The Journal
OF THE
United Service Institution of India.

Vol. LXII. APRIL, 1932. No. 267.

EDITORIAL.

The Disarmament Conference.

It is a little early to estimate what the practical results of the Disarmament Conference now sitting at Geneva are likely to be, but after the opening spate of speeches it seems that the delegates are showing a tendency to form two main groups. The division is between those who follow the French in thinking that the League of Nations should have powerful armed forces under its own direct control to impose its authority over recalcitrant states, and those who aim rather at a reduction of individual national armaments and a League of Nations that relies on moral strength gained by the marshalling of world opinion behind it. It is the difference between settling disputes by a policeman who can if necessary use a truncheon or by an arbitrator who can only appeal to the common sense of the disputants and the sense of justice of their neighbours. Which system is more suited to the present stage in national development is a question not easy to answer ; on the whole it is safe to say that the genius of the Anglo-Saxon races will be against the possibly more logical French conception. We do not like over-much regulation by outside authorities in our private lives, and we are the world's greatest exponents of illogical compromises which to everyone's astonishment work extraordinarily well in practice; what suits us in our own personal affairs will probably appeal most to us in international relations.

In spite of this and in spite of the immense difficulties that its practical application would meet the French scheme is more clearly conceived than any other put forward. It should, and at the Conference no doubt will, receive the closest consideration. Briefly,

the French delegation has proposed little in the way of a reduction of present total armaments but a great deal in the way of transferring what are now national armaments to the control of the League of Nations. Civil aviation is to be internationalized, all bombing machines over a certain size and all long range artillery are to be handed over to the League which will maintain and control an International Force ; nations will only be allowed to keep capital ships, submarines over a certain tonnage, tanks, and medium sized military aeroplanes on condition that they agree to place them unreservedly at the League's disposal when called upon : and certain states will maintain naval, military and air forces ear-marked to proceed at once to the assistance of any country the victim of aggression by another. In addition all states will agree to refrain from using gas, bacteria and air or artillery bombardment at more than a specified distance beyond the front line or coast.

On the whole these proposals are supported by the powers of the "Little Entente" and others interested in the maintenance of the present balance in Europe, while the defeated nations, inclined to see in the scheme the perpetuation of the Versailles Treaty are in opposition. There is indeed considerable danger that the French proposals may form the rock on which the Conference may split in two and founder.

While it is improbable that any general agreement will be reached on the French scheme or on any modification of it, there has been a surprising degree of unanimity on certain points. This arises from the universal desire on humane grounds to protect the civilian population from direct attack. Thus all nations have declared their willingness to abandon the use of gas and bacteria ; many are prepared to accept some limitation in heavy artillery, tanks and submarines : and all are unanimous in desiring bounds to be set to air bombing. Indeed, bombardment from the air seems to have come in for more condemnation than any other form of warfare, and many nations, going much further than France are, like the Japanese and Italians, urging its total prohibition and, even as do the Germans, the entire abolition of military air services.

In India we are particularly interested in this question of air bombing as events on the Frontier in the last few years have led to its employment on many occasions. Indeed there has been in Bajaur

within the last few weeks a very clear example of power to deal with incipient trouble. Whether it is as ethically objectionable to bomb a Frontier village as it is to bomb a great European city is debatable, but if, as a result of the Geneva Conference, the bombing of non-military objectives is prohibited, India in the control of her turbulent border-land will be deprived of an unquestionably powerful weapon. In view of this the attitude of the India Delegation to the Conference is of interest. H. H. the Aga Khan, speaking on its behalf said, ".. .. .. .. we will co-operate to the full in devising means for protecting the civil population against ruthless methods of warfare. Thus we support such proposals as that for the total abolition of the submarine, and of lethal gas and bacteriological warfare and the use of poison generally. Again we will pay special attention to any suggestions for limiting the destructive power of air bombardment ....."

The Conference has wisely decided, in spite of the French attitude, to take the Draft Convention for the Limitation of Armaments already drawn up as the basis on which to work. An effort will be made to include in this Draft Convention the greatest common denominator of agreement on limitation that the nations have so far shown. In many ways the amount of this agreement, based on the universal inclination to limit in some way the weapons most likely to be used against the civil population, has been remarkable. Even if the Conference does not produce some comprehensive disarmament scheme acceptable to all, it is not unlikely that it may lead to very considerable reductions in certain arms of every service, both in numbers and in freedom of use.

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The Far East.

It is more than incongruous that while the Disarmament Conference is sitting at Geneva two members of the League Council should for all practical purposes be at war. The provocation the Japanese have received has undoubtedly been great and has been aggravated by the difficulty of dealing with a Government, which, like the Chinese, has little real control within its own borders. Attacks on their nationals and the boycott of their trade have proved too great a strain for Japanese patience. The British have had so much similar experience themselves in India and in China that we can understand the Japanese attitude possibly better than most nations; indeed, at times some of us feel a tinge of envy for a Government that is so ready to grasp the bull by the horns.

The fierce anti-British agitation and boycott that took place in China a few years ago had none of the justification that might be urged against Japan, yet the way we met it was in startling contrast to Japan's action to day*. Which method will pay best in the long run remains to be seen. Probably, as usual, the ideal lies between the two—something a little stiffer than the British practice of turning the other cheek, a little less drastic than the Japanese invasion. There is, however, one important distinction between Japan and ourselves or any other Power with interests in China. The Japanese, with practically the rest of the world closed to their exploitation and colonization, must maintain their special position in Manchuria if they are to continue to exist as a great nation. They have poured out blood and treasure to achieve this position and the great development that has taken place in Manchuria during the last twenty-five years has been almost entirely due to their energy and to the comparative peace their presence has brought to the country. It is no exaggeration to say that they cannot abandon Manchuria without committing suicide, and this fact must be remembered if anything approaching a true realization of their attitude is to be reached.

In Shanghai there can be no doubt that the Japanese exceeded all reasonable requirements of security for their interests, and as a result they have sacrificed the sympathy of the world. It is unlikely that they intended their operations there to assume the proportions that they eventually did, but once committed national pride and military prestige compelled them to continue and to reinforce. As far as foreign observers can judge, the Japanese General Staff underestimated the delaying power of machine guns and barbed wire, and overlooked the fact that a highly trained mobile force sacrifices many of its advantages if it engages an inferior but numerically stronger enemy in street fighting or in very close country. Unlike most European armies the Japanese did not spend the years 1914 to 1918 butting against wired-in machine guns, and it is not surprising that the stubborn defence of the Chinese, so different from that encountered in the open warfare with Manchurian bandits, should have come as a shock.

However, superior discipline, training, and armamant, combined with the traditional courage of the Japanese soldier, have sufficed to overcome these difficulties, and the Chinese have been driven back

* See "The Hankow Incident," page 177.

beyond the twenty kilometre zone from Shanghai. There can be little doubt that if the Japanese wish, this process of driving back can be continued indefinitely. There is nothing in China that could stand up for long against a Japanese Expeditionary Force. However, honour is now satisfied and there is reason to believe that the withdrawal of Japanese troops already commenced will continue.

Whether it was Japan's deliberate intention or not, the world's interest has been concentrated on Shanghai to the neglect of Manchuria. Now Japan's position in Shanghai is very much on a level with that of other Powers, and she can withdraw her forces without abandoning anything she really wants, and as a very effective 'gesture.' In Manchuria, on the other hand, her interests are more vital and Japan must be well contented to see the other Powers occupied with the Shanghai dispute while the "independent" new Manchurian state consolidates its position.

One aspect of the extension of Japanese occupation in Manchuria is of great interest. In extending their hold on the arteries of communication Japanese forces have occupied Harbin, and through Harbin passes the Russian-owned Chinese Eastern Railway which provides the direct route from Russia to Vladivostok. The Soviet Government has not sprung to arms, it has not made even a serious diplomatic protest. Why ?

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A Dry Ration for Indian Troops.

Recent events on the Frontier and in Burma, which have entailed the employment of small columns moving so rapidly as often to have little time for cooking, have again emphasised the necessity for some form of "dry" rations for Indian troops. The stale *chupatti*, cooked many hours or even days previously, which is normally all that can be provided for a haversack ration, is not only a tax on the most hardy digestion, but, when it becomes sour, as it often does in hot weather, is a positive danger to health. In addition the Army in India in now straining after an increased degree of mobility and to achieve this a very drastic pruning of many things up to now considered almost essential will be necessary. Amongst these, for columns operating at a reduced scale for short periods, may well be cooking pots and fuel—always a bulky article. An adequate and economical 'dry' ration acceptable to all classes of Indian troops has thus, for the double reasons of health and mobility, become a real necessity.

Why not biscuits ? Many sepoys would undoubtedly welcome an issue of biscuits similar to those given to British troops. True, the Indian soldier is unaccustomed to this type of food, but officers will recall how readily sepoys ate ration biscuits when the need arose during the War, and they would probably do so again with relish in similar circumstances. The supply of ration biscuits, however, raises many issues. If biscuits are to be made an authorised rather than an optional ration, careful arrangements for manufacture are necessary in order to overcome caste prejudices. Even with the utmost care in preparation, biscuits might be regarded with suspicion by a minority, and any attempt to force an unpopular ration on Indian troops is so unwise as to be mad. On this ground alone the issue of factory manufactured biscuits contains the germs of danger. Then too the holding of expensive stocks in peace would become necessay to provide reserves for War, and this again entails the periodical issue of biscuits in peace to ensure a " turnover," a measure that is unlikely to be greeted with enthusiasm in the lines.

In consequence, recent experiments to discover some suitable form of " dry " ration for operations on a hard scale have tended towards the production of an easily portable article of diet, which can be readily prepared by the troops themselves, and which will remain in an edible condition for some days. These experiments have been quite distinct from any attempts to solve the problem of emergency rations, which is a different question altogether.

There exists, amongst the scales of rations admissible to Indian Troops, one for train rations on rail journeys when cooking facilities or halts cannot be arranged. This scale provides for the preparation of what is known as " Shakapara Paste," which consists of normal items of the daily ration such as *atta, gur, ghi*, and salt, but in slightly different proportions from the standard scale. It has been found that, with the addition of a greater proportion of *ghi*, biscuits, either sweet or salty, can be made up from this paste and remain edible for as many as fifteen days. Preliminary experiments with the paste have shown that it is possible to draw up a scale which gives the adequate number of calories for a sustaining ration in a reasonably palatable form. This scale also includes sufficient tea, sugar and milk to enable each man to have at least one dish of hot, sweet tea in twenty-four hours. Further and more extensive trials by troops themselves are shortly to take place in order to determine whether the ration is acceptable

to all classes, and to ascertain its value for the purpose for which it is intended. For this type of biscuit there is no question of holding stocks as it is made from the standard ration. The unit cooks prepare it themselves so that no difficulties on account of caste susceptibilities can arise. The only drawback is that a few hours warning of requirements must be given.

The near future may, therefore, see the provision of the long and urgently needed " dry " ration, which will increase the endurance of the Indian soldier and ensure that the stomach on which he marches is a full one.

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The New Light Machine Gun.

Exactly a year ago there appeared a paragraph in the Editorial of this Journal urging replacement of the obsolete Lewis gun by a more modern weapon. At that time it was pointed out that, while several very promising types of light machine guns were on the market, finance was the real obstacle, for to carry out trials, re-equip the Army in India, provide reserves, and organise factory production would cost very large sums. Since then the Army Budget has been reduced by some 5¼ crores and very cogent reasons could be produced for a general postponement of any re-armament scheme. It is all the more to the credit of those concerned that the search for the ideal light machine gun and for the ways and means of re-equipping with it the Army in India has continued. Progress has possibly not been as rapid as those condemned to rely on the Lewis gun could wish, but there are advantages in deliberation in such matters, and progress, while slow, has been continuous.

The first step, the selection of the new weapon, has now reached the stage that, out of the several light machine guns tested, one has proved sufficiently satisfactory to justify extensive trials with troops. These trials will commence very shortly in cavalry regiments both at Home and in India. Since the abolition of the Hotchkiss gun it has been generally recognised that cavalry have been lacking in fire power, and it is probable, therefore, that they will have first claim to the new automatic, should it fulfil the promise it has already shown. After them, the Lewis guns of infantry battalions would be replaced and, finally, the question of substituting the new gun for the Vickers would have to be settled. It is perhaps a little early to discuss this, but it is obvious that an air-cooled gun—and it must be air-cooled to ensure lightness—will almost certainly fall short of the Vickers in its volume of prolonged fire. Indications are that the advantages of one weapon

in the place of two in training and supply, especially in war, would justify a somewhat lower performance in sustained fire.

Further trials must, if they are to be of real value, take time. Even when the new weapon is passed as fit for issue, re-equipment will for financial reasons be a gradual business, but there is at last justification for the belief that the days of the Lewis gun are numbered.

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GOLD MEDAL PRIZE ESSAY COMPETITION, 1932.

The Council has chosen the following subjects for the Gold Medal Prize Essay Competition for 1932 :—

" Disarmament, and its effect on the Foreign Policy of British Empire."

The following are the conditions of the competition :—

(1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force and Auxiliary Forces.

(2) Essay must be type-written and submitted in triplicate.

(3) When reference is made to any work, the title of such work is to be quoted.

(4) Essays are to be strictly anonymous. Each must have a motto, and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.

(5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1932.

(6) Essays will be submitted for adjudication to three judges, chosen by the Council. The Judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.

(7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1932.

(8) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.

(9) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

THE BURMESE REBELLION 1931.

" Steal gold from the Pagodas, fine, bright gold. Refine it in the fire and repeat the magic words in the house, on the lonely path, before the lucky star, at the pagodas ; repeat them a thousand times save one. Consecrate the water ; draw the circle of the flying galon. Put it under the left arm. No harm will befall thee, safe and invulnerable."—Burmese Charm.

Burma is outside the orbit of the majority of units in India, and the news that armed rebellion had broken out in December 1930 came as a surprise to most people,—almost as big a surprise as it was to the Civil Administration of the Province. For some years past the country had appeared quiet enough, and there had grown up a feeling of false security. The large towns were adequately policed and crime was detected and punished with a firm hand, but only a few officials knew and appreciated what was going on in the remote jungles and country districts far from roads and communications. Climate, physical features, bad communications were all against that maintenance of personal touch which has been so beneficial in Districts in India.

The Rebellion of 1931 differed greatly from the last armed rebellion in India, the Moplah Rebellion of 1921, in that it lacked any communal feature. Burmans are Buddhists, completely free from caste, and there is no dissension amongst them caused by religious beliefs. Herein lay the danger of the Rebellion—once thoroughly roused the people of Lower Burma could fight unhampered by inter-religious disturbances and conflicts. Fortunately (from the point of view of those responsible for restoring law and order) Burmans are pleasure-loving and generally averse from work. Their belief in witchcraft and spells is just as strong to-day as it was in the time of King Thibaw and during the Rebellion no dacoities of any kind could be considered unless the occasion had been proved suspicious. Saya San, the original, and probably the greatest rebel leader, was a quack doctor by profession, who carried with him a pair of bellows in order that he might pursue his studies in alchemy when not engaged in other less peaceful pursuits.

Like many other Eastern lands Burma is priest-ridden, and the country-side swarms with *Pongyis*, with their begging bowls and saffron coloured robes. Every male Burman has to serve a period of his life as a *Pongyi*, and this peculiar form of conscription leads to a large itinerant population which has to be fed by the already stricken cultivator. The *Pongyis* wield immense power among the superstitious and simple-minded villagers, and, from a military point of view, are unequalled as propagandists and disseminators of intelligence.

The Origin of the Rebellion.

Opinion is divided as to whether the Rebellion was the result of economic depression or whether politics were the *prima causa*. Both certainly contributed, but the trouble was deep-rooted and no one factor can be held primarily responsible.

As is usual in outbreaks of this nature, there was an evil genius behind the scenes in the person of Rash Behari Bhose, Bengali, a revolutionary, who had fled from India to Japan many years ago. A slightly lesser light was U. Oktama, a Burmese extremist and revolutionary monk, who, after undergoing three years rigorous imprisonment, went to Japan in 1928 and there came in contact with Rash Behari Bhose. Oktama was an earnest student of revolutionary methods, and, on return to India in December 1929, spent six months in French Chandernagore, the Headquarters of the Bengal Revolutionary Party.

The Congress Party in India did not neglect Burma, and it gradually obtained control of the majority of those Burmese Councils which were of a political nature, including the Grand Council of Burmese Associations (G. C. B. A.).

Soe Thein was the original head of the G. C. B. A., but Saya San gradually usurped his position. Saya San appealed mainly to the credulity, ignorance and superstition of the peasantry, and it was he who proclaimed himself "King of the Galons," and founded the "Galon Army." Burmans are extremely fond of tattooing, and we find each man in his army tattooed either with the word "Galon," or with a representation of the bird itself. The *galon* or *garuda* of Hindu Mythology is the legendary *roc* which destroys the *naga* or dragon. As the *naga* is the emblem of the foreigner, success would be assured by virtue of the symbol of victory tattooed on every rebel.

At first Congress did not concern itself with the future of Burma, but when the question of separation was mooted it suddenly began to take a very lively interest. One can quite understand its attitude—there were large vested Indian interests in Burma, it was a source of employment for thousands of Indian coolies, and many Indians were in Government service. All these benefits might well be jeopardized should separation become an accomplished fact, and non-separation became of paramount importance. Congress immediately started organizing industrial trouble, culminating in the Rangoon riots of May 1930, and began to enlist the sympathies of the non-separation school. Attempts were also made to stir up feeling against Indians, Chinese and Europeans. The country was almost ripe for rebellion when, in July 1930, Oktama returned to Burma at the invitation of the Congress Party and the G. C. B. A. He had kept in close touch with Saya San even since his return from Japan, and his arrival in Burma as chief controller of anti-Government activities was marked by renewed and stronger effort. Oktama's plan was to initiate simultaneous risings all over the country so that troops and military police could not be concentrated in any one area. Fortunately the plan miscarried, as a premature rising occurred in the notorious Tharrawaddy District on 22nd December 1930 on the occasion of the Governor's visit, and before Oktama was ready. He thereupon decided to leave Burma, but continued to act in a kind of advisory capacity from India. As might be expected Oktama enjoyed the sympathy of the British Communist Party, and he was on very friendly terms with one Bernard Houghton, who, when the separation question was being finally discussed at the first Round Table Conference, wired to him the now famous message—"*Macdonald shuffling, urge mass demonstration.*"

Reference has already been made to the *Pongyis*, and a large number undoubtedly were deeply involved in the Rebellion. Many of them, known as "coupon preachers," belonged to the Grand Council of Sangha Sametgis (G. C. S. S.), the religious branch of the G. C.B.A. All classes of agriculturists suffered from the rapid fall in the price of paddy in 1930, and they lent a ready ear to the preaching of seditious *pongyis* who took advantage of the political ferment of the previous two years. Closely allied to the factor of agricultural depression was the rising tide of Burmese nationalism, which developed into a dislike of so-called foreign domination. The Rangoon riots were con-

sidered as a victory for the Burmans, and one can understand why a charlatan like Saya San had such amazing success as a Pretender to the throne. This national feeling, fostered by economic causes, has led to a hatred of Indians. At one time the average Burman was content to live side by side with the Indian immigrant, but conditions have changed. The Indian with a lower standard of living, has become domiciled and the ubiquitous Indian money-lender has obtained a firm footing. Economic pressure has therefore forced the lazy Burman to undertake more cooly work and to enter into competition with the Indian labourer, and he is very often in the toils of the money-lender, who holds his land in mortgage. The Englishman was held responsible for the disastrous fall in the price of paddy, and he was to be driven out of Burma together with the Indian. These economic factors and the hated Capitation Tax, provided a number of texts for the *pongyis* and it is not to be wondered at that the superstitious Burman, proud of his race, gave a hearty response.

The Area of Operations.
(See Map I.)

As the Rebellion scarcely affected the Northern Hill Districts, it will be sufficient for our purpose generally to consider what is usually called Southern Burma, and one cannot do better than to quote from the Military Report, which says—"Speaking generally the whole of Southern Burma may be regarded as one vast military obstacle especially when travelling from east to west or *vice versa*. It is a country of mountain ranges running north and south, separated by broad plains through which the river valleys run. The plains are usually swampy, and, for a large portion of the year, except for the main roads, are impassable for wheeled transport on account of large irrigated rice areas and extensive tracts of thick jungle."

Southern Burma falls naturally into two zones—the "dry" and the "wet," and a rough line of demarcation can be considered as coincident with the southern limits of Prome District. June—October is the rainy season, and it is usually extremely unhealthy for troops, but in 1931 the incidence of sick was noticeably low.

About ten years ago there was considerable outcry about the backward state of communications, as up to that time the only through communication was by river or rail. Apart from expense, the Burmese

Government did not consider a network of reliable roads necessary as in the dry weather, from December to March, the empty paddy fields are baked hard by the sun and free movement is quite easy, but during the rains they become impassable for wheels of any description. A Road Board was subsequently formed and a large improvement programme initiated which provided for trunk roads and local projects. There are now two trunk roads, one following the line of the railway from Rangoon to Mandalay, and the other from Rangoon through Prome to Allanmyo, which may eventually be extended to Mandalay. Only part of the latter is tarred, and owing to a decision by Audit Authorities the untarred portion will probably wear out very quickly. They have ruled that tarring is a "new work," not a "repair" or "maintenance," and unfortunately there is no more money available under that Head.

"Local project" roads generally speaking, radiate from each District Headquarters, but having been built as cheaply as possible along the old cart roads with their weak wooden bridges, they are not reliable for continuous motor transport traffic. The old military roads, such as the Thayetmyo—Mindon road had been allowed to deteriorate, but it was found possible to open them up and maintain them during the rains. A final class of road is the country cart-track with ruts up to three feet deep. In the "dry" zone these are often passable by motor transport throughout the year, but in the "wet" zone they are entirely impracticable.

The Course of the Rebellion.

Operations fall conveniently into two phases—the first, from December 1930 to June 1931, and the second, from June 1931 onwards when reinforcements from India were used.

December 1930—*June* 1931.

When the Rebellion broke out the available armed forces were :—

Civil.—Two Battalions of Military Police.

Military.—Two Battalions of British Infantry (Rangoon and Mandalay).

Two Battalions Burma Rifles (Maymyo and Mandalay).

One Battalion of Indian Infantry (Mingaladon).

One Battalion Indian Pioneers
One Field Company Sappers and Miners } Mandalay.
One Mountain Battery

The Military Police Act of 1888 created a Military Police Force in Lower Burma, and incorporated it with the Upper Burma Force, but their rôles differed. Whereas the latter was constituted to support and relieve the regular forces, the former was required to assist the civil police in dealing with lawlessness on an unusual scale. In 1924 the Lower Burma Force was reduced to two Battalions nominally stationed at Rangoon and Mandalay. Their strengths were respectively 2,200 and 1,522, but, owing to dispersion among numerous stations, the actual reserves on the outbreak of the Rebellion were 176 at Rangoon and 94 at Mandalay. This dispersion was a serious handicap to the Civil Authorities, who experienced great difficulty in concentrating sufficient armed forces in any particular area, and they had to ask for military support on several occasions. Events showed that the 1924 reductions had been too drastic, and by June 1931 five new Battalions of Military Police had been raised, while five others were in process of being recruited.

Apart from the scarcity of armed reserves and bad communications, the Civil Authorities had other serious difficulties to contend with. The rebels were organized in bands which hid in the jungles, or when hard pressed, slipped away into the hills. It was not a question of dealing with organized resistance on a large scale, but rather with countless small gangs whose intelligence system was perfect, while the police had great difficulty in obtaining any reliable information, even loyal villagers being afraid of reporting the movement of dacoits. "Intelligence" had an important bearing on operations, and although steps were ultimately taken to organize a workable system, it was tremendously hampered by the nature of the country, the fear of the inhabitants and, at first, by a total lack of Intelligence Security. Gossip in clubs was repeated by servants, and on one occasion a rebel was discovered working in a Deputy Commissioner's office. Telegraphists, railway and postal employees were all implicated in passing information to rebel leaders.

Soon after the Rebellion broke out the civil police proved unable to stand the strain, and military police had to relieve them in purely static police duties. When the 2/15th Punjab Regiment and the two Battalions of Burma Rifles were called out they too were expected to supplement the police and were dispersed in small detachments at places selected by the Civil Authorities. Even the first units from

India were used purely for defence, and the local military commanders found their hands completely tied, with resulting discord between the two authorities when there should have been complete co-operation. It must be remembered that throughout the operations the military were in aid of the Civil Power, and it is not reasonable to expect civil officers to understand and apply military tactics, but it was not the first time that the Army in India has had to perform this unpleasant duty and a *modus vivendi* might have been more rapidly found.

Even in old Burmese times Tharrawaddy had an evil reputation as a criminal and restless district, and in recent years it had become the favourite resort of political agitators. Two months before the Rebellion broke out men were enlisted, tattooed, and sent back to their homes to wait until called up, without any official being aware of the fact. The outbreak was thus a complete surprise. The first night two headmen and a Deputy Ranger of Forests were killed, several villages were raided and guns stolen. Later a Forest Engineer, Mr. Fields-Clarke, was killed and the Rebellion showed signs of getting out of hand. No more Military Police were available, military assistance was asked for, and arrived in the district by the 28th December. By this time the rebels were estimated at between 1,200 and 1,500, and they were believed to have looted 30 guns, a few rifles, and considerable quantities of ammunition. Saya San was proved to be the leader, but he eluded all attempts to capture him—his intelligence was too good. Operations drifted on with occasional unproductive drives and the rising spread into the neighbouring district of Insein. The position was reviewed in the middle of February; the Civil Authorities, however, came to the conclusion that the problem was still one for the police rather than for the military. Subsequent events proved this decision to be wrong. Be that as it may, Tharrawaddy was divided into squares, each of which had a police garrison, and Imperial troops were left at certain towns to maintain confidence among the people and to act as striking forces wherever required. Early in February the G. C. B. A. and its affiliated societies were declared unlawful, liberal rewards were offered for the capture of *Bohs* (Leaders), and the situation appeared to be well in hand.

It will be remembered that Oktama had made plans for risings all over the country, and the outbreak in Tharrawaddy was soon

followed by others in Yamethin, Pyapon, Henzada and Bassein. In every case the rebels split up into bands of dacoits and although the civil and military police were reinforced they were too weak to round them up.

In April trouble began to spread further north and it suddenly blazed out in Thayetmyo District. Military and civil reinforcements were rushed to the area and it is claimed that they inflicted considerable casualties on the rebels. The Civil Authorities hoped that "the crushing defeat" would cause the Rebellion to collapse, but shortly afterwards they had to admit that the district was still in a very disturbed condition. As a matter of fact the situation had seriously deteriorated, and in May, all districts with the exception of Pyapon, were in a state of unrest. Rebel gangs were still at large and an orgy of dacoities had begun. Communal feeling against Indians was increasing and it was feared that the rains would drive the bands further north into the "dry" zone and Upper Burma.

Such was the state of affairs when the Local Government decided to appeal to the Government of India for help. At first they asked for one Infantry Battalion, and then for another, but they evidently miscalculated the magnitude of the task before them, as eventually six battalions were sent.

The confession of a surrendered rebel throws a light on the methods used by these dacoit gangs. Apparently the recruits were little aware of what the future had in store for them, but each *Boh* wielded such power over his gang that they soon learnt the rudiments of discipline. They lived on the country, and the terror-stricken villagers would do anything to escape the wrath of their unwelcome guests. Arms and ammunition were in the greatest demand, and many an unfortunate headman lost his life because he was the possessor of a match-lock. After raiding a village, a gang rarely had any difficulty in slipping away into the depths of the jungle and hiding there, until the police party had withdrawn. Murders were frequent, and in some cases entirely unprovoked, as is revealed by the following extract from a captured rebel's story :—"There we saw an aged Karen woman passing in front of our party. San Kyu shot the woman, as he was ordered to do so by *Boh* San Htu who considered it a bad omen to allow a woman to pass in front of our *Tat* (band)."

Looted oilfield stores in the disturbed areas provided the rebels with ¾" piping which they skilfully made into gun barrels, and crude cannon were made from oil pipes and metal telegraph poles. These however were only effective up to about 100 yards. Home-made ammunition and bombs were produced, but they were extremely unreliable as the rebels sometimes discovered to their own discomfort. In the latter months of 1931 munitions of war ran short, and some of the expedients adopted are rather interesting. Ammunition was precious, so ordinary crackers were made up and used for scaring villagers. Match heads became a popular powder when the supply of cartridges failed, and a rebel prisoner stated that 1,200 boxes of matches were used to load one gun which was fired during the Sitsiyan raid. The Manager of a Swedish match firm also testified to the extraordinary number of matches which were being sold in rebel areas.

June 1931 *Onwards.*

The 1/17th Dogra Regiment left India for Burma on 10th May, but as the Local Government still appeared to be undecided as to the amount of support required, the Government of India arranged for the despatch of a further Brigade, and Headquarters 12th (Secunderabad) Infantry Brigade and the 3/16th Punjab Regiment sailed on 27th May, followed early in June by the Manchester Regiment, 3/10th Baluch Regiment, Signals and ancillary units.

The 1/17th Dogra Regiment and the 3/16th Punjab Regiment duly arrived in Burma and the Civil Authorities began to employ them, but there does not appear to have been any concerted plan, and the liaison between civil and military left much to be desired. Information was still very difficult to obtain, and when it did arrive it was usually too late to be of much value.

June was a particularly bad month and conditions generally were thoroughly unsatisfactory. In Thayetmyo dacoity was rife and unchecked, and there were signs of the Rebellion spreading further north. A no-tax campaign had been started in Upper Chindwin and the crime returns, always a clear indication of the state of affairs, had reached an alarming figure. On 12th June 40 prisoners escaped from Nyaunglebin sub-jail in Pegu District and succeeded in making away with 20 police muskets, 6 shot guns, and 800 rounds of ammunition.

There were numerous signs that the Rebellion was getting completely out of hand, and the peasantry must have thought that the British Raj was becoming impotent. A Deputy Commissioner expressed the view that the attitude of most of the population in his District was one of semi-malevolent neutrality.

One bright spot in an otherwise very gloomy month was the fine performance put up by a weak platoon, 23 strong, of the 2/15th Punjab Regiment at Wetto (near Paukkaung in Prome District). Besides being in keeping with the traditions of the Indian Army, it proved to the rebels, and incidentally to the wavering villagers, that the British Raj was still far from being a spent force. For some days this platoon, commanded by a British Officer, had been working hard in following up Boh Pe and his gang. It proved to be a heart-breaking task, guides were unreliable, information was indifferent and repeatedly the platoon arrived at a village just in time to hear that Boh Pe had slipped away. But the chase went on, and one morning, after a night march, the Platoon arrived at Paukkaung only to hear that Boh Pe was at Wetto. A fresh guide was found who volunteered to lead the way. Boh Pe had accurate news of his pursuers, and this time he decided to stand his ground. It was an opportunity for increasing his prestige, and with a force of nearly four hundred rebels, all invulnerable, he expected to be successful. As the platoon advanced, Boh Pe's gang rushed it and the situation became critical. Rifle fire was ineffective against such numbers, but the Lewis Gun Section was too much for the rebels, and although they showed great courage, they were routed, losing over a hundred killed and wounded.

All units of the 12th Infantry Brigade had arrived during June, and it was then possible to divide Lower Burma into two Brigade areas. Thus for the first time since the Rebellion began, an attempt was made to organize the theatre of operations on what might be termed a sound military basis. If the Local Government entertained hopes of a rapid improvement in the situation after the arrival of reinforcements they were disappointed; July showed very little change in the situation. It was perhaps too early to judge, but Saya San was touring and ensuring that there was no flagging among the rebels. Their morale was high and fears were entertained that a spectacular success would lead to a rapid spread of the Rebellion and encourage the bands of dacoits to concentrate. About this time it was noticed that the rebels were relying,

more on charms and handkerchiefs than on tattooing. One prisoner naively said that whereas charms can be thrown away, tattooing is permanent and sees a man into gaol.

July proved to be just as unsatisfactory as June had been, despite the fact that the 2/5th Mahratta Light Infantry and the 3/6th Rajputana Rifles arrived early in the month. But forces were beginning to work which led to an overhauling of our methods, with the result that the Rebellion was eventually crushed in a shorter time than even the most optimistic observer could have foretold. The Local Government were not at all happy with the state of affairs, and the military authorities were forced to protest against a system which in their view violated all principles, both of war and of the correct employment of "Troops in aid of the Civil Power." They held that "dual control" meant neither one thing nor another; owing to undue dispersion they felt that unnecessary risks were being taken, and they objected to the employment of military forces to relieve civil police of their ordinary duties, leaving only a portion of the troops to carry out real operations. Accordingly the Governor held a Conference of responsible civil and military officers at Rangoon on 27th July. A satisfactory settlement was reached. It was decided that the Civil Administration should remain supreme, but that troops and military police should be under military command. This principle was incorporated in a formula defining the responsibilities of the Deputy Commissioner and the local military commander in each District. (See Map 2). These officers were urged to maintain the closest liaison, and in other words, to try and see the other man's point of view. Having come to an agreement with the Local Government, the Military Authorities were in a position to set their own house in order, which they immediately did. Additional Staff Officers were sent out, signal systems were co-ordinated, a special Military Intelligence Branch was formed, and a road policy initiated.

A grip having been taken of the situation, everything began to work far more smoothly, and individuals felt that at last their efforts were being fitted in to a comprehensive plan which had every chance of success. The Burmese Emergency Powers Ordinance with very wide powers was promulgated on the 1st of August, and the Military Command on their part initiated a plan of operations. Brigade Commanders reviewed the situation, and produced schemes for dealing with the Rebellion

in their own areas. This belated but whole-hearted co-operation on the part of Civil and Military authorities was indeed refreshing after the disappointments and mistakes of the previous seven months, and the future promised well. At one time there was doubt as to whether operations could be successfully carried out in the mud of the Southern Districts where the rains had broken, but events proved that offensive operations were quite feasible. As so very often happens in "small wars" units found that some part of their equipment had to be discarded as unsuitable for local conditions. In this case Vickers guns were proved to be useless, and two extra rifle platoons were formed from the men in the Company. One Battalion even improvised mounted infantry which played a very useful part from its Machine Gun Company.

During this period when the fortunes of the Local Government showed signs of improvement the rebels suffered a severe blow in the capture of Saya San. For some time past he had been trying to stir up trouble in the Shan States, but with only partial success. The Burma Military Police quickly suppressed a small rising and eventually caught the absconding leader, U. Nyanna, who to everyone's joy was found to be no other than Saya San. His place was taken by one Myat Aung, a skilful and resourceful leader.

In August the military plans began to take effect and a systematic and relentless pressure was maintained on rebel gangs. This alteration in the handling of the situation was not lost on the villagers, and by the end of the month they were beginning to believe that Government could and would protect them. Not content with armed effort, Government widened its sphere of activity and started a propaganda department, which kept the press informed of what was going on and published pamphlets and pictures. Certain religious leaders were persuaded to tour with a view to pointing out to the peasantry the error of their ways, and villages outside the disaffected areas were given demonstrations of Lewis gun and rifle fire as proof of what they might expect if they should decide to join the rebels. All this effort met with its reward as slowly but surely the situation improved. Early in September reports were received that the villagers were beginning to offer resistance to rebel gangs, and a still more hopeful sign was the fact that the civil police were regaining more control.

The rebels offered a stout-hearted defence to this increased Government activity, and there were indications that the more important leaders in various Districts were beginning to act on a roughly concerted plan. They tried hard to revive interest by means of proclamations and slogans, and funds were collected for an extension of the Rebellion, Prome District alone contributing over Rs. 21,000. But their plans were frustrated by the energies of mobile columns which harried the rebels in every District. This went on despite occasional setbacks, throughout September and October, until eventually on the 6th of November the General Officer Commanding was able to report that for the first time the Government forces had attained the initiative. Valuable assistance was given to the military by irregulars. They were organized into " packs " and each one was put on the track of a rebel leader with instructions to hunt him and his gang to a standstill.

It is not possible to give an account of the excellent work done by all these columns of troops and Burma Military Police, who, in spite of the bad climate and numerous disappointments, never once lost heart or failed to respond to the demands made upon them, but the action of the 2/5th Mahratta Light Infantry at Thayetkon may be taken as a typical example of a well executed raid.

On the afternoon of 24th October the Commander of the Prome Area received a code wire from the Police at Paungde that a party of rebels had been located in the " Kyaung " (monastery) at Thyetkon. This was an opportunity not to be missed, and he decided to round them up, but from bitter experience the Commander knew that unless he acted with the greatest secrecy and caution his chances of success would be slight. The first essential was to conceal his destination, even from the troops themselves, and to this end he thought out a very ingenious plan. Fortunately the Station Master at Prome was able to co-operate and arrangements were made to entrain two Platoons (including two Lewis Sections) after dark at a little-used siding about half a mile from the station. After a quick and silent entrainment the doors were locked, the shutters drawn, and there was no outward sign that the carriages, which were eventually attached to the Down Mail Train were full of troops. To complete the deception the two British Officers, wearing mufti, travelled in an ordinary 1st Class compartment. The Mail duly arrived at Paungde and the special carriages were.

slipped and put in a siding where they remained, still shuttered down. Here the plan was disclosed and carefully explained to each Platoon separately so that every man should know exactly the part he had to play.

The gist of the orders was that the Column would make a detour, and, approaching the village from the north-east, would surround the monastery. The first phase included the movements of the Lewis Gun Sections who were allotted to the north and east sides, and the completion of the cordon by the rifle sections to the south and west. The second phase envisaged the capture of the rebels and the search of the Kyaung at dawn. Firing was prohibited once the building had been surrounded owing to the danger of sections hitting each other in the poor light.

After orders had been thoroughly digested the troops embussed at the Railway Station, and the Column, accompanied by a Police official and twenty armed Police, left Paungde at 22·30 hours *en route* for Pauktaw *via* Hmattaing. Pauktaw was reached after an hour's run, and the critical stage of the raid began—the approach march on foot. The route which lay through the Zibinhla Forest area was very difficult going—extremely dense jungle occasionally relieved by flooded paddy fields, but by 03-40 hours the Column arrived in a patch of jungle half a mile north of Thayetkon where a halt was called. The scheme and orders were repeated and the Police given their rôle. Then after a re-shuffling whereby the Lewis guns were placed in the lead, the advance was continued. By this time the moon was nearly full, and the men could see their way across the paddy fields. So far no alarm had been raised and there was every reason to believe that all would go well. Thayetkon is a narrow village about a thousand yards long running east and west, and the guide had intended to lead the way right round to the east end, but he miscalculated his position and took the Column through the village. There was no path and bamboo fences and hedges had to be negotiated, but, despite this unforeseen delay, the Column, well closed up, reached the north-west gate of the Kyaung at 04-03 hours. The Kyaung, which is a two-storied building raised some two feet off the ground stands in an enclosure thickly planted with banana trees (except on the south side where there is a garden containing two pagodas) and the whole is securely fenced.

The various sections immediately doubled off towards their positions, but by now the alarm had been given, a gong sounded and the rebels opened fire. They began to invoke the help of their charms and shouted " Tiger ! Tiger ! Miss ! Miss ! Let the bullets turn to water ! " But within a few minutes the building was surrounded and the sections replied with Lewis gun and rifle fire. One sepoy was hit in the foot, but the rebels' amulets proved unreliable and soon loud groans were heard from the lower storey. Sounds of rifle fire from the direction of the Police " stop " north of the village suddenly died down and the first phase was over.

At 04-12 hours the rebels made an attempt to escape, and under cover of bombs five broke out, but the troops opened fire again and they were all killed. Conditions in the enclosure were not ideal as the banana trees threw deep shadows and it was not easy to see what was happening, but in a few minutes orders were given to cease fire. At dawn the Police party began to search the Kyaung and as they ascended the stairs gunshots were heard. Apparently a party of rebels with three *bohs* were hiding on the roof, and when they refused to surrender they were immediately shot.

The casualties were then collected and, as far as possible, identified. There were fifteen killed and sixteen wounded and not a rebel had escaped. Four *bohs* were accounted for including three killed, and the price on their heads, amounting to Rs. 900, was a pleasant recompense for all the discomfort and hard work. The Mahrattas' casualties were one British officer and three sepoys wounded, and the Column returned to Prome after a very satisfactory and encouraging night's work.

The General Officer Commanding decided at the end of October on a determined effort to complete the defeat of the rebels, who as a result of the previous two months' operations, had again split up into bands and were difficult to round up. His plan, divided into two phases, was simple and aimed at driving them into the jungle area and isolating them there whilst " packs " of irregulars went in and hunted them. Experience had shown that the rebels were in the habit of raiding at intervals of about three days in order to replenish their food supplies, and it was hoped that constant patrolling of villages near the jungle together with the blocking of paths would bring great pressure to bear on them. These operations were estimated to last two months, which

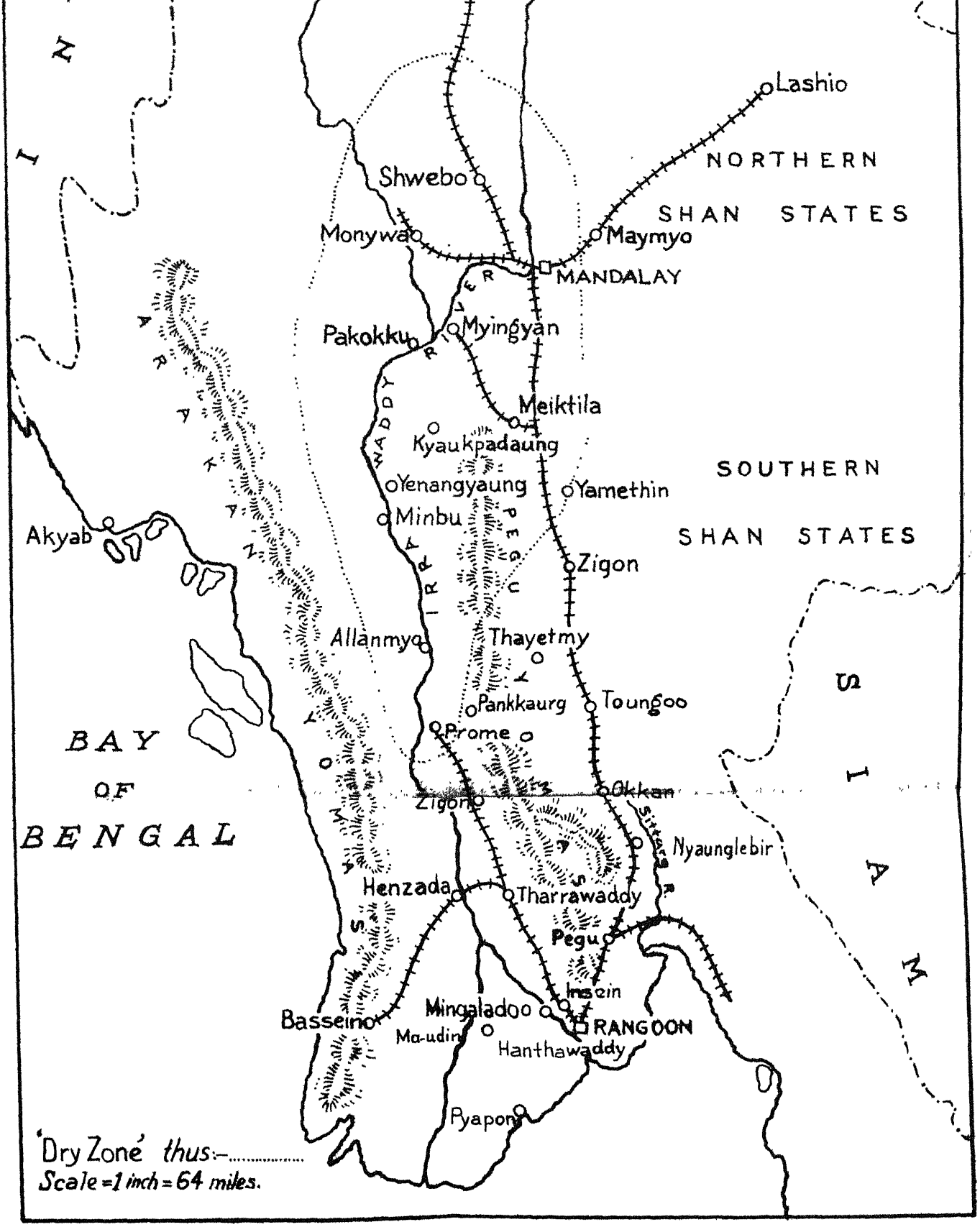
proved to be approximately correct, and during December there were signs of a distinct return to law and order in all districts except Prome and Henzada. Henzada is a bad district, with a particularly lawless population which has been driven to crime by economic conditions extending over the last fifty years, and its garrison always had great difficulty in keeping level with the rebellion.

January is a critical month in Burma, as Capitation Tax is due to be paid, and the end of the paddy harvest usually leads to an increase in crime. The Local Government was rather apprehensive, but operations in November and December had been so effective that the population was heartily sick of the activity of the troops. Desertions from the rebel army increased and leaders themselves began to surrender with their gangs and arms. Conditions varied in districts, but, on the whole, there was every reason for satisfaction. Capitation Tax was being paid with reasonable promptitude and civil administration was showing signs of coming to life again. The rebellion was not quite crushed, however, as on January 6th a rising occurred in the Zigon sub-division of Tharrawaddy which had several disquieting features. The rebel plans had been maturing for two months without the slightest suspicion on the part of the authorities and immediately it broke out there was a cry for military support. Fortunately reinforcements were immediately available and a repetition of 22nd December, 1930, was avoided.

With the defeat of the Zigon rising the Rebellion was virtually at an end and arrangements were begun to enable the Civil authorities to resume their duties. Units were gradually concentrated in their Brigade areas, and their departure from many villages was the sign for entertainments and expressions of good-will. The Local Government agreed to the policy that after the surplus troops had been withdrawn, the garrison of Burma (temporarily strengthened by two Infantry Battalions) should be kept in reserve to be used only if the civil forces lost control. All civil authorities paid marked tributes of appreciation to the military units, and in February orders were issued for their final withdrawal.

The Future.

The departure of the Secunderabad Brigade does not by any means indicate that the trials and difficulties of the Burma Government are over. The civil administration has still a considerable amount of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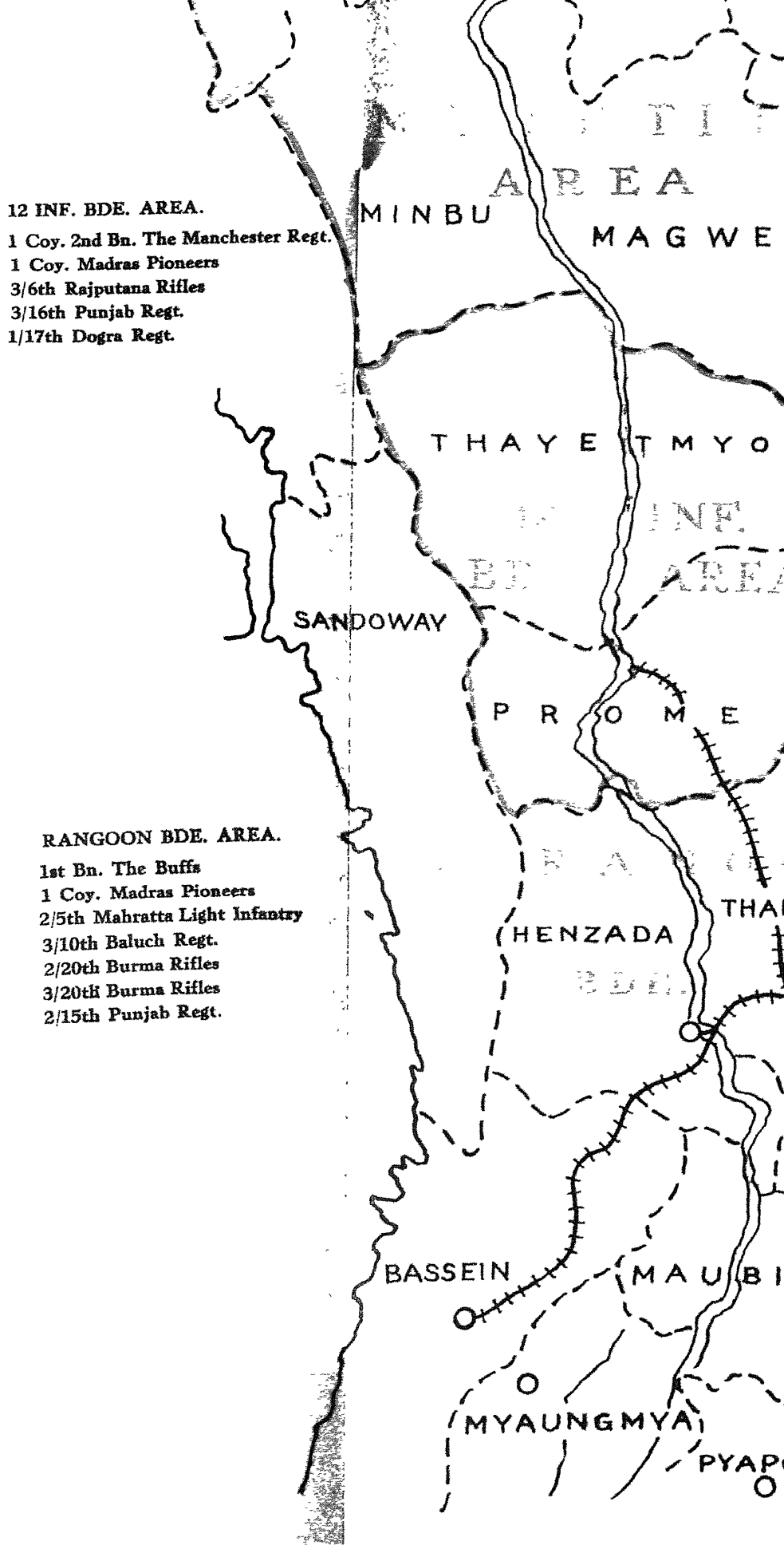

12 INF. BDE. AREA.
1 Coy. 2nd Bn. The Manchester Regt.
1 Coy. Madras Pioneers
3/6th Rajputana Rifles
3/16th Punjab Regt.
1/17th Dogra Regt.
MINBU
MAGWE
THAYETMYO
SANDOWAY
PROME
RANGOON BDE. AREA.
1st Bn. The Buffs
1 Coy. Madras Pioneers
2/5th Mahratta Light Infantry
3/10th Baluch Regt.
2/20th Burma Rifles
3/20th Burma Rifles
2/15th Punjab Regt.
HENZADA
BASSEIN
MYAUNGMYA

clearing up to do and the military police will have a thankless task before them until the civil police can work without support. But the rebels have had a salutary lesson and its effects should keep the country quiet long enough to afford an opportunity for all officials, civil and military alike, to revise their policy and methods on the basis of past experience. If full advantage is not taken of this breathing space Burma will undoubtedly continue to live up to its reputation as "the land of rebellions."

The country is still cursed with *Ahpwes* (secret societies) and one very competent observer in summing up the situation, says—"Rebel organizations may be built up behind a veil of secrecy which is impenetrable to any Government Agency." This is an admission of a very serious state of affairs, but one solution would be to open up the country by means of good roads so that the light of civilisation (together with Burma Military Police in lorries, if and when required) can penetrate the jungles and destroy the foul growths of disaffection and superstition.

SOME SUGGESTIONS FOR THE EMPLOYMENT OF MACHINE GUNS ON THE NORTH WEST FRONTIER.

By Captain G. H. Pulling, 6th Gurkha Rifles.

There have been many adverse criticisms of the Machine Gun Company as compared to the fourth Rifle Company when employed in the hills of North-West Frontier. They are mainly directed against the comparative lack of mobility, the flat trajectory and the vulnerability of the mules. Whether the criticisms are well founded or not, the majority of us have to take the situation as we find it and make the very best of existing conditions.

Here are some of the problems that confront us—

(*a*) To what extent can the Machine Gun Company assist the men on the hills ?

(*b*) To what extent can the Machine Gun Company replace the men on the hill by fire ?

(*c*) How is the Machine Gun Company, with the present organization, to be employed in the hills of the North-west Frontier ?

Some officers have the great advantage of working on the ground, with the possibility of a sharp reminder from an alert Pathan if experimental tactics overstep the bounds of practical politics : others have hill country on which to work but suffer more lenient treatment from the hands of their instructors and umpires. Wherever situated however, there is a tendency to consider ground with a " four rifle company " eye. An officer who has been trained with, and has fought with, rifle companies on the Frontier knows the tactical value of a feature at a glance. He considers it in terms of accurately timed and fast moving bodies of men who use the ground perfectly, occupy the feature, deny it to the enemy, make sure that no enemy has got close up to the piquet during the occupation and who finally get away cleanly and quickly when required to withdraw.

Throughout this article the terms " Holding Ground," " Denying Ground " and " Covering Fire " occur frequently and in order to ensure uniform interpretation they are defined as follows :—

(1) *Holding Ground*—when the Machine Guns deal with ground which would normally be occupied by Rifle Companies,

(2) *Denying Ground*—when the Machine Guns are used to prevent the enemy initiating a movement dangerous to the piqueting troops.

(3) *Covering Fire*—implies either a task of protecting troops which are on the move, or a task of assisting troops which are actually engaged with the enemy.

Before discussing the various types of operations which may be carried out on the Frontier, a suggestion that the combined use of Machine Guns and Lewis Guns might solve the fire problem, should be considered.

The Machine Gun is greatly superior to the Lewis Gun both in accuracy and sustained fire ; this superiority is due to range taking, the fixed mounting and strong mechanism. On the other hand the Lewis Gun is more mobile and can switch more rapidly from target to target.

The fire effect of both Machine Guns and Lewis Guns is greatly reduced in the hills by the broken nature of the ground. In any area engaged, there are bound to be many bullet proof hiding places for the enemy, and frequently there will be sufficient dead ground for the enemy to move without great exposure.

Suppose a section of Machine Guns, with a section of Lewis Guns attached, engaged an area comprising the slopes of a hill feature on which there were known to be some enemy : the Machine Guns could search the hill side systematically and the Lewis Guns with enhanced accuracy, owing to the range finder, could engage fleeting targets within the area. The fire could not be expected to dislodge a determined enemy, but it would certainly go far towards neutralising him. Further, should the tribesman be caught at a disadvantage by such a fire unit, he would surely think long before taking the risk of such heavy punishment a second time. Several such units, co-operating with artillery, open up far greater possibilities.

Whether a Lewis Gun Section is attached to a Machine Gun Section or not, all Lewis Gun Section Commanders should be trained to co-operate with Machine Guns. A Lewis Gun Section firing in the same area as a Machine Gun Section, and from the same locality, should automatically put itself under the Machine Gun Section Commander for fire direction and control. If the Lewis Gun's task does not permit its moving to within voice control of the Machine

Gun Commander, then the Lewis Gun Section Commander should certainly go to the Machine Guns in order to see exactly what they can and cannot engage. The Lewis Gun Commander should also get Key Ranges from the Machine Gun Range Taker. If owing to time or enemy action, or any other circumstance, personal liaison between the Lewis Gun and Machine Gun Commanders is not possible, then the Lewis Gun Commander must rely on information he has received regarding the tasks allotted to the Machine Guns and on the training he has received in peace. It is therefore important that such information as is communicated to Rifle Company Commanders should be passed on quickly through Platoon Commanders to Lewis Gun Section Commanders; of greater importance still is the training in peace which should include some combined battle practices. A Rifle Company Commander might also consider the possibility of lending a Lewis Gun Section from the Reserve Platoon to a Machine Gun Section located in his area. The Company Commander would have to state the amount of ammunition the Lewis Gun was permitted to use and he would have to arrange for the recall of the section in case of emergency.

There is one more general remark which applies to Machine Guns in all phases of Frontier Warfare—it concerns the distance the guns should be from the area which is to be engaged.

Throughout this article I wish to stress the fact that Machine Guns must be much closer to their target in the Frontier Hills than on the Plains particularly when giving covering fire. It is not a question of accuracy or of hitting power. It is for the benefit of the Fire Controller, who must be able to locate our own troops, watch their movements, from their movements diagnose their trouble, and then, on his own initiative, administer the dose of fire requisite.

In frontier warfare the enemy have no artillery and they do not use automatic weapons, hence it is only the ground that will prevent Machine Guns getting up close to their target in time to be of use. Admittedly there will be occasions when it is impossible to get the guns up in time during the advance and also times in the withdrawal when they cannot be left close enough to give effective covering fire. As however the ability to appreciate the ground with the "Machine Gun eye" becomes more general, the occasions on which the Machine Guns are correctly used will be much more frequent. Machine Guns

must be sufficiently far from the enemy to prevent their being spotted and neutralised by rifle fire, and they must be close enough to open effective fire instantaneously on their own initiative.

The various types of operations and fire problems which confront us are :—

(1) Piqueting a route on which permanent piquets have been constructed.
(2) Piqueting a route without permanent piquets.
(3) Protecting the construction of a permanent piquet.
(4) Burning a village.
(5) Camp protection.
(6) Co-operation with artillery.
(7) Fire Direction.

These operations are here considered on a small scale (enemy strength about 50 to 150 rifles) in the belief that the correct tactics in bigger actions will be derived from experience gained in the small ones.

Piqueting a route on which permanent piquets have been constructed.

This is probably the most frequent operation required of Regular Troops. Its object is to allow a convoy of pack animals or Motor Transport to pass through without interruption.

The established permanent piquets deny to the enemy any hope of successfully cutting our communications; he will therefore be concerned with the tactics to which he is most suited. As an individual fighter he counts success by rifles and ammunition captured; tangible evidence of his success in the form of some dead and wounded left out greatly increase his morale.

Piqueting the route may be divided into three phases :—

(*a*) The advance and occupation of road piquets.
(*b*) The protection of the route while the convoy is passing.
(*c*) The withdrawal to camp.

(*a*). *The advance and occupation of Road Piquets.*

During the advance the most likely enemy action is a rifle snatching *chapao* generally arranged for the unwary piquet which gets out of sight of its covering troops.

The Machine Gun tasks will usually be straightforward covering fire, probably firing across the valley. The sections can be leap-frogged forward for this purpose. The Machine Gun Company Commander should be in close touch with the Officer putting up the piquets and should work his sections successively into covering positions. It should be mentioned here that leap-frogging forward is a tiring business for both men and mules but they can both be saved to some extent by keeping only the gun and 1st ammunition mules with the sections. The remainder of the mules should move well forward in the column under the Company Havildar Major. In exceptionally bad country one may be tempted to use single guns in order to provide sufficient echelons to keep up with the advance. If, in most exceptional circumstances, one is forced to adopt this course, the great difference in the tasks that can be allotted to single guns must be kept in mind.

The great reliance placed on Machine Guns is due to their accurate and sustained fire. If properly handled they can get fire effect with the first burst and keep it up as long as the ammunition lasts. *By Splitting the Section this main characteristic is lost.* —Range taking, control of the ammunition supply and the supply of spare parts, are only a few of the difficulties to be overcome. It is a human failing that in spite of great mental effort, it is almost impossible to avoid placing the same reliance on a single Machine Gun as on a Section. One may get away with it: on the other hand, the one prolonged stoppage of the year may occur or a chance bullet may pierce the working parts of one gun: and then the most trustworthy weapon will fail.

(*b*) *The Protection of the Route while the Convoy is Passing.* (*Pack Transport*).

In the case of pack transport the tribesmen may endeavour to knock out sufficient animals to delay the subsequent withdrawal and thus create the situation most favourable for them to inflict casualties on a piquet about to retire. It is the great importance of keeping sufficient time in hand to counter-attack and evacuate casualties, that makes a delay to the convoy so disastrous.

If Machine Guns are used to hold ground from which the road is visible, it is not to be expected that they will prevent a few sharp-shooters from doing some damage with their first burst of fire. On

the other hand, ground from which the road is not visible, particularly isolated features, may be held by a combination of Machine Gun and Lewis Gun fire. This fire must be applied from at least two directions.

On the whole a generous allotment of Machine Guns to the reserve for the express purpose of extricating a piquet, if and when attacked, will meet most situations. The use of reserve Machine Guns is discussed in the paragraph dealing with the withdrawal.

Motor Transport.

The main characteristics of motor transport which effect the piqueting troops are classified below as advantageous or disadvantageous.

Advantageous.

(*a*) It passes a point in a comparatively short time.
(*b*) It is not as vulnerable to rifle fire as pack transport.
(*c*) It is not an easy mark for a sniper to hit.
(*d*) If disabled it can be removed from the danger area more easily than pack transport or dropped loads.
(*e*) It brings with it scope for Armoured Cars or Light Tanks.
(*f*) In case of emergency it can be accelerated over a short distance.
(*g*) With traffic control and good salvage arrangements exact timings can be adhered to when opening and closing the road.

Disadvantageous.

(*a*) It is liable to interruption by obstacles.
(*b*) It must be kept rigidly to the road in mountainous country.
(*c*) It is liable to mechanical breakdown.

Hence, compared with Animal Transport, Motor Transport places a completely different complexion on the problem of protecting the road ; and, while Machine Guns can be used more freely for this purpose, the whole problem is not by any means solved the troops with 1st line, equipment and ordnance mules have still to move out into position and return after the task has been completed.

If Motor Transport protected by Armoured Cars, is used to carry piqueting troops to and from suitable debussing areas, a further change can be expected. However, the writer has no practical experience of the use of Machine Guns in this eventuality and the

opinions he has formed are mere conjecture. It was partly with a view to encouraging some officer with recent experience to give his views that this article was written.

(*c*) *The Withdrawal.*

There is no need to stress the fact that most opportunities are presented to the enemy during the withdrawal. It is also obvious that fast moving, well timed withdrawals are essential. Now the Machine Gun is comparatively speaking a slow mover, and, if left in position long enough to be employed at the critical time, may well be the cause of disaster. The tribesmen know, too, that where there is a Machine Gun there is enough ammunition as a prize to warrant exceptional risks.

However in every block of mountainous country there are positions on which it is possible to pause during the withdrawal, and it should be the duty of Machine Gun Commander to ascertain from the Officer Commanding the Piqueting Troops, where are the lines on which he is prepared to pause. The Company or Platoon Commander should then be sent back to reconnoitre these positions with a view to putting the sections into action as they come back. The intervening ground should be dealt with by the leap-frogging process, but the Machine Guns should be a little further from the troops they are covering than in the advance.

In spite of excellent arrangements, the time is certain to come when casualties are suffered during the withdrawal and it is then that some Machine Guns in hand will prove so useful. For this purpose it is suggested that the ground in the vicinity of each permanent piquet should be reconnoitred beforehand, with a view to locating Machine Guns in such a way that they can cover an action within effective Machine Gun range and then after the troops have withdrawn, retire into the permanent piquet for the night. It is not advocated that Machine Guns should be placed in these positions in anticipation of trouble, because that would give the enemy the opportunity of avoiding areas dangerous to him. The more usual course would be to send them up after the initial trouble had occurred. The whole plan should be worked out to the last detail and section training should include practice in this manœuvre. This training might be divided into two stages.

The first, a drill to ensure that the N. C. Os. and gun members can separate without confusion the ammunition and equipment to be left with the guns from that to be sent back on the mules.

The second stage, tactical, to ensure that all methods of getting into a piquet are well rehearsed. To take an instance :—Suppose the gate through the wire of a permanent piquet is under fire and the wire on the opposite side of the piquet is defiladed, an obvious method of getting into a piquet would be to cut the wire on the defiladed side, pass the guns and ammunition over the wall, fill up the gap in the wire with loose wire or a spare knife rest, and then scramble into the piquet.

The disadvantages of this scheme are that either the enemy will choose ground which is not under observation from a permanent piquet or he will neutralise permanent piquets in the area in which he intends to operate. However there are three factors in our favour. Firstly, a short distance from the piquet the ground under observation may change completely. Secondly, the Machine Gun can give full value at ranges beyond the neutralising zone of rifle fire, and at the time when the decision to send the Machine Guns up is made, the enemy will have disclosed his main dispositions; it should therefore be possible to find a suitable permanent piquet without taking undue risks. Thirdly, the surprise effect may completely upset the enemy's plan.

Finally, a word about ranges ; owing to the great difference in visibility due to the various natural phenomena such as light, shade, scrub and broken rock, it is impossible rigidly to divide Machine Gun ranges into " close," " effective," and " long," as is done on the plains. However it is safe to say that during the withdrawal the majority of useful Machine Gun fire in the hills will be given between 800 yards and 1,400 yards.

Piqueting a Route without Permanent Piquets.

The absence of permanent piquets leaves more courses open to the enemy. He can, if he wishes, oppose the advance to any particular feature, he may develop a more determined attack on the piquets after they are in position, and he can follow up the withdrawal so far as the ground permits his doing so. The general employment of Machine Guns however, does not differ very greatly from that described in the last operation ; covering fire during the advance is if possible, more

important and a slight delay in order to let Machine Guns catch up may be necessary.

One matter that has not yet been mentioned is the height Machine Guns should be taken out of the nullah to give covering fire. There is considerable divergence of opinion on this matter but the controlling factor is whether the Machine Guns can or cannot see, that is to say, whether they can see the likely targets.

During the advance the chief ingredient in the enemy plan will be a good gateway, and therefore he need not be expected on the forward slopes which are liable to heavy covering fire from us. His positions will almost certainly be in ground behind false crests and on spurs and in re-entrants defiladed from the nullah bed. This ground usually can be reached by Machine Gun fire from long ranges, or from positions further forward but well out of the nullah bed. In the first case the covering fire may not come until it is called for and it may have to be directed. In the second case the advance may have to pause until the Machine Guns are in position, but the fire if required will be instantaneous. Which of the two is the better?

In the withdrawal some of this preparation to give covering fire may have to be sacrificed, excepting of course that which is to come from lines on which the Commander is prepared to pause.

To sum up. Get the guns as high as necessary for observation but keep them as low as possible for speed. These two considerations over-rule all others, there will be a continual tug-of-war between the two, which must be decided over and over again as each tactical situation arises.

While on the subject of speed, the importance of individual training must be emphasised; individual training of the highest order is absolutely essential throughout the gun teams and sections. The slightest delay caused by ignorance or slackness on the part of any individual may have far-reaching results. If any members of the teams can be considered as requiring a higher standard of training than the others, it will be the mule leaders and ground scouts; the latter must also be expert mule leaders.

Protecting the Construction of a Permanent Piquet.

This operation differs from the others discussed, in that the heart of the operation is on a hill top or on a spur well above the nullah bed. It is our object to complete the piquet in one day sufficiently for the

piquet to withstand an attack immediately the covering troops are withdrawn. There is so much work to be done that delay in construction may have very serious consequences. It is therefore the task of the covering troops to keep the enemy out of effective rifle range of the piquet during the whole period of construction.

An annihilating fire plan cannot be put into effect until the enemy discloses his presence, hence it is expedient to hold all ground from which the construction parties can be fired on, by occupation. The enemy's most effective course is then to attack some portion of the ground occupied, with a view to gaining an area from which he can fire on the piquet. Consequently the Machine Gun tasks will lie in ground from which such attacks can be initiated, that is to say they will be required to deny ground to the enemy. To do this they will have to be located well out in the ring of protective piquets.

The manœuvre entails great mobility on the hillside, perfect ground scouting and a sure eye for Machine Gun targets. The fire plan can be formed on the lines suggested for holding ground by fire, which is discussed later. The hill climbing ability of the mule is greatly increased if the men are familiar with the use of drag ropes. The ropes are attached to the breeching when ascending and to the breast collar when descending.

Burning a Village.

Although this operation is punitive in its conception, its real value from the point of view of the troops carrying out the operation, is that it makes the tribesman fight on a day of our own selection. We must take the opportunity to deal out some hard knocks if we can. The tribesman can still choose his point of attack but he has to make his choice quickly and carry out the attack unrehearsed. Our protective measures in this operation are not hampered by long columns of vulnerable transport. Every unit in the formation operating must be prepared to take its chance of some casualties as it would in any battle on the plains against a modern enemy. Working on this assumption there is considerable scope for the employment of Machine Guns, and hence great possibilities of inflicting heavy casualties on the enemy.

Now to take the operation in its various stages. We first of all move out and protect the route up to a favourable point from which

the hills round the village can be seen. The plan for the protection of the demolition and burning of the village must then be made.

It is most important that a thorough search for ground which can be held by Machine Gun fire should be made, and if the Commander of the troops responsible for the protection of the demolition of the village is not satisfied with the view obtained in his original reconnaissance, he must carry out a subsidiary operation in order to get the view he requires before forming his final plan. If this is not done, the inevitable result will be that a plan for the rifle companies to carry out the protection will be made and the Machine Guns will be asked to fit in as best they can : in these circumstances it is obvious that many opportunities may be lost.

When selecting ground to be held by Machine Gun fire, the following are the main factors to be taken into consideration :—

(1) Is there sufficient cover for the demolition troops to get into the village and out again without heavy losses ?

In this connection it should be remembered that the Machine Guns will be in position before the demolition troops are expected to move into the village and the local protection troops will have " mopped up " the village and will have been posted to guard all approaches.

(2) Can the demolition troops carry out their task in the village with local protection to stop a rush and Machine Gun fire to deal with enemy further off ?

It must be remembered that casualties in or around the village will be far cheaper in the long run than casualties on the hills beyond.

(3) Will the Rifle Companies on either flank be able to hold their ground without the assistance of the Machine Guns, allotted to the special tasks ? It is most probable that the Machine Guns will be available to cover the Rifle Companies up to and down from their positions, but any assistance required beyond that will necessitate a Brigade task either to deny ground beyond the Rifle Piquets or to hold the ground beyond the village.

(4) Can Machine Gun fire be brought to bear on the ground to be held by fire from at least two directions ? To gain really searching effect in the hills, this is necessary.

(5) What effect will the smoke from the burning village have on the fire plan ? The smoke is a big factor whatever the plan ; it gives the enemy information that the retirement is about to commence and it interrupts communication and observation. However the more ground that is held by Machine Guns the quicker will be the withdrawal out of the smoky area and the Machine Guns are capable of firing at pre-arranged targets through the smoke.

Owing to the careful reconnaissance required before forming the Machine Gun plan, it is certain that time will be lost during the advance, but when the withdrawal commences, the saving in time then, will make ample compensation for time spent on reconnaissance during the advance. The other tasks which can be allotted to Machine Guns should present no difficulties beyond the problem of getting the guns into and out of positions. It should, however, be remembered that in this operation the enemy will come on far more boldly than in any other and therefore opportunities for ambush by Machine Gun fire should not be overlooked. In the withdrawal the Machine Gun is eminently suitable for an ambush provided it has a good line of retirement and some local protection. It is easily concealed and produces a large volume of fire.

Camp Protection.

The tasks for Machine Guns in camp protection may be classified as follows :—

(*a*) Protection of Perimeter .. By firing on fixed lines.

(*b*) Lines of approach .. The guns on fixed lines will not usually have a wide enough arc when firing through loop holes to carry out both tasks.

(*c*) Protection of Camp Piquets. This again is a special task though it may be possible to make the protection of a camp piquet a primary task and fire on lines of approach a secondary task for the same guns.

(*d*) Protection from heavy sniping.

The tasks in (*a*), (*b*) and (*c*) present no unusual difficulties beyond siting the gun positions. The perimeter takes its shape from the ground and wire takes its shape from the perimeter, but whenever possible during the construction of the camp, wiring parties should give Machine Guns a straight line along which to fire.

As soon as the perimeter is complete and the wire has been put up, the Machine Gun plan should be included in the general alarm scheme, but as many of the Machine Gun personnel as possible should be removed from the perimeter.

As for sniping, the most effective course is to ignore it completely. This is most discouraging to the enemy and in all probability the camp is less disturbed if the sniping is not replied to. Persistent sniping will, however, disclose some regularity of time and place so that an ambush by Machine Gun fire may be prepared.

Co-operation with Artillery.

This branch of the Machine Gun Commander's responsibility has not been mentioned before in order to save repetition in the discussion of each operation, but co-operation with Artillery is as important in Frontier Warfare as in any other. The Machine Guns can and will pin the enemy in a definite locality on many occasions, but the Artillery will be required to get them moving again.

The fire plan, for the purpose of holding ground by fire, should be somewhat as follows :—

The Machine Guns must be prepared to search the areas systematically.

The Artillery will be required to force the enemy to move out of cover into Machine Gun fire.

Some Lewis Guns will be required to deal with fleeting targets.

The main thing to remember is that tasks for Machine Guns and Artillery will usually lie in the same area. Close personal liaison is therefore necessary during the formation of the fire plan and also during its execution.

Fire Direction.

When the Machine Gun Company is required to hold ground by fire, some quick system of Fire Direction is very necessary. In order to bring fire to bear from several directions, sections must be widely

separated and communication is only feasible by semaphore or by signallers with visual telegraphy.

Success has been attained on the field firing range by means of a simple code, but it depended on the opportunity to collect fire unit commanders before they moved out to position, at a rendezvous from which the feature to be held by fire was visible. The ground to be held was divided into areas and sub-areas and given code letters. Then, by the code, all sections could be switched on to any sub-area in less than four minutes. They could be directed to fire by observation or to fire a limited number of rounds at given rates or to fire a pre-arranged timed programme. Finally, the sections were trained to re-engage targets in their own area on completion of the task given by the code.

THE HANKOW "INCIDENT."

(EXTRACTS FROM THE DIARY OF A NAVAL OFFICER).

Monday, 3rd January 1928.

This was the last of the three days celebrations ordered by the Cantonese Government to commemorate their "Victories" and the general formation of Trade Unions. It was a fine warm day, and a public holiday, so large crowds were about.

About 12-30 p.m., as crowds outside several of our barricades were being vehemently harangued by soldier or student orators, naval armed parties to man barricades were landed. All the subsequent trouble occurred at one position only—the barricade known as A. 1. on the south end of the British Bund, facing the Custom House, which is on the border of the Native City alongside one of its chief gates.

At A. 1. the street is about 30 yards wide, then comes 20 yards of ornamental turf and promenade, and then about 200 yards of hard mud bank sloping to the river. A. 1. itself was a sandbag breastwork in the middle of the road occupying about one-third of the available width of the road. Thirty yards ahead of the breastwork were kept sufficient coils of concertina barbed wire to stretch right across the road when required. On this occasion, the wire defence was open and any attempt later to close it would have been impossible without firing on the mob. Indeed, it was not long before the mob removed the barbed wire bodily.

At 12-30 p.m., A. 1. was occupied by two sections of Marines, but the haranguing of the mob just outside the post continued. A large section of the crowd, to all intents and purposes sightseeing, spread along the turf and promenade in the flank and to the rearward of our sandbags.

Shortly after 12-30 p.m., it was reported that A. 1. was being stoned by the mob. Two sections from H. M. S. *Woolston*, which were in reserve on the pontoon, were landed and hurried to A. 1. *via* the promenade which was cleared without difficulty. Stone throwing ceased for about 30 minutes.

As usual all our landing parties were fully equipped and had Lewis guns, and each man carried a loaded truncheon. The general order was "At all costs an incident is to be avoided," which was taken to

mean that if the mobs could possibly be held by any other means, not a shot was to be fired, even if it entailed a short retirement.

At 1 p.m. there arrived at A. 1. an extra posse of native (Chinese) police, but these proved perfectly useless in any way. The only police who rendered any assistance to our chaps at any time were three or four Sikh policemen who were there from the start, and they mostly performed in rear of our troops.

At about 1-30 p.m. much more stone and half brick throwing commenced. This was almost entirely done by small boys and youths who fringed the advanced edges of dense mobs of coolies armed with their carrying poles. From 1-30 p.m. to about 4-30 p.m. this pelting continued without cessation and the party—now reinforced by another section from H. M. S. *Woolston* and by a few details from H. M. S. *Magnolia* and *Woodlark*—stood the ordeal with the utmost steadiness and restraint. At times the mob had edged so close to the men—now fronting two ways, across the road and along part of the promenade—that it was necessary to charge with batons and rifle butts to get more elbow room. In all, about four or five charges were made in the course of the afternoon, and most of the casualties occurred on the mud foreshore. These charges ended in the line being extended from the road right down the foreshore to the river—a frontage of about 250 yards, which was necessarily very thinly held subsequently. In all the charges the result was the same—the troops got their own back for a few short moments, and then had to retire back to their own line. This move back was always attended by greatly increased brick throwing.

Pretty well everybody was hit by bricks at some time or other in the afternoon, but the restraint and discipline displayed throughout these three hours by all hands were surprising. A few men did use their bayonets with discretion during the charges, but not a rifle was loaded all day. However, it is quite certain that these same men could not have stood another day's pelting like this without shooting. They blessed their steel helmets!

Most of the men, who bore the brunt, got nothing worse than bruises but two men from H. M. S. *Woodlark* were more seriously wounded—one was brained after his helmet had been knocked off, and another bayonetted in the leg by a Chinese who had seized the brained one's rifle. The Chinese said that six of them were killed

and 100 injured, but from positive information only one was actually killed.

By about 4-30 p.m. the line had retired to a street corner about 120 yards in rear of barricade A. 1., which was then in the hands of the mob, who quickly pulled it to pieces. At this point all the reserves were out, but the line was finally established, and although promiscuous brick bats were still flying about, the worst was over.

At about 5 p.m. Cantonese Military Police and armed soldiers arrived—only three hours late—to restore order and to give the "protection" to the Concession they had "guaranteed" for the past fortnight. They did, however, push back the mob on this occasion. Had they not, what with darkness coming on, the troops would certainly have had to shoot to save the Concession.

There were no more reserves—all our other barricades were being held at the time, though none of the others had trouble. The local Volunteers were mobilised and holding their allotted barricades. All effectives were employed. So serious did the position seem that 100 American blue-jackets were asked for to form a reserve at the Bank. These arrived 1½ hours later.

At about 6-30 p.m. an official arrived from the Cantonese Commissioner for Foreign Affairs and said that if the troops were withdrawn from the barricades they would guarantee protection of the Concession with their best troops from outside. The troops were ordered back on board their ships and the other half into the Bank and Volunteer Headquarters—the Americans were sent back about 9 p.m. Occasional patrols were kept going round the Concession for the night.

Tuesday, 4th January.

In the morning the Cantonese Commissioner for Foreign Affairs asked for a conference with the Consul-General and the Municipal Council. At this meeting the Cantonese authorities guaranteed once more the "fullest protection" of the Concession from outside and said they would use their most reliable troops to maintain it at all costs—but all British forces were to be withdrawn on board ships, the Marines included, for whom there was practically no accommodation. *Nobody put any trust at all in this guarantee. Had we not seen during the past fortnight just what a similar guarantee was worth.*

However, all troops returned on board their ships at 11 a.m.

By 12-30 p.m. considerable mobs of coolies were going about on the Bund beating up native (Chinese) police. By 2 p.m. none of these police were left on the streets, all barricades were razed to the ground and the mobs increasing in size and ugliness. By 4 p.m. there were reports of Englishmen being roughly handled, various inflammatory posters appeared, the War Memorial Cenotaph was badly mutilated and window smashing was started.

The first instructions to evacuate women and children were not issued until about 3 p.m., when they were sent to the British Municipal Council, which had continued to function though virtually besieged in their offices. From 5 p.m. onwards it was considered almost certain death for any Englishman to show up on the streets, and the British Volunteer Company which had been demobilised at 11 a.m., when the troops returned on board their ship began concentrating again at their Headquarters, without orders. Some of them had much difficulty in getting into their building. By 6 p.m. the mob was entirely in charge and very dangerous—and about 60 volunteers were besieged in their Headquarters.

Since noon the troops had sat tight on board, interested spectators of howling mobs performing along the Bund. The sole line of communication was a telephone to the Bank. The only action taken to stop the mob violence was the repeated *protests* of the Consul-General to the Cantonese authorities.

Suddenly, at 7 p.m., came the report that the Cantonese Government had marched 300 armed soldiers into the Concession, ostensibly to restore order, as they professed themselves unable to do so from "outside". Everyone, however, quite realised now that the Concession had gone for good and all—the Cantonese would never now give up its control. Soon after the arrival of the Southern troops the mobs were dispersed, order restored and looting stopped for the night.

The question of the 60 volunteers besieged with their arms and 12,000 rounds of S. A. A., now arose. The Cantonese authorities were requested to give a safe conduct to them in order that they could evacuate their Headquarters. This request was granted and the Volunteers evacuated under the protection of Southern troops, at 9 p.m. These Volunteers, many of whom had been roughly handled

that afternoon, and all of whom were full of fight, had a dreadful few minutes when they heard this decision. Their Corps had been in existence since 1911—and to be disbanded without firing a shot in defence of their Concession!

There were at least three separate mutinies at their Headquarters, and it was touch and go whether they would shoot the town up or not. When their Company finally marched down under arms to the pontoon at about midnight there were many hard remarks being passed about "*taking out naturalization papers as American citizens.*"

Wednesday, 5th January.

Hurried arrangements for evacuating all women and children had been got out the night before and the steamers and guards arranged. 2 p m. Wednesday was the time fixed to commence the evacuation which was to be *via* the ex-Russian and French Concessions to wharves downstream whence the refugees were to be transported in armed tugs to the various ships. Only able-bodied men were to remain behind. These latter, thanks chiefly to Dr. Lyon Brown (late C. O. of the Volunteers) were very cleverly all concentrated during Wednesday and Thursday in the big A. P. C. building on the Bund.

On the forenoon of Wednesday, perfectly enormous crowds filled the streets of the Concession, forming numerous processions, waving banners, cheering, etc. to celebrate the "capture of the Concession." No English could venture out, except under military escort.

At about 1-30 p.m. most providentially, it started to rain, and continued steadily for 24 hours. All crowds immediately melted away —never was rain so welcome. The evacuation was able to go ahead from Wednesday afternoon all through the night and well into Thursday without a single serious incident—nothing worse than attempts at extortion and intimidation on the part of the coolies carrying the luggage. This was stopped by sending seamen guards to all embarkation pontoons and to ships loading in the stream. The record fee secured by carrying coolies early in the day was 100 dollars for carrying two bags. After a bit the fee was standardised at 60 cents.

Thursday, 6th January.

By this day the number of able-bodied Englishmen concentrated in the A. P. C. building reached 160. Of these a certain number had managed to smuggle in revolvers and one rifle. Late Wednesday night five of the leading hands of the party managed to smuggle in

revolvers and get through to the ships. Mr. Lyon Brown was nominated as O. C., A. P. C. building. He was supplied with a Lewis Gun disguised in H. M. S. *Woolston's* cricket bag. The Volunteers managed to smuggle in gear successfully and subsequently got two Verey pistols, an Aldis lamp and some signal flags. It was arranged that concerted plans of action would be taken should the A. P. C. building be set upon and they had to fight their way out. About 50 of them were armed and they had in that building some victualling stores, which were sufficient for six weeks' supply for 300 men. The building is about a quarter of a mile from the river and under constant observation.

It was great luck getting the arms through on Wednesday night because on Thursday onwards all houses in the Concession had been very strongly picketed by Southern troops and they now had wind of what the Volunteers were doing in the A. P. C. building. Anyone entering or leaving was thoroughly searched. These house pickets did not stop foreigners entering offices because the Southern Foreign Minister, Eugene Chen, was most anxious that business should be resumed. But cases occurred where men, who had visited their offices, had been prevented from leaving for hours.

Thursday was a quiet day because it was raining most of the time. Had the Chinese gone for the A. P. C. building there would have been a very pretty show.

Friday, 7th January.

It rained hard all day, so things were very quiet ashore—no crowds. In spite of numerous pickets and Cantonese police guards which pretended to preserve order, considerable quiet looting was going on, but nothing very wholesale.

Mr. Williams, refugee from Wuchang, came in this day reporting things very bad over there. He had lived there for 14 years and had never before had to clear out.

Everybody who should be evacuated (and did not deliberately refuse) had gone by Friday, and several vessels had already left for Shanghai. The total number evacuated was about 400.

It was heard this day how anxious Eugene Chen was to have business restarted. The commerce of the port was practically stopped, and, apart from the financial loss to all Chinese merchants and

banks, the huge numbers of coolies now unemployed were likely to get quite out-of-hand, and might even turn on their "Southern Saviours" when they began to feel hungry. The next fine day, however, would quickly show what turn events were taking. Posters which read "Business or the Concession" were put up everywhere in Chinese and English. This was interpreted to mean, either :—

(*a*). Attempt to regain Concession and we shall boycott you and ruin your business.

(*b*). Resume business or we shall keep your Concession.

Most people thought (*a*) was the correct meaning.

So far however not more than two Englishmen had attempted to go near their offices, and it seemed quite certain that if the Volunteers left the A. P. C. building and returned to work, there would never be a chance of their being able to concentrate again in the building. Very early on Wednesday came the definite news that the Cantonese Government had seized the Hong Kong and Shanghai Bank (the finest building in Hankow) and made it the permanent Headquarters of their Labour Bureau.

Saturday, 8th January.

Another cold and wet day—and blowing hard too. Still no means of knowing what may happen next. No crowds whatever are to be seen in weather like this. A new poster to-day, "Turn out the English gunboats by arms."

A torchlight procession was promised this night but it did not come off. Responsibility for British lives in Hankow was now narrowed down to the crowd in the A. P. C. building, so every one was much happier as regards freedom to act, if and when the time came. What struck all as remarkable was that except on Tuesday and Wednesday, there was no attempt to boycott the men-of-war. Since then fresh provisions and canteen gear had come as usual.

All American women and children were evacuated on Thursday and Friday, the British lending them two "Jardine" ships for the purpose. A few French families also went.

The native (Chinese) police changed their cap badges, tied the usual tricolour ribbon round their necks and took on as Cantonese police.

MORE OR LESS OF A MESS.

I

"END THE MESS."

By 'Economist.'

The serious shortage of candidates for commissions in the Army is to a very great extent the result of the financial situation. The regimental officer of to-day has to be highly educated and parents feel that, after an expensive education at a Public School, Sandhurst, or at a University, the pay, *when the regimental expenses are taken into consideration*, is a most inadequate return for the outlay they have made.

The class from which the commissioned ranks have been recruited for generations is no longer in a position to put its sons into the service. The retired officer knows the burden of debt he sometimes had to shoulder for years, and unless he can give his son an allowance, he feels it is in the best interests of the boy to put him into business. On the other hand the Army for obvious reasons cannot afford to lower the standard of its officers.

The percentage of young married officers is now higher than it has ever been, except possibly for a short time during the War. These conditions must be catered for. It does not help matters by saying "A junior officer has no business to be married." He is married and that is that. What steps, then, can be taken to make the Army as a career more attractive tc the right stamp of candidate? The solution, if it is impcssible to increase the pay, seems to be to cut down regimental expenses.

In view of the present necessity for economy in the Army surely the question of the abolition of the Regimental Mess should be seriously considered. It would be a step in the right direction, lifting a heavy burden off the whole regiment. Running what amounts to a private hotel for the use of perhaps two or three officers is absurd. Two instances may be given. In one battalion there are three unmarried officers, in another there is only one, and these are not isolated cases. Another point which must be taken into consideration is that even these officers are not always with their regiments, but spend a large part of their time away on courses, leave, etc. Many of the married officers seldom go into the Mess and it is not often used as a Club or a meeting place by the officers of the regiment. However few members

there are, the running expenses of a Mess continue with but little reduction for those who are away, and these running expenses have to be met by the regiment as a whole.

There is no doubt that the Mess was a sound institution for the young officer in the days when many of the senior officers were unmarried and lived in it. A good deal was said about the discipline of a Mess being such an excellent thing for the newly joined officer. This is now a thing of the past; there is not the same discipline, and never can be in a Mess in which there are only two or three junior officers. These young men are almost entirely on their own and can do pretty well as they wish.

In most stations in India now there are hotels, boarding houses and Government Quarters. The married officer has often to live in them, so why cannot the unmarried officer? No business firm runs a private hotel at the expense of the other members of the firm for the convenience of its young assistants out from home, so why should it be done in the Army? It is not noticeable that young men who come out to this country in the I. C. S., banks and firms are any the less well-behaved because they have not a Mess to live in and are not subjected to its discipline. Chummeries are run in nearly all towns in India with a business community, and the cost per head rests entirely with the men themselves.

The cost of running a Mess is out of all proportion to its worth. A large staff has to be kept up even if there is only one dining member; the rent of a Mess is usually far higher than that of a private house of the same size, and the servants' wages considerably more than those paid by married officers. One instance will suffice to show this. In a certain station no married officer paid more than forty rupees a month for a first class cook. Yet the Mess cook, simply because he was the *Mess* cook, was paid eighty. It was actually suggested at a Mess meeting that the married officers should pay an extra subscription to meet the Mess cook's wages! This suggestion was turned down, and a few telling remarks made by a bachelor member of the Mess on the quality of food served at the Mess table compared with that at the table of a married officer, and on the difference in price.

The outlay necessary to supply an officer with Mess kit is considerable, frequently putting a young man into debt at the beginning

of his service. Why cannot ordinary evening clothes be worn, with decorations if necessary ? Mess kit is unbecoming to most men, and is neither comfortable nor healthy. The custom of presenting silver to the Mess is an additional expense to the officer. It was first introduced as a means of supplying the Mess with plate it really needed. Most Messes now have a vast accumulation of unused and often unwanted silver, yet this store is steadily increasing.

The existence of a Mess means an enormous amount of extra work to already overworked officers. The time spent on checking stores, Mess accounts, catering, etc., could be spent far more profitably in military study, training, and games. There would be a large saving in money to Government and in worry to officers if there were no Mess to move when a battalion is changing stations—a frequent occurrence these days. The I. A. S. C. have no regular Mess, yet the officers of that corps appear to find quarters to suit them. It may be argued that they usually live in a Regimental Mess, and at times run the risk of being looked on as nobody's babies. The I. A. S. C. officer's annual subscription to his general Mess is very small when compared with that a lower paid regimental officer has to pay. This may be a reason for the present large waiting list for the I. A. S. C. !

Continental Armies have no Messes, yet this fact did not seem to tell against them in the Great War.

What will be the fate of the Regimental Mess when the Indian Army is Indianised ? The proportion of married officers will then certainly be higher than it is now, as very early marriage is the custom in this country. Are Indians going to pay towards the upkeep of an institution which is almost entirely British in its ideas and customs and which is now being kept alive through sentiment and tradition only ? Indianisation spells the death of the Regimental Mess in India. That Mess life is foreign to Indians is clearly seen, and it is an open secret that they find it irksome and in some ways unsuited to them in this climate.

Until the total abolition of the Regimental Mess can be brought about, a Station Mess would meet the demands of most unmarried officers for the time being.

This article will doubtlessly be ranked as sheer heresy by the pre-war officer, but he must realise that times have changed. The Regimental Mess is no longer an absolute necessity ; it is an expensive

luxury which no one can now afford, while the objects for which it was originally instituted simply do not exist at the present day.

To sum up, the advantages that can be claimed for the substitution of Station Messes for Regimental Messes are :—

(*i*) The saving of expense to Government.

(*ii*) A considerable financial help to all regimental officers.

(*iii*) More time at the disposal of the regimental officer for his real job.

(*iv*) As a result of (*ii*) above, an improvement in recruiting the right stamp of officer.

II.

"MEND THE MESS."

By 'Mess President.'

The following remarks do not apply to British regiments or those fortunate units which, having few married officers, have a large number of dining members. For these the advantages of a well run Mess are so obvious that nothing need be said. I confine my remarks to the much-married Indian regiment, keeping in mind also the future Indian Army with its Indian commissioned officers who, no doubt whatever, will be more married than European officered units.

As a married man I can speak with authority on the feelings experienced by the non-dining member of a Mess when he scrutinises his monthly Mess bill. After the first spasm of blind rage induced by the increase of, say, item "Servants and Lighting," he is rendered incoherent by the information that he is being cut umpteen rupees for Mess donations on promotion. The *coup de grace* is often administered by the final item "Share of Mess Guests."

The first reaction in the British breast is "I won't pay the—bill," followed shortly by the calmer reflection "I can't pay the—bill." When the heart beats return to normal, the British head takes over control and says "I've got to pay the—bill;" and that's that. The British body thereupon flings the offending Mess bill on the floor, subsides into the cretonne chair, lights the soothing pipe and considers the whole question.

Mr. Pelman says that the balanced mind evenly distributes its energies between Feeling, Thinking, and Action; more or less that order.

Mr. Feeling is predominant at the moment and the temporarily unbalanced mind is working much as follows :—

" This Mess bill imposition is the limit ? Why should the unfortunate married man (It's all right. His wife is out somewhere recouping the family fortunes at bridge. She can't hear) have to subscribe to an outfit run for a small possé of indescribable egoists, who are either too young or too selfish to marry ? Why ? "

" Hasn't he got his own house to rent and furnish ? And Mess guests, forsooth ! Dammit, does not he already entertain his friends in his own house, including also the aforesaid egoists ? "

" And servants ! Each egoist has his own private servant and yet has to have Mess servants too to pander to him, and, what's more, expects married officers to subscribe to his comfort."

While the British body draws strongly at the pipe, Mr. Think peeps in, but is as yet only allowed on the threshold.

"Oh, yes! A married man can use the Mess and enjoy its comforts but what's the use of that. He can find time to go there only in the late afternoon when it is empty except for the usual crowd of humming mosquitoes. He can dine in, of course. In fact the regimental rule forces him to do so twice a month, but that costs him the price of his dinner, and there is for some reason no corresponding saving at home."

(The mind probably switches off on to another controversy. One purely domestic, which can have no place here.)

" He certainly likes the Mess. It has happy memories of his pre-marital days. A good show and one to be proud of. He remembers stepping into it when he joined and found a comfortable, clean and well-furnished home. Everything going smoothly. Wholesome food and all that. Of course he didn't realise then that it was being kept up partly by harassed married seniors."

" He rather wonders what he would have done if there had been no Mess. Lived in a hotel perhaps or chummed in with old Snooks. Awful thought ! Snooks *would* play the piano all day. Besides he would have had to put down a lot of money for furniture, crockery and so on. Of course he could have gone into that chummery with

the Policeman and one or two others, but it would not have been quite so comfortable or so friendly as your own Mess. Besides it would not have seemed like joining the best regiment in the service."

The pipe is now drawing well, and Mr. Think has come into the room and has linked arms with Mr. Feeling. Our harassed friend as he watches the smoke slowly curling upwards seems to listen in to a conversation between the two.

"It is all sentiment, rotten sentiment," says Feeling. "Everyone is talking of economy and yet keeps up an expensive and quite unnecessary Mess. Other nations manage very well without Messes. Why shouldn't we?"

"Because, my lad, most of our institutions are the result of experience and we find a definite value in Mess life." Mr. Think's voice is slow and measured. "In India the climate and oriental influences sap energy and lead to slackness. The mild discipline of a Mess gives a useful stiffening to the moral fibre."

"A fat lot of stiffening you get in a Mess with only three or four youngsters in it!"

"Not so. The very donning of Mess kit, often uncomfortable and irksome is a stimulus. No chance of 'dining dirty' in a Mess. Moreover, dinner is a parade and punctuality being necessary one can't be slack. The very formality of apologising to the President at table (although he is often junior) is most salutary. The unwritten laws of Mess life under which certain subjects of conversation are taboo and perhaps certain regimental customs observed, all have a useful effect."

"My dear old prude, you make me feel tired. What about our civilian brethren? They seem to be quite full of good manners and grit without all this discipline."

"Touché! But remember that they generally come out to the country older and a lack of this discipline is less observable and matters less in the kind of life they have to lead. The army is founded on discipline and if you haven't got it among your officers you will not have it in the ranks. As above, so below."

Mr. Think continues. "In the past the commissioned officer has been drawn from a community brought up in a tradition in which self-discipline has had a very high place. Mess life helps him to keep

up the standard. Without in any way wishing to decry the character of the young Indian commissioned officer of the future, it must be allowed that many of them will not during their youth have been subjected to the same disciplinary influences. I claim that Mess life will, in their case, be a necessity."

"Well! You spilt a bibful! But, me lad, you are off the rails. I'm thinking of regiments with mostly married officers, just like the new Indianised regiments will be."

"There are times of the year when married officers are separated from their families," Think replies. "The hot weather for instance. The Indian commissioned officer will not always have his family with him. At such times a Mess is a boon. They get in touch with their brother officers in a way that is normally impossible. Let me remind you too of the many weeks of the cold weather during training when in camp. You must have a Mess *bandobast* for that."

"Now, don't tell me that you need keep up an expensive permanent Mess just to keep a camp mess going for a few weeks. You, in your cold calculating way, must realise that the cost of a permanent Mess isn't really balanced by the practical value received; at any rate to the married man."

"I, in my cold and calculating way, realise that there are more things in this life than money and finances. *Esprit de corps* is often born in a Mess which belongs to all, is probably a source of pride, and in which find place the records, souvenirs, and a thousand traditions which cement the regimental spirit. Besides this it provides a means of direct contact between officers of the unit which cannot be found on the parade ground, in office or in the lines. We are passing through a financial crisis which is liable to warp our judgment. There are greater things than money or even than solvency."

"Man's nature will out and he will entertain. A Mess gives the means by which a regiment (which is a definite entity in the social world) can entertain its friends economically. If such entertainment fails to be economical it is the fault of the officers and not of the Mess system."

"But, good heavens man,———"

"Allow me to conclude. Other regiments make friends and gain contact by a call on the Mess. Such a call could no doubt be made by a visit to the other unit's Orderly Room or by dropping a card on

the Quarter Guard. One might go further and publish a friendly notice in regimental orders. How does that strike you, my emotional friend ? "

" It strikes me that you are talking a lot of tripe. The point is that Messes are a confounded expense and something ought to be done about it. The simplest plan is to scrap the lot."

At this point our friend, the British body, as he knocks out his pipe realises that a few years hence he will be the ' Father and Mother ' of his regiment, and therefore responsible for the welfare of his young officers. Nothing can absolve him from this duty. He knows well that a young officer in debt is not a good young officer. The Mess and its accounts give a Commanding Officer a hold over his officers which is obviously necessary.

Mr. Action suddenly appears on the scene.

" Well, you two ! You have been holding forth a lot. What are we going to do about it ? I suggest that as you consider the Mess a necessity and that it is too much of an expense, we go along and cut the thing down somehow."

Mr. Action strongly supported by Mr. Feeling (whose mind is still on the Mess bill) and steadied by Mr. Think, takes charge of our British body who makes his way over to the Mess.

" Here you are," says Action. " Look at this. Daily messing averages Rs. 3-4-0 ! They are either a tribe of sybarites or else the Mess Secretary doesn't know his job. Cut it down."

" Hear ! Hear ! " endorses Feeling. " Why should an officer who has thrived on public school fare and the simple meals of the average English home suddenly find it essential to live at Ritz scale and have half a dozen courses for dinner ? Pure swank."

" Excuse me butting in " says Think, " but surely the standard of messing affects only those who live in the Mess. If they are satisfied with wasting money on food it need affect no one else."

" Wrong ! " bursts out Feeling. " The married man has to dine in and often live in and he is affected."

" All right." Action takes out his note book. " You can't expect a youngster acting as Mess Secretary to know much about the subject. He accepts what he finds. The wives are always comparing notes about their house keeping. Do you ever hear of Mess Secretaries

doing it? No. Very well get down to it and form an unofficial committee in the station, of Mess Presidents and Secretaries. No doubt whatever that they would all benefit." Action makes a note of it.

"Without wishing to trespass in your province, Action, I suggest that only those fellows who have a taste for the work be made Mess Secretaries." Feeling mildly remarks.

"Wrong! No young fellow has a taste for it but they all have to do it in due course and very fine training for them it is. The man with the most knowledge is the senior married man."

"Right!" Action makes a note. "Mess President to be senior married man. Job to chase Mess Secretary. Now, what next?"

Feeling looks round.

"Can't something be done to cut down this mass of useless silver? It costs a mint to insure, clean and move about when changing station. Most of it is never seen and certainly not used from day to day."

Action whips out his notebook.

Think interposes. "I suggest that in part the same applies to furniture. The cost of moving it is heavy and each move takes years off its life."

"Right! Cut down silver to essentials and valuable relics. Furniture to remain in station and be handed over to incoming regiment. Next please."

Feeling and Think speak simultaneously.

"I suggest something less lavish in the matter of crested crockery and glass. Expensive to buy and replace. Why also this passion for very highest grade crested notepaper in the Mess? It all adds to expense and is definitely a pure luxury."

"Let me get that down. Standard crockery and glass to be adopted in all Messes. To be handed over on relief, *i.e.*, no breakages in transit and no transport charges. Wish I could get the contract for the army." Action sighs. "Oh, yes, and crest stamp on Mess writing table. Costs about £5. You can stamp the crest on the paper as you use it."

Think scratches his head. "Many married people have given up expensive table linen. You know what *dhobies* are. Couldn't we do a saving in linen?"

Action pounces at once. "Right. No table linen. Give Mess servants something to do to keep tables in order."

Feeling is roused. "What about this cloud of servants, orderlies, and clerks in the Mess. Something wrong there. The average Mess only has about four rooms and for waiting at table there are private servants. The greater part of the day Mess servants have nothing to do. Surely something could be done to deal with the rush hours. The trouble is that our luxurious bachelors, who probably clean their own shoes at home, have to be valeted and cosseted like invalids out here."

"I have only one suggestion here," says Think. "It is that it should be an accepted principle that cooks' wages are included in the cost of the daily messing. It is definitely unfair to charge to non-dining members a share of the cooks' wages."

"Noted," says Action, "but we don't seem to have achieved much. I thought that large Messes paid better than small ones. What about combined Messes—Station Messes?"

"On purely financial grounds station messes would be an advantage, but, as I said before, there are other things besides money. You will not gain financially what you lose in *Esprit de Corps* and other indefinable influences which count for most in the army."

At this point our British body finding the hour late returned to his bungalow. On the verandah was his better half.

"What does this mean?" said she, waving a letter. "Here is a note from the Mess saying that you have been appointed Mess President for the next quarter. How can they expect a married man to do it? You will refuse of course."

III

"AMEND THE MESSING."

Some Hints on Catering.

By 'An Addict.'

By popular tradition, and ancient custom, the Catering Member, in those messes where the catering system is in vogue, is he who in an unguarded moment has complained more openly than his seniority warrants of the aqueous properties of the milk, or of the capricious nature of the mutton. Consequently one can, at the most, assume the

Catering Member, who is normally the junior member of the Mess Committee, to be possessed only of those qualities, which at the outset, will ensure a change, and which, if developed strongly, may make for improvement.

At the moment of his appointment he is supported by the disillusioned hopes of the senior dining members who are audibly certain that no change can be for the worse, and by the facetious remarks of the juniors now free of the uncertainty which always prevails until the Mess Committee is actually appointed. At the outset the victim must realise the impossibility of obtaining complete success, where so many have failed (and here I would request that the Catering Member be not encumbered with the clerical work in addition to his catering duties). With one menu, within the confines of one Mess table, to appease the crusted liver of the senior dining bachelor, to fulfil the epicurean ideas of the married major temporarily doomed to a bachelor existence, to answer the cry for cheapness of the married captain similarly situated, and to soothe the bleat for brighter living of the young irresponsibles, demands innate skill, vast experience and considerable seniority, but having discovered that economy is the lowest common denominator of these various elements, he will have placed his foot on the first rung of success.

The duties of catering divide themselves into two main sections :—

1. Khansamah and Menu.
2. Stores and their issue.

Khansamah.

No khansamah is perfect ; he works to make a living ; but he is a man who values his *izzat*. At times even the Colonel's wife has to apologise for a spoiled joint or sweet. Every khansamah has his good dishes and his inferior ones. For example at a hostelry in a large Hill Station, the khansamah is famed for the general excellence for his cooking, but dixie stew is as lamb compared with the toughness of this khansamah's plain stews. Again, most memsahibs, even if they cannot demonstrate the making of a dish, can detail the ingredients and in case of failure point the cause. On the other hand the Catering Member is handicapped when dealing with the menu by his complete ignorance of the quantity of ingredients, which compose even a simple dish and of their mixing and preparation. He can normally be expected to devote to the khansamah only about thirty minutes after

breakfast, supplemented by occasional visits to the cookhouse. That being so, it is obvious that the " teach the cook " attitude is from the outset doomed to disaster. In like manner the " fine the cook " attitude is bound to lead to retaliation.

The Catering Member will best proceed by obtaining from the khansamah a list of the dishes he knows, and then, commencing with the most simple, discover his reliable ones. When a failure occurs, it is useless to accuse the cook of stealing the cream and substituting flour and water; a far more effective weapon is the plain statement that the dish was a failure, combined with an expression of pained surprise at the inability of so good a cook to produce so simple a dish. Reasons for failure should then be demanded and promises of future improvement will certainly be given. In the case of repeated failure ostentatiously erase the dish from your list until such time as he petitions for a further trial. When an invitation to dinner liberates you from attendance at Mess, note the quality of the bazaar food, and any new dishes, or better cooked dishes. Next day enlist your khansamah's co-operation in discovering the cause of the apparent differences in the quality of the bazaar stores, and the comparative ability of the two khansamahs. Yours will readily respond to such handling.

There are however certain matters, concerning which one can with safety insist on an immediate and considerable improvement :—

i. The quality and prices of the bazaar stores, such as meat, fish, fowl and eggs.

ii. The quantities provided.

iii. The arrangements for preparing, cooking and serving the food.

Improvement in quality and decrease in prices charged can only be obtained by personal visits to the cook house, the market, by the co-operation of the Mess havildar, and by seeking the assistance of a knowledgeable memsahib. A Mess khansamah is in a favoured position compared with a bungalow khansamah, as his orders are on an average much larger and more regular. Inferior meat, etc., should never be accepted and one is on safe ground in dismissing a khansamah who cannot, or will not, buy absolutely fresh first class bazaar stores.

A khansamah will always, if not checked, produce far in excess of actual requirements. Make him show you exactly how he proposes to apportion a joint, etc., and when the meat, etc., appears on the table estimate the amount actually consumed. Here again frequent inspections and the reference of matters to a memsahib will soon cause an improvement in your ability and knowledge and a decrease in wastage.

The khansamah must be made absolutely responsible for food from the fire, through the too inevitable hot case, to the Mess table. Normally breakfast and tiffin are running meals, the food usually given is of such a nature that each officer's breakfast or tiffin is an individual item. Prevent the cook from preparing at 7-30 a.m. breakfast for an officer who normally arrives at 9 a.m. If the dish is a communal one make him prepare two or three, so that officers have an equal chance of getting their food hot and unmutilated. To be the last officer at breakfast or tiffin and to be presented with scraps is unfortunately too frequent a source of acrimonious remarks. Eliminate the hot case from these two meals and substitute a grill system and you will have accomplished much.

Stores.

You will speedily notice that demands for biscuits, tea, coffee, sugar, pepper, marmalade, Force, etc., from the khidmatgar, and sauces, cooking oil, vinegar, etc., from the khansamah are met immediately without question by the Mess havildar, who issues full bottles, packets or tins. Similarly milk, butter and bread are issued entirely on the requirements of the khidmatgar and without any reference to the actual needs of the day. It requires little imagination to follow the travels of, say, an unopened tin of Cocogem, or bottle of sauce through the cookhouse, where excellent substitutes can be made by the khansamah himself, to a shop in the bazaar.

The Stores Issue Section of the Mess, is a Detail Issue Section. The Catering Member must discover the life days of each article of stores expressed in terms of messing numbers. No unopened stores and packets should ever be issued, and where possible only the actual requirements of the day or meal. Similarly an estimate can be made of the average amount of milk, butter and bread eaten per officer per day.

For stores, the Mess havildar should keep a chart showing lists of stores issued, dates issued, and messing numbers involved. The daily order of milk, etc., can be entered in the khansamah's daily bazaar account, when he also can be asked for his requirements of these articles, and his needs checked against his menu. No independent purchase by him of these articles should be allowed.

To lay down a scale would considerably extend this essay, but if a principle of trial and experiment be adopted and the Mess havildar be trained to see that methods and improvements are really carried out according to your instructions, the Catering Member will in a short time produce his own scale. Personal observation will further reduce this and result in a very considerable economy indeed in items in which there are normally excessive wastage and pilfering. As an example of the efficiency of this method, I may quote the bread bill of my Mess. On a basis of slice issue, by the Mess havildar, the bill was in one month reduced fifty per cent. of the amount paid when whole loaves were issued on demand, and no messing member complained of a shortage of bread.

No Catering Member can achieve complete success, but the above system if forced with a gentle but firm hand will achieve at least two definite results :—

i. Avoidance of badly cooked and badly served dishes.

ii. A large reduction in the cost, without any lowering of the standard of messing.

Merely to have reduced the cost will ensure your promotion to the ranks of those who have achieved greatness—and certainly result in your being granted an extension of the appointment. If you have succeeded in cajoling the cook into preparing in a palatable fashion those dishes for which your brother officers generally show preference, you will be so inoculated with the virus of catering that you will yourself request an extension.

THE SUPPLY AND TRANSPORTATION PROBLEM OF FUTURE ARMIES.

By Major B. C. Dening, M.C., R.E.

With the amount of mechanisation that is contemplated and actually taking place in armies to-day, and the creation of rapidly moving armoured formations, it is a little difficult to visualise how the supply and transportation problem is to be met under the new conditions. The following pages are an attempt to grapple with this difficulty :—

The form, size, and radius of action of future armies.

Before it is possible to discuss the supply problem, it is necessary to define to some extent the probable shape armies will take.

Speaking of civilised theatres of war, the Director of Staff duties at the War Office stated not long ago,

" The armies of the future will consist of formations similar to those we have known in the past, but made more mobile by the provision of M. T. which will be more efficient and rapid. In addition there will be armoured formations whose degree of mobility will be greater still."

In other words, it is necessary to visualise two types of army :—

(*i*) *the marching army*, governed by the marching power of men, even if much helped by M. T. ;

(*ii*) *the wholly mechanised army*, small in personnel and capable of rapid movement over great distances.

It is clear that only a fraction of the forces in the field will be wholly mechanised. In peace no nation can afford to keep large mechanised forces and their creation in war is limited by many factors. From the official publication " Mechanised and Armoured Formations 1929 " it appears that wholly mechanised forces are likely to be organised into light or medium armoured brigades built up of all arms. A medium brigade is shown to contain some 1,900 men, 130 wheeled vehicles and 190 tracked vehicles. As no nation as yet possesses even one armoured brigade, if we can supply a formation of that type, it is likely that the problem for some time to come has been largely met.

The radius of action of mechanised formations, is limited by the medium tank units. According to the publication referred to above (p. 11), such units may be expected to travel as a maximum 300 miles in a week.

The dependence upon Transportation Systems.

Existing land forces, operating as they do mainly upon the principle of obtaining the necessary power in the field from man-power and artillery fire, are dependent upon a transportation system for the following :—Rations, forage, ammunition, petrol, engineer material and water. Without any one of these, operations are brought to a stand-still. The large numbers of men require a large ration supply. The presence of cavalry involves carriage of grain, assuming hay locally available. Artillery bombardments absorb vast quantities of ammunition. The movement in front of railhead of so many supplies necessitates quantities of petrol for M. T. and quantities of engineer stores for the up-keep of communications.

Fully mechanised land forces are dependent upon a transportation system for one main requirement—petrol, and in lesser quantities, for food, ammunition and spare parts. Compared to existing land forces of equivalent fighting power, they require far more petrol but comparatively negligible quantities of rations, forage, ammunition and engineer stores, for they have few men, no animals and do not require heavy artillery bombardments. The petrol supply, however, can never be allowed to fail, even for one day, without completely stopping operations. Fully mechanised formations are also vitally dependent upon a regular supply of oil and lubricants and upon a workshop and repair organisation.

Where mechanised forces are in action, time and movement are important factors, in which one day's loss may prove decisive. With marching armies, a one day breakdown in supply arrangements will not have decisive consequences as regards food though one day's loss of ammunition may prove fatal.

Future Developments.

Aircraft hindering supply.

Against civilised nations in future no supply service can be organised without due consideration of the effects of interference by hostile aircraft. It is obvious that the magnitude of the air

forces built up in the last years of the Great War can be greatly exceeded and that the effects of bombing, especially if gas be used, already serious enough in 1918, may become decisive unless measures are taken to counteract them.

According to the methods which have sufficed in the past, a British Army operating overseas commences by establishing a base at a suitable port. Very rapidly such a base is extended to a great size, to contain the large reserves of supplies, ammunition, petrol and fuel, the field bakeries, workshops, base camps, etc., necessary for an Army in the field. To save labour, all these establishments are organised as near as possible to the docks, landing wharves and railway sidings. From the hostile airman's point of view the result is to offer a compact area as a target which it is hard to miss with a bomb. From the base usually one main railway line forms the artery of supply to any one Army in the field, such an Army being fortunate if it possess two or more railway routes as alternatives. Along the main railway routes are congregated the advanced supply depots, the reserve ammunition dumps, the rolling stock sidings where the intricate daily marshalling of trains takes place and the junctions and bottle necks through which the Army's whole supplies pass. All these offer excellent targets to bombing, lying as they do along a well defined route and being mainly of appreciable size. The explosion of an enormous reserve ammunition depot in one case and the disorganisation of a whole railway system for some days in another were actually caused in the late war by the adroit dropping of a single bomb. Further forward, where railway facilities within reach of the troops are limited, as even in France they were, it is often inevitable that one railway station has to serve as railhead for a large number of formations. The consequent accumulation of M. T. at that point and the congestion in traffic again offer a favourable objective to enemy aircraft.

The size and rigidity, then, of the existing supply system are some of the weaknesses to be overcome in organising the system of the future against a civilised enemy. In semi-civilised countries it will be unwise to assume that the enemy will obtain no aircraft assistance. At the same time many of the dangers from the air enumerated above will be considerably minimised.

Aircraft aiding supply.

The possibility of aircraft aiding supply must not be overlooked. Where the requirements are the regular delivery of limited quantities of some article such as petrol, heavy transport, aircraft may prove of the greatest assistance. Individual aircraft have already carried 100 passengers. There are many to-day capable of carrying 5 tons. To supply a Medium Armoured Brigade with one day's petrol rations and mails twelve 3-ton lorries are required. These 12 lorry loads represent 7 or 8 aeroplane loads. The supply of a mechanised force by air under suitable circumstances is thus eminently practicable. There has already been the example of a force of 1,400 men 850 animals moving out from Dargai, and being supplied for some days from the air alone, though in this case supply on the plains only was considered practicable by this method.

Enemy mechanised forces hindering supply.

A further factor requiring consideration is the possible effect of hostile mechanised forces upon a supply system. It may be assumed as far as the larger marching portion of the Army is concerned, that it will secure its supply system at least at the start of a campaign, by a line or a ring of defences covering its base, which are normally impenetrable by hostile mechanised forces without a bombardment or a regular assault by all arms. As the marching Army moves forward, however, and certainly when the mechanised portions emerge for independent operations, it appears more likely in countries of average terrain that the Army will be able only to create successive limited areas safe against attack by A. F. Vs. and will be unable to make the whole of the rear areas secure for the movement of supplies. The mechanised forces of the enemy may then well be expected to attempt raids on the supply system against which provision will have to be made. Movement of supplies by night will to some extent afford protection against interference.

Railways versus M. T.

Future developments in the civil use of railways and M. T. respectively are of the utmost importance in considering future transportation systems in that military methods must follow civilian practice for a number of obvious reasons.

In the United Kingdom in recent years there has been an extensive increase in the use of M. T. at the expense of the railways.

Even heavy bulky loads are now moved by roads rather than by rail. This tendency may however be misleading. It can be attributed in the United Kingdom partly to the comparatively short distances involved and partly to the obvious advantage of direct movement of articles from the place of manufacture to the place of delivery without intermediate handlings. But over really long distances, movement of large and heavy stores will for many years be more economical by rail than by road. In, for instance, the most classical case of the employment of a railway for the maintenance of an army, namely in the use of the Siberian railway for the supply of the Manchurian Armies in the Russo-Japanese War, no one could conceive M. T. replacing the railway even if M. T. had existed at that date. Not only long distances but defiles such as mountain passes and river crossings may be more profitably crossed by rail than road transport. Nevertheless the elasticity obtainable from M. T., particularly cross-country M. T., the power to switch it at will, and the ability to travel on a series of alternative routes in face of a hostile air menace, are such important military factors that the possible application of M. T. should be constantly reviewed, even if existing civil reserves of cross-country M. T. are still very small. In mechanised forces the flexibility introduced by M. T. to the transportation system is of particular advantage. It enables the problem of movement away from fixed lines of advance to be met. In semi-civilised countries, where railways are likely to be largely absent, M. T. will be especially valuable.

On the use of railways, the "Manual of Mechanised and Armoured Formations 1929," p. 40 states:

"Mobile formations will of course use the railways as much as possible for their supply, but the mobility of these forces is such as to make it extremely difficult to repair a railway system in time to be of value."

For the operation of railways a settled area is required, otherwise accidents and delays, due to improvised organisation, apart from enemy action, will be frequent."

The special problem of Petrol Supply.

A further point to be considered is how any extensive petrol supply is to be organised. Is petrol replacement to be regarded as

akin to ammunition replacement or to that of food supply ? In the case of ammunition, the guiding principle is to keep echelons full : at certain quiet periods no ammunition is sent up and at others large quantities are despatched to certain units that have had heavy usage. In the case of food supply, a regular daily stream of rations goes up, which is checked for certain formations if they should happen to lose heavily in battle. The essential difference between the two methods is that in the case of ammunition it is abnormal for replenishment to be required at all and when required, it is needed irregularly throughout the units whereas in the case of rations it is abnormal for replenishment not to be required and for the needs to be irregular. The question with petrol then is, is its usage likely to bear greater resemblance to the consumption of ammunition or to that of rations ? The answer would appear to be that in the case of M. T. with marching formations, much movement and use of petrol will be abnormal and irregularly applied to units and that replenishment should be on the ammunition method but that with wholly mechanised forces considerable movement, (admittedly only for short spells as governed by exhaustion of personnel, etc.) will be both normal and universally experienced by the units in the force, with the result that there the ration replenishment method is the better. In other words, for mechanised forces there must be a regular stream of petrol of almost constant magnitude passing up the L. of C. at all times to units. As will be seen presently for special periods, as has been done in the past with rations several days supply may be carried at one time by the actual consumers. But this does not affect the principle that there should be a regular stream of supply at all times further back.

A possible solution.

Even in the future, the supply problem will require to be regarded in three parts, *e.g.*, in the base, on the L. of C., and in the Operation Zones.

The base zone against civilised nations will require selection as far away as possible from enemy aerodromes. For fear of air and gas attack its lay-out may require to be the reverse of that in the past, *i.e.*, wide dispersion of base depots, etc., may be necesary, to deny any considerable target. In semi-civilised countries with little or no air menace the base area may for convenience be closer and contracted.

The L. of C. zone will generally use railways if available until within effective range of enemy aircraft. From that point, if in the presence of a strong hostile air force, it will be advisable to supply by M. T. *along a number of alternative routes.* With tracked or six-wheeled vehicles these routes can be largely cross-country tracks. With no railways, M. T. from the base area is necessary– assuming, as is reasonable in any theatre in which large forces are to be employed that the country is mainly open.

In the first two zones the future supply problem can be visualised. Even beyond that in the Operations Zone it will not be difficult to work out the supply of the marching portion of the Army, which will be much as in the past. It is the supply or the mechanised portion in the Operations Zone that presents the real difficulty.

Supply in the Operation Zone.

In this zone, mechanised forces, if their mobility is not to be curtailed, must be free to move in any direction up to 300 miles in a week and have regular replenishment. Can they do this and can they go farther, say 500 miles ?

Now a mechanised force on leaving its advanced lines may be moving in various sets of circumstances. In case " A " it may be advancing in conjunction with a general advance of the marching portion of its army, with tasks perhaps such as were given to the cavalry in the final advance in Palestine, *e.g.*, harrying the enemy's retreat, preventing the forming of a new line, seizing vital points, etc. In case "B ", it may be impracticable for the marching army to move at all and the mechanised forces may be operating alone as a raiding force with restricted objectives. Thirdly, is it possible to have case " C " in which the mechanised forces are used as an independent army moving upon a distant objective ? For the moment, let us assume that it is possible.

In case " B " the supply of the mechanised forces presents few difficulties as those forces will return to their lines after a definitely limited period for which special provision can be made.

Case " A " is again easier than case " C " in that in the former the source of supply for the mechanised forces, *e.g.*, the marching army, is following up, even though the mechanised forces each day may be travelling further out of touch.

Case "C" is obviously the most difficult and if a solution to supply in that case can be found. it will be applicable to cases "A" and "B".

The protracted supply of an independent mechanised force.

A mechanised force such as an Armoured Brigade, on marching off to action, carries with the unit in "A" and "B" echelons sufficient petrol and oil for each vehicle to run up to its circuit of action, fresh food supplies for one day, ammunition for one day's fighting, and reserve rations for two to three days. Each Armoured Brigade is fed by a section respectively of a Supply Company, Baggage Company, Ammunition Company and by a Maintenance Company, all of the R. A. S. C. The Supply Company section carries one day's supplies, and petrol and oil for the brigade to move 50 miles and the Maintenance Company behind carries the same. Ammunition sufficient to meet probable expenditure in action is carried in two echelons, *e. g.*, in the Ammunition Company and the Maintenance Company respectively.

With the existing organisation then, mechanised forces have supplies carried in front of the railhead or head of the L. of C. for three days, a distance of 150 miles.

Diagram "A".

In the diagram attached an attempt has been made to discover the possibilities of supply to an independent mechanised force. A possible situation has been drawn in which the marching army has reached a line C1 C C2 from which the mechanised forces are to operate against a distant railway junction, "O". (Aleppo, in the Palestine or Mesopotamian Campaigns offered the same situation). The mechanised forces might consist of numerous Armoured brigades, but if the case of one such brigade be followed through, the solution of its supply problem will be applicable to the remainder. Now there would appear to be two methods by which an attempt might be made to supply an Armoured Brigade under these circumstances, one which might be described as the Normal Method, dependent upon the use of a string of Maintenance Sections, the second the Convoy Method, based upon the employment of convoys and a series of advanced bases.

The Normal Method.

This is called the normal method because it would be normal in the case of a marching force advancing far beyond its railhead.

Taking by this method a medium Armoured Brigade as starting at 23·59 hrs. on "Z—1" day from C at which supplies of all types have been concentrated, it will have with it rations, petrol and oil, etc., for Z day in unit vehicles.

By the end of Z day, the brigade reaches "D", an advance of 50 miles.

In normal warfare, the sections of the Supply Company would come up from refilling point and hand over to unit vehicles at "D" supplies for Z+1 day on the evening of Z day. Here passing through hostile territory, the supply sections would presumably march with the mechanised force in order to take advantage of its protection. For Z+1 and subsequent days, as far as supply by this method is concerned, two conditions must be fulfilled. First, the sections of both the Supply and Maintenance Companies must have sufficient escort to enable them to move independently of the Armoured Brigade. Second, the sections of the Supply Company cannot go back far, if at all, to meet the Maintenance Company, if they are to catch up the Armoured Brigade that evening with the next day's supplies. On these assumptions, on Z+1 day, the Armoured Brigade will reach "E" the Supply Company sections will remain at "D" until the Maintenance Company reaches them and refills them and then will move off to catch up the Armoured Brigade. The Maintenance Company will have started from "C" very early on Z+1 day to reach "D" as early as possible. Having handed over its supplies it has to prepare for next day's task. This will be to start early to refill the Supply Company at "E" again as early in the day as possible. On Z+1 day then it cannot afford to go right back to "C" to refill. Probably it will have to wait at "D" while another No. 2 Maintenance Company sends up from "C" to "D". Since the first Maintenance Company wishes each day to leave, as early as possible, it will have to be reached by No. 2 Maintenance Company probably on the previous evening. For each 50 miles stage then it is necessary to add a portion of Maintenance Company. If we take the case when the Armoured Brigade has reached "I" on the evening of Z+5 day, the Supply Company and series of Maintenance Companies are as shown in the diagram.

Now, the question is, is this method of supply feasible at all? There are several matters requiring further consideration. The first is to what extent will fresh maintenance units be available for superimposing each day on the tail of the system? The ration and petrol section of a Maintenance Company for a medium Armoured Brigade contains 12 lorries, the Ammunition Section 13 lorries. Unless continually in action which is unlikely it is only the 12 supply and petrol lorries that need to be added with each 50 miles stage of the advance. For one medium brigade to advance 300 miles, allowing one stage as met by the Supply Company some 60 lorries would be necessary. Compared to the 317 vehicles in the brigade itself, this figure does not seem impossible, though there must clearly be a limit to supply by this method.

The second point is whether an economy in maintenance units could not be effected by asking each unit to do more than 50 miles per day, *e.g.*, while the stages for the main body were 50 miles per day, those for supplies might be 75 or even 100 miles per day. How far such assistance can be obtained will depend entirely on the nature of the road or track forming the main avenue of advance. If reasonably good, supply vehicles can obviously be economised, and echelons cut out.

The third point is that though by this method stages of 200 to 300 miles could be dealt with, the whole objective distance could not be, without intermediate halting or staging places, if only to meet exhaustion and maintenance difficulties.

The fourth consideration is how far in hostile territory it will be possible to protect supply units. Clearly if strong parties of the enemy are free to operate the method is not feasible at all. If the local enemy is weak and the main enemy surprised or in confusion, possibly sufficient escort may be found. In view of the distances involved, any scheme of picketing the route other than at defiles, etc., is impracticable. We are left with the conclusion that unless the possibility of a strong hostile force cutting in behind the main mechanised forces is remote this method of supply is dangerous.

The Convoy Method.

The possibility of this method is based upon the principle that the main mechanised force will advance in bounds halting and establishing an advanced base at each bound, and carrying with it all requirements for that bound, the length of the bounds depending partly

upon the terrain and the distance to the objective and partly upon the nature of the enemy. If the enemy be possessed of strong forces capable of delivering strong attacks upon convoys, then the bounds must be shorter and the series of advanced bases closer together. Obviously as few advanced bases as possible should be used. as they have to be built and defended.

In considering this method it is interesting to examine the practice of the Navy in dealing with a similar problem. A fleet operating in distant waters presents an analogy, if not an exact one. If we take the case of the British Fleet sent out for the Dardanelles operations, we find it advanced from base to base, *e.g.*, by Gibraltar, Malta, Alexandria and that it was supplied by escorted convoys using these bases as havens of refuge. Should a British battle fleet be required to fight (say) in Chinese waters it would continue advancing in the same method, supported in succession by Aden, Ceylon, Singapore and Hongkong. While in the case of fleets, there is less choice in the selection of advanced bases, mechanised armies can make them almost any where. On the other hand, there is the important difference that fleets usually go to already defended havens of refuge, while armies have to make their defences on arrival.

It may here be asked why, in order to take advantage of the protection offered by the fleet or mechanised force, supply ships or vehicles sufficient to replenish the force right through to its destination do not accompany the force from the beginning, avoiding the use of convoys until the objective has been reached. While this is possible, the objections to it are that for a really long advance the ships or vehicles may not be available and that the string of supply transport behind may prove unwieldy and a fatal hindrance to the fighting force in battle.

Reverting to the attached diagram and the advance of a medium armoured brigade, if the enemy be weak it might be assumed that the mechanised force could advance 300 miles in the first bound, from "C" south of the destroyed railway, to "P" where a fortified advanced base could be formed. It would involve perhaps 80 maintenance lorries being added to the 317 vehicles of all types in the brigade. This distance is convenient in that mechanised forces in their present state require a day at least to refit after 6 days marching. It would then be necessary for the brigade to remain at "P"

until its first convoy reached it. The convoy should travel far faster than the brigade, how much faster depending mainly upon the state of the road or track. The speed of the advance of the armoured brigade beyond " P " is here controlled by the speed of the convoys. The first convoy, by starting soon after the mechanised force, could arrive at " P " almost as soon as the force itself and after one day's delay, the force with its lorries refilled for a further 7 days could advance once more upon " Q ".

From that stage, it would be the endeavour of the supply organisation to make " P " fulfil the functions hitherto met by " C," *i.e.*, to make " P " the jumping off point for further convoys. If the amount of M. T. permitted, no doubt a series of convoys could follow the first and fill up " P ". In any case, knowing that the convoys can travel a good deal faster than the fighting force, even if several days are required at " P " before the 2nd convoy set off to " Q ", the latter should normally reach " Q " as soon as it is required. By this method there would appear to be no reason why the mechanised force should be delayed by its supplies.

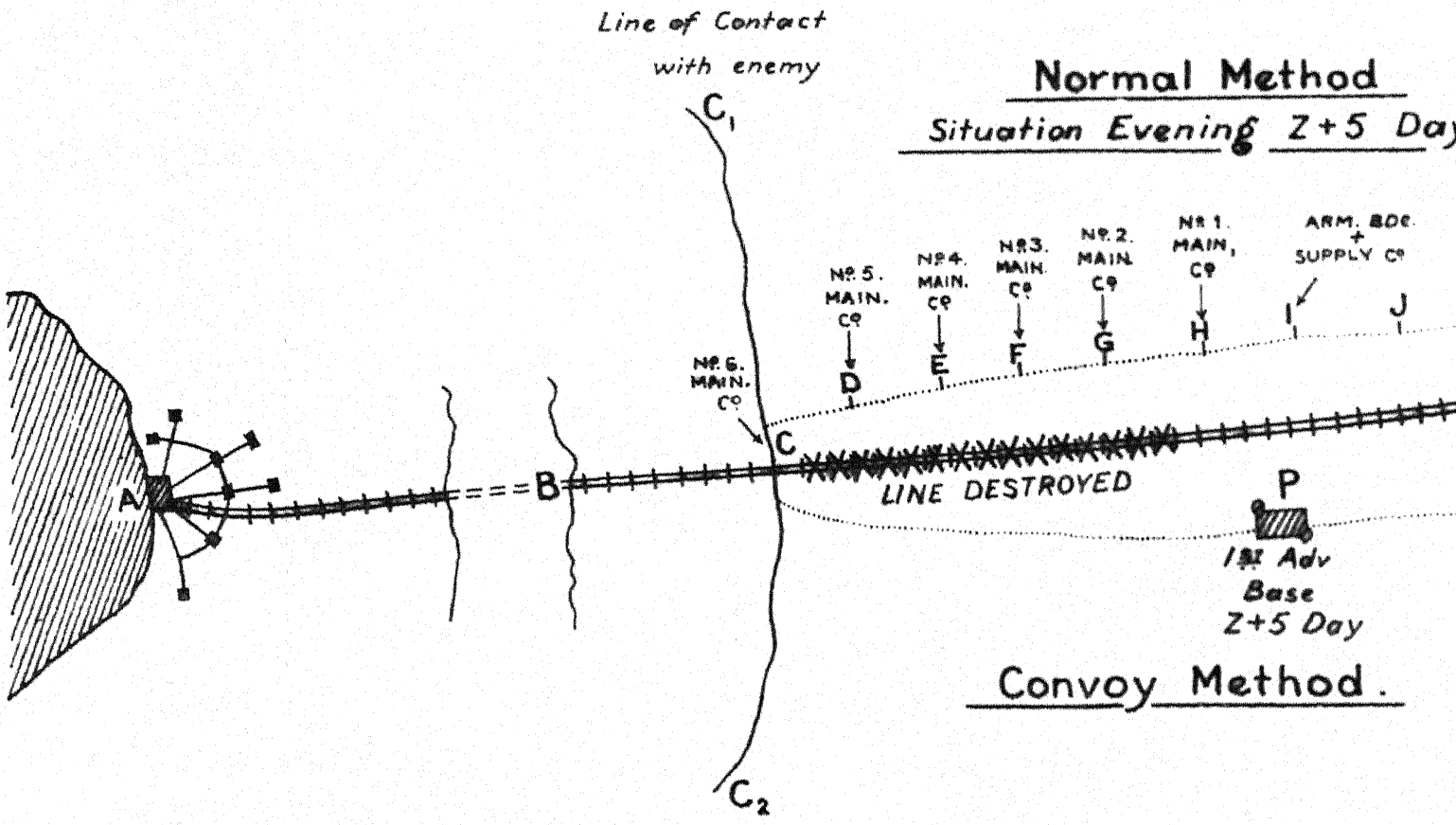
Protection in the case of this method would be provided much as in the other method of supply. Here, however, there is one larger convoy to be covered instead of a series of smaller columns. The problem is in some respects easier and in others more difficult. According to the type of attack expected, so the advanced bases would need to be fortified and garrisoned, and especially perhaps against air and gas attack.

The two methods compared.

The normal method has certain advantages. Up to a limited distance it is quicker than the convoy method. It obviates the need for carrying up the materials, garrisons, etc., for the advanced bases. Particularly where the mechanised force is not intended to remain at the objective, the normal method is more economical in M. T. and more flexible. Its smaller columns offer less of a target to hostile aircraft.

The convoy method, however, offers greater security. In the face of strong hostile force, by establishing bases at sufficiently close intervals, the advance can be consolidated to a large extent. The method is capable of exploitation to great distances. If enough

Diagram "A" to show whether the Supply of an Independent Mechanised Forc



NOTES :—1. Normal Method above railway, Convoy Method below railway.

2. Range of land based bombing aircraft is about 300 miles to-day. Against a strong airpower, the railway can be use
Against a negligible airpower "C" is railhead. Even if "B" is railhead, "C" should be made L. of C. head by M.

3. D, E, F, G, H, I, J, K, L and M indicate 50 mile stages on route to objective.

4. In semi-civilised countries with no railways AC would be covered by M. T. columns and base need not be dispersed.

M. T. is not forthcoming, this method enables use to be made of aircraft. If the bases are sited near landing grounds, they can be kept filled to a large extent by aircraft. Aircraft also would provide a reserve of transport when the convoy route had been interrupted by the action of the weather or the enemy.

With mechanised forces as already stated, an elaborate workshop organisation is necessary as close behind such forces as the tactical situation will permit. The convoy method of supply offers in its advanced bases an opportunity for the erection of a series of workshops and the issue of spare parts.

Conclusions.

The important conclusion at which it is desirable to arrive is whether case " C " (prolonged movement of an armoured force independent of its marching base) is feasible or not, or whether only case " A " (advances *with* the marching army) and Case " B " (raids) are possible. The diagram, and discussion thereon, tend to show that there are great difficulties in maintenance in Case " C " whichever method of supply be employed, in fact that for the present it is necessary to restrict the possible use of armoured forces to case " A " at most. This does not alter the fact that in war Case " C " may be the decisive requirement and the one which at short notice may be badly wanted. It behoves in peace to see if its difficulties can be overcome.

These difficulties are clearly due to the problems of protecting the communications of the armoured force and of providing sufficient suitable M. T. Perhaps a conjunction of air and land transport will give a solution. It is important too, to remember that for very many years, armoured forces, though powerful, will be limited in size.

It is interesting to surmise the effect of the action of armoured forces, employed under Case " A ", " B " or " C " in the Palestine or Mesopotamian Campaigns. This question opens up too long a discussion to be attempted here, but indicates thoroughly the above mentioned difficulties.

MANCHURIA—THE BACKGROUND OF THE PRESENT FAR EASTERN CRISIS.

By Major B. R. Mullaly, 10th Gurkha Rifles.

Manchuria, called by the Chinese The Three Eastern Provinces, comprising as it does the three provinces of Fengtien (Mukden), Kirin and Heilungkiang, lies at the north-eastern extremity of China. It is bounded on the north and east by Siberia, on the west by Mongolia and the Chinese Province of Hopei (Chihli), and on the south by Korea and the Yellow Sea, into which projects the Liactung Peninsula, at the extremity of which is the Kwangtung Leased Territory containing Dairen and Port Arthur, held by Japan on a ninety-nine years lease. Its area is roughly 360,000 square miles, its length from north to south a little over 1,000 miles and its greatest width from east to west about 800 miles.

The climate is severe and the cold in winter is intense. The greater part of the country is a vast plain, but in the north-west and south-east are ranges of mountains, the Khingan and the Changpai. It is in this great fertile central plain that the crops which are Manchuria's principal wealth are raised. The main crop is the soya bean which is used for a hundred and one different purposes and the export of which in 1929 amounted to nearly three hundred million taels in value. The resources of the mountain regions are as yet undeveloped but there are valuable forests and many metals are known to exist.

Outside a few large towns, metalled roads are unknown, and in winter the frozen rivers are extensively used as highways, but the main arteries of communication are the railways. There are three main systems:—

The Chinese owned Peking-Mukden Railway (Peking-Tientsin-Shanhaikuan-Mukden); the Japanese owned South Manchuria Railway with the Antung-Mukden Line (Port Arthur and Dairen-Mukden-Changchun); and the Russian owned Chinese Eastern Railway, the link in the great Trans-Siberian system (Manchuli-Harbin-Pogranichnaya and then on to Vladivostok) with its southern branch from Harbin to Changchun.

Note that the Chinese Eastern Railway is 5 ft. gauge and the others 4 ft. 8½ inches, so that there is a break of gauge at Changchun.

The population, which is now probably about 29 millions, of whom about a million are Koreans, 150,000 Russians and only about 200,000 Japanese, is expanding rapidly. In the past Chinese labourers have flocked north to work on the farms in the summer, many returning in the autumn, but for the last few years constant civil war and the frightful conditions prevailing in many parts of China, especially Shantung, have given an added impetus to this immigration, which has become permanent and is a striking testimony to the peaceful conditions prevailing in Manchuria as compared with China proper.

The history of Manchuria falls conveniently into five main periods:—

1. The early period, ending with the China-Japan War of 1894-95.
2. The period of Russian expansion ending with the Russo-Japanese War of 1904-05.
3. The period of Japanese expansion which was checked by the Washington Conference.
4. The period of Chinese competition with Japanese interests in Manchuria.
5. The present period when the destiny of Manchuria is once more being reshaped.

The original inhabitants of Manchuria were of Tartar origin and were regarded by the Chinese as barbarians. By the 12th Century they had grown sufficiently powerful to found the Chin Dynasty which ruled over the whole of North China until overthrown by the Mongols under Genghiz Khan. They emerged again in the 17th Century when they overthrew the Ming Dynasty and established the Manchu line which ruled China until the revolution of 1911. Shortly before the fall of the Ming Dynasty Russia began to make herself felt in Manchuria but made little progress until the middle of the 19th Century, when events in Europe made the strengthening of her Far Eastern possessions a matter of importance and, by clever diplomacy, the whole of the north bank of the Amur from the Argun fork to the sea was ceded to Russia.

The second period begins with the China-Japan War of 1894-95, in which the comic-opera army of China was ignominiously defeated

by the young Japanese army and China was forced to cede to Japan, amongst other things, the Liaotung Peninsula south of a line drawn from the mouth of the Yalu River to Newchwang. Russia, however, had secret designs of her own against the territorial integrity of China, and, together with France and Germany, " advised " Japan, in what was delightfully described as " a spirit of cordial friendship ", to give up her well-earned gains on the grounds that this concession would jeopardise the peace of the Far East. Japan was not then strong enough to resist and was compelled to return the ceded territory to China.

Developments followed rapidly. For some years past Russia had been engaged in the construction of the great Trans-Siberian Railway and by 1896 it had reached the Eastern shores of Lake Baikal.

The Russians realised the tremendous advantage which would be gained by carrying the line straight across Manchuria to Vladivostok instead of continuing it in purely Russian territory along the Amur. To secure her object Russia entered into a treaty of alliance with China under which China was induced to agree to the construction of the Chinese Eastern Railway. Vladivostok is ice-bound for several months and Russia's eternal search for ice-free ports now came into operation once more and she obtained from China a lease of Port Arthur and Dalny (Dairen) and the adjacent territory with the right to build a railway from Harbin to Dalny. This, coupled with her aggressive policy in Korea, the fortification of Port Arthur and the great increase in the number of Russian troops in Manchuria, constituted a menace to the very existence of Japan and the Russo-Japanese War was the inevitable result.

By the Treaty of Portsmouth, as a result of her great victory in that war, the lease of the Liaotung Pensinsula and the railway from Dalny to Changchun were transferred to Japan, and in 1906 the South Manchuria Railway Company was formed, under the control of the Japanese Government, to take over and operate this railway together with the Mukden-Antung Branch. At the same time China signed an agreement under which she undertook not to build any main line near or parallel to the South Machurian Railway or any branch line prejudicial to its interests. This is a point of great importance, for China's violation of this agreement was one of the main causes of the present trouble.

With the elimination of Russia began the period of Japanese domination of Manchuria and the principal instrument was the South Manchuria Railway which is much more than merely a railway company, and which, apart from providing a main artery of communication in Manchuria, has engaged in many activities for the development of the country and is, in fact, a great colonization agency.

The harbour of Dalny, renamed Dairen, was extended and improved until now it is a great port equipped with every modern adjunct for efficient and rapid handling of cargo. An indication of this development is the fact that the tonnage cleared in 1930 was ten times the amount cleared in 1917.

Through the South Manchuria Railway facilities were provided for the development of markets and Japan was responsible for the opening up of sixteen cities in Manchuria which had hitherto been closed to foreign trade. Production has been increased, partly by assisting the Chinese in building new railways, of which more anon, and partly by improving agricultural methods by introducing modern equipment. Research and experiment have found new uses for the raw materials of the country, chief amongst which have been the many new uses of the soya bean. Japan has further contributed to the future prosperity of the country by building modern business and residential areas, by creating hospitals, schools and public works enterprises of all kinds, and, above all, by establishing in the railway zone those conditions of safety for life and property and security from illegal and arbitrary extortion so essential to the carrying on of trade and so conspicuous by their absence in China proper. The South Manchuria Railway is more to Manchuria than the Canadian Pacific is to Canada.

In the years that followed Japan steadily consolidated her position. Community of interests in face of the outer world, which did not view with much favour the domination of Manchuria by either Japan or Russia, drew the former enemies together, and in 1910 a Convention was signed between Japan and Russia for the maintenance of the *status quo* and for co-operation in the development of the Chinese Eastern and the South Manchuria Railways. In 1911 the Manchu Dynasty was over-thrown and China became a Republic. Thanks to the determination of Russia and Japan not to allow Civil War to extend to Manchuria, no disturbance followed, and up to the outbreak of the Great War no event of particular importance occurred.

During the Great War Japan had the field practically to herself in Manchuria, and, in January 1915, presented to China the famous Twenty-One Demands. These demands were in five groups and for the purpose of this paper it is necessary only to refer to the second group. This opened by stating that the Chinese Government "had always recognised the predominant position of Japan in South Manchuria and Eastern Inner Mongolia," and then made the following demands:—

1. The extension of the leases of Port Arthur, Dairen, the South Manchuria Railway and the Antung-Mukden Railway to ninety-nine years.

2. That Japanese subjects should have the right to lease and own land for purposes of business or farming in South Manchuria and Eastern Inner Mongolia.

3. That Japanese subjects should be free to travel or reside in South Manchuria and Eastern Inner Mongolia and to engage in business of any kind.

4. That Japanese subjects should be given mining rights in these countries.

5. That China should obtain the consent of Japan—
   (*a*) before giving permission to other nationals to build railways in South Manchuria or Eastern Inner Mongolia or to make loans for that purpose, and
   (*b*) to any proposal to raise a loan from a third Power on the security of the taxes of South Manchuria or Eastern Inner Mongolia.

6. That Japan should first be consulted if political, financial or military advisers were required in South Manchuria or Eastern Inner Mongolia.

7. That China should hand over control of the Kirin-Changchun Railway to Japan for ninety-nine years.

China was powerless. She temporised by putting up counter-proposals, and put off the issue for some weeks which gave foreign opinion a chance to make itself felt so that Japan's final demands were slightly more moderate.

On the 7th May, Japan presented an ultimatum. China bowed to the inevitable and signed a treaty by which Japan secured the following :—

1. The extension of the leases of Port Arthur and Dairen and of the South Manchuria and Antung-Mukden Railways to ninety-nine years.
2. The right of Japanese subjects to lease land, to reside and travel and to engage in business of any kind in South Manchuria.
3. The Chinese Government promised to open certain places in Eastern Inner Mongolia to foreign trade and to undertake a revision of the terms of the loan governing the Kirin-Changchun Railway.

Important provisions regarding the jurisdiction over Japanese subjects in Manchuria were also made.

The 1915 Treaty greatly strengthened Japan's position in Manchuria which was further consolidated by the collapse of Russia in 1917, which left Japan alone in the field. Between 1917 and 1920 five important loan agreements were concluded with the Chinese authorities by which Japanese capital was lent for the construction of various railways. They were :—

1. The Kirin-Changchun agreement of 1917 between the Chinese Government and the South Manchuria Railway Company.
2. The Kirin-Kainei loan agreement of 1918 between the Chinese Government and three leading Japanese banks.
3. The agreement of 1918 between the Chinese Government and the same three banks for the construction of the Jehol-Taonanfu, Changchun-Taonanfu, and Kirin-Heilungcheng Railways and for the extension of the Jehol-Taonanfu line to the sea.
4. The Chengchiatun-Taonanfu-Tungliao Railway agreement of 1919 between the Chinese Government and the South Manchuria Railway.
5. The agreement of 1918 between the Chinese Government and the three banks for a loan for the development of mining and forestry in the provinces of Heilungkiang and Kirin.

The way in which the Chinese carried out these agreements is of interest as showing the sort of thing the Japanese have had to put

up with in Manchuria. In the case of the mining and forestry loan, a sum of thirty million yen was advanced on the security of the mines and the forests and the revenue from them. The money was never used for the purposes for which it was borrowed so that the mines and forests were never developed and the security was worthless. When the other loan agreements with the banks were signed, advances were made of ten million yen in one case, and twenty million yen in another. This money too disappeared, used, for some purpose other than the legitimate one, and the work was never done. No progress was made with the agreement for the construction of the Changchun-Kirin-Kainei line, but it has since been built as far as Tunhwa under a later agreement.

In 1920 the reckless borrowing of the clique then in power in Peking had become so serious that the Powers decided to adopt a policy of refusing loans of any kind to any Chinese Government or party, and what was known as the Consortium was formed. This meant that a combination of British, American, French and Japanese banks would share equally in all Chinese Government guaranteed loans, and that the group would pool all their existing and future options.

This seriously affected Japanese rights and she strongly opposed the inclusion in the scheme of rights held by her in Manchuria and Mongolia. After prolonged negotiations, during which Japan claimed special spheres of influence in Manchuria and Mongolia, the British and American Governments gave a written guarantee that the Consortium would not engage in anything calculated to affect the security of Japan's economic life or national defence and that she could firmly rely upon the good faith of the Powers concerned to refuse to countenance operations inimical to such interests. With this Japan had to be content and withdrew her claim to special spheres of influence. The Consortium was signed and Japan's contribution to the pool was the concession for the Taonanfu-Jehol line and its eventual extension to the sea. All other railways in which Japan had an interest were definitely excluded.

The Consortium, incidentally, has accomplished nothing. The important question of spheres of influence came up at the Washington Conference in 1921 and a resolution was unanimously adopted that the Powers concerned undertook "not to support any agreements by

their respective nationals with each other designed to create spheres of influence or to provide for the enjoyment of mutually exclusive opportunities in designated parts of Chinese territory." This was embodied in the Nine-Power Treaty of which Japan was a signatory.

Another matter of great importance in connection with China's relations with the outside world considered at Washington, was what is known as the principle of "The Open Door." The exact definition of the term has always been a matter for discussion, but, broadly speaking, it is intended to ensure that all nations should have equal opportunities for trade in China. Japan has frequently been accused of violating this principle in Manchuria and it must be admitted that, when all allowances have been made for the accidential advantages which she enjoys by geographical position, the posesssion of the Liaotung Leased Territory and the South Manchuria Railway, it is difficult to avoid the conclusion that her policy in Manchuria has for some time been directed towards the creation of monopolistic spheres of influence, which, although technically covered by Treaty rights, are in spirit contrary to the principle of "The Open Door."

At the Washington Conference in 1921 China attempted to secure the cancellation of the 1915 Treaties but failed, although the publicity given to Manchurian affairs had the effect of somewhat checking Japan's aggressive policy.

This brings us to the fourth period of the history of Manchuria, in which Chang Tso Lin and his son Chang Hsueh Liang, commonly known as The Young Marshal, have, with the Japanese, been the principal actors.

Chang Tso Lin was a strong personality and a rather romantic figure. Starting life as a swineherd, he got tired of that, and became the leader of a gang of bandits, in which capacity he rendered valuable assistance to the Japanese during the Russo-Japanese War. He then became an officer in the Chinese Army and rapidly rose until, shortly after the establishment of the Republic, he became the virtual Dictator of Manchuria.

Owing to its position of isolation, Manchuria, although nominally a part of China, had always been administered as a separate dependency and this political isolation became even more pronounced. Chang Tso Lin was, to all intents and purposes, an independent ruler. When

it suited his convenience he was prepared to acknowledge the authority of whatever Central Government happened to be in power in China proper, but when it did not, he went his own way.

In 1922 he declared his independence of the Central Government. In the earlier part of his career he showed himself so accommodating in his dealings with the Japanese that he was suspected of being in their pay, but as he grew older he became more stubborn and developed an ambition to play a leading part in the affairs of China proper. This led him into military advantures inside the Wall, which not only proved a drain on the resources of Manchuria but got him into trouble with the Japanese, who have always been determined to keep civil war out of Manchuria. They looked with disfavour on the money he was wasting on his own military and political ambitions instead of devoting it to the development of the country.

However, he insisted on going his own way in face of Japanese advice and during the last few years of his life relations were very strained. In 1927 he succeeded in getting the reins into his hands at Peking, but his triumph was short lived. In the spring of 1928 the Nationalists made a drive northwards against him. Japan intervened and advised him to retire to Manchuria before he was finally beaten, and warned him that, if he did not do so and civil war was carried into Manchuria, his armies would be blocked at Sahnaikuan. He protested but had to give in. On his way back to Mukden a mysterious bomb explosion occurred, as the result of which Chang Tso Lin was so badly injured that he died almost immediately.

He was succeeded by his son Chang Hsueh Liang who has neither the ability nor the strength of character of his father. He has from the first had very pronounced Nationalist leanings, and this has brought him into direct opposition to the Japanese, who were afraid that if Manchuria became definitely Nationalist various questions concerning their rights and privileges might be made embarrassing. They were determined that the progress of the country should not be impeded by its becoming embroiled in the troubles of China proper. Things went from bad to worse and it was clear that he was doomed. He has been wise enough to keep out of Manchuria himself for some time now, and since the Japanese troops entered Chinchow the last vestige of his rule in Manchuria has vanished. Until the end of the Great War China submitted to the will of those stronger than herself, but, after the

Washington Conference, she began to re-assert herself in Manchuria. This took the form of studied disregard for the special privileges secured by treaty by foreigners generally and particularly the Japanese, by a systematic attack on the position of the Chinese Eastern Railway, and especially by a programme of railway construction regardless of its prejudicial effect upon Japanese interests. The underlying principles which governed this railway programme were to connect the three provincial capitals of Mukden, Kirin and Tsitishar by purely Chinese railways, so as to be independent of both the South Manchuria Railway and the Chinese Eastern Railway, and to compete with the South Manchuria Railway as the carrier of Manchurian produce to the sea.

These plans were designed, when completed, to provide two main systems. Firstly, a series of lines running from Taheiho on the Amur River in the north, through Tsitsihar, Anganki and Taonanfu, to Jehol, to the west of, and roughly parallel with, the South Manchuria Railway, traversing the rich agricultural belt. It was intended that this system should have its outlet at the Port of Hulutao, where harbour work has been in progress for some time. Secondly, another series of lines running roughly parallel with the Chinese Eastern Railway from Manchuli through Taonanfu, Changchun and Kirin to the coast of Korea at Seishin.

Though the second series of lines would be of great commercial benefit they are of very great strategic importance to Japan, as they would provide her with a third railway for her forward concentration in the event of war with Russia, the other two being the main South Manchuria Railway line from Dairen to Changchun and the Korean Railways to Antung and thence to Mukden and onwards. If you will refer to the map you will see that at present gaps exist between Manchuli and Solun, between Taonanfu and Changchun and between Tunhwasein and the Korean border. The Japanese impatience for the completion of the latter section has been an important factor in the present dispute.

Three of the above lines call for special notice. These are the Kirin-Mukden line. The Tahushan-Tungliao line and the Hulan-Hailanfu line with its proposed extension to Mergen and Taheiho. To the construction of the first two Japan objected on the ground that they violated the agreement by which China bound herself not to

build lines prejudicial to the interests of the South Manchuria Railway. Her objections were of no avail and these lines are open. Through traffic over Chinese lines to Kirin began last summer with a considerable flourish of trumpets.

The Hulan-Hailun line is an interesting example of the change which has taken place in the attitude of the Chinese towards Russia in Manchuria since the Bolshevik Revolution. A concession for the construction of this line was granted many years ago to the Chinese Eastern Railway but China, in complete disregard of her pledges, took over the construction herself.

On the outbreak of the present struggle in Manchuria the Japanese at once took possession of the Ssupinkai-Taonanfu-Anganchi line, which had been built with Japanese capital. By driving away the forces of the Chinese General Ma Chan Shan at the battle of the Nonni River, the only engagement in which Chinese troops made any attempt at resistance, they established themselves astride the Chinese Eastern Railway and isolated Harbin.

That, then, was the railway situation—the Chinese endeavouring to establish a network of lines which would compete with the South Manchuria Railway, and deliberately holding up construction on lines for which loans had been obtained from Japan and the completion of which China had, in various agreements, undertaken.

At the time of the outbreak of the present trouble the Japanese claimed that there were more than three hundred cases of infringement of Japanese rights awaiting settlement and there is no doubt that the Chinese have, over a period of years, been carrying out the usual policy of pin-pricks against foreign interests which has met with such success in China proper. It did not succeed however in Manchuria. Apart from the major problem of the railways, the principal matters of dispute between Japan and China were questions in connection with the right of residence, the right of lease, rights of commercial and industrial enterprises, illegal taxation, infringement of extra-territoriality, infringement of administrative rights in the South Manchuria Railway Zone, and the question of jurisdiction over Korean settlers who are Japanese subject. There are about a million of them in Manchuria, where they work as small farmers, and the Chinese have subjected them to a great deal of illegal taxation, extortion and persecution and have

consistently ignored their Japanese nationality. All these questions had been growing more and more acute, and it had become obvious that an explosion was bound to occur very shortly.

The League of Nations intervened in the dispute, but the Japanese Government has consistently claimed the right to negotiate direct with China, and has laid down a number of basic principles on which it is prepared to treat.

These are, briefly:—

(*i*) Mutual cessation of aggressive policy and conduct.

(*ii*) Respect for Chinese territorial integrity.

(*iii*) Complete suppression of all organised movements interfering with freedom of trade and the stirring up of international hatred.

(*iv*) Protection of legitimate activities of Japanese subjects.

(*v*) Respect for Japanese Treaty rights in Manchuria.

The Chinese view is that treaties which have been concluded by former Chinese Governments acting under duress are "unequal treatis" and should be revoked, and that they cannot negotiate until all Japanese troops have been withdrawn to the Railway Zone.

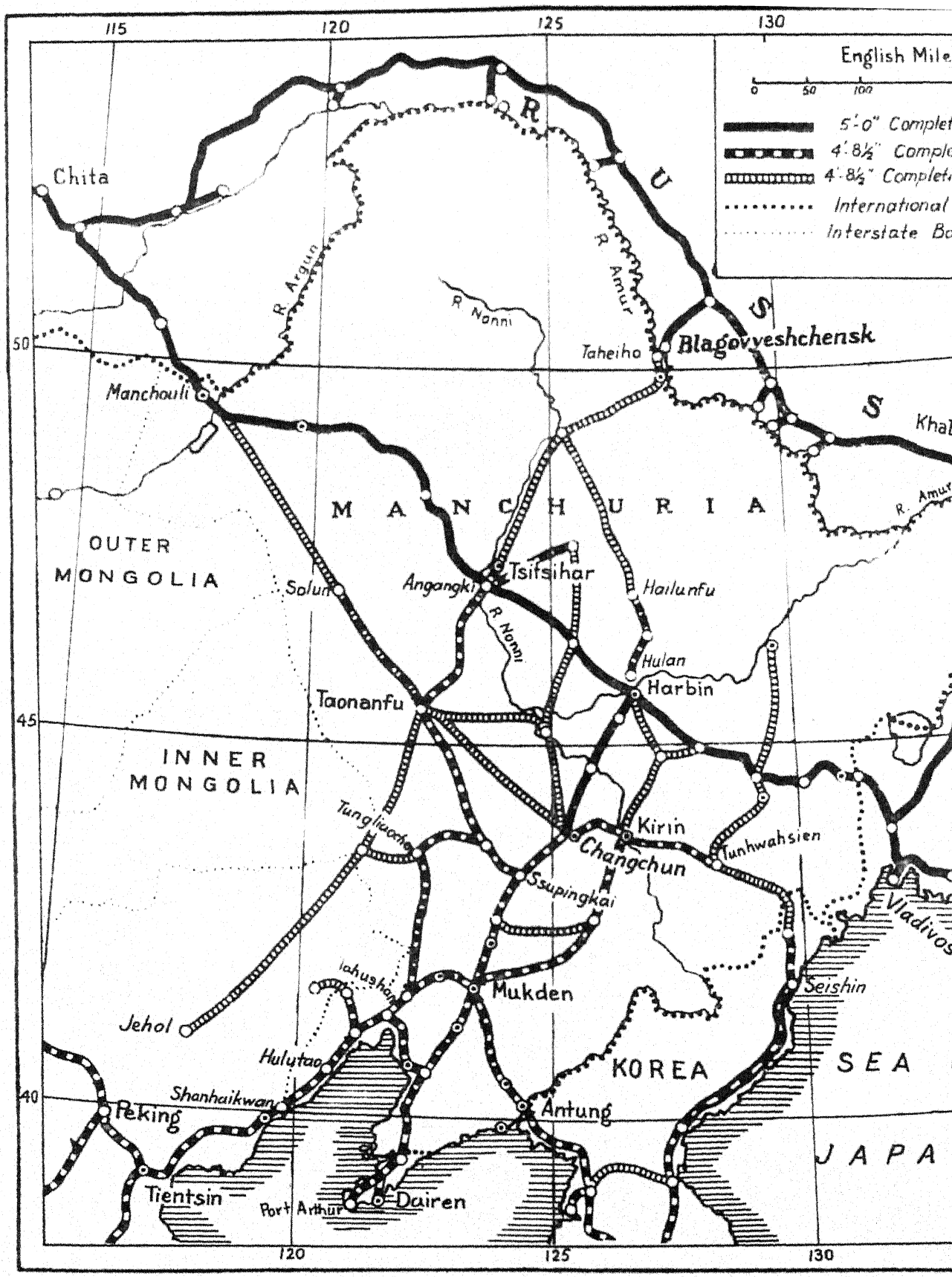
The attitude of Japan in Manchuria is easily understandable. It is obvious that Manchuria under the domination of another power would be a deadly menace to the very existence of Japan. She made enormous sacrifices in blood and treasure during the war with Russia, and justly claims that these sacrifices give her the right to a special position in the country. She has invested enormous sums of money there, something over 200 million pounds, and the retention of her position in Manchuria has become a matter of pure economic necessity. The increase in her population has become Japan's greatest problem. Emigration to most foreign countries is barred, and it has been found that the Japanese will not emigrate to undeveloped countries. In Manchuria, for instance, the Japanese cannot compete with the Chinese whose standard of living is much lower.

The only solution to the problem is further industrialisation and it is in this connection that Manchuria is of such vital importance to Japan. It supplies large quantities of raw materials for Japan's industries and the quantity will steadily increase as the country is developed. It has also the advantages of being close and reasonably safe

from attack. It is already a good market for the finished products of Japanese industry, and, as its prosperity increases, so must its commercial value to Japan increase. Last, but by no means least, Japan regards Manchuria as her first line of defence against the Red Armies and Bolshevism. Enough has been said to show that this is a case of the necessity which knows no law. It would be quite impossible for Japan to relinquish her hold on Manchuria and live.

There are, apart from those who are so purely pro-Chinese or pro-Japanese that they cannot see beyond the immediate selfish interests of either the one country or the other, two main schools of thought with regard to this Manchurian business. There are, on the one hand, those who regard the Japanese action as flagrant oppression of a weaker nation, as violation of the Covenant of the League of Nations, the Nine-Power Treaty signed at Washington, and the Kellogg Pact, and as a menace to the peace of the World. On the other hand are those who recognise that Japan's action was inevitably forced upon her by the inexorable pressure of economic and strategic necessity, who consider that China by her corruption and inefficiency has forfeited all rights to continue to misgovern Manchuria, and who believe that Japan, strongly entrenched in Manchuria, is a bulwark against Bolshevism and a guarantee of the peace of the World against the menace of Russia.

History will decide which view is the correct one.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" TRAIN THE BRAIN ! "
SOME SUGGESTIONS FOR THE ELEMENTARY TRAINING OF OBSERVERS.

By " Zarif."

" All soldiers should be trained in reconnoitring, observing, and reporting the results of their observations."

Infantry Training, Vol. I., Section 148 (3).

Major D. B. Mackenzie, in his article which appeared in the January issue of this journal on the Training of Battalion Intelligence Personnel, laid stress on the importance of accurate observation. Cavalry Training, Vol. I, Section 166, and Infantry Training, Vol. I, Section 149, lay down the standards required for scouts and observers, but little indication is given as to how these standards are to be reached ; in fact, Infantry Training, Vol. I, Section 149 (2) states that " the methods of training to be adopted are left to the choice of the officers concerned."

It is not without some diffidence that the writer puts forward a few suggestions as to one method of instructing scouts and intelligence personnel ; but, while remembering the truth of the saying " chacun a son gout ", the success of the application of the following principles was so marked as to justify further experiment.

The average boy spends many hours, at his public school, much to his disgust, spoiling reams of clean paper in his studies of algebra, geometry, dynamics and the calculus ; but it is extremely doubtful whether more than three per cent. of those youths, when grown up and taking their places in the world, ever experience the necessity to employ abstruse mathematics again. The real use of those subjects was to transform the small youthful brain whose outer surface was as smooth as an egg, into the capable, intricate mechanism of the fully-fledged and much be-wrinkled brain of the educated man ; in other words it was the preliminary training which prepared the brain, making it capable of understanding the problems with which it would later be confronted.

The average private, trooper, sepoy or sowar has not been endowed with a very extensive education ; and though perfectly capable of understanding amazing things if he is educated sufficiently, is not usually in a state that will absorb vast quantities

of 'high-faluting' instruction with any appreciable result. The brain must be educated up to a certain standard, when the knowledge can be imparted with comparative ease.

The soldier with a third class certificate of education is apt to regard map-reading as a mysterious faculty possessed by a limited number of clever people; but an accomplishment far above his ability, and therefore not worth considering. While he is in this frame of mind, it is practically impossible to teach him anything at all. Lack of interest kills progress and therefore the first essential is to capture the interest of the student.

An observer, if he is to be worth his absence from the firing line, must be capable of observing far more than the average man who has not been specially trained in observation work. There is a vast difference between 'observing' and mere 'looking,' and calling a man an observer or scout will not instil into him, as though by magic, the cunning of a practised eye.

A man of average intelligence who possesses good eyesight and can read a map, can see the obvious things which are happening on his front, and make some sort of a report even to giving full map-references; but that cannot be called real observation and is not of sufficient importance to warrant the withdrawal of a lance or a rifle from the fighting strength of a unit. That the majority of people in this world are virtually blind will readily be recognised if one reflects on the number of times one fails to get an accurate reply to such questions as "How many people were there?"; "What were they wearing?"; "What time was it?"; or "Was there anyone else there?" The almost universal answer is "I did not notice."

The elementary training of observers, then, can fall under the following progressive heads:—

(*i*) Understanding and recording what the eye has seen.

(*ii*) Remembering what has been observed.

(*iii*) Retaining information in the memory while doing something else.

(*iv*) Using the powers of observation while returning to make a report on the original mission.

(*v*) Map-memory.

Let us take each of these stages in turn and examine the means of training the men to reach them.

Understanding and recording what the eye has seen.

An excellent method of making a man use his eyes is to give him some common object which has a certain amount of detail about it, such as a fountain pen, a pocket knife, or any small object, and to tell him to write down every single thing he can about it. At first sight this exercise would appear to be too simple, but, if the man really concentrates on it, he will be astonished to find that at the end of even half-an-hour's examination he will still be discovering new things about the object which he had never noticed before.

Remembering what has been observed.

There is possibly no better exercise for this than the old game of " Kim." About a score of articles are placed on a tray and looked at by the man for three or four minutes. The tray is then removed and the man writes down as many of the articles as he can remember. If this exercise is given every day during some period of the day's work it is possible, at the end of a few weeks, for a class of Third Class Certificate men to write down correctly one hundred per cent. of thirty articles examined for one minute only. The art of remembering all that one has seen is acquired entirely by practice.

Retaining information in the memory while doing something else.

The previous exercise can be used again for this, allowing a space of time to intervene between the examination and the recording of the objects seen. As proficiency increases, the intervening time can be taken up with physical training, other exercises, or occupations which will clear the mind of the previous subject. After this interruption to their train of thought the men will write down the names of the things which they recollect.

Another method, which is also extremely useful, is to give the men verbal messages, increasing in length with practice, and make them carry them some distance before reporting them. It is rare that a scout or an observer has the time or opportunity to make notes of what he has observed, so the importance of being able to carry accurate information ' in his head ' cannot be over-estimated.

Using the powers of observation while returning to make a report on the original mission.

It may frequently happen that a scout, while coming back with a message, will be in a position to observe some incident of considerable importance. If he is ' mooning along ' in a brown study, with

his eyes shut, so to speak, he will miss it; but if his brain has been sufficiently well trained to allow him to 'forget' his actual message until he arrives at the place where he is to make his report, he will be free to observe what is going on around him without unexpected and startling events putting his original message 'right out of his mind.' Methods of devising interruptions in the carrying of verbal messages to instil this habit, will readily occur to the officers concerned.

Map-memory.

This is a most important subject for officer, non-commissioned officer and man alike. The value of a good map-memory will be recognised immediately, and the observer who can return to his headquarters and draw a good rough sketch of the area which he has been observing is worth his weight in gold.

There is another aspect which should be considered. The nuisance of having to extract a bulky map from the pocket and hold it flapping in the wind, while one's horse waltzes under the thorny branches of a *kikar* tree, is too well-known to need description. Constant practice is required in visualising the country when looking at the map and in drawing the map again in one's mind's eye when crossing country. Both these accomplishments will eventually prove to be of the greatest value to anyone who spends a little time in acquiring them.

A good method of acquiring a map-memory is as follows:—

(*i*) Enlarge, quite roughly, a square of a map. Then, putting away both the map and the enlargement, draw a rough sketch of the enlargement from memory.

(*ii*) Have a piece of country made on a sand-model; make a rough sketch of the country as displayed on the sand-model.

(*iii*) Draw a rough sketch of any imaginary piece of country; then model it from memory on the sand-model.

(*iv*) Examine a piece of country on a map; look at it very carefully and then draw a rough sketch of it from memory. Leave both the map and the rough sketch at home and ride out to the piece of country selected. Look at the country, and make a note of anything which you observe there which you had not observed on the map. Then return to your map and sketch and see whether you had merely forgotten it, or whether the map was faulty or out of date.

These little exercises to acquire a good map-memory need not be made a burden, but can be used as a means of adding a little interest to an ordinary hack-ride or an afternoon's walk. The benefits which will accrue from them are enormous.

Estimation of numbers and the identification of units can be practised by liaising with other squadron and company commanders, and by sending a few observers out with the skeleton enemy on squadron and company schemes. They will then get a considerable amount of practice otherwise difficult to obtain.

These suggestions are all very elementary, but it must be remembered that the acquisition of a good memory comes only from constant practice. It will soon be found that, after the initial effort of memorising, the action becomes a habit, and what originally needed intense thought and mental concentration rapidly disappears into the undiscovered intricacies of that mysterious faculty, Second Nature.

Once the habit of memorising and observing intelligently has been acquired, the actual taking of verbal messages, or reporting on a situation become as easy as falling off the proverbial log; but however comprehensive the education may have been, however intense may be the thought, however clever the man, the door opening on to the royal road to successful observation and message-carrying can only be unlocked by one key—the preliminary training of the brain.

THE PERSIAN CAMPAIGN OF 1856-57.

By Lieutenant-Colonel C. C. R. Murphy.

Briefly, the cause of the rupture between Great Britain and Persia in the middle of the last century may be summed up as a dispute over the city of Herat, which the Persians had long since regarded as the eastern gateway into their kingdom, and which they were now striving to regain.

The Peace of Paris, bringing to a close the Crimean War, had only just been signed when events in Persia took on unfavourable turn, and it soon became known that the Shah had despatched an army from Meshed to seize and occupy Herat. Great Britain, resenting this overt act of interference with Afghanistan, and determining to resist the advance of Persian troops towards the Indian frontier, immediately declared war against Persia. The short yet brilliant campaign that followed, tightly wedged in as it was between such stupendous events as the Crimean War and the Indian Mutiny, was so completely over-shadowed by them that, strange to say, no complete account of it has ever reached the public, showing how 'the iniquity of oblivion blindly scattereth her poppy.'

War was declared on the 1st November, 1856 ; but the eventually was not wholly unexpected, and during the preceding August the Governor-General of India had received instructions from home 'to prepare and hold in readiness for foreign service overseas an expditionary field force.' These instructions were put into execution at once, but the troops did not leave India until nearly the middle of November.

The expeditionary force comprised a strength of 5,670 fighting men, of whom 2,270 were Europeans, with 3,750 followers, 1,150 horses and 430 bullocks ; and was embarked at four points, namely Bombay Vingorla, Porebunder, and Karachi. The fleet consisted of eight war-steamers of the Indian Navy,* seven hired steamers, and thirty sailing ships ; in all, forty-five sail, under the command of Rear-Admiral Sir Henry Leeke. The first objective of the expedition was naturally Bushire, the principal port in the Persan Gulf. The force, under the

* Now bearing the somewhat confusing title of the Royal Indian Marine.

command of Major-General Foster Stalker, was organised as follows :—

1st Brigade. Brigadier J. Stopford, C.B.

H. M.'s 64th Foot.
20th Native Infantry.

2nd Brigade.

2nd European Light Infantry.
4th Native Infantry.
2nd Baluch Battalion.

Artillery.

3rd Troop, Horse Brigade.
Two Companies 1st Battalion, European Foot Artillery.
Reserve Artillery, European Foot Artillery.

Cavalry.

Headquarters and two Squadrons, 3rd Light Cavalry.
Two Troops, Poona Irregular Horse.

Engineers.

Headquarters and two Companies Sappers and Miners.

Towards the close of November a detachment of the fleet, namely the steam frigate *Feroze* towing two merchant ships, and the corvette *Falkland*, hove in sight of Bushire, and a few days later the Island of Kharg* was occupied and turned into a military depot. On December 6th, the fleet moved down to Halileh Bay, which Commodore Ethersey had pronounced the best suited for the debarkation of the troops ; and on the following day this was effected in admirable order. The landing though unopposed, was not unobserved by the enemy, small parties of whom were driven from their lurking places in the date groves by the fire of the gunboats. Shortly afternoon the force advanced a distance of two miles and, having taken up an extended front, bivouacked there until the 9th.

The Admiral now decided to go ashore the next day to discuss with General Stalker the arrangements for attack, and in connection with this visit history relates a remarkable story, which is typically Persian. On the following morning, horses, grooms, and an interpreter were accordingly sent down to the beach to meet the Admiral and conduct him to the camp. The party, however, had not gone very

* Formerly spelt Karrak, or Karag, 36 miles from Bushire.

far when the Admiral's horse deposited his august burden on the ground. At this the interpreter became greatly alarmed, and fearing that he would be held responsible for this blow to British prestige, fell to thinking how best to conceal from the Persian people the real truth of the affair, namely the Admiral's poor horsemanship. It would never do, he thought to himself, to let that be known. In this quandary, however, the nimble-witted interpreter remembered that amongst Christians the practice of drinking wine was not only lawful, but even popular. So the next day he called at the General's tent and announced with an air of profound satisfaction that he had made it all right about the accident. He had told the people that the Admiral was drunk.

On December 9th the troops were set in motion northwards, the ships of war, led by the Admiral, moving up the coast and giving the closest possible support. After some smart skirmishing, the enemy retreated into the village of Reshire* nearly six miles from Bushire—where amid the ruins of old houses, garden walls, and steep ravines, they occupied a formidable position. Wall after wall was systematically surmounted, many of the enemy fleeing in the meanwhile. A body of Tangistanis,† estimated at about eight hundred, who were holding the old Dutch fort, continued to make the most strenuous resistance, but were finally driven out with heavy loss, Brigadier Stopford being killed on top of the parapet. On the fort being carried at the point of the bayonet, some of the garrison fled down the cliffs, where they met their death, and here Colonel Malet was killed by a Tangistani to whom he had given quarter. At the close of this spirited attack in which our casualties did not exceed fifty, the wounded were collected and sent off to the ships, the troops (who were without tents) passing a cold night on the ground won. Colonel Nicholas Wilson, K. H., 64th Foot, now succeeded to the command of the 1st Brigade.

General Stalker having decided to attack Bushire on the following morning, the fleet moved up into the roadstead. At daybreak the Persian army was seen drawn up in battle array across the *mashileh*‡

* The battle honours "Reshire" and "Koosh-ab" are here spelt as they appear on the colours and appointments of regiments. In the P. C. G. N. these place names are shown as Rishahr and Khush-ab.

† From the neighbourhood of Bushire; they are partly descended from Arab pirates.

‡ The low-lying sandy tract which joins the Bushire peninsula to the mainland. During high tides it is liable to inundation.

its centre supported by a high fortified tower and redoubt approximately a mile and a half from the town walls, and commanding some of the wells from which the better class townsfolk still get their water-supply. A flag of truce was now sent off to the ships asking for a delay of twenty-four hours, but this was instantly refused, and at eight o'clock in the morning the signal was hosited for the ships to engage. Shot and shell were aimed at the redoubt, but with little effect owing to the range. The enemy however, evidently deeming their position out on the plain a little too exposed, shortly withdrew into Bushire ; but during this retirement the ships also moved upon the town, and such was the ardour they displayed in getting close into the works that 'every ship was laid aground at the turn of the tide.' Thus they continued for four hours to bombard the defences, which were active in replying the whole time. Few of the enemy guns possessed sufficient range to reach the ships, but the perseverance of the Persian gunners in firing their heavier pieces was certainly admirable.

The guns of the fleet were next turned on to the fortifications to prepare a breach for our fast-approaching troops ; but when the latter came within five hundred yards of the town the enemy suddenly hauled down their flagstaff in token of submission ; the firing then died away and the attack was over. The bold handling of the ships, the brave appearance of the troops, and the lesson the enemy had learnt the previous day at Reshire, were responsible for the want of spirit in so tamely surrendering this fortified town, in which the British found sixty-five guns, and great quantities of ammunition and warlike stores.

After surrender, some hesitation was shown on the part of the Governor and the garrison to come out of the town ; an assuring note, coupled with a threat of an assault in half an hour, was however sent in by a freed captive and at the expiration of the time, the Governor with his suite was seen issuing from the gate. He was then conducted to headquarters where he was formally received by Major-General Stalker and Rear-Admiral Leeke. Shortly afterwards, the Sarhang (Colonel) in command of the troops surrendered his sword, the entire garrison at the same time laying down their arms. The British flag was then hoisted on the Residency flagstaff, and at sundown the troops moved into the town. The next few days were spent in consolidating the position.

A month later, a second division (composed as under) was organised in India for service in Persia, and Lieutenant-General Sir James Outram appointed to command the whole force. Brigadier-General John Jacob, C.B., commanded the cavalry of both divisions.

2nd Division.—Brigadier-General Henry Havelock. C.B.

1st Brigade.—Brigadier W. Hamilton, 78th Highlanders.
78th Highlanders.
26th Native Infantry.

2nd Brigade.—Brigadier J. Hale.
23rd Native Infantry.
The Light Battalion.*

Artillery.—Brigadier G. Hutt, C.B.
1 Troop R. H. A.
2 Field Batteries.

Cavalry.—Colonel C. Steuart, 14th Light Dragoons.
14th (The King's Light) Dragoons.
1,000 Scinde Horse.

It will be observed that this list contains two names, *viz.*, Outram (the Bayard of India) and Havelock, which before the year was out had become household words in the English language.

When Outram reached Bushire at the end of January, 1857, he learnt that the main concentrations of the enemy were at Mohammerah and Borazjun. At the latter, a village on the Bushire—Shiraz road, the Persian Commander-in-Chief, Shuja'-al-Mulk, had formed an entrenched camp which he was reported to be holding with a force of eight or nine thousand men and seventeen guns. From the information received, Outram drew the conclusion that this force had been organised to recapture Bushire and not merely to bar the road to Shiraz, and that it was necessary to strike a blow in that direction before extending his operations elsewhere.

A few days later, the first brigade of the new division arrived from Bombay, and was disembarked immediately; and on February 3rd, with great swiftness of action, a column of 4,635 men of all arms, and eighteen guns, marched from Bushire without tents or extra clothing of any kind, each man carrying his greatcoat, blanket, and two days' cooked rations, and the commissariat carrying three days'

* Composed of ten light companies of various N. I. regiments.

provisions. A force of 378 Europeans, 1,466 native infantry, a company of European artillery and 14 guns, under Lieutenant-Colonel Shepheard, and reinforced by a party of seamen from all the ships, was left behind to guard the camp.

After a march of forty-six miles in forty-one hours, during which the troops encountered unusually heavy rain and cold nights, they reached the enemy's position in the early morning of the 5th, only to find it abandoned, and to descry, 'to the disgust of all,' the Persian army in full retreat before them. On hearing of the rapid approach of the British they had evacuated their position so hurriedly that they had left practically everything behind except their guns. Our cavalry tried to intercept parties of the Ilkhani's horse,* but after some skirmishing the latter made off in the direction of Shiraz. In this little affray Brigadier Honner had a narrow escape, a bullet passing through his clothing and lodging in the tree of his saddle. The last stage of this march, be it noted, was through hills where a handful of resolute men might, at every turn of the track, hold up an army.

The British force was soon in possession of the entrenched camp near Borazjun; great quantities of stores fell into our hands, the enemy having gone off 'in a most hurried and disorderly manner.' The earthwork round the camp was useless whereas the village itself might easily have been made too formidable for the small British force to have captured.

The next two days were spent in the enemy's position, destroying stores and searching for guns, without experiencing any annoyance from them. On the evening of February 7th, the return march to Bushire was commenced, the column taking away as much of the captured stores as possible, and the Governor of Borazjun as a prisoner. After getting clear of the camp the troops were halted to witness the explosion of forty thousand pounds of the enemy's gunpowder, when the march was quietly resumed. Shortly before midnight, however, a sharp rattle of musketry and the firing of two guns showed that the rearguard (in the capable hands of Brigadier Honner) was being attacked in force. The column was promptly halted, and within half an hour not only the rearguard but the whole force was engaged. Persian horsemen galloped about on all sides, blowing trumpets and bugles and yelling like fiends; but finding they could occasion no

* The chief of a nomad tribe.

disorder they withdrew, and for the remainder of the night the troops had to contend with nothing more serious than sniping. The British, having taken up a position in the shape of an oblong, lay down and without noise or lights awaited the dawn. While these dispositions were being completed, Sir James Outram met with a severe accident, his horse falling heavily and rolling over him. The enemy now opened fire with his heavy guns; one shot plunging into the 64th Regiment knocked down six men, killing one of the number; another, first taking off a foot from Lieutenant Greentree, also wounded Captain Mockler—all of the same regiment. Several followers and baggage animals were killed and wounded.

At last when dawn broke, and a sharp wind had cleared away the morning mists, the Persian army was seen in position and fairly offering us battle; they were drawn up in line, with their right resting on the walled village and date groves of Koosh-ab and their left on a hamlet with a round fortalice tower.

Our artillery and cavalry at once moved rapidly to the attack, supported by two lines of infantry, a third protecting the baggage. The firing of the artillery was excellent, and the loss and disorder which it occasioned made openings for our cavalry who twice charged with great dash and conspicuous success. A standard of the Qashqai Regiment was captured by the Poona Horse; and the 3rd Light Cavalry charged a square and 'killed nearly the whole regiment.' Indeed, upon the artillery and cavalry fell the brunt of the action, since the enemy—who soon wavered and broke—moved away too rapidly for the infantry to overtake them. By ten o'clock the defeat of the Persians was complete, and at least seven hundred of their number lay dead upon the field. The total of their wounded could not of course be ascertained, but must have been very large. The remainder fled in disorder, generally throwing away their arms which strewed the field in vast numbers. Nothing but the paucity of our cavalry prevented their total destruction and the capture of all their guns. The British losses in killed and wounded amounted to six officers and seventy-eight men.

The troops bivouacked for the day close to the battlefield, and at night accomplished a march of twenty miles over country rendered almost impassable by heavy rain. After a rest of six hours the infantry continued their march to Bushire which was reached late at night on

the 9th ; thus performing ' another most arduous march of forty-four miles under incessant rain, besides fighting and defeating the enemy during its progress, and all within the short period of fifty hours.'* The cavalry and artillery reached camp the following day. Thus ended the first phase of the campaign.

On their return from this exhausting expedition into the interior, the troops were given a few days' rest before undertaking the construction of the Bushire defences. With a troublesome *shimal* blowing the whole time, five strong redoubts were built all being armed with position guns, and one with two 68-pounders. In the meantime the arrival of the remainder of the 2nd Division was anxiously awaited to enable Sir James Outram to deal with the enemy concentration at Mohammerah.

At last, on March 6th, all the infantry of the missing brigade, with one horse artillery troop and a troop of the 3rd Light Cavalry reached Bushire ; and three days latter a squadron of the Scinde Horse also arrived. Owing to these delays, Outram was unable to leave Bushire until March 18th, but in the meanwhile he had despatched the transports to the Shatt-al-'Arab.

The Persian army at Mohammerah, occupying a prepared position of great natural strength, consisted of about 13,000 men of all arms, with 30 guns, under the command of the Shahzadeh Khanler Mirza ; so that here, as at the battle of the Baltic,' the prince of all the land led them on.' The British force totalled 4,887 men and 12 guns, with four armed steamers and two sloops of war.

On March 24th, the steamers, with transports in tow, moved up the river towards Mohammerah. At this season of the year, the Shatt-al-'Arab is almost at its highest, but the navigation of the river is not easy, and some of the vessels running on to mud banks did not reach the rendezvous till after dark. While this concentration was in progress, the melancholy news was received from Bushire that Major-General Stalker and Commodore Ethersey had committed suicide within a few days of one another.

The first requirement at the moment was to find positions for the mortars, and with this end in view a party of engineer officers set

* Outram.

out that night in a *bellum** to reconnoitre a low island† situated on the Arabian side of the river, just below the mouth of the Karun. Upon examination however, the island was found to be composed of soft mud, and as no other sites were available a raft was hastily constructed on which were placed two 8-inch and two 5½-inch mortars, under Captain John Worgan, Bombay Artillery. On the following night the raft was towed into position behind the island, about a thousand yards from the Persian batteries on each side of the Karun mouth. Here the raft was securely moored. The range proved just too great for the 5½-inch mortars.

At daybreak on March 26th, the 8-inch mortars began lobbing shells from their floating platform into the sixteen-gun battery at the north point of the river, causing the utmost damage and confusion. This unexpected factor, coupled with the havoc wrought by our 68-pounders, quickly established a fighting superiority over the Persians, and after about three hours of bombardment, the fire from their unenterprising batteries had been sufficiently reduced to allow the small steamers, and one large one towing a transport, to run the gauntlet and land troops on the Persian bank above Mohammerah. The excessive boldness of this manœuvre paralysed the Persians, who now turned their faces towards their line of retreat. Disembarkation was no easy task, but once clear of the ships the troops advanced rapidly on the entrenched camp of the enemy who, without waiting to receive them, fled in panic, leaving behind them all their guns,‡ every tent standing, and three hundred dead upon the field. The British casualties were less than fifty, all told.

An outstanding feature of this remarkable action was the cool daring of Captain Worgan's artillerymen, who remained on their raft during several hours of darkness, in a rapid river, with no means of retreat, and almost certain destruction staring them in the face.

Driven from their stronghold in Mohammerah, the enemy fled to Ahwaz, an old town over a hundred miles up the river Karun, whither Sir James Outram despatched 300 men, under Captain Hunt, to carry

* The ordinary passenger boat of the Shatt-al-'Arab ; it is about twenty feet long, with no keel, and is usually poled by two men.

† This bank, now called Umm-al-Khasasif, is one of the unstable islands of the Shatt-al-'Arab, and subtends the Zain tracts where, on the 17th November 1914, was fought the battle which delivered Basrah into British hands.

‡ Some had been thrown into the river.

out a reconnaissance in force. On April 1st, these troops—half of whom belonged to the 64th Foot and the other half to the 78th Highlanders—having been landed, set off towards Ahwaz, their advance being supported by the fire of the gunboats. Within a couple of hours this tiny British force was in possession of the town, and the Persian army consisting of 6,000 infantry, some guns, and swarms of Bakhtiari horsemen, were in full retreat upon Dizful.

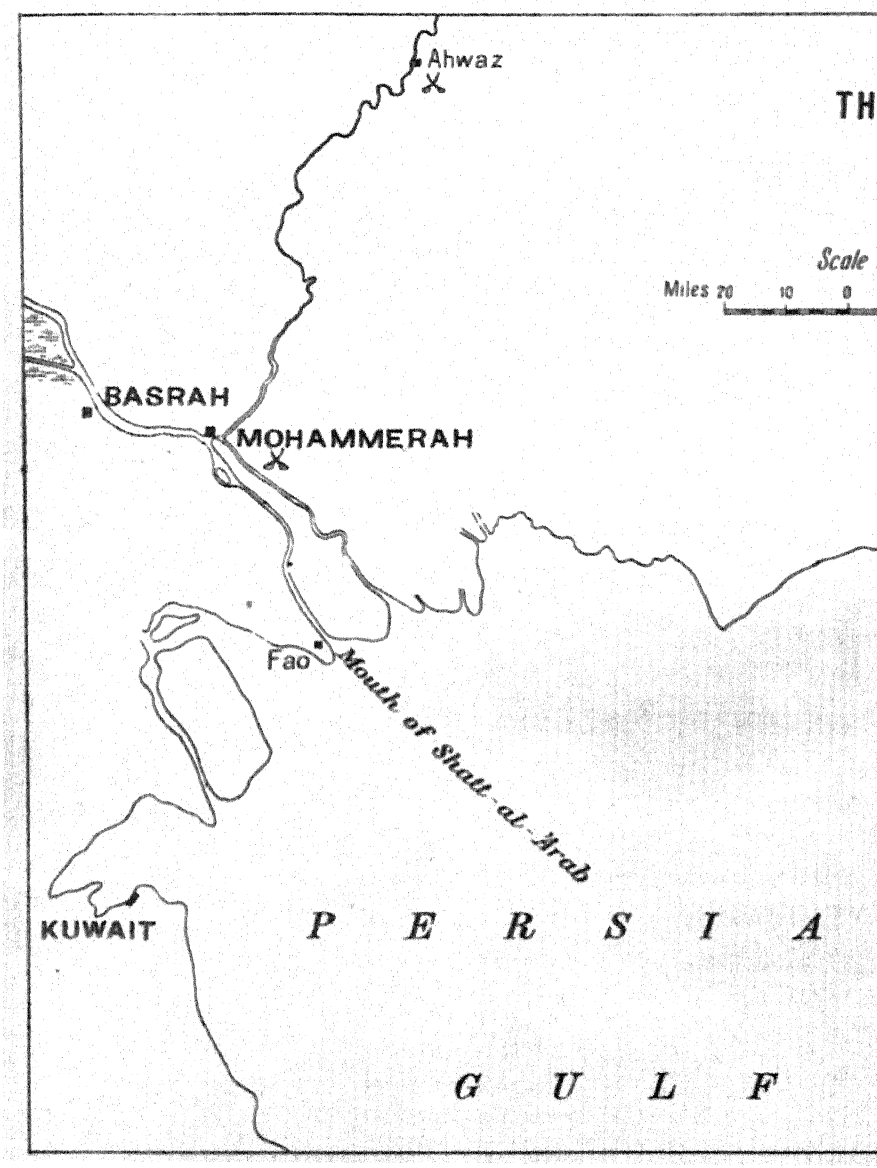
Outram, writing of the Ahwaz affair, says: 'A more daring feat is not on record perhaps, than that of a party of three hundred infantry backed by three small river boats, following up an army of some 8,000 men, braving it by opening fire, and then occupying for three days the position they had compelled the enemy to vacate.'

This was the final episode of the war, and a few days later, Outram received news in Mohammerah that a treaty of peace, between Great Britain and Persia had been signed in Paris. With the exception of a small force retained at Bushire, under General John Jacob, for the three months assigned for the ratifications, the British troops returned to India, where their presence was greatly needed owing to the outbreak of the Indian Mutiny. As for the results achieved by the war, these were negligible; for all that Great Britain got out of it was a written apology.

The medal granted for the Persian campaign was the first India General Service medal, which early in 1854 Queen Victoria had sanctioned for the Burmese war of 1852-53, the ribbon of which is crimson with two stripes of dark blue. Only one clasp was issued, namely 'Persia', but four battle honours were granted as follows: 'Reshire', 'Bushire', 'Koosh-ab', and 'Persia'.

After reading the foregoing account it is interesting to note how history repeats itself. In the attack on Reshire for example, mention has been made of the Tangistanis. It may not be generally known that Dilwar, the stronghold of these tribesmen, was bombarded by the British in 1913, and again in 1915; and that when Bushire was seized and occupied during the great war, the causative act of provocation was an attack made on the British detachment by these same Tangistanis. Ahwaz too, which had witnessed the brilliant exploit of 1857, was the scene of considerable fighting between Great Britain and her enemies nearly sixty years later.

The student of military history will recognise in every action in this campaign an example of the bold, determined hand demonstrating the impotence of inefficiency. The musketry of the Persians was ludicrous; indeed it might almost be said that they discharged their firearms at random without heed to aim or range. They seemed altogether incapable of producing any effect with their fire. As soldiers they were caricatures; but let it here suffice to quote the famous saying which it is on record that one of their commanders of those days actually uttered: 'O Allah, if there were no dying in the case, how the Persians would fight!'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THE NEW INFANTRY TRAINING, VOLUME II.

By Captain M. C. T. Gompertz, I.A.S.C.

Although it may seem a little unusual to praise an official Training Manual, it is difficult to avoid expressing admiration for the recently-issued Infantry Training, Volume II, 1931. It is a model of simplicity and lucidity of expression. This, of course, does not gainsay the fact that the inherent difficulty of command in war is the application of principles to existing circumstances and to ground. Even so, practice is assisted when theory is put simply, logically, and in an easily understood form.

The simplicity of the 1931 edition by no means implies labour-saving devices or rules of thumb. The reverse is, in fact, the case. Thus, the 1926 edition gave, as a guide, frontages to be adopted, *e.g.*, " a company can defend a front of 500 or 600 yards " (Section 22·5); these are now omitted. Similarly, such statements as " when the pursuit is not close, a rear guard's dispositions on the line of march resemble those of an advanced guard reversed " (Section 30·6), savour of a " crammer " and find no place in the present book.

A useful method of studying a new edition of a Manual is to compare it with its predecessor, marking in red the new material in the new edition, and striking out in blue in the old edition whatever re-appears in the new. This gives the developments that have taken place, *viz.*, on the one hand the inclusions, on the other the omissions.

Applying this method, the new I. T., Volume II, has four clear characteristics :—

(*a*) Much material taken from other manuals.

(*b*) Better arrangement.

(*c*) More direct or precise English.

(*d*) New material.

The new edition contains many extracts from F. S. R., Volume II (Operations) 1929, and from A. T., Volume II (War) 1928. Thus, on its first full page (p. 2) extracts are taken from Sections 8, 21 and 30 of F. S. R., Volume II.

Better arrangement is shown by the fact that these extracts are so well worked in to the text as to appear to be a piece of consecutive writing: by the use of sub-headings, as for example, when dealing with Outposts; and by the re-arrangement of matter from one part of the book to another.

The English has been made more direct by a sparing use of such phrases as "It must be remembered that," and more precise by a general substitution of "will" for "must" or "should."

It is the purpose of this article to indicate the more important new material, some of which may have appeared in Training Memoranda, etc., but which now makes its first appearance in Infantry Training. Particularly noticeable are the Sections dealing with the employment of the Machine Gun Company. These Sections are, of course, new matter since the introduction of the Machine Gun Company took place after the previous edition was published. All of them require close study, but will not be alluded to again in this article. These Sections are 14, 15, 22 and 23, whilst Section 4 (10) is largely composed of new material.

In order to save repetition, the 1926 edition of Infantry Training, Volume II, is referred to as O. E. (old edition).

Chapter I.

Gaining Contact.—Section 2 (3). The old definition of gaining contact in so far as it concerns infantry as "the time when it first comes under the aimed small arms fire of the enemy" has now been omitted. The necessity for acting boldly and quickly at this stage, in spite of vague information, is of great importance. More respect is paid to the enemy detachments, and the fact that they may have an offensive rôle is mentioned.

Consolidation.—Section 2 (5). Note that this is not nearly so passive as before.

Defence.—Section 2 (7). The O. E. had two guiding principles. Another which in the O. E. appeared later in the book has been added and is put first, *viz.*—"Fire must be organized to stop the enemy".

Frontages.—Section 3 (5 and 6). Mostly new. The pros and cons of wide and narrow frontages are very clearly put. Note that reduced fronts do not necessarily help units in the attack.

Infantry weapons.—Section 4 is mostly new as regards grenades, machine guns, and A. T. weapons.

Fire.—Section 5 (7). Note the requirements for ensuring continuous support of the attack.

Use of ground.—Section 6. The correct relation of maps and study of the ground is given.

The vital importance of ground in selecting positions for covering fire, when infantry have to cross open ground exposed to fire, is emphasized.

Note section 6 (3) (iv) (vi) (vii).

Inter-communication.—Section 7 (7). Note position of Machine Gun Company, Platoon and Section Commanders.

Cavalry.—The last paragraph of Section 8 (2) draws attention to the value of infantry commanders keeping in touch with Headquarters of cavalry units, operating between them and the enemy.

Artillery.—Note the explanation of the terms "under the command of" "in support of" Section 8 (4): the use of light artillery in defence Section 8 (5) (*i*): the pros and cons of concentrations and barrages, Section 8 (5) (*ii*): the use of Field artillery to harass, blind with smoke, destroy wire, and in close support, Section 8 (5) (*ii*): the duties of F. O. O.'s Section 8 (8).

Tanks.—The co-operation of Tanks with infantry is clearly put in Section 8 (15 to 18). Note the differences when one or the other is the main assaulting arm.

Aircraft.—Aeroplanes of A. C. Squadrons are for reconnaissance, and should not be used offensively except in grave emergency. They can carry a few light bombs, but do not normally do so. Section 8 (24).

Note also:—the two last paragraphs of Section 8 (24) the ground to air signals to be laid down in orders, Section 8 (26) (*i*): troops are to be ready to communicate with any aeroplane that signals to them. Section 8 (26) (*i*).

Chapter II—Attack.

This Chapter is perhaps the most interesting in the book, since it has been re-written more than any other.

Gaining Contact.—Section 9. The need for commanders to be well forward and to be "thinking ahead" is emphasized. The

Officer Commanding the mounted troops will keep Vanguard and Advanced Guard Commanders constantly informed of his progress. Once the mounted troops are definitely held up and relieved by the infantry, their additional duty is to locate the enemy's flanks, whilst the task of gaining information devolves more and more on the infantry. Section 9.(2).

Forward rifle companies will be directed against definite objectives, establishing contact on each objective. Correct infantry action at this stage greatly simplifies the organized attack, which may become necessary later. Section 9 (3 and 6).

Artillery support can usually best be given by observed fire, when the situation is indefinite, and knowledge of the enemy is scanty. When stiffening resistance is met, it may be necessary to ensure adequate fire superiority by concentrating against different objectives in turn. Make certain of one place first: then deal with the next: and so on. Section 9 (4). Section 30 (15).

General Attack Considerations.—Section 10. Note that the preparation of an adequate fire plan takes time: that each component part of the force should have its own task to carry out, and its action should not depend entirely on the success of other parts of the force: that the starting line (at least 200 yards from the opening artillery fire) should be easily recognizable on the ground, Section 10 (4): and the warning at the end of Section 10 (5) about capturing *and holding*.

Orders for the Attack.—Section 11 (1 to 4: 23). The O. E. dealt summarily with the orders from the superior commander by the delightfully trite observation "Having received his orders, the Battalion Commander will proceed to put them into effect" O. E. Section 13 (3). In place of this, we have in Section 11 (4) a well tabulated list of important points, prefaced by the necessity of clearly understanding the Commander's intention. Note the inclusion of three points on machine guns, the use of smoke, and the points of junction with flank units on successive objectives. Attacking battalions retain control of their machine guns, though Brigade tasks may be allotted in the opening stages.

Verbal orders, both in the case of Battalion and of Company Commanders, should be given within view of the ground of action. The Commander will check over the essential points, after those

present have made notes. Sections 11 (23) and 12 (5). This also applies to Defence Section 21 (13). The orders of the Battalion Commander will be confirmed in writing.

Preliminary Action.—This is very clearly set out in Section 11 (5 to 8). Note the contents of a short warning order : the use of mounted officers and the intelligence section on reconnaissances : the minimum of officers with the Battalion Commander.

As regards the plan, there are again three new points about machine guns, whilst the stages of the attack and the crossing of the starting line need careful consideration. Section 11 (7).

Initial success is normally to be expected, but the plan must cater for the main difficulty— the continuation of the advance against unlocated resistance. For this, a reserve of mobile fire power is invaluable. Section 11 (8).

Distribution.—Section 11 (9 to 13). Two methods of attack are given, but, in either case, it is seldom advisable to cover the whole front with riflemen.

No rules can of course be given, but there are cases when one rifle company only need be used, *e.g.*, when there is a covered approach on one flank or when an intervening tactical feature is likely to impede the advance. But, if the front is wide, two companies should be used.

Never place M. G. Platoons under a rifle company, unless they are too far away for the efficient control of their own company commander. Note the rôles of forward, supporting and Reserve M. G.'s Briefly. M. G. fire is supplied at the outset by the supporting guns, whilst the forward guns go forward on wheels : the reserve guns are kept mobile for emergencies.

Co-operation with other arms.—Section 11 (14 to 22). Further points on barrages and concentrations are given. A timed programme should end when the enemy's dispositions are indefinite. After this, command of the bulk of the field artillery is decentralized and will take the form of observed fire directed by F. O. Os.

One or two sections of light artillery will usually be under the command of attacking Battalions but will seldom take part in the initial fire plan. Their lack of external communications makes it incumbent on the infantry keeping in close touch. Note the questions. Why, What, Where and When.

Note the reasons for exact timings when tanks co-operate with infantry. Tanks require time for adequate reconnaissance, and need the assistance of the infantry and artillery in dealing with the enemy's anti-tank weapons.

Further Preparatory Action.—Section 11 (24) (25). All new and close study is essential. See also its counterpart in defence—Section 21 (14).

Conduct of the attack.—Sections 11 (26 to 32) and 12. The tactical handling of the Battalion requires more skill with three rifle companies than it did with four. In the past, there was a tendency to pass two reserve companies through the two forward companies when they were held up: this was often wasteful in resources, as one forward company might still be fit to carry on, and the value of ground might be overlooked. There are now three alternatives. Firstly, a fresh fire plan may be all that is required. Secondly, if the enemy has a flank, the third company may be aimed at the flank whilst the enemy is held frontally. Lastly, the third company may maintain the momentum of the attack in place of the company that has suffered most severely.

Within the company, the forward platoons (let us assume there are two) may be quite capable of advancing, if more fire power is available. As, however, they may be in exposed positions under heavy fire, it will often be best to pass through the two reserve platoons from behind, where they can have got details of the fresh fire plan. An exception to this is when tanks give the fresh impetus, as then it is not necessary to obtain the details of the fresh fire plan. Infantry are trained to go forward directly the action of the tanks makes this possible.

Battalion Commanders must go forward to reconnoitre whenever the situation is vague, and to supervise directly the objective is gained—all commanders must ensure the security of captured objectives.

The rifle platoon in the attack—Section 13. The Company Commander usually gives the line of advance for each platoon. The Platoon Commander has then to make the best use of ground, so as to get his men forward without excessive losses. By reconnaissance, forward and to the flanks, a way will often be found where none seemed possible.

Local situations constantly arise which can be dealt with promptly by the light automatics under the control of the Platoon Commander.

If the enemy has not been definitely located, one rifle section should move far enough ahead of the Platoon to guard against surprise.

Attack on an organized trench system.—Section 16. Infantry cannot advance by day against M. Gs. and unbroken wire. Tanks are best for making gaps in wire, and should precede the infantry. If tanks are not available, artillery and mortars can be used to cut wire, infantry being responsible for keeping the gaps open (except in rearward wire) by constant patrolling and fire from M. Gs. and other automatics.

The Commander allots intermediate objectives which often coincide with the various defensive positions of the enemy.

Consolidation of a captured position.—Section 17. Mostly new and much fuller than in the O. E.

Chapter III.—Defence.

General considerations.—Section 19. Note the continual emphasis on concealment. It must continually be borne in mind. Observation is essential to the attacker.

Control is important, as defensive action entails a certain measure of dispersion. The defender must be ready to act quickly as soon as the intention of the attacker is disclosed.

The Selection of a defensive position.—Section 20 (1 to 11). The place and time of the enemy attack will never be certain. The defence must aim, therefore, at upsetting his forward movement and assembly, and must protect its foremost infantry localities with such a belt of fire from all weapons that the enemy cannot penetrate. As the most likely time of attack is at dawn or night, the defence must organize its artillery and machine gun fire to be maintained even when hostile movements cannot be observed. Section 20 (10 and 11).

Anti-tank defence, especially such obstacles as river lines and woods, needs full consideration. The enemy must not be allowed to reconnoitre a river obstacle. He will then be forced into a special operation to gain contact with the obstacle. Section 20 (2).

Troops may be pushed out in front of the defended localities either to guard against surprise or to delay the enemy. In the first case, their rôle is mobile and a few detachments from forward battalions may be sufficient in the second, their rôle is resistance and they must occupy positions and be effectively supported. Section 20 (4).

Fire.—Section 20 (11 to 14). Harassing, counter-preparation, and defensive fire are fully dealt with. Note that machine guns may be used on any of these tasks, and form the framework of the defensive fire plan. Note the need of rearward O. Ps.

Note the difference in the rôles of Forward, Supporting and Reserve machine guns: the support by machine guns of a counter-attack: and the duties of commanders in ensuring co-ordination of defensive fire.

The Battalion in defence.—Section 21 (1 to 10). The machine gun arcs of fire and dispositions are of primary importance. Their commanders must be told at the outset when they are to be ready to open fire, and also must be given time to reconnoitre and lay out lines of fire in daylight.

The orders from superior commanders are again clearly set forth, Section 21 (1 and 3), as also are the value and contents of a warning order. Section 21 (4).

On his reconnaissance the Battalion Commander may have his rifle company commanders with him or they may meet him later: he must consider, *inter alia*, the relative importance of concealment as against cover from fire.

A wise use of machine guns can often reduce the calls made on rifle companies, and may enable wide fronts to be held in open country. But beware of over-extension. Section 21 (7). By day a proportion of machine guns can be sited to hold the front, and in open country need only be assisted by patrols and a few protective posts on hidden approaches. By night, however, it will be necessary for rifle companies to hold forward localities, and for wide patrolling. Unless, therefore, the position is to be held only by day, frontage depends on night requirements. Section 21 (7).

As regards artillery co-operation, note the uses of light and medium artillery, and the value of silent guns. Section 21 (11).

As regards anti-tank defence, note the siting of infantry in tank-proof localities, and the uses both of anti-tank and dummy minefields. Section 21 (12).

Patrols.—Mobile warfare has been kept in view more than before. Note especially Section 24 (8).

Reserves.—Section 26. It is important to note that :—

Reserve Sections and Platoons always occupy positions.

Reserve Companies usually occupy positions.

Reserve Battalions may or may not occupy positions, but in any case a position will be reconnoitred, and some machine-guns may be placed on it.

Counter-Attacks.—Section 26 (3 to 7). Immediate counter-attacks are usually delivered by reserve platoons and companies, but reserve companies may often be better used to stabilize the situation by fire so that a reserve battalion may put in a deliberate counter-attack later.

A counter-attack becomes " deliberate " by reason of the more detailed preparations for co-operation rather than by the size of the force engaged. Section 26 (6).

The best way to eject an enemy from a captured position is first to shake his morale by the fire of all available weapons, and then to launch a counter-attack. Section 21 (20).

Protracted defence.—Section 27. There is only one degree of resistance, and this applies to both the outpost and the main position. So clear orders must be issued if the commander decides to withdraw from the outpost position.

Chapter IV.—Protection.

General considerations.—Section 29. A force within striking distance of the enemy's main forces can only be considered as secure if it can fight at short notice. It must, therefore, be so disposed that it can deploy rapidly.

Advanced Guards.—Section 30. An advanced guard must seize and hold ground needed for observation by the main body, if it is unable to overcome opposition. Section 30 (2).

Section 30 (8 and 9) are mostly new and deal with the degree of deployment of the vanguard infantry, and the handling of the vanguard machine guns.

After the mounted troops have gained contact, and advanced guard may deploy on a wide front (within the limits needed for control) so as to locate the enemy's flanks.

Constant reconnaissance is important by the leading troops to find out the dispositions of the enemy and of neighbouring units, by the reserves to find out forward dispositions and the best lines of advance. Section 30 (15).

Rear-guards.—Section 32. When the pursuit is not close, the unnecessary deployment of infantry is to be avoided. If the main guard uses more than one road, each portion finds its own rear party.

When in close contact, great depth will not be needed if the ground affords concealment and good scope for the use of infantry weapons. If the front is wide, it may be necessary to put M. G. platoons under command of rifle companies. Vehicles should be kept as near the gun positions as is safe so that the guns may get away quickly. Greater strength and depth will be required in close country. Section 32 (11).

The Rear-guard Commander co-ordinates the withdrawal of the rear parties by fixing a time at which either the last troops are clear of the forward localities or at which they cross a given line in rear. Also it will often be advisable to fix the time the withdrawal may begin. Section 32 (13).

Some machine guns should form the backbone of the rear parties, but only the minimum number of men needed to bring the gun out of action should stay behind until the final withdrawal. Some fire should be kept up from each important locality until the last moment.

Closely pressed infantry can often be best extricated and withdrawn under cover of a counter-attack by tanks. Section 32 (16).

The Rear-guard Commander should not be made responsible for the demolition plan, though he should know its details. Section 32 (17).

Protection at rest.—The four pages containing Section 33 (4 to 12) are new and must be studied very closely.

Note especially that a force, beyond striking distance of the enemy's main forces, is unlikely to be subjected to a co-ordinated attack by infantry supported by other arms. It is, however, liable to raids from any direction by A. F. Vs. and troops brought up in M. T. under cover of darkness. It must, therefore, push out detachments to block all roads and approaches *leading from any direction* into the area. Troops in rear will also be responsible for protective measures in their allotted areas, and, in addition, will protect the services of supply and maintenance.

Within striking distance, a force will be disposed on its battle frontage so that it can fight quickly if attacked, and is ready to meet any form of attack. Lines of approach, such as roads, tracks, railways, etc., and the bottoms of valleys or the tops of ridges in open country, must be strongly held at night. By night not less than one-third of each detachment will be awake and manning its fire position. Section 33 (17).

Most of Section 34, protection from aircraft, is new. Note especially the need for rapidity in dealing with a low-flying attack Section 34 (3 to 6), and the measures for local protection. Section 34 (13).

Chapter V.—This chapter is very much the same as in the O. E. Note Section 35 (2).

Night operations.—In a night advance strong fighting patrols will precede the troops, for local protection and ground reconnaissance Section 44 (4). In a night withdrawal, some machine guns will be among the last to go. Section 45 (3).

Section 47 (1 and 2) on night attacks is mostly new. Note the need for reconnaissance by day down to Platoon Commanders. An officer will be in charge of each selected view-point to ensure secrecy. The ground will also be viewed by night to fix visible landmarks.

Objectives should be so selected that they can easily be found at night. The key localities of the enemy position should be captured but ground in between can be left until it is light enough to see when battalion reserves and tanks may be used. Section 47 (2 and 6).

The pace to the forming-up places will be very slow, and columns must be kept closed up. On arrival, each platoon column will deploy, and a short halt should follow during which leaders verify their positions and the line of advance. Section 47 (4).

Once the enemy is roused by the assault, artillery fire is put well within the enemy's positions and also to protect the flanks of the attack. Section 45 (5). Exploitation should be left until daylight. Any objectives not taken by night can then be attacked with adequate supporting fire. Section 47 (6).

Note the five important points on consolidation. Section 47 (7).

Ammunition Supply.—Chapter VII. Note the points about machine gun ammunition in Section 51 (2) (3 iv) (7).

Working parties and tasks.—Chapter VIII. Note Section 52 (1) and in 52 (2) that infantry commanders are responsible for the siting, organization and construction of their own defence works, and that the officer ordering the work must arrange for any protective troops needed. Also, that, as the number of available tools will often be insufficient, it may be advisable to double-man the tools. Section 59 (4).

Assault Bridging.—Chapter IX. Crossings may be effected silently or covered by fire. They are usually best carried out just before it gets light, but a daylight crossing may often be necessary. Infantry must be ready to exploit all other means, such as rafting and ferrying, as well as assault bridges.

The Engineers transport and deliver assault bridge equipment as far forward as their M. T. can go, and they maintain the bridges when constructed. Section 60 (2). Note the definition of, and the requirements for a bridge-forming point in Section 63 (1).

The bridge must be kept as straight as possible since the joints allow very little lateral play. Direction can easily be changed by wheeling the bridge as a whole, either on the centre or on either end. Section 64 (1). If the current is very strong, the bridge may have to be pulled across from the far bank, by a few men sent across with the covering party for this purpose. Section 65 (2).

Conclusion.

Comment has already been made on the better arrangement of the present edition. The position of the Chapter on Protection and its contents do, however, seem rather an anomaly, as, having attacked the enemy for 51 pages and defended ourselves against him for 50 pages, we suddenly find ourselves marching forward again to gain contact with him.

It is realized that this chapter has inherent difficulties, and that invariable rules cannot be laid down. Still, it is suggested that continuity of action might be better attained, if Advanced Guards were put as a prelude to the Attack Chapter, and Rear Guards as a prelude to the Defence Chapter. The "General Principles applicable to all forms of Protection" might well be included in Chapter I, Battle, and the Protection Chapter limited to the two extraneous forms, *viz.*, Flank Guards and Outposts.

AN HISTORIC DURBAR.

The meeting between Lord William Bentinck, Governor-General, and the Maharaja Runjeet Singh, at Rupar, October 1831, as described by Colonel James Skinner, C.B.

By Colonel E. B. Maunsell.

The following account has only just come to light. The original is an heirloom of the Wood family, and is in Skinner's own handwriting, clear and legible, though the ink has faded. Skinner's memoirs and reminiscences were, curiously enough, written mainly in Persian. The forwarding letter was written to Mr. Wood, who, so the family tradition states, married the daughter of the Rajput officer who lay beside Skinner, desperately wounded, on the field of Oniara. In this connection there is a tradition in the Skinner family that, when the ladies of Delhi were working an altar cloth for the church this old half caste adventurer was building in memory of the horrors experienced on that occasion, Skinner took the letters, I. H. S., to be complimentary to himself, these being his own initials. With regard to the Durbar, Skinner makes the very pertinent remark "The meeting with Runjeet was very grand on his side, on ours, very poor." This is in full accordance with contemporary accounts of Bentinck's character for pettifogging economies. It was this Governor-General, it will be remembered, who was responsible for the mean "half batta" order which reduced the small allowances of officers while retaining those of the sepoys. This, coupled with his fatuous "gesture" of abolishing flogging for sepoys while the punishment still remained in existence for British soldiery, had no small effect towards ruining the discipline of the Bengal Army, which culminated in the Mutiny twenty-six years later.

Skinner, in this note, also observes, "Runjeet is a noble fellow, and the only good chieftain of the old days remaining. After his death there is no one to manage his affairs, and John Company will, of course, do it." Runjeet was then fifty years of age, and, on the last day of the Durbar, joined in with some of his own troopers, and with men of Skinner's Horse, at equestrian feats, Skinner observing, "I could not help admiring his fine spirit."

This was the second occasion when Skinner crossed the Sutlej. In 1805, acting as advanced cavalry to Lord Lake's army in pursuit

of Holkar who was desirous of seeking shelter with Runjeet, then a budding chief, the adventurer, with a couple of troops and a galloper gun, was the first man to plant the British standard on the far bank of the river, and his mare was the first animal of the British camp to drink the water of the Hyphasis—the Beas—of Alexander the Great, and in close proximity to the altar erected by that world's conqueror.

Although in 1831 Skinner had served the Company, on and off, for the last twenty-eight years, he was not a regular officer, but, as a special compliment, he was placed on the roster as a Field Officer, and commanded the outposts in his turn. He was much gratified by this, for never before had he commanded European troops, the 16th Lancers and 31st Foot being the regiments present.

Runjeet Singh's troops, who were reviewed on this occasion, had come into being in a curious manner, for the Sikhs, like the Mahrattas, in the days of Lake and Wellesley, had only been horse soldiers, and very irregular at that. In 1809, Charles Metcalfe had been sent to negotiate certain terms with Runjeet who was now imposing his personality on the whole of the Punjab, as also on Sikh States on the British bank of the Sutlej. Metcalfe happened to be at Amritsar when the Muharram festival took place, and the Mussulman sepoys of the escort celebrated it in the usual manner. This infuriated the fanatical Sikh Akhalis, who attacked the camp. The Company's sepoys, well disciplined, but totalling only some two hundred all told, met the overwhelming numbers of the Akhalis in the most steady manner, utterly routing them. Runjeet was so impressed with what he heard of the occurrence that he resolved on forming an army, to be trained and disciplined in the European manner. The Colonel, Allard mentioned, together with Ventura and Avitabile, were the adventurer officers who, in common with sundry British, entered his service and who welded the Sikhs into the formidable soldiery we met in the war of 1845. In this connection Avitabile became the Governor of Peshawar, the only European who governed in India in an Oriental manner, with the gallows at the city gates.

In the initial preparations for the Durbar "the Seiks cleared a fine space and planted a garden, in the centre of which the royal tent was to be pitched. Wheat had been sown too, in the shape of men, birds and animals, in which form it grew up for the amusement of the chief, as well as gave verdure to this royal and magnificent encampment, while a bridge of boats sufficiently strong to allow the

passage of the royal sowarees, consisting of elephants, horses, etc., was erected. Nor did a single accident occur." The "bungalow of silver" referred to below could be moved about as necessity dictated, Runjeet and Lord William taking their seats thereon and being able to see over the heads of the crowd. With regard to the entertainment given by the Maharaja, Skinner tells us that the whole "formed a perfect specimen of Indian luxury and magnificence"—and this old adventurer had seen much magnificence in his early days, particularly under his first master, the great de Boigne, who fully realised its importance in the East. Runjeet Singh, in his cups, was wont to become "very high spirited" and somewhat inconveniently hearty. On this occasion he pelted Lady William Bentinck, in common with the nautch girls, with gold dust "and he seemed much to enjoy the joke." On the other hand his chieftains appeared unable to carry their liquor as gentlemen should, "and, instead of the manners of noblemen, displayed those of village churls."

Runjeet Singh, in his enthusiasm, went so far as to present Lord William with his famous horse "Loylee"—this was well on in the evening—and his Lordship wisely declined acceptance. The reception was an unqualified success.

The results obtained by the Durbar were incalculable. Had the Sikhs proved hostile during our troubles in Afghanistan eight years later it might have proved impossible to redeem the situation, for the Khyber line of advance would have been closed.

The total number of Sikh troops present was estimated at being some fifteen thousand horse, seven thousand infantry and twenty-five guns.

Skinner's Diary.

25th October.

Runjeet Singh arived in his royal tent this morning at 8 a.m. A deputation consisting of Mr. Prinsep, General Ramsay and two other officers, escorted by 60 sowars from Skinner's Horse, went over and was received with a salute of 15 guns. His son, Kurruck Singh, paid the Governor-General a visit and was received by a salute of 17 guns and took his leave at 12 a.m. The Royal Tent is made of red velvet and the outer kunnauts of yellow satin. There is also a bungalow of silver about 16 feet square.

26th.

All our troops formed a street from the Governor-General's tents towards his camp. The Maharaja arrived at 9 a.m., escorted by a thousand horsemen dressed in silk velvet also rich armours. As he passed every corps saluted, the Company's colours only dropped. The Governor-General with all his suite received him about 100 yards from the Government tents, went into his Howdah and put a string of pearls round his neck. After asking after each other's health, about 200 trays were brought in containing shawls, silk, velvets, *Kum Khaub* and other manufactures, also several double barrelled guns and pistols besides two horses and two elephants which were all presented to the Maharaja. He returned about 10 a.m. with the same salute of 21 guns. The horsemen that accompanied him, about 300 were good, the rest very indifferent. The French Lancers were only a mockery of discipline and the horses badly disciplined.

27th.

This morning His Lordship returned the Maharaja's visit at 7 a.m. Kurruck Singh met His Lordship about ½ a mile on our side of the river when he crossed the bridge of boats and was met by Runjeet with all his Sardars. His Lordship shook hands and went into the Maharaja's Howdah. They then passed through a street fully a mile in length formed by Runjeet's troops, both infantry and cavalry. The Durbar was surrounded by large silk kunnauts inclosing a space about 2,000 yards square. It was made of scarlet broadcloth lined on the inside with yellow velvet worked with gold. The carpets were all shawls, rich and superb. The household horse (dismounted) were arranged in ranks in different places. Upon the Lord dismounting, he was received with a salute of 21 guns. He was seated on the left of the Mahraj—Kurruck Singh on the right. Near Runjeet sat Captain Wade, acting as interpreter—then 200 of his Sardars, and then our own officers according to their respective ranks.

When we were all seated a band of about 100 young women came in, well dressed and jewelled. After their salute they sat down on our left. Some had arrows in their hands, and some bows. Their commanders held staffs of order in their hands and wore yellow turbans inclining on one side which made them look very handsome. After singing a little they retired.

The presents next came. They consisted of about 190 trays of the different rich manufactures of the country. Runjeet put a string

of pearls round His Lordship's neck besides two horses and an elephant with rich trappings. After receiving these, His Lordship got up and looked at all the magnificent tents, etc., etc. After which he took his leave with a salute of 21 guns. Everything was well managed and in the Royal way of Hind. The Maharaja was dressed very richly with jewels and wore on his left arm the famous diamond called the Khoe Noore. We returned to our tents at about 11 a.m.

28*th.*

Troops all paraded at 3 p.m. Maharaj arrived about 4 p.m. with about 200 soldiers and sardars. His Lordship also accompanied him with all his staff. The Maharaja inspected the troops very minutely. When the manœuvres commenced he was so delighted that he was going about alone among the troops with the greatest confidence and asked the General to perform some of the manœuvres again. Of our squares he said " They are like a wall of iron." He departed about sunset quite delighted. He presented 11,000 rupees to the troops. He proved himself superior to any native and seemed rather to have the understanding of an English Field Marshal and, in fact, moved about as though he were himself commanding the troops.

29*th.*

The review of Runjeet's troops took place to-day and was one of the grandest I have seen. In the front of the parade stood the silver bungalow, or rather, temple, for it resembled one in shape. In the upper part of this sat Runjeet with the Lord and his staff. The rest of the officers were seated below under shumianahs which were pitched close before the temple, and before the Durbar all the movements were performed. There were five brigades of infantry formed three deep, and each consisting of 1,000 men, chiefly Seiks, but mixed with some Mussalman and sepoys. The whole of this brigade, with about 15 or 20 gallopers, was under the command of a Seik general. After passing in review order they performed some English manœuvres, now out of date. They were done in slow time. Their firing (which they did both in line and square) was very regular—they were armed with muskets and dressed like our sepoys. There were three or four guns attached to them in all their manœuvres. Whether in line or square they always left a space for them and fired together. Of the cavalry, only one regiment called the Dragoons acted with the infantry. They are dressed in red jackets with steel

helmets and are armed with carbines and pistols. Monsieur Allard (a Frenchman, who was formerly in Napoleon's army) commanded them. He has taken much pains with them but they are still greatly inferior to our cavalry.

The rest of the cavalry were drawn up on each side of the silver temple and seemed the flower of his army. They are undisciplined and are perfectly in their native style. They were dressed in yellow silk and wore armour. Some of his own bargeers receive about Rs. 40 a month.

In the evening an entertainment was given by the Maharaja to the Lord and consisted of fireworks. His troop of females was likewise present and danced before the company. Runjeet was in high spirits and drank freely with the Lord. At the end of the party jewels and shawls were presented to Lady William, and a handsome armour to the Lord.

On the 2nd, the camp broke up—the Lord marched to Puttiala—Runjeet to Lahore, and the troops to their respective cantonments.

LETTERS TO THE EDITOR.

A Sanatorium for Indian Troops.

Sir,

Is there any sadder sight in the Indian Army than that of an Indian Soldier with consumption? The men who contract it are frequently those with long service, men whose resistance has been reduced by hard work and exposure in trying extremes of temperature incident to their service to the Sirkar. No men could be more deserving of many years of life and health to enjoy their homes and pensions. Once having been diagnosed "T. B." they resign themselves to an early death, and their friends, with that curious fatalism of the Indian, commiserate openly with them on the fact that their appointed day is near.

It is pitiable to visit them in hospital while waiting to be boarded out, and to see the sapping of their strength from week to week, and the quiet resignation to what they are convinced is certain death written on their faces. A case in my own battalion is fresh in my mind. All that the Army is able to do at present is to board them out with a maximum pension, knowing full well that there is little probability of their enjoying that pension for more than a few months.

I have talked to several members of the I. M. S. on the subject who were all of the opinion that in many cases a course of Sanatorium treatment in a fairly equable climate with good food would restore many to health. Unfortunately the Government has no funds available for such a step, but it is remarkable that no charitable institution exists for this purpose. Military Hospitals send to the Indian Red Cross the names of such cases, and the Indian Red Cross is supposed to arrange for their treatment in their homes. It is obvious, however, that the majority of such cases must be quite out of their reach, and the climate of their homes entirely unsuitable for a cure.

There must surely be old Army Barracks lying disused in some semi-hill station of the Punjab or United Provinces which could be converted without great expense to a Sanatorium for Indian troops. Their economic needs compared with ours are simple, and they would have a pension sufficient to pay for their food. What more clearly deserving use could be found for the subscriptions raised from Indian Units on Armistice Day. If these could not be made available,

many units would, I feel sure, gladly raise special subscriptions for this object, the cause being one which is repeatedly and painfully brought to the notice of all ranks. It would no doubt be difficult at first to get men to go to the Sanatorium, but once one or two cures had been effected, the applications would far exceed the initial capacity, and that pitiful look of helpless hopelessness would disappear from the faces of the patients in Military Hospitals. Moreover the British and Indian Officers visiting them would have a word of cheer for them.

I feel that the scheme only wants the patronage of some "Big Man," or of his wife to be taken up with enthusiasm throughout the Indian Army.

Yours faithfully,
D. B. MACKENZIE, MAJOR,
5TH BN., F. F. RIFLES.

MIR ALI, WAZIRISTAN:
31*st January* 1932.

HINDUSTANI.

SIR,

It seems very strange that Hindustani is not taught at our universities, military colleges and schools considering the vast importance of our Indian Empire. If you go into any good booksellers or second-hand book shop you will find no Hindustani books. In the old days you could get Forbes's "Hindustani Manual" at any of them. Unfortunately it is out of print long ago, and not procurable. Very often young officers going to India can find no one capable or willing to teach them. It would be a great advantage to all if the history, geography and languages of India could be taught in this country and our young men should be encouraged to learn all they can about India before going out to that country.

HOVE:
14*th February* 1932.

Yours faithfully,
G. BOWRING, LT.-COL.,
(*Retired*).

MOBILITY.

SIR,

May I make a few observations on that most excellent and instructive article entitled "Mobility" by "Light Infantry," which was published in the U. S. I. Journal of January 1932.

The writer proves, to my mind convincingly, that regular troops in India are capable of a high standard of mobility and explains—not

so convincingly—why they were accused of immobility in the Peshawar district during the summer of 1930, when they were compared unfavourably with irregular forces such as Scouts and Constabulary.

I think most people who know the North-West Frontier well will agree with me when I say that, as a general rule, officers serving with irregular forces on the frontier look upon regulars as ponderous and immobile and unsuited at ordinary times to mountain warfare against the agile and wily Pathan of Yagistan.

Now there must be reasons for this and I suggest that they are three in number, *viz.* :

(1) The principle of " Safety first."

(2) Inelasticity in training and in the use of equipment.

(3) Lack of knowledge of local conditions.

As regards (1), am I not right when I say that this is the principle which governs every action of the regular soldier on the frontier to-day ?

It cannot be that regular soldiers are more lacking in enterprise than they were in days gone by, for the Great War proved just the opposite, but, I submit, they are far more restricted in their actions than they ever were in the past on the frontier. Various reasons may be assigned to this, chief amongst them being the almost universal fear (which seems of late years to have sprung from nowhere) of getting casualties and the completeness and efficiency of present day communications.

The days of small and isolated detachments, when the man on the spot had to use his own judgment and act on his own initiative, are long since dead. Nowadays even the smallest detachment is seldom allowed out without the encumbrance of a telephone attached to it and whenever a young and enterprising commander wishes to carry out even the smallest operation he has to ask for orders. And how often is not the answer a lemon ? Is it small wonder then that the commander of to-day is inclined when in perplexity, instead of acting on his own initiative, to fly to his telephone for comfort ?

" Light Infantry " has quoted Tonnochy's raid as a fine example of pre-war mobility, but would such a daring enterprise ever be undertaken nowadays ? I very much doubt it.

As regards (2), *Inelasticity,* the Army in India is called upon to play many different parts on the frontier, as was evidenced in the Peshawar district during the summer of 1930, and before embarking

on any of them it is surely necessary, as "Light Infantry" suggests, to appreciate the situation.

How can a column of troops employed on such work as rounding up unarmed villagers hope to achieve real mobility if they are hampered, quite unnecessarily, with a whole outfit required for war? For such work lightly equipped soldiers with rifles, bayonets, 50 rounds S. A. A. per man, and unhampered by animals are quite sufficient for the job in hand and can be moved and rationed with the minimum of M. T.; but such a thing is seldom done. When troops go out for any job at all they almost invariably go out complete with the whole paraphernalia of war, machine guns, Lewis guns, ammunition, equipment, rations, transport, etc., sufficient to fight the German army, and they become very slow and cumbersome in consequence.

Lastly, we come to (3), lack of local knowledge, and this is a point which has a profound influence on the value or otherwise of troops stationed on the frontier.

Nowadays when the whole of the Indian Army has to take its turn of duty on the frontier there are many who claim to be "frontier experts," but how few really know much about it and how very few can talk the language. It doesn't matter so much about the men, for they merely have to obey orders, but it is the officers, both high and low, who are able to influence the situation for better or for worse, according to their knowledge, or lack of knowledge, of frontier conditions.

Think what a difference the presence of even one officer in a regiment with a knowledge of Pushtu can make when acting in aid of Civil Power. Without local knowledge troops are often, so to speak, left wandering in the dark, whereas a few jokes cracked by a Pushtu speaking officer with a headman over a cup of tea in the village *Hujra* may turn what appears to the uninitiated to be war in hostile country into perfect peace in a friendly atmosphere.

Many incidents come to mind of woeful ignorance of local conditions during the summer of 1930, where a little more knowledge of the Pathan and his characteristics might easily have changed warlike gloom into cheerful optimism and brought much sunshine into the lives of many of the P. B. I. in Peshawar Cantonment.

Yours faithfully.

12*th February* 1932. "P. B. I."

Emergency Rations for Indian Troops.

Sir,

Whilst agreeing with your correspondent that the present emergency ration of Chenna Chebena, etc., is not very satisfactory for Indian troops, I do not agree that the ration suggested of tinned cheese and onions is a suitable substitute.

As is well known the food value of cheese is high but that of onions in comparison with their bulk is low, for this reason onions are particularly unsuitable as a component of an emergency ration, where food value in comparison with bulk is of such importance.

Sufficient quantities of tinned cheese could not be obtained from the trade in emergency in India, so if cheese is to be issued as an emergency ration, stocks will have to be maintained in peace. Cheese even if properly tinned requires frequent turn over in hot climates. Very little cheese is issued to troops in peace, neither is it an article which could be issued as a substitute for any of the articles which form the present ration. If tinned cheese is introduced as an emergency ration, in addition to heavy initial cost, a considerable recurring expenditure will be necessary to ensure that it is frequently turned over to avoid deterioration.

It therefore seems to me that an emergency ration, besides containing the necessary nutriment and being palatable to all classes of Indian troops, must either :—

(*a*) Require little or no turn-over ; or,

(*b*) Be issuable as a normal ration article or substitute to enable stocks to be turned over.

Articles which require little or no turn-over are usually of the concentrated food type and would be unacceptable as an emergency ration to most classes of Indian troops. On the other hand most suitable articles which require turn-over and which are not at present included in the peace scale of rations or equivalents can be excluded on the grounds of expense.

It would therefore appear that however unsatisfactory the present ration may be, its replacement is very difficult, for we are practically limited to an emergency ration composed of articles which can be issued as normal rations in the peace scale.

Yours faithfully,

S. G.

PIQUETTING ON THE KHAJURI PLAIN.

SIR,

I should be grateful if you would allow me to correct a misapprehension which may have arisen from the last sentence of the article "Two Recent Actions against Afridis" which appeared in your January number. Here it was stated that "In a 'through' march, the necessary piquetting could have been carried out with two and a half battalions." The distance of this particular advance was only $2\frac{3}{4}$ miles and, obviously, if officers are taught that two and a half battalions can piquet only $2\frac{3}{4}$ miles and that teaching is carried out, a force will never get anywhere in mountain warfare.

Actually on this occasion, as explained on page 86 of the article, the route was piquetted more thickly than will usually be possible because of the extremely big and intricate country and because one battalion was required to occupy what really amounted to a defensive position on the final objective. In addition the Brigadier wished to give every battalion a chance. Hence the "Battalion Block System" was adopted, and 30 rifle platoons ($2\frac{1}{2}$ bns.) piquetted only $2\frac{3}{4}$ miles. The actual distribution was:—

On piquet	..	$17\frac{1}{2}$ platoons.
In company reserves	..	$3\frac{1}{2}$,,
In battalion reserves	..	9 ,,

This very well exemplifies the disadvantages of the "Battalion Block System," which maintains battalion organisation and ensures decentralization, but wastes an impossible number of men. Under the "Permanent Advanced Guard and Rear Guard System" company reserve platoons are advisable when available but the battalion reserve platoons, in this case nine of them, would have been saved. Thus in this particular instance with thick piquetting and difficult country, a battalion would piquet 1·57 miles. Battalions were very weak, not much more than half strength, and platoons and sections correspondingly depleted.

Undoubtedly the organization of battalions as three rifle companies and a machine gun company has reduced the length of march which a battalion can piquet, but it must be able to piquet two miles at least instead of the former three, or a brigade will never march any distance.

Yours faithfully,
"MAJOR GENERAL."

MILITARY NOTES.

ARGENTINA.

Elections.

The Provisional Government, set up by General Uriburu as the result of the revolution in September, 1930, issued a decree on 8th May, 1931, convoking general elections for the presidency, vice-presidency, national and provincial legislatures and executives to take place on 8th Novermber.

Owing to sweeping reforms by the Provisional Government, all the members of the old regime had been removed from office, and for the second time in 69 years the nation had to choose every Federal and State elective officer simultaneously. Such an important election naturally aroused great interest in Argentina and throughout the world.

The candidates for the presidency and vice-presidency put forward by the various political parties were :—

General Justo and Dr. Roca	..	National Democratic Party (mainly Conservative).
Dr. de la Torre and Dr. Repetto	..	Democratic Progressive Party and Socialist Party.
Dr. de Alvear and Dr. Guemes	..	Union Civica Radical (associated with the regime of the late Irigoyen Government).

Before the election two events occurred which had an important influence upon it. On 8th October the Provisional Government vetoed the candidature of Dr. de Alvear on constitutional grounds because six years had not elapsed since he had held office as president, and also on the grounds that he had been connected with the Irigoyen regime. At the same time they annulled the Buenos Aires provincial elections of 5th April, 1931, which had resulted in the election of a Governor and Vice-Governor who were members of the Union Civica Radical and adherents of the Irigoyen regime.

As a protest against this action by the Provisional Government, the Executive of the Union Civica Radical, which is the strongest political party in the country, decided on complete abstention from the elections.

The elections were held throughout the Republic on 8th November without any serious disturbances. By 23rd November the counting of votes was sufficiently advanced to make it certain that General Justo and Dr. Roca would be elected President and Vice-President

BELGIUM.

Albert Canal.

The second stage of this canal, that between Brigden and Hasselt, which connects the valley of the Meuse with that of the Scheldt has been commenced.

This section presents much greater difficulties than did the first stage between Lanaye and Brigden and it is estimated that the work will occupy at least three years.

Gas in the Meuse Valley.

During the month of October the committee appointed to enquire into the source of the lethal gas which did such damage in the valley of the Meuse during December, 1930, presented its report. The calamity is attributed to the presence of Sulphur Dioxide in the fog which hung for several days over the afflicted region.

This product, ejected in large quantities into the atmosphere by the numerous factory chimneys in the valley, is transformed by contact with the air into sulphuric acid. That this phenomenon should have had the effect that it did, was due to an exceptional combination of circumstances; absence of wind during several days, a low temperature together with the existence of a thick fog, which had a natural tendency to accumulate in a valley forming a basin surrounded with hills.

FRANCE.

Disarmament propaganda.

There is considerable Press propaganda on the subject of the Disarmament Conference in which attention is always drawn to the German semi-military organizations such as *Stahlhelm*, &c., and to the efficient methods of concentration of these bodies for demonstration.

Corsica.

A determined attempt is being made to suppress banditry in Corsica. *Gardes mobiles* and armoured cars have been sent from France for this purpose and are following the scheme drawn up by General Huot, commanding the *Gendarmerie* of the 15th Region.

Conseil Supérieur de la Guerre.

1. The *Conseil Supérieur de la Guerre* is now composed of the following Marshals and *Généraux de Division* :—

General Weygand, Vice-President (Inspector-General of the Army).
Marshal Petain (Inspector-General of National Air Defence).
,, Lyautey.
,, Franchet D'Esperey.
General Gouraud (Military Governor of Paris).
,, Guillaumat.
,, Debeney.
,, Claudel (Inspector-General of Colonial Troops).
,, Maurin (Inspector-General of Artillery).
,, Walch.
,, Ragueneau (*Directeur des Hautes Etudes Militarie*).
,, Brecard (Inspector-General of Cavalry and Military Governor of Strasbourg).
,, Hergault (Inspector-General of the Air Force).
,, Naulin (Inspector-General of North African Troops).
,, Gamelin (Chief of the General Staff of the Army).
,, Dufieux (Inspector-General of Infantry).
,, Mittelhausser.
,, Belhague (Inspector-General of Engineers).

Of the above, General Brecard will pass to the reserve in October, 1932, on reaching the age of 65.

2. In 1932 about 18 general officers will go to the reserve, amongst whom will be Generals Serrigny, commanding 14th Region; Thevenin commanding 18th Region, and Putois, commanding 10th Region. General Baratier, formerly of the Allied Military Committee of Versailles, is due to go to the reserve in December, 1932.

Unveiling of Statue to Marshal Joffre.

A statue to Marshal Joffre was unveiled at his birthplace, Rivesaltes, on Sunday, 22nd November, 1931.

The French Government was represented by the War Minister, Monsieur Maginot, who presided over the ceremonies. Madame Joffre was the guest of honour. Five members of the *Conseil Supérieur de la Guerre* (Generals Gamelin, Guillaumat, Debeney, Claudeland

Mittelhausser), the Commander of the 16th Region (General Dosse), and a large number of other general officers connected with the district either by their present duties or by birth were present. Local senators, deputies, *prefets* and other dignitaries attended.

Belgium, Czechoslovakia, Great Britain, Greece, Spain, Yugoslavia and the United States were represented by their military attachés or other officers, other countries by their consels.

The ceremony opened with the reception at the station of the minister and generals, after which the cortege with an escort of Mobile Republican Guard proceeded to the Town Hall for an address of welcome and thence, *via* the house where Marshal Joffre was born, to the site of the statue. The roads throughout were closely lined by troops of the 31st Division, the 2nd Senegalese Division and the Indo-Chinese-Madagascan group.

At the base of the statue a series of speeches were delivered dealing with the character and achievements of the late Marshal, Monsieur Maginot summing up briefly the whole of his career. The presence of foreign representatives was most cordially welcomed in several of the speeches. The statue was then unveiled and the troops marched past the Minister.

ITALY.

The New Secretary of the Fascist Party.

On 7th December it was announced that the resignation of Signor Giuriati from the Secretaryship of the Fascist Party had been accepted and that Signor Achille Starace had been appointed in his place.

Achille Starace is 42 years old and has a brilliant war record, having been decorated four times for valour and twice promoted in the field for special services. He was an active worker in the early days of Fascismo and organized the first party groups in the new northern provinces which Italy won from Austria as a result of the war. In 1921 he became Vice-Secretary of the Fascist Party, a post which he held until his appointment to the secretaryship. He is a lieutenant-general in the Facist Militia and a director of the *Dopolavoro* (after work recreational organization) in which latter capacity he has shown great energy, ability and drive.

The Italian Press points out, in connection with the appointment of Signor Starace and other new members of the party directorate, that they are all proved Fascists of long standing with experience in the provinces, and that their appointment should result in " bringing the perimeter into closer touch with the centre."

Operations in Cyrenaica.

The resistance of the surviving Senussi insurgents in Cyrenaica is said to be finally breaking down, and defections on a large scale are reported in consequence of a defeat recently suffered by them. On 11th December the three chieftains, Jusuf Rahil, Abdul Hamid El Abbar and Osman Sciami, together with about 100 armed men, attempted to break through the Italian cordon on the Egyptian-Cyrenaica frontier. Abdul Hamid succeeded in escaping, but his fellow chieftains were prevented from so doing and suffered heavy losses. Five days later Osman Sciami surrendered to the Italian authorities near Derna. On 19th December Jusuf Rahil and three other men were overtaken by Italian troops and, on their offering resistance, were shot down.

General Graziani, Lieutenant-Governor of the colony, in an Order of the Day states that " Only a few handfuls of men made to choose, between surrender or death are still offering resistance in the hinterland." He estimates that during the last 12 months 53 major and 210 minor engagements have been fought, in which 1,602 rebels have been killed. Four guns, 3 machine-guns and about 1,000 rifles have been captured, and large numbers of camels, sheep and horses have been confiscated. The Italian losses have amounted to 3 officers and 132 other ranks killed, and 6 officers and 257 other ranks wounded.

MOROCCO.

French Zone.

General.

General Naulin, Inspector-General of North African Troops, has recently undertaken a tour of inspection, visiting all military regions, districts and frontier zones. Most of the tour was carried out by aeroplane.

Operations.

(*a*) During the summer and autumn of 1931, in the Tadla region the troops on the I'Oued El Abid effected a junction with those in the valley of the Assif Ouirine in the Moulouya area. Tounfit was occupied after having been heavily bombed by aircraft. In three months 800 families have submitted.

On the Moroccan-Algerian border, the Saharan routes are policed and organized ready for the occupation of the Tafilalet as soon as orders are received to carry this out.

(*b*) In October, a methodical advance was undertaken so as to close in the dissident area on the south, troops based on Marrakech advancing eastwards from Imiter to join hands with those based on Bou Denib advancing westwards up the Forkla Valley. These operations being carried out under the supervision of the Commander-in-Chief, General Hure.

On 14th November, Foum-el-Souk, 15 kilometres east of Imiter was occupied without opposition.

(*c*) On 21st October, a djich which had pillaged camps of the *soumis* south of the Moroccan-Algerian border was engaged and dispersed by a mixed company of Moroccans and Algerians. The casualties on the French side were one officer wounded, two natives killed and six wounded.

The operations have continued successfully with very little fighting. The Marrakech forces advancing from Imiter, composed of six battalions, a squadron of *spahis*, one brigade of mountain artillery, a battery of motorised 75-mm. guns, two squadrons of armoured cars, and a squadron of aircraft, have occupied some 12 miles of the Todra valley at its junction with the Imiter valley.

A small force has been sent down the Dra valley from Agdz to Amzrou.

The eastern forces consist of eight to ten battalions with artillery, armoured cars and aircraft, and are operating in four columns. A northern flank guard of two battalions, with a battery and two troops of armoured cars, has advanced from Mzizel to Agoudim and is to push on through Semgat to Amsed. Columns from Ksar es Souk and Tarda have occupied Tadiroust and Guelmina, respectively. Slight opposition was encountered at Tadiroust where auxiliaries had an

engagement with tribes from the southern slopes of the Grand Atlas, who were repulsed with heavy losses. The French losses were two French officers and eight other ranks killed, and six other ranks wounded. A southern column from Guelifat moved up the Gheris valley and has reached its junction with the Ferkla at Touroug.

The eastern and western forces are now less than forty miles apart. So far, 6,500 tribal families have submitted.

These operations, when completed by the establishment of posts, will close in the Ait-Atta, a troublesome nomadic tribe who live in the Sarro region, and will also cut off the main area of dissidence in the Great Atlas from communication with the south.

Visit of Sultan of Morocco.

The Sultan of Morocco has recently spent three weeks at Marrakech and visited Telouet on the eastern slopes of the Atlas, where the Glaoui of Marrackech has a fortified palace (*Kasbah*). Before the French Protectorate, the control by the Sultan of the Glaoui and his Berber tribes was very slight indeed.

Policy of pacification.

In a recent series of articles published in "La France Militaire," General Thievency, a well-known writer on Moroccan questions, has put forward a strong plea for the speeding up of the pacification. He claims that at the present rate, which is designed so as to avoid attracting parliamentary or public attention, the work will take 15 years. It will thus stretch over the lean period when the French conscript classes will be much reduced owing to the war, and, further, in this time any form of Islamic reaction might set in. He points out that once the task is finished, it will be possible to reduce the garrison by two divisions which will be most welcome to reinforce the *couverture* on France's eastern frontier, and that in case of war, Morocco will then be a source of strength instead of the potential weakness it was in 1914—18.

Port of Casablanca.

The same writer has drawn attention to the wonderful growth of Casablanca harbour in 20 years. Financed by a loan, the great breakwater, planned by Marshal Lyautey in the teeth of much opposition and technical scepticism, has proved a success ; of its final length

of 3,000 yards, 2,500 yards are already completed. The port has already an annual tonnage of 3-million which places it 8th among all French ports, and when completed it will be in area one of the largest.

PORTUGAL.

New Chief of Staff.

General Artur Ivens Ferraz has been appointed Chief of the General Staff of the Portuguese Army. He replaces General Amilcar Mota, who passes to the Reserve.

General Ivens Ferraz was formerly Administrator-General of the Army. He was at one time President of the Council of Ministers and has also held the portfolios of the Colonies, Commerce, The Interior, Foreign Affairs and Finance, in different Cabinets. During the Great War, General Ivens Ferraz was Chief of the Portuguese Mission in England and Liaison Officer for the Portuguese Army with the British Army. He has also been Portuguese Military Attaché in London, and Governor of Mozambique. He is 61 years of age, and was promoted General in 1927. He possesses a number of Portuguese and foreign decorations.

New Police Force.

At a meeting held on 20th November, the Portuguese Cabinet approved a scheme for the creation of a new body to be known as "The Special Police of the Ministry of the Interior." The duties of the new force will be mainly the prevention and repression of attempts against the security of the State and crimes of a political and social nature.

SPAIN.

Gibraltar Tunnel.

By Decree dated 8th December, 1931, a new Commission has been appointed for the study of the project of constructing a tunnel under the Straits of Gibraltar, with Lieut.-Colonel Don Pedro Jovenois, promoter of the scheme, as secretary.

The sum of 25,000 pesetas has been allotted for expenditure in connection with these studies.

Army Reforms.

In a parliamentary debate, the War Minister said that in his army reforms this year he had simply tried to provide the Republic with a military policy, which Spain had lacked since the 18th century. The most obvious defect of the army, at the advent of the Republic, was the excessive number of officers. On an organization of 16 divisions, Spain has had as many as 22,000 officers, and as there were no men for all these officers to command, there were regiments with as few as 60 men and cavalry regiments with no horses. Notwithstanding the fact that his offer of facilities for retirement on full pay was received at first with scepticism, 10,000 officers have accepted it. Comparing the amount which the Treasury will be called upon to pay in pensions to these officers from August, 1931, until the death of the last one, with the amount they would have drawn in pay had they continued their normal advancement in the army, the eventual saving to the Treasury will be enormous.

In defining the real mission of the army, the Minster said, " If it is to be merely the prolongation of the Civil Guard to help to keep order in the country, it would be better for Spain to have no army. Let the police do that, or an institution of a different nature. The army is not for that. The Republican Army, in accordance with the military policy of the Republic, must be a school where, while preparing for an eventuality fortunately remote, its citizens must be compelled to fulfil a national duty and learn discipline, sense of duty, etc., Spain's external policy is not only one of peace, but of indifference, and we have no military commitments abroad except in Morocco ; and it is the Republican Government's intention that Morocco shall be defended by an army that is not the Metropolitan Army. The National Army of Spain will be prepared against a threat to her independence, or for the event of Spain being drawn into an armed conflict in Europe."

Referring to the excessive expenditure on different services, the Minister said that horse-breeding alone cost the State 18,000,000 pesetas, and the price of each horse worked out at over 4,000 pesetas (approximately £100).

With the reduction of units, the Minister stated that regiments which formerly had 80 men have now 1,200.

In regard to armament, Senor Azana said "We have nothing, neither guns, rifles nor munitions. I realize the seriousness of this statement, but neither I nor the Government wish to keep the responsibility of this secret to ourselves, the Cortes must know it and if you (addressing the members) wish us to have no army we will have none, but if you want one you must give the means needed to make it of some use. If you do not want to give the means, we will suppress the army." Senor Azana then entertained the House with the story of the Schneider guns, bought by Spain in 1908 or 1909, having a range of 9 kilometres. On the arrival of the guns Spanish experts considered the range too great, "for anything we can do in Spain 6 kilometres suffices," and so the guns were cut down.

Of heavy artillery there is very little: only a few regiments are beginning to be supplied. "There is no ammunition."

Of the aviation, he said, "it does not in reality exist, it is a dream for the future! There are hundreds of reconnaissance machines of no use, and as for heavy bombers—there is none!"

Senor Azana stressed the necessity of equality in military service. We strongly opposed the idea of a voluntary army, which must of necessity be small because it is so expensive and creates a type of professional soldier who immediately imposes himself on the civil authorities, and has not the same sense of equality and citizenship as the compulsory service soldier. "Equality in the army and compulsory service are, therefore, the two main principles of the military policy of the Republic."

Public Works.

A programme of Public Works, contained in a Decree of 24th November, has been submitted for the approval of the *Cortes*, the total cost of which is estimated at 409,138,724 pesetas (approximately £9,500,000). This programme of works extends over three years, and expenditure each year will be as follows:—

	Pesetas.
1931	60,169,993
1932	200,882,649
1933	148,086,082

These amounts to be included in the Ordinary annual budget.

The total expenditure is allotted as follows :—

	Pesetas.
Roads	220,000,000
Ports	130,042,274
Hydraulic works	53,255,950
Mining works	5,840,500

The New Constitution.

The new Constitution was laid before Parliament and definitely approved by 368 votes on 9th December. There were no negative votes, but neither the Agrarian Party nor the Basque and Navarre Deputies took part in the voting, and several other deputies left their seats before it began.

Election of the President of the Republic.

Senor Don Niceto Alcala Zamora, adopted as the candidate for the Presidency by all the more important political parties, was elected President on 10th December, by 362 votes on a House of 466. A large number of members refrained from voting; only 13 votes were recorded in favour of other names.

Changes in army organization.

The personnel of Infantry Regiment No. 44, which has been disbanded in Morocco, will be repatriated and formed into two battalions as follows :—

(*i*) A. M. G. battalion with headquarters at Plasencia (Caceres).

Strength—

23 officers,
399 other ranks.

(*ii*) A battalion to form the 3rd Battalion of Infantry Regiment No. 17, and to be detached in Almeria.

Strength—

23 officers,
690 other ranks.

The rifle companies to have three instead of two platoons).

The newly created M. G. battalion will retain the colour and records of the old Infantry Regiment No. 44.

It will be known as the M. G. Battalion No. 2.

The M. G. battalion at Castellon will, in future, be M. G. Battalion No. 1.

U. S. A.

War Department Estimates.

President Hoover presented the Budget for 1932-33 to Congress on 9th December. Faced with an estimated deficit at the end of the current year of 1,717 million dollars (£353 millions at par) the Administration proposes drastic reductions in expenditure and increases in taxation.

Estimates for the War Department, military activities only, amount to 301 million dollars, a decrease of 33½ million dollars from the appropriations for the current year. Of this decrease 27¼ million dollars comes from the Vote for the Quartermaster Corps, and is accounted for partly by lower commodity prices and partly by a proposed postponement of the army housing programme. Other cuts of importance are made in respect of the Air Corps and the National Guard. No reductions are proposed in pay or establishments.

Further details will be published after the Estimates have been examined by Congress. In view of the fact that the Democratic Party, which is by tradition unfavourably inclined towards the Services, now controls the Lower House, it is very probable that further substantial cuts will be made from the Estimates.

Mechanization.

1. *Change of policy.*

The change of policy on mechanization is dealt with at some length in the Annual Report of the Chief of Staff of the Army. The following is an extract from this Report :—

"There have been two theories advanced to govern the application of mechanization to these tasks. The first is that a separate mechanized force should be so organized as to contain within itself the power of carrying on a complete action, from first contact to final victory, thus duplicating the missions, and to some extent the equipment of all other arms. The other theory is that each of the older arms should utilize any types of these vehicles as will enable it better and more surely to carry out the particular combat tasks for which it has been traditionally designed. Under this system mechanization would permeate the whole army, but it would be applied by each arm only as an additional means of securing victory.

In the initial enthusiasm of post-war thought the first method was considered as the ideal one. Mechanized forces were expected to supplant the established order, or at least to constitute a *corps d'elite*, to be supplemented where necessary by foot troops, which would hold defensively the advantages gained by the mechanized striking force. This was the controlling idea in the establishment of " mechanized forces " in our own and other armies, but continued study and experimentation have since resulted in its virtual abandonment. Inherent weaknesses and limitations in the machines themselves are such as to preclude their employment in many types of terrain. Moreover, the impossibility of having any considerable number of suitable armoured vehicles immediately available upon the outbreak of war is sufficient proof that such a doctrine is not applicable in any case to the early stages of a future emergency.

Accordingly, during the last year the independent " mechanized force " at Fort Eustis has been broken up. The cavalry has been given the task of developing combat vehicles that will enhance its power in rôles of reconnaissance, counter-reconnaissance, flank action, pursuit and similar operations. One of its regiments will be equipped exclusively with such vehicles. The infantry will give attention to machines intended to increase the striking power of the infantry against strongly held positions. Every arm is authorized to conduct research and experiment with a view of increasing its own power to perform promptly the missions it has been especially organized and developed to carry out. Every part of the army will adopt mechanization—and motorization—as far as is practicable and desirable. To the greatest extent possible machines will be used to increase the mobility, security and striking power of every ground arm, but no separate corps will be established in the vain hope that through a utilization of machines it can absorb the missions, and duplicate the capabilities, of all others."

2. *Organization of a mechanized cavalry regiment.*

Plans have been made to give effect to the new War Department policy of substituting a mechanized cavalry regiment for the Experimental Mechanized Force.

In May or June, 1932, the First Cavalry Regiment will move to Camp Knox, Va., where it will absorb certain elements of the disbanded mechanized force, and become the " First Cavalry (Mechanized)."

A certain number of transfers of personnel are to take place in the meanwhile, in order that officers and men who are not attracted by, or fitted for, participation in this experiment in mechanization, may be transferred to other cavalry units, their places being filled by selected personnel from other units and other arms.

No tank company or artillery battery is to be included in the regiment. Eventually another mechanized cavalry regiment may be added to form a mechanized cavalry brigade, and then some artillery will probably be assigned to the formation.

A tentative organization for the regiment has been announced as follows :—

Headquarters.
Headquarters troop.
Machine gun troop.
One covering squadron—
One troop of armoured cars.
One scout troop.
One combat car squadron—
Two troops of combat cars.

At present there is a shortage of suitable mechanical vehicles for the regiment. The armoured car troop will take over the armoured cars formerly with the Mechanized Force, namely, five light cars on commercial chassis and six heavier cars with 95 h.p. Franklin engines. Four Christie vehicles (wheel-cum-track hybrid tank-armoured cars) and one similar vehicle manufactured by the Ordnance Department will form the equipment of one combat car troop. The machine gun troop and the second combat car troop will be represented by machine gunners in lorries pending provision of armoured machine gun carriers and additional Christies respectively. Details regarding the equipment of the scout troop, or the transport provided for headquarters, etc., have not been received.

3. *Move of the Tank School and Tank Board to Fort Benning.*

As a further result of this change of policy the Tank School and Tank Board are to be moved to Fort Benning, where the Infantry School and Infantry Board are stationed. The Tank School is to become part of the Infantry School, but a separate course of instruction will be maintained.

NOTES ON MILITARY REVIEWS.

"Bulletin Belge Des Sciences Militaires."

September, 1931.

1. *The Operations of the Belgian Army during the Great War.*

Deals with the period of the winter of 1917-18, and discusses the evolution of tactical ideas during the course of 1917.

2. *The Belgian Defensive System.* By Colonel B. E. M. Michem.

Is a continuation of the article on the subject reviewed in this publication for last month and follows the same lines. The author examines the rival conceptions known as the *Plan Hellebaut* and the *Plan Galet.*

3. *Artillery Forward Observation in the Approach March.* By Lieut.-Colonel B. E. M. Douy.

Deals with the difficulties of artillery observation during this phase of battle and makes suggestions as to how they may be overcome.

October, 1931.

1. *The Operations of the Belgian Army during the War* 1914—1918.

The continuation of an account of the operations of the Belgian Army in 1918.

Deals with the allied efforts to achieve unity of command, and explains how, although the Belgian Army was never under Foch's command, perfect co-operation was achieved in practice.

2. *Pages of History of the Belgian Army in the course of the War* 1914—1918. By Lieut.-Colonel Lievin.

An interesting and lucid account of the action of a battalion which was attacked by the Germans in 1918.

Contains a careful description of the counter-attacks which were carried out to regain the lost trenches.

3. *The Citadels, or Permanent Fortifications in Ancient Times.* By Major F. Delvaux.

The first of a series of articles on this subject. Very interesting and the author evidently knows his ground.

NOVEMBER, 1931.

1. *The Operations of the Belgian Army during the War* 1914—18.

Deals in more or less detail with the operations on the Belgian front from 7th February to 28th March, 1918.

It is not particulary interesting or instructive to those not in the formations and units concerned.

3. *Pages of the history of the Belgian Army in the Great War.* By Captain Sclavons.

Quite an interesting account from a local point of view of the German attacks on 27th April north of Ypres.

This account—as was also the case in a similar article in last month's review—provides an instance of a successful counter-attack, and the point which comes out if one reads between the lines is the excellent support rendered throughout the day by the Belgian field artillery and the confidence with which it inspired the infantry.

3. *Anti-Aircraft Defence.* By Major-General Vandeputte.

The author of this article is the commander of the Anti-Aircraft Defence Regiment of Artillery and is considered a very capable artillery officer. He emphasizes the difficulty of getting defence aeroplanes into the air in time to deal with a hostile raid, particularly in the case of a small country, owing to the impossibility of deciding upon the enemy objective early enough. From this he deduces the enormous importance of ground defence.

The perfection of mechanical appliances for locating enemy machines and for aligning the anti-aircraft guns has been so developed that only a minimum of highly trained personnel are required to operate them. This is an important point in the case of an army consitituted like the Belgian one. He also draws attention to the fact that casualties to ground defenders are so small that they need not be taken into consideration. He points out the imperative necessity of organizing thoroughly the anti-aircraft defence of a country during peace time and of not waiting until a war breaks out before doing so.

4. *French Provisional Field Service Regulations.* By J. V.

A review of the new French Provisional Field Service Regulations drawing attention to the variations between it and the volume which it supersedes and pointing out the differences between Belgian and French organization and doctrine.

5. *The Kellogg Pact.* By C. D.

A clear and adequate *exposé* of the Kellogg Pact and the implications contained in it.

"REVUE MILITAIRE FRANCAISE."

September, 1931.

1. *The Effort to reach a Decision.* Part I. By General Faugeron.

The author draws attention to the factors of surprise in all efforts to draw lessons from one war for use in the next. In 1914 the Germans failed to reckon with the French power of manœuvre, and the latter did not recognize the value of fire power. Moltke's maxim as to the value of the tactical defensive resulted in the lack of drive by the 3rd and 4th German Armies, and thus enabled the French 4th Army to escape from the Ardennes.

The surprise of the nations at the long duration of the war brought discredit on the military leaders, and inspired various statesmen with hopes of taking the stage as masters of strategy.

2. *The Effect of Topography on the Battle of the Ardennes.*

Part II, conclusion. By Lieut.-Colonel Pugens.

Continuing his narrative of the disaster to the 4th French Army, Colonel Pugens shows still further the effect of bad cavalry work added to the lack of grip in the higher command. A confused battle resulted in which the better trained German soldier proved his value. The French artillery could not come effectively into action. On one occasion, a French division and the German one opposed to it both retired precipitately in opposite directions, each under the impression that it was completely worsted.

3. *Aviation in Mountainous Country.* By Captain Seive.

A study of the difficulties of air co-operation with an army in mountains, with some suggestions for overcoming these.

4. *The 1st Corps from Belgium to the Marne.* Part II. By Lieut.-Colonel Larcher.

In following the movements of this corps on 29th August at the battle of Guise, the reader is bound to be impressed by the preponderating influence brought to bear on events by its commander. General

(now Marshal) Franchet d'Esperey kept in personal touch with his subordinate throughout the day, insisted on perpetual cavalry reconnaissance and thus was able at the critical moment not only to launch his own troops but to inspire confidence into the neighbouring corps commanders.

5. *Russian and Japanese Interests in Manchuria.* By R. C.

A close study of a most interesting problem, which since this was written has come to the forefront of the politicial stage.

Reviews.

Much attention is given to the new Italian regulations for preliminary military training of boys, and to General MacArthur's survey of mechanization in the United States Army, and to an Italian study of the evolution of war by General Ettore Bastico.

Other reviews deal with the large number of books on the colonies engendered by the exhibition at Vincennes.

October and November, 1931.

1. *The effort to reach a decision.* (Parts II and III.) By General Faugeron.

These articles are developing into a history of the war 1914—1918. The failure to reach a decision at the Marne is attributed to Von Kluck's army not being fixed before it was attacked in flank by the 6th French Army. The blame for this is thrown on the British who allowed their advance to be excessively retarded by a cavalry screen; Von Kluck could thus concentrate against and defeat Maunoury. There is an interesting discussion on whether the German left would have been sufficiently strong to withstand the French attacks around Morhange had Von Moltke not changed the original distribution in the Von Schlieffen plan. Full credit is given to the Russians for their East Prussian attack which ended so disastrously at Tannenberg. Von Moltke's successor, Von Falkenhayn, is dismissed as a pupil in the art of war and not a master. and as being indissolubly wedded to the strategic defensive. His effort at the tactical offensive at Verdun ended in failure.

2. *The Government of National Defence.* (Parts I and II.) By Chef de bataillon Guigues.

Describes the efforts of the French Government formed in Paris after the surrender at Sedan and the proclamation of the Third

Republic. Although Paris was invested, the Government remained there, sending a commission to Tours to control the rest of the country and carry on the war. The divided control caused much confusion. The only troops at the disposal of the Government were a few regulars and the National Guard. The latter was untrained and unorganized, hence of very little value. The author describes the methods employed to build up an army and the disastrous results from the decision that units were to elect their own officers.

3. *The 1st Corps from Belgium to the Marne.* (Parts III and IV.) By Lieut.-Colonel Larcher.

This is a detailed description of the fighting at the Battle of Guise, and of the complete disorganization at the end of the day.

4. *10th Russian Army and the disaster of Augostovo.* Parts I and II.) By Lieut.-Colonel Aublet.

A good lesson in how not to make war. The lack of liaison between army and corps headquarters led to a complete failure to appreciate the movements of the German armies who surprised and overwhelmed the Russian right flank while the C.-in-C. of the army was using every effort to reinforce his left. An interesting case is quoted when the C.-in-C. of the North-West front gave orders direct to C.-in-C. 10th Army, while his chief of staff gave very different orders to the staff of that army.

5. *The campaign of 1918 and the battle of 15th July.* (Parts I and II.) By General Goudot.

These articles are really misnamed as they are concerned merely with the action of the 4th French Army on the east of Reims. The tactics employed by General Gouraud, the discussions which led up to their adoption and the great success that attended them are very fully gone into. The German crossing of the Marne between Chateau Thierry and Reims, which at one time threatened to paralyse the French offensive in preparation near Villers-Cotterets, is not referred to.

Reviews.

Much attention is given to an article on British Field Artillery from the Journal of the Royal Artillery in July, 1931, and to General Charteris's book "At G. H. Q."

German military reviews are, as usual, discussed at length.

REVIEWS.

"MILITARY OPERATIONS IN TOGOLAND AND THE CAMEROONS."

By Brigadier-General F. J. Moberly (Price 15s. from H. M. Stationery Office).

This is the latest addition to the Official History of The Great War.

The first 41 pages deal with the conquest of Togoland, an area about the size of Ireland, garrisoned by a German force of some 300 Germans and 1,200 natives. The Germans, counting on neutrality in the colonies, had no plan of defence: while their ill-treatment of the native led him to welcome the British and French troops and greatly simplified the protecting of the Lines of Communication. The account of this campaign is concise and well-told and the one map is all that is required.

The remaining 400 pages of the volume describe the conquest of the Cameroons, an area 1½ times the size of the German Empire, defended by a force of some 8,000 rifles. This was accomplished by an allied force of approximately 15,000 rifles in 19 months.

The book is well illustrated with photographs that help the reader to visualize the difficult nature of the country. The 12 maps are clear and good.

The whole account is well written and brings out: -

(1) The hardships due to the bad climate.

(2) The ingenuity of the commanders in improvising all kind of transport on sea, by river and on land and the enormous numbers of carriers required in that part of the country where no other form of transport is possible.

(3) The difficulties due to lack of communications with, in many cases, roads little more than forest paths bordered by dense and impenetrable jungle, with enormous distances between columns and with the few existing telegraph lines destroyed.

The story of how the skill and tireless energy of the allied forces overcame these difficulties, in an unknown country with a population often afraid to act as guide, if not openly hostile, cannot fail to interest all readers.

The Journal

OF THE

United Service Institution of India.

Vol. LXII. JULY, 1932. No. 268.

EDITORIAL.

Disarmament.

In what we are content to call the Dark Ages the Popes undertook many of the functions the League of Nations now attempts to perform. They organized international movements against what they believed to be dangers threatening Christendom, arbitrated between quarrelsome Princes, and at times enforced their awards by direct action either spiritual or physical. The Papal judgments in these mundane matters may not always have been sound, but in some instances at least they anticipated in a surprising way the efforts of present day idealists. One Pope even went so far as to propose what would now be termed 'qualitative disarmament'. He declared that the recently introduced gun-powder was an ungentlemanly weapon, more suited to assassins than to soldiers, and likely to increase to an untold degree the horrors of war. All enlightened Princes should, therefore, abjure its use and trust to honest steel. Perhaps he was right. But there was always the Turk outside the Christian League, and the Princes themselves soon realized that artillery concentrated in their hands was the answer to their troublesome nobles whose strongholds had up to then been such hard nuts to crack. So the Turk took no notice, while the Princes returned polite replies full of admirable and chivalrous sentiments—and ordered a few more culverins a couple of inches bigger in the bore than any yet designed.

The Geneva Conference, having discussed various schemes for the prevention of war and for disarmament, found it impossible to agree on the practicability of any of them. It reached, however, in its turn the old Papal conclusion that certain types of modern weapons should be anathematized. Unanimously the nations agreed that those weapons which are particularly offensive in character or which are aimed chiefly against the civil population should be banned

or at least greatly restricted in use. So far so good; it then only remained to pick out these weapons. Expert committees were formed to select them, and it was only after they had met that it began to be realized how extremely difficult it is to divide modern armaments into those that are defensive and those that are offensive.

Great Britain and the United States point to the submarine as incontestably offensive and directed mainly against the civil population; lesser Powers at once reply that it is their only defence against great surface naval superiority. Tanks and heavy mobile artillery appear essentially offensive to some nations; to others they are merely a defensive counter-poise to the overwhelming numbers of their neighbours' conscript armies. Even the bombing aeroplane, which at first sight seems from its very nature the most offensive of all weapons, is claimed as really defensive. If one nation prepares an aerial offensive against another, the threatened nation has no effective defence but to collect a force of bombers that will enable it to put the attacker's ground establishments out of action and thereby paralyze his bombers. Thus identical types of machines may be offensive on one side and defensive on the other. The obvious answer that if *all* bombers are abolished none will be needed for defence is countered by pointing out that big civil aircraft are all potential bombers, and they cannot be abolished. As the instructors used to say at the Staff College, "It's all very difficult".

An interesting point which has emerged from these discussions is that the weapons which, generally speaking, are accepted by a majority of States as offensive are identical with those denied to Germany and the defeated nations of the Great War—in fact they were denied to them because they were offensive. If the allied nations now deprive themselves of these weapons what will become of the victors' relative superiority? What of the Treaty of Versailles? France and the bloc of smaller nations she leads wish to perpetuate Germany's military weakness. It is an understandable attitude, but it is a grave obstacle to any real disarmament and could be removed only by great self-sacrifice on France's part or by some guarantee of security from the other Powers accepted as adequate by France. Prospects of the difficulty being overcome in the immediate future by either of these methods are not hopeful.

Realizing this the General Committee of the Conference adjourned to allow the leading statesmen of the Great Powers to meet and try to reach some agreement. There can be no doubt that if any real progress at all is to be made, the discussion must be raised above the level of the detailed arguments of experts. All the same one need not envy the statesmen their task.

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The Hoover Proposals.

Into the midst of the conferring statesmen the American President has thrown his disarmament scheme, which, whatever its merits and whatever its eventual fate, has put new life into the almost moribund Geneva Conference. In detail there is nothing new about his proposals. The reduction of capital ships and submarines by one-third, of aircraft carriers and destroyers by one quarter; the total abolition of tanks, heavy mobile artillery, bombing aeroplanes and aerial bombardment; and the scaling down of land forces, have all individually in some form or other been put before the Conference by other nations. There are, however, two innovations. Mr. Hoover has combined both quantative and qualitative disarmament in one bold scheme, and he has attempted to divide land forces into two categories, with different scales of limitation for each. His first category he calls the "Police Contingent", composed of the forces required to maintain internal order and to police frontiers; the second, the "Defence Contingent" consists of all forces maintained to meet the fear of foreign aggression, *i.e.* all land armaments other than the "Police Contingent". The strength of the "Police Contingent" is to be based on that allowed to the defeated Central Powers, which, according to Mr. Hoover, averages 2·32 per thousand of their total population. Nations with large colonial possessions are to be allowed an increase on this to 2·64 per thousand of their overseas population. The "Defence Contingents" of all nations are to be reduced by one-third in numbers.

As was to be expected the American proposals have met with a mixed reception. Italy, and of course, Germany, accept them as they stand; Japan is distrustful, especially of the naval clauses; Great Britain gives a somewhat qualified approval; France is definitely hostile.

The French attitude towards the Hoover scheme is one of intense suspicion. In French eyes it emanates from a doubtful source. France has not forgotten, and will never forget, that a President of the United States once promised her a guarantee of security against future German aggression and then failed to produce it. Mr. Hoover is on the verge of a presidential election and Frenchmen cannot dismiss the idea that this dramatic attempt to gain what Americans are fond of calling the "moral leadership of the world" is designed more as a vote catching device for use at home than as a carefully thought out solution of European problems. Their doubts are strengthened by the enthusiastic acceptances of Italy and Germany. Many of the American proposals are unpopular in France, but the great stumbling block must be the limitation of land forces. Here France

will feel that her security is vitally affected. Her home "Police Contingent" would be only about 96,000 against Germany's 141,000, and even if the 163,000 which would be allowed for the French Colonial Empire were included, few Frenchmen would accept this as redressing the balance. The total French land forces, exclusive of reserves, number at present, about 694,000; subtracting from this 259,000 for "Police Contigent", a "Defence Contingent" of 435,000 is left. This is to be reduced by one-third, leaving France and her Colonies with a total force both "Police" and "Defensive" of approximately 549,000 only. In other words France is asked to reduce her army by over 145,000 men, deprive herself of tanks, heavy artillery and bombing aircraft, while the German land forces may be increased by some 25,000. It is most improbable that any French Government, which accepted such drastic reductions, without compensating and adequate guarantees against Germany, would continue in power for a week. Already the French representatives at Geneva have stated that the Hoover proposals can only be considered in connection with their original suggestion of an International Force under League control. As most nations are agreed that this particular proposal is impracticable, it looks as if another deadlock will be reached.

The attitude of the British delegates towards Mr. Hoover's proposals is one of general approval tempered with some criticism. In place of a reduction in the total tonnage of capital ships they advocate a decrease in the size of individual ships, and go beyond the Americans in urging the total abolition of submarines. Newspaper reports give the impression that Great Britain is prepared to accept the abolition of heavy artillery, large tanks, and bombing aircraft, but it is unlikely that with its overseas internal security commitments a British Government would be prepared to give up all forms of tanks and air bombardment. As for land forces, if Great Britain is considered alone, the total British Army falls just short of the numbers allowed for the "Police Contingent"; if the whole Empire is considered as one unit, its total land forces are very much below the permitted "Police Contingent." This only demonstrated the plain fact that no portion of the British Army is anything but a "Police Contingent" and there should, therefore, be no question of quantative reduction.

The American proposals must also be considered from the peculiar standpoint of India—and India in this matter is very definitely in a completely different position from any other nation. To begin with there is no relation between the strength of her armed forces and those of any Great Power. Every European country, including Russia, and every member of the League of Nations outside Europe could disarm completely without it affecting in any way the strength of

India's defence forces. India's requirements are based on what is necessary only to defend her land frontiers from aggression by her immediate neighbours and to maintain internal security. According to Mr. Hoover's allowance the "Police Contingent" for India would reach the respectable total of 815,000 men. At present her total forces, including military police, irregulars and Indian States Forces, amount only to about 275,000 men so that India could increase her army by 540,000 men before she was considered to have any "Defence Contingent" at all This astonishing figure brings out very clearly the smallness of the present Indian defence forces compared with those of other nations. Even were our small field army classed as a "Defence Contingent" and considered without any reference to its "Police" duties, there could be little argument for its reduction. States on India's borders are not members of the League, and he would be an optimist indeed who expected the Afghan tribesmen to join in the world fervour for disarmament to the extent of giving up a third of their rifles. Disarmament in India cannot be based on what is found possible or advisable in Europe—it must be considered separately on its own merits.

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The Irish Free State.

The personal negotiations between Mr. de Valera and British Cabinet Ministers, which at first raised hopes that a way out of the rather artificial difficulties between Southern Ireland and the rest of the Empire would be found, have broken down. They could hardly do otherwise when Mr. de Valera adopted so intransigent an attitude. He declared that his object was a Republican Ireland to include Ulster; that between this Republic and the British Commonwealth there might, in some circumstances and for some reasons, be some form of association; and that in this case the King should be recognized as the head of the association. Meanwhile, even before this happy state of affairs could be reached, the British Government must accept the abolition of the Oath of Allegiance and the withholding of the land annuities. From this position he has not retreated beyond stating that he is now prepared to accept the original British proposal for arbitration on the question of land annuities, but only subject to certain conditions of his own. These are that the personnel of the arbitration tribunal should not be restricted solely to citizens of the Empire and that other payments besides the annuities should be considered. Mr. Thomas, in the House of Commons, gave the only possible reply when he said that the Cabinet could not accept these conditions, and further that the Government would never consider the coercion of Ulster, nor could it enter into any agreements with a country which repudiated its solemnly accepted treaty obligations.