

AN T-ÓZLÁC.



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EDITORIAL.

OUR NEW COMRADES.

WE welcome heartily the new comrades who entered the commissioned ranks of the Forces on September 2nd, 1929. These new Officers entered the service by competitive examination for Cadetships. They received their Cadet training at the hands of Officers who have been with the Army of Ireland since it first took shape in 1913. As General MacNeill very properly told them, they are heirs to a great tradition of service, sacrifice, and loyalty. They received their Commissions at the hands of the Minister for Defence with all the ceremonial proper to such an important occasion. They have now joined the various arms of the service inspired, we hope, with zeal, full of energy, and jealous of the honour of their uniform.

In the course of his address on the occasion referred to, the Minister for Defence exhorted the new Officers to earnest labour in the Nation's defence, and told them that they should emulate their comrades of longer service in devotion to duty. He said to them that they could not hope to surpass their older comrades in service to Ireland. We think this remark very appropriate, and we are glad to have an opportunity of drawing attention to the Minister's appreciation of the services rendered by those who have brought the Army into being and brought the State to its present degree of security.

Without in any way detracting from the splendid impression which the whole ceremony and the Minister's attitude in particular have created, we may justly comment on one aspect of the matter which the event of September 2nd brings into prominence.

Our Officers—in the words of the Minister—"have dedicated themselves to that noble service—the service of the people." They have sworn to devote themselves wholly to the defence of the State. They have surrendered, as it were, their freedom of action and become willing bond servants of the State.

Our duties as servants of the people are very properly brought home to us in every possible manner, and with the fullest possible emphasis. Masters, too, have their duties. The Gospel and the civil code are alike explicit on this point. Our masters, the people, have a moral and legal responsibility for us. Since we surrender ourselves wholly to their service, they must take full responsibility for providing adequately for our material needs. We all hope to devote the best years of our lives to the service of the State. Some day we shall no longer be fit for further service. What then? Almost every civilised country provides pensions for its soldiers in their old age—every State except one. The Gardai and Civil Service have their pension schemes, but the men whose services, in the opinion of the Minister, cannot be surpassed, have none.

There are two parties to the contract made when an Officer takes his oath of allegiance. The people and the Officer. The Officer must fulfil his obligations, come what may. He should never have to think of his oath in any terms other than an unconditional offering of himself in his country's service. He must give himself wholly to the people. It is not too much to ask that the people should realize their moral responsibility and act accordingly.

PROMOTION.

THE appointment of thirteen Cadets to Commissions in the Forces has further aggravated the position with regard to promotion. We have now the extraordinary position that 2nd Lieutenants with from seven to twelve years' service are serving in the same units with Officers just commissioned. Any promotion that has taken place in recent years has been haphazard as far as the average Officer can ascertain. A few Officers have been advanced. No one has questioned their capacity for the higher ranks given, but it is vital that other Officers should know whether the Officers in question are considered better qualified for advancement than all their comrades of the same grade. What is needed is a system. Have we one? The D.F.R. announcing the relative seniority of Officers, seemed to indicate a system, but no official statement of the nature of that system (if any) has yet been made. In the interests of morale it is to be hoped that those responsible will publish the regulations governing the matter as soon as possible. The existence of any reasonable regulation would let Officers know how promotions are to be made and how the relative claims of Officers of the same rank in different units and branches of the service are to be assessed, and would, we believe, ease the feeling of uncertainty and perplexity that is continually growing in regard to this question.

Promotion is the life of an Officer Corps.

The importance of dealing with the problem is evident.

METAMORPHOSIS.

WE applaud the action of the Minister for Defence in making public his plans for the future of the Defence Forces. The public is entitled to know the end to which its million and a half pounds, called the Army Vote, is being spent. It is entitled to know, within limits, what is being done to provide for the security of the State. It is essential that it know the role of the Army in the nation's life if only that the citizen may discharge fully the duties of citizenship in this matter of National Defence. We sincerely hope that the address delivered at the Dublin Rotary Club Meeting on September 9th, by Mr. Fitzgerald, is but the first of a series.

The matter of the address is of momentous importance, outlining as it does a complete change in the nature of the Forces. It is, therefore, to be hoped that the Minister will elucidate some statements of his which to the

military mind require elaboration. He stated that a Standing Army of 5,000 men would be maintained which should be machinery for training men who should belong to the "Reserve Forces." We have at present the number of men specified, but, as is well known to every Officer in the Army, any really satisfactory training of units is impossible. This is explained simply by the fact that the Army is largely employed in what might be called police duties. We guard prisons, post offices, cable stations, etc., and garrison several small posts where no systematic training can be carried out. Are we to take it that the Minister's statement means the abolition of the present policy of policing the country with the Defence Forces? If we are to continue the present system of guards and small garrisons, the 5,000 men who are to train the Reserve Forces must be provided in addition to those needed for garrison duty.

The continuance of the existing Class "A" Reservists is indicated. If the Regular cadre is so small and is to be of any real use for training purposes, it must be a long service cadre. If it is a long service cadre the number of Class "A" Reservists will be so small as to be negligible. Such men as leave the Regular Forces fit and willing to serve further could best be employed in training non-permanent units.

A recent Defence Force Regulation on Married Establishments means that the vast majority of our long-service soldiers must be celibates. Long service cannot be reconciled with a very much reduced married establishment. It is scarcely possible that the Minister has been advised that the permanent instructional cadre of the Defence Forces should be comprised of short-service soldiers. Additional information on these points will be awaited with interest.

CAVALRY AND MECHANIZATION.

THE question of Mechanization is the greatest military problem of the day. The future of Cavalry is largely bound up with the future of mechanization. In this issue we publish two articles that have a direct bearing on the matter, as it affects us. We have no Cavalry arm. The functions of this arm as a component of the team of all arms must be carried out somehow. We now depend upon the embryonic Mobile Arm (which is to contain Cyclists, Armoured Cars, and Tanks) for the performance of those duties heretofore considered cavalry functions.

Of more immediate importance is the School of the Mobile Arm, which has been approved in principle and exists in miniature, and which has just completed a most successful course of instruction for Reserve Officers. The combination of Cyclists, Armoured Cars and Tanks as one Arm for shock action, reconnaissance, etc., provides the keynote to the future as far as this School is concerned. Its most important function will be to determine by research, test, and experiment, the efficacy of the new Mobile Arm. In the course of its studies, and concurrently with the stabilization of military thought on the mechanization question, it may well be forced to the con-

clusion that Cavalry is an essential element of the complete tactical team. There is substantial unanimity of opinion in military circles the world over that it is. Will it continue to be essential? Military opinion in the mass is notoriously conservative, and it may well be that the task of the Cavalry can better be done by the newer mobile troops. The test of the matter is in the words of Colonel O'Connell: "Can it be established that certain work can be performed only by Cavalry?"

We have further to consider whether or not we may find ourselves faced with the alternative of good cavalry or indifferent mechanized units. In considering the type of unit best fitted to perform a certain role, we must visualise that unit as it will exist with us, not the ideal unit, since ideals are seldom attainable.

Meanwhile it should not be inferred that we are devoid of Mobile troops, nor should we lightly discard the conclusions expressed in the decision as to the present composition of the Mobile Arm. It is, of course, of the utmost importance that the Army of this horse-breeding and horse-loving country should not turn its back on cavalry if any task before it can be satisfactorily performed by that Arm.

FORWARD.

WE are privileged to print in this issue a message from the Minister for Defence which will inspire the members of the forces to greater effort. The Army, as we knew it, has been steadily decreasing in size. Retirements, resignations, the disbandment of units, and many things else have been a sore trial to the morale of Officers and Men. Still through all the confusion of reorganisation and change we have been evolving as an Army towards that stabilization which is a necessary condition of rapid progress and contentment. Without realising the full significance of the changes, the officers of the old Army have assisted in the re-incarnation of the Defence Forces on a new basis and have maintained a steady and indeed remarkable rate of progress towards greater military efficiency. Many problems long unsolved have been and are being dealt with in recent years, and undramatic steady toil will, we hope, have ample reward in the contemplation of the gains that have accrued to the Army and the people. The Minister's message is one of hope, and confidence. "We propose to go forward all the time." We hope that all ranks will take to heart this statement, and each and everyone strive in his own sphere of activity to justify the hope and confidence expressed by the man entrusted by the people with the highest degree of responsibility in matters of National Defence.

Let our motto be "FORWARD."

MESSAGE FROM THE MINISTER FOR DEFENCE.

CONGRATULATIONS to the Officers and Men of the Army on the Tattoo in Lansdowne Road. Those who witnessed the Tattoo realise that the Army during its short existence has reached a degree of efficiency possible only by hard work and zealous attention to duty, and the many thousands who witnessed it realise that, and I am satisfied that their verdict is unanimous. It gave the Irish people an opportunity of seeing the Army and of knowing that the Army that exists to serve them serves unstintingly. Those of us associated with the Army are satisfied and proud. Nor do we propose to sit down saying "all is well." When the work is done to rest satisfied is to be moribund. There is no such thing as standing still. We go either forward or backward. We propose to go forward all the time. What has been accomplished makes us all the more determined to accomplish more. We believe that the present conditions are more favourable to steady progress than they ever were in the past. The Officer personnel is now down to the minimum. The present body of Officers have definitely chosen the Army as their life career. That career is not a life of ease but a life of hard work. Our Officer personnel has chosen it, knowing that to build up an Army worthy of their country and their race would involve that they give of all that is best in them and give it unreservedly. The reduction in the number of Officers adds to the work of each one, but each Officer knows that the reduction removes all elements of doubt and uncertainty. He works for the Army, of which he is a part, and of which every Officer giving generous service may regard himself as permanently a part. The Officer knows that more important even is the personnel of other ranks. The well-being of the men should be always his first care, and care for the men includes concern for their well-being, even when they have left the Army. As a first step we have started the Army Benevolent Fund. Its inauguration at the Army Benevolent Dance in Horse Show Week exceeded our best expectations. The attendance showed that the Fund has the good will of all our people. The Army Benevolent Fund exists solely for the benefit of N.C.O.'s and men, and particularly to assist them in the difficulties they have to face in civil life. All that concerns the well-being of the men should be the first concern of the Officers of all ranks.

I again congratulate the Officers and Men of the Army for their splendid work, which has been made more than ever clear by the Army Tattoo. We look upon the Tattoo as evidence of what has been done, and still more as evidence of even greater accomplishments that we are determined to achieve and very certain that we shall achieve.

Desmond FitzGerald

IRELAND AND AVIATION.

By CAPTAIN O. A. HERON, Army Air Corps.

“**O**NCE to every man and nation comes the moment to decide.” Situations develop slowly, incident by incident over long periods of time, and there then arrives a phase of “ripeness” sometimes long and often brief, when a definite and important decision to *act* must be taken then or the opportunity passes. These decisions in the larger spheres always demand foresight, a capacity for seeing in true perspective the past sequence of events and of visualising the continuance of the evolution into the future, and the quality of *courage*. The decision of small import can be taken easily in the spirit of a gamble, but the decision of great significance, affecting the future of many people, of a nation, requires the qualities mentioned which may be further summarised into knowledge and courage.

The thesis is submitted in these articles that in the realm of air transport the time is now at hand when a decision must be taken by this nation on the issue as to whether or not we are to enter into world progress in the air. It is not a simple issue. It demands the most careful consideration of multiple factors—factors in relation to the air-craft industry itself, and not amenable to modification by us, and factors in relation to the peculiar conditions obtaining in the Saorstát. In other words, it demands knowledge, and then, if a decision may be taken, courage. It is in an endeavour to furnish this essential requirement of knowledge in air matters that this article has been written, and if we travel apparently far from the narrow issue involved, it is only for the purpose of attempting to ensure that the field in its larger perspective will be known to those who are interested in the problem.

BRIEF SUMMARY OF DEVELOPMENT.

The Great War is in many quarters regarded as having retarded considerably the progress of aviation. This is a debatable view. Between December, 1903, when success first crowned the experiments of the Brothers Wright, in America, and the outbreak of war in August, 1914, progress was slow. This was mainly due to the fact that aviation was left in the hands of a small body of enthusiasts, principally French and British, who experimented, built, flew, crashed and continued to experiment, rebuild and fly their own machines at their own expense, undismayed by the knowledge that those of the general public who spared time to think of them, regarded them as fools to be pitied or suicidal maniacs whose activities were a menace and should be suppressed. The British War Office, it is true, influenced probably by the flight of Bleriot from Les Baraques, near Calais, to Dover in 40 mins., on July 25th, 1909, formed the R.F.C. from a nucleus of the Royal Engineers, later augmented by officers seconded from the Cavalry and Infantry. The outbreak of war and the rapid discovery of the numerous ways in which aircraft could be used changed all this. The struggle be-

tween the combatants for superiority in the air, which would give the victor freedom to carry out his tasks unmolested and most efficiently, called for more and improved machines. Aircraft factories sprang up like mushrooms, existing factories increased their plant; reputable engine manufacturers, like Rolls-Royce (who engined this year's Schneider Cup winner and machine holding the world's record for speed) turned their attention to designing and constructing aero engines; new engineering works sprang up to cope with this unforeseen demand for aircraft and aero engines. France and England practically pooled their knowledge and resources. Surely this furthered the development of aviation?

AFTER THE WAR.

Post-war years brought a reaction, due possibly to the cessation of the pressure of the necessity for immediate and continued advancement. There were large stocks of military machines on hand at the end of the war, and when the idea of using aircraft for civil purposes emerged in 1919, the line of least effort, and the natural line of action was taken, viz., the making of alterations to the existing military machines to convert them to civil use. This habit of modifying existing aircraft in details in preference to striking out on new lines has persisted to the present day in the British construction of aircraft for civil purposes.

A comparison of the exhibits at the British Aero Shows of 1920 and 1929 demonstrates very effectively the remarkably slight development that has taken place in the intervening nine years in the design of civil aircraft.

In the Show issue of one of the leading British aviation journals, editorial comment on this point is very strong. After quoting several instances of 1920 exhibits of various manufacturers to show how little they were behind their 1929 models in design and performance, he adds:

"There was hardly a machine in the Show of 1920 which would not put up a performance and/or provide accommodation equal to that of anything in any country to-day if fitted with a modern engine."

This statement is a gross exaggeration of the actual state of affairs, as regards British military aircraft, but is very near the truth when applied to existing British civil aircraft. The reason is not very far to seek.

NATIONAL POLICY OF GREAT POWERS. ITS EFFECT ON DEVELOPMENT.

Britain's chief concern is the menace that aviation threatens to her insular defences, heretofore so impregnable on account of the Navy. To meet these altered conditions she is making every effort, even at the expense, to some extent, of her industrial life, to regain for her air force a position of supremacy among the air forces of the Great Powers at least equal to the degree of superiority her Navy once enjoyed over others. England shrewdly appraises the part aviation will play in the next war, and will be content with equality status in naval affairs at any Disarmament Conference if allowed to develop freely her aerial forces, naval and military.

Her conception of the relative importance of military and civil aviation in pursuance of this policy is very interesting to us. Military appropria-

tions for the fiscal year ending March 31st, 1929, amounted to £19,135,000, out of which Civil Aviation (including grants to light aeroplane clubs as well as the subsidy to Imperial Airways) received £427,000, Auxiliary Air Force and Reserve Forces £554,000, and Technical and War-like Stores £8,130,000. The corresponding figures for year ending 1928 were £19,986,000, £474,000 and £500,400. The figures for France, who is ahead of England in the quantity but not in the quality of her military aircraft, point to the same policy of artificially developing her air strength. With the exception of America, where different conditions obtain, the Great Powers are under no delusion that the *first essential* for defence or offence is the possession of a *military* air force as strong as it can possibly be made. Civil Aviation is aided only to the extent of maintaining it as a necessary adjunct to their military organisation; there is no "drive" to hasten the improvement of design or performance of civil aircraft in contrast with the forced development of military types. The aircraft industry as a whole, on the other hand, is spurred on to concentrate on improvement of design and performance of aircraft for solely military purposes by the assurance that if sufficient advance is made on previous types, the Air Ministry will order three, four, or more squadrons of the new type. Without these orders, most of the aircraft manufacturers would cease to exist.

SUBSIDY CONSIDERATIONS.

This policy on the part of England and France of fostering the aviation industry indirectly through their air forces rather than by direct subsidy to civil aviation is a result of—

- (i.) Their proximity to their probable enemies and consequent necessity for having available for immediate use the greatest possible number of aircraft designed for war purposes and factories that will not require time to modify their plant to keep up the supply;
- (ii.) The comparatively small areas of these countries, from which it follows that at the present stage of development in air transport and "air-mindedness" there is not sufficient inducement by time saved or mileage cost to develop a heavy traffic. Civil Aviation requires a large capital, and the profits for some years to come will be very small.

America, on the other hand, with its vast area, is an ideal country for civil aviation. Travelling by air means a saving of days there, where time means money; and the policy of America has been that of letting civil aviation make its way on its merits.

The distance of America from any possible enemy would give her ample time to switch over her numerous soundly established civil aircraft factories to the manufacture of military and naval aircraft. All she required to justify her policy was the attainment of parity with Britain in the matter of the Navy—the "Disarmament Conference" gave an opportunity which she was not slow to seize.

The result of these policies is that England (as American aviation journals admit in a recent survey of this year's exhibits at the British Aero Exhibition), possesses military aircraft which are much superior to any in America; but in America aviation "has qualified this year as a major industry," whereas in England and France it is still mainly dependent for its existence on the receipt of orders for military and naval aircraft, and civil aviation is still being run at a loss.

It is not through losing perspective of our position and resources that the attitude of the Great Powers in regard to aviation has been examined, though in a cursory manner. These three powers were the pioneers in aviation. They may be presumed to know how to employ it to the best advantage in their own interests, both commercial and military. By examining their policies we can see what they expect from aviation and how they utilise it towards achieving their purposes.

The following conclusions may be drawn from a survey of their policies—

- (i.) Aviation is essential to national security.
- (ii.) It is of prime importance to be able to put the greatest possible number of machines, primarily designed for war purposes, into action as soon as they are required, or *to have the resources for doing so.*
- (iii.) Civil aviation only pays at present stage of development where the routes are sufficiently long to allow a considerable saving of time or comfort to off-set the extra cost of freightage or passenger fares.

In later articles an endeavour will be made to arrive at an estimate of the types, numbers and disposition of aircraft required for the defence of Ireland. For the present it will suffice to consider briefly what attitude we should adopt at this stage towards *civil aviation.*

If civil aviation does not pay at present where the distances to be covered are small, it will not pay in Ireland. It would require to be subsidised as in England, France, and Germany. What is the necessity for it? Or what return may we expect from it? Why not wait till other countries have shown it can pay for itself?

The answers to these questions and others arising out of them is the solution of the problem of our attitude towards civil aviation.

THE NECESSITY FOR CIVIL AVIATION IS ITS EFFECT ON THE DEFENCE OF THIS COUNTRY.

It must be understood that the term "Civil Aviation" embraces all private flying and the activities of flying schools and aero clubs as well as regular air transport of passengers and freight.

All these branches are equally important and worthy of close consideration.

The necessity for civil aviation lies in its effect on the defence of the country. It is secondary only to military aviation. The latter cannot be

replaced. The greatest number of machines that the nation can afford, specially designed for war, must be available to put in the air at the first sign of danger. They bear the first shock of attack. But "the casualties in the air in the next war have been calculated at 80 per cent. per month," a British Air Minister has stated, so it is obvious that there must be machinery for replacing casualties, creating a reserve of pilots and ground organisation, sources of supply of aircraft and material and facilities for rapid expansion. Civil Aviation, if properly organised and supervised, will meet these needs, in addition to providing air bases, which may prove of considerable strategic importance.

No scheme of civil aviation which does not meet these requirements is worthy of consideration or support. To subsidise air transport is not sufficient; if properly organised it will provide, it is true, for expansion of ground personnel. Its factories and depots will replace casualties in material. Its machines may be used for their ordinary work of transport and communications or may even be employed judiciously, accompanied and protected by military aircraft on bombing expeditions. The transport side of civil aviation will not, however, provide a reserve of flying personnel. That can only be secured by fostering "air-mindedness" by assisting the establishment of Flying Clubs and Schools. These branches of civil aviation are interdependent; of what use are machines without personnel to fly them, or the personnel if there are no machines to fly?

If it is admitted, as it must be, that reserves are necessary to replace casualties in war, the necessity for the establishment and development of civil aviation as an adjunct to military aid must be recognised. There only remains the question of whether action should be taken at once to evolve a sound scheme and put it into effect without unnecessary delay, or whether we should sit down to wait for civil aviation to start up spontaneously, through private enterprise—or wait until it can show a cash return for the capital invested. Apart from the fact that the evidence of operation of air transport at a profit in other countries by long-established concerns would be no criterion of the degree of success in Ireland, as the demand for it must first be created, dare we leave ourselves at the mercy of any bullying Power which may decide to use our country as a pawn in its game.

THE FOLLY OF LAISSEZ FAIRE.

The folly of putting off our peace-time preparations for aerial warfare is shown by the following quotation from the report of the American Aviation Commission, presented to Congress in 1920:—

"That no sudden creation of air equipment to meet a national emergency already at hand is possible. It has been proved within the experience of every nation engaged in the war (1914-18) that two years or more of high pressure effort have been needed to achieve the quantity production of aircraft, aircraft engines and accessory equipment. The training of personnel, including engineering, production, inspection, maintenance and operating

forces—covering some fifty distinct trades and some seventy-five industries—has proved itself a stupendous task when undertaken upon the basis of war emergency alone.”

(Incidentally, the italicised portion shows one immediate return from the establishment of the aviation industry by providing employment for men of so many different trades).

In “Basic Principles of Air Warfare,” the author states: “The question of reserves is one which presents very great difficulties, and . . . it is one which is of the utmost importance when war breaks out, for, unless reserves of aircraft and engines are immediately available to replace losses, a country will find itself in a precarious position. In point of fact, it becomes obvious that its position in the air after the first few weeks of heavy air-fighting, will be irretrievably lost. It is more than likely that the first few weeks will decide the issue as far as the air is concerned, and reserves, both matériel and personnel, might conceivably be the decisive factor.”

One final consideration that urges the formulation and putting into effect of a civil aviation scheme is the danger that other countries may deprive us of the initiative in meeting the demands of air traffic by running branch air lines to Ireland—as they have a perfect right to do under the terms of the International Agreement—and rob us of the opportunity for all time of making the most of aviation for National Defence and our future prosperity.

ESSENTIAL FEATURES OF A CIVIL AVIATION SCHEME.

In embarking on a Scheme for developing civil aviation (some alternative plans will be considered later) there are certain principles which cannot be departed from if the best results are to be obtained.

The most important are—

1. Equal attention should be paid to flying clubs (or similar institutions) and air transport.
2. Encouragement should be given to Technical Schools to teach aero engineering, and successful students should be facilitated in obtaining employment under the Scheme.
3. Organisation and administration of civil and military aviation should be co-ordinated under a Ministry of Air.
4. All those employed under or otherwise benefiting directly from the Scheme should consent to be available as Air Corps Reservists and liable for any Air Corps training considered necessary by an Air Council. Exceptions could be made for adequate reasons at the discretion of the Minister.
5. The minimum figure of expenditure necessary to establish civil aviation firmly should be a matter for careful consideration, and once arrived at, should not be decreased.
6. Conditions under which subsidies would be granted would be such as not to admit of any suspicion of “spoon feeding,” but rather aim at making the industry self supporting at the earliest possible date.

7. The functions of military and civil aviation in peace-time are entirely separate, and however civil aviation may suffer it must always be remembered that the need for possessing in the first place an Air Force of sufficient strength and efficiency to bear the entire burden of attack and defence in the early stages of war is pre-eminent.

In the next issue each of these points will be elaborated, and some of the alternative plans for promoting civil aviation will be examined.

THE NATION'S INSURANCE POLICY.

"If I may institute a parallel, I might compare the maintenance of the Army to a form of national insurance. We insure against possible, though, I trust, very remote, contingencies. We have endeavoured to reduce our premium to the minimum percentage. The form of national insurance differs from, say, fire insurance, in this way: that being insured against fire does not prevent or hinder the fire occurring, while I think we may say that the maintenance of the Army may, at least, possibly prevent or hinder the occurrence of the contingencies which it is designed to meet."—The Minister for Defence at a meeting of the Dublin Rotary Club, on September 9th, 1929.

OUR PAY.

When you come to the end of your monthly pay,
 And you sit alone with the thought
 That you've spent it all since the dawn of day,
 For things which your wife has bought.
 In sorrow you gaze on your cheque-book's stub,
 With its balance of thirteen cents;
 Where has it gone?—Ah, there's the rub—
 And whither and why and whence?

So this is the end of my monthly pay,
 And the month still young and new,
 And pay-day still far, far away,
 And so many bills still due!
 I can't think where it has gone or went,
 And I fear that my heart will break,
 For just in an hour or two I've spent
 What it took me a month to make.

THE RESERVE OF OFFICERS.

PAST, PRESENT, AND FUTURE.

By MAJOR GENERAL HUGH MACNEILL, General Officer Commanding,
Curragh District.

THE BIRTH OF THE RESERVE OF OFFICERS.

DURING the month of August events brought the recently constituted Reserve of Officers very forcibly before our notice. During that month the first series of annual training courses for this component of the Forces were completed. Until these courses had actually materialised it is doubtful if many people outside—or even inside—the Service had ever regarded the Reserve of Officers as a really live component at all. Now that we realise that this component is very much alive the tendency is to regard it as an entirely new departure in our National Defence system. This is only partially true.

Actually, the Reserve of Officers, in theory, at least, is as old—or as young—as the Regular Army itself. The first Army Act—The Defence Forces (Temporary Provisions) Act of 1923—made provision for the establishment of Reserves of both Officers and men. It would be of interest, and probably of considerable value, to know exactly what the Army Authorities of the time had in mind when they embodied this provision in the original Act, what functions they proposed the Reserve of Officers should fulfil, how they estimated this component would fit in with the general frame work of the military machine. Unfortunately the writer has no first-hand knowledge of these points, nor has he, at the moment, direct access to documents having any bearing upon them. Perhaps some Officer employed at the Department, or other authority, will remedy these deficiencies in this article at some future date.

The first definite step to give effect to the provisions of the Act in this matter were taken in 1924 when the successful termination of the Civil War resulted in wholesale demobilisation of Officers and men. Provision was made in the demobilisation plans for the compilation of a roster of approved officers who had signified their willingness to accept liability for service with the Reserve. Apart from the actual compilation of this roster no concrete steps were taken to establish the Force, and the matter lapsed for the time being.

To digress for a moment it would seem that the time has now come when this old roster might be carefully examined again. It is obvious that one of the greatest problems in connection with the establishment of the projected Volunteer Force will be the procurement of Officers. It is a well known fact that there are several hundred promising ex-Army Officers all over the country to-day who are debarred, under the present system, from service with either the Regular or Reserve components. Here is a valuable source of Officer material for Volunteer Units. Of course the argument will be advanced at once that it is desirable to organise the new force, as far as possible

from personnel who have had no associations with the Civil War. There is, undoubtedly, some force in such an argument, but nevertheless, in these old Officers of the "National Army" we have a potential reserve of troop-leaders, most of whom are veterans of both the Anglo-Irish and Civil Wars, and many of whom had reached a comparatively high standard of professional efficiency. This fact alone renders it essential that we should not lose sight of any such reserve.

However, to get back to the real subject of this article, the existing Reserve of Officers. With the compilation of the roster mentioned earlier the matter was allowed to drop until 1925, when an "Organisation Board" was set up by the Chief of Staff, with the mission of submitting recommendations regarding the whole future military organisation of the State. The proposals of this Board, in their original form, embodied detailed plans for the organisation of a complete Organised Reserve Corps, including a Reserve of Officers. These plans, for a variety of reasons, upon which it is not necessary to dwell now, never materialised, and the Reserve of Officers remained a purely "paper" force.

This was the position in 1927 when, on the return of the Irish Military Mission to the United States, the whole question of the future permanent organisation of the Defence Forces was again re-opened. In that year a special branch of the General Staff, the Defence Plans Division, was established, with instruction to examine the problems of National Defence in all their aspects, and to submit detailed plans for their solution. In considering the permanent organisation of the Defence Forces this special staff agency followed the headline set by the old Organisation Board, they also realised very clearly the value of an organised Reserve of Officers in any well balanced scheme of Defence Organisation, and detailed plans covering this proposed component were embodied in their general proposals.

At this particular stage events began to move very rapidly, the carefully prepared plans of the Division were forestalled to a great extent by the exigencies of national policy. In 1928 the economy axe fell once more upon the Army, and a further drastic "cut" in establishments resulted in the retirement of approximately 300 Officers. These Officers were all experienced soldiers, and had naturally reached a far higher standard of military efficiency than many of their comrades of the 1923-24 demobilisation. These considerations presumably exercised considerable weight with the authorities, and the Officers who elected to retire in accordance with the regulations, and the Reserve of Officers were offered the option of transferring to the Reserve of Officers. Over 250 of them availed themselves of this offer, and the Reserve of Officers was, at last, an established force, in so far as the enrollment of personnel was concerned. No details of organisation or assignment were laid down at the time, this large number of Officers were simply enrolled in one single cadre, without distinction of Arm or Branch.

This briefly summarises the development of the Reserve of Officers, and outlines the position as it existed when the first courses of annual training

came up for consideration early this year. The framers of the Defence Forces Act of 1923 could say that their outline plans for the establishment of such a force had materialised to the extent that the personnel required to initiate the Corps was enrolled, and that regulations had been published providing for courses of annual training and payment to the Officers completing such training. No instructions were published as to the exact functions of the Corps, the manner in which it was intended to employ its members in time of emergency, or as to the nature and scope of the training visualised.

ANNUAL TRAINING OF THE RESERVE OF OFFICERS, 1929.

This state of affairs naturally placed the Training Bureau of the General Staff in a rather awkward predicament. They were faced with the responsibility of training 250 Reserve Officers without having any definite information to the future missions or employment of this body. They could not obtain this information until several outstanding major decisions had been arrived at. On the other hand, time was running short, there seemed to be a grave danger that if they waited for these decisions to be promulgated that the training season would have passed before they could complete their arrangements. At the time the Defence Plans Division's proposals, around which these decisions hinged, had been approved in principle, and it was decided to assume that they would be eventually approved in detail, and to proceed with the training arrangements accordingly.

The following decisions were, therefore, arrived at on this basis :--

- (i) That the first year's annual training should take the form of Basic Training, that is to say, that the object would be to train each Officer for the command in war of the Unit of his Arm appropriate to his grade.
- (ii) That in accordance with (i), separate courses should be conducted for the Officers of the different Arms and grades where the numbers affected justified this.
- (iii) That the basis of all instruction should be the Tactical Doctrines, Tables of War Establishments, and Tables of War Equipment embodied in the Defence Plans Division's proposals.
- (iv) That the training of all Reserve Officers, with the exception of the Air Corps Reserve, who were to be trained at Baldonnel, should be conducted in the Curragh District during the month of August.

These decisions were communicated to Headquarters, Curragh District, and gave the local staff all the information and direction that was required to enable them to complete their detailed plans before the courses commenced.

The first problem confronting the Curragh Staff was to decide the number of separate courses that should be conducted in accordance with the general direction of the Training Bureau. This involved a number of considerations, the number affected, the instructional staff available, the existing training plant and other facilities, etc. It was eventually decided to recommend to the Director of Training the Organisation of the following separate classes : Infantry Field Officers ; Rifle Company Officers ; and Machine Gun Company

Officers; Mobile Arm; Artillery; Medical; and Supply and Transport Officers. These courses covered all the Arms or Services represented among the Officers detailed for training, with the exception of the Engineer and Signal Corps, and the Ordnance Service. The numbers affected in these Branches did not justify the organisation of separate courses and the Officers concerned were detailed to Infantry Courses for this year. The objectives for these various courses were outlined as follows:—

INFANTRY (FIELD OFFICERS') COURSE.—The training of Battalion Commanders and Battalion Staff Officers.

INFANTRY (RIFLE COMPANY OFFICERS') COURSE.—The training of Commanders of Infantry Rifle Companies and Platoons.

INFANTRY (MACHINE GUN COMPANY OFFICERS') COURSE.—The training of Commanders of Infantry Machine Gun Companies and Platoons.

MOBILE ARM COURSE.—The training of Commanders of Squadrons and smaller Units of the Mobile Arm, with particular reference to the Armoured Car Squadron.

ARTILLERY (BATTERY OFFICERS') COURSE.—The training of Officers of Field Artillery (18 pdr. and 4.5 How.) Batteries.

MEDICAL OFFICERS' COURSE.—The training of Regimental Medical Officers, and Officers of the Divisional Field Ambulance.

SUPPLY AND TRANSPORT OFFICERS' COURSE.—The training of Company Officers of the Divisional Supply and Transport Services.

The actual methods of instruction followed the normal four-point sequence, as laid down in Annual Training Regulations, the applicatory principle being stressed throughout. The students were normally introduced to each subject by means of a lecture or lectures; where possible a practical demonstration followed, regular personnel and equipment being availed of as far as possible; the students were next called upon to apply the theoretical knowledge thus gained for themselves through the medium of practice tests or "checks," terrain exercises, tactical walks, map manoeuvres, and so on initially, and eventually by means of marked practical tests and problems. The limited time available naturally precluded very much repetition, but, as far as possible, this final step was worked in indirectly throughout the training period.

Apart from their value to the Reserve Officers in training the practical demonstrations afforded a considerable amount of training and experience to the Regular Officers and men participating, including as they did some of the most ambitious ventures of this nature that the Army has yet attempted. It is felt that the experience gained in this way is likely to be of considerable value in view of the future mission of the Permanent Force as an instructional cadre.

With a view to ensuring uniformity in training methods and doctrines an experiment was tried under which all classes studied certain subjects of general application in a body under a single instructor. This was enforced, as far as such general subjects as Tactical Principles, Combat Orders, Anti-Gas

Preventative Measures, etc., were concerned. It was found that without interfering in any way with the separate identity of the various classes, this measure not alone ensured a certain degree of uniformity in all instruction, but it also brought Officers of different Arms and Services in close touch with each others problems, made for a healthy interchange of ideas, and brought home to the Officers of the different Arms a clear understanding of the part their own Arms play in the tactical team as a whole.

It is, of course, too soon to analyse the results achieved, but speaking generally it is felt that they may be regarded as highly satisfactory. The whole training was frankly in the nature of an experiment, it was the first occasion upon which the Army had attempted anything of this nature, the available instructional staff was by no means adequate in strength to meet the demands put upon it, the existing training plant and other facilities were totally inadequate, the Regular troops available for demonstration purposes were limited to one weak Infantry Battalion which had just completed its Annual Collective Training, a couple of batteries of Field Artillery, with small detachments of Signal, Medical, and Supply and Transport Troops. This state of affairs had its disadvantages of course, but it also had very definite advantages. It demanded a very high degree of keenness and ability to overcome difficulties on the part of the Instructional Staff, and a correspondingly high standard of application to duty on the part of the students. The fact that these courses were conducted successfully in face of the existing difficulties, combined with the experience gained in overcoming them, will ensure that future training of this nature can be carried through much more satisfactorily under the improved conditions that we may anticipate.

No one would pretend that the very comprehensive objectives laid down were reached in their entirety, no one could hope that they would be. The limited time available for instruction, and varying standard of previous training obtaining among the Reserve Officers, rendered this out of the question. The Training Bureau themselves realised this very clearly when they made it plain that the real object was to get as near to the Training Objectives as possible for the first year. The standards which were finally reached would then be used to determine the nature and scope of subsequent years' training.

This principle governed the efforts of the Instructional Staff throughout the whole training, as a result of which certain definite conclusions can be arrived at. It may be taken that the Reserve Officers have mastered certain fundamental tactical and logistical principles, and that they have obtained a pretty good general idea of the application of these principles to the tactical and technical requirements of their own Arm, in the manner calculated to meet the requirements of any given situation. They have, it is believed, been made to realise that there is no mystery about the Art of War, that neither is it governed by rules, that it is purely a matter of applying well-tryed principles in accordance with a certain well-defined technique, which can be acquired as a result of training and practice and study. If these conclusions

are correct, and it is believed that they are, then these first Reserve Officer Courses may be accepted as successful in all respects. From the knowledge that he has gained on these first courses the average Reserve Officer should be able to continue and develop his training by means of home study in the interval between this first series of courses and next year's annual training. If possible, the Regular Service must assist him in this part-time voluntary training, this, however, forms another problem which must be considered separately.

Apart from the purely technical military results the indirect moral effect of these courses must be of considerable value to the Service as a whole. As was mentioned at the beginning of this article there is no doubt that very few people, even inside the Service, ever considered the Reserve of Officers as a really live effective body. Those who did give any thought to the matter looked upon this component as an unknown quantity of doubtful potential value. As far as the Regular Service is concerned that spirit is definitely dead as a result of these courses. The Regulars' experience of the average Reserve Officers' unremitting application to study, his refreshing enthusiasm and keenness, his ability to absorb instruction, and his extraordinary high morale has killed it. The Reserve Officer, for his part, had, undoubtedly, felt "out of it." Before this year's training, his paper connection with the Service represented nothing to him. As far as he was concerned all his old links and associations with it were broken. He came up for his annual training as a being apart. On reporting for duty he found that the one thing that was stressed, morning, noon, and night, was the fact that he was a Commissioned Officer of the State, everything that was calculated to make him feel this was emphasised, he found himself under the same discipline, expected to live up to the same responsibilities, and to avail himself of the same rights and privileges as his Regular comrade. There is ample proof that this has had extremely good results on the morale and general outlook of the Reserve of Officers as a whole. As a result, the foundations of a real spirit of comradeship between the two components have been laid, a result that augers well for the "One-Big-Army" spirit which is regarded as so vital to the success of the future Army.

If these courses had achieved no other result this alone would, in the writer's opinion, have provided ample justification for the time and energy and money expended on their organisation and management.

In addition to the foregoing considerations these courses are almost bound to have at least equally important repercussions outside the Service altogether. Our people are notoriously apathetic regarding the problems of National Defence. Few citizens consider the matter at all, fewer still want to hear anything about it. These first Reserve Courses will undoubtedly do more to bring the existence of such problems home to our people than anything else. These 250 Officers who reported for training this year are drawn from all over the country, they are representative of practically every walk of life, professions, business, public service, farming, and so on. For

eleven months of the year they are ordinary citizens pursuing their normal peacetime avocations, for one month they get back into their uniforms, they return to the Army, and are required to serve the State as soldiers. This fact alone must give the man in the street some food for thought, it must make him realise that there is a problem of National Defence. Once we make him realise this he will soon get thinking about it, and once he gets thinking about it he can eventually be made to appreciate what that problem means. This does not, of course, directly affect the training of Reserve Officers, it is merely mentioned as yet another example of the indirect beneficial results that may be anticipated as a result of the very existence of such a Reserve in any active form.

THE FUTURE OF THE RESERVE OF OFFICERS.

At this stage we may regard ourselves as having reached a position from which we can survey the ground with some advantage, and consider the lines along which the future development of the Reserve of Officers can be directed. As far as the existing Reserve is concerned we can say that practically every member of it has completed a Basic Course of Training, during which some attempt was made to break down the single cadre system by means of Branch courses. The rosters of these courses can readily be utilised as the basis of future permanent assignment lists. The Confidential Efficiency Reports will, in turn, provide a basis from which the actual appointment or employment of Reserve Officers can be determined. This, in brief, sums up the progress that has been made with this component, as compared with the position which existed prior to the 1929 Annual Training. An enormous amount of work remains to be completed, therefore, before we can regard this force as an effective component of the Defence Forces as a whole.

Before we can consider the details of this work we must, first of all, consider the general outline of the future Army as most of us visualise it. Practically everyone is agreed that this will comprise three main sub-divisions, or echelons. We will, first of all, have a Permanent Force, comprised solely of cadres of very highly trained, long service, professional Officers and men. The primary mission of this component will be to supervise the training organisation, administration, and mobilization of the Forces as a whole as represented in the Non-Permanent components. It might have the secondary mission of acting as a spear-head or "stiffening" agency to the bulk of the Forces. Its strength must be kept at as low a figure as is compatible with the efficient execution of these missions.

The bulk of the fighting forces proper would be organised in a territorial Volunteer Force, comprising complete units of all Arms and Services. These troops would receive regular spare time training throughout the year, with some period of annual active training in addition. At first sight it might appear that if the Active Volunteer Force is to consist of Units of all Arms that there is no necessity for the organisation of a third echelon, that all the personnel and units required on mobilization might be included in the two echelons already mentioned. A little reflection should convince us that this

will not be possible, or, at least, advisable. In the first place the demand that will arise on mobilization for Officers will greatly exceed the supply available in the peace establishment to the Regular and Volunteer Force. Large numbers will be required to complete the training of the Volunteers and to train new units and replacements.

Secondly, many specialist appointments will require to be filled, personnel for which may be found among those whose civil avocation fits them for their military duties. These Officers and men will require little or no military training. Bearing this in mind it would seem that common sense should dictate to us that to get the best value for our money we should cater for these classes by instituting a third echelon, which would be more or less inactive, and, therefore, more economical. There would be exceptions to this, of course, but, as a general statement, it will suffice. Such considerations as these demand the establishment of a Reserve, or replacement and reinforcement echelon, whose mission would be to complete the war establishments of the first and second echelons on mobilization, particularly with regard to certain types of specialists.

The Reserve of Officers would naturally form a component of this third echelon, and its functions would be of the same nature as the general functions of the other Reserve components, that is to reinforce and replace. In general its members might expect to be employed in any of the three general capacities. Once mobilization is ordered, every Regular and Volunteer unit will be faced with the problem of making good its deficiencies in commissioned personnel, as represented by the differences between peace and war establishments. This would be the first mission of the Reserve of Officers. Then we must be prepared for the institution of numerous specialist and technical staff appointments which do not exist in peace time. Here, again, the Reserve of Officers will provide us with the only source of supply. Finally, we must be prepared to have available the 10 per cent. replacements required on mobilization, and to cater for general recruiting, voluntary or otherwise, with the consequent demand for Officers to command and train the new levies. This would form the third task of the Reserve of Officers. The replacements would be found from Reserve Officers gazetted in peace time to Depot Units, composed of the existing "B" Reserves, and the Officers for the new units from the General List of Reserve Officers.

It is upon some such basis as this that the whole future of the Reserve of Officers must be considered, its organisation, training, recruitment, and general administration. All the factors mentioned above, with many others, must be taken into account and carefully examined in all their aspects before any definite decisions are taken. We must face the position that the existing Reserve of Officers is not the logical result of any scheme of systematic development up to the present. Our task, therefore, is to ensure that its future development is directed along sound progressive lines, in accordance with carefully thought out plans, which are based definitely on the requirements of our schemes of National Defence.

ABOLISH THE INFANTRY.

BY

MAJOR J. P. M. COTTER.

SUCH is the momentum of ideas engendered by hackneyed phrases similar to: "The Infantry is the Basic Arm," that, to a certain school of military men, the mere questioning of the utility of Infantry savours of heresy whilst the advocacy of the abolition of Infantry causes variations of temperature which are recorded on the reflex scale between the zero of "Commit him to an asylum," and the maximum of, "Revive the Torture Chamber." Yet will I submit to the taint of heresy and brave the wrath of the would-be Inquisitors by advocating the abolition of Infantry as being surplus to *our particular needs*, dangerous to the nation and to our relations with Britain.

It is desirable that the connotation of the term Infantry should not be misunderstood.

The term, "Infantry man," as normally used is interchangeable with rifleman. Even among our own officers the machine-gunner is considered as a soldier capable of doing an infantryman's (rifleman's) work, but with additional skill and qualifications. The machine gun is regarded as a weapon which accompanies Infantry, and which Infantry may have to protect. It is not regarded as the *raison d'être* of the Infantry. The machine gun came after the rifle—proved useful, if not essential, and Infantry organisations were adapted to find a place for it. The nature of the adaptation varied in different armies, and in some armies at different times, and even yet finality does not appear to have been reached. Through all the variations and adaptations the Infantryman proper carried his rifle and bayonet. Whether organisations were square or triangular the Infantryman carried his rifle and bayonet. Whether there were two or eight machine guns per battalion the Infantryman carried his rifle and bayonet. The predominant feature of our battalion badge is not a machine gun in relief. It is crossed rifles.

When the dry rot in the Infantry Body set in I do not pretend to know. A germ was located when the term, "mounted infantry," was coined. This nomenclature, which is a contradiction in terms, and the reasons which led to it, indicated the necessity for surgical treatment. As and *if* the germs are isolated we will doubtless hear of tank infantry—air infantry—motor infantry (these terms are no less unjustifiable than mounted infantry). The necessary surgical treatment will then be so radical that the subject will be metamorphosed as to be unrecognisable. The IF is, however, a very big one, as modern production methods following intelligent prognosis will tend to eliminate the useless and unnecessary steps. Why create a body of imperfect capacity and then, by adding here and lopping off there, turn it into something else, or rather into an adaptation meant and hoped to be something else? I know most of the hoary old litany of maxims used in the ritual when offering is

made at the shrine of the tin-crowned god, whose body stops bullets, and whose feet are clay. But I am not of the faith. I have no obeisance to make to the man with the bayonet—the man who “cleans up” a trench after that “mere adjunct”—the artillery, has enabled him to get near it, and has damaged the morale of the holders; the man who goes forward through barbed wire in the wake of “those accessories,” the tanks; the man who “holds” a town against an unarmed population; the man who, under modern conditions, is a super-policeman—by virtue of his equipment.

With the growth of modern appliances the day of the Infantry began to wane, and now that war has become the business of the nation, and not solely that of the army, the utilization of man-power in the form of Infantry to secure fire-power is open to question on economic grounds. So much for generalities.

Our own particular needs must be borne in mind when considering the composition of our Defence Forces. Our needs are concomitants of our functions, and the primary function of the Defence Forces is to prevent an enemy crossing our shores—to prevent invasion.

An enemy can come by air. Can we stop him crossing our shores? No. Increase our air arm a hundredfold, and still the answer is No. But under existing conditions—lack of landing facilities, extremely limited carrying capacity of machines (and so far as one can judge, these conditions will exist for many years to come), it is highly improbable that an enemy will attempt invasion by these means. Raids against particular objectives, e.g., the Shannon Works—might be undertaken. Would Infantry stop them? Or would we rely on anti-aircraft weapons, and fighting planes? It may be argued that some few troop-carrying planes might land a small force, which would form a column, and raid through the country, and that Infantry would be useful. Granted. But so, also, would the *levee en masse*, in a nation accustomed to the use of arms. Similarly, small parties might be landed from individual ships which could probably evade observation until too late for prevention. The hostile party so landed would not be in any better position. In any case small parties will never conquer the country.

Large contingents, capable of conquering the country, or dominating it for a considerable time must come in ships, and these ships must come in large convoys or concentrations. This simplifies the matter for us. It is unlikely that we will go to war voluntarily. It is so likely as to be almost certain that we will be dragged into any war with a first-class power in which Britain becomes engaged. We will be with Britain in accordance with an international interpretation of our legal obligations, or we will denounce the legality of those obligations, and be against Britain. The decision will be for the government of the day. The implementing of the decision will be for the Army.

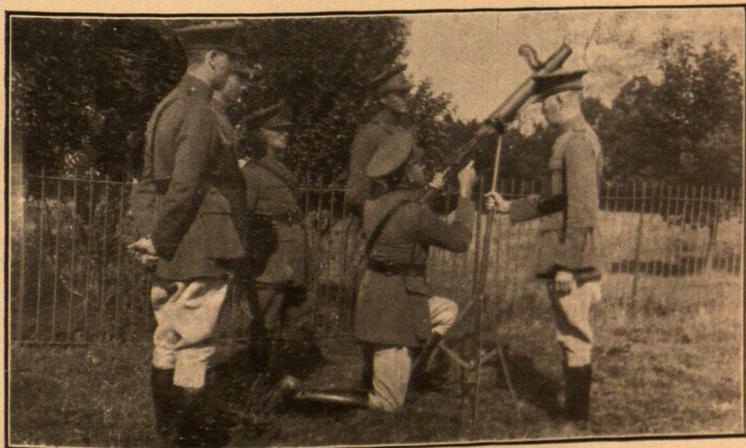
Let us consider the first. Association such as obtained between U.S.A. and the Allies in the World War is out of the question. In theory our status would be that of allies, or something even closer than allies; in practice,



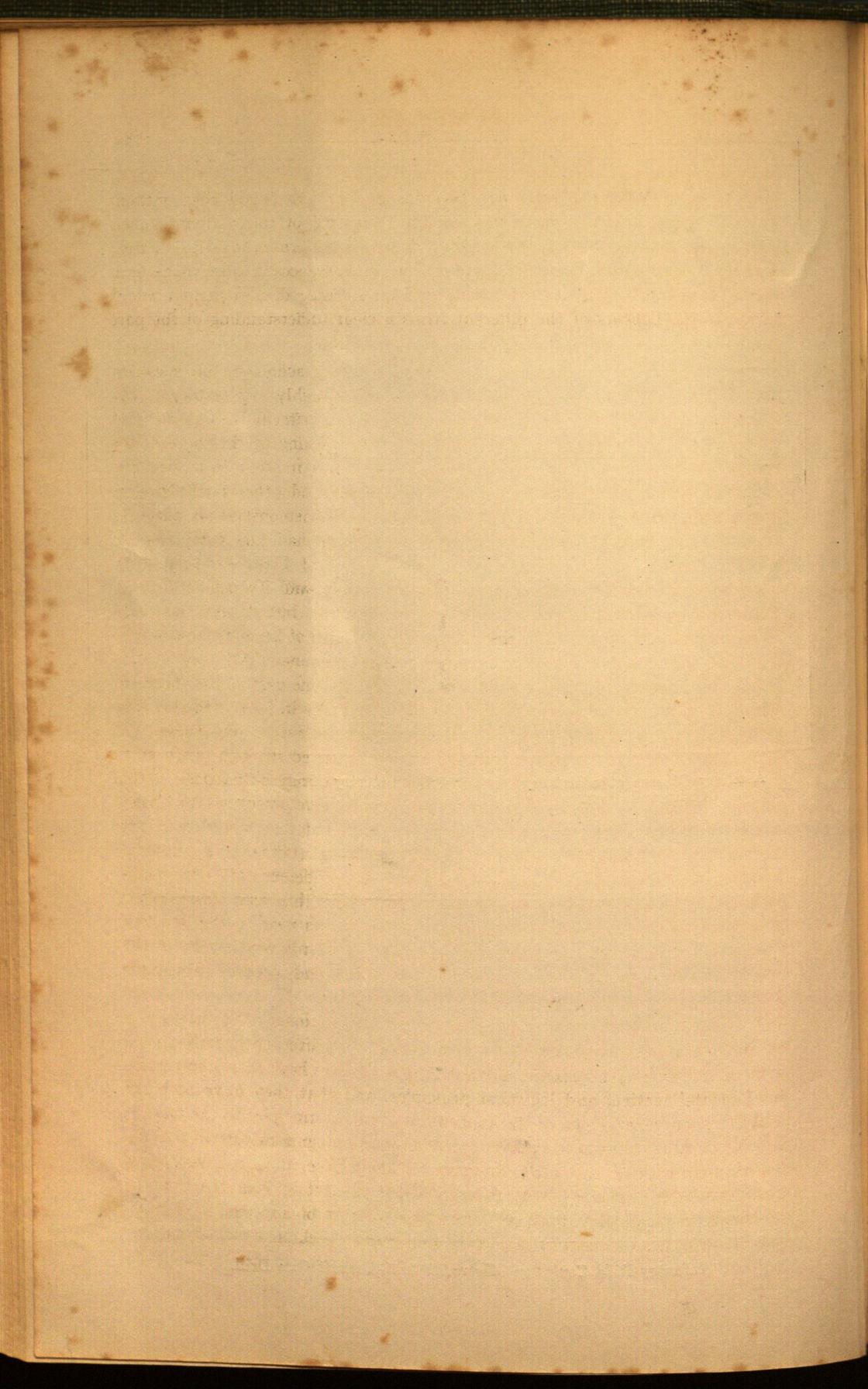
Artillery Officers at a Battery
Command Post.



Infantry Machine-Gun Officers' Gun
Drill.



Infantry Rifle Company Officers at Anti-Aircraft Gun Drill.



probably allies for a specific and limited purpose. Theoretically we should fight to the last Irishman for the safety of Britain, and the integrity of the Empire. There is no use blinking the facts. All the historical and psychological evidence is that we wouldn't. All the probabilities are that we would deal with the basic fact that the Treaty in its essence is an acknowledgment of the influence of geographical factors on military and naval considerations as they affect Britain—an abrogation of our legal rights to meet Britain's admitted necessities—an undertaking as evidence of good faith that we were in fact, "burying the hatchet." As practical people we did not agree to provide men *ad lib.* to fight Britain's wars, nor did the equally practical British make any such demand or stipulation. Our job would be to prevent any enemy utilising, or being in a position to utilise, this country for purposes hostile to Britain.

Now, geographical factors must be considered. The nearest first class power with which Britain might find itself at war is France. *Prima facie*, any other first class power would find it more difficult than France to secure a military domination of this country. From the French coast to the Irish coast, as the crow flies, is approximately 300 miles. Take the mean speed of the convoy as equivalent to 15 miles per hour, it will take 30 hours of uninterrupted sailing to reach the nearest point on our coast. In the depths of winter this could not be done entirely during darkness.

Again, assume, as is probable, that the French would have to make a detour to avoid the British Fleet in force. Assume, if you will, that this enormous convoy has got to sea without our knowledge. How is the threat of such a possibility to be met? My view is that our primary need in such circumstances is a strong air arm performing extended and co-ordinated patrols, particularly at evening and at dawn, and backed by a fleet of very fast torpedo boats and surface craft capable of being used as plane carriers, supply ships, and salvage craft or mine layers. If we again take the convoy speed as 15 miles per hour, and the maximum hours of darkness as 14, and add an hour for lack of visibility at evening we find that if the seas are patrolled to a radius of 225 miles from the coast at evening and found all clear, then there will be no landing at dawn. If the "all clear" is not justifiable the convoy should receive such attention from bombers, and the fleet make such disposition of mines and ships as would reduce his average speed so considerably that a landing next morning would be out of the question.

But suppose something goes wrong—that the enemy escape our notice until sighted by coast watchers, say one hour's sail away. That would mean that the site of the proposed landing place could be fixed with some approach to precision. Armoured cars and machine-gun crews in lorries, or dragons and mobile heavy artillery would be rushed up from the appropriate strategic depots. We have a wonderful network of roads and a railway system which is quite useful for defence against invasion. It is surely more logical to pound the enemy to pieces when you get him concentrated in thousands, and where such manoeuvre as is open to him must be performed in masses of thousands,

than to sit and wait for him to land and deploy his army to fight you man to man. "Put him in to get him out," was, in its day, a useful electioneering catch cry. "Let him in to beat him out" strikes me as the aspiration of the militarist anxious at all costs to have the pleasure of operating his beloved infantry arm in battle rather than a definition of sound defence strategy.

Again, something might go wrong with our arrangements—lucky salvos from the warships might have damaged our prepared emplacements, or the enemy might have actually landed in small numbers and be continuing to land. Well, we would hardly have been asleep—our armoured cars and machine gunners would be in the field in selected positions, our field artillery would be coming up. The British Fleet would long since have been on the way. Our friend, the enemy, would not be happy. Time would be running against him. He would rapidly find himself as an expeditionary force cut from his home base—not by hostile troops which he might overcome, but by the deep sea which he does not command, and without sufficient stores or equipment to form a base in hostile territory.

Assuredly the best insurance against invasion is the certainty of being able to give a warm reception at the coast, or before it is reached.

If money is spent on Infantry it will not be available for airplanes and artillery, and the maintenance of the Infantry arm really means either that we intend to let an enemy land and then endeavour to beat him into the sea, or that we will rely on the British Fleet to prevent a landing, and as a *quid pro quo* hand over our Infantry to the British. Our Infantry would then be used by the British as cannon fodder. "Steady the Buffs and let the Rangers pass," is quoted as indicating the superiority of Irish troops—a flattering tribute to Irish military prowess. To me it indicates the superiority of British Brains, the solicitude of British officers for their own. Let the Irish do the dangerous donkey work; there will be fewer homes in mourning in Britain. This is quite natural. It is not pleasant for any officer to send men to their death, but, once faced with the necessity, human consideration will direct the sending of the stranger in preference to one's own.

The mere sending of Irish troops on foreign active service would violate national feeling.

"On far foreign fields
From Dunkirk to Belgrade,
Lie the soldiers and chiefs
Of the Irish Brigade."

epitomises the regret of the nation for what, rightly or wrongly, was felt to be a useless sacrifice—useless, but in the circumstances, not grudged—a regret untinged by the bitterness associated with the sending of Irish troops as mercenaries or legionaries of Britain. There is venom and hatred in the lines:

"If to India you go
'Tis to grief and to woe,
And to rot and to die
Like a dog, my boy!"

In our own times the Ballad which contains the lines :

“ When the war is o'er
If we want you any more
We'll find you in the S.D.U.”

exposes a variety of feelings—none of them either friendly or complimentary to Britain, and all indicating a certainty and conviction as to the evil fate of those who placed themselves in the British military machine.

There will be no question of operating on our own—under our own commanders. The Great War indicated the necessity of unified command. The British certainly yielded the supreme command to the French—their ancient enemies—a great gesture by a great man—in my opinion the biggest action of the war. Would we not willingly rise to equal heights? I think not. A century had elapsed since the British and French fought. Neither were “conquerors.” A national entente had existed for fifteen years. The British instinct and temperament, while cautious, is not revengeful or vindictive. Less than a decade has elapsed since we fought the British. We have been under the thrall of the conqueror for centuries. A treaty has been signed, and is supported by a majority of the population. It has neither the support nor the enthusiasm of a truly national entente. Our instinct and temperament are revengeful.

“ The treasured wrongs of fifty years are in their hearts to-day.”

No, the big thing was not an easy thing for the British. It would be impossible for us. Time and development, and the obliteration of harsh memories by improved relations are the things which could make it possible, and time will be measured in decades rather than in months.

Let us now consider the alternative—war against Britain. This might arise in the manner already indicated, or through a difference of interpretation of the Treaty. Let us assume that Britain has already handed over the Forts and other land facilities for coast defence—that the Boundary has vanished, and that there is one Government and Parliament for Ireland. This gives matters the most favourable complexion for us. Assume further that we have a defence force organised and equipped for resisting an invader—heavy mobile artillery, planes, fast craft, mine layers, etc., etc. What would our prospects be? Since Britain's enemies are unlikely to bring their convoys into the restricted waters of the Irish Sea, our peace-time activities, training and preparation could not be carried out on the basis of resisting an invasion on the East Coast without tacitly avowing that we regarded Britain as a potential enemy, and without neglecting some of our preparations elsewhere. It can safely be assumed that, for obvious reasons, no such preparation will take place. In other words, we would start under definite disadvantages.

Having regard to the proximity of the British coast, and the extent of our coast line on the east, the fact that although so far as aerial activities are concerned circumstances are practically equal, the British would outnumber us in every class of plane, and the absence from our establishments of capital ships, the possibility of repelling the landings which could take place simul-

taneously does not seem rosy. Assuming the British effect several landings, secure ports and other facilities, it may be argued that Infantry would give them considerable trouble—that with fewer numbers and resources infinitely more slender we have, in the past, “given them a bellyful”—that we would make them anxious for peace, in other words, that we could do as we did before.

This view is based on a misconception and a failure to appreciate the significance of changed conditions. The Treaty effectively prevents any repetition of “what we did before.” We have the acknowledged right to raise defence forces. These forces are internationally recognised, and we must conform to international usage by wearing a uniform. How long would our ambush parties, out-numbered ten to one, or perhaps a hundred to one, last? True, individual leaders fought and won engagements which developed from ambushes, and, it must be admitted, that the absence of uniform did not materially contribute to the result, but the “hit and run” tactics, particularly in towns and cities, are obviously impossible for uniformed forces. Are we, then, to discard the uniform and throw it in the ditch as a shameful thing? It is well to bear in mind that the British were handicapped severely by having, for political and international reasons, to regard the wearing of uniform as illegal, and punishing the offence by imprisonment. In the altered circumstances there would be international sanction for regarding fighting in small units when *not* in uniform as “illegal,” and the punishment would be death.

Further, there are restrictions in the Treaty on the increasing of cable communication and the erection of high power wireless stations. If Britain effects a blockade of Ireland and cuts the cable, how are we—a mother country—going to keep in close touch with the millions of Irishmen throughout the world? The significance of this aspect will not be lost on those who appreciate the extent to which the scattered voices of the Irish people energised world-opinion, and the effect world-opinion had in coercing Britain to the truce and proceedings which culminated in the Treaty.

Mr. De Valera, whose military insight commands regard, in pre-Treaty days is reported as having warned An Dail that it would have to consider the possibility of another “Sherman’s Ride.” This, at a time when facts and propaganda had set the tide of world-opinion flowing strongly against Britain. What sort of war would Britain wage when the world would be in the dark as to happenings in Ireland? “Immediate and terrible war,” was recently a common phrase in discussion. “Sherman’s Ride” came earlier, and Lord Fisher’s “Boil them in Oil” ante-dated both. British Bluff? Perhaps! Perhaps not! “Nits will be lice,” was certainly not bluff. Is it not reasonable to assume that Britain still has a capacity for “going the whole hog,” if pressed sufficiently hard, if she feels that she is “up against it”?

If war be the instrument of policy it is difficult to conceive any sane policy in our relation with Britain which can be served by such an instrument directed at Britain. Of course, if by diplomatic intrigue, we could become

secret allies of a first class power which will be certain to desolate London, and sweep the British Fleet off the seas, and conquer Britain, self preservation might dictate such a course. But, in such circumstances, why should Ireland be taken into a secret alliance with its dangers or indeed, into any alliance?

Even though not certain of success, why not take a chance with a first class power as ally to down the hereditary foe? With political and moral reasons I am not here concerned. Militarily the reason becomes obvious if we consider the peace after the war. If Britain were conquered and became a dependency of some other power we would suffer under similar military restrictions for similar reasons—probably more severe restrictions, as our new ally would not forget that we did not keep faith where faith was openly pledged. If Britain were not conquered she would hardly embrace us—certainly not in gratitude.

Then Britain can interpret the Treaty as she likes, and if we don't agree she can send in troops and coerce us? The interpretation of the Treaty is a matter for statesmen, not for soldiers. It is permissible, however, to advance the view that common sense and common interests dictate that differences be adjusted to mutual satisfaction. The British are not such fools as to leave us with the impression of having the losing end every time—to use their power ruthlessly to exploit a greater experience in the wiles of diplomacy. They know too well that the slimness and trickery by which the Act of Union was passed—their failure to honour the Treaty of Limerick, etc., have left memories more bitter and more enduring than even the vilest acts done under the plea of military necessity. If agreement to mutual satisfaction be not reached—if the issue be a major one—if an Irish Government, as a gesture of self-respect, is forced to take the sword—how do we stand? The Army would of course, obey the Government of the day—to the Death, and a reasonably quick death it would be under existing conditions.

With forces organised and equipped for repelling an invader, other than Britain, I do not contend that the final result—capitulation—could be avoided. I do suggest that the casualty list in our Forces would be smaller—that in the British, larger, and that this factor alone would make Britain give additional pause before becoming, shall we say, unreasonable. This is, however, incidental, is not likely to have any practical bearing, and is merely touched on to anticipate the arguments of those who have not yet found it possible to abandon the attitude of hatred and suspicion which was part of our national stock in trade for so many years. Hatred of wrongs and injustice, as Patrick Pearse felt it, is an Inspiration. Hatred as the man in the street feels it is not on balance a military asset. It may be useful to “blood-up” shock troops; it is more likely to result in indiscipline. Suspicion is based on bias, and in most cases results in prejudgment. To be a military asset it must be superseded by caution and analytical examination of facts and problems.

And now as to cost. All professional armies are parasitical in their nature. They are an Insurance. They are not productive. On the present basis

the major cost of our Forces is not lost to the country. Money is circulated in the country. The presence of troops has a local effect on trade—witness the anxiety displayed, the deputations or petitions when the closing of even a small military post is mooted. What do the Forces give? Service—to Death, if necessary—at the bidding of the Government. They have some little educational value. They have considerable beneficial influence on general physical training and fitness of the male population. They are not without their effect on foreign visitors as a symbol of nationality. The military teams (and individuals) which compete in foreign countries in athletics and horse-jumping, etc., show the flag in foreign countries, and thus add to our national prestige, and indicate our distinct nationality to the people of countries visited.

The Forces are also available for ceremonial, and give that touch of pageantry so necessary for a State function, whether it be honouring and welcoming of distinguished visitors, or as a tribute to one of our own citizens.

It cannot be claimed that the Forces are in any technical way effective for preparing officers or men for taking a useful part in the civil life of the country. With the exception of a few specialist activities all return to civil life with qualifications no greater than when they entered the Defence Forces, and unpractised in their profession, trade, or activity. Many get "soldiering" in their blood, with consequent distaste for normal pursuits. They become inefficient, or less efficient, as workers, and eventually are lost to the country through seeking, in other armies, those military activities which are perforce denied them in their own country.

On the alternative basis of more and heavier artillery more and up-to-date aircraft, more and up-to-date armoured cars, and a smaller proportion of riflemen in relation to machine-guns than at present exist, a small fleet of fast, light-draft vessels, suitably armed. What would the comparison be? As to cost I could not say. The matter would have to be carefully worked out. Probably the change over would be costly. It would, however, be largely capital expenditure and would be gradual, the necessary crews being trained in readiness for the ships or guns during the period anterior to their acquisition. The maintenance would, I think, be well within the budgetary figure of £1,500,000. The international naval limitation discussion now in progress may result in the availability of suitable craft at nominal figures. It may result in the reduction or limitation of first-class battleships, with consequent advantage to any country relying on coast defence works and artillery to beat off an invasion.

The number of men required for such forces would be less than that required for an organisation based on that of large field armies with their Brigades, Divisions, Armies Corps with their trains, etc. To say that this would release a number of men for productive work may sound ironical at the moment. The present state of unemployment is not normal. It is part of the aftermath of disturbed conditions which created the necessity for an army of some 50,000-60,000 Infantry, upwards of 40,000 of whom have been

demobbed, and too many are, unfortunately, workless. Matters are improving, and must continue to improve. The country's eyes are on a brighter horizon, and the fewer men there are whose thoughts are bent on the problem of slaying their fellow-men the more rapid will be the march towards the better times.

Apart from the fleet, if so small a unit may carry so imposing a name, the standard of education required on entering, and reached on leaving, would be higher than in the Infantry, and a stimulus would thus be provided for parents to co-operate with the educational authorities by leaving children at school as long as possible. In the fleet the rank and file would learn much of seamanship, or improve their knowledge thereof. Their outlook would be broadened and education improved by visiting foreign countries, and their services would be ultimately available for the mercantile marine—an organisation which must develop if we are to hold and improve our position. If the sea "gets into their blood" they will turn to the mercantile marine of our own country. If it doesn't, they are still useful both on account of improved general education, and the resource and handiness begotten of life at sea. In all branches physical development and well-being must be looked after, and if the Forces cannot field the number of teams that Infantry units would there is no reason to anticipate lack of quality, and it is quality that counts in the reaction on civilian activities. Whilst I do not suggest the abandonment of the project of sending military teams to foreign countries—it is national money well spent—I put it that the cruise of one or two of our ships (obviously in European waters) would be complementary and of incalculable value in the matter of prestige. Our vessels would show the flag in many ports, not only at a particular and restricted venue. Our men would meet the common people of other countries—not only the official class and those interested in special functions, as at present. The common people of other countries would see, meet and know our men, and recognise our national characteristics, and not be dependent on press reports. The vessels in home waters or some of them could be of incalculable benefit to the fishing industry, and thus be nationally productive. The vessels themselves, or some of them, might be built in our own shipyards.

A few Infantry and Cavalry units might be maintained in view of the secondary function of the Army, viz., to assist the civil power in the event of internal disturbance arising. This force would normally be available for ceremonial, whilst forming a second line of defence for dealing with small raiding parties pending the time when all male citizens would be trained and available for the *levee en masse*. To retain Infantry on the basis of cost (assuming, though not admitting, for the purpose of argument that the alternative, and, as I claim, logical, organisation is more costly), is to me, the negation of economy, and the antithesis of humanity. It is the application of the idea that a poor country must spend in blood what it can't (or decides it can't) afford in shells or appliances. It is the deification of the dollar. It is the "logic" of those accustomed to "costing" on a basis which ignores or deprecates considerations which cannot readily and accurately be converted

to terms of pounds, shillings, pence and halfpence, and whose vision is so coloured by a horizon of gold and a middle distance of silver that they fail to realise the baseness of the copper in which their every-day traffic is transacted. It is materialism glorified and rampant. It is the gospel that things are more precious than men. But, as is not uncommon with false doctrine, it is liable to accentuate the evil it professes to avoid. What about the grants, gratuities and pensions after the war? Will the savings (trivial, if any) during years of peace provide adequate funds for the infinitely greater demand when the nation has finished the actual spending in blood?

We must get away from precedents. We must develop self-confidence. We must think for ourselves—not be hypnotized by the axiomatic phrase, nor dominated by “what other armies do.” We must realise that we are not an expeditionary force—that punitive operations are outside our functions—that we have no conquests in view. We must eventually stop the machine which was contrived for dealing with a particular situation during the recent unhappy years. We must plan in accordance with our necessities. We must build anew and when we come to utilize the parts of the present machine we will find that the outstanding change of function will be on the part of—the Infantry.

The matter is of some urgency. If the changes here advocated obtain the national approval which changes so far reaching require if they are to be fully developed, it is desirable that the existing vested interests receive early notification of impending changes.

The change must be gradual—preparations for the absorption into Government or civil occupation of unwanted personnel must be made, but interests need not be allowed to appreciate in value to any considerable extent or in influence at all—that is mere common sense.

If vested interests cannot be converted or absorbed they must be compensated—that is mere justice.



THE MANŒUVRE OF BANTRY BAY

By COLONEL J. J. O'CONNELL, General Staff.

CHAPTER VI.

THE VOYAGE OF THE EXPEDITIONARY ARMY.

THE delays in Brest, which have already been described, retarded the sailing of the expedition until the middle of December. By that time the various details of the expedition had been tuned up in spite of the friction and disappointments. The date of December 14th was finally fixed on, although the fleet did not actually sail until the following day. Hoche's last communication before sailing was addressed to the Minister Petiet, and was as follows—dated 13th :—" Citizen Minister, when you receive this letter we shall be well out to sea. We sail to-morrow, getting away at last, after all sorts of vexations. I am bringing 14,750 men. May Heaven grant that we may be able to contribute towards restoring peace to the Republic.

"I have been long awaiting the present moment, and often despaired of seeing it—even as late as to-day. Hedouillé, who has not left me for the past month, will give you, no doubt, the details. It is not my business to trouble you with them. I have had to fight single-handed against everything.

"I ask you to keep me a place in your regard. Whatever happens, I beg you will believe in the sincerity of my esteem towards you."

When we analyse how Hoche proposed to conduct his expedition it should be borne in mind that he had no previous experience of amphibious operations ; nor, indeed, had the French Services generally been conspicuously successful in that kind of warfare. He must, therefore, trust to himself for guidance, and it was something to have secured supreme command of the naval, as well as the military forces.

His problem was this :—" To get a considerable force ashore in Ireland in face of the English fleet." The obvious way to achieve this aim was to secure command of the sea, *i.e.*, to defeat the English ships. Now there can be no doubt whatever that Hoche knew this was out of the question. He was under no illusion as to the relative value of the two navies : on this point he was far sounder than Bonaparte. For him the course was clear—to evade, if he could ; fight, if he must. To evade, he must not be too numerous ; to fight, he must have the maximum fire-power in order to inflict the maximum injury. Therefore he took only war vessels and divided his army among them—divided, moreover, so that various parts would be self-contained, and the landing of a portion would not be useless. Mahan—though the present writer differs from him as to the precise significance of the expedition—states the case aptly—" . . . all the means of action need to be immediately disposable, in order that the whole may proceed with instantaneous development when the objective is reached ; and this means that the troops must

accompany the fleet . . . for its success it was imperative that the landing of the troops should follow instantly upon the fleet anchoring, and, accordingly, they went with it."*

Naturally the complete subordination imposed on it by such a view was not palatable to the navy—to be definitely regarded as a means of carrying soldiers. Bonaparte, on the Egyptian expedition, acted otherwise, having an enormous fleet of vessels with the warships escorting them. But that was in a Mediterranean summer; Hoche had to face an Atlantic winter. Nor was it merely the the French fleet that Hoche faced the truth about: he had no wish for elaborate combinations involving Spanish co-operation or difficult movements of any kind. His plan was just the direct, intense, vigorous product that might have been expected from his character.

The one real mistake in the conduct of the expedition was that of Hoche and Morard de Galles going aboard the *Fraternité*. The place for both was on the *Indomptable* (80 guns), the biggest ship-of-the-line—aboard which the bulk of the Staff actually did travel. The *Indomptable* would have been a definite rallying point—such a vessel could not have been blown about like a frigate, such as the *Fraternité*. Authorising admirals to hoist their flag on frigates was an innovation of Jean Bon St. André in 1795—no doubt to help the Representative on Mission who accompanied the commander to move where he felt inclined at the utmost possible speed. In the present case it proved a costly experiment.

ENGLISH NAVAL DISTRIBUTION FOR COUNTERING THE EXPEDITION.

It is not necessary—and, indeed, it would be practically impossible—to plot the exact distribution of the opposing naval forces at the time of Hoche's departure from Brest: the details would differ from one day to another. What is necessary, however, is to have a clear grasp of the main features of the problem. In summarising these main features we shall consider only ships-of-the-line, because they alone were of a force to seriously aid or hamper an expedition of the size in question.

Taking, then, the Allies first, we find that they had their strength distributed in three main areas of concentration. These were:

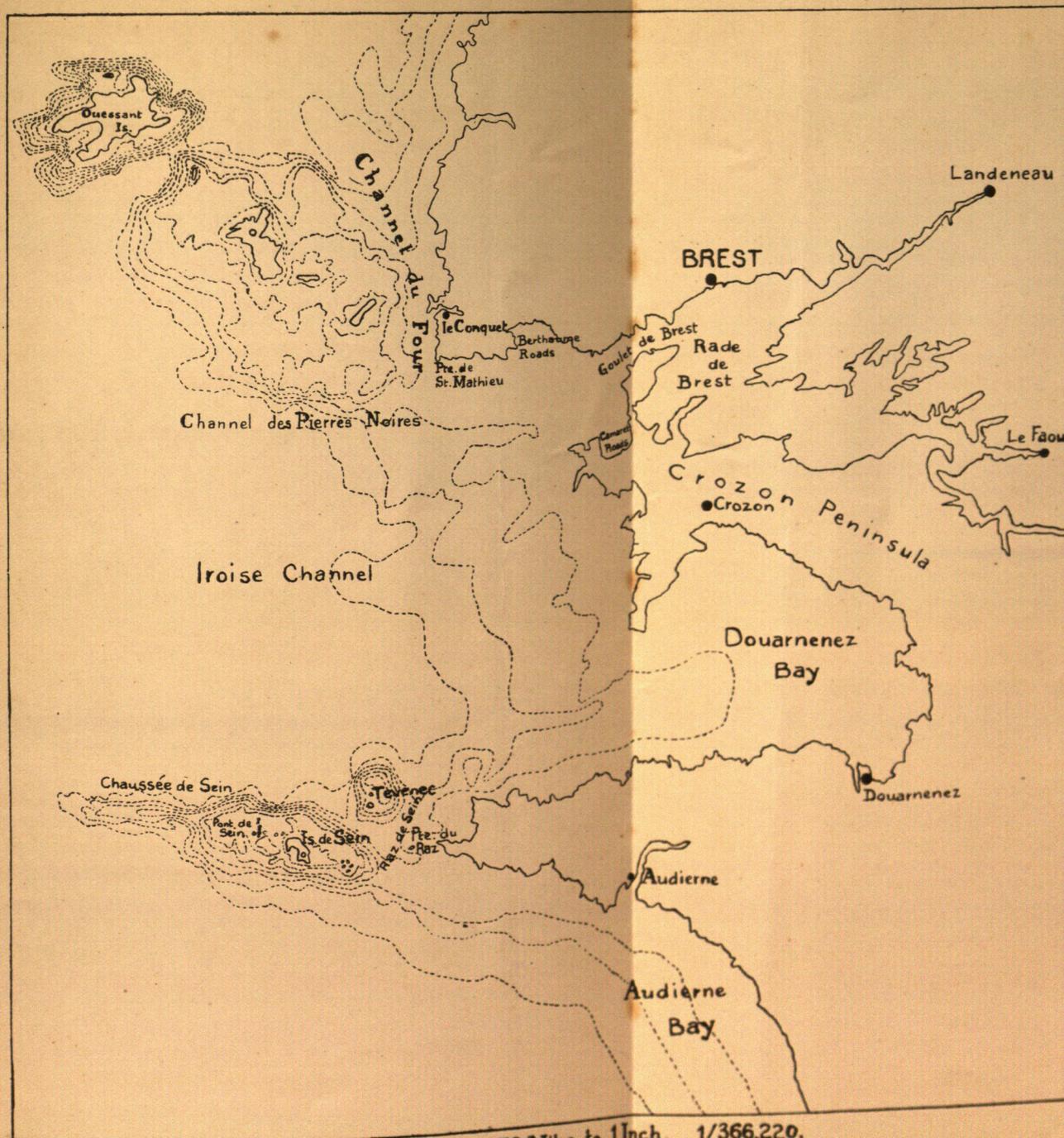
1. In the Texel—about 20 Dutch ships.
2. In Brest—about 20 French ships.
3. In the Mediterranean—about 40 ships, 25 Spanish and 15 French.

It will be observed that round numbers have been given—as the easiest to deal with. For the rest these varied slightly: new ships were built, the oldest lost their military value, there were minor comings and goings. But the main features held good all through this phase. In addition there were certain smaller forces in various places—Western Atlantic, Bay of Biscay harbours, Indian Ocean—none of decisive strength, and some so distant as not to count for anything in the problem we are considering.

When we come to consider the English counter-distribution we find that in European waters they disposed of no numerical superiority, although

*Mahan: "Naval Strategy": pp. 217-18.

Sea Approaches of BREST .



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their total in ships-of-the-line considerably out-numbered the aggregate of their enemies. The reasons for this were two-fold. In the first place, as we have seen in an earlier chapter, they had embarked on distant offensives on a big scale—in the Antilles and against the Dutch Colonies: hence they had some 20 ships in the Carribbean Sea and a dozen or so at the Cape or in the East Indies. In the second place, their great carrying-trade definitely required, at certain points and for convoys, a number of ships that was by no means negligible. These were two spheres of action that could not lightly be abandoned, so that no serious assistance was to be looked for from ships so engaged—and especially, no *immediate* relief could come from such a quarter.

For all practical purposes, then, England could dispose of only the ships actually in European waters. These were so disposed as to provide a force to meet each of the three possible hostile bodies and a central reserve.

The broad distribution was as follows:

1. Watching the Dutch—16 to 20 ships under Duncan based on the Nore.
2. Watching Brest—15 ships under Colpoys.
3. Watching the Mediterranean—10 ships under Jervis at Lisbon.
4. Central reserve at Portsmouth.

The underlying idea was that of an Active Defence.

The aim was not so much to keep the enemy in port as to make sure of meeting him if he sailed. The English could reasonably count on a victory over any of the enemies where the strength was approximately equal. They had, therefore, everything to gain and nothing to lose by an encounter at any time.

To enable touch to be got with enemy forces there were employed an enormous number of cruisers—far exceeding the battle-ships. In the Channel and Bay of Biscay there were so employed 25 frigates and 19 smaller vessels, attached to Jervis 19 frigates and 10 smaller ships, and similarly for the North Sea and the Brest blockade. And, of course, vessels of these classes were much used for convoy and despatch duties in home waters.

THE WATCH OF BREST.

Such were the general defensive dispositions of the English. We must now examine more minutely the details of such as more closely concern Hoche's expedition. In this connexion we need not pay any further attention—for the moment—to the fleets of Duncan and Jervis in the North Sea, and in Spanish waters. These two forces—the wings of the entire disposition—were just adequate to their own tasks and no more: they could not be drawn on for reinforcements for any Irish operations. We have, therefore, to consider in detail only two forces, the Central Reserve, and the force watching Brest.

The Central Reserve at Portsmouth consisted of 15 ships-of-the-line ready for sea, *i.e.*, the same strength as the force off Brest. In addition, there would be a certain number of ships from various stations undergoing refits, a certain amount of new construction, and occasional vessels temporarily present for one reason or another. This fleet—as well as the Brest blockading

force—was under the supreme command of Vice-Admiral Lord Bridport, who received his instructions from the Admiralty. Under his orders were Vice-Admiral Colpoys and Rear-Admiral Curtis, who took watch about off Brest.

The watch off Brest consisted essentially of 15 ships-of-the-line. These were relieved 8 ships at a time owing to the strain on material and crews caused by continuous cruising in winter weather. There was laid down for this squadron a definite cruising rendezvous: "eleven to twenty-five leagues to the westward of Ushant or to the northward there-of if the wind should be to the S.W. or more westerly."*

In point of fact Colpoys was on this station when Hoche sailed, though he never got touch with him.

Detached from the blockading fleet was an inshore frigate squadron under the command of the senior Captain, Sir Edward Pellew. Pellew was emphatically "the right hand man for the job." Mahan, in his "Types of Naval Officers," thus describes him: "To this emergency he brought not only the intrepidity of a great seaman and the ardor of an anxious patriot, but likewise the intense, though narrow, Protestant feeling transmitted from a past, then not so remote, when Romanism and enmity to England were almost synonymous. How would you like, said he to an officer who shared Pitt's liberal tendencies, to see Roman Catholic Chaplains on board our ships? and to the end of his life he opposed the political enfranchisement of persons of that creed."

Evidently Pellew was not likely to leave much to chance in carrying out his appointed task, and, as we shall see, his action in the event was such as to constitute a model for any similar operation.

The inshore squadron of cruisers consisted of three or four vessels—frigates or sloops. It had standing orders to meet the case of an encounter with enemy transports under escort. These orders were: "to run them down or destroy them in the most expeditious manner possible previous to attacking the ships of war, but to preserve such a situation as to effect that purpose when directed by signal." In other words, the French *troops* were indicated as the true objective for the English *ships*. Incidentally we have here an answer to one criticism often directed against the organisation of Hoche's expedition, *i.e.*, the fact that he carried the troops forming the expeditionary army on the ships of war. If the troops were, first and last, the true objective for an English attack, evidently they were best placed on the strongest ships.

THE DIVISION IN IRISH WATERS.

There was one other English force to be considered—Vice-Admiral Kingsmill's Irish Station force at Cork. This was a patrol and convoy force of 1 ship-of-the-line, half-a-dozen frigates, and some smaller vessels. This detachment could not, of course, offer any substantial resistance to such a

*Quoted in Custance "A Study of War."

force as that of Hoche. It was useful only for patrol and despatch duty, for attacking stragglers, or as a reinforcement. Alone it was helpless.

THE STARTING OF THE EXPEDITION FROM BREST.

Of the three exits from Brest, the Northern—Chenal du Four—was dangerous, and led direct to Plymouth—140 sea miles distant: the central—or Iroise channel—the main exit—was the cruising-ground of the English inshore observation squadron. There remained the southern—Raz de Sein—passage, and this was the one selected by Morad de Galles. "It had been agreed in the clearest fashion, that in order to avoid the English, the fleet would sail to the southward, by the Raz de Sein; which would, in addition, increase the enemy's uncertainty as to the real objective of the expedition."

It will be remembered that in Chapter III. of the present study there was described the trick of the Portuguese Proclamation by which Hoche designed to throw the English Government off the true scent.

At 5 a.m. on December 15th, the Admiral signalled to his ships to weigh anchor, and at 11 a.m. the fleet set sail and proceeded to make their way out through the Goulet, and it was there that the final Order of March was to be formed. Two battleships did not pass the Goulet at all, signalling that they would not be ready until the following morning—16th. In addition, owing to the rawness of their crews, four other vessels—two battleships, and two frigates ran foul of one another, and were more or less damaged in their rigging. These also required time to make some repairs. Morad de Galles—quite correctly—decided to lie in Camaret Roads for that night, and to set sail instead on the following day—16th. It was not a hopeful sign that his own—and Hoche's—vessel should be one of the frigates damaged in working out. The other damaged one was that of Admiral Bouvet, the naval second in-command.

Previous to weighing with the fleet the Admiral sent out certain of his lighter ships to reconnoitre the two principal channels. The frigates, *Cocarde* and *Bravoure*, were sent to the entrance of the Iroise, in the neighbourhood of Ushant: the frigates, *Bellone* and *Tortue*, and the lugger, *Vautour*, were sent to scout beyond the Raz de Sein. These three latter vessels found nothing of importance to report; but the former two—who re-joined the Admiral at 8 a.m. on the 16th—brought news of an important character, which had a far-reaching effect on the whole course of operations.

The previous day they had sighted to the North-west of Ushant—and consequently 30 miles in a direct line from Camaret, two English frigates, and three ships-of-the-line, which squadron had not pursued the French vessels. "There resulted for the Commander-in-Chief this important fact, which, no doubt, influenced his decisions: the assembly of his fleet at Camaret had—contrary to all expectations—escaped the enemy's notice.

This slice of apparent good luck was magnified in the Admiral's eyes by the fact that the wind seemed to be shifting somewhat to the South of East. It would thus be on the left, or port flank, of vessels heading south

by the Raz, rendering that difficult channel somewhat dangerous for such an unhandy fleet. The Raz had originally been chosen in order to evade the English—whereas it now seemed possible to secure this result even while using the Iroise passage which was, at the same time, so much easier and more direct. In an unhappy inspiration the Admiral succumbed to the temptation, and on his fleet getting under weigh, he signalled to run out before the wind, *i.e.*, by the Iroise channel. This was at 2.45 in the afternoon.

Now, in mid-December, in the latitude of Brest, visibility is none too good at 3 p.m. At best, the remaining time of day-light is only a couple of hours; and for such an unhandy fleet this was insufficient to enable a wholly unexpected signal to be seen, fully grasped, and obeyed. The usual sequence—order, counter-order, disorder—resulted.

The nearest ships to Morad de Galles obeyed his signals, those nearest the Raz headed south by that channel as originally intended. The Admiral fired a gun to attract their attention, showed flares, and sent the corvette, *Atalante* to recall them. The *Atalante* fired more guns, while still more were fired as distress signals by the ship-of-the-line, *Séduisant*, which had run on the Tevenec Rocks when working out by the Raz. In the growing darkness the confusion became worse.

It was then that Pellew displayed his value as a vanguard commander: for, despite the report of the *Cocarde* and *Bravoure*, he had managed to work into the Iroise channel after all. Keeping close touch with the French ships, he seems to have been mistaken for one of themselves in the growing darkness. He seized the opportunity which thus presented itself to intensify the confusion by firing guns and sending up meaningless flares and rockets of his own. He kept touch until 8.30 p.m. by which time the leading French were largely clear of the Iroise.

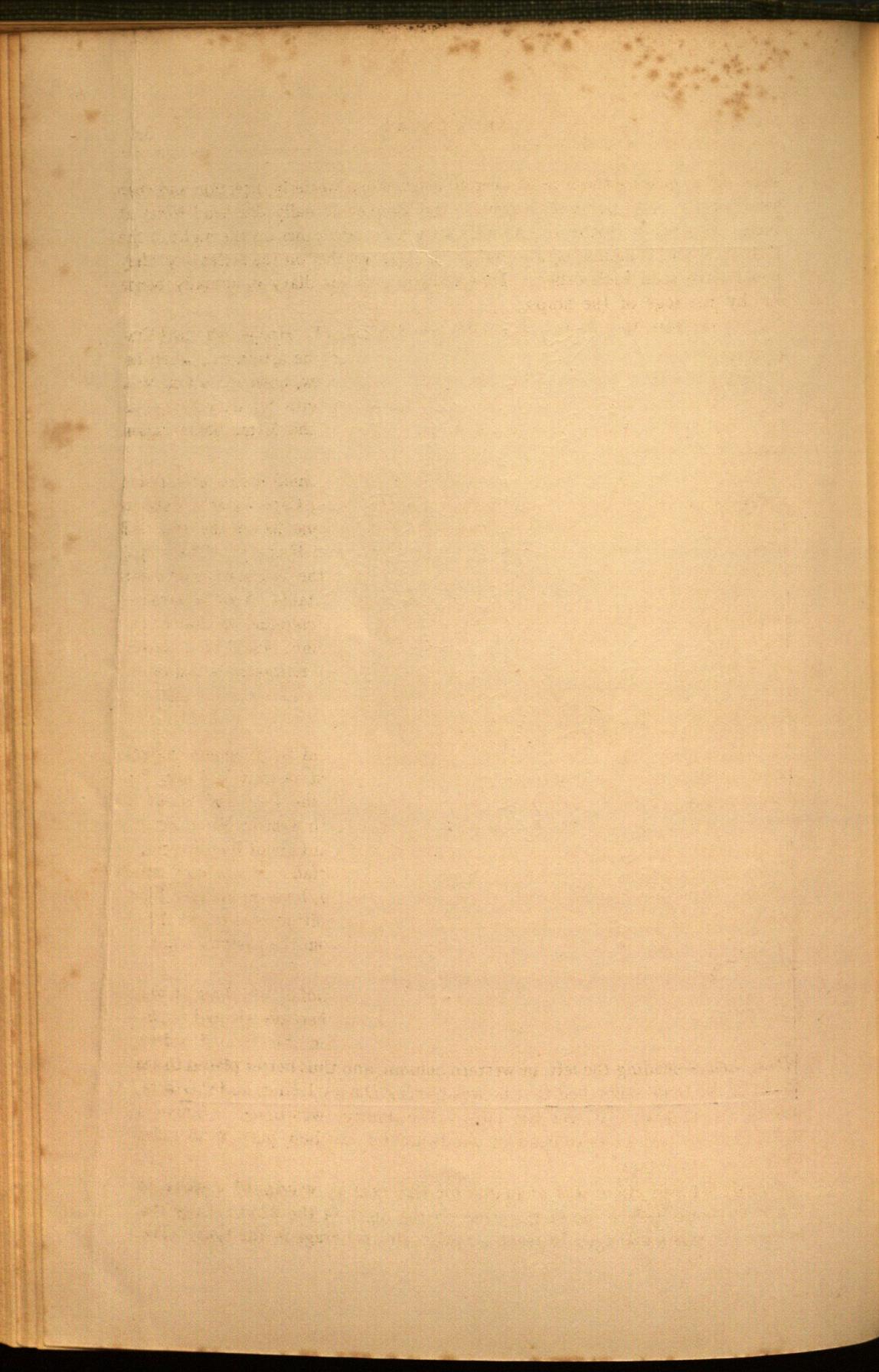
THE NAVIGATION OF THE FOLLOWING DAYS.

Early on December 17th, the expedition was split up into three fractions as follows:

1. Outside the Iroise—S.W. of Ushant was the *Fraternité* with Hoche and the Admiral, another frigate, and one ship-of-the-line—4 in all.
2. Working out through the Iroise was Nielly, with 7 ships-of-the-line, 4 transports, 4 frigates, and 3 smaller vessels—18 in all.
3. Outside the Raz—working out from the Bay of Biscay was Bouvet with 8 ships-of-the-line, 7 frigates and 1 transport—16 in all.

There were thus outside 37 ships out of a total of 43—leaving 6 to be accounted for. The principal of these—the ship-of-the-line, *Séduisant*, had been wrecked on the Tevenec Rocks, a large proportion of her people being rescued.

Hoche, finding himself practically alone, lay to for some hours, and, at 10 a.m., was joined by a frigate from Bouvet's squadron which brought news that at all events a considerable force had succeeded in getting to sea by the Raz. This force Hoche at once steered to join. The original sailing orders



were—after passing the Raz to steer 40 leagues in a westerly direction and then head for the S.W. point of Ireland: and Bouvet actually did head West at once. As a result Hoche and he were very near each other on the night of the 17th-18th, and it seems certain that, with clear weather on the latter day, they would have seen each other. Tone's surmise in his diary is actually borne out by the logs of the ships.

On the 18th Bouvet turned northwards for Ireland. Hoche, who had then unwittingly met and passed him, moved south until the afternoon, when he, in turn, put about and steered for Ireland. He was now, however, a long way astern, and was destined never again to get touch with his expedition—as an expedition. We must now follow the course of the latter before again touching on the fate of the General.

In the morning of the 19th Bouvet and Nielly joined forces at a point some 150 sea miles or so towards the southwest from Cape Clear. Certain smaller vessels—stragglers—also rejoined, so that some 33 of the total 43 were concentrated with Admirals Bouvet, Nielly, and Richery. The ships, hitherto all mixed together, were sorted out into the original component parts of the expedition—Avant-Garde, Corps de Bataille, Arrière-Garde—and the fleet proceeded on its way, formed into three columns on that basis. The front of a fleet of this size distributed in three columns would be a matter of several miles, and this circumstance again had an unfortunate sequel.

HOW THE EXPEDITION REACHED BANTRY BAY.

For a fleet approaching Ireland on the course held by Bouvet's vessels there are three possible landfalls: Cape Clear, the most easterly and also the most southerly; Mizen Head, 11 sea miles more to the west and about 2 further north; Dursey Island, about 17 sea miles north-west of Mizen Head. At day-break on December 21st land was sighted "distant about four leagues." The land was Mizen Head—the middle, and best—landfall. It was now only necessary to hold on, leaving Mizen Head to starboard, hold on another four miles past Muntervary or Sheep's Head and the expedition was in the Bay south of Bere Island, and with some shelter at least from the easterly wind—afforded by the mountainous Muntervary peninsula.

Unfortunately Bouvet was mistaken as to the landfall, thinking it was Cape Clear, *i.e.*, appreciably too far to the east. He therefore steered north-west, at the same time signalling his captains to open their sealed orders. When Nielly—leading the left, or western column, and thus better placed to see the lie of the land—signalled that he was passing Dursey Island, and therefore, passing his objective, it was too late. The damage was done. Bouvet's unhandy fleet had to beat dead to windward for the best part of 30 miles to a sure anchorage.

As it fell out there was available for this beat to windward a space of thirty-six hours before the storm arose on the night of the 22nd. Only the nearest-in vessels managed to reach a fairly safe anchorage in the time. The

rest were still off Dursey Island and were blown away that night : these were Nielly's and Richery's vessels. Not even the most fortunate ships reached the absolutely safe anchorage of Bere Haven.

It may be thought extraordinary that ships could not make 30 miles to windward in 36 hours. It is, however, quite simple—as Mahan explains : “ Crews composed mainly of landsmen, with a very small sprinkling of able seamen, crowded and impeded at every turn by the swarming mass of soldiery, were ill able to do the rapid handling of ropes and canvas necessitated by a dead beat of thirty miles, against a strong head wind in a narrow bay, where every rod lost tells, and requires three or four rods of sailing to be regained ; where sails must be reefed or hoisted, set or furled, at a moment's notice, and the canvas spread varies from half-hour to half-hour. Such a tug tasks the skill, as it proclaims the excellence, of the smartest single ship, though she find the channel clear of other vessels ; but to a fleet of thirty-five, manned and equiped as those of Bouvet, and compelled to give way continually as they crossed each other's paths, it proved impossible to reach the head of Bantry Bay, where shelter would have been found from the east winds, which, for the following week, blew with relentless fury.”

Was the failure then inevitable—seeing that Bouvet cannot reasonably be blamed for an error of a few miles on an unfamiliar coast ? Was there nothing he could have done to prevent what happened ? Most certainly he could have prevented it by displaying the most elementary military precaution, and merely reconnoitring the coast he was approaching. Let us see how he might have acted—taking his fleet as it was, and requiring from it in the way of skilful navigation.

He sees Cape Clear four leagues away—as he thinks. Very well, hold on for Cape Clear—the fleet will be to windward of its objective, and can easily get down to it afterwards. Whereas if it isn't Cape Clear after all—why, then, all the more reason for heading direct for it. Meantime, detach a few swift brigs or luggers to crowd on all sail, push ahead, and scout the coast in detail. Support these by two or three of the frigates, in case there are enemy ships in the Bay. If four leagues leaves us short of sea-room for executing such detachments let the main force shorten sail while holding on for Cape Clear. Evidently, such a course of action as this was possible, without genius in the command or high seamanship in the crews.

The only English war-vessel in the vicinity was the brig, “ Kangaroo ” of 18 guns “ —16 32-pounder carronades and 2 long 6-pounders—” hardly a formidable adversary : This vessel, coming out of Bantry Bay, sighted the expedition, and computed it at twenty sail or so. The Captain, an officer named Boyle, sent a lieutenant into Crookhaven to bring the news by land to Cork ; himself crowding all sail for England on the same errand—a sort of pocket edition of Pellew, whose work outside Brest it now falls to us to review.

HOW THE ENGLISH FLEET FAILED TO INTERCEPT.

We have seen the English dispositions for meeting a French or allied fleet coming from any one of their various war-harbours ; we have also seen

that the English vanguard commander saw and impeded the movement from Brest. How, then, did it come to pass that the English never got to grips with the expedition, either going or returning? Let us see what was the latest reliable information they possessed, and how it was added to from time to time. And first, let us consider Pellew's activities during the critical period.

A week before the sailing Pellew disposed of the following frigate division :

<i>Indefatigable</i>	44 guns, his own ship,
<i>Revolutionnaire</i>	38 guns,
<i>Amazon</i>	36 guns,
<i>Phoebe</i>	36 guns, and the armed lugger,
<i>Duke of York</i> , as an extra despatch vessel. The first	

important date was December 11th—the day on which Richery's ships got into Brest. The accession of this reinforcement—7 ships-of-the-line—was important, and Pellew sent the *Amazon* to England, and the *Phoebe* to Colpoys, with the news. On the 15th he again sent the *Phoebe*, which had returned, to Colpoys to inform him that the French were coming out from the inner harbour.

This time the frigate did not find Colpoys until the 19th. He was then in lat. 48 51 N, long 5 43 W, having 13 ships-of-the-line.

On the next day—20th—a French squadron was sighted and chased. This force took refuge in Lorient, having drawn Colpoys diametrically away from his real objective. For this squadron was none other than Villeneuve's division from Toulon—5 ships-of-the-line and 3 frigates—which had been ordered to Brest, where it was destined for the reinforcing echelon of Hoche's army. Colpoys broke touch with Villeneuve on December 23rd. Then his ships suffered somewhat in a gale and he bore away for Spithead, reaching there on December 31st with only 6 ships.

To return to Pellew. Having, as has been seen, kept close touch with the French working out on the 16th he sent the *Revolutionnaire* that afternoon to Colpoys with the further information. She never found him, owing to the accident that has just been described. Early on the 17th Pellew sent the *Duke of York* to Falmouth, and, as he could not recover the touch lost during the night, followed her himself the same day. He reached Falmouth late on the 20th.

It is not possible to discern a single flaw in Pellew's handling of the situation. His action all through is a model for the leader of a vanguard. He is always well up to observe; prompt to report—in duplicate where necessary; tireless in his persistency; boldly delaying the enemy by such means as he disposes of; finally—but only when there is absolutely nothing else to be done—going to make the detailed personal report that so often means a great deal. And from Falmouth he returned at once to his station—where we shall meet him again.

There remains to be considered Bridport and the General Reserve. It would seem that the news of Richery's arrival in Brest had decided him to reinforce the watching fleet; for when Hoche sailed he was preparing to take out 10 ships to relieve 8 of Colpoys. He learnt of Hoche's sailing on December 21st, and on Xmas Day had 14 ships ready for sea, but only 8 reached the open Channel. The wind shifted, holding up the remainder, and 8 was thought too few alone. It was January 3rd, 1797, when Bridport finally cleared St. Helen's, and even then he had no definite information where to look for the French or what to cover. He went off Ushant first and then to Bantry Bay—which he reached on the morning of January 8th. The French had by that time all departed. On January 10th his ships sighted and chased the *Fraternité* and *Revolution*. The French vessels escaped.

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ANNUAL TRAINING OF THE RESERVE OF OFFICERS, 1929.

TWO hundred and forty-one (241) Officers of the Reserve reported to the Curragh Training Camp for one month's Annual Training on 1st August, 1929. All ranks and all Branches of the Service, with the exception of the Army Air Corps, were represented. The Courses proper were opened on the 2nd August, with a formal address to the Officers in training by the General Officer Commanding, Major-General Hugh MacNeill.

WORK OF THE DEFENCE PLANS DIVISION.

In the course of his remarks on military policy, the General reminded the Officers present that some of them had served the previous year with what was known as the Defence Plans Division of the General Staff. "You know," he said, "what the mission of that Division was: to formulate a Doctrine of War and Tactical Doctrines on which the employment of our fighting forces in war and their training in peace-time would be based; to prepare plans for a Tactical or fighting organisation designed to put those doctrines into execution; to prepare further plans for a Territorial or Administrative Organisation which would enable the Tactical Organisation to be gradually built up, developed, and trained in peace-time, and to devise a scheme of systematic, progressive, military education and training for the Officers and men of the Forces.

"The Defence Plans Division has completed its tasks. The results, as possibly many of you are aware, are now under consideration at the Department of Defence. Already the proposed Doctrines of War and Tactical Doctrines, and the scheme of Tactical Organisation have been approved in detail, while the schemes of Territorial Organisation and Military Education, having been accepted in principle, are at present being examined in detail."

Major-General MacNeill then proceeded to analyse the new Doctrine of War and the Scheme of Tactical Organisation which are to form the basis of the future development, organisation, training, etc., of the Defence Forces.

THE ARMY OF THE FUTURE.

Going on to deal with the proposed scheme of Territorial Organisation, the General said: "This scheme, in brief, provides that the Army of the future shall be divided into three main echelons—each of which is divided in its turn into various components, but we need not consider these at the moment.

"The first echelon comprises the present Regular or Standing Army, which it is proposed to completely re-organise as a small, carefully selected, very highly trained instructional cadre. Never again can we refer to this force as "The Army," it will remain an important—a vitally important—component of the Army, but it will form a very small proportion of the Defence Forces as a whole, its strength probably not exceeding one-tenth of the total forces available on mobilisation.

"The second echelon would comprise units of an active Territorial

Volunteer Force. This body would be organised by complete self-contained units of all Arms, and would form the bulk of the organised fighting forces. It would be in effect our main line of resistance in case of emergency. This echelon does not yet exist in any form, and we are not concerned with it to any great extent this morning.

“ The third echelon would comprise inactive Reserve units and personnel—consisting mainly of trained specialists—required to bring the first two echelons up to war strength on mobilisation. I used the term “ inactive ” advisedly for the following reasons: The units of the Territorial Volunteer Force would receive some regular periodical training throughout the year. The training of the Reserve components on the other hand would be limited, at the most, to short annual courses of active training, combined with home study in the case of Officers. Some components of this echelon would not even receive this limited amount of training in peacetime. As I said earlier, the Reserve would consist mainly of specialists whose peacetime avocations would render further specialist training unnecessary in peace-time, or at least not essential. This would apply to Officers as well as enlisted personnel, although the Force would also have some appeal to that type of citizen, not necessary a specialist, who for one reason or another, could not afford the necessary time or energy required for service with the active Volunteer Force, but who desires to serve his country in some capacity.

“ This briefly sums up the Army of the future as we visualise it. You will see that the outstanding feature of it is that Ireland has now ceased to attempt to maintain a Standing Army as such; that the Mission of the body which replaces the Standing Army—the Permanent Force—is to concentrate almost entirely upon the training of *the* Army as a whole, the one big Army which is to include Permanent Troops, Active Volunteer or Militia Troops, and Inactive Reserve Troops, all fitting in together as part of the one big fighting machine. This, of course, is the logical outcome of the Defence Policy of the present Government as enunciated from time to time during the past few years.

“ We can, therefore, take it that the old Army, as we knew it, is dead. We are assisting at the birth of a new Army, an Army which we hope will maintain and develop all the best traditions of service and discipline, and loyalty of the old Army, but which in strength, in organisation in equipment, in training, and in general effectiveness will be vastly superior to its predecessor.

THE RESERVE OF OFFICERS AND THE NEW ARMY.

“ I would like to go on and attempt to examine the organisation of this new Army a little more closely, particularly as it is likely to affect you gentlemen. In that third main echelon I spoke of, one of the principle components would be the Reserve Officers' Corps, which is designed to replace the existing Reserve of Officers.

“ At this stage I may be permitted to remark that I should think that

many, if not the majority, of you gentlemen, with your practical experience of a military life, would probably find that the Active Volunteer Force would provide a more suitable outlet for your energies and abilities than the Reserve, and would probably transfer to that Force accordingly. However, at the moment that component does not exist, so we will confine our attention to the one that does.

“ The Reserve Officers’ Corps, on mobilisation, would have a three-fold mission, that is to say, its members would be liable to be employed in any of three different capacities. They might be called upon to :

- (i.) Fill vacancies in existing Regular or Volunteer Units.
- (ii.) Fill specialist or technical staff appointments created on mobilisation.
- (iii.) Officer newly-raised formations.

“ You can realise that any one of these missions calls for a very high standard of ability and training among its members. It is, therefore, imperative that the Reserve Officers’ Corps should be organised as a really “ live ” effective component. It is bound to develop into a most important one, forming, as it will, the only Reserve of trained Officers available in case of emergency.

“ With regard to its organisation, its members would, as far as possible, be allotted to their war-time appointments in peace-time, and trained accordingly, so that when mobilisation is ordered each officer will know where and how he fits in and be in a position to prepare himself in peace-time for his war-time employment.

“ With the object of keeping the Corps together, in touch with each other, and with the Service in general, there is a proposition on foot to superimpose upon this purely military organisation a sort of semi-social organisation. You can all realise that if you are allotted to your war-time appointments in peace-time it will be found that any group of Reserve Officers in any given centre will comprise Officers of various Arms who are posted to different units. To overcome this difficulty it is proposed that all such groups should be organised locally, and, as I said, on a semi-social basis, irrespective of Arms of the Service. This would enable you to get together regularly, to run social functions, to get some military training by means of lectures, debates, and so on, and to keep in close touch generally with the Service. This is, of course, all in furtherance of what we might call the One-Big-Army Policy. As far as the Regular Service is concerned, we must ensure that you are made to feel that you are an integral part of the Service just as much as we are. We hope that if it achieves nothing else, this first training course for Reserve Officers will lay the foundations of that policy and that spirit, the spirit of the One Army, Regular, Volunteer, and Reserve, all wearing the same uniform, all working and serving as one. It is on that spirit that the Army of the future must be built, and this is the greatest chance we will ever get to build it. If we succeed, as I feel we will succeed, that alone will ensure that this first course of training for Reserve Officers will go down to history as a memorable epoch in the history of our Army.”

DUTY WITH TROOPS.

BEING SUGGESTIONS ADDRESSED DIRECTLY TO COMMANDERS OF SMALL UNITS OF ALL ARMS AND SERVICES.

By COLONEL M. J. COSTELLO,
Administrative Officer, Curragh District.

REGIMENTAL duty, as it is called elsewhere, is the duty, above all others that prepares an Officer for the ultimate test of his professional fitness, which is battle. Without the experience that comes with the command of a platoon, company, battery or similar unit, an Officer is but ill fitted for staff employment, and can scarcely hope to be a successful Commander of large units and formations of all Arms. In the small unit one deals directly with the bricks which go to build the whole edifice of the Army. One gets one's best and perhaps one's only chance of properly appreciating the qualities of the greatest single factor in war—man.

Officers cannot value too highly or regard too seriously the honour and responsibility that is theirs when they come to command 30 or 100 of their fellow men, and become accountable morally and legally for those men's conduct and training. The Platoon Commander is the leader, the teacher, and the guide of his men, and *the guardian of their interests.*

THE LEADER.

The Commander of the Infantry Platoon* or equivalent Unit of other arms can only be a successful leader in so far as his men are satisfied of his superiority over them. He must earn their belief in his capacity, their faith in his integrity, and demonstrate his industry and justice. They will not take him for granted. They will require to know that their Officer is a student of his profession; that he knows what he is about, and that he knows best how the task of the moment may be achieved.

The essence of the matter is confidence: the leader's confidence in himself begotten of study and industry, and the men's confidence in their leader chiefly derived from a recollection of things well done by him.

The principal factors that make for success in war are the moral qualities of the troops. These are courage, energy, discipline, and determination. They find expression in a soldierly spirit—a spirit of cheerfulness and sacrifice and a high sense of duty, and in perseverance in face of difficulties. Since these are the most important factors in warfare, the first object of training, and the first duty of the Commander is the development of character.

How is this done?

To begin with, the soldier must be of good character when he is enrolled in the Service. The Officer who enlists a man without character is an enemy of the Army. A pride in his uniform, and a proper sense of self-respect must

*Wherever platoon is mentioned, the reader should note that these observations apply equally to the Commander of the Artillery Section, the Armoured Car Section, etc., etc.

be inculcated. The man must, in these matters, be taught chiefly by example. If a proper spirit of pride be present in the unit when he joins, and be apparent in his superiors, the soldier will enter into this spirit too. If he be treated as an intelligent human being, if he be made to think for himself, if he be convinced that he is learning something every month he is in the Army, and above all, if his conditions of life, his billet, mess recreation, etc., be good, he will rapidly develop self respect. Men must live decently or they will lose what self respect they have. Morality and temperance are of the greatest importance in strengthening character. Religion is the framework of character, and a powerful factor in the development of discipline and morale.

Develop the soldier's intelligence by every available means. Interest him in education for its own sake. As a contributor to this journal said in the last issue: "Keep his brains from rusting."

Teach him to avoid bad habits, to abhor dirt and untidiness, and correct him when he begins to go wrong.

Interest and amuse him during his leisure hours. Know what he does with his spare time and what his interests are. See that he never lacks some means of employing his "off duty" hours pleasantly or usefully.

Know him well, where he comes from, what motive he had for enlistment. Learn about his friends and relatives. See that he plays the game with his pals and his dependents, if any.

Help him at his games. Develop the sporting spirit. Make every man of the Unit play some game, and, if possible, one that demands team work.

Look after the fellow who is a butt of fun for his comrades. Give him self-confidence and self-respect. Give him some job to do that he will take pride in, and it will probably cure the trouble.

The man who is undisciplined needs special attention also. Few are so bad that they cannot be improved if one goes to the trouble of understanding them properly. There is probably one way or another of impressing him.

Make the comfort of your men a duty that comes before the search for comfort for yourself. See them eat. Do all you can to have their meals well cooked, well served, and eaten under the most pleasant conditions possible. It will surprise you how little inexpensive details such as curtains, decent salt cellars, flowers (they are easily gathered near some stations), and such like things improve the self-respect and spirit of the men. Visit their rooms frequently: don't leave it to the Orderly Officer. Visit your own men also when they are on guard or picquet duty.

When you are on duty with them, don't wear a greatcoat if they can't. Don't smoke if they can't do likewise.

See that men go sick when they should, and look out also for those who will go sick more often.

Encourage your singers and musicians. In the absence of a band they help greatly to keep up the spirit of the unit.

Discipline is a sense of duty that overcomes panic, fear and stampede. It is a habit. It is a matter of leadership and instruction, not a matter of impression alone. Drill and marches *properly* carried out are great means of inculcating discipline. Ten minutes of really smart drill, during which all men are "on their toes," and during which all errors are corrected, is better than hours of slovenly work. Drill during which no errors are corrected means either perfect drill or very bad instruction. "Snappy" marching to and from pay and bath parades, and in all other movements about barracks, should be insisted upon. It is good for discipline and for the men's self-respect.

THE TEACHER.

The small Unit Commander has the task of training his command to fight successfully. He must give his N.C.O.'s and Men all the knowledge of war that they are likely to require, and let them know the use of that knowledge. Every N.C.O. and Officer is before all else a teacher. The greater part of the service of most of us will be spent in acquiring knowledge and passing it on to others. The Squad Commander teaches the individuals of his squad most of the things they want to know. The Officer teaches the Squad Commander; helps him out in the instruction of backward men; sees that he gives instruction in a proper fashion, and finally teaches the whole personnel of his command those things which can best be taught to the platoon or gun section or troop as a whole, or which can be more profitably taught by an Officer than by an N.C.O.

In the training of the platoon it should never be necessary to have any instructor brought in from outside it. The Commander should be able to instruct in every weapon and be skilled in the duties of each so-called specialist. The practice of having N.C.O.'s or men of a Platoon taught the use of the Automatic Arm or any other subject by an Officer from another Platoon is bad.

Since so much of his time will be devoted to instruction, the Officer must constantly endeavour to improve himself as a teacher. Some will be better teachers than others, but all can teach and all can improve vastly by application, study and practice.

The good instructor will pay attention to each of the following points. He will give more than lip service to them. They are commonplaces of instructional method but they are frequently honoured by a casual consideration instead of being digested, reflected upon, and fulfilled by constant, earnest effort.

(1) The teacher must have a thorough knowledge of what he wants to teach. He must know much more about each subject than he will have to impart to others. He will get this knowledge on courses of instruction, by private study, and from the instructions of his superior Officers. It is important to remember about private study that it is most profitable when done systematically. Find out from a superior Officer what to study and how and in what order. Much time and energy is wasted in reading worth-

less military books or ones of little value and less application to the needs of the student.

(2) Knowing thoroughly the general subject in which instruction is to be given, decide on the particular point or points which you want to teach. This will usually be given you in weekly programmes of training. Anyway, be clear as to what is to be taught, and stick to the subject. If you try to teach two things at once you will ordinarily confuse your pupils, if not yourself also.

(3) Next decide the sequence which you will follow in treating of the different parts of your subject. Stick to this sequence also.

(4) Bring out each point by appealing to the intelligence of your pupils. Suggest things to them. Let them find out for themselves, so to speak, from the reasoning you follow. Let them know why such a thing is done in such a way or why it is necessary to do it at all. Encourage them to ask questions, and get them to answer properly questions put to them.

(5) Be patient and forbearing. Keep your temper. Don't humiliate a man if he makes a foolish answer. Don't come to the conclusion that the men are stupid if they don't follow what you say. It is equally likely that it is your own stupidity in not presenting the subject to them in the proper way, which is at fault.

(6) Demonstrate correctly what you want to teach. Demonstration is the greatest and surest means you have at your disposal for teaching anything from the cleaning of a rifle to the attack of a house.

(7) Be clear and concise. Practical, sensible instruction alone has a chance of being fruitful. Any "high falutin," long-involved sentences, words not in current usage among the men, and unnecessary statements or figures are a burden to your pupils and a clog on the progress of your principal theme.

(8) Stimulate interest by competition. Do everything you can to make learning pleasant, not forgetting the detail of making men as comfortable as circumstances allow, during lectures and other indoor periods of instruction.

(9) Be careful to detect faults quickly and certainly, and to apply a remedy. Never let a bad habit develop longer than the time it comes under notice. Never say a thing is wrong without saying why and showing what is right.

(10) You are always on duty. It is seldom inappropriate to teach your men something. In odd moments opportunities will arise for talking to them about some little point or other, or showing them something of interest and value. Personal contact, advice, and assistance at all times and in all places will bring its reward.

(11) Give a short summary of the instruction given at the end of each instructional period. Review what has been done or said, and impress the important points on your pupils by slow, deliberate, clear enunciation.

(12) *Example is better than precept.*

(13) *Be just.*

A DISCUSSION ON CAVALRY.

By CAPTAIN D. J. LAWLOR, Quartermaster-General's Branch.

(Concluded).

One of the most effective ways in which cavalry can participate in battle is to exploit a break in the enemy lines. General Allenby proved this in Palestine when the action of his cavalry was the chief factor in destroying the Turkish Army. Had General Ludendorf had a cavalry corps at his disposal when the British and French Armies were separated in March, 1918, his break through might have resulted in a decisive victory.

The charge is by no means the only form of mounted attack. The Boers taught Britain this lesson in the South African War, and would probably have done the same to any other nation, except possibly the United States, who in the Civil War recognised the rifle as the premier cavalry weapon. The mounted advance to within effective and telling range, where dismounted fighting commences, must now be trained for by all cavalry worthy of the name. General Allenby has stated that whenever cavalry can expect to succeed in dismounted attack, they can do so with less loss mounted. This is true of probably most cases, but not of all. The ground may not permit of charging home, but it may still be essential to push forward and attack the enemy at close quarters. Cavalry can cover a distance more quickly than foot troops, and when supported by fire their losses will be smaller than infantry who can only move slowly unless the distance is short. In October, 1901, at Bakenlaagte, General Botha defeated a British column 1,600 strong with six guns. He attacked mounted, and after capturing some infantry, the mounted charge stopped below Gun Hill, where the guns were placed, after a struggle they were captured.

Many instances of such tactics could be quoted from this war. I do not intend to infer that cavalry should take the place of infantry in the assault, such is not their role, but there have occurred numerous instances to prove that in battle the use of cavalry in assault at the right place and the right moment will decide the issue. The attack will be quicker and the surprise more complete. In all cases it should be followed by the advance of infantry.

It has been a feature of post war changes that practically every army has re-organised its cavalry. Even those nations not engaged, such as Spain, have done so. The United States has definitely allotted to each cavalry division an Air Corps Observation Squadron, a Tank Unit, and Armoured Car Unit, thereby recognising that each of these new services assist cavalry and enlarge its sphere of action, but do not replace it. The other nations have made similar changes.

Tanks cannot be regarded as suitable for reconnaissance work, their principle function is in battle or acting with independent cavalry in crushing obstacles that cavalry alone might take some time to negotiate. They will

form a ready means of providing that fire support which is necessary to all mounted action. In a break through, or the pursuit, they will relieve cavalry from being intermittently held up, and in a withdrawal they can take a large share in stopping the enemy's advance and causing his deployment, but it is doubtful if any type has yet been produced capable of taking part in raids unless very near its base. These considerations must convince us that the tank, while being a decided asset, instead of replacing cavalry, as some assert, cannot even be relied on to assist cavalry in all of its functions.

Armoured cars, while they remain tied to roads, do not seriously challenge the cavalry position. The Rolls Royce has a radius of approximately 125 miles, and where roads are available it has great reconnaissance powers. Normally all cavalry on this duty should be accompanied by them. Where the armoured car itself cannot obtain information it can generally by its quick long distance work direct the mounted troops in the right direction to obtain it, saving both considerable time and exhaustion to the horses. It will often be able to form a valuable fire support, and as a patrolling flank guard will fire ample warning of any pending enemy manoeuvres. It is, of course, a vehicle, of limited sphere of action, but its great speed (60 miles an hour) in necessity, and its invulnerability, offset many of its drawbacks. In this country it should be effective with cavalry. Both would offer each other protection.

The co-operation between aircraft and cavalry has distinct advantages in practically all spheres of mounted action when it can be obtained. In the first place unless the two arms are trained together and have learnt to know each other's possibilities, the results can only be faulty. In reconnaissance, aircraft, while now nearly always employed for long distance work, can only at times give negative information, but when only this is possible, they can direct the operations of cavalry. Negative information cannot be relied on especially in tactical situations when concealment must always be suspected. Aircraft can considerably lower the enemy's resistance to mounted attack, but the chief difficulty that arises is co-operation. Aircraft cannot stay indefinitely in the air, especially the lighter types, and mounted attacks cannot generally be timed to take place at scheduled hours as infantry attacks can be. It is in order to overcome this difficulty that aircraft are now allotted to cavalry commanders.

Our cavalry should be as heavily armed as possible, but we must not forget that a heavy armament affects mobility. Modern cavalry ride at about 18 stone, the old heavy type rode as high as 22 stone. The Boers, who gained innumerable advantages from their mobility, often rode as light as 14 stone. Our aim must be to make the trooper's armament adequate. We must provide the means of offensive and defensive action for all likely situations, but since a man can only use one weapon at a time we must not add to his load for variety's sake. Cavalry, unlike other arms, has to engage in two different types of combat—mounted and dismounted.

In the past, as we have seen, mounted combat meant cold steel. In defining the characteristics of cavalry, the British Field Service Regulations state "armed with lance or sword it can attack mounted while its armament of machine-guns, Hotchkiss rifles, and rifles enables it to act dismounted, thus it can combine fire with mounted action." The inference to be drawn is that mounted attack is to be made with the lance or sword. We have seen that the Americans are not dependent on these weapons alone for attack, and certainly the Boers were not in South Africa. They often charged, dismounted, and advanced to close quarters, rein over arm, firing as they went, with success.

The lance and sword are shock weapons. The former is undoubtedly the more effective, but what of its other characteristics. It is a positive impediment to dismounted action, as it adds greatly to the difficulty of led horses being moved forward when the men advance. As many cavalry actions will be dismounted, this is a serious consideration for us. It can only be used in the charge in close formation. Personally I fail to see that this will be a feature of any wars that we are likely to be engaged in. Elsewhere it is awkward, it is no use dismounted, it adds considerably to the height of a mounted man and makes concealment more difficult. Can we afford the loss of valuable time that would have to be devoted to attaining proficiency in the use of this weapon. The enlisted man's period of service is short, long and arduous training is necessary for skill at arms with the lance, and this time can only be given at the expense of his training in other essentials. The lance is at best an extremely limited weapon. In South Africa the British had to discard it. Why? For no other reason than that they could not make effective use of it, and because it proved a hindrance to the other fighting powers of their cavalry. This step had to be taken under penalty of reducing the mobility and effectiveness of their mounted troops, and it was only taken with great reluctance, and it was against the accepted cavalry doctrines of that day. It was fire power that forced this change. The British abolished the lance except for ceremonials in 1903—it was re-introduced without apparently any experience to justify the change. I have read that a two-part lance has been projected, the upper portion of which could be used as a bayonet, but this does not seem to be of any advantage; it still presumes training in the lance and adding to the horsemen's load to no purpose. Every ounce is of importance. I can only see disadvantages to be gained from the retention of this 2 yards range weapon, and consequently I presume to dispute with Gen. Von Seeckt that cavalry will ever flutter their lance pennons in the breeze, that is, flutter them successfully. General Baron Von Rothberg, a German who bases his opinion on war experience, considers that the lance is obsolete and that the weapons of modern cavalry are the rifle, machine rifle, and machine-gun. Though the sabre has not some of the disadvantages attached to the lance it is a shock weapon, and it is primarily intended for use in such tactics. It does not add to the visibility of a horseman as the lance does, but it does make very extensive

demands on his training. It is limited to close quarters work and to the charge; it can be used on foot, but is certainly not a superior weapon to the bayonet.

Not to arm our cavalryman with a bayonet would place him at a decided disadvantage in dismounted action. As I shall argue later, the bayonet must be retained. Must our horsemen then carry two cold steel weapons? The sabre is a considerable weight, and even though carried on the horse, lessens his mobility and his staying powers. As our periods of service stand at present it is impossible for a trooper to reach the highest mark in efficiency in the use of both the sabre and the rifle, the interests of one must be sacrificed to the other with the probable result of a low standard of efficiency in each. Proficiency in the rifle is essential, why then equip the cavalryman with a sabre, an arm which he may never and certainly would rarely require? Even in cases where it might be used will not the pistol and rifle prove as effective.

If shock action is to be used (which I doubt), would not highly trained troops be capable of employing saddle-fire with rifles at the longer ranges with very demoralizing effect against any opposing cavalry using shock tactics against them, or which it was desired to attack, and at the closer ranges could not the revolver be used with at least as good effect as the sabre, and the charge still retain its impetus. To my mind the weight of experience and the evidence of history are against the retention of cold steel for cavalry, but if tradition must have its way then the introduction of a sword-bayonet seems the only reasonable compromise. It should be possible to design such a weapon that would be sufficiently long to enable it to be used mounted, while at the same time, it could be fixed to the rifle for its normal use. A thrusting sword is generally acknowledged as superior to a slashing sabre for horsemen.

As regards the rifle, it may be thought that my references to saddle-fire are a bit impracticable, and that for the most part such fire must be unaimed, and therefore valueless. Admittedly it can never be very accurate, but with trained troopers it can be reasonably well aimed and could certainly tend to lessen the fire of the enemy, which would in its turn reduce the horsemen's own vulnerability. For shock tactics would not the sight of a body of horsemen firing as they rode be at least as demoralising as horsemen with drawn steel, whose effectiveness could not be felt till the moment of impact? The necessity of arming cavalry with the rifle is so manifest that I will not discuss it. What other arms would our cavalry require? The bayonet comes next. Cavalry must be capable of meeting and defeating infantry in dismounted action.

The probability is that cavalry in forward action will more frequently have to deal with infantry than any other arm; that they are capable of rapid advance to deny key positions to infantry is one of their greater assets. This involves the taking or holding of positions, and the former can often only be done with the bayonet. Without the bayonet they would lack

the power to close in the final assault with infantry, and their mobility might often go to waste. The bayonet then and the rifle are essentials. What next? Grenades must be carried, cavalry will often be required to attack isolated posts such as buildings and earthworks which may be strongly held and the means to drive the enemy into the open must be available. The arms which have been allotted are so far principally for dismounted action. In my opinion, for mounted action the rifle and pistol will be found adequate. If necessary or if desired, the latter may be used for shock purposes. It does entail the carrying of its own ammunition, but a large quantity need not be carried, a small supply will be sufficient. It is a hardier weapon than either the lance or sabre, and has a longer range, it is more quickly faced to an opponent and may be used with considerable effect on foot and at night. Its bullets have great stopping power, and with trigger action may be fired rapidly. Its weight is well under 3 lbs. With this armament—a rifle, bayonet, pistol and grenades, I think the cavalryman's equipment is adequate and complete; if any additions are to be made to the weight carried a large quantity of S.A.A. will be better than any cold steel. Colonel O'Connell makes use of the expression "to dismount and fight properly." For small cavalry units dismounted fighting will certainly be more frequent than mounted, and our horsemen must be experts at this.

It is the horse's speed and endurance that enables cavalry to fight and hold ground in places in which time will not permit other forces to engage. This armament will enable them to carry out their work.

Before considering their automatic armament, the carrying question must be discussed. Where should the rifle be carried? The Boers carried theirs in their hands or slung. After and before the South African War, Lord Roberts strongly recommended the British to have the rifle carried on the man. When he had power he enforced this order. Both sides carried it slung in the Russo-Japanese War. Undoubtedly the rifle and man should be inseparable. When the rifle is carried on the horse this may not always be so. A man becoming unhorsed will find himself defenceless and without a friend to aid him. The modern soldier's friend is his rifle, first and last. Again, in combat a horse may be shot and the rifle become pinned beneath the horse. The rifle can be slung on the man without undue fatigue and, this being so, is it not the safest place to carry it? The bayonet which must be regarded as part of the rifle, must also be with it on the man. Having provided the trooper with his principal arms on his person, the remainder, I think, might be safely carried on the horse. The revolver and its ammunition certainly since they are principally for mounted action. Grenades, of course, will only be used in dismounted action, but there seems to be no valid reason why they should not be carried on the horse, especially as of the two he is the better able to carry the extra weight. As regards ammunition, 50 rounds at least should be carried on the man, but since man and horse should never be separated any great distance, the remainder might normally be carried on the horse.

The automatic armament of cavalry is a problem that is not as easy to solve as the armament of the individual trooper; in the latter case it only has to be decided whether or not he is to be armed with cold steel for shock purposes. The Americans have a cavalry troop consisting of 3 rifle platoons and 1 machine rifle platoon (6 machine rifles), while heavier armament is provided by attaching to each cavalry brigade a machine-gun squadron (18 guns). The Machine Rifle Squad is all mounted, and consists of 1 corporal, 7 men, 8 riding horses, and 2 pack horses, thus no wagons are required, and the unit can move anywhere horses can obtain a footing. The heavy Madsden gun has already been suggested and can be carried in this manner. This is the type of automatic armament most suited to our needs. Our squadrons must be equipped with some such gun. The Americans use the Browning Light Automatic. The merits, however, of these weapons involve a discussion too lengthy to enter into here, but any gun selected must be capable of being carried on a pack horse. The pace of any Unit is limited to that of its slowest moving component, and the greatest assets of cavalry are lost if it is to be more or less tied to roads and have the pack reduced below that of the ridden or led horse. Provided it can be pack carried, the heavier the gun the better.

So for similar reasons all the armament of a cavalry machine-gun squadron would be pack carried. The Americans have studied this matter and produced a suitable pack saddle capable of carrying machine guns. The British carry their guns in lorries. All possible fire support will be needed in every cavalry engagement, and only by using pack saddles can our guns follow cavalry anywhere and come into action in a few seconds. The Spanish have re-organised their cavalry in the light of their recent experiences, and now carry all machine-guns on pack horses.

In connection with automatic armament, two more matters must be considered. The relative number of guns to be carried, and whether as in the United States a troop should consist of 3 rifle and 1 machine rifle platoons or each platoon should carry its own automatic arms. Perhaps the latter case is better taken first. The Americans, and incidentally the British, visualise the breaking up of the automatic armed units among the remainder of the troop or British squadron when cavalry are acting in small bodies. In the future mounted troops will undoubtedly act in small groups very frequently. Such action is more likely to be the general rule than the exception. Now on general principles the breaking up of any combat unit is to be avoided if possible. The cavalry platoon is the smallest tactical unit, should it not as far as possible be self-contained? Men and horses who work together daily in peace under the same commanders will do so better in war than those who are assembled for an occasion. For these reasons I consider that our cavalry platoon should either contain a machine-gun squad or, if the armament is to be heavier, each squad should be allowed a light automatic; I have presumed that a squad would carry two guns at most. Either of these organisations is, I think, preferable to the American

type, especially if we visualise the employment of mounted troops in small groups.

The question of the relative number of automatic arms to be allotted to mounted troops is one which I approach with a certain diffidence. At the outset it must be borne in mind that approximately a fourth of the strength of any unit must be detailed as horse-holders in dismounted action. Again the number of riflemen cannot with safety be reduced below a certain minimum, a number must always be allowed for protection of the guns and to replace casualties in the gun crews. Further grenadiers will be required, and if, as suggested, each squad is to be armed, I think the maximum armament would be one gun to a squad of eight. However, I do not propose to suggest the details of a cavalry organisation at the moment, the main thing for us to realise is its necessity.

It has been said that troops who cannot make entrenchments will never take them. There is a certain amount of truth in this, and it entails on the trooper the carrying of an entrenching tool. This would probably be carried on the horse. It means adding considerably to our already heavy load, but it is an essential of dismounted fighting, natural cover cannot always be found even in close terrain. It must always be borne in mind when considering the carrying of weights that troops may suffer to a greater degree from lack of an article than by the loss of energy entailed by carrying it.

It may be thought that the type of mounted troops I have outlined are not cavalry but heavy mounted infantry. That modern requirements demand radical changes from the old type of cavalry does not alter the fact that the troops still remain cavalry. Mounted infantry are improvised troops, they will still remain valuable auxiliaries of cavalry, but the latter's specialist training and equipment will permit them to undertake with confidence and success enterprises and independent work which mounted infantry would not be called on to carry out, except in emergencies. This brings us to the question of training. The first thing that must be demanded of horsemen is horsemanship. At the time of the Boer War the British Cavalry was at least of the first rank, yet we find the German official historian of that war attributing the very heavy wastage in horses to bad horse management and indifferent march discipline. Had the British been the critics the report might have been the same, but the lesson must not be lost to us. This essential quality will not be acquired in short periods of training, nor will it be obtained on the barrack square alone. It entails long training with plenty of practice over all types of terrain.

The infantry soldier must master the rifle, the bayonet, the grenade, and the automatic arm. To these for the cavalryman is added the pistol, which he must be able to use mounted. In each of these he must be proficient, so his task is not light. Often a cavalryman's duties will be in reconnaissance work when mist, fog or climatic conditions have prevented aeroplanes from obtaining information or even from leaving the ground,

cavalry can always go forward, and if necessary obtain by force the invaluable news. If our troopers are to supply our demands in this sphere, a high standard of observation and scouting must be attained. It will be necessary for them to develop a field sense and only constant practice and attention can do this. Cavalry Commanders, more than others, must learn to act on their own initiative and seize opportunities which will only occur momentarily and not be repeated. This necessitates the spirit of dash and enterprise which is the true criterion of a cavalry Officer.

Prior to the European War, when Germany maintained the greatest military machine Europe has seen, their cavalry received three years' training against two given to infantry. Our cavalry must be able to defeat any infantry at their own tactics, and this entails extensive dismounted training. It would be unwise to expect them to reach this standard, while at the same time demanding that they be trained efficiently in all the arts of mounted war, unless we give them the necessary time to do it in, for these reasons cavalry should be enlisted for a longer period with the Colours than infantry. The minimum, I think, would be three years. If it is agreed that a fixed period is necessary for a man to allow proficiency in any subject, is it not unreasonable to expect another man to attain the same standard in two subjects in the same time? Results will give us the most reliable data to work on, but unfortunately at present we have none of our own to refer to. General Von Seekt holds that cavalry should receive more training than the other Arms.

In order to be enabled to undertake all the missions that might be assigned to cavalry in this country, it would be necessary that their training should be hand in glove with that of our other corps. For instance, it is highly probable when it would be necessary to send completely horsed detachments of the A.C.E. and A.S.C. on advanced duty with cavalry, and unless provision was made for this work in peace, it would be impossible in war. Small detachments of cavalry may be required to hold road junctions, mountain passes, bridges, and other vital points. This can often be done effectively by chemical means, special troops and apparatus are necessary for this purpose, and arrangements must be made to have such a unit horsed in peace and trained to act with cavalry if its use is foreseen for war.

The carrying out of manoeuvres with only peace-time establishments of our dimensions will always present difficulties, but none the less they are vitally necessary to the progress of the Army. They can be best carried out when the majority of reserve troops are in training. Though they cannot be carried out on the scale one would wish, they can still teach invaluable lessons and give the only experience of concerted action obtainable in peace. On account of this fact that no mounted troops were engaged on either side in the last manoeuvres the results cannot be of any general value. Whether or not cavalry form a part of our army there is no doubt that any possible enemy will be supplied with them, and consequently field exercises or manoeuvres without their employment can only give our commanders both

senior and junior, a false perspective of what real war conditions would be. No commander or infantry officer can appreciate the value of cavalry or form an estimate of its functions and particular duties without experience in the field. Every infantry commander should obtain experience in handling attached cavalry. It is recorded that in the British Manoeuvres of 1925 lateral communication was practically non-existent, and some authorities considered this largely due to the fact that the cavalry usually allotted to the infantry formation was not available.

Cavalry is not the arm which in the end wins battles, but its aid is very necessary to assist infantry and the other arms to attain that object. The co-operation which is so vital between it and the other units of an army must be demonstrated to be appreciated and to enable the other arms to benefit by the work of mounted troops, but if they are to be carried into effect it can only be done in conjunction with the other arms of the service. Commanders will have experience of independent cavalry action, and the cavalry themselves will learn what is expected of them and how to do it. A lot of these remarks will, of course, apply to the army in general, but I particularly wish to bring home the importance of manoeuvres in the training of cavalry. As things are at present the army is totally lacking in cavalry experience, and would undoubtedly find itself hopelessly at sea in the employment of this arm. It is only by experience that we learn both the benefits and difficulties of co-operation.

The size of our army would not permit of a greater establishment than one regular regiment of cavalry, but this would also be the minimum, any less would not permit of it being of permanent benefit. It should consist of at least three squadrons, or troops, as the Americans term them. Two rifle squadrons and one machine-gun squadron would be necessary. I do not intend here to discuss the establishment of a squadron, as it would mean unduly lengthening this article. The rifle squadrons would be armed with rifles and machine rifles and such other arms as decided on, the machine-gun squadron with a heavy gun, with anti-tank guns and possibly with anti-aircraft guns. A formation on some such lines as outlined would permit of all the duties of mounted corps being taught and learned not only by cavalry officers but by officers of all arms of the service.

It may be argued that the cost of maintaining a cavalry regiment would be too great a burden for the already depleted Army Vote. The cost of being without cavalry would be much heavier in time of need. Only a skeleton army can be maintained, but surely it should include all arms of war. One regiment will meet our peace-time needs and give all ranks knowledge of its uses and experience in co-operation. We might all have a perfect book knowledge of the functions of cavalry, but how futile this would be if in battle an enemy employed them against us.

When we come to consider the actual cost of this proposal we realise that it is comparatively small. As it is unlikely that the establishment of a cavalry would mean an increase in the total number of enlisted men, its

personnel would probably be found at the expense of the army as a whole, consequently no appreciable expenditure would be incurred under this head. Again, the barracks in which it would be stationed, presumably Dublin or the Curragh, are maintained at present. Again, no large expenditure should be necessary. Assuming that a regiment 400 strong was decided on, approximately 450 horses would be required at £40 each, this would amount to £18,000. Replacements would be necessary. The Japanese replace one-eighth of their horses yearly. I doubt if it would be necessary for us to replace as many, but even if it were, the cost would not be more than £2,250. Foraging of the horses would be a major recurrent item of expense, at 1s. 9d. the approximate present cost per horse per day, it would be £12,775 a year. A certain initial expense would be necessary for equipment and warlike stores, but only a small fraction would be required for maintenance. The upkeep of saddlery and accoutrements would not be heavy, and as this type of article has a long life, replacements would be infrequent. All these estimates are, of course, only rough approximations, but they are sufficient to show that we cannot excuse our shortcomings in this respect by the plea of shortage of funds. Undoubtedly many normal requirements have to be curtailed on this account, but when the need is sufficiently urgent and important, as surely the need is, the funds will be available. After all the percentage of the vote that would be required is comparatively small for the establishment and maintenance of a basic arm.

The size of the standing army being what it is, it will take a considerable time to build up a reserve which will at all times be small. The Class "A" Reserves will all have received a first-class training, and form our reserve trained cavalry. It will, however, be necessary to supplement this force and it cannot be done by recruiting reserves on the Class "B" system. A man unused to horses cannot be made a competent rider in three months with an annual refresher of four weeks. Apart from the "A" Reserves, the best way of building up additional cavalry reserves would be by a system of yeomanry. To be a success a scheme would have to be evolved of local formations throughout the country, and annual summer camps organised. Such a scheme would have to be popularised with the farming community. Army funds might not be able to afford to mount this yeomanry, and each man would have to provide his own horse. This should not interfere with farm work if the training was carried out in the slack months, and would have decided advantages in providing a reserve of semi-trained horses. An inducement to farmers to enlist in support of the scheme might be offered by only buying army horses from members of this reserve. It should also be possible to pay a small yearly fee for the use of the horse while in training. It will only be by schemes similar to this that we could lay the foundations of an adequate reserve mounted force, but it must be remembered that it would be impossible to raise such a force unless there were already cavalry formations within the Army to which they could turn for training and inspiration and from which they could be supplied with instructors. It

goes without saying that this yeomanry could not be raised overnight, in fact it could only be raised when the regular cavalry had been strongly established, and it had become capable of mothering its auxiliary militia.

The functions of cavalry have been discussed, and the armament considered necessary recommended. In Ireland small units of cavalry would be best suited to our needs, their functions would include all the functions that can be allotted to mounted troops though at times on a minor scale. In particular they would form the mobile go-any-where weapon of surprise which at present is lacking in our army and which could be most effective in any warfare likely to occur in this country. Both in horses and men we have the best material, in these respects we are second to none—but why sell to others what we ought to use ourselves.

The Army can be likened to a highly complicated mechanical device, which as a result of its different components working in unison produces the effect required by its owner. If any component break, or is missing, the machine becomes useless till the part is replaced. The Nation is in the same relation to the Army as the owner is to the machine. At the present the Army has not all the necessary components to make it an effective machine of defence for the Nation. This is a serious consideration for all citizens, but particularly for us since the responsibilities for defence is placed on our profession. Cavalry is the missing cog in our machine.



“TANK AND ARMOURED CAR COMBINED.”

Under this sub-title the United States Infantry Journal and Coast Artillery Journal both publish an article by Major C. C. Benson, Cavalry, descriptive of a new vehicle constructed by the veteran inventor of cross-country military machines—Walter Christie. The writer's claims for this latest machine are astounding. Its reported performance is far in advance of any similar vehicle heretofore developed. Its versatility is evident from the claim that a standard chassis can be used for practically all military combat vehicles.

It is of the alternate wheel or track type. On wheels it can move at over 69 miles per hour by road. With track in use it travelled 42½ miles per hour. Further details of performance, design and capacity are given, of which the following will indicate the revolutionary nature of the claims made on its behalf:—

Power—338 h.p., Liberty engine.

Weight—17,200 pounds.

Average cruising speed across country—20 mp.h.

It can cross a seven-foot trench.

It can climb a forty-five degree slope.

It can surmount a three-foot vertical wall.

It can crush barbed wire entanglements.

It has successfully gone through mud and water to a depth of four feet.

It has the fighting compartment in front, giving unusual vision to driver and gunners.

A new type of running gear reduces the unsprung weight to a minimum, and largely eliminates shock and vibration.

It is claimed for it that it possesses to a remarkable degree—

Endurance,

Long life,

Extreme flexibility,

Ease of control,

Easy steering.

M. J. C.

CUMANN COSANTA NAISIUNTA.

FIRST STEPS TO ESTABLISH AN OFFICERS' ASSOCIATION.

THE General Meeting announced in our last issue was held at McKee Barracks on 28th ultimo, and a representative gathering of officers of the Forces enthusiastically endorsed the recommendation to establish the new Association and passed with minor alterations the Draft of the Constitution submitted by the Committee appointed at the meeting held in March last.

The Chairman of the Committee, Major-General MacNeill, was elected to preside, and Captain E. Rooney was appointed Secretary to the Meeting.

The Committee submitted the following resolution:—

“That this General Meeting of the Officers of the Forces approves of the formation of the proposed Officers' Association; that it adopts the report of the Committee of Officers elected to study this question; and that it hereby constitutes itself the First Annual General Meeting of Cumann Cosanta Naisiunta.”

The resolution was formally proposed and seconded by Major Archer and Lieut.-General MacEoin, respectively.

Major-General Brennan, supporting, stated if criticism could be made it would be only on the ground that the matter had been delayed too long by the Officers of the Forces. In his opinion the Organisation should have been launched a couple of years earlier.

Colonel Costello moved to delete all words after “question,” and the insertion of “and” after the word “Association.” He did not think the Meeting could by resolution constitute itself the General Meeting of the Association. The Association would have to be created by enrolling members before a general meeting could be held. He suggested that a Provisional Committee should be set up that night to which would be entrusted the work of launching the new Association.

Major-General Brennan seconded the amendment, which was carried by a majority of the Meeting, and the resolution as amended was passed.

THE DRAFT CONSTITUTION.

The Meeting proceeded to the discussion of the Draft Constitution as published in the last issue of this Journal.

Colonel O'Connell suggested that it would expedite business if the Constitution was taken *en bloc* instead of item by item.

On the motion of Lieut.-General MacEoin, seconded by Major McKenna, a proposal was passed that each item should be considered separately.

The Meeting then proceeded to a detailed discussion of the Draft, and this resulted in only minor alterations, the original having been regarded as substantially acceptable. The revised Constitution is published in this issue for the information of readers.

“AN T-OGLACH.”

Lieut.-General MacEoin proposed that the Draft Memorandum on the

organisation, administration and form of "An t-Oglach" should be accepted. Major McKinney seconded, and the resolution was unanimously passed.

LAUNCHING THE ASSOCIATION.

The Chairman said that the next business was the procedure to be adopted in launching the Association. Colonel O'Higgins proposed that the Committee who had drafted the Constitution should be entrusted with the work. Major-General Brennan seconded.

Colonel Fitzpatrick proposed that a new Committee should be elected consisting of sixteen members. Colonel O'Connor seconded. This proposal was accepted and the Meeting proceeded to elect a Committee, which was as follows:—

Lieut.-General MacEoin.
Colonel Costello.
Colonel Fitzpatrick.
Major-Gen. MacNeill.
Major Archer.
Commdt. Smith.
Commdt. Egan.
Colonel Guilfoyle.

Major Cotter.
Colonel Shiels.
Colonel Morcan.
Captain Rooney.
Major McGrath.
Commdt. Bryan.
Colonel Hayes.
Colonel Cronin.

CONTROL OF "AN T-OGLACH."

It was decided to entrust the new Committee with the control and management of "An t-Oglach."

The Meeting concluded with a vote of thanks to the Chairman and the out-going Committee.

CONSTITUTION.

NAME.

The Organisation shall be known as "Cumann Cosanta Naisiunta" (The National Defence Association).

OBJECTS.

The objects of the Association shall be:—

- (1) To develop the highest standards and traditions of service amongst the personnel of the Defence Forces.
- (2) To cultivate a national appreciation of the problem of Defence.
- (3) To do all in its power to promote the welfare and comfort of Active and Associate Members and their families, and to improve their social and material positions.

MEANS.

The Association shall endeavour to attain its objects by the following means:—

- (1) The fostering of esprit-de-corps and the promotion of a spirit of efficiency and corporate pride.
- (2) The dissemination of professional knowledge and the exchange of ideas as to the application of such knowledge to the particular role of the Defence Forces in war.
- (3) The advocacy of the full exploitation of the resources of the nation and preparation for true economy in their use in war time.
- (4) The examination and discussion of all matters affecting the problem of National Defence and the interests of serving personnel.
- (5) The conduct, in co-operation with other agencies, official or otherwise, of research into the activities of Irish Armies and Soldiers at home and abroad; the lives of Irish Soldiers of all times, and the influence of Ireland in the world's history.
- (6) The creation and management of Guilds, Benevolent Funds, etc., for the benefit of members, their wives and families.
- (7) The publication of AN T-OGLACH as the official organ of the Association.
- (8) The initiation of and participation in such other matters as are lawful in accordance with the interests of the Service and incidental or conducive to the attainment of the objects of the Association or any of them.

MEMBERSHIP.

- (9) Membership of the Association shall be open to all Officers of the Defence Forces, Regular or Reserve; to all former Officers of Oglagh na h-Eireann of honourable record, and to such other persons as are provided for hereunder:—
- (10) There shall be three classes of members as follows:—
 - Active Members,
 - Associate Members,
 - Honorary Members.
- (11) Serving Commissioned Officers of the Defence Forces *including Officers on the Reserve*, shall be eligible for Active Membership. Such Members shall be eligible for automatic election on application to the Executive Committee acting for the Council. Active Members shall be entitled to participate in all activities, benefits, etc., of the Association, and shall have the right to vote at all general and other meetings, and be eligible for election to any office in the Association.
- (12) Former Officers of Oglagh na h-Eireann shall be eligible for Associate Membership. All candidates for such election shall be proposed and seconded by two Active Members, and shall be elected by a two-thirds vote of the Council. Associate Members shall not be eligible to vote at any General Meetings or at a poll of the Association, but shall otherwise be entitled to all the advantages and benefits of Membership and shall be eligible for elec-

tion to any office in the Association. An Associate Member elected to any office in the Association shall have all the rights of an Active Member.

- (13) Persons other than serving or resigned Officers who have displayed exceptional interest or activity in matters of National Defence or any Branch of historical or military study or research, may be elected Honorary Members. Such Member shall be elected by a 75 per cent. vote of the Council, and shall be entitled to participate in all activities, advantages and benefits of the Association other than any benefits accruing under "Means, Article 6." They shall not be entitled to vote or be eligible for any office in the Association.
- (14) The Association shall consist of:—
 Council,
 Executive Committee,
 Branches,
 Individual Members.
- (15) The Council shall be elected as provided for in Article 21. It shall meet periodically and at least once in every three months to determine matters of policy, etc. It shall be responsible to the Association in General Meeting assembled.
- (16) The Executive Committee shall be constituted as provided for in Article 30. It shall meet periodically and in no case less than once a month, and shall be responsible to the Council for the routine management of the Association and for such other matters as are provided for in Article 32 and 33.
- (17) Branches may be organised in any Arm or Service, Garrison, Staff Branch, Unit, or Area as the Council may from time to time think fit, except that every Branch must consist of at least six Active Members. A Secretary shall be elected by the members of each Branch. The senior serving Officer present shall preside at Branch Meetings, etc.
- (18) Individual members may be affiliated in the manner prescribed in Articles 11 to 13.

THE COUNCIL.

- (19) The Council shall consist of:—
 The President of the Association,
 The Vice-President of the Association,
 The Hon. Gen. Treasurer,
 The Hon. Gen. Secretary,
 The Editor of AN Τ-ΟΓΛΑΧ.
 Ten Additional Members.
- (20) *Not more than one-fourth of the members of the Council shall be composed of Associate Members.*
- (21) The Council, other than the Editor of AN Τ-ΟΓΛΑΧ, shall be elected annually in the following manner:—

Any affiliated branch or any six individual members, Active or Associate, or both, may submit nominations for the offices of the Association or for individual members to the Council. Such nominations must be submitted to the Council at least one clear calendar month prior to the Annual General Meeting. These nominations shall be published in AN Τ-ΟΓΛΑΧ, or otherwise as the Council may think fit, at least two weeks prior to the Annual General Meeting, and voting papers sent to all Active Members at the same time. These voting papers must be returned to the Council at least 48 hours prior to the General Meeting referred to.

- (22) The Council shall determine all questions as to the validity of such elections or of any votes recorded at such elections.
- (23) The Officers and Council thus elected shall take office at and from the end of the Annual Meeting, and shall retain the same until the end of the ensuing General Meeting except as provided for in Article 25 below.
- (24) In case of vacancies arising through any reason among Officers or Members of the Council the latter shall have power and authority to co-opt a successor or successors or to appoint pro-tem a deputy to the office or vacancy affected.
- (25) It shall be the duty of all Members of the Council to promote and be responsible for the interests of the Association and to personally attend all meetings of the Council. Any member of the Council who fails to put in this attendance at meetings shall be ipso facto disqualified, and cease to be a member and become ineligible for candidature for the ensuing twelve months, unless good cause for absence be shown and approved by the Council or by the Association in General Meeting assembled.
- (26) The transaction of the business of the Association and its entire management shall be vested in the Council who, in addition to the powers and authorities expressly conferred upon them by this constitution may do all such acts and things as may be exercised and done by the Association and as are not hereby expressly directed, or required to be exercised by the Association in General Meeting assembled.
- (27) The Council shall at all times be bound by and act in accordance with any resolution passed by the Association in General Meeting assembled.
- (28) Nine members of the Council shall form a quorum.
- (29) The Editor of AN Τ-ΟΓΛΑΧ shall be appointed by the Council not necessarily from among its own members.

EXECUTIVE COMMITTEE.

- (30) The Executive Committee shall consist of the Officers of the Council, including the Editor of AN Τ-ΟΓΛΑΧ.

- (31) *Not more than two Associate Members shall hold office on the Executive Committee.*
- (32) The Executive Committee shall be responsible to the Council for the routine business of the Association and for such other matters as may be delegated to it by the Council.
- (33) Without prejudice to the provisions of the above (32) the Executive Committee shall be responsible for the management of AN T-OGlach.
- (34) Four members of the Executive Committee shall form a quorum.

MEMBERS.

- (35) Membership of the Association shall be strictly confined to the qualified persons as set out in Article 9-13.
- (36) Membership shall be terminated by the Council if a member of the Association—
- (a) Be dismissed the Service.
 - (b) Is found guilty by a competent tribunal of a criminal offence involving gross misconduct.
 - (c) Acts in manner which in the opinion of two-thirds of the Council is likely to bring discredit on the Association.
- (37) Members expelled under Article 36 (c) may appeal to the Association in General Meeting assembled and may be reinstated by two-thirds vote of the members present. Members expelled under Article 36 (a) or (b) may not be reinstated.
- (38) Any member whose subscription falls into arrears for a period of over two months shall be automatically suspended. The Council may remove the suspension of such member at any time within one year of the date of suspension provided that the default is properly explained and the arrears paid.
- (39) Any members wishing to resign from the Association must submit their resignation to the Hon. General Secretary in writing, failing which they will be held responsible for all subscriptions or dues that they would otherwise be liable for.

GENERAL MEETING.

- (40) An Annual General Meeting of the Association shall be held within the first four months of the Association year at such place and time and on such date as the Council may decide.
- (41) On the requisition in writing of 50 members of the Association or six members of the Council, the Hon. Gen. Secretary shall call a Special General Meeting of the Association, provided that due notice of the time and place of the Meeting, with the names of the convenors, shall be given to every Member of the Association.
- (42) A fortnight's notice of all General Meetings specifying the dates, time, and place of Meeting and the nature of the business to be

transacted shall be given to every member of the Association. Publication of the notice in AN T-OGLACH at least two weeks prior to the General Meeting shall be considered satisfactory notice.

- (43) At any General Meeting unless a poll is demanded by at least five members, a declaration by the Chairman that a resolution has been carried or rejected and an authenticated entry to that effect in the Minute Book of the Association shall be sufficient evidence of the fact without proof of the number or proportion of the votes recorded for or against such resolution.
- (44) If a poll is taken at a General Meeting it shall be taken by open voting unless a ballot is demanded by at least five members. The result of the poll shall be deemed the resolution of the Meeting at which the poll is demanded. The Chairman in case of an equality of votes at a meeting or a poll shall have a casting vote in addition to the vote to which he is entitled as a member.
- (45) At all General Meetings every Active Member of the Association in attendance shall have one vote, except as otherwise provided.

POLL OF THE ASSOCIATION.

- (46) The Council is empowered to obtain the opinion of all members of the Association on any matter by a poll by post or otherwise as the Council or Association in General Meeting assembled may direct. Such poll will bind the Council and the Association unless it is rescinded by a subsequent General Meeting or poll.
- (47) (a) Subscription for Active and Associate Members shall be fixed at the Annual General Meeting and paid half-yearly. It shall include the Annual Subscription to AN T-OGLACH.
- (b) The members of the Executive Committee shall be responsible for the funds of the Association.
- (c) Auditors shall be appointed by the Annual General Meeting of the Association.
- (48) The Constitution shall be altered only at a General Meeting duly assembled as provided for in Articles 40 and 41.

ASSOCIATION YEAR.

The Association year shall be from 11th July to 10th July.

Readers who are members or prospective members of Cumann Cosanta Naisiunta should carefully study this constitution, as it provides the entire framework of the new Organisation. As it is printed above it contains all amendments and alterations made at the general meeting of Officers held on the 28th August last. The amendments may be noted by comparing the document as it now stands with the draft as published in our last issue; but it should not be confused with that draft. It should be retained for reference by members of the Cumann.

NOTES ON FOREIGN ARMIES.

CONTRIBUTED BY THE SECOND BUREAU, GENERAL STAFF.

FRANCE.

FORTIFICATION OF THE NEW FRONTIER.

During the early part of September, the Deputy M. Ferry, on behalf of the Parliamentary Commission of the Army, in company with an Officer detailed to the Commission, inspected the progress of the new fortifications to cover the restored territory in the North-East. The regions visited are interesting, as showing the general tendency followed.

The districts in question were Thionville, Bitche, and the Rhine front; and the fact that these are the main centres would seem to indicate a purpose to defend the actual frontier from the outset. The fact that France had to give ground deeply in 1914 seriously hampered her military effort thereafter, and apparently measures are being taken to prevent such an eventuality on a future occasion. Of course, these are in rear of the new works, Metz, and Strasbourg, before the defences of the pre-war frontier are reached at all. The new French frontier will, consequently, be definitely superior to the old one, from the standpoint of general defence.

POLAND.

COMPREHENSIVE TRAINING IN GAS WARFARE.

Owing to the systematic development of gas and chemical warfare by Russia, her western neighbour has been compelled to pay special attention to defensive measures in this branch. The Polish correspondent of the "Revue Militaire Suisse," gives the following very instructive particulars:—

It is necessary that by means of a general and compulsory instruction to which all the unit commanders are submitted, all the N.C.O.'s, and soldiers without exception should be treated so as to form a current interest associating all to the new work. We have, therefore, laid down the principle of compulsory chemical instruction, and immediately the idea was developed amongst the specialists anxious for the future.

The compulsory chemical instruction project of the Infantry has been presented by Lieutenant Joseph Koper, in the August number, 1929, of the Polish Infantry Review, under the title "Infantry Instruction for Anti-Chemical Defence."

The author foresees two forms of instruction: an advanced instruction, destined for Specialists, Gas Officers and N.C.O.'s, making a more extended programme than that actually in operation, comprising a technical course and a tactical course. The author makes it understood that the actual instruction of specialists is too theoretical, teaching by tables, images and models, instead of exercises on the field, under conditions approaching as

much as possible, the realities of chemical war. The second form of general instruction is destined for Officers, N.C.O.'s, and soldiers. The minimum programme has for aim to train the men for the part of look-out and watchers, and to accustom them to discover in time the presence of combat gas in the atmosphere, to use simple detecting appliances, to learn to give the alarm. Meteorological notions and assistance to gassed men terminate the programme of this chemical instruction for the first degree.

The instruction of the second degree is for the N.C.O.'s, having for aim to train them for the command of small units in chemical war conditions, to render them capable of executing in these conditions the different problems of small tactics, carry out reconnaissance, conduct their echelons across the smoke clouds, make them manoeuvre on the terrain subjected to chemical and smoke fire. They should possess good practical and theoretical notions on the maintenance and state of usual observation appliances, rational protection of localities, individual protection, clearing of shelters and assistance to those affected by the gas, as well as particulars concerning the evacuation of wounded. They should be good and vigilant observers, knowing how to use all chemical and smoke means for aggression as well as for protection. Their instruction on the field and the garrison manoeuvres, always under conditions resembling as much as possible the real conditions of chemical war as well as the knowledge of meteorological notions and general tactics applied to gas warfare, terminate the programme of this chemical instruction of the second degree.

The instruction of the third degree is destined for Officers, the programme is the same for the Reserve Officers, and compulsory for them. The programme is laid down on the same principles, as that of the N.C.O.'s instruction. It is naturally much deeper concerning the theoretical notions and tactical chemical problems. It comprises exercises on the field and the garrison manoeuvres, with solution of tactical problems of medium units. The Reserve Officers are periodically attached to the Infantry units either for the garrison manoeuvres, or for the large unit manoeuvres and grand annual manoeuvres, they temporarily replace the active army Officers. The general practical instruction should realise the following measures: Training of Infantry troops for a prolonged wearing of the mask, custom of working and sleeping with the mask, varied exercises on the terrain, prolonged marches, prone fire, double march with the mask. Gas chambers in each Infantry regiment, so as to accustom the men to combat gas and train them to carry the mask properly, to avoid carelessness. The men should also be taught to make simple meteorological observations.

We may foresee that this programme will allow the Gas Officers and Instructors of the Chemical Branch to carry out their task with real utility; they will be working with men already familiar with the procedures of chemical war, knowing the observation measures, of attack and defence, and knowing how to live and fight in a hostile environment, in no way scared, on account of having been accustomed to penetrate therein.

ROUMANIA.

THE ORGANISATION OF THE " CALARASHI " REGIMENTS OF CAVALRY.

There are eight of these regiments. The conditions of service are unusual, and resemble somewhat those of the Cossacks and Indian " Silladar " Cavalry. The men are fairly well-to-do, and are required to find their own horses, uniform, and minor equipment. They serve for four years with the colours, but not continuously. They are bound to serve at least six months during the first year, six months during the second, and a variable period during the third and fourth years.

In the Reserve (from their twenty-fifth to their twenty-ninth year) they undergo at least two months' instruction, and they are required to provide a horse for two years after passing into the Reserve.

The Officers belong to the Regular Army.

Each regiment of Calarashi comprises six squadrons, plus a heavy machine-gun squadron.

SPAIN.

" The Spanish Government has placed with Messrs. Vickers, Ltd., an order for eighteen 15 in. guns for the rearmament of the shore batteries in the neighbourhood of Ferrol, Corunna, Cartagena, and the Balearic Islands. Six have already been delivered, and the cost approximates to £1,500,000.

" As the batteries are situated at high altitudes, it will be many months before the material is on site, and still more before they are completed. Each barrel weighs 88 tons, and the under-carriages and other components from 15 to 42 tons; the transport necessitates the provision of a movable track of 300 feet, which can advance at the rate of about half a mile a day. In some cases the battery is 22 miles from the port of discharge."—Extract from the " Morning Post," September 25th, 1929.



REVIEWS.

FURTHER ASPECTS OF MECHANIZATION. By Brigadier-General H. Rowan-Robinson, C.M.G., D.S.O., p.s.c. 6s. net. William Clowes & Sons, Ltd., 94 Jermyn St., London, S.W.1.

In this work (published in July) an illuminating preface opens: "Record is being piled upon record. Grieg has flown at 319 miles per hour! " Yet inside two months a world record is captured at 357 m.p.h. and a speed of 368.8 m.p.h. has been attained. In the circumstances one can find a ready sympathy for the author who feels that " a certain tardiness is evident—in the tactical and strategic exploitation of these technical achievements."

In twelve chapters the author develops his theme in logical manner, and assists the reader to form an independent judgment by quotation from the authorities, which are not calculated to support his case.

Mechanisation—the replacing of men by machines is clearly distinguished from motorization, which merely increases the strategic mobility of existing arms. The point is of vital importance in studying or discussing the matter, but nomenclature must make a further advance, as the author fairly points out that increasing the number of machine-guns is technically an act of mechanisation; but adds " it does not imply mechanisation in the usual acceptance of the term."

The chapter on " The Passing of Great Armies " is of profound interest to us. General Pershing is quoted as saying in 1918: " It is evident that a force of about 1,000,000 is the smallest unit which in modern war will be a complete well-balanced and independent fighting unit."

A decade later General Von Seeckt:—

" The more we increase the masses of our fighting men the more certain becomes the triumph of the machine; for its reach exceeds that of the supplies of man power. The triumph of the machine is not, however, over man, but over mass humanity. The machine can only come to life in the hand of man."

And the author himself:—

" Yet in spite of these improvements and high standards of attainment, which will be further examined in later chapters, there is but a limited place for horse and foot on the modern battlefield. An undiscovered machine-gun section fells troopers by the squadron and infantry by the platoon; the airman, too, rejoices in perfect targets; every bullet, every splinter to which armour is impervious, can penetrate a body. All this has been known for more than a decade; yet—and it is another triumph of hope over experience, another sign of the inexhaustible and incurable optimism of the human mind—these two arms figure as bravely on peace battlefields as ever. The fact that modern armaments prevented cavalry from profiting even on a single occasion from a break-through on the western front, the fact that before infantry could occupy ground it had to be conquered by artillery, are now in the limbo of forgotten things."

The limitations imposed by manoeuvres conditions are explained, and the explanation is at once a shattering broadside for those who declared on the result of the manoeuvres, that "The tank is doomed," and an exposition of the true function of an armoured Force.

His thesis notwithstanding, the author advocates the abolition of steel helmets for British troops, on the ground that all nations other than Britain have to a large extent abandoned shrapnel, and that as splinters from high explosives fly upward, the helmet deflects them into the head.

Chapters are devoted to Artillery, Cavalry and Engineers in relation to mechanisation, and the author pushes his case relentlessly. His is no comfortable doctrine "that all is for the best in this best of all possible worlds."

"We are wondering how on earth we are going to find the money for the changes we regard as essential, and at the same time, we are maintaining all our great artillery establishments, although it is clear that modern conditions are shifting the relative importance of mobility and firepower sharply to the enlargement of the former."

"It is, of course, the business of the general staff to lay down the policy for the gunner, but our general staff is always our weak point. We place our best men there, but they either lack the necessary type of talent, or they get so absorbed in their routine work that they fail, with a few brilliant exceptions, to do the thinking, which is their primary business. Our strong suit is organization; and we therefore find, in the absence of a sound directive impulse, that we are organizing solidly towards false or indefinite aims."

A more hopeful note is struck with regard to cavalry:—

"And one last word on cavalry. It provided many of our chiefs in the great war; and, as it is the arm which best teaches quickness of decision and the grasp of ground—both acquirements particularly necessary in mechanized warfare—it is there that we may again have to seek our leaders. In any case we cannot do better than arm our new weapon with the old cavalry spirit and inspire it by the study of great cavalry actions."

After dealing with Supply and Maintenance, and stressing the necessity for an intimate association with the Air Force, the author concludes with what is in effect a plea for free and clear thinking; he demands the destruction of the idea that slowness and security go hand in hand. He points out that Napoleon ascribed his success to thinking ten years ahead of his opponents, and that in war the commander reaps no reward where he sees the hazards rather than the opportunities.

The work is well worthy of perusal and purchase. It will take more than one perusal to assimilate and assess the arguments. The problems discussed are not our problems, and the solutions propounded obviously demand the backing of an industrial organisation, nevertheless the work is of value to every Officer who realises that armies are in the melting pot. The paralyzing effect of vested interests and the big machine are indicated. The

necessity for questioning in the light of modern invention, what once was dogma, is demonstrated, and over and above all the book has a galvanic effect on the mind.

P. M.

MAGAZINES.

BRITISH.

JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION, 1929.

Rear-Admiral C. V. Osborne, C.M.G., through the medium of a brightly written dialogue between a Philosopher and a Student of War, revises, propounds, and explains the Principles of War in a logical and convincing manner. Those who find Field Service Regulations of all nations dry and uninspiring will delight in this feature.

"*The Self-Defence of the Infantry Battalion Against Armoured Fighting Vehicles*" is the subject of another interesting article. The author (Captain H. W. Mirehouse, M.B.E., p.s.c.) discusses the nature of the attack, and declares the most important factors in defence to be (1) Weapons, (2) Ground, and (3) Information, in that order of importance. His solution of the problem comprises the following:—

- (a) An increase in the number of Anti-Tank Weapons allotted to the Battalion.
- (b) An increase in the mobility of the Anti-Tank Weapon.
- (c) The utilization of existing small arms fire against A.F.Vs.—(made effective by employing incendiary or armour piercing ammunition or by increased velocity of the bullet).
- (d) Choice of ground.
- (e) Reconnaissance.
- (f) Exposure of as few men as possible to attacks in the open.

A particularly interesting suggestion is one to the effect that the means of reconnaissance at the disposal of the Battalion Commander be increased by the provision of nine men mounted on horses, and nine motor cyclists.

A lecture on "*National Finance in War*," by one of the greatest authorities on such subjects (J.M. Keynes, Esq., C.B.), is reported, together with the discussion which followed it.

"*The Training of the Infantry Soldier*" is the subject of an article in which the author pleads for the higher education and training of the individual Officer, the development of the N.C.O., and the military individuality of the private soldier.

He takes as his text the following quotation from a Memorandum on Army Training: "The military object of modern training must be to foster disciplined individual initiative . . . it is questionable whether we do enough to foster the individuality of the soldier."

There is a report of a lecture by Sir Norman Leslie, K.B.E., on "*The Mercantile Marine in a Future War*," in which many of the factors that affect the defence problem of An Saorstát are referred to. Admiral Sir R. G. O. Tupper, G.B.E., etc., presided, and in the course of the discussion

following the lecture, said that he "was apprehensive of the position in Southern Ireland, especially in regard to the difficulties which might arise in a future war in connection with shipping passing the south-west approaches to that country."

Of a similar nature is an article on "*Our Anti Submarine Requirements of the Future.*"

Among other articles are the following:—

"*Industrial Mobilisation for War: The United States System,*"

"*Ground and Mechanized Forces,*"

"*International Espionage in Peace,*"

"*The Regimental Office.*"

THE ROYAL ENGINEERS' JOURNAL, September, 1929.

A lecture by Captain V. R. Krohn, M.C., R.A., is printed in this issue. It summarises the reasons for A.A. Defence, describes the means of defence, the operation of A.A. Units, and the equipment of such Units. The capabilities and limitations of ground defence against aircraft are discussed, and an excellently clear picture of the problem of the A.A. gunner is given to the reader.

A "*Modern Division*" is proposed by Captain G. S. Hatton, R.E., as an answer to the "tendency to exaggerate the power of mechanized forces and correspondingly to belittle the action of other arms." The author's modern division would consist of:—

Infantry: Three Brigades as at present, with the existing Battalion organisation of 3 (three) Rifle Companies, a M.G. Company of sixteen guns, and a H.Q. wing. Machine Guns would be carried on cross-country vehicles which would be less conspicuous than the existing six-wheeler, and would enable guns to go into action on the move. More Anti-Tank guns would be provided on mounts similar to those of the Machine Guns. The Lewis Gun would go. The rifleman would get an automatic rifle of the Browning type.

The superiority of mechanized over horse-drawn artillery on almost every type of ground being, according to the author, generally admitted, he would have the 18-pounders provided with a self-propelling mount.

Having provided a six-gun battery, this arm is otherwise left as at present.

Cavalry: A Cavalry regiment of two sabre squadrons and one Armoured Car Squadron together with two Anti-Tank guns, would be part of the Division.

Engineers: A proportion of the Engineers would be moved in cross-country carriers, their transport would be mechanically propelled, and some of their tools mechanically driven. Anti-Tank mines, and a considerable stock of explosives must be available. Similar changes are proposed for other arms and services forming the Division.

An excellent article by Lieutenant F. C. C. Bradshaw, R.E., describes the "*Characteristics of a Good Lesson.*" These are, he says:

(1) *Thorough preparation on the part of the teacher, ensuring that—*

- (a) The aim of the lesson is absolutely clear.
- (b) Unnecessary matter is rejected.
- (c) Matter of lesson is within average intelligence of the class and likely to be beneficial to them.
- (d) Matter is presented in simple, clear and logical form, and, when possible, in the shape of a series of problems of gradually increasing difficulty to be solved by the class without conscious effort.
- (e) All necessary apparatus is present.
- (2) *Delivery of lesson to be such that—*
 - (a) Attention of class is attracted by commencing lesson with something familiar and known.
 - (b) Class enjoys lesson and proceeds by a number of easy steps, as outlined in (1) (d).
 - (c) Class has confidence in and respect for the teacher.
 - (d) Class has a clear and concise summary of the lesson presented at the end.
- (3) *Benefit from lesson is ensured by—*
 - (a) Questions and problems set by the teacher.
 - (b) Encouragement by the teacher for further discussion by the students.
 - (c) Teacher using his own personality to make as vivid an impression on the class as possible.

Other articles are :

" *The 23rd Field Company, R.F., in the Great War, 1914-1918,*"

" *How British Colonies are Governed,*"

" *Notes on Portable Machinery in the Field.*"

THE JOURNAL OF THE ROYAL ARTILLERY. July, 1929.

The "Duncan" Gold Medal Essay, 1928-1929, is published in this number. It deals with the changes in training and equipment necessary to enable artillery in the field to counter armoured fighting vehicles successfully.

A lecture by Major-General Peck, C.B., D.S.O., Director of Mechanization, is reported, in which the evolution of Armoured Fighting Vehicles, Armoured Carriers, Armoured Tractors, and Unarmoured Transport Vehicles is discussed. The difficulties encountered, the defects found in various machines, and the general direction of future development are clearly stated. The lecture provides a very valuable summary of the development of mechanization from the technical or constructional point of view.

Colonel J. F. C. Fuller, C.B.E., D.S.O., contributes a lengthy article in which he outlines the "National History of War." He defines his theme by saying that "the Natural History of War relates war itself as a living force to culture and civilization." The author attempts to cover the natural history of war from the "period when the first weapons . . . were made," to the present time, and predicts the future of the struggle. His

task is ambitious and his picture is necessarily one of broad outlines. While his generalizations, will challenge historians, and particularly those with a Catholic bias, he will arouse interest and incite to study all who wish to understand the great and over-recurring phenomenon called war.

Writing of modern times, he lays stress on the economic causes of war, and is refreshingly realistic in his diagnosis of the causes of the last great conflict. Those interested in the maintenance of neutrality when the world is at war are confronted with this assertion—"henceforth between any two great powers conflict must inevitably lead to a world war because all civilized nations, great or small, are in the grip of the law of economic interdependence, forming one vast and intricate international prosperity society." Even a superficial study of the world war or of the international trade of to-day should be sufficient to satisfy all concerned of the truth of this statement.

Other articles are—

"*Weapons. The Interdependence of Policy, Strategy and Tactics, with their Design, Finance and Provision.*"

"*The Mechanized Battery Staff.*"

"*Tannenberg and the Masurian Lakes.*"

AMERICAN.

COAST ARTILLERY JOURNAL. August, 1929.

The progress which has been and is being made in the United States in the development of ordnance of all kinds, is well known. This is nowhere more apparent than in the equipment which is being put at the disposal of the Coast Artillery, the arm that also provides for A.A. ground defence. An inspiring article, by Captain Gordon B. Welch, C.A.C., published in the August number of this journal, is appropriately entitled "Progress." Captain Welch describes the modern equipment of an A.A. Battery, and indicates further developments which are in the experimental stage.

A three-inch A.A. Battery will impart about five thousand horse-power, or eighty thousand foot tons of energy per minute to the one hundred projectiles which it will fire in the same time.

A muzzle velocity of two thousand six hundred and fourteen feet per second is attained by using a tube fifty calibres long.

The guns have loose liners which can be removed and replaced by a few Artillery men.

Simplicity of control has been achieved through marvellous directors. These are electrically operated, compute firing data continuously, and maintain automatically and continuously a correct laying of the guns.

A road speed of twenty-five to thirty miles per hour can be maintained by the battery, and manoeuvreability across country is described as "very satisfactory."

Continuous progress is being made, and the fertility of resource and imagination which have united with the achievements of science and industry to produce the material described by Captain Welch promise even more extraordinary results for the future.

An article by Captain G. M. Wells, Ordnance Department, entitled "*Modern Anti-Aircraft*," deals with the same remarkable progress in the development of material.

"*Recent Developments in Chemical Warfare*" are described by Lieutenant Robert E. Sadtler, 1st Gas Regiment. The article begins as follows:

"The Chemical Warfare Service is constantly at work seeking to protect the soldier against a weapon capable of destroying three million times its weight of living matter. This weapon is mustard gas. The problem of protection against poisonous gases is of the utmost importance, as the modern gas mask will only protect the respiratory organs, the eye, and the face. It is now possible to spray materials like mustard gas over a column of troops a mile long in about twenty seconds. This has actually been done—a harmless red dye being substituted for the poisonous liquid, the men wearing white muslin suits so that it was easy to calculate the quantity of liquid on each man and the effectiveness of this method. It is apparent that we must be able to protect the entire body of the soldier against this form of attack. Research on this problem has led to the development of protective clothing."

Constant efforts are also being made to develop the ideal war gas, the characteristics of which are described.

Other articles are:

"*The Railway Artillery Reserve, A.E.F.*,"

"*Notes on the 1929 Anti-Aircraft exercises*," etc.

COAST ARTILLERY JOURNAL. September, 1929.

Besides the article on the new Christie Tractor, which is the subject of a special note, the September number contains contributions dealing with: "*Mine Defence—To-day and To-morrow*," and "*Combined Citizens Military Training Camps and Reserve Training*."

THE FIELD ARTILLERY JOURNAL. July-August, 1929.

This number contains, among others, articles on—

"*Field Artillery Training in Air Observation*,"

"*The Conduct of War*," translation from the French of Marshal Foch,

"*Complete Rounds of Ammunition*."

The latter article contains a discussion of the endeavours of the Ordnance Department to reduce the effort required to furnish ammunition and ensure the arrival of the entire complete round at the front in perfect condition."

THE INFANTRY JOURNAL. September, 1929.

The first of a series of articles on the development of the Infantry Arm is published in this number with the following editorial note:

"In an effort to acquaint the Infantry with the Infantry development projects that are now under way, Captain Bolté has prepared and the *Infantry Journal* is publishing a series of articles under the title *The Future of Infantry*. Captain Bolté has devoted the present Article . . . to introducing the subject and giving a general idea of the infantry development project as a whole. Subsequent articles will tell about the separate projects: what they are, how they are being handled, and what they are accomplishing."

The author manifests an easy style, a good knowledge of his subject, and vision. His articles should be read with interest and profit by infantry Officers and members of the General Staff.

The other articles in the number under review are of the high standard expected by all readers of this progressive Journal.

Some titles are:—

"*Anti Aircraft Rifle Fire*,"

"*The Perfect Warrior*" (an account of Genghis Khan),

"*Machine Gun Anti Aircraft Dispersion*,"

"*Anti Aircraft Training for Machine-Gun Units*,"

"*A Technique for Engaging Moving Targets with the 37 MM. Gun*,"

"*Notes on Machine-Gun Marksmanship*,"

"*Training Chart and Drill Schedule for an Infantry Company*,"

"*The New Christie 'Model 1940'*" (noticed elsewhere).

THE MILITARY ENGINEER. July-August, 1929.

"*The Mechanization of Armies*" is the subject of an interesting article by Captain John K. Christmas, Ordnance Department. There is internal evidence of considerable research work by the author, and his facts are well marshalled and substantiated by references to authorities. Speaking of the position of the United States, he says: "The mechanization of industry has made us world leaders in peace, and mechanization of war will enable us to successfully defend that position against enemies and unscrupulous rivals."

He comments as follows on British developments in the field of mechanization: "The British experiments also brought out that, tactically and strategically the mechanized force is essentially a modern form of cavalry with great mobility and striking power, but with limited holding power. This necessitates following up the actions of the mechanized force with a body of infantry to consolidate the gains made by the mechanized force. This is, of course, not a new problem in principle, except that due to the high rate of movement of the mechanized force the supporting infantry must be furnished with some form of transport. To carry out the principles of mechanization the supporting infantry must also be furnished with some mechanical protection (armour). An approximate solution of this phase with the British took the form of numerous small fast-moving lightly armed vehicles, carrying one or more armed with machine-guns, known as 'tankettes.' Numerous forms of such vehicles were experimented with by the British."

The next issue of this journal will contain a discussion of the development of mechanization in the United States.

Other articles in the number under review are:

“ *The Geoditic Survey of Canada,*”

“ *Laws Controlling Government Contracts,*”

“ *Command Post Exercise for Reserves.*”

THE ARMY, NAVY AND AIR FORCE GAZETTE.

This Journal continues to keep its readers abreast of the news of the day in the British Army.

Recent issues contained many articles of interest, especially Major Whitaker's accounts of the season's exercises in the south of England.

In an editorial under date of September 19th, the following passage occurs:—“ . . . The British Army to-day is probably effectively stronger than that of any other European nation. It alone has devoted proper attention to mechanization, and it has to-day a nucleus of armoured forces which exceed in efficiency those of any other Power.”

Colonel E. G. Hamilton, C.M.G., D.S.O., M.C., writes under the title “ *Machine-Gun Carriers or Light Tanks?* ” (19th September), and proposes the exchange of the Machine-Gun L.G.S. Wagon for a Light Tank.

The Editor will be glad to receive for publication, correspondence on any subject of military or historical interest.

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