILLUSTRATIONS USED ARE BRITISH OFFICIAL PHOTOGRAPHS (CROWN COPYRIGHT RESERVED)

With the experience gained from the successful employment of Commando units during the Second World War, the British Army is continuing to train men for this type of guerrilla warfare at the Commando School at Bickleigh, outside Plymouth. This picture-story describes the specialists' course for Royal Marine Commandos, and is published for the information of Canadian servicemen interested in Commando tactics.

Even Commandos have their classroom training, for they must learn how to handle the many gadgets to aid them in their pioneering work. On the cliff leaders' course they learn about the various pieces of climbing and mountaineering gear. The equipment on the right is a rocket-fired grappling iron to carry a rope to the top of a cliff.

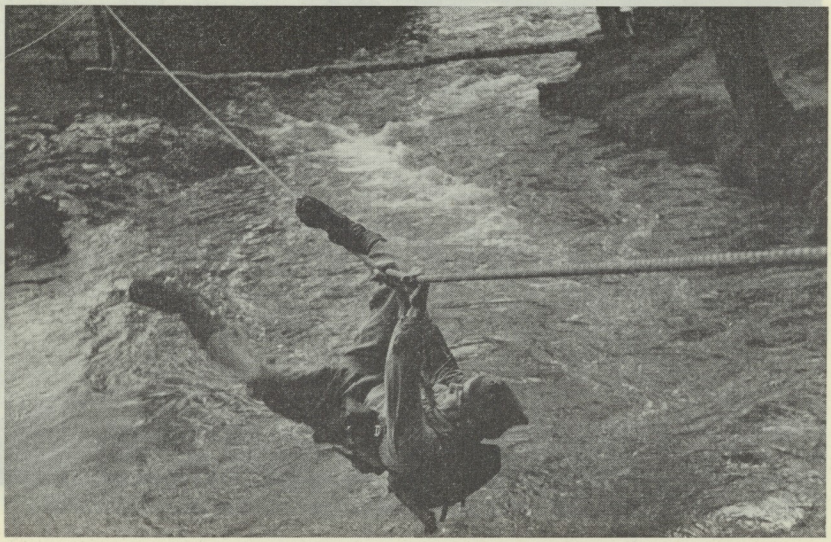
At Bickleigh, Commando Brigade veterans are taking special courses side by side with the young soldiers who have volunteered for Commando training during their period of compulsory National Service.

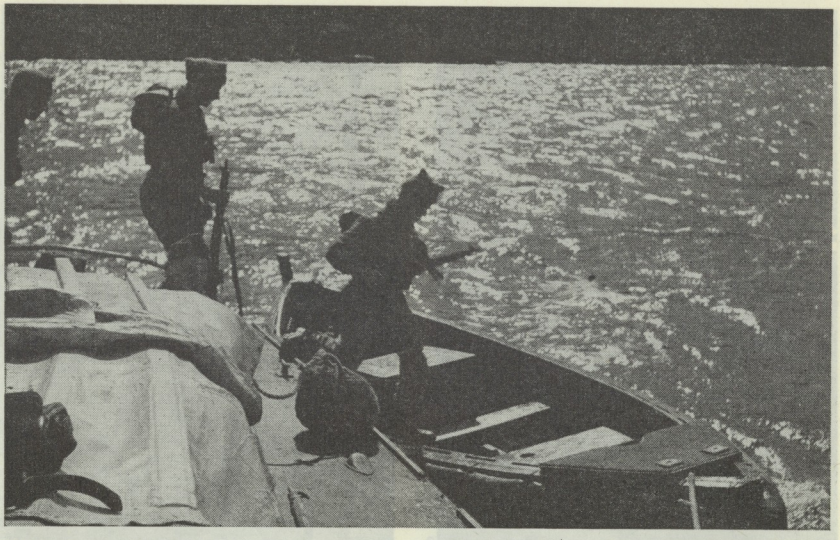
The young Royal Marine Commandos (distinguished by the blue beret and dagger badge) who have joined Commando units since the Second World War have already seen service in Tripoli, Egypt, Jordan, Malaya and Hong Kong. These men are now taking a specialists' course in climbing—not the "firemen's slide" type of thing which every Commando recruit has to master in his first few weeks, but the infinitely more dangerous work of climbing rock chimneys, cracks and pitches without the comforting aid of a climbers' rope.

On the steep crags of Dartmoor and on the storm-lashed Devon coast, he is learning how the many aids by which mountaineers have conquered the most intractible peaks can be applied in warfare, and more particularly to the Commandos' specialty of furtive night-landings on enemy-held coastline. The more rugged and inhospitable these cliffs, the greater is the Commandos' advantage in surprise.

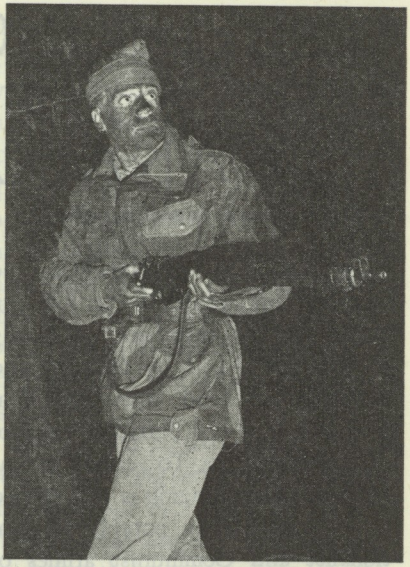
Judo comes in useful in unarmed combat or when sentries must be overpowered noiselessly. In this and many other ways men are taught how to use initiative when acting on their own.

Above Left: For demolition raids and other special assignments, Commandos learn how to handle explosives. Here a door latch is being wired so that it will detonate the booby trap when lifted. *Above Right:* The "death slide" is not quite as grim as it sounds, but for the first time the rapid descent at this acute angle can be quite unnerving. *Below:* Swaying 50 feet above the Plym as it rushes down to Plymouth Sound, this Commando tries "regaining" drill with full kit during the battle P.T. exercise.





Above: As Marines, the Commamdos are particularly at home at sea, and Plymouth Sound provides many good spots for practising rocky landings. Ideal craft for this purpose is the small powered dory, into which Commandos transfer for the landing operation. *Below:* The cliff leader is first ashore from the dory during the landing practice.



Above Left: Once ashore the leader seeks out the best route for his party to follow up the cliffs. *Above Right:* Night guerrilla raids are among the special functions of Commando units. Camouflage cream makes the face less conspicuous. *Below:* The cloth comforter cap is distinctive of the Commandos and is simple to camouflage. As part of his specialist training, the Marine Commando is shown how to use the telescopic sights on the sniper's rifle.

CATERING SERVICES IN THE CANADIAN ARMY

Prepared by the Directorate of Supplies and Transport, Army Headquarters, Ottawa

In the days of Napoleon and Marlborough armies were fed primarily by the expedient of "living off the land", and by foraging and pillaging for food from the local inhabitants of the particular area of their engagements. To a certain extent this system of foraging is still carried on by some armies, notably the Nationalist and Communist armies of China, for whom a "handful of rice" augments the food obtained "from the land". This is borne out by recent Chinese Communist prisoners, who have stated that they had not eaten for three or four days prior to being captured.

A system of haphazard procurement and preparation of food is not satisfactory or desirable for modern armies such as the United Nations forces. Great efforts are being made to improve feeding arrangements for our soldiers by all means available, in order to ensure their physical well-being. The provision of good and adequate meals has come to be considered one of the chief factors in the morale of the soldier.

As a result, the logistic requirements to maintain a present-day Canadian division of 15,000 men in the field, for all commodities, amount to some 416 tons daily, of which food supplies constitute 49 tons, or about $6\frac{1}{2}$ pounds per man per day.

The problem in the modern army is to reduce the weight and bulk of necessary food supplies, and at the same time to retain a ration which is nutritionally adequate and which can be prepared in the form of acceptable, palatable and balanced meals. This is the function and responsibility of the catering services.

It is the purpose of this article to review the development of the catering services in the Canadian Army, to discuss current efforts in this field, and to highlight the catering problems of the immediate future. It is a subject which directly affects every member of the army, and one in which the individual should take a natural interest.

Background

In the First World War cooks were integral members of their units, allocated to their duties by the unit

commander. Consequently, their usefulness, diligence and effective employment depended almost entirely upon the interest taken by the unit commander and his officers in this important phase of unit administration. Too often the chief qualification for a cook was his inaptitude or inability to qualify as a gunner, rifleman, clerk or other "useful" duty. The tendency was thus to entrust the feeding of the troops to a group of misfits, with a resultant lack of good meals, a great deal of waste, and a consequent loss of morale on the part of the troops.

During the Second World War the Canadian Army gave the matter of catering more specialized attention. A group of catering specialists was formed in the Royal Canadian Army Service Corps (RCASC), utilizing former civilian experts such as chefs, butchers, bakers, hotel food supervisors and executives, etc. A small number of dietitians from the medical corps augmented the RCASC organization, and this group of catering specialists combined their expert knowledge and training in a common effort to provide a much higher standard of messing throughout the army. Great advances were made during this period. All cooks, butchers and bakers were made RCASC personnel and were allocated to army units in accordance with the unit entitlement. The RCASC operated catering and cooking schools for the training of these personnel, and they were afforded an opportunity to qualify for higher rank and tradespay commensurate with their skill and aptitude. A system of inspecting messing facilities and messing arrangements within units and establishments was adopted. All-in-all, greater efficiency and a much higher standard was achieved in messing, both within the unit and throughout the army as a whole.

By the end of the Second World War the catering services had justified their existence as a specialist element in the army organization, and the need for their perpetuation in the post-war army was recognized. Consideration was given at that time to the setting up of a separate Catering Corps, with certain advantages. However, the need for curtailing the administrative overhead in the Active Force rendered the formation of an additional corps inadvisable, and the catering services remain at the present day an RCASC responsibility.

The catering services today are organized under the Director of Supplies and Transport at Army Headquarters, and good use is being made of the valuable lessons learned during the recent war years. A small supervisory staff operates at Army Headquarters, and each army Command has a permanent catering element consisting of a Command

Catering Adviser plus Kitchen Organizers of Warrant Officer or NCO rank. Specialist RCASC Messing Officers are also provided at army training schools.

All cooks, butchers and bakers remain RCASC personnel, and are posted to units to fill vacancies within the unit establishment. Training of catering personnel is undertaken at The RCASC School at Camp Borden, and tradespay is authorized in accordance with the qualifications and aptitude of the individual.

Current Efforts

The period 1946-51 has seen an ever-increasing emphasis on the importance of the feeding of the soldier. A number of technical agencies are engaged in research and development covering food preparation, food standards, catering facilities and equipment, preservation, packaging, etc., all designed to achieve the ultimate in a balanced diet, acceptability, palatability and utility. The scope of these efforts is indicated by the following partial list of agencies involved in this work:

- The Joint Services Food and Nutrition Committee of the Department of National Defence
- The Food and Nutrition Section of the Defence Research Medical Laboratories
- The Panel on Nutrition at the Defence Research Board
- The Institute of Aviation medicine
- The Canadian Government Specifications Board
- The Catering Company of The RCASC School
- The Canadian Army Liaison Officer at the Quartermaster Food and Container Institute of the US Army.

Within the past year, much has been accomplished. Measures undertaken or under way during this period include: .

1. Plans of Kitchen and Mess Hall accommodation have been redesigned to promote both efficiency and comfort, and conversion or new construction is under way in many places.

2. New and up-to-date catering equipment is being procured on a programme basis for all Kitchens and Mess Halls.

3. Arrangements have been made for the promotion of catering Warrant Officers to commissioned rank as classified Catering and Messing Officers (Specialists), thus broadening the the field of advancement for these personnel in their technical specialty.

4. Better career possibilities, improved working conditions and more adequate scales of cooks are at present under consideration.

5. The recruiting of cooks has been accorded Number One priority from an enlistment standpoint, thus ensuring that full advantage is taken

of the qualifications and potentialities of enlistees for the catering trades.

6. An increased programme of courses for catering personnel has been instituted at The RCASC School to permit the training of a maximum number of candidates and to offer ample opportunity to qualify for higher rank and tradespay.

7. The Catering Section within the Directorate of Supplies and Transport at Army Headquarters has been strengthened to permit adequate administration of the catering services.

Even this short summary is sufficient to indicate that catering in the Canadian Army is a very live issue. But while much has been accomplished in a relatively short time, there is still a great deal to be done.

Problems for the Future and Suggested Solutions

Making the Catering Officer a "Specialist"

Although the specialized nature of catering services has come to be recognized, and the Cook, the Butcher, the Baker and the Kitchen Organizer have become specialized trades, no provision has as yet been made for the specialist Catering Officer.

At the present time all Catering Officers are appointed within the RCASC. In rare cases officers with knowledge and experience in the catering field are available for these appointments, but in the majority of cases it is necessary to select an unskilled officer and to train him for the job. Experience has shown that a reasonable number of officers have the necessary aptitude for this type of employment, and develop into satisfactory Catering Officers with training and experience during a normal 2- to 4-year tour of duty. Thus there would be no serious problem in developing an adequate quota of trained Catering Officers, provided that these officers could be retained in that employment continuously once qualified.

Unfortunately, such is not the case today. The appointment of Catering Officer is considered in common with the several appointments such as Supply Officer, Transport Officer, etc., through which the RCASC officer may be rotated during his army career, and such a rotation is mandatory under existing policy if the officer is to achieve relative qualifications and seniority for promotion in the corps. Only two alternatives exist under present circumstances: either the Catering Officer must be relieved of catering duties after a short term of employment and be given an opportunity to gain experience in other corps appointments, or else he must be retained in the catering services to the possible prejudice of his personal advancement. This is a very unsatisfactory situation, as the first alternative is not in the

best interests of the catering services, and the second is not in the best interests of the individual.

Other than by setting up a separate Catering Corps, the solution to this problem lies in the setting up of a separate gradation list for Catering Officers within the RCASC. This list would permit the assessment of Catering Officers for advancement on the basis of their specialist duties, and in comparison only with officers in their own field of employment. The Catering Officer would then be recognized as the specialist he is.

Accentuating the Role of Unit Officers

The ascendancy of the RCASC in the catering field during the past few years has been accompanied by an unfortunate decline in the interest taken by unit officers in the important matter of unit messing. The attitude "it's up to the RCASC" has become all too prevalent.

The outcome of this attitude is a tendency in many cases for unit officers to concentrate their interest and efforts on training matters, and to give relatively little attention to important administrative subjects such as the feeding of the troops. This tendency is evidenced by the inadequacy of Unit Men's Messing Committees; poor selection of potential candidates for cooking courses; lack of interest in the development of unit cooks; failure of Unit Quartermaster Officers, Unit Messing Officers and Unit Orderly Officers to devote the proper time to the problems of the kitchen and mess hall; failure to utilize the technical advice of Catering Officers and Kitchen Organizers or, conversely, expecting these advisers to effect the entire cure.

This is not to say that such negligence on the part of unit officers is always culpable; more often than not it stems from a lack of understanding of unit catering problems, and the relative responsibilities of the unit as opposed to the RCASC. Nor is the criticism applicable to all units, for in some units careful attention is given to messing requirements, and the efforts are manifest in the high standard of messing achieved by these units.

The solution of this problem lies with the unit commander. His personal interest is the key to the matter. By making personal inspections of unit messing facilities; by effective delegation of unit catering responsibilities to the Unit Quartermaster, Messing and Orderly Officers; by ensuring that Unit Messing Committees are organized and functioning properly; by occasionally attending these committee meetings in person; by accompanying the Command Catering Adviser and Kitchen Organizers during their routine inspections of unit catering facilities;

by seeking the advice of these catering experts and effectively implementing their suggestions; by organizing "on the job" training for cooks under the Unit Messing Officer and senior cook, to further the advancement of the individual cook; by personal attention in the selection of trainees for cooking courses; and by making all his officers "messing conscious", the unit commander can immeasurably improve unit messing, and at the same time set an example which will have a far-reaching effect in support of the campaign to achieve a high standard of catering throughout the army.

The Catering Officer will welcome the active interest of the unit commander, and will support his efforts to the limit of catering resources.

Making the Cook Feel That He "Belongs" to the Unit

Many cooks have the feeling that they are only "on loan" to the unit in which they are employed, and that while they are necessary to the operation of the unit, they do not really "belong" to the unit family.

Experience has proved that the interests of the catering services are best served by having all cooks in the RCASC, where their training, qualification and up-grading can be undertaken with the greatest efficiency and equity for the individual. However, it should be borne in mind that this arrangement is but a means to an end, and "the proof of the pudding" lies in the degree to which the cook and his talents are absorbed into the unit team. The cook is of a different corps than the unit he serves; he wears a different corps badge and up until the time he arrives at the unit, he has nothing in common with the troops he has come to serve. So long as this feeling of apathy prevails, the cook will not be able to give his best efforts and may well be unconsciously indifferent to the attitude of the troops to his cooking.

A solution to this problem lies in large part with the unit. The unit commander, his officers and his NCOs should make a real effort to bring the cook into the unit family—to make him feel that he is just as important a link as the rifleman, the gunner, the signaller, the clerk, etc. In short, he should be imbued with the "esprit de corps" of this, "his" unit. The army might well further this cause by giving serious consideration to the expedient of permitting cooks to wear the unit cap badge and at the same time to continue to wear RCASC shoulder titles. This would be tangible evidence that the cook "belongs" to the unit.

Improving the Scale and Rank Structure for Cooks

When compared with his counterpart in civilian life, or with his opposite number in the RCN and RCAF, the army cook resembles a bit

the "poor country cousin." In the matter of wages, working hours and helpers, he comes off a distinct second best.

This accounts in part for the shortage of some 400 cooks which exists in the army today, while the RCN and the RCAF have no corresponding problem. The scale of cooks in army units is less than in the other two Services, and the rank structure is less generous. Thus the army cook is required to work longer hours, with less help, less pay and less opportunity for advancement. There is consequently little inducement for soldiers with the necessary aptitude to volunteer for training as cooks; and little incentive for the existing cooks to do a conscientious job. This unhappy situation is reflected not only in the present shortage of cooks in the army, but also in the increasing number of civilian cooks which must be hired on civilian rates of pay to augment army staffs and the mounting dependence upon civilian catering contractors to undertake the feeding of army camps and installations.

Consideration has been given to the granting of "proficiency pay" for army cooks, but this would involve an undesirable precedent which might result in corresponding demands on behalf of other tradesmen. The real need is for a scale and rank structure for army cooks commensurate with those now in force for the RCN and RCAF, and steps are being taken to this end. Some improvement has already been effected by the introduction of classified Catering and Messing Officers (Specialists) mentioned earlier, but approval is being sought for a general increase in numbers and ranks "across the board". When this increase is effected, it should be accorded wide spread publicity in order to overcome the existing impression that the lot of the army cook is a poor one. In this way it should be possible to reverse the present unfavorable state of affairs.

The Need for a "Pool" of Trained Cooks

There are never enough cooks to compensate for increased or unexpected commitments, and for those necessarily absent due to courses, leave, sickness, etc.

In the case of most army trades, these variations in the workload can be met by a redistribution of duties and a temporary lapse in less vital functions. Not so in the case of cooks, where the feeding of the troops is an essential "three times a day" proposition. There is simply no substitute.

To some extent this problem is presently being overcome by the casual hire of civilian cooks and by the use of civilian catering contractors, but this is at best an unsatisfactory and unrealistic solution. The requirement is for a reserve of trained army cooks, who are capable of undertaking

any commitment at any place, and are immediately available to meet the demands of an emergency. These cooks should be allocated in a small "pool" of about 5 cooks at each army Command. When not employed on special or replacement duties, they would serve as a useful adjunct to the staff of the Command Catering Adviser for instructional and training duties.

The Need for More Training in Field Cooking

It is not enough to legislate for the catering requirements of the army in Canada. The cook must be trained for his role in war, and must be capable of cooking under field conditions.

This problem is highlighted by the commitments of the Canadian Army today in the Far East, and its potential commitments in Europe. Training in cooking with field equipment, under field conditions, is an essential not only for army cooks but also for the individual front-line soldier who will often be called upon to do his own cooking.

The RCASC School is giving some instruction in field cooking, but the scope is necessarily limited due to the commitments of the School for the basic training and up-grading of cooks for static units in Canada. In addition, training in field cooking can be realistic only if practised within units, at the platoon level, and under conditions as closely approximating field conditions as possible.

Unit commanders should give serious attention to this important problem, and organize unit training in field cooking on a comprehensive basis. Use should be made of the knowledge and training of unit cooks and other personnel who have had experience in cooking during field operations, or who have taken training in field cooking at The RCASC School. The services of the Command Catering Adviser and his staff are available and should be used for advice in this matter.

The Need for Cooks in the Reserve Force

The number of cooks in the Reserve Force is small, and totally inadequate to meet the requirements of training and mobilization. Few Reserve Force units have a full complement of cooks to fill present establishments, and there is no reserve pool of cooks which could be utilized to meet mobilization requirements.

This is a serious defeat in the light of increasing Reserve Force training, and the heavy requirement for cooks which will exist immediately on mobilization. It can be truly said that it is difficult to interest civilian cooks in the activities of the Reserve Force, but this is largely due to the fact that little or no provision has been made for them in their specialist role.

Action is needed to set up a component within the Reserve Force which would give the cook an opportunity to train and serve in his own trade. His services could be put to excellent use at training camps, and on week-end schemes, exercises, etc. He would be a valuable asset as a "call-out" with the Active Force during temporary emergencies. Such a reserve of trained cooks would be indispensable on mobilization.

One way of meeting this problem would be to form a platoon or company of cooks in the RCASC Reserve Force at each Command, utilizing the services of a former Catering Officer or a catering expert from a local hotel, etc., to train the cooks. Consideration might also be given to the formation of a CWAC platoon or company of cooks in the same manner, in view of the imminent re-establishment of the CWAC. However achieved, some concrete action is necessary to make available a reserve of cooks in the Reserve Force.

Catering Facilities in an Emergency

In the event of a military emergency, the army must be capable of immediately undertaking the feeding of a great influx of personnel. Planning and provisioning of the necessary catering facilities for this purpose must be undertaken progressively, in order that the increased commitment can be undertaken with a minimum of disruption.

This involves the standardization of designs for kitchens, mess halls, cooking equipment, etc., on modern and labour-saving lines; the conversion of existing catering facilities to standard and permanent construction; and the stockpiling of reserves of equipment and prefabricated buildings sufficient to permit a rapid expansion of catering facilities in an emergency.

Great strides are being made in this direction, with the building of standardized 500-man messes and kitchens and the installation of the latest and most efficient equipment. The conversion and construction programme is going ahead steadily, and plans include stockpiling in advance. This represents a tremendous step forward in army catering, and will do much to enhance the cooking trade by offering the best in labour-saving devices, planned kitchen and mess hall lay-outs for convenience and comfort, and ideal working conditions. It will also have a strong appeal in future recruiting.

Conclusion

It will be seen that the catering services have "come of age" in the Canadian Army. The feeding of the troops in the modern army is a specialized function, and no effort is being spared to guard the physical well-being of the soldier. While great advances have been made in the cater-

MONKEY ON A ROPE

A piece of rope weighs 4 oz. per foot. It is passed over a pulley, on one end of which is suspended a weight and on the other end a monkey. The whole is in equilibrium.

The weight of the monkey in pounds equals the age of the monkey's mother in years. The age of the monkey added to the age of the monkey's mother is 4 years.

The monkey's mother is twice as old as the monkey was when the monkey's mother was half as old as the monkey will be when the monkey is three times as old as the monkey's mother was when the monkey's mother was three times as old as the monkey.

The weight of the rope, or the weight at the end, is half as much again as the difference in weight between the weight and the weight plus the weight of the monkey.

How long is the rope? (Answer on page 75).—*Contributed by Lt. Col. J. A. Stairs, MBE, Directorate of Armament Development, Army Headquarters, Ottawa.*

CATERING SERVICES

(Continued from preceding page)

ing field, much remains to be done; and active consideration is being given to the problems of the future. Steps are under consideration to materially improve the lot of our catering "specialists" in the matter of rank, pay, career possibilities, working hours and working conditions. Serious thought is being given to the need for a pool of cooks in the Active Force, a reserve of cooks in the Reserve Force, and the methods of making these thoughts a reality. The needs of mobilization are being actively pursued.

In particular, the role of the unit cook cannot be too strongly emphasized. Although trained by the RCASC, he is an integral member of the unit in which he serves. He must be able to feel that he "belongs" to the unit. His welfare, and the efficiency of the unit messing scheme in which he is the vital cog, are important unit responsibilities. These functions require the personal attention of unit commanders, who should exact a corresponding interest on the part of all of their officers. The ingredients and the recipe are there—it remains but for the unit to combine them for a product of lasting satisfaction.

ANTI-AIRCRAFT IN THE FIELD ARMY

By
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Introduction

A requirement for anti-aircraft defence in the field army was appreciated even before the First World War. During that war, as has been the case ever since, equipment to cope with developments in aircraft and operational techniques lagged behind. Between the two major wars very little was done to improve anti-aircraft equipment until the German Air Force came into being and began to assume alarming proportions. About 1935 steps were taken to improve the situation and some advances were made. The 3.7-inch heavy anti-aircraft gun was developed and Sweden began production of the 40-mm light anti-aircraft gun, better known as the "Bofors". These two weapons formed the basis of our anti-aircraft equipment during the Second World War.

This paper is intended to discuss the use of anti-aircraft (AA) in the

Major Higgs

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**The author draws on his operational experience in this review of the use of anti-aircraft equipment in the Second World War. The attention of readers is directed to two other articles on this subject—"The Personnel Problem in AA Defence", published in the October 1950 issue of the* Journal, *and "Progress in AA Defence", which appeared in the November 1950 issue.*—Editor.

past war, partly in the light of official reports and partly from the writer's own experience. Some suggestions as to what the future may hold will be put forward.

Equipment

Mobile equipment, as required by the field army, was of two basic types: Heavy Anti-Aircraft (HAA), for defence against high and medium level attack, and Light Anti-Aircraft (LAA), for defence against low level attack. Each type had its own fire control instruments, which in the case of HAA included predictors, plotting equipment, and later on as they were developed, radars. Predictors were developed for use with the Bofors (LAA), but, while they were efficient on static positions, training exercises soon proved that they would not stand the rough treatment of bad roads and cross-country travel. They were deleted from the LAA mobile establishments.

Other weapons used were searchlights, balloons, AA smoke, small guns of 20-mm size and, in the early stages, such weapons as the Lewis machine gun.

Two types of radar were developed. One was a long-range set capable of giving approximate target data which was transmitted by telephone to the control room. The second was a fire control set producing accurate information continuously for feeding directly into the predictor.

In addition to the towed version of the Bofors, a 40-mm Self-Propelled (SP) equipment was produced. It was well liked by all units, as it was much more mobile and did save considerable road space when at times this was at a premium. Personal experience indicates its greatest lack was the absence of a winch gear.

Many minor developments and modifications to equipment were made. Some were as a result of reports from users in the field and others purely to effect economy in production.

Perhaps the greatest single advance in AA ammunition was the introduction of the *VT* fuze. This was invaluable against air targets and its use for air burst against ground targets was soon exploited.

Separate types were developed for the AA and ground role. The AA type was more sensitive and designed to function when it passed within 60 feet of an aircraft.

These fuzes eliminate the necessity for fuze setting and thus the normally expected errors arising therefrom.

Only a small percentage of AA type failed to function properly, but care had to be taken not to shoot too near any obstacle which would actuate the fuze.

The performance of the ground type was tremendously affected by weather conditions. In dry weather about 85 per cent. were found to function properly, while in a heavy

rain and largely due to random bursts, only 30 per cent. correct results were obtained.

Employment

It is the job of AA in the field army to ensure that enemy aircraft do not interfere with the plans of the Commander, to assist the air force to keep the air and to assist in the maintenance of fighting forces by protecting base supply ports and lines of communication from air attack.

A few examples of the protection tasks provided by AA are beach areas in the assault, base ports, base and advanced airfields, Line of Communication (L of C) tasks, field gun areas and infantry forming-up places.

As in other types of artillery, there are normally too many tasks for the number of guns available; the temptation to disperse the AA in "penny packets" has to be resisted and the tasks must be considered in order of priority. The best results are obtained by strong protection of vital areas of the highest priority and not by defending all vital areas with a sliding scale of AA according to their importance.

The AA organization is based on the principle that the AA tasks are of an area nature and all units can be moved independently of other formations to any area they are required. For example, to combat the flying-bomb menace in England they were moved from all over the country and concentrated on this one priority task. At one stage in the battle a total of 536 HAA guns and 900 LAA guns were deployed. Again, 54 Bofors and twenty-four 3.7-inch guns were deployed for the protection of one bridge over the Volturno river when this was the only bridge in use.

The air defence of any area is an inter-service responsibility. The weapons are the fighters of the air force and the AA guns of the army. The degree of responsibililty of each will vary, on the different levels, from Army Group down to Division. Rules and regulations, known as "Operation and Procedure Instructions", must be worked out in conjunction with the air force formation concerned. These instructions dictate the policy for the use of AA and the over-riding operational control must be exercised by the air force Commander.

At Corps and Divisional levels, AA comes under the direct command of the artillery adviser to the formation Commander concerned. Whenever possible, these AA units should be linked up with any other air defences in the area and actual fire control exercised from a central control room.

After the D Day landings, the main use of HAA in its primary role was the protection of the beaches, ports and key centres. A typical example is the defence of the port of

Antwerp. Here, five HAA regiments, 10 United States AA gun battalions, along with 40 searchlights, were deployed. This layout was supplemented with a number of LAA batteries and had an early warning system which extended, in the later stages, as far as S'Hertogenbosch in Holland and Aachen in Germany.

Up to the time of the battle for Falaise, LAA units did a reasonable amount of AA firing. Several enemy fighter and reconnaissance planes were shot down over the Normandy battlefields, and during construction of the bridge over the Orne river at Caen a LAA barrage was set up, designed to prevent enemy night reconnaissance of the site. It succeeded in driving the aircraft up beyond the range of the guns. In organizing this barrage, the greatest difficulty was one of inadequate communications. The R 109 receiver was unsatisfactory for picking up broadcasts from the control room.

After the battle of Falaise very few enemy aircraft were seen until the appearance of the jet-propelled fighter late in the fall of 1944. First attempts at engagement of these very fast targets were apt to make LAA gunners despair and imagine that the days of the Bofors were over. However, experience showed this was not the case if conditions favoured the gunners. The writer personally saw a jet fighter shot down by a LAA gun. On being engaged, the aircraft turned to dive on the gun position and in so doing approached at such an angle as to make engagement with Bofors possible. However, the times when these circumstances will occur are very few in number and should be regarded as the exception rather than the rule. The great lesson learned by the gun detachment was that, given favourable circumstances, their gun could cope with jets.

In circumstances where air superiority has been established and there is consequently a surplus of AA guns, they can provide a useful addition to the fire power of corps and divisional artillery.

A ground role for HAA had been envisaged before the Normandy invasion, but it was then expected that units would only be called on to do simple tasks and would be under the command of a field or medium regiment. This did not turn out to be the case and many units were actually asked to undertake all the tasks of a field or medium regiment. Sometimes they were the only artillery in support of operations. This necessitated, insofar as was possible, an adoption of field artillery procedure. The only major differences were due to differences in equipment.

The use of AA guns against ground targets evolved as the air battle went into its dying stages. The 3.7-inch gun proved completely successful in

this role and no trouble at all developed in the equipment. It was soon discovered that the sighting arrangements were not suitable and field artillery dial sights were fitted. These proved satisfactory, simplifying the laying of the gun and saving a great deal of time in shoots controlled by an Observation Post, since orders from the OP could be passed direct to the gun. The only difficulty was in the additional training required by the layers for this role and in providing some suitable lighting arrangement for use in night firing.

The HAA gun proved completely successful in the ground role. The most important lesson learned was that guns could not be sited to perform a dual role. The layout of communications and command posts is entirely different in the two roles. A HAA unit deployed in the AA role could take part in fire programmes provided ample warning was given, but could not be ready, at any time, to answer calls for fire and to engage aircraft without serious loss of efficiency in both roles and a great strain on personnel.

The possibility of using LAA guns in ground tasks, other than the anti-tank role, had not been foreseen. Thus, when the opportunity presented itself, equipment had to be improvised. The basic need was for some means by which the guns could engage targets by indirect fire, i.e., a reasonably accurate means of laying the gun for line and elevation. Most of the equipment was produced in local workshops and a good measure of success was obtained. This improvisation resulted in a great deal of variation from unit to unit and finally, to ensure standardization, a workshop instruction was issued and stores were manufactured under Army Group arrangements. The results were fairly satisfactory, but the complete answer to the problem has not even yet been produced.

LAA guns proved effective against certain types of targets, and were often employed in the ground role. Among tasks carried out successfully by Bofors were harassing fire, destructive shoots on Observation Posts and pill-boxes, setting buildings on fire, directional fire for night attacks and participation in lightweight bombardments.

Because of the limited range and flat trajectory of the weapon, many difficulties were encountered in selecting suitable gun positions. Guns were not normally sited closer than 3,000 yards from the target area.

For most types of target the SP guns were more satisfactory than towed guns. The SP was more difficult to conceal and more vulnerable to enemy fire, but could get into a position and out of it quickly. It was found advisable to evacuate a position immediately after a shoot, since

the gun could be readily located from the tracer of the shell.

Personal experience in the conduct of several shoots has allowed the writer to draw the following conclusions regarding AA in a ground role:

1. In directional fire tasks, some means must be developed to keep the gun on its fixed line.

2. The gun cannot be used as a heavy machine gun. This was tried near Antwerp and in 15 minutes two of four guns were put out of action by enemy fire. Of the 12 men on the two guns, five were casualties.

3. Excellent results can be obtained by shooting in the windows of buildings and through the slits of pillboxes, but the engagement must be limited and the position evacuated immediately.

Training

Once a unit has attained a satisfactory standard of training and has joined a field army formation, it can best maintain that standard by frequent operational shooting. If officers ensure that every small weakness is rectified immediately after a shoot, there are scarcely any training difficulties.

When enemy targets are rare, units must be periodically withdrawn for firing practice. Targets are also needed so that they can shoot regularly from the gun positions.

Training expedients and aids can be improvised and good value obtained therefrom for HAA units, but for the LAA gunners little can be accomplished without air co-operation.

As in every other type of unit, team work is the secret of all success in dealing with hostile aircraft. Perfection in the functioning of the AA team can only be attained by regular and continuous training.

The Future

Our potential enemy can and will make use of all types of aircraft in his attempt to interfere with the operations of the field army. These types will probably include strategic bombers capable of flying up to 60,000 feet, tactical bombers and ground attack aircraft. Either jet engined or piston engined or both types will be used. The main weight of attack by tactical bombers will probably be delivered from heights up to 25,000 feet.

To meet the threat from the types of aircraft above, it will probably require three types of AA guns—a Heavy Anti-Aircraft gun, a Medium Anti-Aircraft gun and a Light Anti-Aircraft gun. The heavy weapon would be designed to combat strategic bomber types, the medium for tactical bombers and the light weapon for use against both tactical bombers and ground attack aircraft flying in the height band from 0 to 10,000 feet.

(*Continued on next page*)

A POTENT FACTOR IN WAR

SURPRISE

By
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Part 2

Historical Comparison: Napoleon, von Moltke and Montgomery

Modern warfare finds its roots in the Napoleonic era. The light of Napoleon Bonaparte's genius guided the efforts of generals until the next notable phase in history—the Franco-Prussian War. During this period, Helmuth von Moltke postulated rules of war that were the antithesis of Napoleon's. It was the legacy of his teachings that brought about the defensive stalemate of 1914-18. This defensive thought, in turn, gave birth to the most expensive and useless experiment in the history of peace—The Maginot Line. Fortunately, however, all military minds were not stultified; some were able to penetrate the opacity of this defensive logic. They foresaw that improved weapons plus an application of the Napoleonic touch would render the combination of mass and static defences helplessly inert. One of these advanced thinkers was Bernard Montgomery, who in the largest war yet recorded was to have unqualified success as a field commander.

A sense of proportion demands

**The author wrote this essay during the Spring of 1950, at which time he was serving as a Resident Staff Officer at St. Francis Xavier University, Antigonish, N.S. He entered it in the Bertrand Stewart Prize Essay Competition, which is sponsored by The Army Quarterly (United Kingdom).—Editor.*

ANTI-AIRCRAFT IN THE FIELD ARMY

(Continued from preceding page)

The Allies used both heavy and light bombers in direct support of ground forces during the last war. Thus, it is reasonable to suppose that, in a future war, an enemy who would presumably be superior in the air at the start would do the same. We can, therefore, envisage attacks on our divisional areas by both strategical and tactical bombers.

This would indicate a requirement for something much better and much heavier than the Bofors in direct support of our divisions. One answer might be to have both the suggested medium and an improved light AA weapon organic to corps and/or divisional establishments.

that we set out the contrasts of the periods with which we are concerned. In Napoleon's day, the commander-in-chief undertook personal leadership of his army as well as the responsibility for planning. The turbulence of world events resulted in twenty years of active campaigning for Napoleon. The constant pressure undoubtedly took its toll of flesh and blood, which would perhaps explain his occasional lack of brilliance and the rare cases when he even substituted imprudence for subtlety.

Von Moltke became prominent during the peaceful years prior to 1870. For the first time, the years of peace became a convenient interlude to organize and plan for war on a national basis. Von Moltke's war became one of detailed planning and detached direction; generalship was administered from headquarters in the rear.

Montgomery fought a war that was also directed from headquarters behind the front line. Increased numbers of troops and extensive frontages made this imperative; improved communications made it possible. Still, leadership was the essential quality. A commander's personality was reflected in the way his troops did battle.

In winning his battles, Napoleon relied on a formula that, properly applied, equated victory: he used mobility and morale to achieve concentration on selected points. To this he added surprise, with a boldness that was to mark him as perhaps the most enterprising commander of all time.

He was quick to realize that mobility in war is relative. It was the custom of the time to halt columns before dusk to permit the tail to close up to the encamping area. This procedure was designed to reduce defence and administrative problems. However, Napoleon ordered his columns to camp in depth, and thus covered ground in valuable time that other troops used for telescoping their columns. By this technique, Napoleon upset the enemy commander's calculations, and appeared in strength at unexpected places.

By dividing his army into fighting units, Napoleon made the most of his new-found mobility. It permitted him greater scope in the use of his cavalry arm, and this considerably increased the flexibility of the army. He used these units to achieve an advantage at a time and place of his selection. Thus Napoleon was the founder of our modern divisional system.

Napoleon used this divisional system to separate the armies of Piedmont and Austria. He forced an armistice upon the Piedmontese and looked forward to an invasion of Austria. He was somewhat dismayed to find that the Austrians had entrenched about one-third of their force in

Mantua, which controlled the natural approach to their country. Instead of taking up the customary siege positions, Napoleon spread out his forces and tempted the Austrians to reinforce their bastion. Then, by acting with speed and decision, he was able to engage the enemy piecemeal. This action culminated in the French victory at Castiglione, which made the Austrian commanders take pause.

Napoleon then placed his army of twenty-five thousand between Mantua and the Austrian army of relief, which approached in force. Here Napoleon exhibited a lack of skill that at times classified him as a military enigma. He directly assaulted the strongest Austrian wing, and was beaten back with heavy losses. A lesser general would have admitted defeat; but Napoleon worked his indomitable will on his troops. He undertook an out-flanking march and came upon the Austrians from the rear.

Despite this feat, the French still found themselves greatly outnumbered at the selected point, the Arcola bridge. Napoleon's subtle mind recalled a stratagem that Marlborough had used at Oudenarde years before. He sent some trumpeters around to the rear of the bridge to sound the charge. The Austrians poured across the bridge and, loosened from their defensive positions, fell easy prey to Napoleon's superior mobile tactics. Thus trickery made a glorious victory possible, the complete defeat of the Austrians inevitable.

Though Napoleon now planned an invasion of England, the Russo-Austrian coalition arranged by Pitt left him further obstacles in Central Europe. Irritated as he was by this, he gave history the outstanding example of the precise and tactically sound military thought of which his genius was capable. Here was the paper war, the planning on maps of von Moltke. Here was the imaginative forecast of events that characterized Montgomery.

The French General summoned his secretary in the early hours of the morning. Like a man possessed, he paced the floor and ceaselessly dictated orders for the battle. Every detail was covered: the order of march, the time-table for the movement of troops, the concentration areas and dates. In a matter of hours the plan for Austerlitz was prepared. It proved to be a masterpiece. Events adhered so closely to the paper plan that it would seem that its author had been supernaturally gifted.

The tactical plan was simple. Napoleon intended to force the Russians to extend their line and weaken the centre. To do this, he held the high ground on his left wing with a strong force. He held a force under Soult in reserve to crack the weakened centre. A force under

Davout was placed on the French right wing and was to encourage Russian progress. This was a natural point of attack for the Russians, and as it succeeded they reinforced it with reserves from the centre. At the precise moment, Soult's force charged into the depleted centre. He separated the Russian wings and defeated one-half of the enemy line in conjunction with the French force on the high ground. Davout, meanwhile, counter-attacked with his reserve troops, and the Russian left wing was rolled back against the French pivot. Napoleon culminated his brilliant exhibition of paper work with a decisive victory. Again his formula was mobility, morale, concentration of effort at a selected point, plus a liberal sprinkling of surprise.

The only defeats Napoleon suffered were when he relied on mass rather than subtlety. This direct method seemed to guide his actions when he decided to invade Russia. It is not improbable that the years of combat had tired him, and rather than labour with wearisome detail, he chose the easier method of direct assault. The campaign was marked by his imprudent and costly tactics. But Napoleon was stubborn in defeat, and in the latter stages of the campaign he fought magnificently as he recovered his old brilliance.

Ironically, surprise caused the last defeat of perhaps its greatest exponent. (In exile, he stated that he was the boldest general that ever lived). Napoleon was forced to a direct attack on Wellington when Ney failed to carry out his tactical role. The day still might have been won by the French but for the unexpected arrival of the Prussian forces under Blücher. Thus a piece of ground of little tactical significance lent its name to the state of defeat and a brilliant career came to an inglorious end.

As Bonaparte was synonymous with daring, so von Moltke was the essence of caution. Any similarity in technique ceased at the planning stage, where each exhibited a great capacity for thinking in detail. Von Moltke was utterly lacking in the tactical skill that characterized Napoleon.

Von Moltke introduced to the science of war the calculating and methodical thought of the scientific mind. He held that mass, guided by a pre-arranged time-table and supported by meticulous administrative planning, would over-ride any tactical feat of the enemy, however clever. This principle necessitated the development of staff officers capable of accurately working out the maze of calculations required to control the movements of large numbers of troops.

Indeed, although von Moltke relied upon detailed preparation and mass, the perfection of his staff work

provided a degree of surprise. In the war of 1870, he illustrated the value of minute planning. Within eighteen days of the declaration of war, the Prussian General deployed one million German troops, in battle order, on the French frontiers. This was an unparalleled achievement.

Although brilliant in his conception and execution of the logistical plan, von Moltke paid little attention to the tactical plan. In fact, he acknowledged that he had no plan for the campaign of 1870 other than ensuring that the mass of his army moved relentlessly forward in good order. This artless system resulted in a murderous slaughter. In the Battle of Wörth, one hundred and twenty thousand Germans defeated fifty thousand Frenchmen, killing twenty thousand of them. A comparison of the total casualties of the war shows that the French war dead exceeded the German by one hundred and twenty-four thousand.

In his victories, von Moltke was aided by fortuitous circumstances. The Prussian breech-loading rifle gave his troops an advantage. The French troops were poorly trained and ineptly led. The tactical misuse of the mitrailleuse hastened the defeat of the Republic. Von Moltke was supported by a state specifically organized for war. Nevertheless, he must be recognized as a successful commander.

In fact, his formula for success was to direct German defence policy fifty years later. His namesake, von Moltke the Younger, is notable for having wrecked the Schlieffen Plan by reducing the 7-to-1 ratio on the right wing to 3-to-1, in an effort to be strong everywhere. By destroying the power of the main attacking force, he led Germany into a long and exhaustive war.

If the Allied commanders of the First Great War had realized it, they held in their control a "mechanical toy" which could have been used to advantage. As in the case of the French mitrailleuse, time and experience were necessary to show the proper value of the tank. In the Second Great War, it was left to an infantry soldier, General Montgomery, to show the Allied commanders the proper use of armour.

It might be suggested that Montgomery was the military synthesis of Napoleon and von Moltke, in a war in which synthetic products played so vital a part. Like von Moltke, Montgomery considered painstaking staff work an essential part of battle arrangements. This careful planning permitted him firm control in action, and allowed him to execute daring plans with Napoleonic skill. Any objections to considering a commander still living fade into insignificance before the ableness of the man.

When Montgomery took command of the Eighth Army, it was just two

months after the disastrous ambush at Knightsbridge arranged by Rommel. Two hundred and seventy Allied tanks were lost, tanks which had been delivered by the perilous Mediterranean route. Nevertheless, Montgomery set about to seize the initiative.

At Alamein, intense preparations were made for the impending battle. Troops were trained to handle new equipment; guns were brought forward and surveyed into position; roads and tracks were built to meet the demands of the increased operational and administrative traffic. Aerial photography made it impossible to conceal such large-scale preparations, but elaborate deception and camouflage made it possible to fool the Germans as to the point of attack.

Although hemmed in with detail, the plan was ingeniously simple. It was to make the enemy think that the main thrust was in one direction while it actually moved in another. It was based on the Napoleonic principles of surprise, mobility and concentration, all bound together with a magical morale.

One corps attacked in the northern sector, threatening the enemy's line of communication, the coast road. On the southern flank, strong attacks contained the enemy. After seven days of bitter fighting, a salient was established pointing northward at the vital supply route. Rommel assumed direct command at this stage and ordered several attacks in an effort to burst the bulge. The Allied troops held on. Every available reserve force of the Afrika Korps was attracted to the top of the salient. Then Montgomery, with the keen sense of timing essential to a great commander, threw the whole weight of his armour against the southern end of the bulge. Gaps were made by infantry troops in a night attack, and the tanks ripped through the openings at first light. Taken by surprise with his reserves out of position, Rommel could not deal with this new thrust. Before he could regroup his force, the Allied armour had turned on his flanks and won a decisive battle.

Alamein was a timely victory. It was planned under great pressure, against experienced desert fighters who had never been really beaten in battle. There can be no doubt that measures of deception in the preparatory stage, together with the cunning plan, enabled Montgomery to attain tactical surprise and force a decision. The indirectness of the main thrust was truly worthy of Napoleon.

Yet he has been called timid: in subsequent campaigns he failed to make his move until he was positive that every detail of preparation was attended to and adequate forces

grouped for the attack. His defenders reply that this cautiousness—if it may so be called—follows from the intimate knowledge of the situation which results from minute planning. Here Montgomery displays in a large measure the characteristics of von Moltke. The British General has time and again stated that he never gave his troops a task that was not within their capacity.

Surprise is a double-edged weapon. The enemy strives to offset any advantage you gain by an application of counter-surprise. As an antidote to such enemy action, Montgomery developed his concept of balance. In his book, *El Alamein to the River Sangro*, he states:

> "Our lack of a similar formation [the formation in depth of the Afrika Korps] in the past had meant that we had never been properly balanced. 'Balance' on the battlefield implies the disposal of available forces in such a way that it is never necessary to react to the enemy's thrusts and moves: a balanced army proceeds relentlessly with its plans in spite of what the enemy may do."

In addition to the balance of his ground forces, he was careful to use every weapon that modern science had made available to him. Future critics might agree that Montgomery's greatest contribution to the science of war was his application of air power to the land battle. He even took the unprecedented step of utilizing the support of Bomber Command on occasion. This type of flexible thinking was hardly possible when armies were led personally by commanders, usually on chargers. With von Moltke's introduction of detached generalship, it became not only possible but essential.

Few commanders in history ever undertook a more daring enterprise than Montgomery's attempt to seize the bridges on the approaches to Arnhem. Airborne troops were planted on the crossings of three major rivers, the Maas, the Wall, and the Neder Rijn. The surprise air-drop was of course the basis of the plan. Success in this phase would permit the speedy follow-up of the ground forces before the astounded enemy could recover. Weather, a variable factor in any operation, plus an unexpected enemy force, prevented the full accomplishment of a plan which ranks second only to the Invasion of France in audacity. Despite this partial failure, the crossings of two major water obstacles were seized intact.

From this review of Field Marshal Montgomery's exploits, we can perceive the blend of Napoleonic skill with von Moltke's penchant for planning and sureness.

Napoleon, fighting in battles as he found them, relied on principles that were cardinal to Montgomery. Each had to apply them, of course, to the special considerations of his day. Von Moltke, perhaps by unhappy circumstances, introduced the ugly

clash of controlled mass. Montgomery perfected von Moltke's detached generalship, fulfilling subtle plans by flexibility in action. He won decisions where he was outnumbered and faced with heavy psychological odds. Alamein, the Caen pivot, and the Battle of Arnhem stand as witness to the advantage of cunning and indirect manoeuvre over brute force.

The Future

All past experience stresses the potent role that surprise has played in the science of war. What new methods of achieving surprise are likely to be developed? What countermeasures can we take to prevent our being caught unawares in case of future conflict?

During peace, the development of new weapons continues. Today the intensity of weapon development has reached a new high. As little as a year ago, it was thought that the atom bomb was the ultimate in destructive power. Now a hydrogen bomb is in its formative stage and is reputed to be a thousand times more powerful than the atom bomb. The field of bacteriological warfare is relatively untouched. Dreadful possibilities are latent in such vast and indiscriminate weapons of war. It can only be hoped that, as with poison gas in the Second Great War, there will be a psychological sanction against their use.

However, in the fields of strategy and tactics great possibilities also exist. In modern war flexibility is the very essence of surprise. Any means by which mobility can be increased and still kept within the control of the commander will be of infinite value.

The question of air transportability is the first problem. With the fast-moving tactics of today, the commander who gets there "first with the most" stands a very good chance of winning. Since a future war could be waged on any part of the world front, air transportability is doubly important. From the first attack, until stabilization permits all maintenance agencies to be utilized, the transport of troops and equipment by air will be our only recourse. To meet this situation our technical experts must produce the following:

(a) A general purpose air-cargo plane with a ten-thousand-mile range and a twenty-five to thirty-ton payload.

(b) An improved aircraft fuel to give increased range.

(c) Electronic devices for long-range guidance of aircraft, both piloted and remotely controlled.

(d) A gigantic transport aircraft to replace the troopship for strategic movement. Although this is possibly remote, the use of atomic energy may make it quite feasible.

In the tactical battle, future com-

manders can look for several refinements in equipment to help them achieve surprise. Here are some that will undoubtedly be developed:

Engineer Equipment: Bridges must be designed for faster erection while having a higher load-carrying capacity. Improved and portable illumination equipment is required to permit greater efficiency in engineer work at night. Floats of more efficient design and material are necessary for ferrying divisional weapons.

Armour: Greatest requirement is for a navigational apparatus that will indicate course and position. Also a fuel giving "miles to the gallon" instead of "gallons to the mile" is essential.

Infantry: The infantry soldier must have infra-red visors to give him night vision. He must also be equipped with a radio-telephone with a range of two to three hundred yards, perhaps similar in design to a hearing aid. Battalions should have a light bridge that can be projected across minor water obstacles. An overhead cable system, based on the block-and-tackle principle, should be provided for the transfer of support weapons over obstacles.

Airborne Units: The first requirement is for air-portable landing strips. Aircraft with men and equipment should land or perhaps be let down by special helicopter blades. A minimum of personnel should be para-troops in order to permit the evacuation of the airhead if necessary. Planes and gliders capable of carrying light tanks and field artillery must be developed. A cargo craft that can detach its load-carrying container and return to base to pick up another is essential to the rapid buildup of an airhead.

But it would be misleading to pretend that such inventions will be the sole determinant of who will be the victor in the next war. Although the scientist will increase his contribution, all past experience indicates that the human factor will remain. The future commander must therefore combine von Moltke's control over his technical resources with Napoleon's genius for doing the unexpected, in order to work his will upon the enemy.

Before concluding, we should consider what countermeasures can be taken to prevent an enemy from gaining surprise. We know that a power bent on world domination will not observe a code of ethics. While democracies have their "rules", it would be folly to assume other powers will follow them. Therefore, an unstinting effort must be made to ensure that no aggressor power will gain a "Pearl Harbor" advantage which, with the devastating weapons of today, might prove fatal.

At the level of political strategy, broad-minded military thought is

vital. Neither personal feelings nor biased thought ought retard the production of the best possible defence organization. The national policy must include a guard against a surprise thrust in the political field. A complementary shield must be raised up by the military leaders.

No possible avenue of strategic approach must be discarded. The whole history of war shows that audacious and courageous commanders have chosen the impracticable route. In Napoleon's time, the desert was not considered a possible battleground. Within a short span of years, it was to be the arena for some of the largest military operations on record. We are always faced with the danger of indifferent opinion which might, for example, regard protracted Arctic warfare as impracticable.

In peace, we must rely upon thorough preparedness; constant development of weapons and techniques; complete harmony at the political-military level; and thoughtful military appreciations, revised to keep apace with the changing world situation.

The words of Lord Byron are particularly apt:

> "A *thousand years scarce*
> *serve to form a state;*
> *An hour may lay it in the*
> *dust . . .* "

In the tactical battle, the only countermeasure to the surprise which a crafty enemy might achieve will be the nimbleness of the commander's mind. The unexpected will always be a nemesis to a commander. If he has his forces in proper balance, it will be difficult to catch him off guard. This will not always be possible. In such circumstances, only a cool head and a quick mind will thwart the stroke of the opposing commander. Field Marshal Montgomery demonstrated this fact during the Battle of the Bulge. His refusal to become flustered enabled him to take quick and effective steps to restore the situation after the German break-through in the Ardennes. Surprise is psychological in essence; the antidote is equally nebulous.

Conclusion

Surprise will always be a general's most effective weapon. From 333 BC, when Alexander constructed a causeway through the sea to capture the island-city of Tyre, to the Invasion of Normandy, when the Allies established two artificial harbours in the Baie de la Seine to maintain their vast invasion force, the unexpected achieved through vision, courage and determination, has overcome seemingly insurmountable obstacles. Surprise, with its limitless range, seeks out and paralyses the mind of the enemy commander, thereby creating the opportunity for decisive action.

Surprise, in all its aspects, must

TACTICS IN MALAYA

Condensed from an article
by Major J. L. Hillard in The Army Quarterly
(Great Britain)

The emergency in Malaya now has lasted for more than 2½ years, and, according to various authorities, it is not likely to end in the near future. In view of this situation, it seems appropriate to re-examine some of the basic strategy and tactics of the campaign in relation to the general principles of war. Such a re-examination is difficult for authorities on the spot. They become immersed in detail, which tends to confuse the essentials of the problem. Owing to the nature of human psychology, they tend to think within a certain framework of assumptions—assumptions which may have a bearing on the lack of success in the campaign.

Nature of the Country

Malaya is approximately the size of England and Wales. For the most part, it is covered with dense jungle and has considerable areas of swamp. It has very limited communications—road, rail, and signal—so that many parts of the country normally are never visited except possibly by aborigines. Much of the country is uninhabited and unadministered.

Attitude of the Population

The attitude of the local population must be considered under two categories—Chinese and non-Chinese. That of the non-Chinese is generally and basically pro-Government. Willingness to give support to the Government alone, however, is not sufficient. The flesh also must be strong, and, in Malaya, the ability of the pro-Government section of the population to give support is limited largely by the inability of the Government to

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SURPRISE

(*Continued from preceding page*)

continue to be a most potent factor in war.

Sources of Direct Quotations

Page 68: "Our lack . . . enemy may do." From "El Alamein to the River Sangro" *by Field Marshal, The Viscount Montgomery of Alamein, KG, GCB, DSO. (Page 4).*

Page 72: "A thousand years . . . dust." From "Childe Harold's Pilgrimage," Verse LXXXIV, Canto the Second, by Lord George Byron.

(*Concluded*)

give adequate support and protection to its well-wishers.

The attitude of the Chinese section of the population is harder to explain. Nearly all, whatever their real wishes, naturally want to be on the winning side, and, in the present situation, are, therefore, reluctant to show their hand. Force of circumstances compels many to compromise their idealism, whatever its type, with practical realism. The net result of this attitude may be summed up as follows: The attitude of the Chinese section of the population varies between support to the guerrillas (forced or voluntary), apathy, and support to the Government. As regards the proportions of these three attitudes, there is little doubt that the guerrillas receive much more support from the population than the Government.

Summing up the combined effect of the conditions of the country and population, Malaya might be regarded as almost a guerrillas' paradise. In contrast to the Government forces, the guerrillas receive more support from the local population, have better information, know the terrain better, and are better able to live off, and move in, the country.

Strength of the Forces

Relative strength always is an integral part of any military appreciation, and the relative disparity of strength between the Government and guerrilla forces might appear, at first sight, to be the next outstanding fact in the present situation in Malaya.

The guerrillas have to use few, if any, of their forces on protective duties, and so can employ almost their entire strength in an offensive role. On the other hand, the Government forces have to protect the entire population of Malaya—less the guerrillas and their supporters—a population of approximately 5 million people, whose distribution is not concentrated in a few large towns, but spread out in numerous small towns, villages, squatter areas, and estates. This is a task which is essential if the Government is to secure the help and support of the masses of the population, without which no power can remain in an alien country. The consequences of this are twofold. First, the Government forces available for a fully offensive role probably are only two or three times greater than the forces available to the guerrillas. Second, it is impossible to be strong everywhere, so that the Government forces are, of necessity, split up into numerous small parties against which the guerrillas, having, as the aggressors, the local initiative, can concentrate superior strength.

Organization, Equipment, and Resources

There now remains to consider the fourth outstanding factor in any ap-

preciation of the present situation in Malaya, namely, the great superiority in organization, equipment, and resources of the Government forces. The problem, therefore, resolves into a consideration of how these advantages may be utilized to overcome the advantages of the guerrillas, which have been noted above. The advantages of the Government forces are of no benefit unless they can be put to practical use, and the primary contention of this article is that these advantages are not being exploited. The Government forces are using tactics which bring them down to the level of the guerrillas, which results in their fighting guerrilla-type operations. For instance, a typical operation in Malaya is something along these lines. A report is received at the local headquarters that there is a base of bandits in the jungle near Y, approximately 50 miles from the nearest road. Immediately, a party is sent to contact the guerrillas and destroy them. The normal sequel is a long and exhausting march through the jungle lasting possibly a week, and, on arrival at Y, the occupation of a small deserted clearing in the jungle. In more fortunate and unusual circumstances, contact with the guerrillas may be achieved, in which case probably a short small-arms engagement takes place between a few personnel of each side, resulting in one or two casualties before the guerrillas retire. The superiority of organization, equipment, and resources which the Government forces are able to bring against the guerrillas is almost negligible, and, due to the necessity of dispersion of the Government forces for protective purposes to sustain civilian morale, it is more than likely that the numerical superiority in such engagements is with the guerrillas rather than the Government forces—although the overall numerical superiority of the latter is possibly twentyfold.

Lack of Tactical Mobility

In the preceding paragraph, it has been suggested that the basic problem in Malaya at the present time is that of finding a means whereby the Government superiority of organization, equipment, and resources may be exercised. What, up to the present time, has prevented the employment of this superiority? The answer is the lack of tactical mobility of the Government forces.

The physical means of movement which now will be considered are the human being, air transportation, and mechanical transport. In considering the first means—the human being or, to be more specific, the mobility of the individual—it has been stated before that this will put the Government forces on the same level with the guerrillas, and it has been agreed that this is the wrong approach. Air transport is being used, and has been used,

in Malaya with great success in dropping supplies. This enhances the administrative mobility, hence the tactical mobility, of the Government forces. However, the characteristics of air transport are such that it cannot be used to enhance short-range, tactical mobility—especially in the case of Malaya where airfields are few and far between, and the employment of parachutists is difficult.

There remains the alternative of mechanical transport. However, mechanical transport, like air transport, also requires a correlative condition for its effective utilization, namely, a well-developed road system, and Malaya does not have such a system.

Summary

The development of this article now has reached its climax, namely, the assertion that the primary solution to the problem in Malaya is the construction of roads. It is not maintained that the construction of roads alone will solve all the difficulties in Malaya, any more than anyone would maintain that the ignition of a spark is the only factor necessary to cause an explosion. The battle must be fought on the social, political, and economic fronts, as well as on the military front. However, it is maintained that a policy of road construction is an essential component of any solution of the present Malayan problem. Only in this way will the Government forces be enabled to enhance their present numerical superiority over the guerrillas sufficiently to allow them to carry out their protective responsibilities, and, at the same time, have a large numerical superiority over them for offensive operations. Similarly, only in this way will the Government forces be enabled to employ their superior technical resources against the guerrillas, to penetrate their bases and hiding places, to concentrate quickly and with surprise and in superior numbers from all directions, and, finally, to bring the guerrillas to battle—the primary tactical problem in any anti-guerrilla campaign. In short, this author recommends a policy of opening up the country to free access, rather than attempting to collect the population into certain selected areas already opened up.

A Lesson From History

This solution is not novel. It was a cornerstone of the method employed by the Romans for the security of their empire. It had to be adopted on the northwest and northeast frontiers of India, and it is the writer's contention that it is not only an essential component of the short-term solution to the present problem in Malaya, but also the most important factor in any long-term solution of the internal security problem in that country.

Answer to problem on page 55: 15 feet.

THE PRINCIPLES OF WAR

Prepared by the Directorate of Military Training, Army Headquarters, Australia, and reprinted from the Australian Army Journal

Introduction

A cursory perusal of the Principles of War listed in Army Training Memorandum No. 53 (February-March, 1948), may lead to the supposition that the Chiefs of Staff in the United Kingdom have altered some of the old principles and introduced some new ones. Reflection, however, will show that all they have done is to re-state the well known and generally accepted principles in more precise terms, and to underline certain factors which, under the conditions of modern war, require emphasis.

It will be noted that the Chiefs of Staff have:

(a) Emphasized in the strongest possible terms the importance of the *Principle of the Selection and Maintenance of the Aim.*

(b) Elevated to the status of principles two well known elements of war which were not included in the list of principles given in Field Service Regulations, Volume II, 1935. These two elements, now designated principles, are:

Maintenance of Morale
Administration.

It is felt that a brief review of the changes in the conditions of war which have necessitated the statement by the Chiefs of Staff may be of assistance in forming an appreciation of the differences between the new and the old list of principles. Since the only differences lie in the additional stress placed on "*The Selection and Maintenance of the Aim,*" and the inclusion in the new list of "*Maintenance of Morale*" and "*Administration*", it is proposed to confine the review to these three principles.

Selection and Maintenance of the Aim

At first sight it may appear that the selection of the aim to be pursued in any operation is a fairly simple matter. Experience has shown, however, that in practice the selection of an aim from several alternative courses is not always easy. At the higher levels it is nearly always subject to the influence of conflicting interests, opinions, and demands. Even when selected, the relentless pursuit of the aim is still subject to these same influences, and at all levels the general confusion of war and the ever

changing situation, makes it extremely difficult to "keep one's eyes on the ball".

A good example of the selection and maintenance of the aim at the highest levels is to be found in the situation created by Japan's entry into the war in 1941. Instead of one major adversary the Allies now had two. Three courses were open to them. They could concentrate against Germany or against Japan, or they could attempt to defeat them both simultaneously.

All interested parties in both London and Washington ruled out the third course, because it violated the *Principle of Concentration*, and because it was obvious at the end of 1941 that we would not be strong enough for several years to launch a major offensive against both opponents simultaneously.

The selection of the enemy to be attacked first was not quite so simple. American public opinion had been aroused by the . . . Japanese attack on Pearl Harbor and the course of events in the Far East. There was, naturally, a strong national desire to avenge these disasters. Similar influences, springing from a different cause, were felt by the British Government.

The Allied statesmen and military leaders saw clearly that Germany was the more dangerous enemy, and decided on the following course:

First: Concentrate the maximum available force in the European theatre with a view to crushing Germany. Simultaneously to allot to the South-East Asia and Pacific Areas the minimum forces required to protect the bases and resources which would eventually be required for an offensive against Japan.

Second: Having crushed Germany, transfer from the European to the Asiatic-Pacific theatres the forces required to mount a decisive offensive against Japan.

The Allied leaders had now to decide how, when, and where the forces to be concentrated in the European zone would be launched against Germany. There were many places where a landing could be made in Europe, and many points for and against each of them.

Eventually it was decided to launch the main attack from the United Kingdom against the north-western coast of France, and to support it with a subsidiary operation in the south of France. Meanwhile diversionary operations, designed to knock Italy out of the war and bring about a dispersal of the German forces, were undertaken in Italy.

In adhering to these decisions despite considerable pressure to open a "second front" at a premature stage of their preparation, the Allied leaders had in mind one of the major lessons of World War I. In that

conflict the Central Powers (Germany and Austria) induced us for political and other reasons to undertake a number of costly subsidiary operations in the Near and Middle East, and on the periphery of Europe. Whilst these operations absorbed a large number of our troops and much equipment and shipping, the Central Powers, working on interior lines, were able to hold our attacks with only a fraction of the forces and material expended by us.

Having selected their aim, and decided upon the method of attaining it, the Allied leaders resolutely pursued their purpose. Unlike their predecessors of the 1914–18 war, they steadfastly refused to disperse their forces by engaging in seemingly attractive side shows.

This is a strategic illustration, but in a very similar way the junior leader must select his aim, and then concentrate every possible effort on maintaining it.

Maintenance of Morale

Maintenance of Morale has always been considered vital to success in war. From time immemorial man has endeavoured to undermine his opponent's will to resist by methods that were sometimes subtle but very often crude and ineffective.

Until comparatively recent times the means of attacking an adversary's morale were strictly limited. In time of peace only weak subversive influences could be brought to bear on the potentially hostile population. In time of war it was virtually impossible to reach them at all. However, improvements in means of communication, notably in the development of modern printing methods and wireless broadcasting, have opened up avenues through which the will to fight of the armed forces and the civil population can be reached at all stages of the struggle, before and after the "shooting war" begins.

Long before World War II started the Germans had brought their newly developed psychological warfare machine into operation. By every conceivable device, the radio, the printing press, smooth-tongued agents apparently innocent associations of honest citizens, they undermined the morale of their intended victims.

As a result of these subtle, indirect attacks, Austria and Czechoslavakia fell like ripe plums into the German basket without a shot being fired. In Norway, the activities of many influential people who had fallen victims to Hitler's propaganda machine, paved the way for the cheap and easy victory of the German forces. In France similar methods met with striking success. These things happened; they are not figments of the imagination. And they happened to people who were just as sure as we are that they were proof against any

propaganda.

With the outbreak of hostilities we entered the propaganda field, and the Germans intensified their efforts. Although we are inclined to deride our opponent's appreciation of the psychology of other nations we should not forget our own futile leaflet barrage of Germany in the early months of the war. Nor should we forget that the Germans' efforts to influence the morale of fighting forces opposed to them did not in all cases go entirely unrewarded.

The first defence against this insidious form of attack is for every commander, in peace and war, to ensure that his troops are thoroughly educated in the ideals and aspirations of their country, and unshaken in their belief in the ability of their own army to fight its way to victory.

Good leadership, good training, and good administration are the surest foundations on which to build and maintain morale. As a soldier gains confidence in his leaders, his weapons, and his equipment, so does his morale rise. These basic essentials, coupled with a firm belief in the justice of his cause, should sustain the morale of the soldier even under the most adverse conditions.

Administration

In the days before the Napoleonic Wars the relatively small and simply equipped armies lived off the country, and required no elaborate supply or transportation arrangements. Napoleon's attention to administrative detail placed him ahead of many of his contemporaries, and contributed in no small measure to some of his most striking successes. Nevertheless, administrative failure in his campaign in Russia in 1812 ruined his magnificent army, and led to his final overthrow.

As the dependence of armies on vast quantities of supplies and equipment has increased so has the importance of administration. Failure to realize this fact has led to many military disasters, of which the Crimean War of 1854 was an outstanding example. Lest it be felt that these events are too remote to be impressive it is worth recalling that administrative failures no less shocking occurred during the British-Indian Campaign in Mesopotamia in 1914-16. Even as late as 1941-42 the Germans' failure to provide their armies in Russia with winter clothing and equipment involved them in tremendous losses.

The administrative arrangements for the invasion of Normandy, which took many months to perfect, constitute a model of planning, forethought, and co-operation. They ranged from the secret construction of huge mobile ports and under-water petrol pipe lines to the provision of paper bags for seasick personnel. The concentration, and embarkation in the

right craft at the right time, of a large number of units and vast quantities of stores, vehicles, and equipment, called for detailed planning on an immense scale.

The plans worked. Despite bad weather that wrecked one of the mobile ports and impeded beach working, the success of the operation was never endangered by a breakdown in administrative arrangements.

For many years before the war the importance of administration was stressed in the training of the Australian Army. And yet the outbreak of hostilities brought to light certain weaknesses in ideas and methods, notably in the matter of the soldier's food.

Administration is not solely the concern of higher commanders and their staffs. Nor is it merely concerned with the mounting of operations on a vast scale. Every commander, and there are no exceptions whatever, is responsible for the administration of his command.

On the unit level administration only occasionally becomes involved in big operational plans. Within the unit it is a day-to-day affair of painstaking attention to detail. There can never be any let-up in this matter in peace or in war because, in the final analysis, it is on sound unit administration that victory is built.

LIGHTER LOADS

Energetic efforts are being made to reduce the weight a soldier must carry into combat by as much as 65 per cent., according to General J. Lawton Collins, [U. S.] Army Chief of Staff. He disclosed that a new intrenching tool has been developed to replace the shovel, pick-mattock and axe. This one item, General Collins said, will cut 3 pounds 14 ounces from the soldier's load.

He noted that the new 3.5-inch bazooka weighs less than the original 2.36-inch model, reported that a new aluminum-nylon helmet will save 8 per cent. in weight and give 15 per cent. more protection and said new tropical boots under development will be three-quarters of a pound lighter than the regular boot. The soldier's eating equipment is being reduced by about a pound.

General Collins told also of experiments being made with the metal, titanium—light and extremely tough. He said that a base plate of an 81-mm. mortar fabricated from pure commercial titanium weighed only 24 pounds, compared to 45 pounds for the old steel plate. "This new metal," said General Collins, "has great possibilities, such as titanium armour for light-gun tanks which will make them even lighter and more manoeuvreable."—*Condensed from the Army-Navy-Air Force Journal (U. S.).*

OTTAWA
EDMOND CLOUTIER
Printer to the King's Most Excellent Majesty
1951

17,000 — 8-51-(5031)
H.Q. 223-C-3