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Number 74 July, 1955

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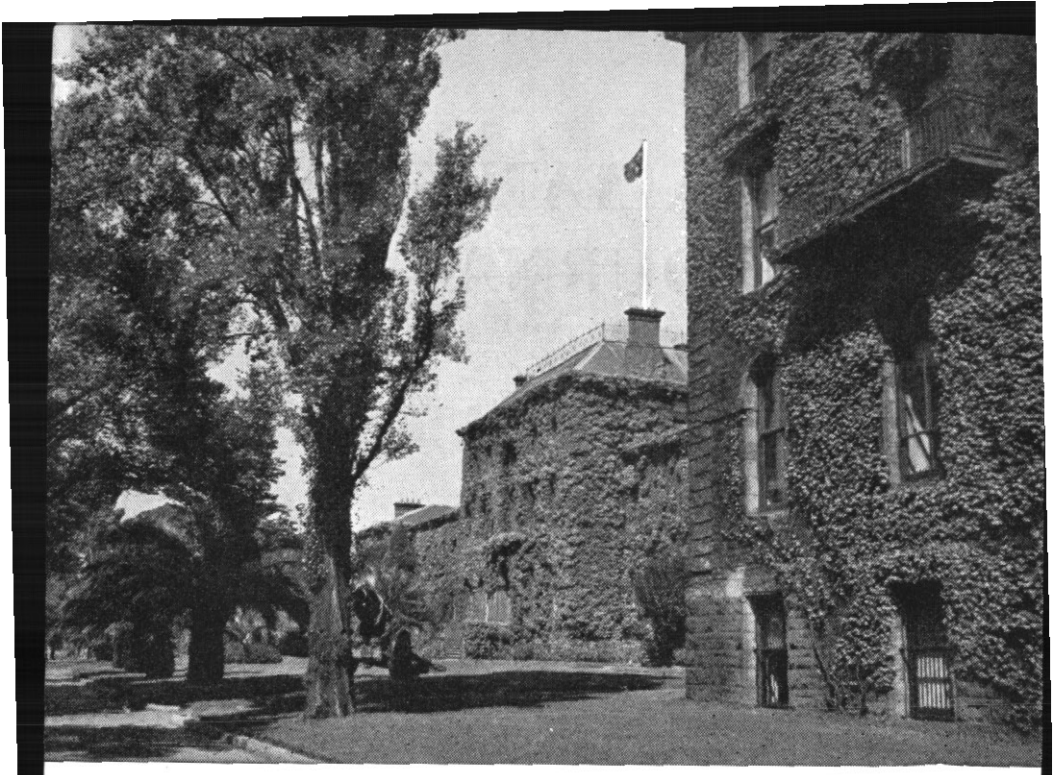

VICTORIA BARRACKS, MELBOURNE

AUSTRALIAN ARMY JOURNAL

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LOOK to the FUTURE

Major P. Falkland,
Royal Australian Artillery

"The longer I live, the more keenly I feel that whatever was good enough for our fathers is not good enough for us."

—*Oscar Wilde.*

THE exercise is over. With a feeling of relief the Director stands up to summarise the main lessons, and with greater feelings of relief the students sit back to listen. One by one the lessons are driven home, and finally comes the summing up:—

"Gentlemen, that concludes our study of this phase of war. Before we disperse I should like to leave in your minds the thought of what effects atomic weapons will have on operations of this nature in the future. I recommend you examine the subject more closely from this aspect."

How many times have we heard this or similar injunctions pronounced? And what do they mean? To be candid they mean that the last war is once more being fought again, and that the problems and tactics of the future war are being left in abeyance. Such injunctions are indicative of our present approach to training. They are meant in good faith, but are, in fact, a menace to modern thought.

This article is written, therefore, in the hope that the reader will perceive a weakness in our present tactical training, and will be convinced that we must adopt a more realistic approach without delay.

Past Versus Future

As training for war is a pursuit of the theoretical rather than the practical, we are obliged to rely largely upon past history and experiences. It cannot be denied that the past forms the firm foundation for our principles, procedures, and practices. However, the art of war, though based on the past, must be influenced by the future. We are paying insufficient attention to the profound influence which modern developments are having upon present day thoughts and ideas. In short, little do we contemplate the probable pattern of future war in our everyday tactical training.

It may be argued that, if the past gives us the basic principles, and if these are understood thoroughly, flexibility of mind will master any new developments quickly. Major-General J. F. C. Fuller answers this argument adequately:—"No army can in the full sense be kept up to date. This means that in war-time evolution will be extremely rapid. Consequently the army which is mentally better prepared to meet tactical changes will have an enormous advantage over all others."

Mental Preparedness

Our training must be capable, therefore, of preparing our minds for the next war, in which we are going to fight with or against more modern weapons, equipment and ideas. The possible weapons and equipment are not difficult to imagine. The ideas, particularly those of the enemy, are harder to perceive and therefore demand closer attention. Let us dismiss immediately from our minds the vain hope that whatsoever we do not possess, the enemy likewise, has none. Such hopes as these allowed the Allies to succumb to the mechanized German Armies in France in 1940.

How might we become mentally prepared for the next war? We know of the existence and day to day improvement of various new weapons and machines, but how can we possibly adapt our minds to these devices when, firstly, they are not available to the majority, and secondly, their secrets are so closely guarded? The answer lies in imagination, coupled with initiative, and the basic facts at our disposal.

Imaginative Training

Some may say that the use of too much imagination in training leads to unreality. That is true, but this article makes no attempt to argue in favour of anything but reasoned imagination, based on the facts and trends around us. Such imagination will lead us more towards the future than back to the past.

Recall the injunction delivered by the Director. Surely imaginative ideas within the exercise itself would have done more to train those students' minds than mere words pronounced as a parting gesture.

Let us see from some examples how imagination can be introduced into an exercise, can help guide our minds to a better stage of training, and provide us with future food for thought.

Atomic Weapons

In view of their vast influence on military thought, we will first examine how atomic weapons can give the right perspective to an exercise.

The outstanding feature of these weapons is their devastating effect on any concentration of animate or inanimate objects. While camouflage, deception, and underground installations will afford some protection, the most obvious and practicable solution is dispersion. This means dispersion of all forces before, during and after contact, dispersion of headquarters, dispersion of maintenance areas and supply dumps. If dispersion is the best answer, then we must be capable of rapid concentration, which entails a higher degree of mobility than we possess at present.

We will require increased cross-country mobility for all types of vehicles. Every vehicle must be capable of moving off roads, for roads lead to nodal points and nodal points mean concentration. Mobility will mean lighter personal equipment, lighter supporting weapons, lighter vehicles and lighter maintenance requirements.

Dispersion will require better communications, with the emphasis more on wireless than on telephone. It will demand increased range and accuracy of supporting weapons, and will inevitably lead to the adoption of smaller, more compact formations and organization than employed at present.

These are the main effects which atomic weapons will and do exert on tactics. Yet we evade the issue by saying that no aggressor nation will be able to produce atomic weapons in sufficient quantity to permit their indiscriminate use against forces in the field. The fact remains, however, that an aggressor nation which does possess atomic weapons, *could* and *might* use them against a field force. We must be prepared for such an eventuality, hence let us think in terms of smaller, harder-hitting formations which can disperse and concentrate rapidly by virtue of increased mobility and independence. Let us, in a few exercises, abandon movement by road, assembly areas, maintenance areas, etc., and then solve the chain of problems which such limitations will initiate.

VT Fuzes

It has been said that the VT or proximity fuze was second only to the atomic bomb among the scientific achievements of the last war. The fuze has revolutionized warfare. It enables one to deliver uniform shell bursts at selected heights regardless of ground or darkness. Surely if the enemy can shower a target with a heavy rain of jagged steel in a very short time our tactics must be affected.

For example, reorganization on an objective must be considered in the light of the VT fuze. Immediate overhead cover must be available for the assaulting troops, for men cannot dig fast enough to escape well-timed enemy defensive fire of VT fuzed shells. We must think of carrying forward armour plate for immediate overhead cover. We must lay greater emphasis on counter-bombardment during this stage of the attack. We must become aware, in our exercises, that the VT fuze is a killer of men in the open.

The attack must not fail because we thought that the enemy could not afford such expensive weapons. We must anticipate this problem and face it squarely in our exercises.

Radar and Infra Red

To achieve greater surprise, to facilitate the crossing of obstacles, or to minimise the effects of aimed fire across open approaches, we resort to night attacks. Despite continual improvements in radar and infra red equipment, we are apt to put complete trust in a night operation as a means of solving an otherwise difficult problem. We convince ourselves that, although radar and infra red can see through darkness, they are not really effective.

How will our standard night attack proceed against an enemy who

has perfected these contrivances, who can see us forming up and who can observe us advancing across the start line in regular formation? Now would be his opportunity to teach us a lesson and decimate the assaulting ranks with VT fuzed shell.

It becomes obvious that we must anticipate the rapid development of these modern devices and prepare ourselves before it is too late. In contrast to previous practice, we must learn to avoid unnecessary concentration of troops by night, we must abandon regular shoulder-to-shoulder formations, and we must attempt deception to the same degree as we do by day. Infra red and radar will force night tactics to resemble, more closely, those employed by day. We should, therefore, take heed now and recognize this fact in future training. Let us not be guilty of leading the unwary into believing implicitly that night affords protection. Conversely, let us give cognizance to the fact that our own forces, including armour, will enjoy as much freedom by night as they do by day.

Helicopters

Because these ubiquitous and amazing machines are still in their infancy, most of us seem to be content with such statements as:— "The role of the helicopter will increase as its design and payload improves and as its maintenance overhead is reduced." The statement is certainly true, but it dulls our senses and stifles imagination and curiosity. Having heard such a statement, the immediate reaction is to relax and wait for the day when the designer can announce perfection, and acclaims that the helicopter is capable of flying a radius of one thousand miles while carrying a heavy gun tank.

These complacent statements and attitudes must be overcome. We must be prepared to keep our thoughts in step with the designer and not allow our mental faculty to sleep while the machine is being perfected.

Now is the time to give the helicopter a permanent place in our exercises. To wait until the machine is in our hands in an improved form may be too late. It requires little imaginative effort to conduct paper exercises in which helicopters carry out the entire maintenance of divisions forward of a Corps Maintenance Area. Also exercises in which whole formations are transferred from one sector to another in the midst of battle, in which reorganization stores and reserve troops are landed on an objective after its capture, in which bridging is carried forward and laid by helicopter.

These are but a few of the many tasks which helicopters can and will perform in any future war. We must therefore look ahead and not wait until the enemy shows us the way.

Conclusion

The theme of this article could be continued ad infinitum, encompassing guided missiles, biological weapons, rockets, recoilless guns, napalm and so on. However, the main examples already advanced should suffice to show the ways and means in which we can modernize our minds, and condition them to

receive the inescapable shocks of future war.

It may be well if the reader examines his own conscience and asks himself whether he has shown genuine and intelligent interest in the effects of modern developments on tactics, and, if he has shown such interest, whether this has influenced his subsequent approach to tactical training.

In the words of the late General de Lattre de Tassigny, "dynamic human qualities of imagination and curiosity, initiative and willingness to assume responsibility, together with alertness and flexibility are required." We must apply these human qualities in our peacetime tactical training, for otherwise we shall not be armed to meet the fury of modern science in battle.

Epilogue

The time has come, the walrus said,
To have a revolution,
In training men to think of war,
In terms of evolution,
Of atom bombs and radar sights,
Of infra red at night,
Of VT fuze and mobile troops,
And of equipment light,
Of helicopters in the sky,
Performing various tasks,
Of quick dispersion when we need
To nullify the "blast."

—*From "The Owl," Journal of the Command and Staff College, Pakistan.*

DECORATIONS AND MEDALS

In the article "Decorations and Medals," published on page 40 of AAJ No. 71, it was inadvertently stated that the ribbon of the Victoria Cross is blue for the Royal Navy and crimson for the Army and Air Force. Actually the ribbon is red for all services.

The Soldier's Place in Modern Society

Warrant Officer K. L. Hanrahan,
23 Cadet Battalion

SOME time ago the author was involved in an argument as to the soldier's place in modern society. The discussion was with a group of civilians, who claimed that there was no justification for the large annual expenditure being made on defence; that the peacetime retention of armed forces fosters a militarist class with views opposed to the civilian's; and that soldiers spent the greater part of their time in idleness and, when they did work, it was wholly nonproductive, contributing nothing to the national wealth.

Any one of these points is basis enough for an article of this type (most of us can make a suitable answer to any one of them), but where the author failed to acquit himself well was on the last assertion. Therefore this article is an attempt to expiate the deficiency in the hope that any other soldier, should he be so placed, can defend his vocation.

To say that the soldier's profession is an honourable and therefore necessary one, or to answer that there have always been and always will be soldiers, or that the armed forces provide a venue of employment for a working-class surplus, do not suffice to adequately answer the question. The answer can best be supplied from an economic, and in other respects social, aspect, as the argument revolves basically around material wealth. This is doubly so, as the soldier has nothing to trade with society in order to pay his way; neither does he create or produce anything of material value. His services are retained just as are those of the doctor, journalist, parson or priest, policeman, public servant, train driver, dustman or accountant, all of whom have no saleable commodity of use to society other than their labour or knowledge, or both.

The claim that the production of material objects is the only true

production does not hold if argued to its logical limits. Physics teaches us that there are two fundamental laws: the never diminishing supply of energy and the indestructibility of matter. Taken this way, no man ever produces anything. All that he does is to change the form of matter so as to make an article of use to his fellow-men; he merely alters and shapes material and directs energy, but does not create anything.

Some readers will here contend that the substitution of the word "create" for "produce" is sophistry; that it is a subtle device employed by the writer to mislead or beguile the reader. This is not so. Man never has and never will create anything that does not already exist; he can only take what matter and energy already exist, and so work upon them and so direct this energy as to change some of the characteristics of matter in order to enable it to better withstand the effects of stress, heat, cold, friction and corrosive influences.

An explanation is now necessary to resolve the question which must naturally arise as to how, if no man produces anything, is wealth determined. Wealth is money, and money is nothing more than a means of exchange. "X" might have a dozen shirts, but needs a pair of shoes. In olden times he would have had to find someone who had a surplus of shoes and who needed a shirt. The disadvantages of this system of barter are evident, so money was instituted to obviate or circumvent it. "X" is now able to sell all his shirts and buy not only shoes but a coat and other articles as well. So, therefore, wealth is measured in terms of a man's capacity to earn money or the amount of it he is able to retain as a surplus. To carry this thought further, it can indeed be said that the producers of wealth are those who satisfy a human want, because in this way a man is enabled to either produce (that is, make) a wanted article or to provide a necessary service, such as draw up a will or check accounts. Therefore any person who, through social or business intercourse, deals with another person to that person's material, mental, or spiritual benefits becomes a producer of wealth.

Modern society is divided into three broad groups. On the one hand, are the organizers of industry and commerce, who direct capital, labour and land to the ends of material production; on the other hand, are those who provide the necessary services to complete man's social and vocational life—the postman, clown, lawyer, schoolteacher, barman, usherette, dentist, radio announcer, ballet dancer, singer, etc. Standing between these two groups is the great mass of humanity, which has nothing but labour to exchange with society in order to live—the workers, but, because this group is directed as energy by the captains of industry, it is, as soldiers, to the latter group that we must attach ourselves.

Here it will be as well to retrospectively examine the status of soldiers in former times, because history provides the perspective necessary to review the soldier's place in modern society.

In the ancient Vedic civilization of India there were four classes to which a man could belong. These

were: The Kshatriyas (soldiers), the Brahmans (priests), the Vaisyas (traders), and the Sudras (labourers). There was a time, however, when the priest ranked higher than the soldier, and, although it is not clear why the change took place, it is safe to assume that it was occasioned by a loss of power or prestige on the part of the Brahmans. This could have occurred through an evolutionary reappraisal of each group's usefulness to society in those embryo times. Similarly, in ancient Gaul there were two ruling groups: the Druids (priests) and Knights (warriors).

Over the centuries we see the soldier still holding a high place in the life of his country, but, throughout history, no change more evident than that wrought by the use of money is perceived. Before the introduction of money, armed might was the only real indication of power, but as time passed man realised that power itself was a saleable commodity, able to be bought by anyone who could pay the price asked. In this way men began to acquire titles and the estates and serfs that went with them; to buy powerful friendships and allegiances to buy special mercantile rights and immunity from laws; and privileges that became the property of a class. Thus, formerly, if a man possessed armed might, he controlled, to a lesser or greater degree, the social and economic life of his country, but when money became power the soldier's position became debased for material things.

Some people will contend that this state of affairs was more desirable, as it subordinated the soldier to the State, and thus freed the State from the fears of revolution. But they would be wrong, because even in the smallest States of those bygone days the numerous factions of barons, lords, priests and kings served to keep the people in a continual state of morbid expectancy as to the next outbreak of violence. But that is not the point; what must be remembered is that whatever malevolent and predatory characteristics the soldier may have possessed, he was duty bound to sacrifice himself in time of war. This was a much-prized duty, because it was the highest honour the country could bestow and a rather doubtful honour, to be sure, but nevertheless the custom survives to this day with the erection of monuments and the observance of certain days in honour of the war dead who, according to the annual panegyrics, gave their lives that we may live.

However, the ascendency of the merchant over the soldier gave rise to the mercenary armies that plagued Europe from the 10th century onwards, and soldiering became synonymous with rape and pillage. Duty, loyalty and honour no longer existed in the soldier's code, because his services were for sale to the highest bidder.

Coming nearer to our own time, we witness the rise of Western civilization as we now know it; a civilization which could not exist without law—law without which man's affairs could not function. This system is based on Parliamentary government and the magistracy as the constitutional head of the much larger executive body—the police.

Society is a co-operative effort by all to live in harmony, thus enab-

ling man to satisfy his wants without either infringing on the rights of others or offending against the State. That, simply, is why we have policemen. By preserving order in society, man is able to carry on with his lawful affairs and to engage in the production of those things which constitute wealth.

But the policeman's role is purely internal; he can only deal with the enemies of society within the State. Therefore his power is limited, and an extension of that power is needed to deal with the external enemies of the State, a much more menacing aspect. Tolstoy in "War and Peace" has said: "All historians agree that the external activity of states and nations in their conflicts with one another is expressed in wars. . . ." It has also been said that war is the practical expression of politics, that is, what can't be gained at the conference table can be acquired by force. Witness California in 1846, Manchuria in 1905, Alsace-Lorraine after 1918, and Czechoslovakia in 1939. These few examples alone are adequate arguments for the raising of armies, but how much more so today, when wars have become truly inter-continental!

Like the policeman, the soldier's role is the preservation of law and order, the same law and order without which production could not be carried on or without which men would no longer be free to engage in the satisfaction of those wants that are inherent in each and every one of us. If society is burdened with the maintenance of armed forces, it is so because the selfish acquisition of wealth by the members of that society has made it necessary to protect not only that wealth but also the right to accumulate it from predatory States.

In this respect soldiering has not changed since the earliest times. In Vedic India of about 2000 BC, the soldier-caste was almost continuously engaged in protecting the State from the marauding tribes who moved down from the north, thus enabling the trading-caste to carry on its work of mercantile activity and the labouring-caste to produce. Similarly, in Gaul it was the Knights who had to protect the tribes from both the Roman Legions and the Huns east of the Rhine. Here an interesting comparison may be made. The Huns had no divisible class; everyone was obliged to fight. Tribal law forbade a man to take up land or to build a cottage. In other words, having no merchant-class engaged in the production or acquisition of wealth, no soldier-class was deemed necessary to protect it. Therefore it is axiomàtic that the greater the wealth of a country the larger will be the armed forces that that country can and does support.

In this very real way does a soldier contribute to the national wealth. He supplies a need—the desire of society to be protected, thus ensuring the continuance of that freedom which enables its members to pursue their own ends subject to law.

The fact of his being a soldier makes a man the least parochial of society's members; he is more distinguished by his lack of "border-mindness" than his civilian contemporary. His knowledge of military history and of his unit's share in that history, his acquaintance with

foreign armies and his intimate knowledge of other peoples through foreign service carry his spirit far beyond the borders of his own country as to give him a personal interest in the affairs of the world.

Even in these modern days there is still enough hardship and inconvenience attached to soldiering as to make the profession of arms the vocation of that small group of people, themselves co-operative members of an integrated society, whose aims in life are truly national and who are imbued with that very spirit of idealistic adventure which has made nations great, and having been made great have contributed their share towards the world's cultural and scientific progress.

No! armies do not just offer well-paid jobs or security of employment. Rather they offer a man the practical expression of that something which many others lack—an unselfish wish to serve both his country and his fellow-men in a manner which reflects his distaste of working for limited, narrow ends.

COMPETITION FOR AUTHORS

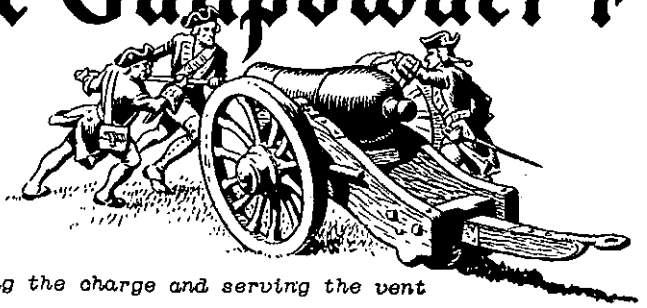
Monetary awards on a competitive basis are made to authors of original articles published in the Australian Army Journal.

Monthly Award.—All original articles published in each issue are reviewed by a Board appointed by the Director of Military training. The author of the article considered to be the best for the month is awarded £5.

Annual Award.—When twelve monthly awards have been made, the twelve first place articles will be reviewed by the Board, and the author of the one judged to be the best will be awarded £40.

The award of both monthly and annual prizes will be based on the substance, originality, completeness, and the over-all merit and quality of the article.

The Gunpowder Plot



Ramming the charge and serving the vent

Major J. T. Ashenhurst, R. of O.,
Design and Inspection Branch,
Department of Supply

WHO discovered gunpowder?

It is said that the Chinese used it for making fireworks as early as the seventh century; that Arab traders carried it to Baghdad, where its adaptability for war was discovered; that Genghis Khan first used it in cannon in China in 1234. Despite the many claims made, it is possible today to name only one individual who was undoubtedly concerned in the discovery of the highly combustible substance we now call gunpowder. He was Roger Bacon, an English friar and alchemist, who concealed his discovery in cryptic writings. These writings, only recently deciphered, suggest the discovery was made in 1242 or even earlier.

It is doubtful whether Roger Bacon ever considered his explosive powder as a potential propellant; it would seem, rather, that he was imbued with the same spirit of revelry as the Chinese, and produced nothing more offensive than a firecracker. No doubt he was a great success with the children of his day.

With the advent of gunpowder, the term "artillery" took on a new and significant meaning. Previously the word had been used to describe any "engines" for the projecting of missiles; even bows and arrows. Now, of course, by artillery we mean guns of all types which use propellant charges. The term also covers that branch of the Army which operates the guns, and the science that treats of it.

This article and the illustrations are based mainly on "The Story of the Gun," by Lieut. A. W. Wilson, R.A. The illustrations were contributed by the Artists of the Design Establishment, Design and Inspection Branch, Department of Supply.

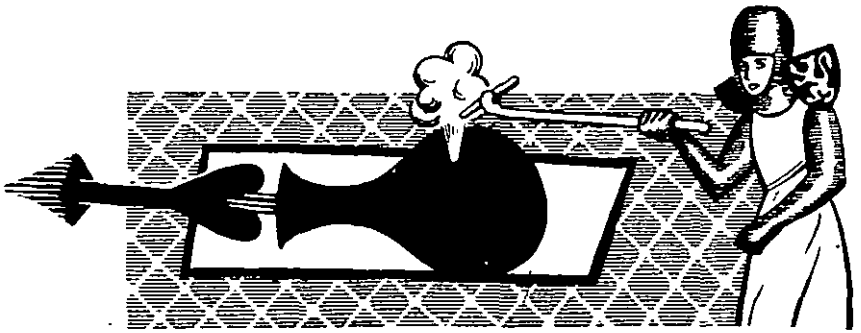
We are told that a German monk, Berthold Schwarz, produced the first gun in which gunpowder was used to despatch a projectile. He was responsible for that odd looking contraption the Pot de Fer or Vasi. Weird or not, the principle evolved stood the test of the centuries, and was used, with various modifications, for the next 500 years.

It took a long time to establish the gun as an orthodox weapon of war. It was regarded with scorn at first, chiefly because the projectiles used were too small to do much damage. In mediaeval days of siege warfare, defenders ensconced behind their massive battlements could afford to laugh at the efforts of the English pop-guns. Efficiency of the new weapon improved as ways and means were evolved to increase the size of the projectiles used. Respect for them grew with their increasing ability to breach the walls of a besieged fortress or town. It must be remembered that siege warfare had been the only type of warfare for hundreds of years, and continued to be for centuries more. Cannon first proved their value at the siege of Calais by Edward III in 1327, but the small allowance of gunpowder (3 to 4 ounces a day) reduced their effectiveness.

A hot iron was used originally to fire the propellant, but this was replaced by a method of priming the vent with loose powder, fired by means of a match. By a match, of course, we don't mean the Bryant and May variety; we mean slow match, consisting of tow or twisted rope, dipped in vinegar or wine lees.

Nearly 500 years after gunpowder was invented yet another gentleman of the Church appeared with his contribution to progress in the science of war. He was a Scottish minister named Forsyth, who invented percussion powder in 1807. In 1845, Mr. March, of the Royal Arsenal Surgery, introduced his percussion tube, which was fired by a hammer fixed to the gun. This was approved for use, but the gunners apparently viewed it with distrust, for they continued to carry their old port fires and slow match.

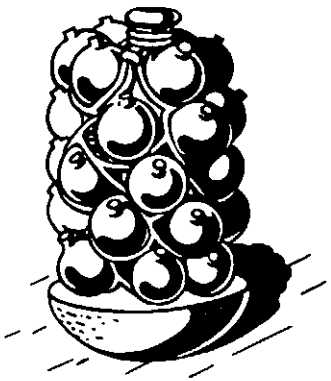
Heavy stone or iron shot were used in attacking fortresses, but new methods were required for use against troops in the open. From



Vasi or Pot de Fer (from a 1326 manuscript)

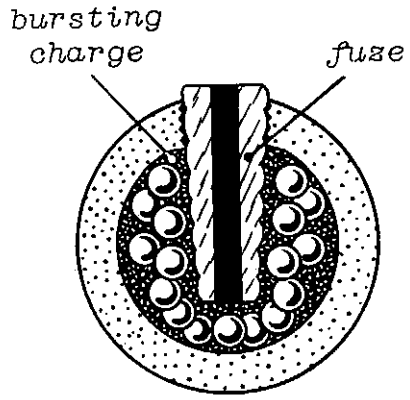
this requirement emerged the case shot, a wicked collection of old iron, flints, gravel—anything, in fact, that would maim or kill—loaded into a case or canister. In its early form this assortment was known as "Langridge," and the bits and pieces were loaded straight into the gun. Case shot were used in the siege of Constantinople in 1453.

Cousin to the case shot, and designed for the same fell purpose, the grape shot was so called because of its likeness to a bunch of grapes. It consisted of a number of small round shot contained in nets or sacks. Later versions consisted of 40 9-lb. shells, separately fuzed. These were fired from the 13-inch mortar, and were called "quilted grape shot."



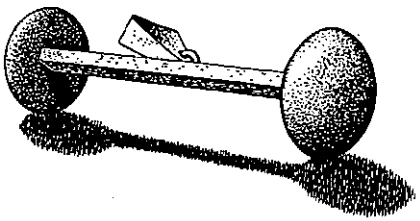
Quilted Grape Shot

The case shot and the grape shot were the forerunners of the shell invented by Lt. Henry Shrapnel, R.A. Variations of the original shrapnel shell were used in the Great War of 1914-18, and for many years afterwards, notably on the North West Frontier of India. They were eventually replaced by H.E. shell containing airburst fuzes.



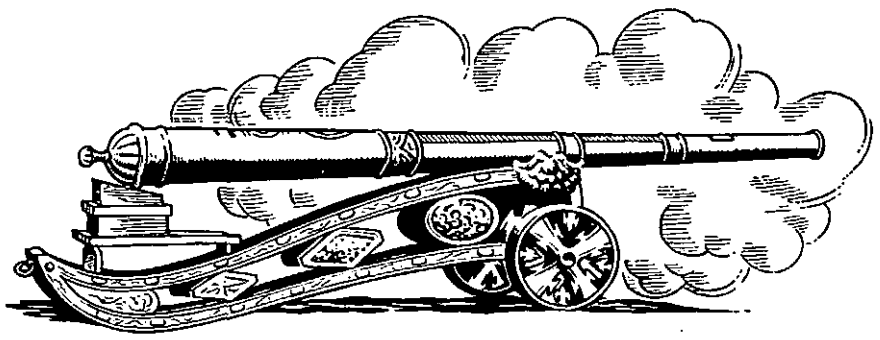
Spherical Type Shrapnel Shell

About the time grape shot was conceived, the Navy, not to be outdone, produced their own particular forms of frightfulness in the chain shot and bar shot, designed expressly for the purpose of "derigging" enemy ships. The "action" of the chain shot was not unlike that of the bolas used by the South American natives to throw animals to the ground. One can imagine the consternation caused by one of these evil contraptions whistling through a man-o-war's rigging!



Bar Shot

Some of the guns that fired this primitive ammunition were unique; many were enormous. The 25-inch calibre monster used by Mahomet II in 1453 at the siege of Constantinople weighed nearly 19 tons, and was 17 feet long. It took two



Queen Elizabeth I "Pocket Pistol"

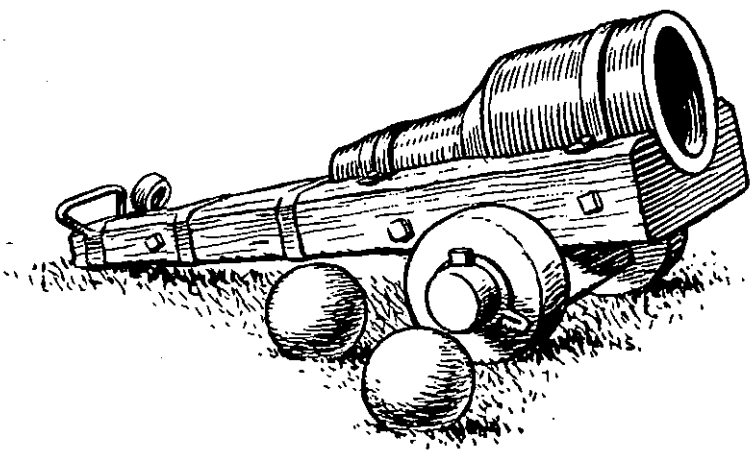
months to move the cannon 150 miles. It fired a stone "pellet" weighing 600 lb. a range of one mile, and its maximum rate of fire was seven rounds a day!

Another famous old-timer was Mons Meg, which now rests in Edinburgh Castle. It was constructed on the barrel principle; long wrought iron bars crudely welded together with iron hoops shrunk around them. This was one of the earliest methods of gun construction, and explains the derivation of the term "barrel" now applied to a piece.

Built for coast defence to guard the Straits of Dover, the "Pocket Pistol" of Queen Elizabeth I bears an inscription which somewhat optimistically boasts—

"Load me well and keep me clean,
I'll carry my ball to Calais Green."

Many of these old warriors were more dangerous to those behind them than to the targets they opposed. James II of Scotland was killed in 1460 at the siege of Roxburgh Castle by one of his own guns. It is recorded that "While



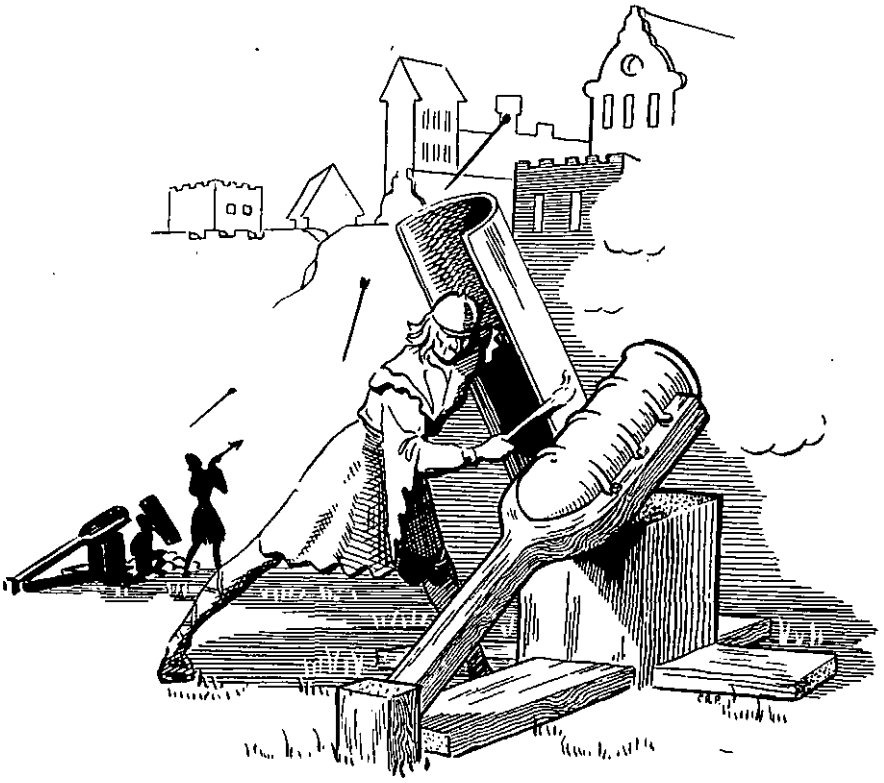
14th Century Bombard

this prince, more curious nor became the Majestie of any Kinge, did stand near-hand where the Artylliare was discharged. His thigh bone was rung in two by a piece of a miss-framed gune that brake in the shuting, by the which he was stricken to the ground and died hastilie."

Another danger to those who served these ancient muzzle loaders was the proportion of powder often left smouldering in the chamber from the previous charge. To counteract this, a sponge mounted on a long rod was introduced to swab out the chamber before ladling the fresh charge of powder into the bore. The gun sponge is still an Ordnance store.

As an additional precaution when ramming the new charge, one man of the gun crew was given the duty of "serving the vent." This meant placing his thumb over the vent to prevent a sudden rush of air causing any burning residue to flare up and ignite the new charge. Any gunner failing to "serve the vent" was promptly hit over the head with a rammer by his No. 1!

In these troubled days, when the threat of atomic warfare is hovering over the world, we can afford to



14th Century Siege Gun

be amused at the puny efforts of our ancestors. Yet it all started 700 years ago, when an obscure English friar made public a discovery that was to start off a train of destruction undreamed of by that mediaeval scientist or his contemporaries. The weapons forged in those early days were as terrifying in their way as the bomb that destroyed Hiroshima. We can appreciate the words of Cervantes in his "Don Quixote"—

> "Happy those ages which know not the dreadful fury of artillery!—those instruments of hell . . . by means of which the cowardly and the base can deprive the bravest soldier of life."

THE TRAINING of the OFFICER in the BATTALION

Major-General W. D. A. Lentaigne, C.B., C.B.E., D.S.O.

THE aim of this article is to show how the officer should be trained in the battalion from the time he first joins it. I shall not deal with the courses he has to attend in Army Schools of Instruction.

It should be easily recognized in India, where the family plays so large a part in civil life, that a regiment or corps is a closely knit family, and an officer on joining it must associate himself with this family as quickly and as deeply as possible. Esprit de corps, morale and discipline all stem from the deep-rooted sense of "belonging" to a fine family, which will rally round the individual member at all times, and equally expects the individual member to place the family above and beyond his private affairs.

The Tyro

Man is far too prone to conceit, and a second lieutenant fresh from the Academy must be made to realize that there is a world of difference between a Senior Cadet at the Academy and a junior officer in a battalion.

On being commissioned the infantry officer is first posted to an active battalion. During the first nine months he is a tyro, and is required to be trained up to the standard of a trained soldier in all infantry weapons. What should be his training during this period as an officer and a member of the Regimental family? To start with, without his knowledge, a fairly senior officer, normally the second-in-command of the battalion, should be detailed as his Godfather. The Godfather must watch him unobtrusively, and from time to time in a fatherly manner tell him of his faults and weaknesses. All other officers should, of course, make him welcome, but should be quick to point out his errors, and the more junior they be, the more forceful

—*From The Infantry Journal, India.*

should be their comments and, in rare cases, their physical correction.

The Godfather should initiate him into the customs of his new family, the Regiment, in regard to the Mess dress and dealings with Junior Commissioned Officers and jawans both on and off parade.

Apart from his Godfather, he should be given a professional mentor in the shape of a company commander whose duty it should be to instruct him in company administration and interior economy. Minus his badges of rank, he should be drilled with the platoon under the platoon Junior Commissioned Officer, and he should learn the niceties of the regimental drill. He should also do his weapon training as a member of a squad of jawans. Later, this time with his badges on, he should take the squad himself both in drill and weapon training. There is a world of difference between the drill and the drilling of a squad of gentlemen cadets and that of jawans of an old-established regiment.

As time passes he is initiated gently but firmly into the Regimental family, and exchanges the hopes, aspirations and loyalties of the Academy for the more lasting ones of his Regiment.

The Young Officer

After his apprenticeship of nine months our tyro is or should be an officer in the full sense of the term. There should be no Godfather to guide his footsteps. If these stray off the straight and narrow path of service or Regimental custom, retribution must be severe, but always just. Nemesis should be masquerading in the shape of the Adjutant, who must invariably be an officer of the highest standard, not, as is so often the case these days, a fully qualified Head Clerk sporting a Captain's badges of rank and nothing else. On parade and off, in all matters of behaviour, dress and speech, the Adjutant must ensure that all young officers conform to the highest standards. The Commanding Officer and field officers should seldom, if ever, have to reprove a young officer for his turnout or behaviour. Should they find it necessary to do so, then the real fault lies with the Adjutant of the battalion.

Responsibility for Training

We have now conditioned the officer to his life as a member of the Regimental family, but the major task of making him efficient has hardly begun. The first concept not always fully recognised is that the Commanding Officer is responsible for the training and administration of his unit. "There are no bad units, only bad officers" is a hackneyed but true statement. A battalion can never be efficient at anything if the officers are not on top of their job. So, the first duty of a Commanding Officer is to train and administer his officers. Once he has achieved this, then the rest is child's play. Only too often a Commanding Officer looks to higher command to train his officers, and to instructors from Army Schools to train his men, leaving to himself only the task of administration of even that of pleasing his superiors by the application of "white-wash" or "wool-drawing" over their eyes. How, then, should a Commanding Officer set about his major task of training his Officers?

First, he must decide on what is to be taught to officers, who is to instruct them, and what time can be spared for special officer instruction. In short, he must make out a programme. Tentatively I should suggest one morning a week organized instruction and say four hours a week private study by individuals. In addition, certain individual officers will require extra instruction in certain subjects, the details of which are given later. He must ensure in planning his instructional programme that officers attend regularly. Nothing is so detrimental to good training as irregular attendance. It is for consideration whether the pre-war "make and mend" on Thursdays might not be re-introduced, the morning of this day being devoted to routine administration and internal economy conducted by Junior Commissioned Officers, Clerks and Non-Commissioned Officers, while the officers spend their time on specialized training, but this must be equally applicable to higher formations and such things as Courts of Inquiry and so on.

Next, he must be honest with himself. This honesty may well be induced by judicious advice or even the orders of his superior. He must first be certain if he is fully capable of teaching his officers all the aspects of their profession. If he cannot, then he must swallow his pride, admit his weaknesses to himself, and delegate some or all of the instruction to his Second-in-Command or some other officer possessing the necessary qualifications. He must, of course, ensure that his orders delegating instruction to others are carried out, and by frequent personal attendance ensure that interest and enthusiasm are maintained.

Tactics and Staff Duties

Now let us examine the subjects to be taught and the methods of teaching them. Tactics and Staff Duties are, to my mind, subjects in which continuous and general instruction should be given to all officers, while periodical particular instruction will be necessary in weapon training, field works, administration and so on. Let us start off with Tactics and Staff Duties. Obviously, the more senior majors and captains should know more of these subjects than the newly joined subaltern and the other junior officers. Equally, many Junior Commissioned Officers must be capable of commanding a company in the field in the event of war. Therefore, in the earlier stages of the individual training cycle, young officers and Junior Commissioned Officers should be exercised, while the more senior officers carry on the administration and interior economy of the unit. Later on in the season, when officer training is more advanced, the more senior officers should take part, and the Junior Commissioned Officers who are more junior should undertake routine administration, and so on.

Two tactical exercises without troops a month, each of 3-4 hours, is, I feel, the minimum essential in the battalion. This means that in a ten months' individual training cycle, the battalion should run twenty tactical exercises without troops internally for officers. These can be set and directed by one or two of the more efficient officers, or by the Commanding Officer himself,

and should begin at the platoon level (say ten tactical exercises without troops), and be followed by company problems (six tactical exercises without troops), to end with four tactical exercises without troops again at Company level, but introducing supporting arms in greater detail. Every tactical exercise without troops should have at least one map reading problem and a question to be answered on radio telephony. Some of the tactical exercises without troops, but not many, can be breakdowns in greater detail at a lower level of other tactical exercises without troops conducted on a Brigade or Station level.

As to Staff Duties, these can best be taught by written papers dealing with simple messages, operation orders and appreciations and, say, one morning a month devoted to practice in radio telephony, verbal orders and map reading, developing towards the end of the individual training period into simple headquarters and signal skeleton exercises.

Tactics and Staff Duties have between them used up three Thursday mornings in the month. The fourth may well be devoted to demonstrations of such subjects as a platoon or company defended locality fully dug and manned, a platoon or section patrol, handling of mortars, reorganization on a captured objective, the company in the attack and so on. When possible, this series of demonstrations should include private visits by all officers of the battalion to other arms such as Armour, Artillery and Engineers, there to study intimately their methods and tactics. Many of the demonstrations put on by a battalion can well be done by the Senior Training Cadre, which should be a recurring item in the battalion individual training programme. As one senior cadre of say three months' duration finishes, another is started.

I feel that the more senior officers in the Battalion, including the Commanding Officer himself, should be trained in tactics, Staff Duties and so on by the Brigade or Sub Area Headquarters Staff. This may well be carried out simultaneously to the tactical exercises without troops, demonstrations and so on at the lower level in the Battalion, which can be supervised by only one officer of the unit, leaving the other senior officers available for training under Brigade or Sub Area auspices.

Private Study

The study of Tactics and Staff Duties has filled up the four mornings a month allotted to organized instruction of officers inside the battalion, while we have expended some portion of the four hours of private study per week in our written Staff Duties papers. The remainder of the private study period can profitably be spent on, say, three evening lectures a month on current affairs given in turn by all officers of the Regiment. This means thirty lectures in the ten months' individual training period, or, say, two to three per officer. In addition, Law and a little Military History should be studied, and perhaps dealt with by written papers, discussions, lectures and so on, but the study of military history should as far as possible be kept to battalion or at the most brigade level.

Special Instruction

Now for periodic particular instruction of certain selected officers in such subjects as Administration, Weapon Training, Field Works, and so on. The young officer must be trained in his duties so as to be capable of passing his Retention Examination. This can best be done by attaching him in turn to the Adjutant, Quartermaster, and President of Regimental Institutes, and as far as possible by making him do much of their work. He should also attend selected training cadres as a student, so as to master Weapon Training, Field Works and the like.

Officers selected to attend various courses should, of course, receive special instruction to enable them to pass the Entrance Examination on arrival at the Army School. In my Regiment pre-war, an officer was expected to obtain a "Q. 1" at the least in any course he attended, and a "Q. 2" or "Fail" Qualification almost inevitably meant a change in his badges and buttons.

Concern is often evinced at the number of failures in promotion examinations. To my mind, the Commanding Officer should not have to undertake any special training for officers taking their examinations. If the officer training in the Battalion is carried out on the right lines, and the Commanding Officer ensures that his candidates do the requisite amount of private study *of the right type,* no more is required of him. Private study of the right type implies that the officer going up for promotion does not learn by heart such manuals as "Conduct of War" and "The Infantry Division in Battle." I do not consider these titles should even be known to anyone below the rank of lieutenant-colonel unless he is studying for the Staff College.

In general, I feel that Junior Commissioned Officers and Non-Commissioned Officers should be given far more responsibility, particularly in regard to administration and interior economy, so as to release the officers, more particularly the more senior ones, from routine, and give them time to get down to preparation of tactical exercises without troops, written papers and so on. If Junior Commissioned Officers take on more of the administration, junior officers can take on more of the work of their seniors, and, in the process, *learn themselves.*

Developing Initiative

Essential qualities in all officers are responsibility, initiative and coping with the unexpected. Pre-war, in a good Regiment, subalterns were not permitted to take their privilege leave in Fleshpotspore. They were required to go on a shooting trip in the jungle or hills or on a trek either on foot or on horse back. Things are different today. Finance, families in India as opposed to United Kingdom, and often early marriage, which aggravates the other handicaps, preclude "selfish" leaves into the blue. But pre-war the young officer whenever possible was also sent on detachment or given command of the skeleton enemy in exercises with troops. I personally learnt more of tactics, command, leadership and so on when in independent command for a month with a company in such places as Alexander Ridge Piquet near Razmak or when leading say

fifty men as skeleton enemy to the battalion or brigade.

Early in the war when given command of a battalion allotted internal security duty at Ambala, I made every new joined subaltern straight from an Officers' Training School or the United Kingdom take a platoon and an animal transport cart for three days over a set cross country course with the warning that the Battalion Intelligence Section would be watching them and, on occasion, attacking them if their formation or protective dispositions at the halt were faulty. Their nominated route eschewed the Grand Trunk and other major roads, and they moved light. On each of these expeditions I or a senior officer made a rendezvous with the Intelligence Havildar, who reported the whereabouts of the platoon, so enabling us to observe it and visit it for a chat and advice or a rocket to the officer. With the patrol went a Junior Commissioned Officer to advise the young officer only in an emergency. Many were the adversities encountered in the foothills, particularly when crossing "chos" and dry nalas with rainstorms in the hills bringing down sudden spates. Both the young officer and the men enjoyed these interludes in the routine life in cantonments, and the former gained immensely in self-confidence and his powers of leadership.

While detachments and the like are hard to come by these days, I feel they must be improvized at all costs, and the young officer must as often as possible be left out in the blue with a detachment of men to command and administer. Today active units are stationed all along the Himalayas from Dehradun and Chakrata to Bakloh, Dalhousie and Gurdaspur. Platoons or companies under young officers could frequently be sent from one station to the next, cross country, making the return journey in empty supply lorries or mechanical transport engaged on training drives.

It has been suggested that standards of knowledge should be laid down for officers of varying length of service. This is, I think, dangerous. Such standards or yardsticks exist already in the Retention and Promotion Examinations, and the various Courses that an officer has to pass during his service. The only standard that I recognize is that all officers of the rank of captain and below must be capable of commanding a company efficiently in any circumstance, and a major of commanding a battalion. In the last war many young officers with only a few weeks' training at an Officers' Training School were commanding companies in action with credit a year later. True, the niceties of administration were lacking, but they were tactically sound leaders imbued with responsibility, and enjoyed the confidence, respect and even love of their men. The young officer of today must equally develop these qualities, and, till he can do the same and better, is not truly efficient.

The Lure of the Office

One last point. Armies of today are far too office bound. Many senior officers have admitted to me that the normal routine work of a Commanding Officer can be done in an hour a day. This should be sufficient office time for all other officers in the battalion except per-

haps the Adjutant and the Quartermaster. Correspondingly, Brigade and Sub Area Staffs are equally too prone to be chairborne. Might I suggest that Officers' offices are kept locked up to 10 or even 11 a.m. and relocked at 4 p.m. In the hot weather, for health if for no other reason, all officers should be up and about by 6 a.m. at the latest, and in the cold weather by 8 a.m. They should be out on parade or planning training with an interval for breakfast up to mid-morning, and then only debase themselves by office work. Staff Officers, Quartermasters and the like must be going round units, barracks, training areas (e.g., ranges, gymnasiums, and so on) in the early hours watching training equipment in actual use and ensuring that they are at all times efficient. As things are, when an officer feels bored with training he slips into his ever-open office, and creates unnecessary paper to fill in the time till he can decently slip away to his quarters.

Every effort must be made by higher authority to cut down Station duties, such as Courts of Inquiry. Would it not be possible to assemble one or at the most two Courts of Inquiry weekly on a fixed day (why not Black Monday), which will each investigate two or more matters? As it is, Station or Brigade Orders convene a number of Courts of Inquiry on every day of the week, each lasting an hour at the most, and each requiring three officers, who waste a whole morning in the process. If this be not feasible, then it could be ensured that Thursday or any other day in the week is a "dies non" for all extra regimental duty for officers, thereby enabling Commanding Officers to muster their full officer strength for training.

COMMAND and CONTROL of ARTILLERY

Lieutenant-Colonel A. D. Watt,
Royal Australian Artillery

If possible, this article should be read in conjunction with "Command and Control in Battle of Field Branch Artillery," by Captain J. G. Hooten, which was published in AAJ No. 52, September, 1953.—Editor.

IN "Artillery Command and Control" (AAJ No 72 May 1955) Major I. A. Geddes makes a number of criticisms of an article on the same subject which appeared in AAJ No 68, January 1955. It is the purpose of this article to answer those criticisms.

Major Geddes concludes with a question—"Is the science—or is it an art—of command and control of artillery so abstract that it is not possible to be explicit?" It can be said at once that there is nothing profound about the subject, and it can be described adequately in simple language. At the same time it is necessary to guard against over-simplification and a too precise definition which, in matters of this nature, often lead to rigidity and inflexibility. It would be very easy, for example, to state categorically that if a regiment is in direct support of a brigade its fire is absolutely guaranteed to that brigade. Certainly such a statement would be explicit, and no one would be in any doubt—but it just does not happen to be the best way to use artillery.

The battle winning factor in the employment of artillery is its flexibility—the ability to produce large concentrations, quickly, on any part of the front. To decentralize artillery *fire* by allotting it out to subordinate commanders in penny packets of guaranteed fire would be to frustrate this ability and to brush aside the most important lessons learned during the past thirty years regarding the employment of artillery. Consider, for example, the effect of such a decentralization of fire at the brigade/battalion levels. Suppose that a regiment is in direct support of a brigade, and that each battery of the regiment is in direct support of a battalion. Suppose now that the division is attacked,

that each battalion of the brigade is involved and that each battery fires on the front of its respective battalion. The brigade commander would then find that, although he was charged with the responsibility of fighting the brigade battle, the fire power of the regiment allotted in direct support of his brigade was being applied in three separate places, and was not available to him to use in the way he considered best. The same sort of situation could arise at the divisional/brigade levels. Would such a situation really be acceptable to brigade and divisional commanders? Yet that is the sort of thing that would have to be accepted if in direct support meant guaranteed fire. Apart from the inflexibility inherent in such a method, there would be a grave danger of the artillery not being used effectively. The value of a concentration rises steeply as the number of guns is increased. The fact must be faced that a battery cannot seriously impede any but the smallest of attacks, whereas regimental and particularly divisional concentrations have at times had a paralysing effect on enemy assaults.

Everyone agrees that it is a bad thing—except in special circumstances—to decentralize artillery units. By what logic, then, is it considered a good thing to decentralize *artillery fire*? For this is what would happen if in direct support implied guaranteed fire.

The question now arises that if the CRA does have authority to use (on behalf of the GOC) the whole divisional artillery—which means units in direct support of brigades—to strike an effective blow against an enemy assault, how often is this likely to happen? We know that in a surprise attack by night the direct support batteries will normally be firing close DF in support of their affiliated battalions—as a result of calls by patrols or forward companies—before the CRA or divisional commander has sufficient information to be able to apply large concentrations. However, there is little to be gained by saying that a certain situation is or is not likely to arise. It is better to understand the factors involved. Assuming that the GOC really understands and has confidence in the effectiveness of artillery concentrations—and this must be accepted—the most important factors are the frontage and strength of the enemy attack, the amount of artillery available and the amount of information in the hands of the superior commander. Since these factors will vary very greatly, both separately and in relation to each other, it is clear that the GOC (or CRA) will not find the answer he seeks in a text book. The decision will be a matter of judgment based on knowledge and experience. In the North-West Europe Campaign there was no problem, because there was always plenty of artillery; in Korea also there was no problem, because the amount of artillery available was normally adequate in relation to the frontage of attack. What the situation may be in the next war is a matter for conjecture. The indications are that the flexibility of artillery will have to be exploited to the utmost.

Can the divisional artillery be in direct support of the division of which it is a part? The answer will be found by examining the essen-

tials of "in direct support," which are that artillery in direct support of a unit or formation will provide the necessary observation, liaison and communications to control all artillery fire in support of that unit or formation; also that the unit or formation can use the fire of the direct support artillery—within any restrictions laid down—without having to ask the next superior commander for it. No matter how much additional artillery is placed in support of a division, the divisional artillery is responsible for the observation, liaison and communications required to control all fire in support of the division. And, even when command of artillery is centralized under the CCRA, the division may use the fire of its divisional artillery without reference to Corps. In short, the divisional artillery is in direct support of the division. The fact that the divisional artillery is also an organic part of the division, which belongs to the GOC, does not pose any problem at all, provided that the meaning of "in direct support" is understood, and one is concerned more with employing artillery effectively than with cramping it by words.

Major Geddes appears to see the CRA merely as a Staff Officer adviser, with the various artillery regiments under command of the division. This view is inadequate. That the artillery regiments belong to the division cannot be denied—so also do battalions and armoured regiments. But the CRA is as much a commander of the artillery units as the brigade commanders are of the infantry or armoured units. Is the GOC always the authority—as Major Geddes suggests—for the movement of the divisional artillery? He is not. When the divisional artillery is centralized under command of the CCRA, the Corps Commander is the authority. One of the principal reasons for centralizing command of artillery at the highest practical level is to ensure that it is always correctly positioned throughout an operation. On the brigade level, if a regiment is placed under command, the brigade commander is the authority for the movement of the guns. Although there are other implications in the grouping of artillery for command, the tactical significance of command is the authority to move guns into and out of action.

Since artillery is a supporting arm, artillery commanders under whom artillery is grouped for command will always act in strict accordance with the commander's plan. But this does not mean that artillery commanders have no scope whatever. In this connection, Artillery Training Volume I Pamphlet No. 1 (paras 121 & 122) states:—

"As soon as formation commanders have framed the plan, and have decided the artillery policy, it is for artillery commanders to implement that policy. The problems which this will involve must obviously vary according to the operation in hand; but, for the most part, they will be related to certain basic functions which are the concern of artillery commanders under all conditions of battle. These functions are:—

(a) Deployment of the artillery resources.

(b) Allotment of the artillery effort.

(c) Fire planning.

(d) Control of fire.

"The correct planning and direction of deployment both initially and throughout the battle is the first essential in producing concentrated fire at the times and places that it is required. It is the concern of artillery commanders at all levels, and is solely their responsibility. The closest touch must, however, be maintained with formation staffs, because deployment areas and the times and routes for movement into them must be co-ordinated with the dispositions and movements of other troops. This is particularly the case where large forces are involved. It is for artillery commanders to state their requirements, and for formation staffs to approve the areas selected and to allot routes and timings for movement."

Major Geddes suggests that the forward troops will always ask: "What fire support can be relied upon at all times and under all conditions?" The apparent simplicity of this question disappears when one takes a second look at it, and one wonders whether the troops really would ask this question. Well, there are two ways of "guaranteeing" fire (subject always to the enemy playing the game). One is to place artillery under command of a unit or formation and the second is to issue a fire plan in which artillery units are ordered to undertake specific tasks. The short answer to the question is that the troops may rely on the maximum possible support. Troops who have confidence in their artillery know this. They also know, if they are well trained and well led, that the infantry or armoured commander in control of the battle will employ all his resources to the best advantage.

ADMINISTRATIVE PROGRESS in the ATOMIC AGE

★ ★ ★ ★

Lieutenant-Colonel Robert B. Rigg, Armour
United States Army

IF THE papers in our in-baskets suddenly turned into stone tablets, typewriters were atomized, Mimeograph machines ran out of fluid, and half-pound M-1 slates were issued in lieu of paper, the Army could carry on, although military occupational specialty adjustments would see clerks and typists shunted into muscular, and even gun-wielding, jobs. This could never happen. But something revolutionary should.

Today, a military campaign through the Swiss Alps by a 25,000-man task force would probably see 700 men directly chained to typewriters, Mimeograph machines, and related appurtenances of administration. Another 600 men would probably be relegated and related to periphery tasks. But these "serfs of a system" need not be damned, for they are normal to this *administrative* (and atomic) *age*.

From Military Review, U.S.A.

Marshal Suvarov led such a campaign in 1799, and his force numbered about 25,000. He launched one brutal 2-day battle with the order, "The opposing army will now be taken prisoners." In this historic campaign his clerks and administrative personnel might have numbered 290—but probably about 140. He won!

The handwritten messages, carried by runners, and the voice commands sometimes lost in high winds during the age of horseback command have given way to communication over wider fields of action by telephone, teletypewriter, and multiple types of radios. Parallel with the great rise and ratio of these latter means of communication, which commanders before the machine age never had, has been the rise and eye-straining crescendo of massive volumes of paperwork.

Military brevity of correspondence held forth in an age when the human hand had to fashion the mis-

sives. It grew sick when the typewriter appeared, and it died when the Mimeograph machine began to rotate. The typewriter and reproduction machine—with their precision and speed—instead of shortening administrative processes have intoxicated the verbose and inspired the silent.

The telephone—conceivably a means to eliminate a degree of written correspondence—has not eliminated correspondence to any noticeable degree. Instead, it has been backstopped with memo for record forms (which must be often typed) an acknowledgable necessity that is often abused.

Thus, possessed as we are of a mass of ultra-modern communication means, we slow our efforts, divert our energy, and monopolize time and attention on minutia and detail by our steady manufacture of paperwork. Slowly, like a descending fog, a volume of papers and paperwork have come to cloud our military clarity, efforts, and efficiency. Furthermore, the snow of shuffled papers is slowly leading to casual contempt and the weight of a significant directive is lost or ignored amid the confusion of too much written about too many things. The desk-binding effect of our administrative procedures is reaching the point of absurdity.

Signs of the Times

Back when most lieutenant-colonels were second lieutenants, a company bulletin board was about 3 by 5 feet. Today, the average company has about double this space posted with memos, directives, and other instructions. The permanent directive portion of this board—sometimes it is one separate board—is awe-inspiring in its amount of fine print, and is too often placed in a dull light.

The company kitchens—once administratively governed by a master menu, cook book and ration list—are now graced with desks and, in some cases, file cabinets, although the more vigorous commanders manage to eliminate the latter or at least reduce them in size. Administrative requirements vary from place to place, but in some areas 6 months back-files must be kept by the mess steward. The amount of reports and records that company messes are now required to maintain indicates that before too long a clerk typist will be required for the kitchen staff.

The only present asylum from administration and paperwork is the company latrine.

Many companies are, of necessity, adding an extra clerk to their orderly rooms who is not authorized on their table of organization and equipment. For, while the level of clerk efficiency could be improved, it is a well-known fact that companies lose their best clerks to higher echelons. It is on the company level that paperwork is handicapping the Army most. Here at the final receiving end of all directives, the harassed commanders work nights and too many daylight training hours—all at the expense of unit mission and training.

Companies gained a unit administrator—a warrant officer—by virtue of the descending paper load. These administrators were a great help, but they have been eliminated. Such

personnel cuts are admirable in purpose, but they should be proportional on levels above the regiment. It is all too often that staff administrators on higher echelons project the mandatory report requirements that so over-burden companies and battalions.

One of the best-selling military text-books is not concerned with combat, tactics, gunnery, or training. It is on company administration.

Out-Basket Dictatorship

Fifteen years ago a small memo tab could send a basic paper a long way. The tab comment was cryptic and handwritten. Now business is done with an 8 by 10 inch disposition form (DF) of such magnificent chlorophyll space that the sender feels he has failed in duty if he has not written at least one full paragraph, and he usually does more.

The "make it look neat and precise" school leads too many officers to have DFs typed. This only requires a typist! Human handwriting, while legible enough for the typist to copy, is not considered adequately legible for the recipient of the DF. And too many DFs fall in the category of "comments on the comments" wherein a 5-minute meeting or telephone conversation with other staff members could reconcile the views or solidify the recommendations.

Out-basket dictatorship breeds typewriter empires—batteries of buttocks and clacking machines—whose products create in-basket slaves on other levels.

General George C. Marshall has long held that any problem or subject can be summarized on a single page. He always demanded brevity and clarity of expression. His principle is fortunately preserved in fair degree in some of our higher staff levels, particularly on the Joint Chiefs of Staff and on the General Staff levels at the Pentagon. Business within these staff levels is, of necessity, involved in the study and production of many papers; the need for record and recording is essential because of the weight of the subjects and decisions handled.

However, at his first meeting with the Army Staff, General Matthew B. Ridgway, the Chief of Staff, remarked, "I think we can do much more by better organization—more

———WINE-STEIN THEORY

$$(1)\ \frac{\text{Size of Staff}}{1} \times \frac{(\text{No. of typists}) - 2 \text{ coffee calls})}{1} + \frac{\text{Available Paper}}{5 \text{ Carbons}} \times \frac{\text{No. of Mimeo Machines}}{(\text{Available Ink})} = \frac{(\text{Paperwork})\ 4}{(\text{No. of In-Baskets})}$$

$$(2)\ \frac{(\text{Size of Staff} \times (\text{X Hrs.})}{(\text{In- and Out-Basket Hrs.}) + (\text{Suspense File Hrs.})} = \text{Relative Productivity (Action or constructive thought)}$$

$$(3)\ (\text{No. of Daily In-Basket Papers}) \times (5 \text{ Min. reading time}) \times (2) \text{ Min. indecision or hesitation}) \times \frac{(3 \text{ Min. Co-ord. time})}{1.5} = \text{Minimum Hours At Administration}$$

of the spoken than the written word, less attention to the written record for alibi purposes, and more efficient and adequate delegation of authority to subordinates."

The extra copy department is grinding in full gear, and has developed several subdivisions, the first of which is the "insurance copy division," or the "never let me be caught without a record of what everyone else has said." This "let me have an extra copy" division generates waste time in at least two directions.

The "let me have a memo for my protection" division is composed of the weak and uncertain staff officers who are untrusting of others and of themselves! They feel superiors and colleagues will not trust their word later unless it is in print, or they seek to divert blame for an action which might later be considered as out of line. This fraternity of alibi spellbinders builds files into astronomical proportions.

The "we must have a copy for our files" division is too often made up of the lazy and ill-conditioned set whose hall-marching or telephone-lifting capability is in inverse ratio to its energy and enterprise at file shuffling.

Also party to this bureaucratic paperweight-lifting cult are those individuals whose voices in staff session—or before a superior—are weak, but whose suggestions and words find real strength in a text and signature that can be deftly dropped in an out-basket. The roaring recipient may burn holes through the paper and make loud remonstrances to the message centre deliverer, but the originator is relieved of the initial torrent.

The consumption of paper and carbons is incidental. The consumption of time is consequential.

Statistics, Surveys—or Action?

The demand for reports upon which to base statistics has reached the level of military unreality.

There are supply and logistical fields where record keeping is essential and vital. Even these break down sometimes and lower echelons must be burdened with survey-making.

The system of requiring accident and incident reports is well intended. These figures combined with AWL and a few other rates can index—to a degree—discipline, morale and other factors. But in places the system appears carried too far.

Definitions have been established to place incidents in minor and major categories; the regulations and specifications were explicit that damage exceeding 50 dollars in repairs placed the incident in the higher category. This worked satisfactorily until the summer of 1953, when Ordnance considerably raised its figures for vehicle repair and labour. The statistical-reports staffs were late in catching up with this up-marking, so the result was that incidents of still minor category had to be raised to that of major significance. There were numerous reports in transit that had to be re-examined and resubmitted.

Many finely drawn definitions have so troubled the troop units that some of them, in disgust, settled minor damages out of individual pockets, and simply covered up the accident or incident rather than be

bothered with time-consuming paperwork.

In Germany, men returning to the barracks 10 to 20 minutes after curfew became reportable statistics in the same category as a drunken, MP-fighting soldier who was brought back after deliberately staying out five hours beyond the prescribed time. There exist thousands of written words, regulating such reporting systems, defining in almost legal terms the types and categories of human errors and accidents to be reported. These directives require reports *in addition* to the well established and normal reports of survey, accident reports, and investigations.

The resultant statistics are used to index the excellence of various units, but the "X" factors have never been integrated into the formula. Thus, an armoured unit, training its tankers in aggressive and realistic exercises, may damage a fence, a vehicle in blackout driving may slide into a ditch and be damaged, while another unit training dismounted, and perhaps travelling only a fraction of the monthly mileage—and that over better roads—will appear statistically better.

A staff officer initiating a system requiring reports should inquire into the purpose and objective of his measure seriously—will the material be used for action or just a set of file case figures?

Military History—Too Little Paper

One of the most important fields of professional facts and lessons to be learned lies in military history. Only recently has renewed emphasis been placed on the current recording of military history. It is in this field that commands and staffs have been too brief and incomplete in their recording of information. Here, for the real permanent record, textual volume can be afforded.

Conclusions

Too many officers are writing and reading but not acting or using modern means of verbal communication. Excessive memoranda and missives on piddling subjects and minutiae are obscuring and confusing the more central issues and subjects. Staff members type up too many papers to themselves. The demand for more typewriters and typists is growing, not lessening. Many higher staff officers fail to boil down their written texts sufficiently—younger officers do not know how.

In places there are too many down-the-hall typed memos, and not enough down-the-hall walking and talking.

Military training and other missions are not being served properly because of the excessive demands by some higher authorities for reports.

Some staff elements have developed into statistical bureaux.

Younger officers are growing up in this atmosphere of compounded reports, and they are learning bad habits as a consequence.

Unless the trends of excessive paper shuffling and report requiring are curtailed to military—and not statistical—reality, efficiency and combat excellence, without a doubt, will suffer in the long run.

Military brevity begins with the elimination of paragraphs and ends

with the elimination of pages — and papers.

An Army-wide week should be designated, wherein all commands will review their administrative procedures with the object of eliminating excess paperwork. Examination should be made of reports systems, staff co-ordination measures, form simplification, and the general load of paperwork. Critique should follow the examination. Where pertinent, a military-brevity writing course of instruction should be given all staff officers.

Brevity—The Lost Chord

Seven normal paragraphs can require 60 seconds' reading time, and they will generally consume more than one page. Seven sentences will often suffice.

A fine example of studied brevity was the Joint Chiefs of Staff paper which gave General Elwood Quesada his mission, as well as authority to establish the 9,000-man Joint Task Force III to conduct atom bomb experiments at Eniwetok. The operation, staged from Washington, D.C., Eglin Field, Florida, Los Alamos, New Mexico, and multiple other points, embraced the Atomic Energy Commission and all military services. This Joint Chiefs of Staff charter was one page long, double spaced!

When he was Commander in Chief in Spain in 1810, the Duke of Wellington received a request for another report from a member of the Staff of Lord Bradford, Secretary of State for War. In reply, the Duke of Wellington wrote:

"Spain 1810

My Lord,

If I attempt to answer the mass of futile correspondence that surrounds me, I shall be debarred from all serious business of campaigning. I must remind your Lordship for the last time that so long as I retain an independent position I shall see to it that no officer under my command is debarred, by attending to the futile drivelling of mere quill drivers in your Lordship's Office, from attending to his duty, which is, as always, to train private men under his command."

EMPIRES of LANGUAGE

Warrant Officer C. M. D. Flinn,
Australian Army Education Corps

IN the development of society, language preceded writing by millennia; it is the basic social fact, and linguists trace the 2,796 separate languages spoken today from only a few sources. Viewed in this perspective, the Germanic languages from which English has stemmed are kin to present day Hindi and Persian, and, with most of the languages of Europe and some of Asia, have developed from the language of a primitive pastoral people living somewhere near the Dnieper River. Thus "grad" meaning town in Leningrad is cognate to English "garden," while English brother is kin to Sanskrit "bhratar" and Latin "frater." These primitive speakers of this language under the pressure of hunger and war, spread and mingled with other groups over much of Europe and Asia. Under the stimulus of differing environments and experiences, their early language tended to break down into dialect and finally into separate languages very quickly. Uniformity was confined to small groups only, sharing the same experiences, though even in those remote days the language of the better organized and co-operative groups would tend to spread.

The necessities imposed by the development of barter and the ultimate growth of trade were factors tending to fix language. The development of picture language to convey ideas, as the Egyptians used it, where a drawing of house represents a house, was carried a stage further when the sound itself was represented by a symbol as in some

of the syllabaries of the present day. Greater social complexity and the pressing need to record transactions led the enterprising traders of the Syria-Palestine seaboard to fix the consonants by signs. The necessity had created the tool, and by the time another trading people, the Greeks, had added symbols for vowel sounds, word development had made a giant stride forward. From then on, it was possible to fix a language for purpose of communication; from that date history, too, was born. It is an amazing fact in the human story that all alphabetical symbols in use are variants from the nineteen consonantal symbols first used by the Phoenicians as a trading aid.

The simple ABC had become a potent factor in the spread of civilization. Appearing on coins, it impressed the barbarian and spread the idea of literacy over the caravan routes and the great waterways. Along with the language, the conceptual patterns derived from their culture were imposed by the superior literate conquerors, and the kindred Persian and Greek languages contended for the control of the Middle East and Asia Minor. With the conquests of Alexander the Great, Hellenistic cities grew up all over the Middle East, and the cultural drive of the language of the Greeks was such that their conquerors, the Romans, found it necessary as a second language. Not surprisingly, Greek is the language of the New Testament — a fitting vehicle for a dynamic religion. For this is one great factor involved in the spread of both language and literacy—in modern terms, an ideological drive.

In the Italian peninsula, the Etruscans and the Romans had adapted the original Greek symbols to their own needs, developing the Roman script which we still use today. No doubt the Roman organizing genius, the great military roads and the multiplicity of records on stelae and monuments were factors in fixing this alphabet, just as they were factors in spreading the Latin language all over Western Europe to the British Isles. As Roman arms subdued the tribes, all those who sought to advance themselves would find it necessary to learn this alien speech, and it is this "pidgin" Latin, not classical Latin, spoken by legionaries, ostlers and publicans which laid the foundation for the great Romance languages of Europe —Italian, French, Spanish, Portuguese and Roumanian.

The writing of the sacred books and the force of religious conviction greatly aided in the spread of what are still the dominant languages of the world. Such was the Latin of the Christian world, such was the Church Slavonic or Cyrillic developed from the Greek by the monk Cyril, and imparted to the Scandinavian tribe of Rus in the ninth century, such was the Arabic of the Koran or the Sanskrit of Hinduism and Buddhism, spread by proselytizers even into the Indian Ocean. Another factor was now involved: it was only in the greater languages that word symbols existed to convey the more complex conceptions of civilized people; the more primitive languages only possessed a vocabulary commensurate with the simple needs of their speakers. So was developed the conception of a supra-national lan-

guage such as Latin remained until the seventeenth century—the language of law courts, of international intercourse and diplomacy, in that field the language of Queen Elizabeth and of John Milton, who was Latin secretary to Oliver Cromwell.

In the Anglo-Saxon Danish settlement of Britain many dialects were established, but one, the ancestor of our present-day English, gained dominance. All highly inflected, the dialects had shown a tendency to shed inflexions as kindred tribes whose root-words were the same, but were furnished with different affixes, sought to communicate with each other.

As it happens, the Norman conquest, forcing English "underground" as a "people's" language, accelerated a tendency already in evidence. For generations Anglo-Saxon remained mostly a spoken language—word endings and inflexions were dropped wholesale—and the language had become an adult language in which sense was determined by word position. Brevity and terseness were its characteristics—"live and learn" the motto of its speakers. By the time it emerged, and merged with Norman French to become the language equally of Saxon and Norman, it had developed a further characteristic of a future world language. It was receptive. It continued to assimilate words from the Norman overlords, from the Latin of the Courts and the Church, from French and later from the different classical Latin of the Renaissance scholars. By the time of Marlowe and Shakespeare, it was a sinuous, expressive and colourful language; completely unlike the cognate German, it continued to assimilate words as England's adventuring younger sons acquired new concepts and as their horizons expanded to embrace the world.

Meanwhile another great force was aiding the spread of established languages—the invention of printing. "With these twenty-six soldiers of lead, I can conquer the world," Caxton said. In Shakespeare's day, English was spoken by barely five million people. When the first Encyclopedia Britannica was published in 1760, English, in all its dialects, was spoken by 14,000,000 people. Today, English is the most widely read language in newspapers and books, while more than half the world's radio stations broadcast in English. What are its chances in a world increasingly committed to measuring even the best tools of communication in ideological terms? United Nations debates bring home forcibly that all languages fall short in directions where past experience has not developed a concept; there is no precise Russian concept for "jurisdiction," and the Chinese alone had to coin over a thousand new words at the San Francisco conference. The need for a common language which would be understood by all participants is a pressing one—meantime, UN has established a programme of linguistic research to devise the impossible, dictionaries of exactly equivalent words in the five official languages, English, French, Spanish, Russian and Chinese. For language is living, language is metaphor, and precise equivalents in living languages do not exist. Meanwhile a one-hour English speech made by

a delegate is estimated to require four hundred man hours put in by 124 different persons before it can be permanently recorded in the five official languages.

One thing is certain—the great languages were not made by grammarians — grammarians merely codify what the people in the ceaseless interchange in the courts and the market place, in social and domestic life, hammer out for themselves. Alphabets have been altered by fiat, as in Turkey, but language has proved more elusive. However, this generation has witnessed some striking efforts at simplification. Chinese, a monosyllabic language, is hampered by its script; it has no alphabet. In 1923, James Yen began a campaign under the name of Mass Education movement, using a limited number of characters, 1,200 out of 30,000, to form a Basic Chinese. Under the pressure and fervour of conversion to Communism, vast numbers of the eager illiterate are being pushed through courses in literacy involving a further simplification of the more frequently used characters. Two to three million workers are reported to have attended part-time schools in 1944, while 48,000,000 peasants attended winter classes. These classes are in the vernacular; widespread illiteracy makes reform comparatively easy, but for this generation forms are in a state of flux. The common language of China and used at UN is Mandarin (a word of Portuguese origin!).

The sub-continent of India is the scene of paradox today, not least in the field of its linguistic future. English, as the only language spoken by educated Indians all over India, provided the common medium of communication which achieved Indian independence. Meanwhile a domestic language problem exists in that India, attempting to build her political future on a foundation of Parliamentary democracy, has pressing need for a universal language. Until 1965, that language will continue to be English. "Let us not make the mistake of giving up the official language, which has helped us to bring about administrative, political and linguistic unity, and substitute in its place different regional languages which may sacrifice and undermine our unity." The words are those of Mr. Nehru. It is impossible to assess the importance of English in statistical terms, but the English language press is the only national press, and English is the paramount medium in the field of Indian journalism at present. After 1965, Hindi, claimed in the 1951 census as the mother tongue of 108,000,000 people, will supersede English. But Hindi to most Indians remains a foreign language, the schools are switching to regional languages, the flourishing film industry is catering for big audiences in the regional languages, and the Communist party in this one respect has advocated regional language development to embarrass the central "bourgeois" Government. One element in the Hindu-Moslem conflict in pre-independence days was linguistic—the Islamic people had developed a new language, an admixture of Hindi and Persian and written in Persian script. Now known as Urdu, it is the official language of Pakistan. Mahatma Gandhi, with a full awareness of the necessity of a common medium which could be

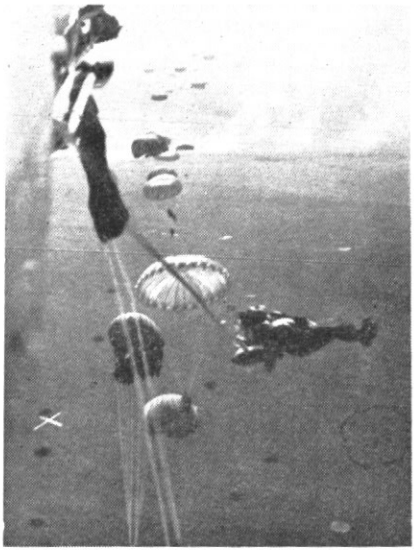
accepted; advocated a national language combining features of Hindi and Urdu and called Hindustani. Though this would seem theoretically desirable as presaging the future political unity of the subcontinent, the mutual distrusts and the emotion engendered when anything as intimate as language is discussed make Gandhi's dream unacceptable to the present generation of Indians.

Meanwhile there exists a flourishing Anglo-Asian literature. In this field, the English language "is chosen," as Mulk Raj Anand writes, "for its graces," and no doubt because to the mentally alert, English is still the key to open the door to the ideas and development of the outside world. When the agenda for the recent meeting of the Afro-Asian Powers at Bandoeng, in Java, was under consideration the medium of communication to be used must have been considered very closely. The gathering included distinguished representatives from the two continents, but in the many languages spoken as a first language by the members there was no language common to all. Because of the long history of the British peoples in the exercise of Parliamentary democracy, the English language is rich in words whose meanings and connotations facilitate the meeting of minds. It is therefore not without significance that President Soekarno chose, on opening the conference, to couch his address in English, and English continued to be used freely throughout the conference.

Meantime, as has been pointed out by Sir Ivor Jennings, the people of the United Kingdom are engaged in a tremendous experiment in converting colonies into a great community of free and independent nations. In this work, the English language is again the basic instrument—without that, the dream would remain a dream. The Aryan group of languages, and in particular English, have in their custody the bulk of scientific knowledge, and in the field of science some measure of international co-operation has already been achieved. The form of linguistic shorthand in the system of mathematical notation is universal throughout the civilized world. The musical scale is understood at least by a select coterie, and so is throughout the world the modern "alphabet soup" of NATO, SEATO, UNRRA, UNESCO.

It is the purpose of this article to indicate that the tendency to diversity characteristic of human language has been replaced in increasing tempo under the stress of modern needs by a tendency to standardization. Stage, screen, radio, the press and television have a tendency to set up example not only of language but even of systems of utterance—the sound track is playing its part in featuring a new universal English. We in Australia, formerly remote from the great centres of civilization, fortunately possess a great degree of linguistic unity already—by virtue and accident of settlement in a period when communications were improving. The steamship and the telegraph were instruments which overcame the extreme geographical isolation in which dialects develop, and indirectly facilitated federation.

It seems certain that the English-speaking network will remain a



★ The World Parachute Jumping Championships

A Precis of a RAF Report
Major M. B. Simkin,
Royal Australian Infantry

IT was decided last year that for the first time Great Britain should be represented in the World Parachuting Championships, to be held at St. Yan, France, in August. Other participating nations were:

France
Italy
Yugoslavia
Czechoslovakia
Russia

Unfortunately the British decision to compete was not made until late June and bad weather further curtailed the time available for training. However, a team of five comprising four Air Force and one civilian was selected from the seventy-odd Service and civilian aspirants who volunteered to take part, and four weeks' intensive training was carried out at the RAF Parachute School.

The rules of the championship required each member of each team to complete the following five descents:

1. 5,000 feet — 20 sec. delay — possible points 100 (lose 10 points for every 0.2 sec. error).

unifying factor through the world in the next few decades—democracy at work finds a readier voice in English than in any other language, and the speech communities of different races which use it, use it freely to translate and discuss, to argue and confute, to publish and to teach. Whether the language spoken by the future inhabitant of Cosmopolis will be English cannot be predicted; but it can be predicted, and with certainty, that whatever language is devised, adapted, or adopted as a future world language, it will owe much of its increased vocabulary and concepts to English.

For every triumph a price must be paid. If, in Churchill's words, "the ever-conquering English language" surmounts this last barrier, too, in its flexionless form, with a completely reformed spelling and an alphabet of perhaps forty letters, covering all sounds used, it will be less like the English of today than today's language resembles that of Chaucer, or for that matter, Spanish, Esperanto or Interlingua.

There are three requisites for all good writing. The first is clarity, the second is clarity, and the third is clarity.

—Anatole France.

Precision landing — possible points 200 (lose 1 point for every metre away from target point).

2. 5,000 feet — Same as descent No. 1.

3. 2,000 feet — Immediate opening, precision landing — possible points 200 (lose 1 point for every metre away from target point).

4. 2,000 feet — Same as descent No. 3.

5. 5,000 feet — 20 sec. delay — possible points 100 (lose 10 points for every 0.2 sec. error).

   Stabilised position — possible points 100 (lose 2 points for each 0.1 sec. longer than 3 secs. to reach stabilised position).

The Championship began in light wind conditions on 4th August. The teams drew lots for the order of competing, and one member of each team in turn made his first competitive descent.

This first test was a delayed drop from 5,000 feet, followed by a precision landing, and it was soon obvious that the "Iron Curtain" countries were setting an unbeatable standard of performance. With their excellent equipment, and skill born of long and intensive practice, their parachutists began to cluster around the target. The other nations were left behind immediately, not least the British who, possibly because of the strain of the occasion, simply could not reproduce the form shown during practice descents made only two days earlier. At the end of the first day, when the first test had been performed twice by each man, Russia was clearly in the lead with a team score of 725, their nearest rivals being Czechoslovakia with 595. Great Britain lay fifth with a modest 386.5.

A meteorological report of low cloud during the course of the second day caused an alteration in the Championship programme, and on 5th August each team made two low level descents instead of the style and timing test from 5,000 feet. Once again the Russian parachutists, using their square parachutes with great skill, formed a group within 30 metres of the target, many of their landings being made within the arms of the cross. Fetchichine returned a score of 4.47 metres and 4.85 metres in his two attempts at this test, and his team mate Kisinov followed this up with 8.37 and 17.62 metres. The British team could not match this almost incredible accuracy, although they were successful in landing a consistent group within 100 metres of the target. This was in itself something of an achievement, for weather conditions varied considerably throughout the day and steering technique had to be modified accordingly.

The final test, a descent from 5,000 feet in which points were awarded for stability of position during the free fall and accuracy of timing in opening the parachute at 20 seconds, was held on 6th August. The marking of stability was very rigid, any deviation of 90 deg. between 3 seconds and 18 seconds causing forfeiture of all points for style, and although each man in the team achieved stability throughout the main part of the fall only one succeeded in maintaining his position for the full period of the test.

The final results of the Championship were as follows:

National Championship

	points
1. Russia	1862
2. Czechoslovakia	1598
3. France	1487
4. Yugoslavia . .	1429
5. Great Britain .	1090
6. Italy	704

Individual Championship

1. Fetchichine (Russia).
2. Maratkine (Russia).
3. Chasak (France).
4. Kosinov (Russia).
5. Milicevic (Yugoslavia).
6. Jehlicka (Czechoslovakia).

It is interesting to note that two women, one from Russia and one from France, came within the first 20 placings of the individual championships.

The Championship ended with a closing ceremony at St. Yan on Saturday, 7th August, when prizes were presented to the individual and team champions. All competitors then travelled to Vichy for a Mayoral Reception and a Banquet. Speeches were made by officials of the Aero Club of France and other organizations, and each competitor was presented with an album of photographs taken during the Championship. After the formal banquet the celebrations were continued in an atmosphere of great international cordiality, and one member of the British team elicited from a Russian counterpart the following interesting information:

(a) Parachuting is recognized as a sport worthy of government subsidy and young men and women may engage in it without any cost to themselves.

(b) As a result of this there are alleged to be some 230,000 trained parachutists in the USSR.

(c) Training for the 1954 Championship began in 1952.

(d) The party to travel to France was selected one year before the championship and had trained as a team ever since.

In view of this, it is not difficult to understand the overwhelming success of the Russian team.

The principal aims of entering a British team in the Championship were:

(a) To gain information on world parachuting and to establish contact with parachutists of other nations.

(b) To provide a nucleus of British parachutists with the experience required to train themselves and others for future competitive jumping. (The next World Championship is to be held in Moscow in 1956.)

(c) To arouse official interest in amateur parachuting in the country.

In the first two aims, the project was undoubtedly successful. Great Britain is now in a position to compete with any other nation in future championships. Whether she can do so on equal terms and with high hopes of success will depend largely upon the degree to which the third aim has been achieved.

BATTLE — Old Style

C. C. Soden

FIGHTING, especially jungle fighting, is a dirty business. The stealthy approach, the sudden burst of sub-machine gun fire, followed by a hasty "mopping up" and away before the enemy have fully realised that contact has been made. Jungle warfare—jungle law, no other words can describe it, and yet a bare two hundred years ago battle was such a formal, ceremonious affair that the opposing sides actually dressed their ranks, and in many cases the officers saluted their opponents before opening fire.

To fully describe just how it was all carried out we can do no better than slip back to Marlborough's time and accompany a battalion from first to last on going into action.

It is night, a night of slashing rain and biting wind and on the waterlogged ground with nothing in the way of blankets, groundsheets or greatcoats, which latter incidentally were not to come into the picture for another century, the men drag through the long hours in an abyss of misery.

Many squatting in the mire have removed their white cross belts and thigh length gaiters and hung them round their neck, for as usual there will be an inspection before going into action, and despite the appalling conditions prevailing woe betide any man who appears on parade with dirty equipment or attire. In irregular rows between the lines of platoons the five foot long "piled" flintlocks sag in grotesque angles as they sink in the quagmire. From the older men, veterans of Ramillies and Blenheim, rises a monotone of profanity. From the younger ones, many just arrived after impressment in England, come unrestrained sounds of sheer misery, both on account of their present condition of existence and the fact that in most cases they have been pressed into service and shipped directly overseas without being given a chance to inform their wives and relations what has caused their sudden disappearance.

The driving rain has now eased off, and in the chill dawn the dull thudding drum beats and shrill

notes of the fifes sound the "reveille," and with unconscious sighs of relief the huddled mass of uniformed misery struggle to their feet and await the appearance of the feeble glow of lanterns which heralds the coming of the platoon sergeants with their breakfast.

Along the line passes the NCO, alongside whom is a private carrying a large sack, into which the sergeant delves and brings forth hunks of bread, one of which he hands to each famished man.

According to regulations, a pound of beef should accompany the bread, but, as was so often the case, the "Regimental Food Master" had failed to see that the meat ration was on hand. For those who possessed the requisite penny, a mug of ale and another piece of bread could be obtained from the "Sutlers'" tent nearby, but in those days few could rustle up the necessary coin, the custom of the time being to dole out all payments less "stoppages" at the end of the campaign.

A few moments later will be heard the long double roll as the drums beat the "Assembly," and the men get frantically to work in an effort to rid their white cross belts of all traces of mud. The long canvas gaiters are donned and pipeclayed on the wearer, the subsequent process of drying out from this saturation point being responsible for the fact that in Marlborough's time around fifty per cent. of the troops were so crippled with rheumatism as to be completely unable to keep up the normal marching pace.

The "Marker Sergeants," origin of the latter day "Colour Sergeants," now pluck their Company Colours from the muddy ground and fall in for preliminary inspection by the Regimental Sergeant-Major, which being completed they march stiffly away to the position assigned them.

In the centre of the bivouac a small party consisting of two Ensigns and four sergeants carrying pikes instead of muskets form line in front of the Regimental Colours. Two of the NCOs hand their pikes to their companions and dislodge the flags from the collapsible tripod in which they have passed the night, and hoist them into the belt sockets of the Ensigns.

This done, the whole party moves off and takes up a position ten paces in front of the centre Company Marker. The Company drummers then march off and station themselves alongside their respective Marker Sergeants, and at a signal from the senior sergeant of the Regimental Colour Party beat the sharp flam of the "Assembly."

The Battalion Commander emerges from a small tent, the privilege of possessing which he alone enjoys, strolls across to where his officers are standing in line awaiting him. The latter present a very gallant appearance, each man arrayed in a full skirted scarlet jacket heavily braided in gold on pocket flaps and wide turned back cuffs. At their throats silver plated gorgets are half hidden beneath the folds of fine lace cravats, undercuffs of the same material falling over their hands to the finger tips. Their waists are encircled by wide silk sashes, beneath which is worn a leather belt in which is stuck a brace of heavy .525 calibre smooth bore pistols.

The CO, a veritable fashion plate of sartorial magnificence, takes their salute and delivers what today would be termed a brief "pep talk," after which he turns to a grizzled old major, orders him to take over the command, and saunters off to take his seat in a small field carriage awaiting nearby. In regard to this transfer of control the following scrap of information may not be widely known.

At that period, and in fact right up to 1840, the various degrees of commissioned rank were obtainable by purchase. Promotion by merit was of course in existence, but should a senior vacancy exist in any unit it was open to any officer or even civilian, by paying the required amount, to secure the coveted post. In consequence of this fantastic state of affairs, it was no unusual thing for battalion commanders, while reaping the social and financial benefits accompanying such rank, to be completely devoid of anything other than the most elementary knowledge of military affairs, in which case it was the recognised custom, when on active service, to hand over command of the unit to some junior officer of proved battle experience, the CO himself watching the fighting operations seated in security and comfort in his coach, and, when the battle had ended, reassuming command and being accorded full credit for any victory gained. Needless to say, his understudy shouldered all blame if things went wrong, providing, of course, he lived to do so.

The men having fallen in on their Company Markers, the officers proceed to carry out a formal inspection of all items of clothing and equipment. Now and then can be seen the unusual spectacle of a private soldier leaning forward to receive a few sharp blows from the inspecting officer's cane, for in those days summary punishment up to a dozen strokes could be delivered by the officers for such minor crimes as sneezing in the ranks, scratching the head or giving the officer a "cross look."

Inspection over, the platoons, all the time in full sight of the enemy not many hundreds of yards distant, await the command "Prepare for Battle," which being sounded on the drums each man examines his flint, replacing it if worn away by one having a sharp square striking edge. Careful attention is also given to the "fizzen" of the priming pan cover, any dirt or mud adhering there being scraped away, for such would prevent the flint making direct contact with the steel to create the necessary shower of sparks.

In the rear of the unit is stationed the Regimental band, equipped in most cases with the remarkable leather "brasses" of the period. On the right flank of each Company stand two drummers, the instruments they carry being the larger type "Battle Drums," which will come into operation when the battalion moves off to the attack, the Band itself remaining behind.

A short distance in the rear of the Band are gathered a motley throng of frowsy womenfolk, who eye the operations with vulture-like interest. Coming within the category of camp followers, these wretched bedraggled specimens of femininity, some of them wives of the men in the ranks, others straight-out prostitutes, are permitted to

draw scanty rations, in return for which they (theoretically) tend the wounded when the fighting is over. True enough, these succouring angels do a scrappy job of work so long as their activities are carried out under the watchful eyes of officers or NCOs, but in the case of isolated wounded, and more especially when darkness has fallen, it is a matter of stripping the victim of anything of value and hastening to the next, their wounds being ignored entirely.

But to get back to the battalion. The eight companies are now ready to move off, the CO some twenty paces ahead of the front rank, while alongside him stands his "Command Drummer," his instrument alone bearing the Royal Coat of Arms, all other drums being devoid of any adornment other than the Company number painted on their blue "shells." A few paces ahead of their men the platoon officers stand languidly swinging their silver headed canes or fastidiously arranging the frills of lace at throat and cuff. Others have produced small pocket mirrors, and are inspecting the condition of their white powdered queues, patting the rolls of curled hair. But do not be mistaken, these dandies will, in the final bloody phase of slaughter, lead their men with the same casual, almost insolent, indifference to their surroundings, many not even condescending to draw their swords or pistols, their display of ice cold courage doing more to maintain morale than all the heroics in the world.

Advancing in close company formation, the battalion moves forward, many of the men obviously finding difficulty in keeping pace with their companions, due to the acute rheumatism that grips them occasioned by the constant wearing of pipeclay saturated gaiters.

A hundred yards or so from the enemy line the CO is seen to turn to his "Command Drummer" and give a curt order. In quick response the latter gives the sharp double beat for "Silence." Without turning his head, the CO shouts the hoarse command, "On No. 3 Company form battle order," and the remaining Companies deploy outwards, and with the Marker Sergeants moving at the double to reach their assigned position, the whole unit, within a matter of moments is in line formation three ranks deep, the enemy so short a distance away watching their movements with sombre interest.

Again the warning beat from the CO's drummer followed by the command "load." Between the knees go the long heavy flintlocks as their owners delve into the right hand pouch, bring forth a powder container in cartridge form, bite off the end and empty the contents down the barrel. Next the bullet, a hefty two ounce ball of lead, is fished out of the left hand pouch, dropped into the muzzle and rammed well home with a few sharp blows of the ramrod. Next comes the order "Battle Drummers Take Post," on which the latter from their position on the flank move smartly across and station themselves in pairs alongside the Company drummers.

All being in readiness, as indicated by the centre platoon commander raising his right arm horizontally in front of him, the order is given "fix and carry." In this

rather curious dual operation the long triangular bayonet is whipped from its scabbard attached to the rear of the left hand bullet pouch and smartly drawn down over the muzzle of the barrel, the bayonet as soon as the head has cleared the foresight, being given a turn to the left to engage in the lug which keeps it in position. Setting their time to the actions of the corporal on the flank, all muskets are then brought to the "carry" position, which then consisted of the weapon being raised with the trigger guard level with the right hip bone and the barrel pressed close to the side of the body.

On the command being given the whole line, three ranks deep, moves forward in slow time to the dull thudding of the "battle drums," whose deep note completely drowns the lighter beat of the company drums. As they advance, the platoon sergeants and corporals maintain a vigilant eye on the dressing of the ranks, while in front the officers move over the ground with easy nonchalance, their long silver topped canes tucked under the left arm.

Before even a few yards have been covered spurts of flame from the enemy muskets indicate that the curtain has been raised on the first act, but the range, a little over eighty yards, is too great for the smooth bores, and the leaden balls merely send up spurts of dirt and mud a little ahead of the advancing line.

Steadily and to the deafening thunder of the battle drums, an inspiring yet sinister volume of sound, the men press on, any looseness in the dressing of the ranks being instantly corrected by the ever watchful NCOs, despite the fact that an ever increasing number of scarlet jackets slumping to the ground prove that they are now well within range of enemy fire.

Still another twenty yards, and the acting CO still on his feet and marching steady as a rock, flings a curt order to his drummer. The latter in turn raises his sticks high in the air, gets half way through the "Preparative" drum beat, and topples forward on his instrument with one of the murderous leaden balls through his brain.

Anticipating the half given command, all officers and drummers drop back through the intervals separating the platoons, and take up a position in rear of the lines, the Regimental Colour Party, however, taking post between the two centre platoons and in line with the front rank.

Under the hail of lead now sweeping the whole line red jackets are falling like leaves, but in response to the quick "flam" from a freshly appointed Command Drummer, those still standing in the front rank raise their heavy flintlocks.

Comes next a second "flam," the order to fire, and as the triggers are pressed a dull reverberating rumble, very different from the sharp crack of a modern .303, rolls along the ragged line.

Having loosed off their volley, the men, stooping low, pass through the intervals of the rear files and immediately commence to reload. The second rank that was, now in turn bring their muskets to the "present," but the subsequent command to fire is badly hampered by the clutter of wounded at their feet

writhing in agony and in many cases clutching at them in semi-delirium.

Before the red jackets have a chance to press their triggers a volley from the enemy blasts their ranks, cutting wide swathes in the line, and instantly the men behind are moved into position in the gaps created, and add their fire to that of their comrades in front. Though only a comparatively short space of time has elapsed since the first shot was fired, not only the original entire "Colour Party" but those who immediately took over are now either dead or draining out their life blood on the ground. The Colours themselves, however, still flutter bravely in the wind, one, the haft of which was splintered in half close to its spear head, being hastily attached to a sergeant's pike and again raised aloft.

The curtain is now about to be raised on the final and most bloody phase of the ordeal. Coolly stepping forward, the CO, whose white brocade waistcoat and buckskin breeches are discoloured by ominous red stains, raises his sword aloft and points it forward in the direction of the enemy.

Immediately all officers still alive make their way through the disorganised mass of men and from amidst the piled up dead and dying, call their platoons to attention. The NCOs, some of whom are so badly wounded as to find difficulty in keeping their feet, supervise the dressing of the ranks. This is necessarily a brief operation, but even so the officers, true to the gallant battle code of honour of the period, casually swing their canes and carefully adjust the tilt of cocked hats, for they know full well the nerves of their men are at breaking point, and only by example can morale be restored.

Though the opposing force has suffered severely, they know what is now about to take place, and in an effort to avert the coming onslaught loose off a last volley.

This takes sad toll of the scarlet jackets, the officers especially, owing to their position in front of the line, constituting an easy target. The CO is down, as are all Company Officers, but a senior platoon commander, by some miracle yet untouched, assumes command and gives the order "With Bayonets—Advance." With muskets at the "Carry" position, they will only be dropped to the "Engage" on actual contact with the enemy, the line moves forward, "Marker Sergeants" in the centre of their company to serve as a rallying point, and at intervals along the entire front the Battle Drummers a few paces behind the officers.

The whole atmosphere seems now shaken by enemy "independent" fire at point blank range, and the deafening roll of the battle drums. A dozen paces only now separate the opposing forces, the drummers, the few still standing, come to a halt, but continue to bear their thundering continuous roll.

High aloft go the poles bearing the Company flags of the "Markers." Down go the bayonets of the redcoats, and yet another is added to the great Marlborough's long line of victories.