

sufficient size, speed and gun power of protect our commerce in distant seas, we are very deficient, having only one vessel of the *Inconstant* class, and one other, the *Blonde*, in course of construction with one of the smaller class, the *Raleigh*, also building. This vessel is, we believe, the best size and type for a powerful cruiser, for she could carry four or six 18 ton guns, which, with her high speed, would render her no despicable opponent for most of the foreign ironclads, and she could likewise carry those smaller guns which the exigencies of naval warfare imperatively require in a cruiser. A vessel of the *Raleigh* size, armed as we have indicated, appears to be the type of cruiser in favour with our ablest naval officers, and will, doubtless be well considered by the present Admiralty Board."

This equipment of an army for actual service is the most difficult operation with which military science has to deal. The moving and massing of the force with its material, and provisions, is the greatest effort of skill, to which human ingenuity can aspire; and yet, to render its operations certain, the whole must be accomplished with precision and accuracy.

Various methods have been resorted to for this purpose, but all appears to have culminated in one idea, and that is the division of the military service proper into two sections—the fighting, and the civil branches—whereby for every two men placed in line of battle, another will be engaged in supplying the necessities, to make their service effectual.

This duality, involving expensive and complicated arrangements without corresponding responsibilities, has frequently led to disaster, and was always liable to confusion. The failure of the French system of *Intendance*, is a fearful example of the former case, as is the break down of the English commissariat in the Criméan campaign, and of the "Control System" which has succeeded it in the Autumn Manœuvres of last year.

It may be true that in those countries, no other system is possible, but it is evident that it removes from the category of military science—*Logistics*—altogether; and confining the soldier to strategy and tactics, which is evidently a grave mistake, inasmuch as a thorough knowledge of the former, would be the best possible preparations for the latter, and a thorough soldier should understand the whole theoretically as well as practically.

These wonderful soldiers the Romans, were the first to develop the laws governing military science, and their *centurion's* command represented the tactical unit. In the British service theoretically at least, the same unit is represented by the captain's command, but in reality the regiment represents it, and, as a consequence, the individuality of the immediate commanding officer is lost in that of those above him.

As a consequence, it is notorious that the life of a British officer in barracks or else-

where, is not conducive to the development of energy of character, or the growth of enterprise.

The reasons are self evident, the abstraction of the practice of "Logistics," from the military science of the day, leaves the mass of the regimental officers little or nothing to think of or do, once they have acquired a knowledge of drill and the skill to manoeuvre a company in battalion. There is not the opportunity or necessity for that acquisition of knowledge which the military art demands, and the "Civil branch" abstracts from its efficiency by removing the motive for the exercise of brain power.

Modern historical records point clearly to numerous instances of the disasters produced by the system described. The inevitable crippling of operations by the failure of commissariat supplies, or the impossibility of providing transport. The Franco Prussian war showed that in the latter respect, the Prussians had organized respectable transport, but the force of officers and non-combatants it required was nearly as many as the fighting force. It was in reality an amplification of the old system of Frederick the Great, one line of men and another line of non-commissioned officers to keep them to their duty.

In a country sparsely populated such a process would not be applicable; for instance: now in Canada we could place say 100,000 men in the field, but it would be too great a strain on our resources to deduct 50,000 from the reserve, merely to attend on the fighting men. We must, therefore, devise some other mode, and luckily the circumstances of the case offer a practical solution of all difficulties surrounding this interesting problem.

Our troops, raised from the whole mass of the population, and therefore local, in the strict sense of the term, make the captains command the natural unit of the force, and as it rarely assembles at headquarters except for battalion drill, the individuality of the officer commanding is never lost in that of the field officer of the battalion.

On occasions of emergency the company officers have to provide transports and provisions for their commands, and it is in this direction we must look for the strictly Logistical training, which is absolutely necessary to provide for a military force, before it can be said to be reliable or efficient.

The first and primary questions in the proposition is, whether man or horse power is the more costly and valuable; here, at least, man's power is beyond all proportion. The transport of troops, material of war, and provisions becomes then a question of what can be effected by animal power or mechanism, in the removal of a given weight.

Taking 55 men and three officers as the full complement of a company, and allowing to each four carts and eight horses, with four drivers, we have a full force of 62

individuals to provide material for, and forage for eight horses.

Each cart should carry 1,000 lbs. as ordinary load, making in all 4,000 lbs. allowing to each individual 40 lbs. for baggage, irrespective of arms and ammunition, all which are carried by the troops, we have for actual necessities which must be transported.

Five sets of Camp Cooking utensils	
40 lbs. or .. ..	200 lbs.
Six days' provision at the rate of	
3 lbs. per man .. ..	1,116
Five large tents and one small do.	340
Spare ammunition .. ..	350
Intrenching tools—	
15 pickaxes, each 4 lbs	60
15 spades .. 3 ..	45
15 shovels .. 3 ..	45
15 axes .. 5 ..	75
Forage for 8 horses for six days,	
25 lbs. hay per diem ..	1,200
Forage for 8 horses for six days,	
15 lbs. oats per diem ..	720
Total .. ..	4,151 lbs.

The spare horses could be used in the transport of field artillery, which must, from the nature of modern warfare, revert to its pristine position of battalion guns worked by soldiers of battalions to which they are attached, or as additional horse power in case of necessity for a rapid advance; this would necessitate a more careful and thorough drill for our soldiers; they should be, as they are good riflemen, gunners, drivers, and mechanics in general, for the necessity for entrenching involves all those qualities.

If it should become necessary to push the troops forward for some decisive movement the men's knapsacks could be transferred to the spare horses, and would be sure to arrive within three or four hours after the position for the night was taken up.

A well trained quarter-master sergeant to each company should have charge of the transport, and it would be his business to see it halted in a place of safety within easy reach of the company.

An arrangement of this kind would give our officers sufficient employment, would make each tactical unit complete in itself, and would more than double the fighting power of any force.

Moreover, the health and comfort of the men would be adequately attended to, and every precaution taken to render the *infectious* less.

Every company being dependent on its immediate commanding officer for supplies, the men would take care to see that he attended to their wants while the cost to the country would be immeasurably lessened.

The duties of the commissariat would be confined entirely to supply of depots; there would be no hosts of civilian teamsters to impede retreat or add to a panic by cutting their horses traces, and riding away precisely at the moment their services might have repaired a disaster.