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DEPARTMENT  
OF  
MILITIA AND DEFENCE  
FOR THE  
DOMINION OF CANADA  
REPORT  
FOR THE YEAR ENDED 31st DECEMBER  
1898

*PRINTED BY ORDER OF PARLIAMENT*



OTTAWA  
PRINTED BY S. E. DAWSON, PRINTER TO THE QUEEN'S MOST  
EXCELLENT MAJESTY

1899

*To His Excellency the Right Honourable Sir GILBERT JOHN ELLIOT MURRAY-KYNNY-  
MOND, Earl of Minto and Viscount Melgund of Melgund, County of Forfar, in the  
Peerage of the United Kingdom, Baron Minto of Minto, County of Roxburgh, in the  
Peerage of Great Britain, Baronet of Nova Scotia, Knight Grand Cross of Our  
Most Distinguished Order of St. Michael and St. George, etc., etc., Governor General  
of Canada.*

MY LORD,

I have the honour to forward to Your Excellency the accompanying Report of the  
Department of Militia and Defence of the Dominion of Canada for the year ended 31st  
December, 1898, which is respectfully submitted.

I have the honour to be,

My Lord,

Your Excellency's most obedient servant,

F. W. BORDEN,

*Minister of Militia and Defence.*

DEPARTMENT OF MILITIA AND DEFENCE,

OTTAWA, 9th March, 1899.

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I  
PART II.

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REPORT

OF THE

DEPUTY MINISTER

DEPARTMENT OF MILITIA AND DEFENCE,

OTTAWA, 9th March, 1899.

The Honourable F. W. BORDEN,  
Minister of Militia and Defence.

SIR,—I have the honour to lay before you the following ordinary annual reports which relate, in detail, to the operations carried out in the Department of Militia and Defence :—

1. The report of the General Officer Commanding the Militia, with appendices relating to Active Militia and Permanent Corps; also, the report of the Officer Commanding the Royal Military College.

2. The report of the Chief Superintendent of Military Stores, giving a detail of all clothing and military stores issued to the force during the year. It also contains a return of all monies collected for rents, ammunition, gunpowder, friction tubes, issued on repayment—together with important suggestions.

The 30,000 sets of Oliver Equipment authorized to be manufactured, are now being received into the stores and over 3,000 are inspected and ready for issue when authorized.

3. The report of the Chief Engineer of the Department showing the work of repairs done under his supervision in the different districts.

4. The report of the Superintendent of the Government Cartridge and Shell Factory. Nearly a million of ball cartridges .303 have been manufactured during the year and in the shell factory about 10,000 projectiles have also been made for the 9-pr., 12-pr. and 64 pr.-guns now in possession of the Batteries of the Artillery.

It is expected that in the near future an important addition will be made to the factory by the manufacturing of steel shell projectiles.

The financial statement for the year is as follows :

FINANCIAL Statement for the Year ending 30th June, 1898.

Votes for Militia Services, 1897-98.		Expended.
		\$ cts.
By Statute—		
Pay of General Officer and Adjutant-General .....		6,600 00
By Vote—		
Pay of Staff, Permanent Corps and Active Militia, including allowances .....		364,135 44
Yukon Contingent .....		99,975 75
Annual Drill of the Militia .....		299,627 60
Salaries and wages of civil employees .....		65,420 23
Military properties, works and buildings .....		99,899 59
Rifle Range at Ottawa .....		14,659 75
Warlike and other stores .....		46,867 90
Clothing and necessities .....		87,343 60
Provisions, supplies and remounts .....		119,910 93
Transport and freight .....		39,975 51
Grants in aid of Artillery and Rifle Associations and Bands and Military Institutes ..		35,000 00
Miscellaneous and unforeseen contingencies .....		14,803 68
Royal Military College of Canada .....		58,231 27
Dominion Cartridge Factory, including free ammunition for Rifle League competitions, \$54,000 ..		72,832 45
Defences, Esquimalt, " material, Martini rifle ammunition, \$15,000 .....		
Dominion contribution towards Capital Expenditure for works and buildings, \$29,000 ..		
Pay and allowances of a detachment of Royal Marine Artillery or Royal Engineers, \$47,500 ..		44,899 47
Gratuities to Officers to be retired .....		42,914 94
Queen's Jubilee Contingent .....		1,374 25
Capital Account—Arms, Ammunition and Defences .....		173,740 32
Total .....		1,681,612 68
<i>Pensions.</i>		
By Vote—		
Pensions—Militia, Rebellion, 1885 .....		18,918 41
" " Fenian Raids, &c. ....		2,870 60
" " Veterans, War of 1812 .....		
By Statute—		
Pensions—Militia, Upper Canada, Rebellion, 1837-38 .....		1,480 00
		23,269 01

REVENUE.

	\$ cts.	\$ cts.
Casual .....		401 50
Ammunition, Stores and Clothing .....	15,467 88	
Miscellaneous .....	1,145 16	
Rents .....	4,419 62	
		21,032 66
		21,434 16
Royal Military College .....		15,883 68
		37,317 84

I have the honour to be, sir,

Your obedient servant,

L. F. PINAULT, Lt.-Colonel,  
Deputy Minister of Militia and Defence.



## APPENDIX No. I.

### REPORT OF THE CHIEF SUPERINTENDENT OF MILITARY STORES.

STORE BRANCH, OTTAWA, January, 1899.

SIR,—I have the honour to report that during the year 1898, I visited the military stores at Halifax, St. John, Quebec, London, and Toronto, and found the duties of the Store staff being carried out as satisfactorily as possible under existing circumstances.

The buildings at Halifax, Kingston, Toronto and London, as previously reported, are altogether unfit for storage purposes and render the proper care and efficient working of the Staff very difficult. The buildings at Halifax and London are held under lease. The lease at London will expire during the coming year. I would strongly urge and recommend that provision be made in the estimates for the erection of a new building for the Department. This would not entail a larger sum than the rental paid, if capitalized, but would, I believe, effect a saving in a few years. The same would apply equally to Halifax. The building leased there is an old and dilapidated one and thoroughly unsuited for military stores purposes—necessity will compel a change, if not to a building erected by the department then to another one under lease, which will be more suitable for store requirements.

The early erection of the store buildings at head-quarters is a necessity in order that the stores may be gathered under one roof for care and supervision.

The artillery at Quebec have gradually encroached on the store accommodation at that station to such an extent as to greatly interfere with the proper receipt, storage, and issue of equipment. During the year, in order to facilitate the handling of large consignments, and so save expense of transport, which was considerable, I personally made arrangements with the Honourable the Minister of Marine and Fisheries for a portion of the store building on the Queen's wharf, to be handed over to militia charge for the purpose.

Attention is drawn to the fact that the Store branch is only charged with the custody and proper care of the *matériel* in its charge, and its issue, under the authority of the Honourable the Minister. Experience has proved that the latter is a necessity in the interest of the Public.

The correctness of patterns, inspection when in store as to fitness for issue to the troops, &c., are all vested in the military authorities. If they do not come up to the service requirements, the officers charged with the above duties are responsible. They have free access at reasonable hours to the store buildings when necessary. They have, also, every facility for knowing the number, and quantity, of each article in store as they are checked by them annually, or are supposed to be, by regulations and orders for the militia, and their correctness verified by reference to the store ledgers in charge of the respective Superintendents.

That there is the existing quantity of *matériel* in charge is due to the persistent efforts of the branch under my charge in repeatedly pointing out that their purchase was an absolute necessity. This was done from personal knowledge of the wants of the force and not based on any estimate supplied by its officers.

No estimate of probable requirements for any given period, has ever been furnished by the Military branch of the department, and it is not possible that any other branch should be cognisant of its actual, or probable requirements by intuition. If the articles required are not forthcoming when demanded, the responsibility must consequently rest with the officers who are charged with attending to this necessary duty, and not with the Store branch.

No information is supplied to my office of the number, quantity, or description of stores ordered either in Canada or from England, the first intimation received is an order to take a certain quantity of stores on charge, after inspection, or after their delivery on the wharf at Quebec, or elsewhere, if from England. This interferes materially with the work of receiving stores, as I am unable to notify officers concerned to make necessary arrangements. When the 12 pr. B. L. batteries, Maxim guns and other stores were ordered from England by Colonel Lake, then Quarter-Master General, no notification whatever was received by me as to the nature, or quantity of the stores to be received, for what service they were required, or to what station they were to be sent. It is utterly impossible under the circumstances to make due provision for the effective working of the branch under my control.

Annual boards of survey, in accordance with the regulations and orders, were held during the year under the presidency of the District Officers commanding at the following stations, on the dates mentioned :—

London.....	22nd February.
Toronto.....	1st to 14th January.
Kingston.....	7th September.
St. John, N.B.....	5th and 6th April.
Victoria, B.C.....	27th January.
Charlottetown....	11th and 12th April.

As the store ledgers were verified on the above dates by the officers composing the board, I did not during my visit enter into any minute inspection, more particularly as returns from the several stations are checked monthly under my supervision.

The inspection of ordnance and other warlike stores is entrusted by regulation to the Inspectors of Artillery and no action is taken with regard to them without reference to these officers through the Military branch. The officers of the Store branch are, however, quite competent to carry out the inspection, care and preservation of any warlike stores as yet provided for use in Canada.

The greater number of the articles referred to in my last annual report as being obsolete or unserviceable have since been disposed of by public auction. In every instance, however, the articles so disposed of had been reported upon either by a board of survey, or by the Inspector of Artillery, and the action taken was in accordance with the recommendation of these officers after subsequent approval at Head-quarters.

There is still a large quantity of shot and shell for smooth bore guns on charge at some of the stations. After inquiry it is not considered that any saving to the public would be effected by transferring them to Quebec for use at the Cartridge factory. The recommendation is again made, therefore, that they be sold, locally, either by public auction or by tender.

Former conditions as to magazine accommodation remain unaltered. It is quite inadequate.

Attention is requested to my remarks in last report with reference to supply of clothing for issue to the force. Much of the trouble during the present year was due to the inability of the contractors to fulfil their obligations. If, however, a reasonable stock were provided over and above the year's demands, an emergency, such as occurred this year, would be easily met.

The two additional batteries of 12 pr. B. L. Guns received from England have been ordered for issue to the 1st (Quebec) and 7th (Welland Canal) Field Batteries. A supply of spare parts and small stores liable to become unserviceable by accident or from fair wear at drill is required to meet probable demands—the supply in store is limited and I have no knowledge of any having been ordered as a reserve.



The fifteen Maxim guns imported have been distributed as under :—

R. C. Artillery.....	1
Cartridge Factory.....	1
Yukon Contingent.....	2
"B" Squadron R. C. D.....	1
Regimental Depots.....	4
2nd Queen's Own Rifles.....	1
8th Royal Rifles.....	1
10th Royal Grenadiers.....	1
43rd O. and C. Rifles.....	1
48th Highlanders.....	1
13th Battalion.....	1

It is suggested that these guns should be thoroughly examined and cleaned by a competent Armourer at least once a year.

Lee-Enfield Rifles have been marked and issued to corps as ordered. The services of the armourers are available for inspection of rifles in possession of corps when required. This should be done at least every two years. Great want of care is evident in the handling of these rifles when issued to camps for instructional purposes. The rifles in store at Quebec will all be placed in racks in the armoury as soon as the necessary alterations which are being effected are completed. This has been delayed waiting for authority to incur the necessary expense.

The 30,000 sets of Oliver Equipment authorized to be manufactured for the use of the militia, are now being received into stores at Toronto and Halifax as passed by the Board of Inspection. Two thousand sets have been sent to each of the stores at London, Kingston, Montreal and Quebec, and are ready for issue when authorized.

In accordance with the recommendation of Mr. Woodcock, Departmental Saddler at Toronto, the whole of the leather work of the new saddlery is being thoroughly treated with dubbing, as received into store. Mr. Woodcock's services have been used by the department in inspecting the saddlery and Oliver equipment (at Toronto) as received from the contractors. He has proved himself thoroughly efficient in his duties.

The establishment, by the Honourable the Minister of Militia, of the principle that only men who have acquired a knowledge of stores by service in the permanent force should be eligible for positions as foreman of stores, cannot fail to secure good and capable men. In accordance with this decision Sergt.-Major Ingram has been appointed foreman at Winnipeg from "B" Squadron, Royal Canadian Dragoons.

I have to acknowledge the faithful and efficient aid given to me at all times by the members of my staff at Head-quarters. Major Donaldson's long service and experience as an artillery officer and his thorough knowledge of the artillery branch of the service have been of invaluable assistance to me.

Detailed statements as to quantities of clothing, ammunition, gunpowder, &c., issued, of moneys received on account of stores sold, and rents collected are appended.

D. A. MACDONALD, Lt. Colonel,  
*Chief Superintendent of Military Stores.*

The table herewith shows the details of clothing issued on requisitions during the year :—

## ISSUES.

Tunics, Cloth.				Tunics, Serge.				Trousers, Cloth, Pairs			Trousers, Serge, Pairs.			Forage Caps.				Great Coats			Riding Breeches	
Cavalry.	Artillery.	Infantry.	Rifles.	Cavalry.	Artillery.	Infantry.	Rifles.	Cavalry.	Artillery.	Infantry.	Artillery.	Infantry.	Rifles.	Cavalry.	Artillery.	Infantry.	Rifles.	Cavalry.	Artillery.	Infantry and Rifles.	Cavalry.	Artillery.
299	574	2,057	78	627	726	3,236	1,474	257	235	189	782	5,562	1,336	492	1,315	8,735	761	202	553	3,343	421	452

The following table shows the number of tenants and the amount received on account of rentals from military properties held under lease for the year ending 30th June, 1898.

## TENANTS and Rental from 1st July, 1897, to 30th June, 1898.

Number of Tenants.	Station.	Rents Received.	Remarks.
		\$ cts.	
3	{ ...Chatham } M. D. No. 1.....	6 00	
	{ ...London.. }		
5	{ ...Toronto.. } M. D. No. 2.....	267 85	
	{ ...Niagara.. }		
21	...Kingston, M. D. No. 3.....	322 17	
6	...Montreal, M. D. Nos. 5 and 6 .....	589 75	
45	...Quebec, M. D. No. 7. ....	2,957 95	
8	...St. John, M. D. No. 8. ....	177 25	
12	...Halifax, M. D. No. 9 .....	75 53	
2	...Charlottetown, M. D. No. 12. ....	5 87	
102	.....Total number of tenants .....		
	Total amount of rents received .....	4,402 37	

*Deposit Receipts.*

The following amounts have been received for the services mentioned and duly deposited to the credit of the Receiver General during the fiscal year 1897-98.

Ammunition.	Military Stores and Clothing.	Rents.	Totals.
\$10,924 53	\$4,597 59	\$4,402 37	\$19,924 49

D. A. MACDONALD, Lt.-Colonel,  
Chief Superintendent of Military Stores.



SMALL Arm Ammunition issued for Practice from 1st July, 1897 to 30th June, 1898.

Military Districts.	Rounds.	
	Ball.	Blank.
Military District No. 1. London .....	173,040	30,740
" 2. Toronto .....	318,893	95,155
" 3. Kingston .....	160,320	4,800
" 4. Ottawa .....	20,380	7,180
" 5 & 6. Montreal .....	331,480	61,795
" 7. Quebec .....	130,890	3,260
" 8. St. John, N.B. ....	55,785	2,200
" 9. Halifax, N.S. ....	100,260	43,360
" 10. Winnipeg .....	35,220	400
" 11. Victoria, B.C. ....	6,000	6,200
" 12. Charlottetown, P.E.I. ....	18,140	
Issued to Militia Corps for Rifle League Competitions .....	200,000	
Total .....	1,550,408	255,090

D. A. MACDONALD, Lt.-Colonel,  
*Chief Superintendent of Military Stores.*

SMALL Arm Ammunition issued on repayment from 1st July, 1897, to 30th June, 1898.

Military Districts.	Rounds.	Amount.	
		\$	cts.
Military District No. 1—London .....	27,500	391	50
" 2—Toronto .....	154,664	2,550	99
" 3—Kingston .....	13,000	214	00
" 4—Ottawa .....	178,365	3,785	34
" 5 & 6—Montreal .....	57,350	801	25
" 7—Quebec .....	28,896	320	45
" 8—St. John, N.B. ....	42,683	603	65
" 9—Halifax, N.S. ....	13,340	168	18
" 10—Winnipeg .....	104,479	1,332	87
" 11—Victoria, B.C. ....	34,600	492	00
" 12—Charlottetown, P.E.I. ....	18,320	264	30
Total .....	673,197	10,924	53

	Rounds.
Lee-Enfield—Ball .....	178,163
Martini-Henry—Ball .....	416,369
Snider—Ball .....	58,985
" Blank .....	2,000
Morris Tube .....	16,480
Revolver—Colt's .....	1,200
Total .....	673,197

D. A. MACDONALD, Lt.-Colonel,  
*Chief Superintendent of Military Stores.*



RETURN of Gunpowder and Friction Tubes issued for Practice and Salutes from 1st July, 1897, to 30th June, 1898.

Military Districts.	Stations.	Corps.	Gunpowder.	Friction Tubes.
			Lbs.	No.
No. 1....	London.....	Field Batteries of Artillery.....	876	977
No. 2....	Toronto.....			
No. 3....	Kingston.....			
		Field and Garrison Artillery, Royal Military College and R. C. A....	5,682	2,915
No. 4....	Ottawa.....	Ottawa Field Battery and Salutes.....	472	325
Nos. 5 & 6.	Montreal.....	Field and Garrison Artillery and Salutes.....	550	425
No. 7....	Quebec.....	do do.....	5,324	2,650
No. 8....	St. John, N. B.....	do do.....	1,452	645
No. 9....	Halifax, N.S.....	do do.....	122	150
No. 10....	Winnipeg.....	Winnipeg Field Battery and Salutes.....	685	500
No. 11....	Victoria, B.C.....	Garrison Battery for Salutes.....	26½	44
No. 12....	Charlottetown, P.E.I.	Field Battery for Salutes.....	398	108
		Total.....	15,587½	8,739

D. A. MACDONALD, Lt.-Colonel,  
*Chief Superintendent of Military Stores.*

## APPENDIX No. 2.

### DEPARTMENT OF MILITIA AND DEFENCE, ENGINEER BRANCH.

OTTAWA, 31st December, 1898.

The Deputy Minister of  
Militia and Defence.

SIR,—I have the honour to report that the following works were carried out, and repairs made, at the military buildings and fortifications in the several Military Districts throughout the Dominion, from the 1st July, 1897 to the 30th June, 1898, which are under the control of the Department of Militia and Defence.

### MILITARY DISTRICT No. 1.

#### LONDON.

*Wolsley Barracks.*—A granolithic floor was put down, and a new sink placed in the men's kitchen. General repairs were made to the steam heating apparatus. A new floor was put down in the guard room. The draining system was overhauled, proper ventilation provided, and two hydrants repaired.

*Store Buildings.*—The water pipes in these buildings were partly renewed. Painting, papering and glazing was done in the office of the Superintendent of Stores.

*Drill Hall.*—General glazing was done to windows in this building.

*Camp Grounds.*—The buildings here were generally repaired.

*Rifle Range.*—General repairs were made to markers mantlets, firing points, targets, &c.

### MILITARY DISTRICT No. 2.

#### TORONTO.

*Stanley Barracks.*—The ceilings and walls of Sergeants' Mess were papered, and plaster repaired. A new sink, complete, was placed in the Men's Cook House. The water pipes at these barracks were repaired and partly renewed: hydrants were also replaced and repaired. Slight repairs were made in sergeant's and men's latrines. One attached officer's room was papered and painted. The roads leading from these barracks were graded, levelled and rolled. An isolation ward was provided in the hospital, the halls and rooms generally were kalsomined, and ventilation provided for wards. Maxim gun accommodation was provided in building 16 at these barracks.

*Drill Hall.*—General repairs to plumbing were carried out in this building. The wood work in armouries was painted generally. A new room was opened up in S.W. tower of drill hall, for a tool room for pioneers of the Queen's Own Rifles. General glazing was carried out. The gun shed and harness room of 9th Field Battery were enlarged, repaired and altered, for accommodation for increased establishment. The gates at drill hall were repaired and fence extended to complete inclosure. The arm racks in all armouries were re-numbered, and new locks put on store room doors of the several corps. The ceiling in boiler room was lathed and plastered.

*Old Fort.*—The board walk through Old Fort to the C. P. R. Bridge was thoroughly repaired.

*Store Buildings.*—The roof and chimneys of main store building were repaired. Storeman Pirrie's quarters were generally repaired, a storm porch put up, and new doors and windows placed. An office was fitted up for the Superintendent of Stores in the main store buildings.



## BRANTFORD, ONT.

*Drill Shed.*—A new hard wood floor was laid in the main hall of this building.

## WATERDOWN, ONT.

*Drill Shed.*—Repairs were made to walls and doors of this building, slight damage being caused by fire.

## BURLINGTON, ONT.

*Drill Shed.*—The armouries of the 20th Battalion in this building, were repaired generally. Drains were constructed to carry off surface water, and new eave troughs were put up.

## SIMCOE, ONT.

*Drill Shed.*—The eave troughs of this building were repaired, and provision made to carry the water away from the foundation.

## DUNDAS, ONT.

*Drill Shed.*—The roof of this building was thoroughly repaired, the foundation sills were renewed, and other small repairs made.

## NIAGARA, ONT.

*Rifle Range.*—The markers butts, firing points and targets of this range were all thoroughly repaired and put in order, for use at Brigade Camp.

*Camp Grounds.*—A new bridge was erected over Hospital Creek, and the necessary temporary buildings were put up for use at Brigade Camps.

## ST. CATHARINES, ONT.

*Drill Shed.*—The quarters of the 7th Field Battery were altered, and fitted up, to provide for increased establishment. This building has since been damaged, and almost destroyed by a cyclone.

## MILITARY DISTRICT No. 3.

## KINGSTON, ONT.

*Tête de Pont Barracks.*—The floor and joists in rooms 6 and 13, Block "E" were renewed, new chimney tops were placed on hospital kitchen Block "D", and Men's Kitchen Block "C", and the porches of Block "E" were flashed. The plumbing was repaired generally in these barracks. The ceiling of the Gunners' Library was kalsomined. A new steel clad bath and fittings were placed in the C. O.'s quarters. The floor in No. 7 Barrack Room, Block "E", was repaired. The stall posts in battery stables were renewed, and the sills and door of shed near stable repaired. The passages and billiard room of Officers Mess, and one room in the Sergt. Major's quarters were painted and papered.

*Barriefield Common.*—Several buildings were erected here for the Brigade Camp, and the two windmill water tanks were painted. Two chimneys on the Foreman of Stores quarters were repaired and a pump put in order.

*Fort Henry.*—The roof at east and west ends of gorge well was repaired, and the ends of walls covered. Wood covering was placed on the parapet of east and west flank walls. Fifty four chimneys not in use were covered, and those in use were repaired. Two ladders, each twenty-four feet long, and four fire buckets, were supplied. Six openings in Advance Battery were built up to prevent snow blowing into magazines. Windows in Caretaker's quarters were repaired. The fence around store property was partly rebuilt.

*Artillery Park Barracks.*—Alterations and repairs were carried out in the armouries of the 14th Battalion at these barracks.



## ROYAL MILITARY COLLEGE.

*Commandant's Quarters, King Street.*—The drainage at these quarters was generally overhauled and repaired.

*North Building.*—The various rooms and passages have been washed, kalsomined and painted. General repairs were made to plumbing, electric light and gas fixtures, and various slight repairs to plaster. The reading room was kalsomined and papered, the heating apparatus repaired, and general repairs made to windows, and glazing. A photographic dark room was fitted up in tank room, woodwork painted, and gas pipes laid. The doors in main tower were repaired. The walls and ceilings of No. 3 class room were kalsomined, and woodwork painted.

*East Building.*—General repairs were made to floors, doors, and ventilators. The various rooms and passages were washed, kalsomined and painted. General repairs to plumbing were made, also various repairs to plaster. New coal bins were made in furnace room. A new radiator and main pipe were placed in attic. The hot water boilers for bath room hot water supply were renewed.

*Non-Commissioned Officers' Quarters.*—General kalsomining, papering and painting were carried out at No. 2 and 3 quarters, one chimney was taken down and rebuilt and other chimneys flashed, the roof re-shingled, and fire ladders, doors, shutter and blinds repaired. One room in No. 3 quarters was kalsomined, painted and papered, floors repaired and sink sheeted.

*Engineer's Quarters.*—A new porch and front steps were put up, and repairs made to board walks.

*Servants' Cottages.*—The walls in these cottages were papered, ceilings kalsomined, and woodwork painted, and plaster repaired in Nos. 1, 2, 3, 4, 5, 6 and 7 cottages, and board walks were repaired and partly renewed.

*College Grounds.*—The roads in these grounds were slightly repaired, gravelled, and kept in order, the grass mown regularly and lawn rolled, also repairs made to fences and gates, new running path was made, the front gate repaired and re-hung and trees planted.

*Rifle Range.*—A new stop butt was constructed, targets renewed, markers butts repaired, telephone line and boxes fitted up.

*Quarter Master Stores.*—New shelves, wickets and standards were put up in these stores.

*Gymnasium.*—The electric light fixtures were repaired, floor and vaulting horse repaired, and the apparatus refitted generally. A bicycle rack was also fitted up.

*Carpenter Shop.*—The fitting up of a new carpenter shop was completed, and the exterior of same painted.

*Inner Gate House.*—The walls in this building were papered, ceilings kalsomined and woodwork painted.

*Bathing Shed.*—The floors were repaired, and a new spring board, gangway and fence put up.

## BELLEVILLE, ONT.

*Drill Shed.*—The drainage around this building was re-constructed and repaired.

*Rifle Range.*—The markers mantlets and firing points were extended at north and south ends, and extra targets provided.

## PETERBOROUGH, ONT.

*Drill Shed.*—Electric light was installed in this building.

## PORT HOPE, ONT.

*Drill Shed.*—The harness room of the 14th Field Battery was altered and extended to provide accommodation for increased establishment, and three armouries of the 46th Battalion were fitted up to complete the regimental armoury. A new chimney was also built in battery harness room.

## MILITARY DISTRICT No. 4.

## OTTAWA.

*Drill Hall.*—A new concrete floor was laid in the Field Battery Gun Shed, and a new door opened from main hall into same. The harness room of this corps was altered and extended to provide accommodation for increased establishment. Two chimneys on this building having fallen, and one in a dangerous conditions, were rebuilt. The roof, where damaged by falling chimneys, was repaired. Small repairs were made to plaster in several armouries. The interior of caretaker's house was papered and kalsomined, and woodwork painted. A water-closet was also fitted up in these quarters.

The foundation wall of drill hall was thoroughly pointed, and the tar and gravel roof over skylights was renewed. All windows were thoroughly glazed.

*Rifle Range.*—A survey was made, and a plan of the proposed Rockcliffe Rifle Range was prepared. The construction of the range was commenced, and good progress made. [See supplement to my report herewith.]

The old Rifle Range was levelled, according to conditions of lease, and the ground handed over to the owners. The Caretaker's quarters at this range were temporarily repaired.

*Store Buildings.*—The roof of work shops below Dufferin Bridge was recovered. The flag pole at Nepean point was painted.

## CARLETON PLACE.

*Drill Shed.*—This building was slightly repaired, and windows glazed.

## PRESCOTT, ONT.

*Drill Shed.*—The windows in this building were repaired generally.

## MILITARY DISTRICT No. 5.

## MONTREAL.

*Victoria Rifles Armoury.*—A new galvanized iron roof was put on this building, and roof gutters, down pipes and ventilators were repaired, and a new skylight was put in. The rear wall of building was pointed below ground, and the whole length drained. A brick wall being in a dangerous condition in furnace room was taken down and rebuilt. The floor, doors and plaster generally were repaired where necessary.

*Drill Hall.*—Alterations and repairs were made in the armouries of the Montreal Hussars. Twenty-nine new saddle racks were put up, new carbine racks provided and placed, cupboards and shelving re-constructed, an iron staircase erected to connect quarters on first floor, and new entrance made to store room, which was changed to officers quarters.

Three new rooms were fitted up, one for the field and two for the Garrison Batteries of Artillery. Cupboards, arm racks and fittings were placed in the former, and the heating and lighting installed in both.

New water and waste pipes were put in lavatories of main hall, and railing of stairs leading to galleries repaired. A new counter, shelves and drawers were fitted up in the Brigade Office.

## ST. HELEN'S ISLAND.

The camp grounds on this island were extended and levelled, and fences renewed. General repairs were made to storemen's quarters.

## ST. ANDREWS, P.Q.

*Drill Shed.*—General repairs were made at this drill shed, including re-shingling portion of roof, raising chimney and pointing same, renewing sills, and repairing doors and locks.



## MILITARY DISTRICT No 6.

ST. JOHNS, P.Q.

*The Barracks.*—General repairs were made to quarters occupied by the District Officer Commanding, also to those of Capt. Chinic. A new wicket gate was put up at main entrance of barrack inclosure. Two baths, two large water-closets and sixteen wash-basins were fitted up in men's quarters. Small repairs were made to plumbing in hospital, and one new water-closet put in.

*Camp Grounds.*—These grounds were drained preparatory to occupation by brigade camp.

SHERBROOKE, P.Q.

*Rifle Range.*—A survey of a proposed range has been prepared.

RICHMOND, P.Q.

A new regimental armoury was fitted up in the post office building for the 54th Battalion.

## MILITARY DISTRICT No. 7.

QUEBEC.

*Citadel.*—General repairs were made to plumbing in officers quarters, Jebbs' redoubt.

A new hot water heating system was installed, to replace wood stoves, in each of the following quarters in citadel :—The hospital, citadel armoury, Mann's stores, Orderly and Quarter Master stores, and general repairs were made to the hot water heating apparatus in different quarters.

The arches and walls of coal vaults were rebuilt, and a new coal shed built for hospital building.

The floor of 7-inch gun emplacement was cemented, walls painted and traversing bolts refixed at King's bastion. The staircase and steps in magazine, Cavalier, were repaired. The roof of cells building (one side) was renewed, and a new ash pit built. The floor of 8-inch gun emplacement was cemented, and steps repaired at Mann's bastion. The wall in gun emplacement at Diamond bastion was repaired and coped, and traversing bolts replaced. The chimney of carpenter shop was repaired. The floor of room 23, of officers quarters, was renewed. The chimneys over casemates in Dalhousie bastion were thoroughly pointed. The roof gutters and down pipes on casemates, from Dalhousie to Richmond bastion, were refixed and repaired. The stairs east of Diamond bastion were repaired.

A new wooden ceiling was put in sergeants' mess, and the floors of mess, billiard rooms and cook-house were repaired.

A hose tower was erected at the hand ball court, near "A" magazine. A new floor was put down in hall and ward No. 2 of hospital, and hot water connections made to baths. Twenty-two new storm window sashes were supplied for Mann's stores, doors and windows repaired, and coal bins built for these stores and for citadel armoury. The men's barrack rooms were painted and whitewashed generally. The plank wall in front of casemates 24 to 29 was removed. The floor in the officers' mess room was also renewed.

*Field Artillery Barracks.*—A drain at the entrance to these barracks was covered with concrete and connected with stable drain. This entrance was also graded and paved.

A new stairway was provided in the sergeant major's quarters. One chimney was encased in galvanized iron, and a chimney pot put up. A new chimney was also built for kitchen.

The water pipes in men's ablution room were repaired. New shelving was placed in the offices. The roof and floors of stables were repaired.



*Brigade Office Building.*—The interior of offices were painted, cleaned and kalsomined. The galvanized iron roof of sheds was repaired. The roof of main building was also repaired and roof gutters renewed. A new cowl was placed on one chimney.

General interior repairs were carried out in the quarters occupied by the District Officer Commanding. Floors, doors and windows were repaired, painting and papering done, a new water closet and bath was put in, and general glazing.

*Married Men's Quarters, St. Louis Street.*—A new hot water heating system was installed in this building, and general repairs were made to windows and doors. General plumbing was also carried out.

*Fortification Walls.*—The wall between Half Moon and St. Charles batteries on the ramparts was pointed. Slight repairs were made to wall on Mount Carmel Street. The wall on Mountain Hill, from post office steps to terrace, was partly rebuilt, thoroughly pointed and coped. Gun platforms on ramparts were renewed. Coping of wall in St. Genevieve Street was renewed, and a wire fence placed upon same.

*Store Buildings.*—The offices of the superintendent of the stores were generally repaired, painted and kalsomined. Lavatories were also fitted up in office building. The quarters of the foreman of stores at main store buildings were kalsomined, papered and painted, and the main entrance gate was renewed.

New caretaker's quarters were fitted up in lower park stores.

Quarters occupied by Armourer Sergeant on Palace Hill were repaired, the galvanized roof renewed, chimneys pointed and repaired, and gable end of building pointed.

*Drill Hall.*—A new galvanized iron chimney top was placed on a chimney on Caretaker's quarters.

A small brick magazine was built in main hall for storage of small arm ammunition. Slight repairs were made to stairs in towers on both sides of main entrance.

Two new cupboards were placed in the armouries of the 8th Battalion, and the officers room of 9th Battalion was wainscoted, and varnishing and kalsomining done. A sink was also placed in passage.

#### CARTRIDGE FACTORY.

*Office Building.*—General repairs, painting and kalsomining were carried out in this building.

*Cartridge Factory.*—Four chimneys on this factory were repaired and pointed, and one chimney lined with galvanized iron. A new floor was laid in the engine room. The main gate was repaired, and walls and pillars pointed. Roof gutters were repaired generally. The floor under main shaft was renewed.

*Shell Factory.*—A new floor was laid in this building, and several doors and windows renewed. The skylights were repaired, and all properly glazed.

A portion of the shell factory wall was rebuilt, and the whole pointed.

*Superintendent's Quarters.*—General interior repairs were made at these quarters, including papering, painting and kalsomining, repairs to doors and windows, new floors in hall and one room. The roof was slightly repaired, and new porches built.

*Laboratory Buildings.*—These buildings were painted, and lightning rods repaired on danger buildings.

*Fulminate Buildings.*—These buildings were painted. The foundation of one building repaired, and galvanized iron ventilators placed.

*Captain Panel's Quarters.*—These were repaired generally, and painting and papering done.

#### LÉVIS, P. Q.

*Engineer Park.*—General repairs were made at the Engineer Park, preparatory to holding Brigade Camp there, including repairs to cooking oven, roads, bridges, latrines, &c.

#### MILITARY DISTRICT No. 8.

##### FREDERICTON, N. B.

*Men's Barracks.*—The outside woodwork of these barracks was painted.

*Park Barracks.*—The Sergeant Major's quarters in these barracks were generally repaired.

*Officers' Quarters.*—A new porch and steps were built at the attached officers' entrance, and the officers mess quarters were altered and generally repaired.

*Drill Hall.*—The floor of main hall and the roof of tower were repaired. Two new galvanized iron chimney caps were put up, and the main door repaired.

#### ST. JOHN, N. B.

*Store Buildings, Sydney Street.*—These buildings were generally repaired, and painting done.

*Fort Howe.*—The roofs were repaired and walls pointed, of the store building, brick magazine and stone magazine at this fort.

*Fort Dufferin.*—A fence was repaired at this fort, and repairs made to doors of magazine.

*Dorchester Battery.*—A fence at this battery was renewed.

*Martello Tower, West End.*—All outside masonry of this tower was pointed, and loose stones reset.

#### SUSSEX, N. B.

*Camp Grounds.*—Temporary stables were erected on these grounds for the use of the 8th P. L. Hussars at Brigade Camp.

### MILITARY DISTRICT No. 9.

#### HALIFAX, N. S.

*New Drill Hall.*—This drill hall, now under construction by the Department of Public Works, is almost completed, with the exception of interior fittings.

*Old Drill Hall.*—General repairs were made to this building, both inside and out, and fences repaired.

#### WINDSOR, N. S.

*Drill Shed.*—A new drill shed is now under construction here, by the Department of Public Works.

#### ALDERSHOT, N. S.

*Rifle Range.*—The markers' butts at this range were re-constructed. New firing points raised. New targets and frames put up, and a small shelter shed erected for storing targets.

#### SYDNEY, C. B.

*The Barracks.*—Further general repairs were made this year to these buildings, including painting, glazing, clap-boarding, shingling, re-flooring, re-silling and pointing.

### MILITARY DISTRICT No. 10.

#### WINNIPEG, MAN.

*Quarters of District Officer Commanding.*—General repairs were made to these quarters, including painting, papering, &c.

*Men's Barracks.*—The rooms and halls in these barracks were cleaned and kalso-mined, and repairs made to plaster in basement.

*Married Officers' Quarters.*—Repairs were made to doors, windows, floors and chimneys in these quarters, also plastering and kalso-mining done.

*Married Men's Quarters.*—The roof of this building was re-shingled, eave troughs and down pipes were renewed, and walls, doors and windows repaired.



*Stables.*—The stables were whitewashed, and the north side of sick stables sheathed.

The drains between blocks "D" and "E" were repaired, and thirteen chimneys on the several buildings were repaired.

*Drill Hall.*—A number of trees were planted in the drill hall grounds, and a new floor laid in the quarters of the caretaker.

### MILITARY DISTRICT No. 11.

NEW WESTMINSTER, B. C.

*Drill Hall.*—The roof of this building was slightly repaired.

VICTORIA, B. C.

*Drill Hall.*—Alterations were made in the electric light fixtures to improve the lighting.

### MILITARY DISTRICT No. 12.

CHARLOTTETOWN, P. E. I.

*Victoria Barracks.*—A new fence and gates were erected at these barracks. All buildings and fences were lime washed.

*Drill Shed.*—The armoury of No. 3 Company, 87th Battalion, was fitted up, and cupboards placed in same.

*Fort Edward.*—An arch in the magazine at this fort was rebuilt, and the floor of magazine was renewed.

*Kensington Rifle Range.*—Small repairs were made to this rifle range.

### MINOR BARRACK SERVICES AND REPAIRS.

The usual amount for the supply of materials for "Minor Barrack Services and Repairs" was authorized at each permanent military station, and the work carried out by the men of the corps.

I have the honour to be, sir,

Your obedient servant,

PAUL WEATHERBE.



## SUPPLEMENT TO CHIEF ENGINEER'S REPORT.

## ROCKLIFFE RIFLE RANGE.

This rifle range, a plan of which is attached, has been practically completed since the 30th June, 1898.

The range property is about three miles from Ottawa, down the river.

It is bounded on the north by the Ottawa River.

There are three main routes to this range from Ottawa :—

1. By way of the Ottawa River.
2. By way of the Montreal Road.
3. By way of Rockcliffe.

The area of land acquired is 399.05 acres, a large proportion of which was acquired to provide for safety on account of the great penetration and velocity of the Lee-Enfield rifle bullet.

The length of the range from 1,000 yards firing point in the direction of the fire, is 3,223 yards.

The width at the 500 yards firing point is approximately 473 yards.

The direction of the range is practically from west to east.

Along the south side, from the 1,000 yards firing point to the targets, there is an elevated plateau which will afford an ideal camping ground.

The soil is of blue clay, which made the construction of this range much more difficult than it otherwise would have been.

The markers' trench is below the ordinary surface of the ground, and is revetted on the west side with a stone wall set in cement on a concrete foundation. The east side is sloped to the ordinary ground level.

Shelters are provided in front of each target for the markers.

A wide platform, the entire length of the markers' trench, eight feet below the top of the revetment wall, has been built.

Access, under cover, to a latrine on the river bank is provided for the markers by a deep ditch and platform.

Access, also under cover, from the south boundary of the range to the markers' trench is provided in the same manner.

The ditch in the markers trench, to carry off all surface water, is cobblestoned.

The markers' trench proper is about 780 feet long, and contains 55 target frames set 14 feet centre to centre.

Target frames [*a drawing of which is attached*] are secured by lag screws to posts set five feet in the ground in concrete.

The target frames, of iron and practically indestructible, are a new device invented by the Chief Engineer of the Department of Militia and Defence, by which a target of any class and a dummy may be operated simultaneously. The frame is entirely under cover, the target only showing over the top of wall.

When the target is in sight the dummy is under cover and accessible to the markers. When the target is struck the shutter on the dummy is moved by the marker to show the value of the shot and the target is lowered, the dummy at the same time coming up and taking the place of the target.

The marker then patches and spots the target and raises it to the firing position, the dummy at the same time coming down under cover.

The dummy and target counterbalance each other.

The friction in operating this frame is so slight that it may easily be operated by a boy.

A system of double targets may be used with this frame. It was tried during the last Dominion Rifle Association matches, but it was then decided that the dummy system was preferable.

A stop butt has been erected 50 feet in rear of the targets.

It is built of open cedar cribwork, filled with field stone, and sheathed on the target side with three inch plank. The numbers of the targets are painted white on an alternately rounded and square black ground, on this sheathing immediately above the targets when in the firing position.

The stop butt is 830 feet long, and extends 10 feet north of the northernmost target, and 40 feet south of the southernmost one.

It is 25 feet high, 25 feet thick at the bottom and 8 feet thick at the top.

Firing points have been laid out and marked at every 100 yards from 200 to 1,000 yards.

Enough land has been acquired to provide firing points up to and including 1,200 yards.

A flag pole about 90 feet in length, consisting of mainmast and topmast with cross trees, has been erected near the 600 yards firing point.

A building for the housing of the targets, and for a work shop, has also been erected. It is 45 feet long, 20 feet wide and 10 feet high under the eaves. This is also placed near the 600 yards firing point.

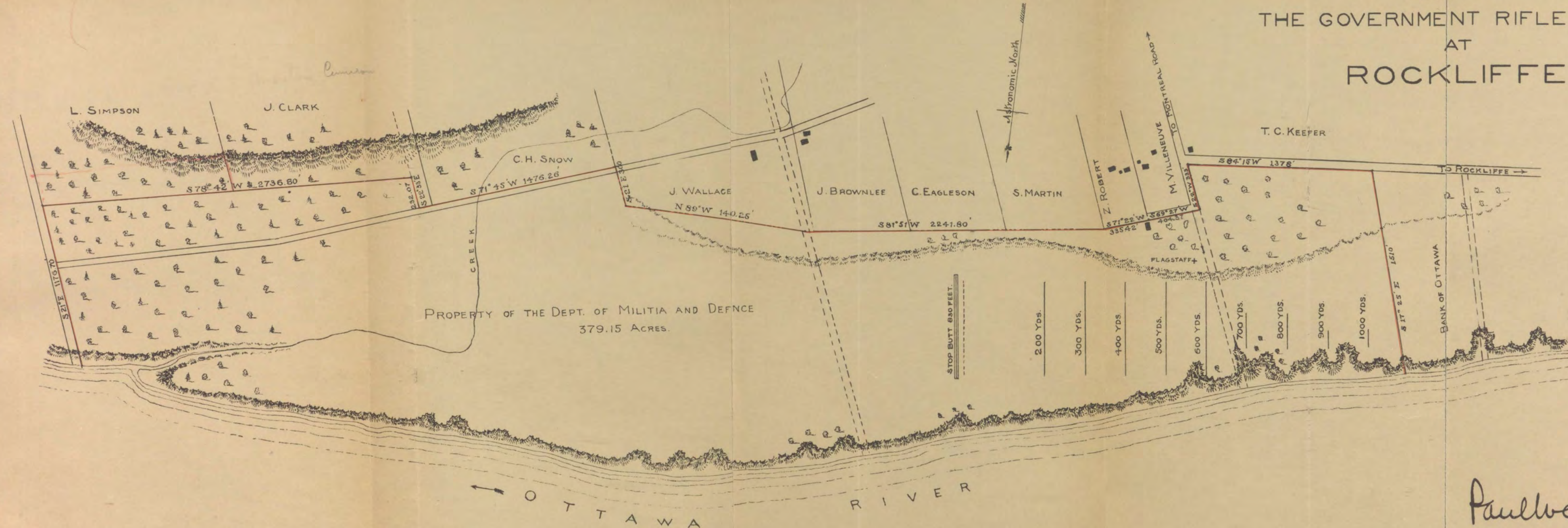
A telephone line has been erected on the range connecting each firing point with the markers' trench. Telephone instruments complete have been purchased by the Department of Militia and Defence.

The range proper has been fenced in with the Page wire fence.

PAUL WEATHERBE,  
*Chief Engineer, M. & D.*

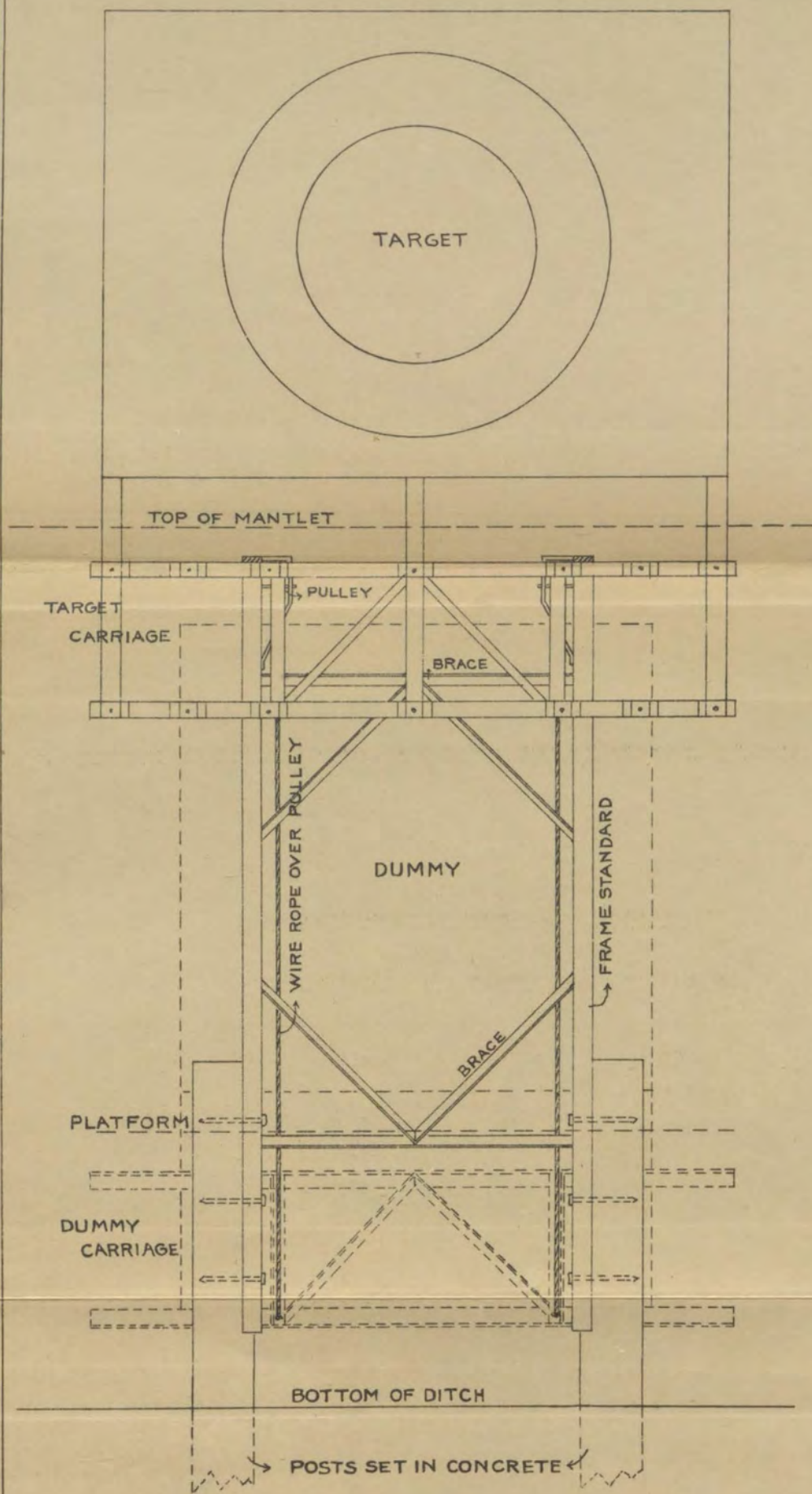


# PLAN OF THE GOVERNMENT RIFLE RANGE AT ROCKLIFFE



Paul Weatherbe  
Chief Engineer M.D.



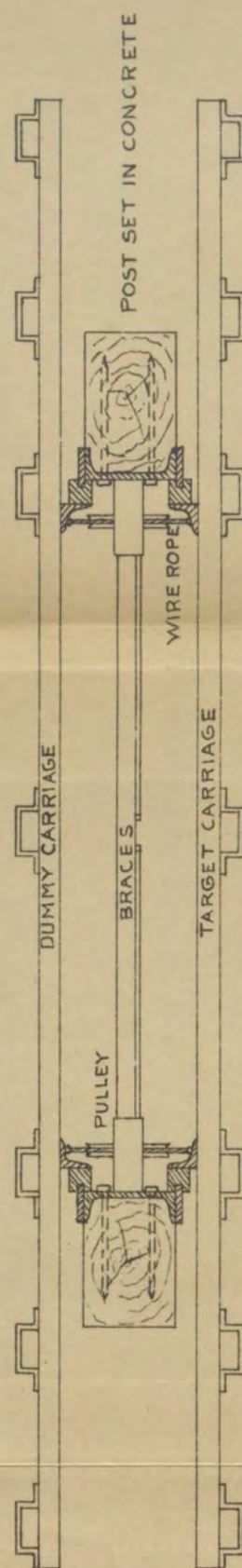


— ELEVATION —

# PLAN OF TARGET FRAME USED AT ROCKLIFFE

1 1/2 0 1 2 3 4 5 FEET  
ELEVATION SCALE

1 1/2 0 1 2 FEET  
PLAN SCALE



— PLAN —

*Paul Weatherbe  
Chief Engineer M&D*



## APPENDIX No. 3.

### SUPERINTENDENT'S REPORT OF THE GOVERNMENT CARTRIDGE AND SHELL FACTORY, QUEBEC, OF 1898.

SIR,—In compliance with instructions, Militia and Defence 17250, dated Headquarters, Ottawa, 12th December, 1898, calling for a report upon the operations of the Government Cartridge and Shell Factory for the calendar year 1898, I have the honour to report as follows:—

#### CARTRIDGE FACTORY.

The following amount of ammunition was manufactured and delivered into store:—

Cartridges, 303 inch., cordite, ball, Mark II.....	673,200
“ “ “ blank, Mark V.....	50,000

We have on hand about 150,000 rounds of ball cartridges which have not yet been sent into store. There is in addition to this about 500,000 rounds which are ready to load, but which we have been prevented from completing earlier owing to delay in obtaining copper strip from England to manufacture percussion caps. The time taken in importing materials from England is generally very long, and delay in carrying out work results. We have been obliged to wait eight months for our copper strip, during which time we were unable to finish any work, which will account for the small output reported. It would appear advisable to keep on hand at all times a supply of extra materials to meet delays of this nature, which might preferably be made large enough to provide for warlike requirements. This matter has been fully gone into in special reports and need not be therefore dealt with in greater detail here. The most effective means of providing for constant and regular manufacture would be to provide machinery to make us entirely independent of foreign sources of supply, which will be more fully explained below. Complaints about the quality of the ammunition, were made at the last annual meeting of the Dominion Rifle Association, the defects observed being mainly in the cartridge case. As a complete inquiry is being made into this matter, which will constitute the subject of a special report, it would be premature to venture any opinion at present.

I am happy to be able to report that the money originally asked for in 1896, for the purchase of apparatus and instruments to establish a small laboratory here, has been granted. This will enable us to thoroughly test all materials and ingredients entering into the manufacture of ammunition, and to ascertain that the provisions laid down in specifications are being complied with at every stage.

The instruments are expected to arrive some time during the winter.

Money has likewise been granted for the erection of a proof-house and butt, for the use of Maxim Machine Gun. We have hitherto been prevented from applying the test of firing with the machine gun, as there was no safe range available. Advantage has been taken of the existence of a postern or tunnel under the ramparts of the fortifications, at the entrance of which the proof house has been built. All our work of this nature with the exception of accuracy proofs which are still fired at the Cove Fields, can therefore be carried out on the premises.

In connection with the question of uniformity of quality of small-arm ammunition it is strongly recommended that machinery be provided to allow us to manufacture from raw materials obtainable in the country at all times. By purchasing on the spot, the suitability or otherwise of materials can be immediately determined, and the long delays entailed by importing from abroad will be avoided. The importance of being on a footing quite independent of outside sources of supply will commend itself for military reasons, without further explanation. Reference is invited to the annual report for 1897, in which the purchase of this machinery was advocated, and where it



will be seen that a sum amounting to probably \$20,000 annually is expended abroad for the purchase of materials. By erecting a suitable plant all this money will be paid out here in wages to our own work people, and in buying material from Canadian firms. The machinery required and estimated cost of same are as follows:—

- 1 Furnace for annealing metal strip.
- 1 Machine to punch blank and form brass cups.
- 1 Rolling Mill, fitted with roller bearings and chilled iron rolls.
- Enlarging foundry, Ingot Moulds, Pickling Tanks.
- Installation of plant, &c., &c.
- Total estimated cost \$5,742.67.

It will thus be seen that in return for the comparatively small outlay of about \$5,700.00 we shall be in a position to offer work and profit to our own people, consequent on the annual expenditure of about \$20,000, which are now beyond our control, and that the plant cannot but pay for itself in a very short time. From an economic standpoint there can be no doubt that benefit will accrue, and that the spending of money in this manner is judicious.

As the impression prevails in some quarters that fired cases are repaired and reloaded for issue as new work, an extract from the annual report for 1897, (p. 19) which reads as follows is submitted: "The fired cases of solid draw ball cartridges returned to us are not suitable for reloading as such, because the condition of the metal after firing renders it unfit to stand the strain imposed by further firing with ball." Long before this was written, we were fully alive to the danger of employing old cases in this manner, and have been careful to avoid it. Experiments made by the United States Government have shown that the cartridge metal employed by them, which is of similar composition to ours, cannot be depended upon for use in a reloading cartridge. The Winchester Company make the following statement on this point: "No manufacturers of rifle ammunition are to-day able to successfully and satisfactorily produce a smokeless powder shell suitable for reloading; and for this reason the Winchester Repeating Arms Co. cautions its patrons against the reloading of smokeless powder rifle ammunition, and wishes to do its utmost to discourage this practice." Finally, if further and conclusive proof be needed, it may be stated that the diameter of the cartridge case at the mouth after the operation of "necking" (which gives the cartridge its bottle-shaped appearance) is smaller than that of the assembled 60 strands composing a charge of cordite; hence, in using fired cases we should be compelled to load by hand each of the 60 strands or cords forming the charge which would be extremely tedious, inaccurate and expensive. The work is actually performed in improved machines having a capacity of 15,000 per day each, and which weigh the charge within the narrow limits required.

Money has been voted by Parliament for the repair of defective ammunition purchased from the War Office. The special machinery required for the performance of this work was ordered in England as soon as funds became available, and will it is expected arrive here shortly. The repairs to be executed consist in extracting the percussion caps and replacing them by new ones, containing an improved detonating composition.

The manufacture of Mark IV bullet, having a cavity in the point is being taken up as rapidly as circumstances will permit; the fact that we have on hand a large amount of work in course of manufacture, which cannot be adapted to latest pattern, will, however, compel us to issue a larger amount of Mark II ammunition than we would have wished. For drill purposes, the solid bullet is equal in every respect to that recently adapted, and its accuracy of shooting is about the same.

The new bullet is practically a modification of the old pattern, made by piercing the point with a hole 0.1" in diameter and 0.35" deep; it thus differs from the Tweedie and Dum-Dum bullets in that, in the latter the point is left uncovered by the nickel, forming what has been termed a "soft nose."

As considerable interest has manifested itself of late on the question of expanding bullets for military and sporting purposes, no apology is needed for the insertion of the following remarks. Much of the information here given has been taken from a book entitled "The evolution of Modern Small Arms and Ammunition" by Edward C.R. Marks, A.M.I.C.E., M.I.M.E.



The bullet made at the Government Cartridge Factory at Dum-Dum, a town of the Bengal presidency, which was the scene of the first open resistance of the Sepoys to the use of the greased cartridges, has a soft lead point which causes it to expand on impact; the lead protruding from the opening in the jacket, makes the bullet assume a mushroom-like shape, by which it inflicts a serious wound. From experiments we carried out last year previous to the despatching of the Yukon expedition, it was ascertained that the lead and nickel of these bullets break up into a number of small pieces which would remain in the body. It has been alleged by the Germans that England has broken the St. Petersburg Convention of 1868, under which the Great Powers agreed to refrain from the use of an explosive bullet. The Dum-Dum bullet is not an explosive bullet, although its "man-stopping" qualities of necessity make it compare unfavourably with the ordinary Lee-Enfield (Mark II) bullet in the nature of the wounds which it inflicts. In reply to questions in the House of Commons, Lord George Hamilton stated "that according to information supplied to him, the effects of the Dum-Dum bullet were not more serious than those of the Snider bullet, nor than those of the M. H. bullet; but, on the other hand, it was clearly shown that during the Chitral expedition the Lee-Metford bullet frequently failed to attain the object for which all missiles were discharged in war, viz.: that of disabling the enemy with the least possible suffering. The Dum-Dum fulfilled this object, as did the bullets previously used by the English army, and fulfilled it in the same way. That the Dum-Dum bullet was consonant with international law, as set forth by the terms of the St. Petersburg Convention of 1868, was perfectly clear, inasmuch as what the convention forbade was the use of any explosive projectile beyond a certain weight charged with fulminating or inflammatory matter. He had received as yet no medical reports from India as to the effects of the Dum-Dum bullets in the recent frontier engagements, but he had asked the Indian Government to expedite the information".

Referring to this bullet, the *Engineer* of November 4th, 1898, says: "The nickel case small-bore bullet is liable to go through man and beast almost without making its passage felt at the time, and the small hole it makes is said generally to heal on first intention, and with great rapidity. The Chinese, it is true, when marching away before the Japanese—which was their chief operation in the field—generally quickened their pace after receiving a shower of bullets into them, but the bullets would not always even have this effect. In the coal riots at Lord Masham's pits, in the afternoon, after the troops fired, one pitman said he felt his thigh a bit uncomfortable as he walked, and on examination it was found that a bullet had passed through it. A bullet should do more than make a man rub his leg for some hours afterwards. Consequently efforts have been directed to causing bullets to set up on impact. The Dum-Dum and the Tweedie bullets resemble each other in the fact that the point is left uncovered by the nickel. The bullet sets up on impact, but unfortunately the nickel breaks and flies about, which is undesirable. Our own Mark III bullet, designed at the Royal Laboratory, has a hollow in the head, into which the nickel case enters, lining it, as it were with nickel. This bullet sets up a little on impact, but not enough to give it the stopping power that belonged to the old-fashioned heavy ball. The nickel case, however, remains intact, and probably this bullet, which is regularly adopted may be our service one possibly in a modified form. There is a great difference between a bullet that sets up, and whose case accidentally splits and flies more than could be wished, and bullets purposely made to contain explosives and act as a shell. It seems curious that all nations should have adopted bullets that hurt so little on impact as to create an obstacle to their use."

The following particulars relating to the new bullet are from the *Times* of January 28th, 1898:—

"A new service bullet, just adopted by the War Office, will be used for the first time in the Khartoum expedition. Several million rounds are being sent for the use of the infantry who are going to Egypt. The reason assigned for the change in the service bullet is that the Lee-Metford, though it is more deadly at ten times the range of the old musket ball does not disable an enemy as effectively as could be desired. Soldiers have been known to go on fighting after a dozen Lee-Metford bullets have gone through



them, whilst the bullet itself has passed through two or three men consecutively, shock being sacrificed for penetration. The Dum Dum bullet, now also superseded, came into use for the purpose of stopping the rush of hordes of fanatics, as it had the advantages of spreading out and breaking up whenever it encountered resistance; but there has recently been some discussion in France as to the propriety of remonstrating with the British War Office on the ground that it is contrary to the convention made with other European powers in 1868. The new service bullet is the same diameter, weight, and length as the Lee-Metford bullet, and fits all the service rifles and machine guns. The case is of nickel, the base only being filled with lead. The conical end is left empty, and when it strikes the enemy, burrs, opens backwards, and lodges in the body, penetration being lessened and shock increased. The new bullet is spoken of as 'the man killing bullet,' in contradistinction to 'the man-penetrating bullet.'

The *Engineer* of July 8th, 1898, referring to the foregoing states:—"It is not correct to speak of the new bullet as having a hollow conical nickel head, and only containing lead in the base. The lead runs up to the point inside the nickel to the same extent as the lead in the Snider-Boxer bullet. That is to say, a bullet with the ordinary form of point has a small cylindrical hollow made in the axis, the nickel being run to the edge, and a disc of nickel being pressed down to the bottom of the cylindrical hollow. As we have often pointed out, it is a matter of some delicacy to make a bullet spread sufficiently to give it stopping power and shock and yet not fly and form what is termed a cruel bullet."—The above descriptions refer to Mark III bullet, which had a metal cup .3 inch deep inserted in the cavity, in the head of the bullet. We are now manufacturing a modification of this pattern, Mark IV, in which the metal cup has been discarded.

#### SHELL FACTORY.

We have manufactured and delivered into store the following projectiles during the year:—

9 Pr. R.M.L. Shrapnel shells.....	2,656
12 Pr. B.L. " " cast iron.....	52

This of course does not represent the output of the factory, as we have in hand a very large number of projectiles which we could not deliver, as the Store Department could not furnish boxes. The following figures will give an idea of the work performed; a very large proportion of this work is finished, and ready to hand over as soon as boxes are received. On the 31st December, 1898, we had under manufacture at various stages:—

9 Pr. R.M.L. Shrapnel shells.....	5,171
12 Pr. B.L., cast iron practice Shrapnel shells.....	2,045
64 Pr. R.M.L., Common shells.....	250
Total.....	7,466

It has been decided to complete the 9 Pr. R. M. L. projectiles under manufacture and to make no more new ones for the present, as there is a very large reserve in store. To prepare for the manufacture of steel shells, a 12 Pr. B. L. cast iron shell has been turned out for practice purposes. A complete set of gauges, templets, jigs, &c., have been made, and as all the interior parts are similar to those of steel shell, we are ready at a moment's notice to begin the manufacture of the latter with a trained staff who have already had some months' experience. In this manner it has been endeavoured to make the factory as useful as possible, and to keep pace with modern requirements, but the limited plant and resources at our disposal preclude the possibility of further advance. Complete reports have been submitted on different occasions, detailing our requirements which are somewhat lengthy. It will suffice for the purpose of these remarks to say that to introduce the manufacture of B. L. steel projectiles of latest Imperial Government pattern, on a small scale of about 6,000 to 8,000 per annum, the nature and cost of plant will be as follows:



1 Circular Saw for Hot Iron.  
 1 Hydraulic Pump.  
 1 " Press.  
 1 Accumulator.  
 1 Bouching Lathe.  
 1 Brass Lathe.  
 Total estimated cost \$7,542.00.

It is earnestly hoped that this small sum will be authorized as the benefit, to be derived cannot be under-estimated.

#### GENERAL REMARKS, AFFECTING CARTRIDGE AND SHELL FACTORIES.

Pursuant to a report submitted, it was decided to substitute steam motive power for the combined system of electricity and steam we have been using. The latter was found to be expensive and unsuitable for many reasons. Measurements were taken to determine the amount of power required, and after making due allowance for probable expansion in the size of the establishment, an order was given for an automatic engine of improved pattern.

A handsome stone power house has been erected adjoining the north end of the Cartridge Factory, and the fortification walls which were made use of to avoid building new ones. Power is transmitted from the engine by belting in the usual manner, and steam is conveyed for heating and other purposes as required. The installation of the plant is barely complete at the present time, and we shall endeavour to use our exhaust steam for heating purposes, due regard being paid to economy of energy and other important considerations. It is proposed to move the dynamo used for electric light to the new power house, and to extend and improve the system of lighting to provide for additional requirements. The suggestion is again offered, that this establishment is able to manufacture a number of articles purchased in England provided funds are voted for the service of the factory.

In addition to the work of building a power house the following new work and repairs have been executed during the year.

*Office.*—Roof painted.

*Cartridge Factory.*—Eight new chimney caps. New floors and repairs to foreman's office. New floor to bullet room. 15 new double-windows.

*Shell Factory.*—Repairs to foundry skylights. Three windows renewed. New porch to foundry.

*Laboratory Buildings.*—Lightning rods repaired, repairs to gates, pointing of walls of magazine, pointing chimney of engine house, repairs to chimney, watchman's quarters.

*Pulminate Buildings.*—New gates and platforms, repairs to fences.

*Miscellaneous.*—Building proof house and rebuilding walls of sally port for Maxim gun range. Repairs to windows and two new floors in Superintendent's quarters. Chimneys of Dauphine barracks repaired. New door step and one new ceiling, also new floor in passage and cellar, Mr. Hallé's quarters. Doors and windows of Mr. Davies' quarters repaired. Mr. Panet's quarters: Storm sashes and one room painted, front of building whitewashed.

It is suggested that arrangements be made to provide for security against fire for our books and papers. We have in our office documents and plans which money cannot replace without long and inconvenient delays, entailing perhaps a suspension of manufacturing operations. It is intended to recommend that some old cells in the lower story of the office building, formerly used for the custody of military prisoners, and which would adapt themselves admirably to the purpose, be converted into a fire proof vault for the reception of our books and valuable papers.

In conclusion I should again invite attention to the insufficiency of the amount voted by Parliament for the performance of the work we are expected to furnish. This

matter has been alluded to in former annual reports and dealt with in detail in special reports submitted from time to time. It is requested that this vital question shall receive the consideration that it deserves.

I have the honour to be, sir,  
Your obedient servant,

F. M. GAUDET, *Major,*  
*Superintendent.*

To the Deputy of  
The Honourable the Minister of  
Militia and Defence, Ottawa, Canada.



PART II.

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REPORT

OF THE

MAJOR GENERAL

The Honourable the Minister of Militia and Defence,  
Ottawa.

SIR,—I have the honour to forward the following report of the troops under my command for the year ending 31st December, 1898.

The report is divided into three parts, namely Part (1) Narrative of events in 1898; Part (2) Proposals for the current year 1899; Part (3) General report and recommendations dealing with the Military situation in Canada.

PART I

NARRATIVE OF EVENTS IN 1898.

The following is the narrative of the events in connection with the troops under my command, ending 31st December, 1898, which I consider to be of interest to bring in an official form to your notice:—

CHANGES IN ESTABLISHMENT.

(1) The Winnipeg Dragoons and the 60th "Missisquoi" Battalion of Infantry have been disbanded. A Company of Mounted Rifles and 5 Independent Infantry Companies have been raised in British Columbia, and a Bearer Company in Halifax. The 1st Battalion "Prince of Wales" Regiment and the 6th Battalion "Fusiliers" were, on the 1st May, amalgamated under the designation 1st Battalion "Prince of Wales' Regiment Fusiliers." On the 1st September the 69th "1st Annapolis" and 72nd "2nd Annapolis" Battalions of Infantry were similarly amalgamated, under the designation 69th "Annapolis" Battalion of Infantry, and on the 1st December the St. John Rifle Company, a small independent unit, was amalgamated with the 62nd "St. John Fusiliers" Battalion.

APPOINTMENTS.

(2) Field Marshal His Royal Highness the Prince of Wales has been pleased to signify his acceptance of the appointment of Honorary Colonel of the 1st Battalion "Prince of Wales' Regiment Fusiliers," which, upon the 5th November, 1898, was duly notified in the *Canada Gazette*. The appointment of His Royal Highness has been received by the regiment in particular, and by the Militia generally, as an honour and as a much appreciated mark of His Royal Highness's interest in the Dominion.

The distinction of Honorary Lieutenant Colonel has, among others, been conferred and accepted by the following, viz:—

The Right Honourable the Earl of Aberdeen, G.C.M.G., The Governor General's Foot Guards; Lord Strathcona and Mount Royal, G.C.M.G., 3rd Battalion, "Victoria Rifles of Canada"; The Right Honourable Sir John Sutherland Campbell, Marquis of Lorne, G.C.M.G., 15th Battalion, "Argyll Light Infantry"; The Right Honourable the Marquis of Dufferin and Ava, G.C.M.G., 38th Battalion, "Dufferin Rifles of Canada," &c.

On the 30th June last Major General Gascoigne resigned the command of the Troops to which he had been appointed on the 19th September, 1895.

The appointment of Major (Local Colonel) P. H. N. Lake, East Lancashire Regiment, as Quartermaster General terminated on the 11th August last.

I had the honour to be appointed to the command of the Canadian Militia on the 11th August, and assumed the command upon my arrival at Ottawa on the 23rd day of that month.

Major (Local Colonel) Hubert Foster, Royal Engineers, similarly, and upon the same dates, was appointed to, and assumed the duties of Quartermaster General.

Surgeon Lieut.-Colonel J. L. H. Neilson, M.D., R.C.A., was, in March last, appointed Director General of Medical Staff.

#### YUKON FIELD FORCE.

(3) It was considered advisable, early in the year, in the interests of the public security, that a detachment of troops should be sent to the recently developed Yukon District. Upon the 21st of March last it was directed, by an Order in Council, that a Field Force, composed of volunteers from the permanent troops of the Dominion, under the command of Major (Local Lieut.-Colonel) T. D. B. Evans, Royal Canadian Dragoons, should be despatched to Fort Selkirk. The force consisted of

#### Staff.

Commanding Officer.....	Lieut.-Colonel Evans, R.C.D.
Adjutant.....	Captain Gardiner, R.C.D.
Paymaster.....	Major Talbot, 9th Battalion.
Medical Officer.....	Surgeon-Major Foster, 68th Battalion.
Supply Officer.....	Major Bliss, R.O.

	Officers.	N. C. Officers and men.
Royal Canadian Dragoons.....	1	15
Royal Canadian Artillery, (Field Division).....	1	16
Royal Canadian Artillery, (Garrison Division).....	2	30
Royal Regiment of Canadian Infantry.....	3	130

#### Total.

Officers.....	12
N. C. Officers and men.....	191

#### Civilians attached.

Mr. Carry, C.E.....	1
Assistants.....	3
Artificers.....	9

Total.....	13
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above force left Ottawa on the 6th May, and reaching Vancouver, proceeded by steamer to Wrangel, thence by river boat to Glenora, by Telegraph Creek, to Teslin Lake, and thence by river steamers to Fort Selkirk. The first detachment arrived on the 25th July.



The march of this force across an hitherto but little known and very difficult country was conducted with judgment and skill on the part of the officer in command.

The difficulties encountered were not unlike those experienced by the Red River Expedition in 1870. It may fairly be said that this small force of Canadian troops has well-sustained the reputation of British soldiers for perseverance, persistence of purpose, endurance and discipline under trying circumstances.

The small field force under Lieut.-Colonel Evans is now divided between Dawson City and Fort Selkirk, but happily its services in the cause of public order or security have not, hitherto, been called into requisition.

The following officers have been specially mentioned for zeal and energy in connection with the expedition, viz.:—Major D. C. F. Bliss, Reserve of Officers; Captain H. E. Burstall, Royal Canadian Artillery; Captain P. E. Thacker, Royal Canadian Infantry Regiment; Captain L. G. Bennett, Royal Canadian Artillery.

#### TRAINING OF THE ACTIVE MILITIA, AND MILITARY SCHOOLS OF INSTRUCTION.

(4) A limited number of camps of instruction were held during the year, the details connected with which will be found in Appendix "B."

I personally inspected a camp of instruction at Aldershot upon the 15th and 16th September. I regret to say that the standard of military knowledge, the system of organization, the equipment of the troops, and other matters connected with the camp were far from satisfactory. The standard of military efficiency was, generally, not equal to that which my experience with similar troops in other parts of the Empire had led me to expect, and was certainly inadequate to the national requirements of Canada. This condition of things was not, in my opinion, due to the troops themselves, but to the faults of the system and organization under which they labour. By the employment of a carefully selected and properly instructed staff, by an improved system of organization, and by encouraging a higher degree of military training, it may be safely predicted that the camps of instruction in 1899 will better satisfy modern military requirements.

A tactical Field Day, and review of the Toronto troops was held on the 24th of November last. It was satisfactory to note the great interest and military spirit displayed by all ranks. I hope that during the current year, it may be possible to develop a system of tactical instruction for the troops of the Dominion generally, which the officer in command of No. 2 Military District has initiated to the great benefit of the city corps under his command.

The mobilization of the Halifax garrison, which included the quota of Canadian militia allotted to that fortress, took place on the 26th and 27th October, 1898. The General Officer commanding Her Majesty's troops in British North America, has been pleased to report that the result was fairly successful, so far as the Canadian Militia are concerned.

The instruction of the portion of the 5th Regiment Canadian Artillery, allotted to the defence of Esquimalt, has been carried out by the officer commanding the Royal Marine Artillery at that place, with distinctly beneficial results to the militia, and a satisfactory report has been received from the General Officer commanding Her Majesty's troops in British North America.

Much valuable work has been done by all the Schools of Instruction during the year, and a considerable number of officers and N. C. officers have passed through and qualified, the details of which will be found in Appendix "C."

The officers, N. C. officers and men of the Permanent Force, employed at the various schools have worked with zeal and with commendable energy. The Cavalry School of Instruction under the Inspector of Cavalry deserves an especial word of praise. This officer has instilled much of his own energy into the cavalry service. Further remarks will be found in section 10.

The following officers and N. C. officers, Royal Canadian Artillery, have with your approval, proceeded to England for the purpose of undergoing a complete course of gunnery at Woolwich, and Shoeburyness, viz.:—

*Royal Canadian Artillery, Field Division*:—Captain Benyon, Sergeant Hébert, Sergeant Jordan.



*Royal Canadian Artillery, Garrison Division*:—Major Rutherford, Sergeant Weatherbie, Sergeant Benson.

The foregoing detachments should complete their course of instruction at the beginning of 1900, except Major Rutherford, who will complete the "Firemaster's Course" in the Autumn of that year.

#### *Training, &c., Permanent Troops.*

(5). In accordance with arrangements made before my arrival, No. 2 Company of the Royal Canadian Artillery, (Garrison Division), were, on the 18th April, 1898, with the co-operation of the General Officer commanding Her Majesty's troops in British North America, sent from Quebec to Halifax, and replaced by a company of Royal Artillery. The opportunity was thus, for the first time, afforded to a Garrison Company of the Royal Canadian Artillery to be put through a complete course of annual training and drill with armament of modern type.

#### *Cadet Corps Schools and Colleges.*

(6). In April last, amended regulations were issued for the formation of High School Cadet Corps in high schools and collegiate institutes. A most desirable system of military instruction for Canadian youths has thus been further developed, and I cannot too earnestly commend the importance of this movement to your favourable consideration. It is difficult to conceive any instruction which is better adapted for teaching the rising generation of Canada to realize that among the obligations of citizenship, the defence of their country is, above all, a national duty and a sacred privilege.

#### ARTILLERY AND RIFLE PRACTICE.

(7.) (a). *Field Artillery*.—It is much to be regretted that annual artillery practice by the Field Batteries has not been regularly carried out during the past year. The number of batteries exercised and the rounds fired will be found in Appendix "D".

The totally inadequate amount of artillery practice which has been given is due, in a large measure, to the difficulty in finding a suitable Field Artillery Land Range. The practice which was carried out at Deseronto in 1897 was not satisfactory, as the danger area is reported to be inadequate. I trust that measures may be taken to rectify this difficulty, during the present year.

(b). *Garrison Artillery*.—The instruction given to, and the practice carried out, by the Permanent Garrison Artillery, and by the Garrison Artillery regiments and companies of the Active Militia, respectively, (No. 2 Company, Royal Canadian Artillery, trained at Halifax, excepted), has been unsatisfactory in the highest degree. The absence of modern armament makes it impossible that the Garrison Artillery can fulfil, under existing circumstances, modern requirements. This important matter has received your consideration, and preliminary steps are being taken to rectify this serious condition of things. A certain number of 5 inch B. L. Howitzers will, shortly, arrive from England, and two officers and four N.C. officers of the Royal Canadian Artillery have been sent to England for a Long Course at Woolwich and Shoeburyness. The absence of technically or scientifically trained officers as instructors prevents an adequate scientific training in gunnery being given to the Canadian Artillery generally.

(c). *The Dominion Artillery Association*.—This valuable body has done its best to assist in promoting the interests of the artillery, and to compensate for the disadvantages above pointed out. It is deserving of every encouragement and assistance.

(d). *Rifle Practice*.—It is much to be regretted that effective instruction in rifle shooting has not received the attention which its importance deserves in the annual training of the Militia. With the present long range rifle, and in the absence of suitable ranges, the effective instruction of the Infantry becomes yearly more difficult. I have dealt with this question in Part II. Sec. 17, in a manner which, as a temporary measure, may I hope prove successful.



(e.) *Dominion Rifle Association, Etc.*—The new rifle range at Ottawa was opened at the meeting of the Dominion Rifle Association on the 29th of August last. It is hoped that the institution of this excellent range may be followed by others, and that improvements may be effected and further encouragement given to rifle shooting throughout the Dominion. It is essential that the competitions and matches fired under the auspices of state-aided institutions such as the Dominion Rifle Association, the Canadian Military Rifle League, and others, should partake of a more modern character than heretofore.

A representative detachment of Canadian riflemen, familiarly called "The Bisley Team" under the auspices of the D. R. A., left for England on the 16th June, 1898, under the command of Lieut.-Colonel Cooke, 1st Battalion "Prince of Wales' Regiment, Fusiliers." The detachment well-sustained the reputation of Canada among the other competitors at Bisley.

In the near future it may be possible to arrange for a system of Musketry Instruction to be conducted at Ottawa, under properly qualified instructors, upon the principle of the School of Musketry at Hythe, England, where officers, N.C. officers and men of the Canadian Troops may be taught the principles and science of modern rifle shooting, and thus utilize to the full the benefits conferred by the above-mentioned range.

#### ADMINISTRATIVE CHANGES.

(8.) The district commands have been enlarged so as to include the Permanent Units and Schools of Instruction.

An acting Chief Staff officer has been appointed, and an improved system of conducting correspondence has been instituted at Head-Quarters.

From November last an Unattached List was created so as to facilitate the transfer of senior and valuable officers from one portion of the force to another, whenever the exigences of their civil duties necessitate change in their place of residence, without their being relegated to the Reserve of Officers or the Retired List.

#### DEFENCE COMMISSION.

(9.) In accordance with the request of the Canadian Government a Defence Commission, composed of the following Officers, commenced its proceedings early in August, and concluded them in December last:—

Major General Leach, R.E., V.C., C.B. . . . .	President.
Captain White, R.N.,	Members.
Colonel Dalton, R.A.,	
Major Lake, East Lancashire Regiment,	

The Ministers of Marine and Fisheries (The Hon. Sir Louis Davies, K.C.M.G.,) and Militia and Defence (Surgeon Lieut.-Colonel The Hon. F. W. Borden), representing the Canadian Government, formed part of the Commission.

#### INSPECTIONS BY THE GENERAL OFFICER COMMANDING.

(10.) With your concurrence, as soon as possible after my arrival I inspected the Military Districts (Nos. 10, 11 and 12 excepted) as follows:—

Ottawa . . . . .	5th September
Montreal . . . . .	6th do
Quebec . . . . .	8th do
Aldershot, N.S. . . . .	16th do
Halifax, N.S. . . . .	19th do
St. John, N.B. . . . .	22nd do
Fredericton, N.B. . . . .	23rd do
Toronto . . . . .	8th October
London, Ont. . . . .	15th do
Hamilton . . . . .	20th do
Kingston . . . . .	22th do
St. Johns, P.Q. . . . .	28th do

All the Commanding Officers of Regiments and Corps in each District were summoned to meet me for the purpose of discussing collectively and individually, questions affecting the welfare and efficiency of their commands. An opportunity was further given to all officers to make my acquaintance, which was very generally taken advantage of. By these means I have been able to gain a knowledge of the personnel and to gauge the requirements as regards administration and organization in each district, which may, I hope, prove of value in my military advice to yourself, and of benefit to the force generally.

At the same time the whole of the permanent units and schools of instruction (Winnipeg excepted) were inspected. I have been much impressed by the general excellence of the permanent force of the Dominion. The physique, the discipline, and the soldierly bearing of N. C. O., and men are very satisfactory. An excellent *esprit de corps* pervades this valuable force and the troops are well commanded. The Staff Instructors are an especially valuable set of N. C. officers.

The instruction however given at the various schools is, for the most part, of a purely elementary character, and the standard of knowledge attained by the officers, N. C. officers and men in the permanent units generally, is not equal to their responsibilities as instructors. This condition of things is not due to lack of zeal or energy, but to the want of opportunity, and to the fact that too much has been expected of the permanent staff and troops during the last four or five years. Courses of instruction for officers and men of the active Militia have been held continuously throughout the year, and no time has been allotted to that most essential of all modern military training—a properly conducted system of Annual Training—or to relaxation from the incessant round of instructional courses. The companies of the Royal Regiment of Canadian Infantry, for example, have not received a connected Annual Training under their superior officers since their concentration at Pointe Lévis in 1893.

This question has been dealt with in Part II., Section 18 of this report.

#### MEETING OF OFFICERS COMMANDING MILITARY DISTRICTS.

As the sequence to the Meetings of the commanding officers held in each district, a Meeting of officers commanding Military Districts (Nos. 10 Winnipeg, and 11 Victoria excepted), and of the Inspectors of cavalry and of artillery took place with your concurrence at Ottawa, from the 15th to the 18th November.

Agenda of important questions affecting the future of the militia were circulated beforehand, and formed the subject of collective consideration. The views and opinions of these officers will be of value in assisting me to judge the means best adapted to increase the well-being and efficiency of the force.

The opportunity thus given for the interchange of opinion and for the discussion of important military questions has been of the utmost value, and it may be assumed that all the officers concerned will benefit by an increased intelligence, and from an enlarged experience, and thus be enabled to discharge the responsibilities of their commands with greater confidence and renewed energy.

#### MILITARY STORES.

(III.) I visited, with your permission, the military stores in each district, which by the present system are under civil administration and apart from military command. My notes upon these inspections have been submitted to you. The absence of regulations, the want of system, the inadequate knowledge for the most part of the officers and employees concerned in the custody of government military stores are matters which deserve immediate attention, and render the organization of a properly constituted Ordnance Store Corps as part of the military command to be absolutely essential in the public interest. It is contrary to universal military precedent elsewhere, to economy, and to military efficiency for the custody and issue of military stores to be in the hands of a civil department. Special recommendations on this matter will be found in Part III.



## CARTRIDGE FACTORY.

I inspected the cartridge factory on the 13th September, which I found to be well organized and performing excellent work. It appears that much of the material required in the factory is purchased in England, through the High Commissioner and not through the War Office. The result is that stores so purchased are not properly tested before delivery. The defects in cartridge cases, which have been complained of, are traceable to this cause.

I recommend that all stores should be tested in England before shipment, and that the War Department at Woolwich be invited to co operate for this purpose.

It is only possible at present to manufacture wrought iron shells for the field artillery. I recommend that the necessary additional plant for manufacturing steel shells shall be procured. Wrought iron shells are not sufficiently powerful for service purposes. The extra expense entailed would not be great.

## ARTILLERY AND INFANTRY EQUIPMENT.

*(a). Field Artillery.*

(12). The new 12 pr. B. L. field gun, complete with harness, has been issued to the following field batteries, during the year :—

"A" Battery, Royal Canadian Artillery.

"B" Battery, Royal Canadian Artillery.

1st Field Battery, Quebec.

2nd Field Battery, Ottawa.

3rd Field Battery, Montreal.

4th Field Battery, Hamilton.

7th Field Battery, St. Catharines.

9th Field Battery, Toronto.

The new guns and equipment for two additional batteries are now ready in England for shipment, and will be issued during the current year. There will then remain nine field batteries still equipped with the 9 pr. R. M. L. gun. These latter have, during the year, been made up from 4 to 6 guns.

*(b). Garrison Artillery.*

There will shortly be available for issue to the Garrison Artillery the following :—

Movable armament or guns of position, a proportion of 5 inch B. L. Howitzers, and of 40 pr. B. L. guns.

*(c). Infantry small arms.*

The Lee-Enfield (303) Magazine Rifles have been issued to the permanent troops and city corps. The rifles for the remaining battalions should be held for issue in district stores.

The Oliver equipment for the infantry, ordered on the 2nd April, 1898, will shortly be ready for issue.

## GENERAL SERVICE MEDAL.

(13.) A general service medal, for Canada, has been graciously approved by Her Majesty, the Queen. It is hoped that the medals may be ready for distribution at an early date in accordance with the regulations issued in G. O. 63, July, 1898, for war services in the Fenian Raids of 1866 and 1870, and the Red River Expedition of 1870.

INTERCHANGE OF A FIELD BATTERY OF IMPERIAL TROOPS WITH A FIELD BATTERY  
OF THE ROYAL CANADIAN ARTILLERY.

(14.) The interchange of a field battery of the Royal Canadian Artillery with an Imperial Field Battery from England has been suggested, and the greatest importance is attached to the bringing into closer relations the permanent units of the Canadian army with Her Majesty's regular troops elsewhere. An amendment of the existing Militia Act would be required to enable this proposal to be carried into effect. It must be remembered that the permanent troops in Canada are instructional cadre corps, and are maintained for the instruction of their militia comrades at the respective schools, in peace, and for distribution in war among the militia units as a stiffening. It would be necessary therefore, before carrying out such an exchange, to insure that the Imperial Troops are prepared to take up all the duties now assigned to their Canadian comrades.

It would be necessary, in order to carry out the proposed arrangement, to amalgamate the two Instructional Batteries, Royal Canadian Artillery, ("A" and "B" Batteries) so as to make up the Establishment of the single Field Battery, which it is proposed to send to England. This would leave available in Canada, the Imperial Field Battery, and a fraction only of the R. C. A. Field Artillery, which would be quite inadequate for instructional purposes. An increase in the Establishment of the Field Artillery R. C. A., would therefore be required.

ROYAL MILITARY COLLEGE—KINGSTON.

(15.) I inspected the College upon the 24th October, and have great satisfaction in bringing to your favourable notice its excellent condition. Lieut.-Colonel Kitson and his staff deserve the highest credit for the good discipline and satisfactory standard of educational training which has been reached. The cadets are well clothed and comfortably housed. A high moral tone and *esprit de corps* has been fostered.

The students, since the present Commandant has assumed charge, have increased from 49 in 1895 to 74 in 1898. A similar increase in 1899 to that in 1898 may be anticipated, and the requisite accommodation is being prepared without addition to the existing buildings. This increase speaks for itself, and is an indication of the confidence which the present Commandant has created with the Canadian public.

The College has in the past, more especially during the last two years, supplied many able and well-trained officers to the Imperial Army, but the advantages of the excellent education given at the College have not been sufficiently utilized in supplying officers to the Staff and the Permanent Force of the Canadian Militia. This may, I trust, be rectified in the future. It may be assumed that the primary object of the maintenance of this college by the State is to turn out young gentlemen whose services could be utilized in the military service of Canada, and be available if required, as officers in the Reserve. It should, however, be borne constantly in mind by the Commandant and his Staff that the training given and the education imparted must be that which will also fit the students for becoming worthy and valuable citizens in all pursuits of life.

The useful surveys of the neighbourhood of Kingston and other districts which have been conducted for the instruction of the cadets during the last five years are now being prepared for publication, on a scale of 1 inch to a mile. The maps thus available will prove of much value.

It is proposed, in future to still further utilize the educational advantages presented by the College, and to institute a Course of Instruction in the duties of the General Staff for officers of the Canadian Militia. This course will partake of the character of the instruction given at the Staff College in England.

The Annual Report of the Commandant is submitted for your favourable consideration. (Appendix "A".)



## PART II.

### PROPOSALS FOR THE CURRENT YEAR, 1899.

#### POSITION OF THE GENERAL OFFICER COMMANDING THE MILITIA.

(16.) The definition of the responsibilities and powers of the General Officer Commanding upon the lines indicated in Part III., para. 39, and Appendix "G" of this Report, is of primary importance.

#### CAMPS OF INSTRUCTION.

(17.) I beg to recommend, as essential to the efficiency of the troops under my command, that the whole of the Active Militia should be embodied for training during the current year. I attach the greatest importance to this embodiment being carried out, as far as may be by concentration at various central camps, where a regular system of company, regimental and brigade training can be carried out under proper supervision. The troops thus concentrated would be formed into Brigades and Divisions, with a properly constituted Staff, under my own personal command. The best officers available would be selected to command, and to fill the requisite Staff appointments. An opportunity would thus be afforded for giving practical instruction to those senior and responsible officers upon whom the command and administration of the troops would devolve in case of National Emergency. It is, moreover, of great importance that the opportunity should be given me of personally becoming acquainted with the efficiency and military value of all regiments and units under my command.

Relying upon the military instincts and zeal of the troops I propose to carry out a higher degree of training than in previous years, and during the last two days to include Tactical Instruction in which the city regiments shall be invited to take part.

In consequence of the short duration of the training, and the inadequate range accommodation it has hitherto been found impossible to give the necessary time and attention to musketry. In order to meet this difficulty I propose, as a provisional measure, to carry out individual rifle practice with special Morris Tube ammunition at miniature targets, and at miniature ranges. For this purpose small wooden targets and portable mantlets should be provided at small cost, and utilized at the different camps. By carrying out this system for Individual Firing and by adopting the same regularity, precision and exactitude as upon the regulation Ranges, very useful training can be given. When practicable, the existing ranges will be utilized for Mass Firing in the attack formation. An elementary knowledge of rifle practice can thus be taught in a minimum of time, and to the whole of the troops without additional cost. The system proposed is, however, to be regarded only as a temporary expedient to meet the existing difficulties of want of range accommodation.

The saving effected by substituting Morris Tube ammunition for Service ammunition will cover all the outlay required in targets, and portable mantlets, &c.

The period of training sanctioned by the Estimates of 1898-99 of twelve days is, for rural corps, admittedly inadequate, more especially for the Field Artillery and Cavalry. I trust that the training to be carried out during the summer and fall of 1900 may be for the increased period of sixteen days. I propose to submit the increased amount required for the Estimates.

A complete programme of the Field Training proposed for the year 1899 will be found in Appendix "E."

## ANNUAL TRAINING PERMANENT FORCE.

(18) The difficulties under which the various units of the permanent force labour have been pointed out in Part I., paragraph 10. A proposed programme to meet the case will be found in Appendix "F", giving the periods of duration of each Course of Instruction at the various schools, and the dates of the Annual Training, etc., throughout the year.

The proposed arrangement will give the permanent troops the means to acquire a satisfactory knowledge of their duties under proper supervision, and will thus enable them to impart a better and a higher standard of training at the various schools.

I recommend most strongly that the concentration of the companies of the Royal Regiment of Canadian Infantry for their Annual Training shall take place at Ottawa, where it will include the annual meeting of the Dominion Rifle Association, at which officers and men can be usefully and profitably employed.

I recommend that "B" Squadron Royal Canadian Dragoons be removed from Winnipeg in May next, and transferred temporarily to Kingston.

The two squadrons of the Royal Canadian Dragoons exist primarily for instructional purposes. "A" Squadron, quartered at Toronto, is insufficiently large to provide the instruction necessary for the whole of the cavalry and for the equitation courses in the Dominion. "B" Squadron is at present of little value in Winnipeg, where two squadrons of Manitoba Dragoons constitute the whole of the cavalry force. Its services are urgently required as an instructional cadre and nucleus for the cavalry brigade in the Province of Quebec. The squadron can be accommodated in existing barracks at Fort Henry, until barracks have been constructed for their permanent occupation at Montreal as recommended in Sec. 28.

In order to afford the requisite relief to the permanent corps, I propose to reduce the existing three months' "Officers' Course" at the various schools to two months, and to institute, in addition, a short or "Cadets' Course" of one month, which shall be carried out concurrently with the two months' "Officers' Courses". Officers undergoing the former will be expected to have mastered the elementary part of their drill before arrival, for which purpose the "Cadets' Course" is available. There will be no extra expense to the public by this re-adjustment.

## MOUNTED RIFLES IN THE NORTH-WEST.

(19) I recommend that a regiment consisting of two battalions of Mounted Rifles should be raised in Manitoba and the North-west Provinces.

The instructional head-quarters of the regiment should be established at Winnipeg as soon as the squadron of Royal Canadian Dragoons has been transferred to Kingston. The population of the western provinces is rapidly increasing, and the resources of the prairie districts are peculiarly adapted to the creation of a most valuable force of mounted riflemen.

## HALIFAX AND ESQUIMALT GARRISONS.

(20) The General Officer Commanding Her Majesty's troops in British North America has been pleased to promise his assistance in furthering the instruction of the Canadian troops allotted for the defence of Halifax and Esquimalt. It would be of the greatest benefit to the Canadian Militia Artillery to be placed for instructional purposes under the officers of the Royal Artillery, upon whom in time of war would devolve the responsibility of their command.

It has been arranged that the annual mobilization of the troops, and the manning of the forts at Halifax shall take place annually on the 1st of July in each year.

## CREATION OF A CANADIAN GENERAL STAFF.

(21) There are not, at the present moment, any officers now serving in the Militia who have received practical or theoretical instruction in the higher duties of the general staff of an army in the field. It is necessary, as a primary condition of raising the Canadian militia to the level of a modern army that the nucleus of a trained general staff should be created.



With the above objects in view, a Special Staff course has been arranged with your approval, to take place at the Royal Military College, under the direct supervision of the Commandant. Fourteen officers from the Permanent and Active Militia have been selected for this training. The first steps towards the creation of a trained and experienced staff will thus have been taken.

#### MONTREAL RIFLE RANGE.

(22) The Montreal District is, at present, without any rifle range. I need hardly point out that a rifle range is a matter of vital necessity for the military training of this very important District. The efficiency of the troops and the legitimate aspirations of those interested in rifle shooting as a branch of the National defence, merit your earnest and favourable consideration.

#### AN OFFICER OF THE ROYAL ARTILLERY TO COMMAND THE ROYAL CANADIAN ARTILLERY.

(23) The professional attainments in, and the technical knowledge of artillery as a science on the part of the officers of the Royal Canadian Artillery are insufficient for modern requirements. This is, as I have stated, in no way due to lack of zeal, but to the absence of opportunity and to the want of proper means.

The organization and administration of the artillery service, the effective supervision of modern armament, gun matériel and ammunition, require an artillery officer of the highest technical knowledge and experience.

The Schools of gunnery for garrison artillery at Quebec, and for field artillery at Kingston, are quite elementary, and are not equal to the instruction of the officers and non-commissioned officers of the Canadian Artillery generally in the science of modern gunnery.

At the present moment there is no officer of the Canadian Artillery who has had the technical and scientific training in Artillery to enable him to efficiently fulfil the above duties.

I recommend therefore, as an essential factor in the present and future efficiency of the artillery of the Dominion, that a specially selected field officer of the Royal Artillery (Lieut.-Colonel if possible) be appointed from the 1st May next to command the whole of the artillery for three years. This officer will be able to initiate a system of artillery command and administration upon modern lines which, at the termination of three years, our own Canadian Artillery Officers should be competent to carry on.

#### MESSING.

(24.) The greatest importance should be attached to the messing of the troops when concentrated and mobilized for training. An improvement might well be effected in this respect, which would materially conduce to the popularity of the force, to the contentment of the men and to improved discipline. I recommend that the system of messing recently adopted in England should be introduced, and that a limited number of marquees should be purchased and issued on loan to battalions as messing tents. Greater attention shall be paid to improving the cooking and regimental cooking places, &c. I especially recommend that the arrangement of the contracts for supplies, &c., be left entirely to the officers commanding the several military districts.

#### CLOTHING AND BOOTS.

(25) The serge frock has, with rural corps, been substituted for the tunic. It is most essential that two serges, one new and one part worn, should be available under company or regimental arrangement for each man. This system might be gradually carried into effect by granting a fresh issue after the second training.

It is a question which will merit careful consideration in the future if some especial emblem or Canadian characteristic should not form part of the Canadian uniform.

The quality of the boots in use by men at training has, in the past, been a fruitful source of irregularity and inefficiency. In accordance with existing regulations all militia men on joining are expected to provide themselves with serviceable boots. This rule in many cases is not observed, and the men do not provide themselves with satisfactory boots. I propose that those men, who on joining for training are found to be insufficiently booted, should be supplied with a pair of government ammunition boots at contract price, and that the amount for the same be charged against their pay. In order to meet this proposal a supply of government boots would be necessary at the various camps and points of concentration for training.

#### REGULATIONS.

(26) The militia regulations for 1887 have been amended to date, and a limited number of copies will shortly be issued provisionally.

Regulations for clothing are urgently required. Uniform is issued in a spasmodic and irregular manner, so as to very seriously affect not only the efficiency but the very discipline of the troops concerned. There is nothing which directly affects the *amour propre* and, therefore, the *esprit de corps* of military units so seriously as an unsatisfactory supply of clothing. So long as the department which is charged with the custody and issue of clothing is under civil control no system which will satisfy military requirements from the point of efficiency as well as of discipline is practicable. The result is absence of military supervision and consequent irregularity. I earnestly invite your consideration to the necessity of the department charged with the maintenance and issue of clothing being transferred to the military department. I recommend that detailed clothing regulations be framed without delay.

Regulations for Dress are also required in greater detail.

I also recommend that Regulations for Pay and Allowances based upon those in force in the Imperial Service should be framed. At present there are no regulations governing the details of Pay and Allowances, which are, therefore, a constant source of correspondence, delay, and irregularity.

As soon as the necessary Regulations have been framed and approved I recommend that a Pay Department should be organized as part of the military command, which following the custom of all armies, will deal with the issue of pay, and petty disbursements under the Regulations. The Pay Department, as in the Imperial Service, would be responsible to the Finance Branch, and render an account periodically. The issue of the soldier's pay involves discipline and necessitates military supervision, and cannot be dis-associated from the military command.

#### OFFICERS TO ENGLAND.

(27) Following the excellent precedent of previous years, I recommend that selected officers shall be sent to England and attached for duty and for instruction so far as funds admit. Four selected Non-Commissioned Officers have been recommended to be sent to qualify as Instructors for the Army Medical Corps, which it is proposed to create.

#### BARRACKS AT MONTREAL.

(28) I desire to invite your attention to the necessity for making the important City of Montreal a permanent military centre. Montreal is, indisputably, the centre of commercial activity. It is also a strategical point of great importance in the long frontier line of the Dominion, due to its being the all-important railway centre, and to its dominant position at the head of the ocean navigation of the St. Lawrence. Having these points in view I recommend that arrangements be undertaken and that barracks be erected for the accommodation of a proportion of the Permanent Troops required for the instruction and training of the troops of the three arms in this portion of the Dominion.



The necessity for a Squadron of the Dragoons at Montreal has already been urged in section 18 of this report. A company of the Garrison Artillery is similarly required as the nucleus and instructional cadre of the artillery defence of this important city.

I recommend that barrack accommodation be provided as follows :—

One Squadron of Royal Canadian Dragoons.

One Company of Garrison Division—Royal Canadian Artillery.

One Company (Depot) Royal Canadian Infantry Regiment.

Quarters and accommodation, for the officers attending courses of instruction, stores for the troops allotted to the defence of this portion of the Dominion, and offices and quarters for the district staff, are also requisite. Gun sheds are also required for the movable armament allotted to the garrison artillery.

#### REGIMENTAL ARMS AND EQUIPMENT STORES, GUN SHEDS, ARMOURIES.

(29) It will not be practicable, in my opinion, without serious loss to the State, to proceed with the issue of the new arms and equipment to battalions which are not provided with suitable stores. The Lee-Enfield rifle is costly and requires care in its custody. The Oliver equipment is of brown leather, and will require to be most carefully looked after and attended to in this climate. The means at the disposal of officers commanding companies belonging to rural battalions are quite inadequate to the responsibility. This opinion is shared by all officers commanding military districts. It will be necessary, therefore, to provide a regimental arms and equipment store for each regiment. This can be done in two ways; either by adding to existing stores, or by building.

I recommend that this service should be carried out gradually and that as an instalment the sum of \$30,000, be set aside in the estimates for 1899-1900. A rough estimate of the cost of a new Regimental Arms and Equipment Store, including headquarters offices, may be taken as ranging from \$800 to \$1,200, and of the necessary addition to existing stores from \$600 to \$800. The Regimental Arms and Equipment Store should provide storage not only for the Lee-Enfield rifles and Oliver equipment of each unit on its peace establishment, but also its war establishment. Storage for the additional regimental clothing to complete the units to war strength, and offices for the commanding officer, adjutant and quartermaster are also necessary.

The clothing for the companies on peace strength, together with the Kit bag, should be taken charge of, as at present, by the officers commanding companies, to which might possibly be added the waist-belts and haversacks.

In view of the re-equipment of field batteries which has taken place with the new 12 pr. B. L. gun, and having in regard the fact that the balance of the batteries will, shortly, be equipped with Q. F. pattern of the same weapon, it is essential that adequate storage in the shape of gun sheds for guns and harness rooms for harness should be completed. The modern type of gun is one which must inevitably suffer unless adequate steps are taken to meet this want. Suitable storage is also required for the saddlery, arms and equipment of some portion of the cavalry.

Accommodation for the stores of No. 1 Military District is urgently required at London, Ontario, as the lease of the present building expires in October next. I recommend that a store be constructed within the inclosure of Wolseley Barracks.

A store building No. 2 Military District is also required at Toronto, in place of the Old Fort, which, with its tumble-down wooden buildings is no longer adapted for the purpose, and which might, with advantage, be disposed of. I recommend that a store be constructed on government ground in proximity to Stanley Barracks.

New stores are required at Ottawa, towards the construction of which a certain sum is available. I recommend that the site be selected, and the details of construction be framed, having in view the future of Ottawa as a strategical military centre. The construction of suitable military head-quarters, providing accommodation for the staff and heads of departments should also be considered.

Having in view the delay which must ensue before all infantry battalions in the Dominion can be provided with suitable regimental storage, I recommend that all the Lee-Enfield Rifles and Oliver Equipment required for each district be issued and stored in the District Stores. The rifles should be unpacked and stored, in arm racks, which in many cases, already exist. By this means the prompt issue of the new rifle can be carried out upon emergency arising, which otherwise, under existing circumstances, with the arms stored in boxes, etc., would involve a serious delay.

Suitable drill halls, or armouries, are also urgently required for several city battalions.

#### PURCHASE OF EQUIPMENT.

##### *Field Artillery, Quick-firing guns.*

(30) With reference to section 12, part I., of this report, there are still 9 field batteries which are equipped with the obsolete 9 pr. R.M.L. gun. I recommend that these batteries be gradually equipped with the latest pattern quick firing gun, about to be adopted into the imperial service, and that instructions be given for the guns now under order from the War Office to be of that pattern. It may be safely assumed that, in the course of two or three years a quick-firing armament will be universally adopted. The necessary sum for the provision of two additional batteries to those now under order should be debited to the special vote for equipment and matériel, of which a balance still remains unexpended, so as to enable a further order for quick-firing armament to be forwarded to the War Office.

##### *Camp Equipment.*

Having in view the fact that, except tents and blankets, there is, at present, insufficient camp equipment available, I beg to recommend that the articles required to complete two infantry divisions and one cavalry brigade, in accordance with tables 57 and 61, War Establishments, 1898, shall be provided.

##### *Medical Staff Equipment.*

I attach the greatest importance to the organization of an Army Medical Service, and recommend as a commencement that a complete medical equipment for four bearer companies should be purchased together with a limited number of ambulances. This equipment, when purchased, will be available for instructional purposes, and the organization of Bearer Companies can then be proceeded with.

##### *Band.*

I beg to recommend the re-organization of the Band of the Royal Canadian Artillery. I have submitted, for your approval a small addition to the estimates, so as to provide sufficient remuneration to secure the services of a highly qualified band-master, and to provide the necessary band instruments.

A good permanent military band is much required, which should form a Military School of Music for improving the existing militia bands. Its services should be available for purposes of state, and for public occasions at Ottawa, and other Cities in the Dominion.

#### YUKON FORCE.

(31) I trust that the Detachment of Permanent Troops now on duty in the Yukon District, may be permitted to return to duty with their respective corps in the early summer. It is satisfactory to know that the services of the troops have proved valuable but in the event of its being considered advisable to retain the whole or any portion of the Force, I request that a corresponding increase in the Establishment of the Perman-



ent Corps may be approved. With the reduced number of Permanent troops now available, it is found to be impossible to satisfactorily carry out the instructional system for officers and N. C. officers of the Active Militia at the various Schools of Instruction. It is even difficult to carry out the ordinary routine duties appertaining to troops in barracks. I have already represented that officers and men at the various schools of instruction are overworked.

In the event of it not being found possible to relieve this detachment of its present duties, I propose to recommend for your consideration that an increased establishment shall be sanctioned.

There are now serving with the Yukon Field Force, 12 officers and 191 of other ranks, making a total of 203, or 24.4 per cent of the total establishment.

#### RECRUITING FOR THE IMPERIAL SERVICE.

(32) It has been proposed by the Imperial Government, that recruiting for the Prince of Wales' Leinster Regiment (Royal Canadians) shall be open to British subjects in the Dominion of Canada. Complete arrangements for carrying this out have been prepared, and will be published as soon as the final instructions and the requisite official forms have been received.

#### MILITIA ACT.

(33) The revision of the Militia Act of 1886, has been constantly urged. The Militia, originally formed as a supplement to Her Majesty's Regular Army garrisoning Canada, has now become the military force charged with the responsibility of National Defence. An amendment of the Act upon these lines is required.

#### RETIREMENT SCHEME FOR OFFICERS OF THE STAFF AND PERMANENT FORCE.

(34) A system for conferring pecuniary consideration upon officers on their retirement from the service on account of age, physical incapacity, or other causes, has become a question which requires urgent attention.

It is universally recognized that it is not to the true interest of any State to abandon its public servants, be they soldiers or civilians, to want or poverty-stricken old age after having extracted from them years of faithful service.

The pay of the junior officers of the Staff and Permanent Force in Canada is on an average about equal to that of the Imperial Service, but the pay of the senior officers is less. Consequently the longer a Canadian officer serves, and the more experienced he becomes, the less relative pecuniary reward for his services does he receive. Officers in the Imperial army have, moreover, a fixed rate of pension or gratuity to look forward to, so that their position and prospects are in this respect far better than those of their comrades in Canada.

## PART III.

### GENERAL REPORT AND RECOMMENDATIONS DEALING WITH THE MILITARY SITUATION IN CANADA.

(35) I desire with all respect to bring forward, for your earnest consideration, the whole question of the military situation of Canada. I do so with a very deep and abiding sense of the responsibility which rests upon me, not only as the military head responsible to yourself and to the Government of Canada for the efficiency of the troops under my command, but with the even still greater feeling of responsibility as military adviser.

I propose, in the *first place*, to bring to your notice the present condition of the military forces of the Dominion: in the *second place*, to invite you to consider the principles which govern the defence of Canada, and upon which the solid structure of future military organization must be based: in the *third place*, to submit the changes which are necessary in order to carry out those principles in a manner which shall be worthy of the Canadian nation, and consistent with the grave responsibilities which rest with her Troops.

#### 1st.

#### PRESENT CONDITION OF THE MILITARY FORCES OF THE DOMINION.

(36) The existing condition of the military forces of the Dominion can only be characterized as unsatisfactory in the extreme. The troops themselves generally are endowed with a profound patriotism, gifted with an excellent physique, and infused with that zeal and aptitude for military service which is an historical attribute of the Canadian people. The Canadian Militia consists of a number of small units of cavalry, artillery and infantry of varying strength, and of a very varying condition of discipline and efficiency. Valuable as such a force may be in the fighting qualities of its personnel, it is useless for military purposes in the absence of a trained general Staff, in the absence of administrative departments, and in the absence of an adequate supply of those stores of arms, ammunition and equipment which are indispensable to the maintenance of an armed force intended for military operations. The militia force of Canada is not under the existing system, an army, in its true sense: it is but a collection of military units without cohesion, without staff, and without those military departments by which an army is moved, fed, or ministered to in sickness.

#### *Absence of a Trained General Staff.*

There are no officers of the Canadian Militia who have received training in the higher functions and responsibilities of the general staff of an army. I need hardly remark that it is the staff which constitutes the brains and motive power of an army.

The initial step to fulfil this want has been taken by your recent approval of the necessary expenditure connected with the staff course already alluded to, but the creation of a general staff, whose members shall be able to discharge with the requisite efficiency their duties as organizers and instructors in peace, and as leaders in war, can only be encompassed after a lengthened period of theoretical and practical training.

#### *Absence of Administrative Departments and Corps of Engineers.*

There are no military administrative departments at present in existence. With a view to more particularly inviting attention to the importance of this matter, it is as well to enumerate those departments, and to state their functions, which are:—

1. *Army Service Corps*, charged with the supply of food and forage, and the transport of military stores, of supplies, of baggage and of the sick.



2. *Ordnance Store Corps*, charged with the military custody, maintenance and issue to the troops of equipment, ammunition, guns and warlike stores of all kinds.

3. *Army Medical Corps*, charged with the care of sick and wounded.

4. *Army Pay Department*, charged with the issue of pay and petty disbursements under the regulations in time of peace, and the custody of the military chest and the issue of the requisite funds, in time of war.

5. *Corps of Engineers*. Although not strictly an administrative department it may be here observed that no *Corps of Engineers*, exists. There are two weak independent companies of engineers who are partially provided with equipment. There are, not however, in Canada any of those stores which are included in the requirements of an engineer field park. A corps of engineers which shall include field companies, a bridging section, and a military telegraph section, is an indispensable adjunct to all armies intended for active operations.

*Absence of sufficient Stores, Arms, Ammunition, etc., and Clothing.*

With the exception of blankets and tents there are not sufficient stores to enable a military force of any size to be placed in the field. A reserve of arms and ammunition is required, based upon the recognized scale. The custody, maintenance and issue of all warlike stores and military equipment is in the hands of a civil department. The anomaly of placing in the hands of civilians the custody of military stores has already been pointed out. A system which removes from the knowledge and supervision of a general in responsible military command all those stores which have been provided by the Government for the use and efficiency of the troops under his command, will, I trust, be amended. The difficulty can be met without extra expense by converting the existing civil department into an Ordnance Store Corps which could then adopt the War Office regulations for the custody and maintenance of stores, etc., and be under military supervision. There are no stores of reserve clothing.

*Impossibility to organize Departments and purchase Stores at short notice.*

The military administrative departments enumerated above would be required at the very outset of the preparations in the event of a national emergency, and it is absolutely impossible to organize them at short notice.

These departments, from their technical character, require a most thorough knowledge on the part of the personnel if they are to fulfil their indispensable functions efficiently. It would be unreasonable to expect that officers and men could be capable of at once performing the very responsible administrative duties which only careful preparation by previous training could fit them to discharge with any hope of success.

*Inadequate Standard of Military Efficiency.*

I am not in a position to report fully upon the standard of military proficiency attained by the whole of the troops under my command.

The fact, however, that the training of rural battalions has in the past been spasmodic and uncertain renders the efficiency generally of the whole of the militia an undetermined factor of defence. Until the training of the rural troops is an annual fixture it would be folly to suppose that the militia of Canada as a whole can attain any satisfactory standard of military knowledge, or be reckoned upon as a solid and dependable military force.

The period of twelve days allowed for training of all arms is all too inadequate for infantry, but, when it is attempted to condense into this short period, which amounts, after deducting a Sunday and the days of arrival and departure, to nine working days, the training required for cavalry and field artillery, it needs no argument to show that the military value of troops thus trained cannot be of a high order.

The insufficient range accommodation at the various camps of exercise has, hitherto, prevented the troops from receiving anything but a very hurried and irregular course of musketry instruction and rifle practice during the period of their annual training. The provisional arrangement for the training in 1899, which I have submitted in Part II., Sec. 17, will, I hope, to a certain extent ameliorate this difficulty.

## 2nd.

## PRINCIPLES GOVERNING THE DEFENCE OF CANADA.

(37) It may be assumed that two factors govern the future organization and administration of a Canadian Army, viz. :—

(a.) *The defence of Canadian soil.*

(b.) *The power to participate in the defence of the British Empire.*

It is justly claimed for Canada that she is now a nation. In establishing this claim it must equally be accepted that with her birth as a nation are indisputably born the responsibilities of self defence. The defence of its own territory is the primary duty of a state. It would, indeed, be hardly consistent with the development of Canada as a young and vigorous nation if she were to abrogate her responsibility, or, in the robust period of her national youth rely upon the strong arm of the mother country to supply that which her own sons are so eager and willing to undertake. Canada is, moreover, a part of that larger empire which has given her birth, and it is the pride of Canada that in the past, whenever British or Imperial interests have been threatened, she has been the first to offer her assistance. If public opinion has been rightly judged there is, at the present time, a universally held determination to uphold at all costs the integrity of the empire, and at all hazards to maintain its interests against hostile aggression or foreign interference.

(a.) *For the defence of Canadian soil* there are two essentials, viz. :—

Garrison Troops for the protection of certain pre-determined strategical centres.

Field Troops for the active operations which are of primary importance in the defence of an extended frontier.

It is not necessary that the Troops for Garrison duty should be mobile. Field Troops however must be not only well trained, carefully organized, and thoroughly equipped in all respects, but must also be ready for active operations in the Field at the shortest notice. It is troops of the latter description which have been in the past, and would in the future be the determining element in the early issue of a campaign in Canada.

As a most important element in the defence of Canada, I cannot but impress the necessity of the naval defence of Lakes Erie and Ontario. The Militia Act of 1886 contemplated the formation of a Naval Militia Brigade, and I strongly recommend that steps should be taken with that intention. Training ships with an instructional staff might be obtained from the Admiralty. I feel sure that the formation of such a force would be productive of most valuable results, not only as a strong and most important element of defence, but as a means of educating the seafaring population, and of improving the shipping interests of the inland waters of Canada.

(b.) *For the power to participate in the defence of the British Empire* it will be obvious that the Field Troops above alluded to could be made quickly and readily available. Active operations could thus be undertaken conjointly with other British troops in whatever part of the Empire it might be the desire of Canada to employ them.

## 3rd.

## CHANGES NECESSARY IN ORDER TO CREATE A CANADIAN ARMY.

(38) The following changes are required in order to carry out the principles indicated in Para. 38, viz. :—

(1.) The position of the general officer in military command to be amended.

(2.) The creation of the existing militia force into an army complete in staff, in administrative departments and in all the important elements which constitute a modern army.

(3.) The provision of military stores and buildings for their custody.



*(1.) Position of the General Officer Commanding the Militia.*

The responsibilities of the General Officer in command of the Militia are laid down in the Militia Act of 1886, as those of "Military Command." Military Command is defined by the Queen's Regulations and Orders which are equally binding in Canada as elsewhere in the absence of other local legislation, (Militia Act, sec. 82). It is essential that these responsibilities, which are clearly indicated in Section 2 and Appendix I, Queen's Regulations, 1895, should be made clear and definite. The necessity for this step has been frequently urged, and the absence of a clear definition of these duties has been a fruitful cause of difficulty and friction between the Military and Civil Branches of the Militia Department. The Civil Branch has usurped many of the functions of the Military Command, thus reducing the powers of the General in Command, while leaving him his responsibilities as the military head under, and as the military adviser to the Minister of Defence.

If any system of sound military administration is to replace that which exists it can only be by placing in the hands of the General Officer Commanding his legitimate military functions.

In Appendix "G" will be found the responsibilities which, in accordance with Queen's Regulations, are recommended as consistent with the position of the General Officer Commanding and the Deputy Minister, in their relation to the Minister of Militia and Defence.

*(2.) Creation of a Militia Army for Canada.*

Under the existing circumstances any considerable increase to the present strength of the Militia Force is inadvisable, but I wish most strongly to urge that a complete though gradual change should be effected in the organization and administration of the whole Force, so as to conform to the requirements of the principles which I have ventured to submit. This change can be effected with comparatively small increase to the yearly Budget. It will be time enough to consider whether an increase of the troops is necessary, when the present military situation in Canada has been made to approximate to modern military requirements.

The difficulties incidental to the transformation of the existing Militia Force into a Militia Army need not be great.

The creation of the necessary administrative departments indicated in Sec. (36) does not present any serious difficulty. The system existing in Switzerland for the organization of these departments might be adopted with advantage. I would instance, as an illustration, the Army Service Corps. This all important department consists of two separate branches, viz. :—Supply and Transport. The Officers and personnel required for the Supply Branch might, with the greatest advantage, be recruited from those citizens whose civil occupations associate them with similar vocations in ordinary life. Similarly, the personnel of the Transport Service would be recruited from those whose civil occupation is concerned with transport by rail, land or water. The personnel required for each branch is not large, as the detail work of supply of food and forage, and the work of transport would be largely, if not entirely, performed by contract, and the military staff would be only concerned in the direction and military supervision of the contract system. This is the method adopted in most of the colonies of the Empire, and has been usual in many of our recent campaigns. It will be observed that the difficulties of organizing this department are more those of organization, administration and of military training than of a large expenditure of public money.

As with this department, so with the Ordnance Store Corps, and Pay Department. The Army Medical Corps and the Corps of Engineers would alone necessitate the organisation of a considerable personnel and the purchase of a suitable equipment. It may well be arranged for the conversion of some of the existing units into the personnel required for these two indispensable departments, and thus save the additional expense which an increase in the existing militia establishments would otherwise entail.

It is impracticable to attempt any form of administration which can be applicable on mobilization for war unless the existing small units of varying size are increased

in numerical strength and made up to a *uniform* establishment. Regiments of cavalry, batteries of artillery, and battalions of infantry must necessarily be of uniform strength. This change might well be carried out gradually, and existing battalions, weak and varying in size as they are, might at first be combined into provisional regiments without interfering with their present identity, having a fixed peace establishment which would, as required, be increased to a predetermined war establishment. The units thus organized could then be combined into brigades and divisions. The Staff Officers would be apportioned, and the proportionate quota of administrative departments detailed. The War Office manuals, lists of stores, mobilization tables, etc., could then be utilized.

(3) *The provision of military stores, and buildings.*

It is indispensable that the existing want of the necessary stores should be rectified, but this might be gradually carried out as the creation of the army progressed.

CONCLUSION.

(39) It would be necessary for the troops comprising an army thus created, to be trained annually and for fixed periods, if they are to possess any real military value.

Success in modern war, whether in defensive or in offensive-defensive operations, can only be ensured by deliberate slow organization during peace. History and modern facts alike testify that men only, no matter how brave and no matter how deeply endowed with military qualities, are powerless to oppose an army which has, in times of peace, been perfected by measured organization and matured by scientific preparation for war.

Some interesting facts are given in Appendix "H," as regards the expenditure upon military defence, which is undertaken by foreign nations, by Great Britain and by her self-governing colonies. It will be of interest to note that the Canadian people, who have a frontier of 3,260 miles, contiguous to a foreign State, pay less per head of its population towards the defence of its own soil than any other country in the world. It has been estimated that exclusive of capital expenditure upon guns, stores, etc., an expenditure of \$1,650,000, or 33 cents per head of the population would be sufficient for the requirements of the force proposed in paragraph 39 (2) during the next financial year. This will be an increase of \$130,000 upon the estimates of 1897-98.

A comparison of the military expenditure with that of other self governing colonies of the Empire will make it apparent that the annual outlay of \$2,000,000 upon her defences will be the lowest expenditure to expect of the Dominion in the near future with its vast resources, its increasing wealth, and its ever widening responsibilities.

The creation of a Militia army upon the lines indicated will transform the existing militia units into a Military Force, which shall in some degree at least be worthy of the Canadian nation, and be equal to maintaining the rights and liberties of the Canadian people. It will be, in its true sense, a National Army, and will, as such, be able not only to defend inviolate the integrity of Canadian soil, but it will be capable of contributing to the military defence of the British Empire in a manner and with a power which will place Canada in a position of unparalleled dignity and influence among all the possessions of the Crown.

I have the honour to be,

Sir,

Your obedient servant,

EDWARD T. H. HUTTON, Major General,

A.D.C. to Her Majesty The Queen,

Commanding Canadian Militia,

OTTAWA, 1st January, 1899.



## APPENDIX A.

## REPORT OF COMMANDANT R. M. C.

To the General Officer Commanding the Canadian Militia, President Royal Military College.

KINGSTON, ONT., October 22nd, 1898.

SIR,—I have the honour to forward my annual report on the Royal Military College for the year 1898.

(1.) At the commencement of the year 1898, there were fifty-seven cadets in residence. Of these :

Two were granted commissions in February.

Three were withdrawn at the request of their fathers.

Eight graduated in June.

One extra commission was granted to a cadet of the second class.

One failed at the midsummer examination and was withdrawn from the College, leaving forty-two old cadets. A new class of thirty-two joined in September, thus bringing the strength of the College at present up to seventy-four.

(2.) Only eight officers of the militia attended the long course, of whom four obtained first class certificates and one failed to qualify.

With one exception these militia officers were quite young men, anxious for a training to enable them to get into the Imperial Service, or to qualify for the permanent corps.

I do not consider that these young officers are those for whom this course was founded, and should be very glad if you could see your way to induce more senior officers, whose training would be of service to the Canadian Militia, to come to the College.

(3.) In addition, one officer and four non-commissioned officers of the Charlottetown Company of Engineers were put through a special course of military engineering for one month in the spring. The results of this training are reported to me to have been most beneficial, and the company's improvement at this year's inspection was very noticeable.

(4.) During the midsummer vacation, a party of nine cadets, under the superintendence of Capt. Twining, R.E., were employed on a reconnaissance and military survey of the country between London and Port Stanley, and the Detroit and St. Clair River frontiers.

(5.) Under the sanction of the General Officer Commanding the Militia, seventeen cadets were attached to the Militia Regiments in Camp, twelve to the Kingston Camp, three to Niagara, and two to Sussex.

This duty is now considered an obligatory part of the College training, and is most beneficial to the cadets. Every endeavour was made to train them to be good Squad and Company Instructors, and in all these instances their services were highly spoken of by the Officers Commanding the Camps, as being of great use to the militia. I hope that twenty-eight cadets will be available for this service next June.

(6.) With the permission of the Minister of Militia, a party of thirty-two cadets under Capt. Lesslie, R.E., took part in the Toronto Military Tournament, giving an exhibition of rapid marching and free gymnastics, similar to the display given by the Aldershot Gymnastic Staff at the Military Tournament in London. Col. Otter, the President of the Tournament, subsequently wrote to me as follows :—

"I am desired by the Tournament Committee to thank the cadets for their most "excellent and interesting display, it was without doubt the feature of the Tournament."

(7.) On the invitation of Mr. E. W. Rathbun, the cadets of the first and second classes were able to visit his extensive works at Deseronto, an object lesson of great value to them.

(8.) With the permission of the Minister of Militia, I was able to accept the kind invitation of the Dean of McGill University to show the cadets of the first class over the magnificent workshops of that institution. The cadets actually saw performed and were allowed to assist at, "The testing of materials of construction, such as iron and steel bars, and heavy timber beams. Observations on flow of water over weirs, and through orifices, and the determination of hydraulic coefficients, the taking of indicator diagrams, and the determination of indicated and brake horse power."

(9.) The behaviour of the cadets during the past year has been exemplary.

(10.) Now that the numbers of the College have been so greatly increased, a large Infantry and Artillery Drill Shed is much wanted at the College. The plans were submitted to the Chief Engineer, Militia Department, last year, but the money was not voted.

(11.) The midsummer examinations may be described as satisfactory. The outside examiners, in all instances, were pleased with the work done by the cadets, though in many instances a want of practical application of the work learnt was complained of. Owing to the long winter, the time available for outdoor training is much curtailed, but every effort is now being taken, especially during the fall of the year, to get the cadets as much out of door training as possible.

In the 1st class all the cadets obtained their Diplomas, Co. Sergt. Major Denison being distinguished in every subject. Three of the class obtained the "Diploma with honours."

The following cadets were gazetted to commissions in the Imperial Army during the year :—

February 29th.—Royal Artillery :—Co. Sergt. Major A. C. H. Dean and Sergt. A. E. Smith.

August 10.—Indian Staff Corps :—Battn. Sergt. Major F. F. Hunter.

Bedfordshire Regiment :—Sergt. G. H. Rogers.

Lancashire Fusiliers :—Corpl. H. R. Payzant.

September 13th.—Royal Engineers :—Co. Sergt. Major G. W. Denison.

Royal Artillery :—Cadet H. St. G. Hamersley.

Two commissions in the Permanent Corps were offered to the Cadets, but were not accepted.

In addition to the above-mentioned officers, the following cadets graduated from the College :—

Co. Sergt. Major L. Sherwood.

do A. C. Caldwell.

Corpl. J. F. O'Connor.

Cadet W. B. Kingsmill.

In the 2nd class one cadet failed to qualify and has been withdrawn from the College.

In the 3rd class four cadets failed to qualify and dropped into the recruit class under para. 57 (1) "Regulations for the Royal Military College."



In all subjects, examiners were selected who had had nothing to do with the instruction of the cadets in the subjects they examined in.

The remarks of the examiners are given in the appendix.

I have the honor to be, sir,

Your most obedient servant,

G. C. KITSON, Lt.-Colonel,  
Commandant Royal Military College.

## REMARKS OF THE EXAMINERS ON THE EXAMINATION, JUNE, 1898.

### MILITARY SUBJECTS.

#### MILITARY SURVEYING AND RECONNAISSANCE.

Very satisfactory.—The sketches were neat and fairly accurate, and a good knowledge of the general principles of reconnaissance was shown. In the application of these principles, however, the results of the oral examination on the ground were feeble.

#### TACTICS.

Book work thoroughly well got up, but the actual handling of a company in the field was, in many instances, very feeble.

#### MILITARY ENGINEERING.

1st class.—The results of the examination are satisfactory, the per centage of marks averaging 57 per cent. Every candidate attempted every question, and all were equally well answered.

2nd class.—The paper set was a hard one requiring much thought. The result of the examination is satisfactory and shows a good general knowledge.

3rd class.—The papers as a rule are good and show that the practical work has been well taught.

#### ARTILLERY.

I considered the results very satisfactory. In this subject there were no failures.

### CIVIL SUBJECTS.

#### CIVIL ENGINEERING.

<sup>and</sup> <sup>very</sup> I consider the work of the cadets on the whole very good. There is certainly a marked difference in the character of the work from that done last year. Of course the effects of a transition from one course to another can be observed, but the cadets show a good knowledge of the fundamental principles underlying civil engineering and in some cases the work is fully entitled to honours.

#### CIVIL SURVEYING.

The class does not seem to have had that practical experience of astronomical work, which is essential to a thorough understanding of the subject.

#### MATHEMATICS.

I do not think that better results can be obtained with students from the secondary schools of Canada, and in the time devoted to mathematics by the cadets of the Royal Military College. At the same time, while the marks are in several cases exceptionally

high and the general average extremely good, I am led to think that a few students are entirely out of place in the college, and I trust that these results will be of some service to you in ridding the institution of a few men who are not likely to be a credit to it.

(Note by Commandant, R.M.C.—One cadet in the 2nd class has been discharged and four in the 3rd class dropped a term.)

#### PHYSICS.

All the papers were fully worthy of passing, and one or two showed quite special excellence. The work in Heat was fuller and stronger than in Electricity, and I desire to lay stress on the importance of practical work, however elementary.

#### CHEMISTRY.

The answering is fair, and I think all the men, except one, should pass.

#### FRENCH.

The marks obtained by the candidates tend to reflect credit on the teaching of the institution, and on the application of the candidates examined.

#### ENGLISH.

The candidates gave very satisfactory answers to the questions set, but there is an evident lack of knowledge of orthography.

There is a general complaint of bad spelling among the examiners.

#### PRACTICAL GEOMETRY.

3rd. Class.—Paper on the whole very well answered, except in one instance. The average of the class was 56 per cent.

#### DESCRIPTIVE GEOMETRY.

Papers fairly satisfactory. The average of the class was nearly 50 per cent.

G. C. KITSON, Lt.-Colonel.

### (APPENDIX II.)

The College Honours and Prizes were awarded as follows :—

#### DIPLOMAS WITH HONOURS.

Co. Sergt. Major Denison.  
Battn. Sergt. Major Hunter.  
Co. Sergt. Major Sherwood.

#### DIPLOMAS.

Co. Sergt. Major Caldwell.  
Corporal Payzant.  
Cadet Hamersley,  
Cadet Kingsmill.  
Cadet O'Connor.

#### GOVERNOR GENERAL'S MEDALS.

Gold medal, Co. Sergt Major Denison.  
Silver medal, Battn. Sergt. Major Hunter.  
Bronze medal, Co. Sergt, Major Sherwood.



## CLASS PRIZES.

1st class, Co. Sergt. Major Denison.  
 2nd class, senior half, Sergt. Peters.  
 2nd class, junior half, Sergt. Bingay.  
 3rd class, Cadet Baker.

## SUBJECT PRIZES—1st Class.

Mathematics.....	Co. Sergt. Major Denison
Military Engineering.....	do
Military Surveying and Reconnaissance.....	do
Tactics, Mil. Administration and Law..	do
Surveying.....	do
Science (Chemistry and Physics).....	do
Civil Engineering.....	do
French.....	do
English.....	Batt. Sergt. Major Hunter.
Drills and Exercises.....	do
Conduct and Discipline.....	Co. Sergt. Major Caldwell.

## SUBJECT PRIZES—2nd Class.

Mathematics.....	Co. Sergt. Major Carr-Harris.
Geometrical and Engineering Drawing..	Sergeant Peters.
Tactics, Mil. Administration and Law..	do
English.....	Sergeant Rogers.

GYMNASTICS (open to 2nd and 3rd classes, prize given by R. M. College Club.)  
 Cadet Weston.

## DOMINION ARTILLERY ASSOCIATION PRIZES.

Sergeant Bingay, and Co. Sergeant Major Carr-Harris.

## ONTARIO ARTILLERY ASSOCIATION PRACTICE COMPETITION.

Sergeant Peters.

## REVOLVER SHOOTING.

1st Prize, Sergeant Bingay..... 2nd Prize, Cadet Reid.

## RIFLE SHOOTING.

(Prize by Capt. Wurtele, Secretary R. M. College Cadet's Club.)  
 Sergeant Peters.

G. C. KITSON, Lt.-Colonel.

## (APPENDIX B.)

RETURN showing the Number of Officers, Men and Horses trained during the year 1898, in District Camps.

Military District.	Authorized Establishment Called Out.			Received 12 Days Training.			Received Under 12 Days Training.			Untrained.		
	Officers.	N. C. Officers and Men.	Horses.	Officers.	N. C. Officers and Men.	Horses.	Officers.	N. C. Officers and Men.	Horses.	Officers.	N. C. Officers and Men.	Horses.
No. 1... ..	316	3,302	396	236	2,547	349	4	39	.....	76	716	47
2.....	371	3,848	603	267	3,640	549	13	38	2	91	170	52
3.....	206	2,077	583	152	1,956	554	1	28	1	53	93	28
4.....												
5.....	101	959	217	80	906	152	.....	.....	.....	21	53	65
6.....	123	1,264	268	82	974	257	.....	.....	.....	41	290	11
7... ..	148	1,428	22	104	1,169	16	2	27	1	42	232	5
8.....	83	840	11	66	829	10	6	8	.....	11	3	1
9.....	213	2,276	154	181	2,172	132	1	14	1	31	90	21
12.....	22	210	.....	21	201	..	.....	8	.....	1	1	.....
	1,583	16,204	2,254	1,189	14,394	2,019	27	162	5	367	1,648	230



## (APPENDIX B.—Continued.)

RETURN showing the Number of Officers, Men and Horses trained during the year 1898,  
at Local Headquarters.

Military District.	Authorized Establishment Called Out.			Received 12 Days Training.			Received Under 12 Days Training.			Untrained.		
	Officers.	N.-C. Officers and Men.	Horses.	Officers.	N.-C. Officers and Men.	Horses.	Officers.	N.-C. Officers and Men.	Horses.	Officers.	N.-C. Officers and Men.	Horses.
No. 1.....	26	252	4	15	201	4	.....	.....	.....	11	51	.....
2.....	185	1,932	23	171	1,932	23	.....	.....	.....	14	.....	.....
3.....	78	756	12	54	584	12	16	137	.....	8	35	.....
4.....												
5.....	153	1,970	148	141	1,820	145	.....	17	.....	12	133	3
6.....	38	385	6	33	326	6	.....	.....	.....	5	59	.....
7.....	77	756	144	49	698	136	5	32	.....	23	26	8
8.....	33	347	55	25	288	55	4	8	.....	4	51	.....
9.....	84	1,189	8	74	1,032	8	.....	85	.....	10	72	.....
10.....	36	389	53	24	300	49	2	54	.....	10	35	4
11.....	38	616	.....	31	501	.....	.....	37	.....	7	78	.....
12.....	6	100	.....	5	74	.....	1	3	.....	.....	23	.....
Ottawa Brigade....	63	755	104	55	634	101	.....	56	2	8	65	1
	817	9,447	557	677	8,390	539	28	429	2	112	628	16
SUMMARY.												
District Camps....	1,583	16,204	2,254	1,189	14,394	2,019	27	162	5	367	1,648	230
Local Headquarters	817	9,447	557	677	8,390	539	28	429	2	112	628	16
Totals.....	2,400	25,651	2,811	1,866	22,784	2,558	55	591	7	479	2,276	246

Total Regimental Establishment of Active Militia, Officers, N.-C.  
Officers and men, on 31st December, 1898 ..... 35,173

Total Regimental Establishment of Active Militia, Officers, N.-C.  
Officers and men of Corps ordered to drill during 1898 ..... 28,051

Total Officers, N.-C. Officers and men of Active Militia, trained or  
partly trained during 1898. .... 25,296

M. AYLMER, Col.,  
A. G.

## (APPENDIX C.)

RETURN of Certificates granted to Officers, N.-C. Officers and Men of the Active Militia for the year ending 31st December, 1898.

Arm and Station.	Long Course.						Short Course.						Special Course.						Musketry Course.						Equitation.	Maxim Gun.	Trumpeters' Course.			High School Cadet Instructor's Certificate.	Total.	Remarks.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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M. AYLMER, Col., A.G.



## (APPENDIX D.)

RETURN of Field Batteries C. A. which performed Annual Drill during the year 1898, showing type of gun used, ammunition expended, &c.

Battery.	Guns.	Type.	GUN AMMUNITION EXPENDED BY EACH BATTERY.		Station at which Gun Practice was carried out.
			Shells.		
			Common.	Shrapnel.	
1st Brigade } 11th "Guelph"	6	9-pr. R.M.L.	Did not	practice.	Camp, London.
16th " " "	6	" " "	"	"	" " "
1st "Quebec"	6	12-pr. B.L.	"	21	" Quebec.
2nd "Ottawa"	6	" " "	"	40	" Ottawa.
3rd "Montreal"	6	" " "	Did not	practice.	" " "
4th "Hamilton"	6	" " "	"	40	" Niagara on the Lake.
5th "Kingston"	6	9-pr. R.M.L.	16	24	" Kingston.
6th "London"	6	" " "	Did not	practice.	" London.
7th "St. Catharines"	6	" " "	16	24	" Niagara on the Lake.
8th "Gananoque"	6	" " "	16	24	" Kingston.
9th "Toronto"	6	12-pr. B.L.	"	40	" Niagara on the Lake.
10th "Woodstock"	6	9-pr. R.M.L.	16	24	" Woodstock.
12th "Newcastle"	6	" " "	Did not	drill.	" " "
13th "Winnipeg"	6	" " "	16	26	" Winnipeg.
14th "Durham"	6	" " "	Did not	practice.	" " "
15th "Shefford"	6	" " "	16	24	" Granby.
17th "Sydney"	6	" " "	16	24	" Sydney, C.B.
Total			112	311	

RETURN of Garrison Regiments and Companies C. A. which performed Annual Drill during the year 1898, showing type of gun used, ammunition expended, &c.

Garrison Artillery.	GUN AMMUNITION EXPENDED.				Station at which Gun Practice was carried out.
	Shot, Palliser.		Shot, solid.	Shell, common	
	6-inch B. L.	9-inch R.M.L.	40-pr. R.B.L.	64-pr. R.M.L.	
Royal Canadian Artillery Garrison Div. ( No. 1 Co. )	16	24			Halifax, York Redoubt.
( No. 2 Co. )					
1st Regiment C. A.					No practice, owing to gale.
2nd " "			36	26	Isle of Orleans.
3rd " "				60	St. John, Fort Dufferin.
4th " "			55		Charlottetown, P.E.I.
5th " "	12				Fort Macaulay, B.C.
( 1st Batt. )					
( 2nd " )					
Levis Companies ( No. 1. )					
( No. 2. )					
Quebec Company					
Cobourg " "			14	14	Isle of Orleans.
Digby " "					
Mahone Bay " "					
Pictou " "					
Yarmouth " "					
Total	28	24	105	100	

W. H. COTTON, Lt.-Col.

A. A. G. for Artillery.

## (APPENDIX E.)—MOBILIZATION for Training, Drill Season, 1899.

CAMP.	DATE.		TROOPS.	Approximate Strength of all Ranks.	REMARKS.
	From	To			
London.....	May 30..	June 10..	1st Division (London)— 1st Infantry Brigade (5 Battalions). 2nd Infantry Brigade (4 Battalions).	3,700	{ 1 Cavalry Regiment. 2 City Battalions in addition will be attached for two days.
Niagara.....	June 6..	" 17..	2nd Division (Toronto)— 1st Cavalry Brigade (3½ Regiments). 1st Artillery Brigade (4 Batteries). 2nd Artillery Brigade (3 Batteries). 3rd Infantry Brigade (5 Battalions). 4th Infantry Brigade (5 Battalions). 5th Infantry Brigade (3 Battalions). 6th Infantry Brigade (3 Battalions).	6,400	{ "A" Battery, R.C.A., attached as Horse Artillery. "A" Squadron, R.C.D., attached.
Longueuil and Laprairie....	June 20..	July 1..	3rd Division (Montreal)— 2nd Cavalry Brigade (3 Regiments). 7th Infantry Brigade (6 Battalions). 8th Infantry Brigade (6 Battalions). 9th Infantry Brigade (6 Battalions).	6,200	{ 1 Sec. "B" Battery, R.C.A., attached as Horse Artillery. "B" Squadron R.C.D. attached.
Levis.....	" 27..	July 8..	4th Division (Quebec)— 4th Artillery Brigade (3 Batteries). 10th Infantry Brigade (5 Battalions). 11th Infantry Brigade (5 Battalions).	3,400	2 City Battalions will be attached for two days.
Sussex.....	Sept. 5..	Sept. 16..	5th Division (Nova Scotia and New Brunswick)— 5th Artillery Brigade (3 Batteries). 12th Infantry Brigade (4 Battalions). 13th Infantry Brigade (5 Battalions).	3,000	1 City Battalion in addition attached for two days. 1 City Battalion in addition attached for two days.
Aldershot.....	" 12..	" 23..			
Kingston..	" 5..	" 16..	6th Division (Kingston)— 14th Infantry Brigade (6 Battalions). 15th Infantry Brigade (6 Battalions).	3,000	1 Cavalry Regiment. 1 Company of Engineers. 1 City Battalion in addition attached for two days.
Kingston.....	May 30..	June 10..	3rd Artillery Brigade (5 Batteries).	444	2 City Battalions in addition attached for two days. 2 City Battalions in addition attached for two days.

NOTE.—The remainder of the Troops which are not included in the above central camps will be trained locally.

HUBERT FOSTER, Colonel, Q.-M. G.



## (APPENDIX F.)

ANNUAL Training, etc., for Permanent Instructional Corps, and Courses of Instruction, 1899.

## ROYAL CANADIAN DRAGOONS.

Period.	Nature of work.	Remarks.
2nd Jan. to 28th Feb. ....	Short Course and other Courses..	As per Syllabus.
1st March to 30th April ..	" " " ..	" "
1st May to 30th May.....	Squadron Training..	
1st June to 15th July .....	With Camps of Instruction .....	As may be detailed in Militia Orders.
15th July to 15th Aug.....	Furlough. ....	
15th Aug to 31st Aug.....	Musketry.....	Continuation of Squadron Training.
September .....	With Camps of Instruction ....	As may be detailed in Militia Orders.
1st Oct. to 30th Nov.....	Short Course and other Courses.	As per Syllabus.
December.....	Furlough. ....	

## ROYAL CANADIAN ARTILLERY—FIELD DIVISION.

2nd Jan. to 28th Feb. ....	Short Course and other Courses..	As per Syllabus.
2nd March to 30th April.....	" " " ..	" "
1st May to 28th May.....	Battery Training.....	As per Schedule.
30th May to 15th July.....	With Camps of Instruction .....	As may be detailed in Militia Orders.
15th July to 15th Aug... ..	Furlough.....	
16th Aug. to 30th Sept.....	Battery Gun Practice and with Field Artillery Practice Camp.	As may be detailed in Militia Orders.
1st Oct. to 30th Nov.. . . .	Short Course and other Courses..	As per Syllabus.
December .....	Furlough.....	

## ROYAL CANADIAN ARTILLERY—GARRISON DIVISION.

2nd Jan. to 28th Feb. ....	Short Course and other Courses..	As per Syllabus.
2nd March to 30th April.....	" " " ..	" "
15th May to 30th June. ....	Annual Training and Gun Practice .....	As per Schedule.
1st July to 15th July ... ..	With Camps of Instr. or Annual Training of Gar. Artillery Units	As may be detailed in Militia Orders.
16th July to 16th Aug.. ..	Furlough.....	
17th Aug. to 15th Sept. ....	With Camps of Instr. or Annual Training and Gun Practice of Garrison Artillery Units. ....	" " "
1st Oct. to 30th Nov.....	Short Course and other Courses..	As per Syllabus.
December.....	Furlough .....	

ANNUAL Training, etc., for Permanent Instructional Corps, and Courses of Instruction, 1899.—*Continued.*

## ROYAL REGIMENT CANADIAN INFANTRY.

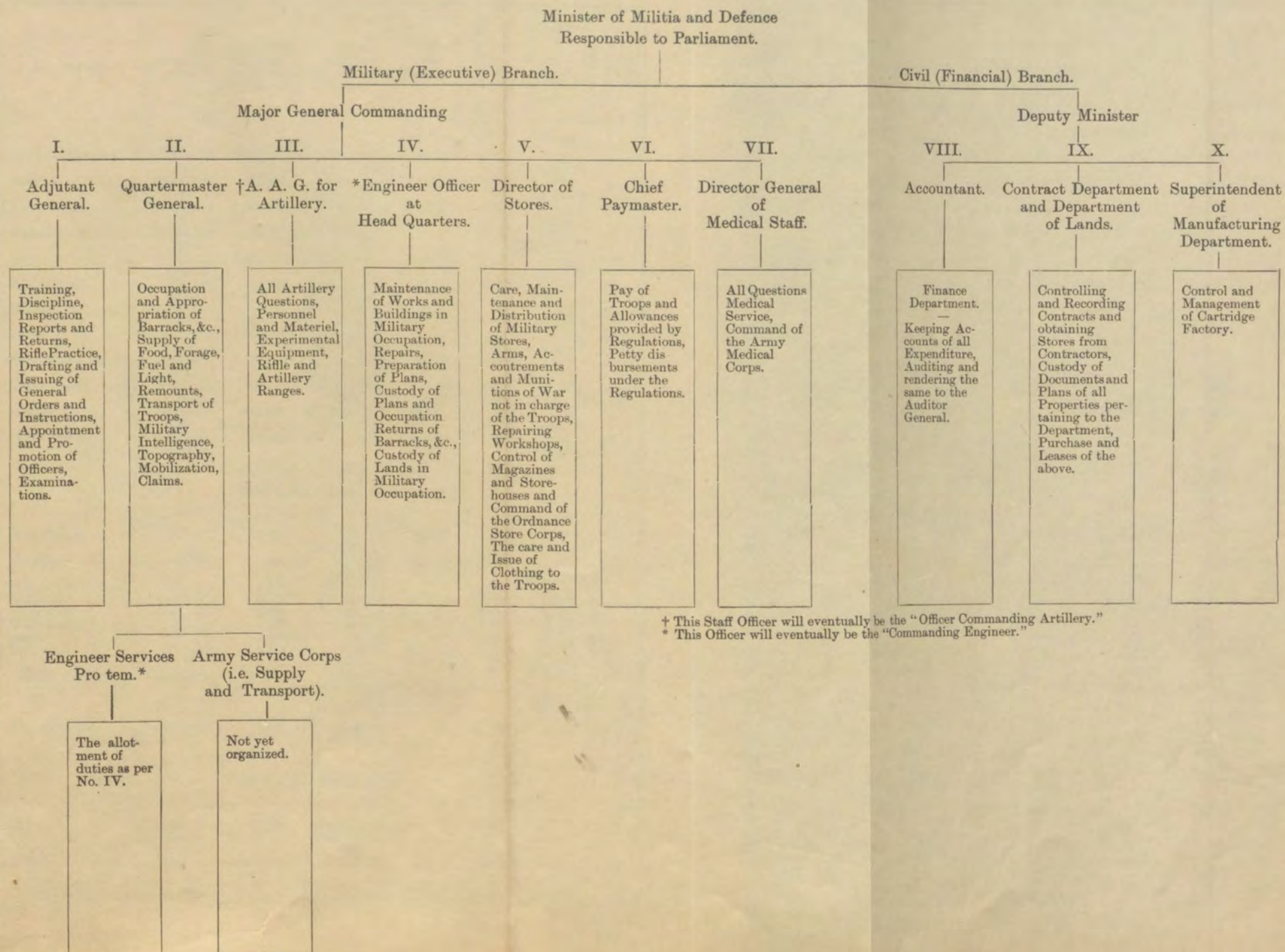
Period.	Nature of work.	Remarks.
2nd Jan. to 28th Feb. ....	Short Course and other Courses..	As per Syllabus.
March .....	Furlough .....	Special Courses.
2nd April to 30th May .....	Short Course and other Courses..	
1st June to 10th July .....	With Camps of Instruction .....	As may be detailed in Militia Orders.
14th July to 24th Aug .....	Company and Battalion Training.	As per Schedule.
September .....	Musketry and Camps of Instr'n..	As may be detailed in Militia Orders.
1st Oct. to 30th Nov. ....	Short Course and other Courses..	As per Syllabus.
December .....	Furlough .....	

M. AYLMER, Colonel, A.G.



## (APPENDIX G.)

TABLE showing proposed Distribution of Duties and Responsibility in the Department of Militia and Defence.



## (APPENDIX H.)

## STATEMENT of Military Expenditure of Great Britain and her Colonies and the Principal Nations of the World.

Country.	Popula- tion.	Organized Military Strength, 1895.	Gross Military Expenditures. Totals.	Per Soldier.	Per Head of Po- pulation.	Total Federal Taxation per head of Popu- lation.	Percentage of Taxation de- voted to Mili- tary Purposes.
				£ cts.	£ cts.	£ cts.	
Austria-Hungary . . .	41,358,886 (1890.)	1,826,940	136,604,701 Fr. (Budget 1896.)	30 17	1 34	6 67 (1892.)	20.1
Belgium . . . . .	6,341,958 (1894.)	163,082	51,963,452 Fr. (Budget 1896.)	61 00	1 54	5 40 (1894.)	28.4
France . . . . .	38,343,192 (1891.)	2,500,000	651,174,820 Fr. (Est. 1896.)	50 25	3 28	11 92 (1894.)	27.5
Germany . . . . .	51,758,364 (1895.)	3,000,000	472,212,400 Ms. (Exp. 1896.)	37 50	2 16	6 32 (1892-93.)	37.3
Italy . . . . .	30,913,663 (1894.)	3,435,607	225,982,843 Fr.	12 70	1 35	8 46 (1894.)	16
Netherlands . . . . .	4,795,646 (1894.)	70,000	23,792,645 G. (Budget 1896.)	137 78	1 95	4 16 (1892.)	46.8
Russia . . . . .	129,545,000 (1895.)	2,512,143 (1892.)	288,521,969 R. (1896.)	85 69	1 72	3 16 (1894.)	54.4
Spain . . . . .	17,565,632 (1887.)	1,083,595	139,486,821 Ps. (B. 1895-96.)	25 00	1 50	6 35 (1893-94.)	23.6
Sweden and Norway . .	6,920,000 (1894.)	535,000	37,110,900 Ks. (Budget 1896.)	18 76	1 48	3 91 (1890-91.)	37.8
Switzerland . . . . .	2,986,848 (1894.)	488,614	23,113,639 Fr. (1895.)	9 13 Net.	1 55 1.35	2 68 (1894.)	57.8
* United States . . .	65,000,000 (1895.)	143,000 Regs. & S. G.	\$35,925,173 (Exp. 1895.)	251 22	0 57½	4 11 (1895.)	Net 50.3 14
† Great Britain . . . . .	40,000,000 (1896.)	718,821	£20,805,758	135 74	2 24	9 47 (1894.)	23.6
FOR THE YEAR 1894.							
Cape Colony . . . . .	1,711,487	7,978	£161,229 (\$783,572.94)	98 21	0 44	5 27 (1892.)	8.3
Natal . . . . .	560,000	790	£116,235 (\$565,677)	716 00	a) 0 98	3 68 (1891.)	26.6
New South Wales . . .	1,251,450	6,108	\$1,326,383	(b)	1 04	10 80	
Victoria . . . . .	1,179,103	5,388	972,646		0 80	10 34	
Queensland . . . . .	445,145	2,960	307,136		0 68	15 19	
West Australia . . . .	82,072	776	46,854		0 52	28 16	
South " . . . . .	347,720	2,033	178,032		0 64	10 74	
Tasmania . . . . .	157,456	1,458	60,504		0 30	13 05	
Total, Australia . . .	4,189,074	18,723	£593,753 (\$2,891,575)		0 66.3	14 71	4.5
New Zealand . . . . .	726,128	7,488	£36,365 (\$420,310)		0.44	16 48	2.6
FOR THE YEAR 1895.							
Canada . . . . .	5,000,000 (1895.)	35,835	\$1,631,102 (Exp. 1895.)	45 52	0 32	5 49 (1895.)	5.8

\* United States returns include Regular and State troops and expenditure.

† If the expenditure under the naval vote is added, Great Britain pays 17s. 4d. or \$4.20 per head of population.



## (APPENDIX I.)

ANNUAL RETURN of Permanent Corps of Active Militia (Non-Commissioned Officers and Men) for the Year ending 31st December, 1898.

Name of Corps.	Authorized Establish- ment.	Strength on 31st Decem- ber, 1897.	Strength on 31st Decem- ber, 1898.	Become Non-effective.								Enrolled.					Composition of present Contingent as to Length of Service.				Serving with pen- sion from Im- perial Govt.
				Discharge by Purchase.	Discharged, Unsuitable.	Discharged, Invalided.	Discharged, Time expired.	Deserted.	Died.	Transferred.	Total.	Enlisted.	Re-enlisted.	Transferred.	Returned from Desertion.	Total.	Under 1 year.	1 to 2 years.	2 to 3 years.	Over 3 years....	
Royal Canadian Dragoons . . . . .	151	128	138	10	4	6	4	24	...	6	53	56	5	1	1	63	44	19	27	48	2
" " Artillery. . . . .	385	303	338	8	11	4	19	33	2	3	80	100	3	4	8	115	98	59	40	141	1
" " Regiment of Canadian Infantry ..	329	272	298	11	8	8	9	23	2	2	63	73	4	2	10	89	68	45	30	155	
	865	703	774	29	23	18	31	80	4	11	196	239	12	7	19	267	210	123	97	344	3

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## (APPENDIX J.)

## RETURN of Musketry in District Camps, 1898.

Military District and Site of Camp.	Corps.	Corps figure of Merit.	Rank and Name of Best Shot.	Score.	Remarks.
District No. 1.					
London Camp . . .	21st Battalion . .	21 44	Sergt. W. Smith . . . . .	61	Best shot in camp.
	26th " . . . .	15 02	Pte. E. Snake . . . . .	57	
	27th " . . . .	24 36	Corp. H. Manity . . . . .	77	
	28th " . . . .	16 20	Pte. W. J. Roy . . . . .	59	
	29th " . . . .	18 12	Pte. Westfall . . . . .	54	
2nd Camp . . . . .	1st Hussars . . . .	13 32	Sergt. Little . . . . .	51	Best shot in camp.
	22nd Battalion . .	20 62	Sergt. Graham . . . . .	68	
	30th " . . . .	23 29	Pte. M. Hurren . . . . .	72	
	33rd " . . . .	18 20	Sergt. Miller . . . . .	57	
	District No. 2.				
Niagara on the Lake	2nd Dragoons . .	44 11	Sergt. Eddy . . . . .	74	Best shot in camp.
	12th Battalion . .	45 16	Pte. W. Mitchell . . . . .	75	
	37th " . . . .	40 00	Col. Sergt. Weir . . . . .	73	
	39th " . . . .	38 00	Pte. D. Burch . . . . .	69	
	44th " . . . .	34 84	Sergt. Berry . . . . .	70	
	77th " . . . .	48 21	Corp. Carson . . . . .	74	
	Sault St. Marie Rifle Co. . . . .		Pte. E. Daly . . . . .	61	
	Sudbury Rifle Co		Pte. Perrault . . . . .	56	
	District No. 3 & 4.				
Belleville . . . . .	16th Battalion . .	46 12	Pte. Russell . . . . .	77	Best shot in camp.
	40th " . . . .	42 8	Pte. J. Carson . . . . .	73	
	46th " . . . .	49 5	Sergt. Young . . . . .	74	
	3rd Dragoons . .	42 2	Tr. Murphy . . . . .	73	
Kingston . . . . .	4th Hussars . . . .	50	Sergt. Londen . . . . .	70	Best shot in camp.
			Corp. Lacey . . . . .		
			Pte. Bennett . . . . .		
	42nd Battalion . .	46	Pte. J. Warren . . . . .	74	
	59th " . . . .	43 6	Pte. D. Fraser . . . . .	77	
District No. 5.					
Laprairie . . . . .	6th Hussars . . . .	28 34	Tr. J. McNaughton . . . . .	76	Best shot in camp.
	83rd Battalion . .	9 62	Sergt. W. Sharpe . . . . .	67	
	85th " . . . .	20 67	Pte. G. Black . . . . .	63	
	86th " . . . .	22 81	Pte. P. H. Vermette . . . . .	66	
District No. 6.					
St. Johns, Que. . . . .	54th " . . . .	49	Pte. McCullough . . . . .	71	Best shot in camp.
	58th " . . . .	45	Pte. M. McLeod . . . . .	65	
	79th " . . . .	37	Pte. Z. Mangeon . . . . .	70	
District No. 7.					
Lévis . . . . .	55th " . . . .	43 16	S. Sergt. McHarg . . . . .	69	Best shot in camp.
	92nd " . . . .	36 73	Sergt. Chatigny . . . . .	59	
	89th " . . . .	36 10	Pte. L. Marquis . . . . .	66	
	23rd " . . . .	34 64	Pte. Coulombe . . . . .	58	
	70th " . . . .	29 78	Pte. F. Despins . . . . .	66	
	61st " . . . .	26 39	Pte. H. Caron . . . . .	54	
District No. 8.					
Sussex . . . . .	74th " . . . .	26 62	Sergt. T. Kyle . . . . .	76	Best shot in camp.
	73rd " . . . .	23 80	Pte. F. L. Parker . . . . .	72	
	67th " . . . .	21 55	Pte. E. Dyer . . . . .	71	



(APPENDIX J.)—RETURN of Musketry in District Camps, 1898.—*Continued.*

Military District and Site of Camp.	Corps.	Corps figure of Merit.	Rank and Name of Best Shot.	Score.	Remarks.
<i>District No. 9.</i>					
Aldershot. ....	K. C. Hussars ..	...	Lce.-Corp. Tupper.....	72	
	68th Battalion..	33·18	Sergt. Power .....	74	Best shots in camp.
	69th " ..	43·24	Sergt. Young .....	74	
	75th " ..	35·08	Corp. Aulenbach.....	68	
	78th " ..	35·21	Lieut. Blair .....	72	Best shots in camp.
	93rd " ..	44·22	Sergt. Collins.....	72	
Local Head Quarters	94th " ..	54·92	Pte. T. E. LeCras.....	72	

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## PART II.

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