



## Fighting in Enclosed Country with Some Notes from the Essex Manœuvres

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# FIGHTING IN ENCLOSED COUNTRY

## WITH SOME

### NOTES FROM THE ESSEX MANŒUVRES.<sup>1</sup>

*By Brevet Colonel G. H. OVENS, C.B., h.p.,  
Late Commanding 1st Battalion the Border Regiment.*

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Tuesday, 31st January, 1905.

Colonel Sir H. S. RAWLINSON, Bart., C.B., *p.s.c.*, in the Chair.

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#### *Motto.*

"The simple principle that, in days when speed is essential, and the effects of disaster incalculable, forethought, systematic preparation, and scientific study of war are essential to National security."

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#### INTRODUCTION.

THE headings I propose to take in this lecture are as follows:—

- I. Urgency of Subject.
- II. The physical features of enclosed country and their immediate effects.
- III. Consequent modification of tactical rules.
- IV. Evidences from former wars.
- V. Summary and general deductions.
- VI. Our requirements.
- VII. Appreciation and conclusion.

[Please note that "Enclosed" country does not mean "Close" country, which refers more particularly to woods, jungle, etc.]

#### I.—URGENCY OF THE SUBJECT.

People may ask: "Why discuss fighting in enclosed country at all? We are not likely to have any use for that kind of fighting." At the first glance this may seem a natural objection to make, but it is one which is easily refuted on the following grounds:—

*Economy.*—At certain seasons of the year enclosed areas can be made available in return for small compensation. Waste lands are rare in England, and transporting troops to them is expensive. Also the opinion is happily gaining ground that field training by units or sub-units on ground near their quarters is more useful just now than manœuvres by large bodies of troops. It is evident at least that

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<sup>1</sup> For further information on this subject, students should consult the Gold Medal Prize Essay of 1881:—"Military operations in the United Kingdom considered, particularly as influenced by the enclosed nature of the country." By Captain J. K. Trotter, R.A. Vol. XXV. of JOURNAL of the R.U.S.I.

to obtain the full benefit from Army manœuvres previous practice by companies, squadrons, battalions, and brigades is essential.

*Profit.*—The characteristics of East Essex and Salisbury Plain are as different as chalk from cheese.

Now that the Boer War is over we are not likely to fight on ground like Salisbury Plain, and it is to be hoped that we shall not have to meet an enemy in Essex, but a large dose of Salisbury Plain might act as a useful alternative after a course of enclosed country training. Troops skilled in both kinds of tactics would be well prepared for most theatres of war.

In enclosed country the isolation of small parties affords most valuable opportunities for developing individuality, self-reliance, and co-operation. There are many able soldiers who advocate the use of enclosed country.

*Use at Home.*—We cannot pick and choose ground for training. It is too often impossible to get any at all.

If enclosed country is not made use of for instruction many of our Regulars will be dependent on injurious barrack-square training, and Volunteers will get no field-work at all.

Manœuvres were held in enclosed country in 1903 and 1904, and will probably take place in such country again. The examinations, on which many careers now depend, may be held there too.

It appears from reports obtained by me from regimental officers that the rank and file as well as senior officers certainly gained instruction in the Essex Manœuvres.

An experienced company commander writes:—

“The non-commissioned officer learns a good deal and gets confidence in himself as a section leader; he studies his map, and learns his way about the country, and certainly the seniors follow with interest the operations.

“The company officer benefits greatly, especially in map reading, studying the country, making dispositions for attack and defence, and outpost sections.”

A regimental lieutenant-colonel writes:—

“A great deal was learnt by companies and the battalion.”

We want studies and exercises in tactics for the Auxiliary Forces and those Regulars who are to be ready to fight at home.

We may have to *fight abroad* in some part of the world in enclosed country. Chanzky's campaign about Orleans and the Loire was in enclosed country. North Italy is much enclosed. Fields and fences played a part in the Confederate War, and we ourselves have fought through enclosures in many places, such as Lucknow, Peking, and Kandahar.

But there is a far more cogent argument than the above. Surely by this time we have abandoned the ostrich-like plan of shutting our eyes and ears to the possibility of an *invasion* of England? Great events move with accelerating rapidity in this twentieth century, and unexpected developments are the rule.

What a storm of complacent satire would have been poured on the man who had ventured to suggest twenty years ago that Japan might in 1904 meet and defeat the naval and military forces of the dreaded Russian Empire. Coalitions cannot be all foreseen; the balance of power may be upset without warning. In an able article in this month's *National Review* several high authorities are quoted

as officially confirming Lieutenant Dewar's contention that England has not sufficient naval resources to make sure of success if two of the great naval Powers combine against us.

In these days inventions quickly succeed and surpass each other. Ships and guns become obsolete. A new discovery in submarines or even motor balloons might suddenly put our ironclads at a discount.

Mr. Arnold-Forster, speaking at Newcastle on 12th December, said: "[the Regular Army is] in the second place for defending our shores." Later, he remarked: "We must prepare ourselves for the emergency [of an enemy landing in our country]."

The Chief of our General Staff stated at Leicester that however efficient the Navy might be it could not guard against all invasion.

In case of war we should not want to keep the Navy tied to our shore—a kind of passive defence.

A foolish idea calmly put forward after the South African War was to the effect that all that was necessary to repel an enemy landed on our shores was to give every civilian a rifle and let him stand behind a tree and "pot" the rash invader. If the Essex manœuvres made one thing more clear than another it was that for fighting in enclosed country troops require very high training, and that we know little about it—it is an unexplored art.

With regard to bush fighting, in his "Ashanti Expedition" Lord Wolseley writes:—

"The best officers and the most highly disciplined troops are alone capable of bringing this war to a speedy and successful issue."

"A terrible lesson awaits the nation whose soldiers find themselves opposed to equally brave but better trained opponents on the field of battle."

The Germans owed their wonderful success against France to their having studied the details of all kinds of warfare which could possibly come in useful. The history of the war relates how, in the Orleans campaign, Chanzy hoped to delay the enemy by holding the banks and enclosures, but here the higher training of the Germans came in. They penetrated the opposing lines in various places, and large parties of the French were cut off.

We see how the Japanese have succeeded through their energy and perseverance in studying every variety of military science and learning.

Let us not neglect these lessons.

Past Ministries have been accused of having no settled policy or plans of actions ready for the national defence in case of certain events taking place.

The Navy has lately deemed it necessary to take no hesitating steps in this matter. Let not us of the Army incur the risk of being accused of neglecting our share of the national responsibility.

If, then, invasion has to be guarded against, it must be admitted that our subject is one of vital importance. What are the first steps we can take in the matter?

The subject has apparently been ignored in the past; I can find no text-book or chapter of a text-book which lays down even first principles, but I have learnt a little about the subject under the following circumstances:—I commanded an infantry battalion in the manœuvres of 1903, and as Chief Staff Officer of Umpires of the Red

Force in the Essex Manœuvres I had to superintend the preparation of the daily narrative and criticisms, to move constantly about the area of operations, and to boil down the reports of the umpires. I also obtained at the end very valuable notes from a number of regimental officers. Since then I have studied what history there is on the subject; I therefore venture to put forward what I have gathered in the form of various elementary modifications (or, rather, adaptations) of the principles of tactics with reference to enclosed country. Many of my ideas may be amended or altogether discarded, but some may act as foundation stones for the early erection of a more permanent fabric. At least they may pave the way to discussion.

Since I wrote my report on the manœuvres, Captain Donaldson, R.F.A., has contributed to the JOURNAL of this Institution an able paper on a similar subject, but from rather a different point of view.

## II.—THE PHYSICAL FEATURES OF ENCLOSED COUNTRY AND THEIR IMMEDIATE EFFECTS ON TACTICS.

Most of my remarks will refer more particularly to the Essex Manœuvres as being a marked example of the features, or want of features, specially signified by the words "Enclosed Country."

East Essex is flat. Its fields average some 200 yards square, and are enclosed by banks from 2 feet 6 inches high with 4 feet to 5 feet hedges on the top, and a ditch on one side. The hedges were in full leaf in September.

1. It was *impossible to see* to any distance, or to know what was going on within 150 yards all round.

A commanding officer moving with his battalion told me that he suddenly found it was gone. He took several minutes to find it again, although it had never been more than 200 yards away from him in another field. Numerous instances could be added.

2. Heads of columns, patrols, and orderlies were constantly losing their way.

Another commanding officer said that his whole attention had to be given to seeing that the right direction was maintained.

In this kind of country there is obviously little reason to fear that undue interference by seniors, which has been so much talked of, but which is, in my experience, greatly exaggerated or misrepresented. Control is often welcome assistance.

3. *Surprise* was the rule. Patrols, columns, and even guns and baggage suddenly blundered against the point-blank fire of entrenched infantry and machine guns.

On 12th September the head of the main body of the VIth Brigade was fired upon at 300 yards range from an entrenched position.

At Great Bentley, on the 12th September, the VIth Brigade, while crossing the railway bridge in column of route, came under machine gun fire from the Argyll and Sutherland Highlanders at 750 yards range.

A commanding officer, with his second-in-command, adjutant, and bugler, etc., was taken prisoner almost in the midst of his battalion by a small patrol of hussars.

4. *Marked features*, commanding-points, and possible positions were remarkable by their absence. There was nothing to guide the

commander of a picquet, a rear guard, or a flank guard in selecting a position, yet rapid decision was constantly required, as it was a land of surprises and ambushes.

5. *Roads* become all-important factors, since cavalry, guns, and ammunition columns, as well as transport, are confined to them, and all but small forces of infantry are dependent on them. The distribution or detailing of these to separate routes becomes a vital question, and staff officers are wanted for each main road. Calculations of time and space are of vital importance, and junctions of main roads become leading tactical points.

Roads and lanes become defiles in which 1,000 may well be stopped by 3, while none of the 1,000 can tell whether those stopping them are 3 or 300. "Bluffing" fire here has its greatest opportunities.

6. *Railways* were not made use of, but it is evident that they would require a very excessive number of troops for their protection.

### III.—CONSEQUENT MODIFICATION OF TACTICAL RULES.

We now come to the more definite tactical details of the fighting. To make these more digestible I have strung them on sticks after the manner of the Indian kabobs. I hope they may prove more palatable. The first stick I have selected is the sequence of successive questions which would present themselves to the commander of a force advancing to *attack*.

#### A.—RECONNAISSANCE.

How are its principles modified in enclosed country? So many difficulties hinder effectual reconnaissance that it has been suggested that the best plan would be to select an objective by the map and go straight for it without any reconnaissance. This may save time, but the attacking force is very liable to strike the air only and become lost or cut off by the defender.

*Balloons*.—Little information can be obtained from *balloons* in close country. The present day long-range guns can keep them at a distance, and they also require considerable escorts, but, as they afford a wider view than anything else does, they should be multiplied rather than reduced, and constantly practised with. Our balloon was stalked and disabled.

*Cavalry patrols*, being confined to roads, are very liable to be cut off, ambushed, or at least effectually blocked by the enemy, and they can see little.

*Cyclists* can obtain considerably more information than cavalry, being less easily seen and heard, and being able to travel faster and further round an enemy's flanks. Individual cyclist officers obtained much of the information gained during the Essex Manœuvres.

*Infantry scouting* is the only reconnaissance that can succeed when the enemy is near at hand, but it badly wants developing. Infantry scouts should take advantage of ditches, and creep up to banks to see if they are occupied. In this work they take the place of the mounted scouts who rode up to the kopjes in South Africa. The service is a most dangerous one, and requires selected men and a regular course of training.

The Germans have long employed infantry scouts, also the Russians, under the name of "Foot Cossacks"; we ourselves have proved their value over and over again on the Indian Frontier.

*Reconnaissance in force* or by strong patrols was recommended by Captain Donaldson in his recent paper. It may well be resorted to where certain information is essential and other means of obtaining it fail.

"*Personal Reconnaissance.*"—Generals commanding may climb church towers, haystacks, and trees, or even the new self-raising fire escape ladders, though the former are preferable. On the level they cannot see anything and run grave risks in attempting it. It would be improper in us to credit the story of a sergeant on patrol whose hand only just failed to grasp the bridle of a field-marshal commanding an hostile army corps in 1903, because the sergeant did not realise what a noted cross-country rider could do in an emergency, and only an irreverent "Sub." would believe that three general officers had been given "hands up" by a corporal's patrol on 7th September last. However that may be, there were several occasions during the manœuvres when general officers could very easily have been shot while reconnoitring.

There is yet *another method* of ascertaining an enemy's position.

On 12th September, General Wynne, pursuing the Blue invading force towards Clacton, despatched his columns eastwards on three parallel roads. All their advance guards eventually struck the enemy's position, and, with the cavalry on a fourth road, obtained contact all along the six miles of his line. While these columns acted as a containing force they sent back information from which General Wynne was able to decide on his point of assault. At the same time, the want of an objective caused loss of direction and confidence among the columns.

I must add that this passing back of information is a very weak point in the Service.

#### B.—ORDERS AND CO-OPERATION.

Having made his appreciation of the situation and arrived at a decision, with or without full information about the enemy, the General Officer Commanding next has to give out *orders*. These should make the objective and compass bearing clear, and should, if possible, give a dividing line (such as a road or stream) to guide the flanks of adjacent columns. The omission of either of these causes redoubles confusion in a terrain where you cannot see even the columns next to you.

There is a special reason why orders should be very full and clear. A commander loses all control and even communication very early in action, and commanders of units and sub-units, in seizing the opportunity for exercising initiative and individuality, are apt to lose sight of that *co-operation* which is so essential to success.

*Individuality* is more valuable than ever in close country where each sub-commander constantly has to think and decide for himself; but unless the commander's general plan is kept steadily in view, individuality may practically amount to insubordination.

I believe the remarkable combination of individuality with co-operation shown us in some of the Boers' operations was due to their all having been made thoroughly acquainted beforehand with each of the steps by which the common object was to be attained.

## C.—PROTECTION.

The *Advance Guard* must be unusually strong in infantry because: *a.* More men are required to search out close country. *b.* There are none of the commanding points to economise men. *c.* Numerous connecting files are necessary. *d.* When cross-roads are reached the advance guard should be strong enough to detach parties down them to watch until the column has passed in safety. (This last is not necessary where flank guards can move along parallel roads.)

Advance guards require their local reserves very near the firing line to be at hand to repel an enemy who has got close up unseen.

The advance guards may move near to the main body, as they have not got to keep the enemy's guns out of range.

These two remarks apply to all protective formations.

## D.—ATTACK.

With regard to the advance to the attack of the main body, a course commonly adopted would be as follows:—Columns would advance by parallel routes and obtain contact along the enemy's front until the local reserves could effect penetration at some weak point. Mobile reserves would drive this assault home, while local reserves repelled counter-attacks. One commanding officer says of the infantry:—"Probably a good way to advance would be as far as possible in lines of *groups*,  $\frac{1}{2}$  sections or sections in file, each leader choosing his place for getting through the hedge in front and keeping scouts ahead to examine the fence on the far side of each field before that field is entered."

This resembles the group system used by the Japanese and long advocated by many of our own authorities. Caldwell, in his chapter on bush warfare, says:—"It has been found that working by sections or even smaller groups is the most satisfactory arrangement." Lord Wolseley approves this method.

The Japanese have "1st class privates" answering to our group leaders.

In enclosed country more officers are wanted, troops being cut up into small parties.

Lord Wolseley, in writing of the bush country in the Ashanti War, says:—

"We required a very large proportion of officers, as the space over which our officers can exercise any useful influence there is very small."

"Without plenty of officers the men, both British and native, soon got out-of hand."

Infantry are not exposed to long-range artillery fire from the enemy, but they are also, as a rule, unable to reckon on support from guns.

*Cavalry*, like mounted infantry, will, I think, be chiefly confined to dismounted action, such especially as rapidly strengthening the attack on weak points and checking counter-attacks. It was cyclists and Yeomanry who got in on the right of Blue's position on 12th September.

A large proportion of mounted men should be kept in hand for these purposes.



Shock action is practically out of the question, though a charge or two was successful in the American War.

Schemes for concentration of cavalry require to be carefully worked out and arranged beforehand.

Cyclists, however, are undoubtedly more suited for enclosed country work, and even the cavalry commanders admitted this in Essex. In fact, cyclists were shown to be as useful in such country as mounted troops were in South Africa, and I believe that a few hundred cyclists supported by armoured motors and machine guns, and with motor cyclists to convey orders and information, would successfully oppose many times their own number of other troops.

*Artillery* is a large and important question, and might well form the subject of another paper and discussion here. Guns labour under the following great disadvantages in enclosed country:—

- a. They cannot make use of their longer range, but must always come into action within effective rifle-fire of their target.
- b. The dangerous zone and general effect of their projectiles is halved.
- c. Being confined to the roads it is extremely difficult for them and their wagons and ammunition columns to get about and avoid blocks.
- d. They require large escorts, and are in constant danger of being surprised.
- e. They are somewhat at the mercy of pom-poms and machine guns, which can get near them under cover.
- f. It is extremely difficult for them to find positions at all for supporting infantry.
- g. Their fire cannot generally be observed.
- h. There is no room to mass them, and co-operation is too difficult.

These considerations almost, if not quite, cancel their usefulness; but happily here we can remember that such flat, featureless, and completely enclosed country as Essex is the exception even in England.

General French reports (of the Essex Manœuvres):—"The absence of artillery positions . . . gave very little scope for this arm . . . The only possible tactics appeared to require that batteries should be attached to infantry brigades, and should trust to local co-operation whenever it might be found possible."

The report of the Senior Umpire with Red Force says:—"Artillery could find no target or position as a rule, and were of little use." One able and experienced R.A. Umpire wrote:—"I do not think the support rendered by the Red artillery was sufficient to justify their presence with the force." Another reports:—"In 4 days of hostilities the artillery have at last come into action, and then only for a brief interval at very fleeting targets."

Considerations c, f, and h, above, make for dispersion and also favour 4-gun batteries.

Another artillery umpire reported:—"Wide fronts and dispersion should be the rule."

The official German report on the Franco-German War says of the campaign in enclosed country near the Loire:—"The latter

(artillery) could seldom be counted by batteries—mostly only by divisions (sections) or single guns."

It would appear advisable to keep a large proportion of the guns in reserve until the enemy's position or some definite target is located.

*Howitzers* or mortars might be found to be preferable to guns, and *Pom-Poms* may partially take their place; but *machine guns* are certainly invaluable, and a number might well be substituted for a portion of the artillery.

A commanding officer says:—"They could be brought up close to the target under cover, and withdrawn with equal ease; most useful to repel counter-attacks, to stop a rush along a road, or to cover the advance." They are also invaluable in defence for enfilading a lane, etc., or commanding a gap or gateway. The men who got in on the flank of Blue Force on 12th September were only exposed to fire at one point—a gateway; machine gun fire on this gate would have been invaluable. They are much relieved by being comparatively safe from artillery fire.

In the Loire campaign the German account says the mitrailleuses were in their element. Dr. Miller Maguire quoted this from this platform recently. The machine guns appear to have been great factors for success in the Russo-Japanese War.

Some form of hand howitzer or mortar for throwing high explosives short distances might be of great assistance in attacking a position.

[I should here repeat that the above and many of my other remarks are only of the nature of suggestions which might be further discussed or lectured on by experts.]

#### *E.*—LATERAL COMMUNICATION AND THE CIRCULATION OF INFORMATION

are most important points, requiring special attention in enclosed country. One commanding officer says:—"All hinges round the word *information*." *Signalling* and *semaphore* being much hampered, the telegraph and telephone are most invaluable. Still more so are cyclist and *motor cyclist* orderlies. Several cyclists are required with every unit, and also with advanced, rear and flank guards, baggage, ammunition columns, etc., etc. *Signallers* should be mounted on cycles. Both G.O.C. Red Force and O.C. Cavalry informed me that motor cycles were absolutely invaluable in Essex for conveying information and orders for G.O.C.'s and cavalry commanders.

One O.C. says:—"Two bicycles should be attached to each company where good roads exist." Everyone commended their use.

Sub-units coming into collision with the enemy constantly failed to send word both to their commander and to their neighbours, as the following extracts from umpires' reports will show:—

"This was noticeably the case on the 12th September, when a body of cyclists and Red cavalry turned the right flank of the Blue defences near Beaumont Quarry, and neglected to inform Colonel Allenby of their success."

"Owing to our always having worked in very open country, e.g., Aldershot and Salisbury, it was difficult to get commanding officers to realise that after they had passed the first hedge the brigadiers could practically know nothing of how things were going on except by reports."

"On one occasion the brigadier was receiving information as to the enemy's movements near Witham from the headquarters of the Red Force at Braintree, instead of from the battalion of his brigade, which was at Witham, and which was much nearer to him."

We will now transfer our attention to another stick of kabobs, viz., the considerations occupying the mind of the commander of the defence; but before doing so I propose to insert here the advantages and disadvantages of the attack and defence.

#### F.—ADVANTAGES AND DISADVANTAGES OF THE ATTACK AND DEFENCE.

##### *The Attack.*

##### *Disadvantages.*

The more obvious ones are as follows:—

- a. Difficulties in reconnaissance.
- b. Liability to surprise and confusion.
- c. Difficulty in communication, control, and co-operation.

##### *Advantages.*

- d. Good approaches under cover up to all parts of the enemy's position.
- e. Cover for checking counter-attacks and for "containing" operations.

##### *The Defence.*

##### *Disadvantages.*

- f. No strong positions or natural features for flanks to rest in.
- g. Difficulty of ascertaining enemy's movements and intentions.
- h. No command of view or fire.

##### *Advantages.*

- i. Good cover from fire and view.
- m. Opportunities for false fronts and flanks, "bluffing," and ambushes.
- n. Supports and local reserves can be kept close up, and a counter-attack issue unexpectedly from any point.
- o. Existing obstacles can easily be made very effective.

For the sake of additional emphasis I have shown the above factors, both under Attack and Defence, though some are practically repetitions of others.

Of these (d) and (h) are perhaps the most important, and on the whole the advantage may be said to lie with the attack.

Many minor points will no doubt suggest themselves to you here. Two which I have not mentioned above are that (p) attacking guns have a more defined and stationary target, and (q) an attack is always likely to be disconnected and spasmodic.

## G.—POSITIONS.

*Considerations Affecting the Defence.*

In selecting his *position*, the commander of a force on the Defensive misses those natural features which so greatly assist him in other countries. The lie of the roads, both lateral and perpendicular to the front, gives some general indication; but repeated practice in enclosed country is the only thing which can enable him to decide quickly and confidently.

## H.—OUTPOSTS.

While as in the Attack, the commander is not likely to learn much from Reconnaissance, something of the enemy's plan is bound to be revealed by the driving in of the *outposts*. The outpost line must be far thicker than in open country, with reserves closed well up. On the other hand, the perimeter need not be so far out as usual—a great saving in men.

## J.—FALSE FLANKS AND AMBUSHES.

A good deal of ready-made cover is afforded by the banks and ditches. This gives opportunities for false flanks, advance posts, and ambushes.

## K.—MOBILE RESERVES.

*Local Reserves* must be numerous, and should be posted close up, so as to be able to repel any sudden successes of the enemy, especially on the flanks.

A large proportion of the mounted troops with cavalry—machine guns must be kept in hand near cross-roads for the same purpose. A local reserve on Blue's right, near Beaumont Quarry, would have saved his flank on the 12th. Large reserves arrived about 35 minutes late, and this was probably because Red attacked along his whole front, and he could not tell till the last moment at which point reinforcements would be required.

## L.—GUNS.

*Guns* must be concealed and dispersed, many alternative positions being prepared. You will have noticed the great results obtained at Ta-Shih-Chiao on the 24th July, when the Russians first masked their batteries successfully: 3 Russian kept 12 Japanese batteries in play all day, and were reported to be 100 guns. — (*Times* Correspondent.)

## M.—DEFENSIVE WORKS.

Concealment of the exact position is generally so important that banks parallel or oblique to the line cannot be levelled, though acting as saps for the enemy's approach. The far sides of them can, however, be mined, and gaps may be cut like gateways with machine guns trained upon them. The *R.E.* should also see that barbed wire and wire charged with electricity is woven into hedges and gateways, and that roads are blocked with abattis, etc. Hand grenades should be

given out, and a few shields provided for men holding important exposed points.

#### N.—COMMUNICATIONS.

Arrangements for signalling and telephone communication are most important, and also gaps must be cut for the passage of mounted infantry, machine guns, etc., to reinforce threatened points and for retirement across country.

#### O.—RETIREMENTS AND DELAYING ACTION.

*Retirements* would appear easy in enclosed country owing to the amount of cover from view and fire; but, on the other hand, the enemy's flanking movements are similarly concealed. Confusion will probably be the rule in retreat with all but the most highly-trained troops, on account of congestion of traffic, and difficulty of finding the way.

As in the case of advance and flank guards, there are no strong successive positions for a rear guard to take up.

At the same time, a determined commander who knew the country could bluff and mislead a pursuing force and cause it much delay.

Knowledge of the localities would evidently be invaluable here, hence the special value of Yeomanry and Volunteers.

#### P.—NIGHT ATTACKS.

In the manœuvres the invading force was remarkably successful in a night attack; but the invaders were helped by circumstances which would hardly obtain in war. The method was, I believe, to obtain contact with the defenders on a road and immediately move round their flanks through the fields, and this was excellently carried out. I have barely touched on the subject, as it is a doubtful point whether night operations would be feasible in enclosed country, except to occupy strategic rather than tactical points.

#### Q.—OTHER OPERATIONS.

I have no time to consider wood and village fighting, convoys, marches, etc., as well as many other points, such as the alterations in certain paras. in the Drill Books, including those relating to frontage, depth, and ranges.

#### IV.—EVIDENCES FROM FORMER WARS.—EXTRACTS FROM TRANSLATION OF OFFICIAL GERMAN ACCOUNT OF THE FRANCO-GERMAN WAR: CHANZY'S CAMPAIGN ON THE LOIRE.

"Owing to the extensive sub-division of the land customary in this country, every property is surrounded by hedges, ditches, and walls. . . . Although the superior effect of the *Chassepots* here ceased to avail, the mitrailleuses were in their true element, and became a dangerous weapon. Even the commanding points seldom offer a free view to the assailant. He must abandon all idea of any planned deployment of large bodies, especially of cavalry and artillery. In the actions before Le Mans.

the latter could seldom be counted by batteries, mostly only by sections or single guns. The action of the cavalry was limited to the roads, and the infantry had almost exclusively to bear the burden of the struggle.

"It follows that in such country the control by the higher commanders is rendered very difficult, and that independent initiative must be demanded of every leader.

"Off the roads even infantry could only move with great difficulty, and at a slow pace, so that any turning movement became impossible."

"In consequence of the peculiarity of the district through which the Army was moving, and owing to the shortness of the days, deep columns could not deploy. The necessity became apparent of advancing in several separate detachments on a broad front, although this would not fail to lead to comparatively weak forces being at all points brought into collision with the enemy."

FROM GENERAL VAN HEINLITH'S BOOK.

(Orleans) "High hedges line the lateral roads; all view is obstructed, and neither R.A. nor cavalry can be employed; defending infantry find innumerable places of support and cover, where they can keep renewing their resistance, the aggressor being all the while unable to estimate the strength of his enemy. The contest resolves itself into a series of disconnected combats withdrawn from all control of the commanding officer."

Since writing this paper I have received the official report of the Essex Manœuvres, and add the following extracts as specially instructive:—

FROM REMARKS BY THE DIRECTOR OF MANŒUVRES ON THE OPERATIONS.

"It was clear from the experience gained that the opportunities of using artillery in a highly enclosed country, such as Essex, must be but few and far between, and that the long range of modern guns would be discounted by the impossibility of getting a target at anything but what for artillery would be a very short range."

"The range and stopping power of modern weapons are largely discounted when the physical features of a close country enable the attackers to advance almost unseen to within a few hundred yards of the defenders' position, while the difficulty of ascertaining the true direction of the attack and its progress makes it very difficult to decide as to the opportune moment and direction of the counter-stroke."

"Another marked feature of the recent manœuvres was the extreme difficulty of maintaining cohesion and direction in the fight. Direction was easily lost, and units were ignorant of what was going on in their immediate neighbourhood. The need of communicating and connecting posts was seriously felt. Cyclists are well suited

for this purpose, but in their absence mounted troops will have to be employed.

"On the whole, the nature of the fighting calls for the highest discipline and training on the part of the defending troops. It is a widely-held opinion that the intricacies of close country will enable imperfectly trained troops to offer lengthy opposition to an advancing force. This opinion is not corroborated by our recent experiences in Essex, where the need for highly-trained officers, a well organised system of command and communication and good discipline was convincingly proved."

#### EXTRACTS FROM REPORT OF UMPIRE-IN-CHIEF.

"The selection of the county of Essex as the manœuvre area was not without its advantages; it afforded an entirely new experience to all arms and ranks. The troops for the most part were confined to roads and lanes. Cavalry operations were difficult, artillery positions generally absent, and the movements of troops were much hampered by the extent of the 'out of bounds' area."

#### EXTRACTS FROM REPORT OF SENIOR UMPIRE, BLUE FORCE.

"The leading of infantry in the very enclosed country operated over presented great difficulties, and was new to most of the officers engaged. Without the utmost care the attack in closed country becomes spasmodic and without any cohesion, and is beaten in detail, as the defender can run from one field to another wherever danger threatens."

"I have no doubt that the diminution of the strength of artillery attached to each division of the Blue Force was due to financial reasons, but for tactical reasons also I consider it was perfectly justifiable, as in such closed country the amount of support which can be given to the infantry by the artillery is small, and long columns of guns only tend to block the roads."

"In an enclosed country such as Essex, the first steps in entrenchment (so called) before any digging is begun should be to make gaps in the hedges to get inter-communication between companies, and the next should be to cut down the quick-set hedges to obtain a free field of fire."

#### EXTRACTS FROM REPORT OF THE GENERAL OFFICER COMMANDING RED FORCE.

"*Cycles.*—These should not be fewer than 20 for each regiment of cavalry and battalion of infantry.

"Motor cyclists were of great use when efficient, but six only were supplied to the Red Force, and there were several breakdowns, in consequence of which I was without communication with the cavalry brigade on the night 7th-8th September, the occasion of all others when communication was so important."

## V.—SUMMARY AND GENERAL DEDUCTIONS.

The great advantage of training in enclosed country for practice at home and use abroad makes our subject an important one; but the possibility of Invasion makes it absolutely imperative.

*High Qualities* and experience in commanders, and thorough training and discipline in the rank and file are more than ever requisite to success.

The characteristics of Enclosed country make necessary a fresh consideration and *adaptation of the principle of tactics*.

*Reconnaissance* has many difficulties to contend with, but its advantages are so great that, instead of slurring it over, more means should be used to make it effectual. Of these, cyclists come first.

*Orders* should be very complete, and initiative must always be subordinated to co-operation with the plans of the commander.

Advance guards and all protective formations must be strong in infantry, with numerous local reserves close up.

*In attack, infantry* should work by groups, and cannot depend on artillery support. *Cavalry* will fight dismounted, and, with machine guns, will be especially valuable for quickly reinforcing successful attacks or repelling counter-attacks.

*Cyclists* will make raids and do the usual cavalry work.

*Guns* lose much of their great importance, and should generally remain in reserve, pom-poms, and machine guns being substituted for part of them.

*Machine guns* are invaluable for enfilade, checking a rush, worrying guns, etc.

Means of *communication* must be multiplied, and a special system devised. *Cyclists* and motor cyclists are *essential*. *Passing information* requires more practice during peace time. In defence, false flanks, ambushes, and advanced posts are valuable factors, as also is *concealment*. *Mounted reserves* should be kept in hand. Gaps must be cut. Men must be specially trained in this and in cutting loopholes and making abattis.

Owing to troops being confined to the roads, the movements of large forces is attended with much difficulty, especially in cross-country operations, such as turning an enemy's flank.

Enclosed country suits guerilla warfare.

Manœuvres depending on correct co-operation and communication, such as convergent attacks from distant places, should be avoided.

*General Deductions.*

Enclosed country is more suited for attack than defence; but it favours delaying action.

Knowledge of the country is especially useful. Movements are necessarily slow, and timing is difficult.

Many roads should be used in an advance for convenience, and safety of both manœuvre and transport.

## VI.—OUR REQUIREMENTS.

1. A school or course for regimental scout instructors, and the general development of infantry scouting and moving across close country.



2. Further practice in visual training and reading country. (Some men and even officers are quite unable to observe an enemy well within their view.)
3. A definite improved system for lateral communication.
4. Organisation of trained cyclists, and other orderlies, under an Intelligence officer. Also guides.
5. Practice of rapid or snap-shooting at short range. (A man's head bobbing up over the next bank is the usual target in enclosed country.)
6. A chapter of a text-book dealing with the principles of fighting in enclosed country like England.
7. The acquisition, through the Manœuvre Act or otherwise, of the use, during certain seasons, of areas of enclosed country near all military stations for training.
8. Field firing to be carried out in enclosed country, and also experiments as to penetration of bullets and shells, dangerous zones, etc.

An artillery officer whose opinion carries weight reported at the close of the manœuvres:—

“Probably one year's actual gun practice in similar country would lead to the discovery of a useful method of employment of Artillery in situations such as occurred.”

We want more trained scouts, more cyclists, more motor cyclists, more officers, both Staff and Regimental.

*Equipment.*—We see that the Japanese have profited as remarkably by their use of modern inventions as they have also suffered by their guns being outclassed by the Russians.

In some of their infantry corps every man has a field glass. We want these, and in enclosed country we want many such things as shields, hand grenades, bamboo mortars, and hand howitzers.

Automatic rifles would be valuable for commanding a lane or gateway. They are said to fire as rapidly as a machine gun. The “Hallé” only weighs 11 lbs.

Kookries or small axes are required for cutting through hedges and through barbed wire and making loopholes and abattis.

“Observation ladders” as made in Germany would sometimes be most useful.

The time may not have yet arrived to pay much attention to motor balloons, but we certainly ought to make more use of motors.

I found by experience that a staff officer on a motor can obtain and take back to his general in less than one hour a complete report of what is going on along the whole front of a division in action, together with a cavalry brigade and cyclists.

Motors can place troops and guns at a distant threatened point in half the time it can be done by any other method.

The Portuguese have a motor which can convey 4 howitzerz double as far as 50 horses could draw them, and in less time.

Armoured motors, carrying machine guns, automatic rifles, and small ladders for observation, would do the work of the armoured wagons and trains in South Africa, only much more effectually.

They will be invaluable for “cutting out” work, like torpedo-boats. They will effect wide turning movements and reconnaissances, or at least support cyclists in carrying these out. They would be most useful for holding weak points, convoy work, etc., etc.

## VII.—APPRECIATION AND CONCLUSION.

The brilliant and gifted Colonel Henderson, who gave us "Stonewall Jackson" and "Combined Training," whose loss at this crisis in our military evolution was a national disaster, has passed away, but his words live after him. While at the Staff College he steadily advocated the practice of making out Appreciations of the Situation. General Hutchinson, in his report on Army examinations for promotion, put the Appreciation of the Situation at the head of the subjects in which officers are deficient in tactics.

We all think much of a man who has sound judgment and sense, knows what he is about, and "is all there." These are merely other ways of describing one who can appreciate the situation and act accordingly.

We are told in our text-books that the whole aim and object of a soldier's training, his drilling, marching, manœuvring, his discipline and musketry is to enable him to bring bullets or shells to bear on an enemy at the right time and place. That is his *raison d'être*.

In the same way the whole end and object of an officer's or non-commissioned officer's training is that when he comes to the supreme moment of his military life—namely, the command of his unit or sub-unit in immediate contact with an enemy—he may be instantly able to appreciate the situation in all its bearings and act accordingly.

In order to have calmness and confidence at that crisis, he must know what he is about, must be well up in his subject, must have the tactical factors at his fingers' ends so that he acts on them instinctively as on second nature. The great Roger Bacon laid it down that "Knowledge is power." The Germans and the Japanese have acted on this motto. They have studied theory and achieved power. We in the British Army have been far too much inclined to despise and shirk theory, and yet theory is the complement of practice, as any captain of a cricket, football, or polo team would tell us.

General French has officially warned us that our small Army must be so highly trained as to beat an enemy with odds of 3 to 1 against us.

Our opportunities for practice are limited. Let us at any rate master all the theory we can get at, so that when active service comes to the lucky ones we may be all there, and may not be pointed at by irresponsible vote-hunters or yellow Press penny-a-liners as those "stupid" and "ignorant" officers.

I have referred to the *raison d'être* of privates and officers; we may now go a step higher and ask: "What is the end and aim of an Army?" Is it not simply to effectively strike an enemy; above all, to strike him when he climbs over our old white walls?

Let us roughly appreciate this situation.

The General Idea is that we are at war with two of the great naval Powers and that they have landed a force in, let us say, Essex, either to raid or to invade.

Our *object* is to cut this force off and destroy it. The enemy would be concentrated, and no doubt well placed, and *his forces* strong and well-found. Mr. Arnold-Forster said at Newcastle on 12th December that "we should be fighting against the best organised and best drilled troops in the world."

Our *forces* are scattered and not homogeneous. Their strength is small and exists partly on paper.

I will pass over most of the *factors* laid down, but you will find on looking over them that they favour the enemy as much as ourselves. I only want to refer to two, and these are "Topography" and "Positions." Surely the mere mention of these is sufficient to make us realise the urgency of our learning the unexplored art of fighting in enclosed country.

One *course open to us* is to shirk the question, and since the days of Ethelred the Unready we have shown a marked tendency to do this, and to learn our lessons only from disasters.

The "*other course*" is to go straight at the subject without more ado. Surely it will provide us with a simple, definite, and practical "line of action."

We may know from their utterances that we shall have the Secretary of State and the Senior Military Member of the Army Council behind us in this, and the Council of the United Service Institution have selected for the subject for the next Gold Medal: "In the event of war with one or more naval Powers, how should the Regular Forces be assisted by the Auxiliary Forces and the People of the Kingdom?"

Let the Regulars make themselves experts in this kind of fighting and develop it to the utmost by practice and study. Let the Auxiliaries get to know their own localities and swell the ranks of machine gun detachments, cyclists' companies, and motor Volunteer corps. The People of the Kingdom who join neither the Regular nor Auxiliary Forces can but provide the ground for practice and pay for other absolutely necessary requirements.

Lord Roberts has recently written his opinion that: "Men of all classes, who for one reason or another do not care to serve in time of peace, must be prepared to undergo such a modicum of training as will make them useful as soldiers when called upon by their country . . . in time of need."

If John Bull will not give his services as a conscript he must at least pay the bill.

Colonel E. A. ALTHAM, C.B., C.M.G. (late Royal Scots):—I think we must all feel very grateful to the lecturer who has brought this very important subject before us for consideration this afternoon. It is one that has not received sufficient attention, either in theory or in practice, throughout the Service, and yet it is one which seems to me to need our attention as an Army more than any other Service in the world, and that for two reasons: first, because more than any other Army, we, the British Army, have so constantly to meet cunning and skilled foes in a closed country. I suppose very few officers of the Army realise how constant our small wars are in these savage countries; but it may be useful to recall for a moment one or two striking instances where fighting in very difficult bush country has taken place in the last five or six years. Let me call to your mind the Sierra Leone rebellion, where the fighting took place along very narrow bush paths only about 7 feet across, with an impenetrable bush on either side. There was a problem which, I take it, hardly any officer in the Army had ever thought of before: the difficulty of forcing a way through an enemy holding a position across a path of that kind with stockades. Take two other actions, both of them not very satisfactory for our Army, that at Erigo and Gumburru, in the Somaliland campaign. At Erigo we had a long column of Irregular troops, mostly very indifferently disciplined, suddenly attacked in high grass and thick bush by

a mass of Somali savages armed with spears and short-range rifles. ...t Gumburru, again, we had a small column of disciplined men surrounded and outnumbered by fanatics, and having to stand their ground and fight it out to death. These are only typical examples, it seems to me, of problems and difficulties which the British officer has to face all round the world in defending the Empire. But if we turn to our own country, the United Kingdom, we find that the essence of home defence is fighting in enclosed country, and yet until the last manœuvres in Essex I do not think there was any attempt to practise troops in enclosed country, except possibly the manœuvres held by Sir William Butler at Ashdown Forest some five or six years ago. The lecturer pointed out, I think most usefully, the extraordinary difficulty commanding officers have to face in training their troops in enclosed country. I venture to think that is a matter which requires consideration even more than large manœuvres. It is well known that in large manœuvres it is the general officers and their staffs that benefit most; the greater number of the troops have sometimes, day after day, to march in the rear of a column, and perhaps hardly come into action at all, and see very little, and therefore get very little practical experience. They are there to train the generals and the brigadiers. It is therefore at other times regiments should receive their practical training, and I do think it will be of enormous value to the Services generally if some system could be arrived at which would enable that training to be carried out in enclosed country during the whole year. This applies very forcibly indeed to the Auxiliary Forces. As the lecturer pointed out, unless Auxiliary Forces can train over enclosed country they get no practical training whatever. Now, what is at the bottom of the difficulty that prevents this most excellent practice being carried out? The bottom of the whole difficulty, I take it, is the Trespass Law in this country. That is to say, that the State, although nominally owning certain rights over the property of the whole country, is debarred from training troops over the land, although on the efficiency of those troops the safety of the whole country depends. It does seem to me that that is an illogical position for this country to adopt. It is an accepted doctrine that the interests of the individual must yield to the interests of the community. If the interests of the community required a railway to be made over a certain tract of country the land is taken from the individual. But we go further than that; we actually allow the amusements of the community to over-ride the sacred rights of property, because it is notorious that any Tom, Dick, or Harry who likes to spend two guineas in hiring a horse to follow hounds can ride over any man's land and break down his fences, ride over his crops, and penetrate his covers, and so on. I suppose none of us would like to see that done away, it is an admirable and excellent custom; but it does seem to me a most anomalous state of things that when we allow anybody and everybody to damage our neighbour's land for the sake of amusement, the troops of this country are denied the right of access to that land when the safety of the country depends upon it. It would be such a simple thing to pass a short Act of Parliament abolishing the Law of Trespass, so far as concerns the exercising of troops when on duty, with a saving clause, of course, that whatever actual damage was done by these troops should be made good by the taxpayer. Now let me mention before I sit down, a short instance that I was told the other day, showing how very little that would cost the taxpayer. I believe down at Dover the country at the present moment is paying £700 a year for the right of manœuvring troops over certain farms. The agreement with the tenants of those

farms states that in addition to that £700 a year the troops are to pay for all the actual damage done, for all damage done to fences, crops, and so on. A staff officer told me the other day that last year the addition they had to pay to that £700 rent was the large sum of 10s. Practically, therefore, all that the tenants were out of pocket was 10s., and the country gave them £700 a year for nothing. I do think that is a monstrous state of things, and I do trust that some of our statesmen will look the matter in the face.

Lieut.-Colonel A. W. A. POLLOCK (late Somersetshire Light Infantry) :—After the very eloquent speech to which we have listened from Colonel Altham, the wind is completely taken out of my sails, and I have really nothing left to say. I intended to indulge in a tirade against the British public, who will neither serve themselves nor allow their servants to learn the soldier's trade. Colonel Altham has put the matter so clearly before you that there is nothing left for me to add. However, I would like to say a few words in reference to the lecture and to Colonel Altham's speech. The lecturer has impressed upon us the importance of theory. I do not for a moment wish to contest the importance of theory; but, on the other hand, I think most of you will agree with me that although we have not enough theory, we have no practice at all, and probably the reason why we are wanting in theory is on account of the entire absence of the practical foundation on which to base that theory. A young gentleman is taught how to compare the strategy of von Moltke, of 1866, we will say, with some other example; but on the other hand, if you give him fifty men and ask him to defend a drift he does not know what to do because he has never had any practical experience. I was talking to Mr. Arnold-Forster only last week on the subject of training, and I was able to say to him that in the whole course of my service I only once commanded or served with a company at field training under conditions which permitted anything approaching to reasonably decent training. In that particular case I was at Plymouth, and I happened to have certain advantages owing to being able to get permission to go over private property, and that training was fairly useful. With regard to enclosed country, it has been brought before us by the lecturer and also by Colonel Altham that the importance of learning to work in enclosed country is in order that we may be able some day to meet some desperate invader. I venture to suggest to you that the true reason why we should be allowed to work in enclosed country has no reference to invasion at all. Troops that have been sufficiently well trained to work in enclosed country can be worked easily in any other, because enclosed country being the most difficult and the difficulties having then been mastered, what was previously difficult becomes comparatively easy. The invasion bogey I hope sooner or later will be laid. We ought to be able to understand that once the time comes when either hedge-row riflemen or beautifully drilled Guardsmen are asked to oppose the Pomeranian Grenadier, it would save time to chuck up the sponge. It only means, if you will pardon a "bull," whether we are going to starve after we have been killed or before! I do not see how any resistance in this country can affect the result of the campaign. Mr. Cobden, for example, did not pretend to be a soldier, but he appears to me to have summed up the whole matter in the smallest possible number of words. He wrote :—"If an enemy has command of the sea so as to be able to land a force in this country and keep open his communications, he has thereby shown his power to blockade us, and starve us into subjection." However we improve the training of our troops,

and however we increase our armed forces, it should be entirely with reference to over-sea service. The defence of London is not on the Surrey hills, but somewhere in Europe or Asia, as the case may be. We want to train as well as ever we can, therefore let us get a Manœuvre Act which shall over-ride the selfish rights of the citizen in favour of the interests of the nation; let us have leave to go over everybody's ground and train our soldiers in enclosed country, so that from the lessons they learn under those difficult circumstances they may be able to grapple with the comparatively easy problems presented by open country. The lesson, I suppose, of the Essex manœuvres was not so much what was to be learned by operating in an enclosed country, but the present impossibility of gaining access to any ground at all. I understand in those manœuvres the troops were occasionally allowed to enter a few fields, but generally speaking were confined absolutely to the roads. That is a matter which should occupy the attention of our statesmen (if we have any), so that in the future our soldiers may be trained by practical experience and not only by reading books.

Colonel G. H. OVENS, in reply, said:—I do not think there is very much for me to answer. We have listened with great interest to Colonel Altham's remarks, and I agree it should be driven home how necessary it is for the country to provide us with practice grounds. We cannot be expected to fight without such practice grounds, and the more that is driven home to the public mind the better. Apparently practice ground can be cheaply provided, judging from the extremely small charges for compensation that were paid at Dover. With reference to what Colonel Pollock said, I do not wish to set theory against practice, but I think theory is a useful handmaid or supplement to practice. He declares that no invasion is probable; but that is a very large subject, and has been talked about for hours here on other occasions. At any rate, he puts the other arguments very strongly in saying that we can learn very many lessons from fighting in enclosed country that will be useful abroad. I hope that on some future occasion many of the subjects that have been mentioned will be taken up and a whole lecture devoted to them: artillery, for instance, cavalry, and cyclists. Experts might well enlarge upon these questions, which I have so lightly touched upon, and which I should have hesitated to bring before you at all, knowing so little about them, excepting that nobody else had done so, and one had a few opportunities in Essex and elsewhere of forming an opinion.

The CHAIRMAN (Colonel Sir H. S. Rawlinson, Bart., C.B., Commandant of the Staff College):—In connection with the most interesting and lucid lecture we have heard this afternoon I should like to make a few remarks in summing up, more especially in connection with the tactical features and difficulties presented by an enclosed country. I think the great tactical feature of operations in an enclosed country, and one which was specially brought forward in the Essex manœuvres, is the enormous difficulty of mutual support. The lecturer has already shown how impossible it is for columns to keep touch with one another and each to know what the other is doing, in a dead flat country a mass of enclosures 200 yards square. Mutual support between columns which is so vitally important to success must necessarily be impossible in such a country. If the Essex manœuvres have taught us anything, I think they have at least taught us this. Then again, in a country such as Essex, the three arms cannot work in combina-

tion. The infantry could not be supported by the artillery, for there were no artillery positions, and as we have been told by the lecturer, the experience of the cavalry was that they could effect nothing. If we turn to the experience of war we see a general inclination to avoid operations in a very enclosed country, mainly because these operations almost invariably degenerate into isolated combats. The front is broken up, and we find small actions going on over a wide area without any connection or cohesion between them. For this reason any really decisive result will be almost impossible. The local successes will not be confirmed, whereas in a local reverse the defeated troops can withdraw in safety and break off the engagement. Hence in such a country it will, I think, be impossible to confirm the successes, and at the same time easy to avoid defeat. And this brings me to what I think is one of the lessons which we should carry away with us this afternoon, viz., that from actions in enclosed countries it will be almost impossible to obtain definite results, for neither side will be able to gain a decisive success. Still, the local conditions of Essex, where the country is practically dead flat, do not obtain over very large areas; in fact even in these islands, where, as a general rule, the nature of the country is more enclosed than almost any other, we find very few repetitions of Essex. There is almost always some slight undulation which will furnish artillery positions. I have recently had the opportunity of working over a very large extent of country in South and South-Eastern England, and I know of no area which is exactly similar, or of such a wide extent, as the flats of Essex. The enclosed country as a rule extends along the valleys, and those valleys are bordered by more or less lofty hills or undulating areas, giving at once a view and an artillery position. If we have to operate in the neighbourhood of enclosed country I think we should probably elect to do so when on the borders of it. A commander will gain a material advantage by forcing the enemy to pass through an enclosed country, which then partakes of the nature of a defile, whilst he himself remains on the outskirts of it. He will then gain for himself the artillery positions which will be denied to the enemy, and he will be able to make use of the three arms in combination, whereas the enemy will not. This is also the teaching of history. If we look back at past wars we find there is a general reluctance to engage upon extensive operations in enclosed country. The lecturer has already referred to the Orleans campaign. I was fortunate enough last year to visit that terrain, and nothing struck me more than the fact that all the decisive actions in that most instructive neighbourhood took place not in the intricacies of the Orleans forest but in the clearings on the confines of it at Coulmiers, Loigny, Pouprie, and Beaugency. All these actions were fought not amongst the vineyards and the woods, but outside them. Von der Tann, when at Orleans in October, 1870, received information that large French forces were coming against him from the north-west. He forthwith marched straight out of Orleans, 20 miles north, and fought in the open. On the 3rd December of the same year, when Prince Frederick Charles was directed to occupy Orleans, so loath was he to plunge into the intricacies of the forest which surrounds that town that it required a strongly-worded order direct from the King to induce him to make that plunge. Having once done so, he found, as we shall always find in enclosed country, that his superior discipline and training, coupled with the war experience of his veteran troops, made it a comparatively easy matter for him to push back the French *gardes mobiles*. And this brings me to what I think is the second lesson that we may learn

from fighting in enclosed country, namely, that in confined areas, whether in forests, towns, or fields, such as Essex, disciplined troops who have been thoroughly trained, have little to fear either from less disciplined troops or a local population armed with rifles. There is an idea amongst Englishmen; to which the lecturer has already referred, and which I think was started at the close of the South African War, to the effect that the armed population of this country could effectively defeat invasion. I think the teaching of history, especially the Orleans campaign and the experience of South Africa, do not support this theory. Armed inhabitants will never be able to successfully oppose trained and disciplined troops. The idea that they will be able to do so is to my mind a pernicious fallacy. Discipline and training are at all times of the highest importance, but in enclosed country they are doubly valuable. In this connection the facilities for the more thorough and universal training both of our Regular and Auxiliary Forces in enclosed country should, I think, be granted on the lines indicated by Colonel Altham and Colonel Pollock. We are very much indebted to them for having raised the question, and I am glad of this opportunity of expressing my entire agreement with them. It is now my pleasing duty to propose a vote of thanks to our lecturer, and in doing so I am sure I am only endorsing the sentiments of everyone present.

Major-General Sir EDWARD HUTTON, K.C.M.G., C.B. :—I have been asked by the Secretary to propose a vote of thanks to our Chairman, Sir Henry Rawlinson; but before actually asking you to accord that vote I would like, as an old friend of the Chairman, to add to the lessons which he has enumerated as to be learnt from the interesting and most suggestive lecture we have just heard, another lesson, viz., that of organisation. I feel sure the Chairman will agree with me—as all thinking soldiers will agree who have had anything to do with raising, organising, and commanding troops in war—that the foundation of sound tactics in the field of battle is sound organisation in times of peace, and it is in this very particular that we at home so lamentably fail. It was interesting to hear the lecturer comment on the Essex manœuvres. It is still more interesting to consider the means that we have at our disposal for opposing a possible invader. We soldiers, whether belonging to the Regular Forces, the Militia, or the Volunteers, must recognise that under existing conditions anything in the shape of a sound system of military defence which will hold its own in face of the disciplined Armies of the Continent does not exist at present in this country. I ask you, gentlemen, by acclamation to pass a vote of thanks to Colonel Sir Henry Rawlinson, the Commandant of the Staff College, for so kindly presiding on the present occasion.