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# A COMPARISON OF CURRENT AMERICAN DOCTRINES AS TO THE ALLOCATION AND EMPLOYMENT OF ACCOMPANYING ARTILLERY WITH THOSE OF THE FRENCH, BRITISH, GERMAN, ITALIAN, RUSSIAN, AND JAPANESE ARMIES.

Submitted by-

Walter C.Lattimore,

Capt. F.A.

March 23, 1934.

# Report Documentation Page

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INDIVIDUAL RESEARCH STUDY

# A COMPARISON OF CURRENT AMERICAN DOCTRINES AS TO THE ALLOCATION AND EMPLOYMENT OF ACCOMPANYING ARTILLERY WITH THOSE OF THE FRENCH, BRITISH, GERMAN, ITALIAN, RUSSIAN AND JAPANESE ARMIES.

Submitted by

**Walter C. Lattimore.**

**Capt. F.A.**

**March 23, 1934.**

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The Command and General Staff School
Fort Leavenworth, Kansas

This is an excellent exposition of some of the questions involved in the employment of division artillery as accompanying artillery.

## BIBLIOGRAPHY


1. Field Artillery Manual, Vol. II, 1932.

2. Article by Lt. H. H. Hunt in Field Artillery Journal, November-December, 1932.

3. Article by Lt. Col. R. C. Burleson, 1921 File of Field Artillery Journal.

4. Article by General Franck, French Army, in "La Revue d'Infanterie," December, 1922, translated by Lt. Col. Clarence Deems, Jr., F. A., on file in the Library, C&GSS.

5. British Field Service Regulations, Vol. II, 1924, and same volume, edition 1929.

6. The following annexes submitted herewith, and referred to in the footnotes by the symbols indicated below:

Annex No. 1---AQ
Annex No. 2---AA
Annex No. 3---AB
Annex No. 4---AC
Annex No. 5---AD
Annex No. 6---AE
Annex No. 7---AF



Especial acknowledgment is made to the following officers who have assisted in the process of collecting information on which this study is based:

Lt. Col. L. J. McNair, F. A., Ft. Bragg, N. C.

Maj. A. V. Arnold, F. A., Infantry School, Ft. Benning, Ga.

Maj. Dean Hudnutt, F. A., Office of Chief of Field Artillery.

Maj. B. A. Day, F. A., Field Artillery Board, Ft. Bragg, N. C.

Maj. J. W. MacKelvie, F. A., Field Artillery School, Ft. Sill.

Maj. E. E. Schwien, Inf., C&GSS, Ft. Leavenworth, Kan.

(And to several officers on duty in foreign countries, whose names, for obvious reasons, are not to be published.)


Note:- Information contained in Annexes 2-7, inclusive, will not be quoted.

Fort Leavenworth, Kansas,
March 23, 1934.

MEMORANDUM FOR: The Director Second Year Class, The Command and General Staff School, Fort Leavenworth, Kansas.

SUBJECT: A comparison of current American doctrines as to the allocation and employment of accompanying artillery with those of the French, British, German, Italian, Russian and Japanese armies.

I. PAPERS ACCOMPANYING:

1. A Bibliography for this study.

II. THE STUDY PRESENTED.-- A comparison of current American doctrines as to the allocation and employment of accompanying artillery with those of the French, British, German, Italian, Russian and Japanese.

The meaning of the term " accompanying artillery", its purpose, and some of its more obvious advantages and disadvantages, are set forth in the Field Artillery Field Manual, Vol. II, 1932, par. 355,d,(2), which states:

"(a) The general term accompanying artillery is employed to designate accompanying batteries and accompanying guns. Accompanying batteries are appropriate units for detachments to infantry regiments or brigades, accompanying guns to infantry assault battalions.

(b) The purpose of accompanying artillery is to give close support to the unit to which attached, by attacking, with surprise and rapidity, targets which the supported unit by its own fire power can not overcome. Limited ammunition supply precludes employing accompanying artillery in the firing of barrages or in searching large areas. Targets are attacked on the order of the commander of the unit to which attached, or by the accompanying artillery commander on his own initiative.

(c) The advantage of accompanying artillery is increased effectiveness of fire, which is due to short ranges, simple

signal communication, near-by observation, ease and accuracy of designating and identifying targets, and close association of the infantry and artillery commanders. The disadvantages are the weakening of the supporting artillery, difficulties of ammunition supply and consequent restriction of fire, and vulnerability to enemy fire. The successful employment of the present divisional artillery gun, as accompanying artillery, depends in great measure upon the nature of the terrain over which it is used, particularly with regard to the amount of cover.

(d) The use of accompanying artillery is warranted when it can be foreseen with reasonable assurance that supporting artillery as such would be unable to give the close support needed, or when the engagement is likely to break up into a series of local combats where centralized control by the commander of the force is impossible. The trend in the development of infantry weapons, now in use, indicates that the necessity for the attachment of accompanying artillery will become more and more of an exceptional nature."

A study of the use of artillery in past wars discloses that accompanying artillery in one form or another has been used in armies all over the world for several centuries. But it remained for the late European unpleasantness to produce in great quantity those two powerful instruments of war, machine guns and tanks; and to demonstrate the folly and wastefulness of opposing infantry riflemen to such weapons without the supporting fire of some weapon capable of silencing the machine gun or disabling the tank by fire. It was all too often the case that such fire could not be gotten from the supporting artillery when most needed against such targets, due to breaking down of communication systems. These conditions gave rise to the increased use of accompanying artillery as the war progressed.

Time does not permit a detailed presentation in this

paper of results gotten from numerous historical illustrations of the use of accompanying artillery during the war. Any one interested in such a study is referred to an article by Lt. H. H. Hunt, published in the Field Artillery Journal for November-December, 1932. In this article the author cites numerous examples of the use of accompanying artillery in the various armies, and follows with an interesting tabular analysis of the results gotten. This analysis indicates that in about one-half of the cases cited the results were unsatisfactory, which means that amount of division artillery had been wasted. Referring to the results of his study as applied to our own army, the author wrote: "Based upon these figures, the results obtained with accompanying artillery in our service were decidedly unsatisfactory. In our service over 71 percent are estimated to have been failures, as against only 29 percent of the foreign cases. It indicates that our training was faulty, as well as rather incomplete. Four of the five unsatisfactory U. S. cases were primarily due to sending up guns under officers who seem to have been trained as specialists instead of troop leaders - their tactical training had been neglected. It is indicated that generally where the guns were well handled and the terrain was suitable, they were successful."

Another article of considerable interest on this same subject, entitled "Some Observations Concerning the Use of Accompanying Artillery during the World War with Some Personal Experiences", by Lt. Col. R. C. Burleson, appears in the 1921 file of the Field Artillery Journal, page 523. In this article Colonel Burleson describes a reconnaissance made by him, in the course of which he came upon three platoons which had been sent up earlier in the day to act as accompanying guns with infantry assault battalions. Colonel Burleson found the platoons in the zone of an adjoining brigade, halted under cover, where they had been from early morning until noon. After describing the rather vigorous

activities which immediately followed this discovery, Colonel Burleson wrote: "Had it not been for the fact that I encountered these platoons on my reconnaissance, they would not have fired a shot or occupied a position during the entire day".

In commenting on this incident, Lt. Hunt wrote: "The gun commanders displayed a lack of initiative and determination. They had no liaison. They did not get their guns forward. Perhaps this was impossible. It was not impossible to promptly report such facts to either the infantry commander or to their own regimental commander. In this case it is shown that it was not impossible to get into action even though the guns were immobilized. Their observation was still mobile.

The gun commanders were not well trained and the guns were totally ineffective until an officer who knew what he was about took them in hand. Then they became immediately effective. That their regimental commander, an experienced officer, was able to immediately grasp the situation and put these guns to effective use is the answer to why there were so many failures of accompanying artillery in our service- lack of training- lack of initiative- lack of resourcefulness and determination".

Lt. Hunt is indisputably correct in his line of reasoning as applied to this case. But to carry the reasoning a bit farther, it might be well to add that any system of fire support, which must be too often dependent on the presence of an officer of the experience of the regimental commander with the accompanying guns, is too precarious a system to assure any sort of fire support to the infantry during those critical periods when it is most needed. Nor is there likely to be any great difference in the initiative, resourcefulness, determination and war experience of junior lieutenants of the past war and future wars, although there should be a somewhat better initial technical understanding of their arms and equipment, as a result of the training now being given by various reserve agencies.

It seems reasonable, therefore, to believe that if in future wars we follow the practice of detaching accompanying artillery from the divisional artillery, as we did in the last one, we may expect a considerable part of such artillery to accomplish nothing. And to that same extent our divisional artillery is weakened at the time its fire-power is most needed.

If our past practice was faulty, how is it to be improved? What could we do about it in the immediate future with the material available? What is being done to improve our facilities for close support of infantry against mechanized forces and machine gun fire? What should be our future actions in the matter? What is the trend in development of infantry weapons now in use? Will this trend cause the attachment of accompanying artillery to become more and more of an exceptional nature?

In order to make a correct comparison of the current American doctrines as to the allocation and employment of accompanying artillery with those of the French, British, German, Italian, Russian and Japanese armies, an effort has been made to assemble information which would give an answer to each of the questions above for each of the countries concerned. We will begin with a discussion of the American doctrines, then discuss foreign doctrines in the order listed, after which we will proceed to a comparison of the salient points pertaining to allocation and employment.

In this discussion, we will limit our study to the support of infantry against mechanized forces and machine gun fire, these being the hostile elements which most demand added fire support for infantry. In considering weapons, minute details of construction will be avoided, and we will give chief consideration to the characteristics of caliber, range, type of trajectory, and means of movement and emplacement.

In making a study of the subject as it pertains to our own army, information and opinions, coming from ten officers

now serving on the staff and faculty of the Infantry and Field Artillery Schools, the Infantry and Field Artillery Boards, the office of the Chief of Field Artillery, and Lt. Col. L. J. McNair, Field Artillery, were gotten by the author, and have been studied as a basis for arriving at a conclusion as to the prevailing thought on this subject in well-informed quarters among our infantry and field artillery. At present, the best weapon the infantry has in quantity for defense against mechanized forces or machine guns is the 37 mm gun, M16, range 4300 yards, flat trajectory, drawn by mule or hand, and capable of penetrating Grade A armor plate of thickness ranging from .7 inch at 300 yards to .55 inch at 700 yards. (1)

As to future improvement of weapons, all are in agreement that for protection against mechanized forces some weapon possessing the following characteristics will best fit the purpose; automatic weapon, flat trajectory, high velocity, armor piercing. Such a weapon in the hands of the infantry in sufficient quantity would, of course, obviate the necessity for detaching guns from the divisional artillery for tank protection. The present development of the 50 caliber machine gun is applicable to this use, and these guns could doubtless be gotten into quantity production at an early date, in case of war. (1)

In this connection, the following thoughts, submitted by Col. McNair, are of interest. In answer to a question concerning characteristics desirable in a weapon for this purpose, he wrote: (1) "Yes, a new weapon is to my mind essential, and I don't know of its having been found. Its characteristics are controlled by the problem of mechanized forces, more difficult than MGs. The same weapon would then be effective against MGs, and incidentally against other targets. I can't lay down its characteristics definitely, but these are the controlling ones:

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(1). AQ

A gun, for maximum range and power with small caliber, and to reduce the time of flight. I'd no more think of a howitzer or a mortar than I should put such weapons on warships or use them for AA. Defilade is of no consequence, for such guns must go up and fight. Their protection is in small target presented, hiding them, surprise fire, and mobility after discovery.

Caliber, the smallest that will permit a shell, HE, and penetrate tanks of great mobility. Fast tanks and cars cannot carry heavy armor; heavily armored tanks must be slow, and can be attacked by heavier guns, such as the 75. The caliber thus might be between .70 and 1:00 inch, but I don't know.

Tracer ammunition. One has only to see such ammunition to realize its importance and utility.

Automatic fire. This is not difficult, for I, personally, fired the old Vickers-Maxim 1-pdr. nearly thirty years ago, and it was a fine gun.

Transport, motor- the gun to be mounted for firing either from the motor or on the ground.

In other words, a super-machine-gun, overpowering the infantry machine gun and fast tank weapons, and having the undeniable advantage of firing from a fixed platform. With tracer ammunition and automatic fire, the conduct of fire even against rapidly moving targets ceases to be a problem; its a one-man job, just like playing a hose."

Along this same line of thought, Major Lytle writes: (1)

"For the general purpose of closely supporting infantry on the march, in bivouac and in position against mechanized forces (including tanks), I believe the high powered machine gun of intermediate caliber with tracer adjustment of fire to be the most effective weapon for the following reasons:

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(1). AQ

1. Due to the surprise element (relative, of course,) expected in an attack by mechanized forces, the weapon should be very mobile, available in considerable numbers and organically with infantry- there is no basis for permanent or "normal" attachments of such weapons from another arm or branch. Such action is subterfuge.

2. Due to the short period of time available in which decisive results must be obtained against fast, armored vehicles, only concentrated and continuous fire from weapons of the full automatic type can be expected to deliver the required volume of fire per gun necessary to achieve the fire effect necessary. An additional consideration, which is very important, is that the same weapon will provide (on the proper mount) extremely valuable anti-aircraft protection at all times, thereby eliminating the necessity for additional weapons for that purpose. Note: With regard to the armor penetration characteristics of the improved 50 caliber gun, they can take care of about three-fourths of an inch at normal impact at reasonable ranges, 500 to 600 yards at least, I think. The assumption, that vehicles proof against such a gun can be expected in mobile mechanized forces, is, I believe, unwarranted."

With particular reference to the matter of fire against hostile machine guns, there appears to be a decided tendency to favor a weapon of curved trajectory, capable of firing from defiladed positions. (1). The 81 mm Stokes-Brandt mortar, now in process of development, is highly regarded for this purpose by officers who have observed it in tests. This is an infantry weapon, and its use in quantity by the infantry would further obviate the necessity for detachment of guns from the divisional artillery.

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(1). AQ

In this connection it is of interest to note that it is the current belief at the Field Artillery School that, with the improved methods of fire direction now in use, even this type of fire may be just as quickly delivered, and with better results, by the artillery in support than by accompanying guns. Major MacKelvie has the following to say on the subject: (1)

"With our present methods of fire direction the fire of a battalion of field artillery can be maneuvered with flexibility comparable to a battery; and all that is required to make it so is a liaison or forward observer with a portable radio set. I believe accompanying artillery (i.e. attaching guns to infantry organizations) is out of the picture. Anything that is worthy of fire can have a volume (1 bn) of fire placed on it in as short a time as one officer with an accompanying gun or battery could place his driblet of fire on it with the resultant doubtful degree of neutralization."

And this from Colonel McNair: "Such weapons, by their nature, it seems to me, would fight a purely local combat, and should be commanded by the infantry battalion commander, by attachment if not organic. It certainly should not be the practice to detach from the mass of supporting division artillery, which always will be needed for its legitimate role, except in special situations, such as exploiting a successful attack."

From the foregoing, and from numerous other expressions on the subject which time forbids quoting (1), we may conclude that the current American doctrine is to work to a system of organization, equipment and fire direction, which will reduce to a minimum the necessity for weakening the fire-power of the division artillery at critical periods, and at the same time

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(1). AQ

provide the infantry effective protection against their most dangerous opponents, hostile mechanized forces and machine guns. In other words, by seeking to develop weapons which will more effectively provide the protection previously sought by use of accompanying artillery; and by improving the ability of artillery in direct support to afford that same type of protection, it is sought to avoid the allocation and employment of what we have known in the past as accompanying artillery.

Now let us consider the subject as applied to the other modern armies mentioned in our subject.

1. FRENCH-- The following remarks on the subject "Accompanying Artillery" were translated by Lieut. Clarence Deems, Jr., Field Artillery, from an article written in "La Revue d'Infanterie", December, 1922, by General Franck, French Army. This translation, coming as it does from an officer who is undoubtedly qualified by experience and observation to think soundly on the subject, is considered of sufficient value to warrant quoting it here. General Franck wrote: ( )

"At the present time support for the infantry is obtained in two ways: 1st- With their own weapons under infantry command.

2nd- With the aid of field artillery.

Infantry regiments have under their command 37 mm guns and light mortars.

The 37 mm gun has an effective range of 2,200 yards. Its projectile has an effect analogous to that of a hand grenade which before bursting is given great penetrating force. But the employment of this gun is very limited due to its flat trajectory, which necessitates placing it in battery either in embrasures in the line, or upon a dominating position.

Light mortars have a range of about 1760 yards. They are projectiles of from 7 to 9 pounds which are more powerful than those of the 37 mm gun, but which have no penetration. The trajectory is curved, but the fire is inaccurate.

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(3). --

These weapons permit the infantry to solve a certain number of problems against which the artillery proper is powerless, on account of lack of time or data pertaining to the targets. In this manner the infantry is able to overcome local resistance by neutralizing, with its own accompanying weapons, the machine guns of the defense.

Call is made on the field artillery (called artillery of close support), when the infantry cannot with its own means overcome opposing obstacles that it meets during its advance.

Article 125 of Part II, of the provisional Infantry Drill Regulations, states: "Some batteries or platoons of light artillery may be placed under the command of the local infantry commanders in the division, (regimental or even battalion commanders) to form their artillery of close support. The small size of the command and the mobility of these units allow them to utilize the terrain under the best conditions, and to move from place to place according to the emergency, by platoon or piece, in exposed terrain.

These artillery units cooperate in the reduction of local resistance; they attack the advanced guns of the defense and the enemy tanks."

From this, it is seen that batteries or platoons of light artillery can be placed under the command of infantry. Without having it definitely prescribed, battalion artillery has been restored. But, an isolated gun, in general, produces but little effect. It is by fire concentration that the artillery obtains results.

Why then does the infantry wish to have, so to speak, field artillery in its immediate vicinity?

In my opinion, the reason for it is simple. When infantry finds resistance in front of it that it alone cannot break, then it is necessary to seek help from the artillery. Everyone knows the difficulties to be surmounted in being able to transmit to

the artillery the needs of the infantry.

The inauguration of detachments of liaison officers from the artillery to function with the infantry had no other end than seeking to accelerate communication. But this acceleration is a function of the means of transmission employed: telephones, visual signals, runners. Even when these means function expediently, infantry must wait an appreciable time, say half hour, in order to obtain the support required.

The infantry now says: "Since the difficulties of communicating with the artillery are so great, let us get some artillery and place them in action near us. Then we can speak to them easily and we will thus obtain what we desire almost instantly."

The idea is correct, but, in its application, it presents very great difficulties.

Our field gun is a weapon with a flat trajectory; it would not be easy to execute fire with it in the midst of infantry, if arrangements were not made to clear a space for the passage of its projectiles.

Horse drawn artillery, following immediately behind a body of infantry executing an attack, is doomed to certain destruction. The horses, especially, cannot lie down in order to avoid the rain of bullets. In spite of the arrangement in orders which prescribe that the infantry lend its assistance to this artillery in moving its material, if the teams give out, there is a great risk of seeing this artillery fail at the critical moment.

The necessity for the close support of the infantry impresses itself. It should be able to deliver at every moment that fire which is necessary to demolish most quickly and most cheaply those obstacles which are stopping or slowing up the advance.

The two methods now employed perfect each other. But shall it not be possible to find another solution which will give satisfaction to the justifiable desires of the infantry?

We have seen how dangerous it is to use the present accompanying weapons handled by the infantry; also, all the precautions that it is necessary to take to employ them so as to even obtain a result which has not always been satisfactory.

The 37 mm gun and the light mortars have survived.

Metallurgy has made sufficient progress so as to allow the manufacture of more powerful, more accurate and hence more effective weapons.

Such being the case, why not look further for weapons which might also replace the artillery of close support?

I remember having seen during the war 75 mm trench guns, transported on wheel-barrows, using curved fire, firing the 75 mm shell with a range of about 1650 yards. A gun which placed under the command of infantry was able very well to serve as an accompanying weapon. Going forward by bounds, from shelter to shelter, even with the second regimental echelon, it would be near by to respond to all calls.

Should it be material of 75 mm caliber that should be adopted, or some other? 75 mm material presents the advantage of being able to fire the same ammunition as the field gun, and consequently facilitates the ammunition supply. The objection may be offered that the weight of this projectile is too great and that its transport to the vicinity of the line of combat will become difficult.

Some think that material analogous to the 65 mm mountain gun would be sufficient.

We have the mountain howitzer; it is 100 mm in caliber; but I am not aware of any howitzer of 65 mm caliber. It would be possible to construct it. But, already having on hand a considerable amount of the 75 mm munitions, the light gun of this caliber suggests itself.

We have recently seen a 75 mm trench weapon carried on a wheel-barrow. For a weight of about 220 pounds this is a practical matter. But the light gun that we wish will weigh certainly

somewhat more than 440 to 660 pounds, for it should be powerful, and above all, accurate.

It should be able to be carried on the back of a mule like a mountain gun. The objections to the horse reappear.

It is necessary to find something else. The employment of caterpillar tractors has been considered. In an interesting article appearing in the "Revue Militaire Francaise" of January, 1922, Major Block expresses himself thus:

'In order to preserve an intimate and permanent contact with the infantry, a portion of the artillery might borrow from the tanks their caterpillar treads and a little of their armor. It should arm itself then with a gun suitable for high angle fire in order to easily execute masked fire for which the tank is unfitted.

'When during the course of an attack, tanks and infantry find themselves stopped by strong points containing anti-tank weapons and machine guns, this gun should be capable of being used immediately and effectually, because the ordinary artillery, held in the rear by obstacles to its progress and the flatness of its trajectory, finds itself always in such an emergency, (experience has proved it), among insurmountable difficulties of observation and communication.'

So, light artillery with curved fire drawn by tractors or upon caterpillar treads would solve very happily the problem of close support of the infantry.

The method of the movement of guns by the aid of mechanical means would be applied also to ammunition, which would simplify supply considerably.

The preceding considerations have led to proposing the abolishment of the 37 mm gun and light mortars, to no longer adhere to the former theory of artillery in close support being taken from the field artillery, and to entrust this role to a special artillery named accompanying artillery.

The question to be settled is the following: Who will man this artillery? I dismiss from consideration the incorporation of these weapons in the artillery, since they are a power placed at the disposal of the infantry similar to the tanks. Their handling belongs to the infantry. Whether these weapons may be drawn on a wheel-barrow, placed on muleback or tractors, or mounted on caterpillar treads, personnel could easily be found in the infantry and could receive the necessary instruction.

But the ability to command these units will necessitate a course of instruction similar to that required of an artillery officer. Each regiment should have as a part of it its battery of four accompanying guns, commanded by a captain who should work with the infantry regimental commander. This battery should be divided into two platoons each having as its commander at the moment of mobilization a lieutenant so that it can operate by separate platoons. The methods of fire of this platoon should be identical with those of any platoon of artillery.

Infantry officers might be attached for a certain period to the artillery in order to receive the desired technical instruction and later return to their own arm where they will become specialists. I do not doubt that we can find infantry officers capable of fulfilling these requirements. I would prefer, however, the reverse solution: to attach, for a minimum period of two years, artillery officers for service in the infantry to exercise command of the accompanying batteries. In time of peace, one captain and one lieutenant will be enough; the second lieutenant obtained at the time of mobilization should be a reserve officer. These artillery officers should be selected with particular care and should be detailed by the minister of war.

This solution would present great advantages, I believe, through detailing artillerymen to live the life of an infantryman for a certain period; a reciprocal exchange of officers would serve to produce only good results."

General Franck's reflections on the value of a reciprocal exchange of junior officers of infantry and artillery offer food for interesting thought. Of course, to obtain such a result would require some changes in our present tables of organization, etc., but the ultimate value to both branches of such a prectice cannot be doubted.

The present practice at the Ecole de Guerre is to assign to infantry regiments three sections of three anti-tank guns each for the defense. (3). On the offense they also assign to an infantry regiment two sections of these so-called anti-tank guns each, which would aid in missions generally assigned to accompanying artillery. The infantry still has the 37 mm gun and infantry howitzer. The anti-tank gun has the following characteristics: automatic, 25 mm, high velocity, wide traverse (30 degrees right and 30 degrees left), drawn either by animal or motor, and firing the following four types of cartridges: (3)

1. Ordinary shell with brass case and steel core.
2. Armor piercing shell, made in same manner as ordinary shell, but with steel core treated with tungsten.
3. Explosive shell.
4. Luminous tracing cartridges, ordinary or perforating, visible up to a distance of 4,000 meters.

As to the allocation and employment of accompanying artillery, it is the present practice in the French Army to hold the artillery groupment commander responsible for continuous support, and he determines the form this support will take. It is the generally expressed opinion among French artillerymen that use of the 75 mm gun, either horsedrawn or motor drawn, is not an economical solution of the accompanying gun problem. (3)

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(3). AA

2. BRITISH-- The following is quoted from paragraph 2, section 94, chapter VIII, Field Service Regulations, Volume II (operations), 1924, British Army: "Sections of field guns, or even single guns, may be usefully employed in carefully concealed positions well forward for delivering a sudden fire at short ranges against hostile infantry and tanks. The employment of small detachments of field artillery is, however, unfavorable to control and extravagant in men and material. It cannot, therefore, be extensively adopted".

We find the same regulation avoiding the use of the terms "sections" and "single guns" in the edition printed five years later, 1929, in the following quotation: (par. 7, section 66, Chapter VII, Field Service Regulations, Volume II (operations), 1929, British Army): "Forward units in battle require some artillery to deal with opposition which the pre-arranged covering fire has failed to overcome. Close support artillery is placed under commanders of forward units to assist their advance and to deal quickly with unexpected resistance. It will also be prepare to engage enemy tanks in cooperation with infantry anti-tank weapons."

Against mechanized forces, the British Army contemplates at present assigning four anti-tank weapons to each infantry battalion. (4). The weapon at present experimentally adopted is the .8 inch Oerlikon anti-tank gun, an automatic weapon, manned by the infantry. This weapon has been found to be unsatisfactory, and none other has at present been adopted. But without regard to the exact weapon eventually used for the purpose, the fact that they expect to use four such weapons with each infantry battalion indicates that the British do not regard this type of support as something to be normally gotten from the division artillery.

3. GERMAN-- The extensive use of accompanying guns by the Germans during the late war is a matter of common knowledge

(4). AB

among military men. As far as can be learned, the German Army has made no progress in designing or manufacturing new weapons since the war. But it is a safe assumption that they are keenly observing any progress being made along that line by other powers.

As a result of the demonstrated necessity for close support of infantry by weapons of greater power than the infantry rifle and machine gun, and, in the absence of more suitable weapons for the purpose, the Germans still use the 77 mm gun, as well as their infantry trench mortars, for this type of support. (5). But, also as a result of their wide experience in such matters, we find the Germans avoiding the necessity for splitting up their division artillery by including a six-gun battery of 77 mm guns as an organic part of each infantry regiment. In the tables for the composition of the infantry division of September 25, 1921, the infantry battery is classified as an infantry unit, just as are the trench mortar companies. Each regiment has one such battery, or three platoons of two pieces each (one platoon per battalion). (5)

In the light of more modern developments in arms for this purpose, we may well doubt that the Germans will long continue to use the present 77 with their infantry batteries. But of immediate importance, as applied to this study, is the fact that the Germans, with their wealth of experience, recognize the desirability of adopting a means to avoid or reduce to a minimum the necessity for parcelling out their division artillery on the battlefield. It is interesting to note the similarity between this German solution of the subject of accompanying artillery and the thoughts of General Franck on the same subject, as previously quoted in this article.

4. ITALIAN-- In the Italian Army, each infantry regiment now has a section with three pieces of light artillery for

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(5). AC

direct support. The gun is of 65 mm caliber. It can be broken down and packed on six mules, or drawn by one mule on a small two-wheeled carriage. (6). With regard to recent developments, General Baistrocchi, Under-Secretary of War, stated in the Italian Senate recently: "Two new weapons have been developed,- one, a new infantry cannon. This cannon will be light and practical, with curved trajectory for clearing hills. It will serve to destroy enemy machine gun nests. It will be employed in sufficient numbers to afford immediate support for the infantry. It will be simple to handle and fully adapted for use by the infantry." (6)

This organic assignment of pack artillery to infantry regiments in the Italian Army may be readily accounted for by the rugged nature of the terrain over which they normally expect to fight. At the same time, without regard to terrain, this system minimizes the necessity for splitting up the normal division artillery.

5. RUSSIAN-- The soviets recognize the need for a highly mobile weapon for the close support of the infantry, and also, due to their far-flung frontiers and the probability of much independent action by infantry regiments, these regiments have been provided with great fire power. There are a total of 27 light machine guns, 18 heavy machine guns, 10 trench mortars, and one 37 mm gun per battalion. Then, in addition, the regiment has a battalion of six 76 mm guns. (7). As in the case of the German and Italian armies, this organic assignment of light artillery to infantry regiments would tend to render unnecessary any consideration of taking accompanying guns from the division artillery in the Russian Army.

6. JAPANESE-- Concerning the Japanese Army and its em-

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(6). AD
(7). AE

ployment of accompanying artillery, there is little to be found either in their regulations, or in printed accounts of actions in which they have engaged. Some military attache reports indicate that the Japanese have not made much change in their artillery employment since the Russo-Japanese War. (8). In their late unpleasantness in China it should be remembered that they had little opposition, and consequently moved the division artillery up within 300 or 400 yards of the infantry front line. This was because the Chinese had practically no artillery, and few, if any, machine guns to make them take positions farther back. A study of Japanese operations and methods since the Russo-Japanese War is of little value to our subject, since they have not, during this period, engaged in operations against any well-equipped and trained modern army.

CONCLUSIONS-- The extensive use of accompanying guns taken from the division artillery during the World War was an expedient demanded by the comparatively sudden appearance on the battlefield of powerful weapons (tanks and machine guns) against which no adequate counter-weapons had been devised.

All of the nations considered in this study have sought by one means or another to get away from the necessity for parcelling out their division artillery as accompanying guns in future wars.

The exact methods of accomplishing this result vary somewhat. It appears that our present doctrine on this subject is to solve the problem by:

1. Adding to the infantry armament weapons especially designed to combat mechanized forces and machine guns.
2. Using improved communication (radio) with infantry liaison groups to permit the rapid placing of fire from the artillery in direct support on any target warranting artillery fire.

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(8). AF.

This doctrine may be said to be in practical accord with that of the French and British.

The Germans, Italians and Russians have combined these measures with the inclusion of specially organized light artillery units in infantry regiments.

But the doctrines of all these armies, as evidenced by developments in recent years, are in agreement on the principal question involved. There is a uniform desire to get away from the necessity for parcelling out divisional artillery as accompanying guns in future wars.

ANNEX.NO. 1 (A-2)

SOME ANSWERS TO QUESTIONS RELATIVE TO CLOSE SUPPORT OF INFANTRY AGAINST MECHANIZED FORCES AND MACHINE GUN FIRE.

NOTE: These answers will in all cases be understood to represent individual opinions only. But an effort has been made to get the thoughts of individuals who have been in position to make intelligent observations on the subject, and it was thought that a grouping of the several individual answers to each question would therefore prove interesting to any person interested in this subject.

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QUESTION 1.- What is the best weapon now available in quantity for this purpose? Please describe briefly as to caliber, range, type of trajectory, and means of movement and emplacement.

Answers:

(a) Maj. Lytle, Tank Section, Inf. School:
1. Versus mechanized forces- The 50 cal. M.G. as improved by Ord. Dept. to increase muzzle velocity. Trajectory, consistent with muzzle velocity. Range, consistent with highest foot-seconds muzzle velocity attainable. Mounted on a fast self-propelled cross-country mount of low profile, wheel and track type. (May or may not be considered as available in "quantity"). Otherwise, 75 mm artillery.
2. Versus machine guns-, or armored vehicles halted-- 75 mm artillery (smoke and HE).

(b) Maj. Morris, Weapons, Inf. Board:
37 mm gun and carriage, M 1916.

(c) Capt. Negrotto, Dept. of Experiment, Ft. Benning:
1. Against mechanized forces:
1st, 50 cal. MG ( at present not an inf. weapon).
2nd, 37 mm gun,
old type, available in quantity.
new type, not " " " .
3rd, tanks, " " " " .
2. Against MG fire:
1st, 37 mm gun.
2nd, 81 mm Stokes-Brandt, range 3400 yds.
3rd, MG and rifle fire.
Tanks.

(d) From the Weapons Section, Inf. School ( name of officer missing from reply form):
Best with infantry, 37 mm, M16. 4300 yds., flat, mule or hand. Penetration: (normal impact, Grade A arm. plate)
at 300 yds.--- .70 inch.
" 500 " --- .65 " .
" 700 " --- .55 " .

(e) Maj. Ward, Gunnery Director, Ft. Sill: (F.A.S.)
37 mm.

(f) Capt. Campbell, Gunnery Executive, Ft. Sill: (F.A.S.)
The only weapon the F.A. has available in quantity is the 75 mm gun. Against MGs, better results might obtained from mortars.

Gunnery Dept.

(g) Maj. MacKelvie, ~~Tactics~~, F.A.S.:
The only weapon the F.A. has in quantity is the 75 mm gun, M 1897. For MGs definitely located, the 37 mm howitzers with HE shell is O.K. But MGs are seldom definitely located. So the 75 is still the best weapon against MGs.
The 75, or 105 how. with panoramic sight, wide traverse, and flat trajectory, is desirable for fire on moving targets.

(h) From the Tactics Dept.,F.A.S.:( name of officer missing from reply form).
My personal reaction is that for mechanized forces we need a 1-pdr. pom-pom.
As to protection for inf. against MGs, I advocate use of a 75 mm howitzer.

(i) Maj. Day, F.A.Board, Ft.Bragg.
There is no satisfactory weapon available in quantity for attack of mechanized forces. The 37 mm gun, if given a suitable projectile, is probably the best. Either the 75 mm gun or the trench mortar is probably the best weapon available in quantity for attack of MG fire.

(j) Lt.Col.L.J.McNair, F.A., Ft.Bragg:
The 75 is available; it has the power and the range- in fact, more than is needed for most of such targets. But its fire cannot be delivered and maneuvered rapidly enough. Its mobility leaves much to be desired, ammunition supply is none too simple, and it presents a considerable target.
The 37 is available; it has the range and quite a bit of power; it traverses on the carriage more than the 75. But the rapidity of its fire is inadequate, and the methods of conducting fire also are slow. Observation of fire is not always easy, yet is essential.
The 30-caliber machine gun has the rapidity and ease of firing; its place in our armament today is testimony to its effectiveness. But its power is quite insufficient against tanks and armored cars. Against other machine guns, superiority of fire is obtained, of course, only by multiplying the guns.
The 3-inch trench mortar seems unsuitable against small fixed targets or against rapidly moving ones.
It seems to me that only the first two are capable of doing such a double-headed job; but both are so faulty that a choice between them is largely academic. As a guess, I would take the 75, for its power, assuming that it was available in quantity, adequate for this particular purpose, which I doubt.

QUESTION 2.- Is any special weapon now in process of development for this purpose? If so, please describe briefly.

Answers:

(a) Maj. Lytle:
I believe the Ordnance consider their present development of the 50 cal. MG as applicable to this use. No other development that I am aware of.

(b) Maj. Morris:
No. The Inf. Board has recommended a gun with the following characteristics:
1. Automatic weapon.
2. On self-propelled mount from which it can be removed quickly.
3. Penetrate one-inch armor at 1000 yds.

(c) Capt. Negrotto:
50 cal. MG, ultra-high velocity bullet.

(d) Anonymous member Weapons Sect.:
37 mm- M2. 5500 yds., flat traj., mule or hand transp., penetration: (normal impact, Grade A arm. plate)

| | | | |
|---|---|---|---|
| at 300 yds. | --- | 1.2 | inch. |
| " 500 " | --- | 1.0 | " . |
| " 700 " | --- | .85 | " . |
| " 1000 " | --- | .70 | " . |

(e) Maj. Ward:
Yes. 50 cal. armor piercing. High velocity, flat trajectory, explosive bullets, one tracer in five. What of mines in the shape of special grenades on certain suspected areas?

(f) Capt. Campbell:
If F.A. must be used, it should be a weapon of the type of ~~the~~ 75 mm pack howitzer.

(g) Maj. MacKelvie:
Against mech. forces, the 50 cal. MG, armor piercing projectile, range to 3000, high velocity, flat traj. Against MGs- a weapon similar to our 105 howitzer- this in preference to the 75 howitzer, since I believe the 105 how. should be the weapon for div. art.

(h) Anon. member Tactics Dept.,F.A.S.:
For mech.force- either a 75 mm or a one-pdr. with all-purpose mount.
For MGs- 75 mm how.

QUESTION 2 (cont'd.)

(i) Capt. Day:
I know of no special weapon now in process of development for use against mechanized forces. Experimentation is being carried on with the various weapons to determine what should be developed. These have included weapons up to around 37 mm in caliber, single shot, semi-automatic and fully automatic, on various types of wheeled and pedestal mounts. The 75 mm howitzer on the split trail high speed carriage, equipped with special sights for tracking moving targets at ranges up to 2500 yds. offers possibilities of turning out to be an efficient weapon for the attack of fast-moving armored vehicles from direct laying positions. Foreign weapons have also been investigated to determine if they offer suitable characteristics. The unquestionably (to my mind) best weapon under development for close support of infantry against MG fire is the 81-mm Stokes-Brandt mortar.

(j) Col.McNair:
Yes, a new weapon is to my mind essential, and I don't know of its having been found. Its characteristics are controlled by the problem of mechanized forces, more difficult than MGs. The same weapon would then be effective against MGs, and incidentally against other targets. I can't lay down its characteristics definitely, but these are the controlling ones:

A gun, for maximum range and power with small caliber, and to reduce the time of flight. I'd no more think of a howitzer or a mortar than I should put such weapons on warships or use them for AA. Defilade is of no consequence, for such guns must go up and fight. Their protection is in small target presented, hiding them, surprise fire, and mobility after discovery.

Page 4

Caliber, the smallest that will permit a shell, HE, and penetrate tanks of great mobility. Fast tanks and cars cannot carry heavy armor; heavily armored tanks must be slow, and can be attacked by heavier guns, such as the 75. The caliber thus might be between .70 and 1:00 inch, but I don't know.

Tracer ammunition. One has only to see such ammunition to realize its importance and utility.

Automatic fire. This is not difficult, for I personally fired the old Vickers-Maxim 1-pdr. nearly thirty years ago, and it was a fine gun.

Transport, motor- the gun to be mounted for firing either from the motor or on the ground.

In other words, a super-machine-gun, overpowering the infantry machine gun and fast tank weapons, and having the undeniable advantage of firing from a fixed platform. With tracer ammunition and automatic fire, the conduct of fire even against rapidly moving targets ceases to be a problem; its a one-man job, just like playing a hose.

QUESTION 3.- What should be the normal allocation of such weapons to infantry units--i.e., how many per infantry battalion?

Answers:

(a) Maj. Lytle:
None with battalion; 12 to 16 with regiment for attachment to or support of battalions as situation may require,-i.e. anti-tank and anti-aircraft company in regiment instead of present regimental machine gun company, as the 29th now has; one company in brigade of infantry in addition.

(b) Maj. Morris:
Minimum- 4 per regiment, allotting 2 to each front line battalion.
Maximum- 4 per battalion.

(c) Capt. Negrotto:
As now provided in Table of Organization.
Subject to change,- at present under study.

(d) Anonymous member Weapons Sect.:
4 per battalion.

(e) Maj. Ward:
Infantry pretty well loaded with special weapons now- GHQ unit.

(f) Capt. Campbell:
By artillery, through observation. Individual accompanying pieces undesirable and useless dissipation.

(g) Maj. MacKelvie:
Furnished by artillery. Infantry battalion has too many different types of weapons now. It is a powerful fighting unit but at present rate of progress it will be a miniature division- about all it lacks now is a detachment of engineers.

(h) Anon. member Tactics Dept., F.A.S.:
By field artillery. The infantry has too many weapons now.

(i) Capt. Day:
The close support (accompanying) weapons should be manned by the infantry and be a part of their organic equipment.

QUESTION 3.- (cont'd.)

(j) Col. McNair:
The division admittedly should include organically only those units and weapons which always are needed; the special gadgets should be organically in GHQ reserve, and fed to divisions which happen to be in situations calling for them. Such a weapon as I have described might develop a sufficiently general utility to warrant its inclusion organically in the infantry or artillery divisional units, but I'd hesitate to say so. I'd say rather that they were best manned by GHQ reserve units and attached as needed.

Whether the units should be infantry or artillery depends primarily upon what sort of a weapon was developed. The infantry already has some weapons which are pretty close to artillery, but whether they should have them is a question. The infantry and artillery both should not man the same weapon. The artillery should go ahead and develop the proper weapon, and then let the question of who should man it be decided upon its merits. I can't see having both infantry and artillery using, for example, the Stokes-Brandt mortar.

QUESTION 4.- Should these weapons be manned by infantry personnel and carried as organic infantry equipment, or should they be manned by artillery units especially organized for the purpose, and regularly attached to specified infantry units?

Answers:

(a) Maj. Lytle:
Organic infantry equipment and manned by infantry. There is nothing in the technique of M.G. fire at moving and stationary targets which necessitates training by another branch.

(b) Maj. Morris:
Since guns for this purpose must be located habitually in the area of the front line infantry battalion and be used for the defense of that unit, anti-tank guns should be an integral part of infantry units.

(c) Capt. Negrotto:
By infantry.

(d) Anon. member Weapons Sect.:
Infantry for those which are a part of organic battalion.

(e) Maj. Ward:
Radio and fire direction will increase the support given,- continue to support.

(f) Capt. Campbell:
Special organization for observation and liaison only. At least one observer with radio with each battalion.

(g) Maj. MacKelvie:
With our present methods of fire direction ~~whereby~~ the fire of a battalion of field artillery can be maneuvered with flexibility comparable to a battery; and all that is required to make it so is a liaison or forward observer with a portable radio set. I believe accompanying artillery (i.e. attaching guns to infantry organizations) is out of the picture. Anything that is worthy of fire can have a volume (1 bn.) of fire placed on it in as short a time as one officer with an accompanying gun or battery could place his driblet of fire on it with the resultant doubtful degree of neutralization.

(h) Anon. member Tactics Dept., F. A. S.:
Specially organized and attached where needed. On the defense can be used as anti-tank; on the offense as accompanying guns.

QUESTION 4.-(cont'd.)

(i) Capt. Day:
If the artillery is required to man the close support weapons or to furnish accompanying weapons, special units should be organized for this purpose. The practice of detaching accompanying guns and even platoons and batteries from the division artillery brigade diminishes the strength of the artillery under the orders of the brigade commander, available for the flexible general support, and fritters away the artillery with only the rarest cases of commensurate value received.

(j) Col. McNair:
Such weapons, by their nature, it seems to me, would fight a purely local combat, and should be commanded by the infantry battalion commander, by attachment if not organic. It certainly should not be the practice to detach from the mass of supporting division artillery, which always will be needed for its legitimate role, except in special situations, such as exploiting a successful attack.

QUESTION 5.- Is it thought desirable to normally expect this type of support to be furnished by detachments from the division artillery brigade?

(a) Maj. Lytle:
No. It will have to be in the infantry if it is to be available when wanted.

(b) Maj. Morris:
No. I have a letter from Col. Danford to Col. Huntley dated Feb. 16, 1933. Quote, "We are convinced that nothing has arisen since the preparation of Vol.II, F.A.F.M. to render the provisions of that volume obsolete regarding this matter.

(c) Capt. Negrotto:
No.

(d) Anon. member Weapons Sect.:
Not from artillery.

(e) Maj. Ward:
One per battalion.

(f) Capt. Campbell:
Enough field artillery should be present to have at least one field artillery battalion in direct support of each infantry battalion.

(g) Maj. MacKelvie:
None as I understand allocation. One battalion field artillery in direct support of each infantry battalion.

(h) Anon. member Tactics Dept., F.A.S.:
I do not advocate any <u>normal</u> allocation. The need for these guns should not be over one per battalion in assault. With our present liaison methods we can concentrate a battalion on any target before you can emplace and open fire with an accompanying gun. Hence, I cannot concede the need of a <u>normal</u> allocation.

(i) Capt. Day:
For weapons for close support against mechanized forces, not over four per infantry battalion should suffice. For weapons for close support against machine gun fire, I believe there should be at least eight per infantry battalion.

QUESTION 5.- (cont'd.)

(j) Col. McNair:
I'm totally unable to answer. On a front seriously threatened by a tank attack, such special weapons should be dense enough to win; it would be economical to plant them so thick that, if needed, there would be as many weapons as tanks, since the tank would cost more than the weapon. The logical effect of such a condition, assuming the weapon to be thoroughly effective, would be to drive the tank into the discard entirely, for I can't see how the tank can match a suitable gun, any more than ships can match coast guns, which they once tried to do.

QUESTION 6.- Any other pertinent ideas you may have on the subject.

(a) Major Lytle:
For the general purpose of closely supporting infantry on the march, in bivouac and in position against mechanized forces (including tanks), I believe the high powered machine gun of intermediate caliber with tracer adjustment of fire to be the most effective weapon for the following reasons:

1. Due to the surprise element (relative, of course,) expected in an attack by mechanized forces, the weapon should be very mobile, available in considerable numbers and organically with infantry- there is no basis for permanent or "normal" attachments of such weapons from another arm or branch. Such action is subterfuge.

2. Due to the short period of time available in which decisive results must be obtained against fast, armored vehicles, only concentrated and continuous fire from weapons of the full automatic type can be expected to deliver the required volume of fire per gun necessary to achieve the fire effect necessary.

An additional consideration which is very important is that the same weapon will provide (on the proper mount) extremely valuable anti-aircraft protection at all times, thereby eliminating the necessity for additional weapons for that purpose.

Note: With regard to the armor penetration characteristics of the improved 50 caliber gun, they can take care of about three-fourths of an inch at normal impact at reasonable ranges, 500 to 600 yards at least, I think. The assumption that vehicles proof against such a gun can be expected in mobile mechanized forces is, I believe, unwarranted.

(b) Maj. Morris:
No comment.

(c) Capt. Negrotto:
No comment.

(d) Anon. member Weapons Sect.:
Suggest check in regard to characteristics of Cavalry 50 caliber machine gun.

(e) Maj. Ward:
The rubber tired gun is no good for fire at moving targets.

(f) Capt. Campbell:
No comment.

QUESTION 6.- (cont'd.)

(g) Maj. MacKelvie:
So called Ford or Bishop battery on balloon tires has not proven satisfactory as an anti-tank gun. It bounces around too much.

(h) Anon. member Tactics Dept., F.A.S.:
No comment.

(i). Maj. Day:
Experiments are in progress at present along the lines of giving the 75-mm guns of the division artillery wide traverse and stable carriages, with directors, direction controllers, electrical transmission of data and "match pointer" laying. If these experiments turn out a success, the division artillery will then have definite capabilities of effective fire on fast-moving targets from defiladed positions.

(j) Col. McNair:
This question, or something like it, has been on the fire during and since the War, yet its state today is nebulous. The reason, to my mind, is that we have not gone along logical lines; we have simply milled around. We have certain clearly defined guide posts which we have not seen, for example: We may say that there are three systems of bringing our fire to the target: by commands for the changes in firing data; by a director, which changes the data mechanically; and visually, by pouring forth a stream of tracer projectiles. The field artillery, of course, has long used the command system against fixed targets, for which it is well adapted, and has tried to use it against moving targets, with poor success. The bomber forced the development of the director system for A-A fire, even though the apparatus is very complicated. The visual system, of course, has been found very effective in both ground and A-A machine gun fire; it is the only solution of fire against low flying planes, which offer moving targets of terrific speed. Of course, the ammunition consumption by the visual system is great, but it seems thoroughly practicable for calibers well above .30 inches or .50 inches, for the short bursts of fire required against the targets you are considering. Yet right now the field artillery is devoting its attention rather to the director system, for which I can see little appropriate and useful application. Bombers, the proper targets of the director system, do not hover over the division artillery. In other words, the solution of fire against small, rapidly moving targets of little resistance is indicated clearly by developments in other fields, of which we have not taken advantage.

ANNEX NO. 2 (A A)

(Not to be quoted)

Don't quote me or source in any stuff I've given

Dear Lattimore, —

In talking over the question of anti-tank guns with Major Loomis (CAC) who is now a student in his second year at the Ecole de Guerre — I am informed that in map problems that they have assigned to Inf. Regts 3 sections of 3 Anti-tank guns each — for the defense — Of course there are for anti-tank business principally —

However in the Offense he states that they also assign to Inf Regt 2 sections of 3 guns each of these so-called anti-tank guns which would aid in the general mission generally assigned to accompanying artillery x — Of course the 1 pdr anty still have their 37's and Inf Howitzers —

Hope this data I'm sending may be of some value —

Yours truly
Foster

AMERICAN EMBASSY
OFFICE OF THE MILITARY ATTACHE
[redacted] RUE DE CHAILLOT
PARIS.
2, AVENUE GABRIEL

February 17, 1934.

Captain W. C. Lattimore,
Command & Gen. Staff School,
Fort Leavenworth, Kansas.

Dear Walter:

Your letter of January 28 reached me some three or four days ago and I am hastening a reply which I hope may be of some value to you.

Excerpts from Field Artillery Regulations:

"Reglement de Manoeuvre de L'Artillerie -
L'Artillerie au Combat Deuxieme Partie, 24 Sept. 1926".

" ARTILLERY ELEMENTS PLACED AT THE DISPOSAL OF THE INFANTRY.

278. In certain situations, it may be useful or even necessary to place at the disposal of the infantry some artillery elements whose mission is called accompanying artillery (d'accompagnemant immédiat).

The influence of the terrain is of prime importance in accompanying artillery. It is possible in covered terrain - impossible in open terrain; it is thus of an intermittent character.

279. The units for accompanying artillery are generally furnished by the organic light artillery which is accustomed to working in intimate liaison with the infantry.

However, tractor drawn artillery, very mobile in all terrain, easier to conceal, and much less vulnerable than horse drawn artillery, may be employed as accompanying artillery. The tractors are generally used in pairs - one towing a gun and another the caisson.

The accompanying artillery units are put at the disposal of the Infantry Brigade Commanders. Sections are used generally - rarely a battery. A section is the maximum to be put at the disposal of an Infantry Battalion Commander.

The Artillery Battalion which detaches an element for use as accompanying artillery furnishes the necessary communi-

cation and liaison personnel; it also handles supply questions. A large use of reduced charge projectile should be foreseen.

280. In the attack and in the exploitation of success, the accompanying artillery elements assist in the reduction of enemy islands of resistance and in widening initial breaches in the enemy lines. They also are very effective in short range enfilade fires.

In the attack as in the defense they intervene against machine guns, infantry, cannon and tanks.

They primarily act to support the units to which they are attached but they must not let any opportunity escape to aid adjacent units.

These fractions of detached artillery may often render very effective support during counter-attacks, particularly if at that moment the enemy artillery is being displaced.

281. The Infantry Commander determines the rôle of the accompanying artillery and if necessary provides proper close infantry support. He designates objectives (targets) but he does not prescribe the position of the guns, the method of fire nor the amount of ammunition to be expended.

The commander of the detached artillery is usually with the Commander of the Infantry unit supported, but in actual cases of firing missions he goes to his guns to command same.

He keeps constantly in touch with the situation and when necessary he intervenes upon his own initiative to place fire upon any objective which is slowing up the friendly infantry advance or which menaces the defense.

Due to the small quantity of ammunition usually available and in general due to the small time element, he seeks short range fires in order to effect the most rapid results.

To accomplish these results he must advance his gun from cover to cover. As soon as a suitable objective is reconnoitered he generally unlimbers a single gun - the other or others remaining in a position of readiness a short distance away but well defiladed and always ready to come to the support of the piece in action.

A prolonged stay in the same place carries a serious risk and thus as soon as a firing mission is accomplished the accompanying guns should change position.

If the means of transportation of the accompanying artillery are damaged, a call for help should be made to the infantry.

282. Cavalry may receive fractions of accompanying artillery under the same general conditions as outlined in paragraphs 278 to 281.

In the pursuit or in delaying actions, due to the moral effect which may be provided, the accompanying artillery with cavalry should take advantage of the long ranges of the artillery and fire at great distances. For this purpose ample ammunition must be provided."

---

The above is all that is given in the Artillery Regulations. The Infantry Regulations repeat almost word for word the above paragraphs.

Thus you see that we have about the same ideas (or did when I was at Sill) on this question of accompanying artillery as the French in so far as the use of 75 mm. weapons are concerned.

The average French Artillery also has about the same reaction as the average American Artillery officer, namely, that the 75 mm. either horsedrawn or tractordrawn is not a good solution of the accompanying artillery problem.

Now I will start back at the top of your letter and say something on each question. I am too pressed for time to make any research, so I am giving you the dope which I have at hand. Not much is available as all developments of new materiel are more or less secret and I have not seen the new anti-tank gun, which will be used in somewhat the same manner as accompanying guns.

(1) See attached inclosure marked Appendix "A". Whether it is available in quantity I am not prepared to say. I have not seen it in service, but I feel sure that the French Army has some. Hotchkiss Company could turn same out rapidly.

(2) See Appendix "A". I believe that another model of this same general nature is being developed.

(3) Not sure of the correct answer to this but I believe from conversations with tank and infantry officers that a majority believe that this <u>is not</u> the job of the Field Artillery.

(4) No. Not so far as I know. See regulation quoted above which specifies that Artillery furnishes personnel, etc., for attached personnel.

(5) See rough draft attached marked Appendix "B" - Rôle of Artillery in Combat of Modern Tanks, which brings up many good ideas.

Hope this will be of some value to you.

Warmest personal regards to you and Mrs. Lattimore in which Mrs. Lester Joins.

Faithfully yours,

Lester

2 INCLS.
JAL-F

J. A. LESTER,
Major, F. A., Asst. Mil. Attache

The Hotchkiss Machine Gun, 25 mm. caliber, is a powerful automatic arm which fires, at the rate of 170 shots per minute, various categories of projectiles. Its power and the initial and remaining velocities of its projectiles make it an especially efficient arm against tanks of all tonnage.

For this purpose, there has been built a field carriage (described in this pamphlet) which, together with the machine gun, constitutes materiel at the same time powerful and mobile and suitable for all the echelons of the infantry in combat.

The long range (maximum 10,000 meters) and the precision of the projectiles at all distances allow this materiel to be used for interdiction fire or for attack of special objectives, such as bomb proof shelters, observatories, command posts, crossing roads, etc.)

The 25 mm. machine gun by reason of the range in height of its projectiles (maximum range in height 7,000 meters) can also be used for antiaircraft defense at all altitudes, although this requires a carriage different to the one described herein which has already been built by the Hotchkiss Co.

The Hotchkiss machine gun, 25 mm., fires the following four types of cartridges:

1) Ordinary shell with brass case and ordinary steel core.

2) Armor piercing shell, made in the same manner as the ordinary projectile, but with steel core treated with tungsten.

3) Explosive shell, with band equipped with an extra sensitive fuze, which explodes automatically before its arrival on the ground if it does not reach the objective.

4) Luminous tracing cartridges, ordinary or perforating, visible up to a distance of 4,000 meters.

The loading of the M. G. is effected by means of magazines of 10 cartridges.

The effects of the projectiles are as follows:

From the viewpoint of precision of fire:

At 50 meters, five shots fired automatically have their impacts comprised in a rectangle 13 x 6 cm.

From the viewpoint of perforation:

Plates of extra hard steel, 40 mm. thick, are perforated at a distance of 700 meters at an incidence of 15°.

At a distance of 1,000 meters, the same plates are still perforated at a normal incidence.

At a distance of 1,500 meters, plates of 35 mm. are cleanly

perforated.

The automatic 25 mm. M. G. is mounted on a carriage equipped with two wheels and a split trail, its displacement being assured either by animal or automobile traction.

The carriage has recoil brake and recuperator, the axial recoil of the tube is about 110 mm., the strain on the trunnions being about 1 ton.

The elevating mechanism is from 10 to + 20°.

The traversing mechanism is from 30° to the right to 30° to the left.

The total weight of the materiel is 450 kgs.

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# PRINCIPAL CHARACTERISTICS

| | | |
|---|---|---|
| Caliber | | 25 mm. |
| Loading by means of magazines of | | 10 cartridges |
| Weight of M. G. | | 135 kgs. |
| Total length | | 2 m. 220 |
| Length of the tube | | 1 m. 500 |
| Weight of projectile | (Ordinary | 320 grams |
| | (Armor piercing | 325 " (or 320) |
| | (Explosive | 290 " |
| | (Tracing | 310 " |
| Initial velocity | (Ordinary shell | (875 m/s |
| | (Armor piercing or tracing | ( |
| | (Explosive shell | 900 m/s |
| Muzzle energy | | 12,500 kg/m |
| Maximum pressure in the chamber | | 3,000 kgs. |
| Weight of cartridge, complete | | 0 Kg.900 |
| Weight of a magazine loaded with 10 cartridges | | 15 Kg.600 |
| Thickness of extra hard steel perforated at a distance of 500 m. (with armor piercing shell) | | 40 m/m |
| Weight of carriage and machine gun | | 450 Kgs. |
| Speed of fire - number of shots per minute | | 170 |

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ANNEX NO. 3 (AB)

(Not to be quoted)

AMERICAN EMBASSY
OFFICE OF THE MILITARY ATTACHE
LONDON.

Misc. 13505 February 7, 1934.

Captain Walter C. Lattimore,
The General Service Schools,
Fort Leavenworth,
Kansas.

Dear Captain Lattimore,

While the regulations are that military attaches shall send all information through military channels, namely, G-2, War Department, and while I advise you to enquire at G-2 for the information which you desire, I have provided below answers to some of the questions which you raise.

Your question No. 1 asks for information about the best weapons for support of infantry against mechanized forces and against machine gun fire. I suppose you mean by machine gun fire the fire delivered against attacking infantry by defending machine guns. Against mechanized forces, the British Army contemplates at present assigning four anti-tank weapons to the Headquarters of each infantry battalion. The weapon at present experimentally adopted is the .8-inch Oerlikon anti-tank gun, an automatic weapon. This weapon has been found to be unsatisfactory and none other has at present been adopted. Against attacking mechanized forces, the British also use the 18-pounder gun with wheels resting on a circular turntable. G-2 and the Chief of Artillery in America know all about this. The infantry naturally will handle the Oerlikon weapon or whatever weapon is chosen in its place; the artillery will handle the 18-pounders.

As far as question 4 is concerned, you probably know that there is in each British infantry division a battalion of what they call light artillery. This uses the 3.7-inch Howitzer, originally designed as a mountain gun. For details of these weapons you are advised to buy from His Majesty's Stationery Office, Adastral House, Kingsway, London, W.C.2, in the event that these volumes are not accessible to you, the following:

"Handbook for the 3.7-inch Quick Firing Mark I Howitzer".
Price 7/-, (about $1.75), and
"Gun Drill for the 3.7-inch Quick Firing Howitzer, Mark I".
Price ninepence (about eighteen cents.)

You probably have in your library (there are copies in Washington anyhow) "Elementary Tactics or the Art of War, British School" by Major Packenham Walsh. This will give you the organization of these units and an idea of their normal tactical employment.

You have asked very little, and possibly you are not concerned, about the employment of divisional artillery in supporting an attack. For the information of artillerymen in general at Fort Leavenworth, it would be well to invite attention to the fact that the British field artillery is entirely equipped, so far as divisional artillery is concerned, with weapons of post-war manufacture. The 18-pounder is normally to be fired at an hourly rate of four rounds per gun per minute, thus doubling the authorized rate of fire for our 75 mm. gun. Naturally, therefore, the volume of fire will be doubled thereby.

I am very glad to hear that you are enjoying life at Fort Leavenworth, and we join in kind regards to Mrs. Lattimore and to you.

Sincerely yours,

Cortlandt Parker

CORTLANDT PARKER,
Lieutenant Colonel, Field Artillery,
Military Attache.

MILITARY INTELLIGENCE DIVISION
In replying refer to

~~For Official Use Only~~

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

March 10, 1934.

MEMORANDUM FOR MAJOR HUDNUTT, F.A.:

Subject: The Accompanying Gun.

The term "accompanying gun" is not used in the British texts and the use of single guns or in sections, is not treated as a separate subject.

That the use of single guns or sections is contemplated is indicated by references given below.

The close support weapon is the light howitzer 3.7 inch; weight of shell 20 lbs.; maximum range - HE - 6000 yds - shrapnel 4500 yds. Employment: Close support or tasks similar to those of field howitzers. May be employed for anti-tank defense.

FSR Vol. II p. 123

The support provided by artillery in the later stages of the attack depends upon the initiative of subordinate artillery officers and on close cooperation between them and attacking units. In addition forward units in battle require some artillery to deal with opposition which the pre-arranged covering fire has failed to overcome.

Close support artillery is placed under commanders of forward units to assist their advance and to deal quickly with unexpected resistance. It will also be prepared to engage enemy tanks in cooperation with infantry antitank weapons. The close support of infantry is the normal duty of light artillery, but field artillery may also be employed in this task.

P. 143 - Attack on trench system.

Light mortar batteries should accompany the infantry in the attack and be pushed boldly forward in close support of forward units. It will generally be advisable to place light mortar units under battalion commanders during the advance.

armored fighting vehicles

P. 133 - Elementary Tactics (Advance Guard)

Infantry will form the major portion of the main guard. Anti-tank weapons must be moved well forward to deal with attacks by AFV's. Artillery will prove of value in assisting the other arms in breaking down opposition, and in delaying enemy attacks. . . . It may be necessary to move sections nearer the head of the main guard or with the vanguard to deal with attacks of AFV's where the unit antitank weapons are not sufficient and to provide close support in enclosed country.

P. 157 -

Thus a field brigade (Bn.) and a light battery may be attached to an infantry brigade in which case the Officer Commanding the Field Brigade will act as Chief, Royal Artillery of the combined force.

Sections of the light battery may further be placed under the orders of the Commanding Officers of infantry battalions for close support.

P. 190 -

The duty of antitank defense in their own areas rests on the infantry. It may be necessary under certain circumstances to place artillery for the special purpose of antitank defense.

For cooperation in counter attack - It is of supreme importance that artillery commanders including battery and section commanders should be prepared to act independently if necessary.

P. 205 - Artillery with outposts.

The whole of the artillery must be prepared to deal with enemy tanks which may penetrate the outpost position. Besides this artillery for general defense, it will frequently be necessary to detail special batteries, sections or even single guns, or more frequently light howitzers (3.7 in.) for close support of the defending infantry, or for antitank defense on likely lines of approach of enemy tanks.

Those guns especially allotted for antitank defense should remain silent and not be used prematurely for close support.

P. 40 -

As a section of a light battery (3.7 in. how.) is more likely to be detached from its battery than is the case in the field battery, each section has 2 subalterns and the necessary staff and equipment for distant control.

ANNEX NO. 4 (AC)

(Not to be quoted)

~~For Official Use Only~~ 10/24/23

GERMANY

Military (6700)

## The Infantry Battery.

I - Present Organization and Desired Organization.

In each division of the Reichsheer (see Bulletin of April 1, 1922), the third battery of the first group is equipped with four 77 caliber guns, model 1896 modified in 1916 (F.K. 96/16) (1) and is called the infantry battery of the division. In matters of organization it is subordinate to the artillery, but in tactical matters to the infantry. Its strength is the same as that of the other mounted batteries, which have 77 caliber guns model 1916 or 105 light howitzers model 1916.

In the tables for the composition of the infantry division in a modern army of September 25, 1921 (2), the infantry battery is classified as an infantry unit, just as are the trench mortar companies. Each regiment has one, or 3 platoons of two pieces each (one platoon per battalion). The gun that is considered in these tables is, as in the Reichsheer, the F.K. 96/16.

II - Present Gun and Desired Gun.

The Infantry battery of the present day can be traced back directly to the batteries of infantry guns that were formed at the end of the war and that Ludendorff defined as follows in a memorandum of July 23, 1918: "The batteries of infantry guns are special mobile batteries assigned as needed to infantry regiments for given mission. Contrary to artillery that fires at a distance, the battery of guns should fight on the terrain in close and personal liaison with the infantry and should generally act by single pieces or platoons against the enemy at short range when the infantry is in close combat with him."

At that time these batteries were equipped with light guns, preferably mountain guns, particularly Russian guns.

The manufacture of a special gun was considered then. Since 1917 the Germans had been planning something comparable to the light trench mortar, a 77 gun with a range of 2000 meters, a wide vertical field of fire, capable of being moved for short distances without a limber, easily drawn by men, provided with removable armor and capable of being divided into several loads, the heaviest of which could be carried by two men.

The manufacture of an infantry gun of 77 caliber was then decided upon, but too late for it to be used before the armistice; this gun, called the I.G. 18 (3) weighed only 650 kg. in battery and 1170 kg. with limber, or scarcely more than half the weight of an ordinary field gun.

It was this gun that the Germans adopted in the first place for equipping the infantry batteries of the Reichsheer. But the Control Commission stopped their manufacture. It seems, moreover, that in use the gun had not shown itself entirely perfected.

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(1) - Feldkanone (field gun) 96/16.
(2) - These tables very likely indicate the composition that the Germans would try to give their divisions in time of war if it were possible for them to do so.
(3) - Infanterie Geschutz 1918 - Infantry gun model 1918.

However this may be, the Germans withdrew it and substituted for it the old field gun that was transformed during the war (F.K. 96/16), consisting of the tube of a prewar gun of 1896 model mounted in 1916 on a howitzer carriage so as to be able to fire at high angles. Its maximum range is about 8000 meters. In battery it weighs 1100 kgs.; with the limber it weighs 1900 kgs., without the gun crew. This gun is too heavy and too cumbersome and could hardly give satisfaction as an infantry gun.

Moreover, the following remarks on this subject are made in the Provisional Training Regulations for Artillery, Volume 18, signed November 18, 1922. "The infantry guns of divisions with modern equipment (infantry guns) are of the same caliber as the field guns but not so far above the ground; thus they are more mobile but have only a short range. They form part of the heavy arms of the infantry.

The artillery of a division with modern equipment is composed of the divisional artillery and batteries of infantry guns.

The batteries of infantry guns in modern armies are not, as a rule, subordinate to the artillery but to the infantry, with which they fight in close and 'personal' liaison on the terrain (1).

In view of the fact that the German artillery does not possess special infantry guns, it will be necessary in case of need to take for this purpose some guns from the divisional artillery, but in limited numbers (field guns, field howitzers, mountain guns). The batteries of divisional artillery used for this purpose are called 'infantry batteries'."

Hence the Germans make a clear distinction today between: the infantry gun (I.G.), a special light gun of 77 caliber, as a rule; the battery of infantry guns, equipped with these special guns and classified, as a rule, as an infantry unit; the infantry battery, equipped with field guns, light howitzers or mountain guns. The latter is a battery that is detailed from the artillery and put at the disposal of the infantry for a variable time.

III - Use.

1. <u>In the Offensive</u>.

In describing the execution of the attack, the Regulations on Combat and Command of Troops of all arms operating in liaison (September 1, 1921), uses the following expressions: "the infantry (Sec. 282) always has need of its infantry batteries, which are generally placed at first under the orders of regimental commanders; then in most cases the platoons or pieces are placed at the disposal of the commanders of battalions in the front line who can, in turn, assign them to certain companies for special missions. The mission of the infantry batteries is, from the opening of the combat, and in cooperation with the other heavy arms of the infantry, to aid in crushing local resistance and to silence isolated or grouped machine guns, trench guns and artillery of the enemy. The best way to do this is to use isolated pieces that change position frequently and often fire without cover; these pieces should perform their mission as quickly as possible before the fire of the enemy's artillery is drawn to them. For this reason and because of the difficult in supplying them with ammunition, these pieces cannot execute fire of

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(1) - This was Ludendorff's expression in 1918.

long duration; they should, on the contrary, disappear quickly and without attracting attention as soon as they have performed their missions."

The regulations called the School for Artillery Combat and signed on November 18, 1922 have the purpose of shaping to the use of the arm the principles laid down by the preceding regulations in 1921. In regard to the infantry guns they add the following details in connection with offensives in position warfare: "the infantry guns (of modern armies) do not participate in preparing for the attack (1); they are kept ready until the beginning of the assault, so as to go into action with the assailing infantry. Often they must be laid by the gunners, either by platoon or by piece. In addition, some automobile guns should be kept ready and should be sent forward with the front line infantry. When these guns are specially equipped (caterpillar treads), it is easier for them to cross ground full of shell holes than it is for horse-drawn guns."

2 - <u>In the Defensive</u>.

The Regulations of September 1, 1921 are less exact in regard to this point. They are content with saying that in open warfare "the batteries should, as a rule, preserve their mobility." As to the isolated pieces or platoons placed very close to the front in order to break the enemy's assault or to stop tanks, they are taken from the divisional artillery. It is indicated that in position warfare "infantry batteries are used for supporting the infantry, if the enemy succeeds in making a breach, and especially for accompanying counter attacks" and that it is well to attach to the infantry platoons of horse-drawn artillery in addition to the infantry batteries. The Regulations of November 18, 1922 dwell on this subject, stating that "infantry guns are particularly suitable for being used in counter attacks."

IV - Conclusion.

The present day tendencies seem to be the following:

I - at present:

1) to train the men as best can be done with the old field gun;

2) to design (as far as possible) a light 77 gun, or, more simply, to perfect the infantry gun 18.

II - When manufacture can be resumed, to equip some batteries with the new gun and to prepare for the organization of the regimental battery of 6 guns (one platoon per battalion). Finally, to consider the use of mechanical traction.

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(1) - Just opposite to the trench mortars.

Source: French G-2 Bulletin for August, 1923.

ANNEX NO. 5 (A D)

(Not to be quoted)

Anne
5
AD

# American Embassy

OFFICE OF THE MILITARY ATTACHE,
ROME.

February 13, 1934

Capt. Walter C. Lattimore, F.A.
The General Service Schools
Fort Leavenworth, Kansas

Dear Capt. Lattimore,

In reference to your questionnaire, the following data is submitted:

Question 1 - In the Italian army, each Infantry regiment now has a section with three pieces of light artillery for direct support and for defense against mechanized forces and machine gun emplacements. The gun is of 65 mm caliber, 17 calibers long, and with a maximum range of about 4000 yards. This piece can be broken down and " packed " on six mules or it can be drawn by one mule on a small two-wheeled carriage. It fires fixed ammunition (H.E.). The weight of shell is 4.942 kg (about 11 lbs). Its maximum elevation is + 350 mils and depression - 130 mils. The angle of traverse is 142 mils. The weight of the piece is 560 kg (about 1230 lbs). Ref: " Ricordi Ligistici e Tattici " 9th. Edition, by Gen. Lambert, pages 233, 239, 250, 280, 308 - Tipografia Barbera, Firenze, 1933 .

Question 2 - General Baistrocchi, Under-Secretary for War, stated in Senate recently: " Two new weapons have been developed: One, a new Infantry cannon ********** This cannon will be light and practical with curved trajectory for clearing hills. It will serve to destroy enemy machine gun nests. It will be employed in sufficient numbers to afford immediate support for the Infantry. It will be simple to handle and fully adapted for use by the Infantry ". Ref: G-2 Report Italy # 13704-6400, Jan. 1934 .

Question 3 - " Infantry must have the weapons - cannons, machine guns, hand grenades - to conduct its operations, if necessary, independent of other arms " Ref: " Forze Armate " No. 803, Jan. 13, 1934 .

" The experiences of the World War have demonstrated the necessity for the Infantry itself to have light artillery capable of being moved by hand " Ref: " Forze Armate " No. 807, Jan. 26, 1934 .

Question 4 - No .

Question 5 - Consensus of opinion in Italy is that Infantry should have within its own organization accompanying guns of about 65 mm caliber .

I am sorry that we can not give you more data especially as regards

the new Infantry cannon, all information of which has to date been held confidential. It is still considered in the experimental stage.

With kindest regards,

Sincerely,

J. G. Pillow

J.G. Pillow
Col. Cav. USA
Military Attaché

Italy ~~Not Official~~

A careful study of the data on "the Italian Artillery and its Employment". show nothing as regards the tactical use and number of accompanying guns. as in all armies this would depend upon the particular situation".

The Italian general staff seem to regard the 75 m m gun as the ideal gun in the Infantry regiment. In 1934 the 37 m m gun of the Infantry regiment was replaced by the 65 m m gun which there are a large number on hand. . the intention is to replace the latter with the 75 m m when funds are available.

The Italians call this infantry gun the "accompanying gun". This gun to be reinforced by attached guns or guns under the local Infantry Commander when and where the situation may demand it.

Memo from G-2 Dept, Thru Maj. Hudnutt

ANNEX NO. 6 (AE)

(Not to be quotea)

MILITARY INTELLIGENCE DIVISION
In replying refer to

~~Not Official Use~~ Duly

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

Memo for Major Hudnutt,

In accordance with your request I have gone through our files and the following data having a bearing on accompanying artillery, or its missions are submitted:

There is but little discussion concerning accompanying artillery as such. The Soviets recognize the need for a highly mobile weapon for close support of the infantry, and also due to their far flung frontiers and the probability of much independent action by infantry regiments, these regiments have been provided with a greater fire power than is normal with other armies. We find in the rifle platoon 3 LMG's and 1 trench mortar (but few are so equipped now, but it is planned that these will eventually be of about 47-mm --grenade throwers are being used in the meantime) The battalion has in addition a cannon platoon of one trench mortar and 1 37-mm gun. There are a total of 27 LMG's, 18 HMG's, 10 T.'s and 1 37-mm gun per battalion. Then in addition, the regiment has a battlaion of 6 76-mm guns. Regarding these latter guns it is stated: "The 76-mm regimental gun, model 1927, is employed in single pieces for the reinforcement of the battalion artillery, and in batteries for the reinforcement of divisional artillery in the zone of its own regiment. The chief combat missions are as follows: Counter-battery, neutralization fire against enemy troops both during march and sheltered in field trenches, destruction of wire entanglements and other artificial obstacles, action against tanks and armored cars, and neutralization of fire from infantry guns."

It is thus seen that they incorporate in the infantry regiment as organic artillery the means for carrying out the functions of accompanying artillery, and the issue is not a live one. It is probable that the above cited need for making the infantry regiment capable of independent action is a major factor in determining the present organization.

From G-2 files - Thru
Maj. Hudnutt.

No 1

ANNEX NO. 7 (A F)

(Not to be quoted)

THE UNITED STATES FIELD ARTILLERY ASSOCIATION
THE FIELD ARTILLERY JOURNAL
1624 H ST. N. W.
WASHINGTON, D. C.

March 7, 1934

Captain Walter C. Lattimore, F. A.
Fort Leavenworth, Kansas

My dear Walter:

I wish to acknowledge receipt of your letter of February 27 and let you know you are not among the forgotten.

Concerning the first paragraph of your letter I have gone to G-2 and on Saturday I expect to pick up some information about the British, German, Italian and Russian armies in answer to your question

Concerning the French Army, they have no set method of employing accompanying artillery. It is one of those cases in which the answer "It depends upon the situation" is quite applicable. The Frenchman makes considerable study of the amount of Artillery needed in any case and assigns his Artillery based on his study. He never can see the reason why we have one Field Artillery regiment supporting one Infantry brigade. He looks the situation over and may decide that all but one battalion of Artillery will support his brigade or such and such Infantry units, and that one battalion of Artillery will support the remainder of the Infantry.

About the same thing is true with the accompanying gun or guns. He sizes up the situation and then shoves in whatever gun or guns are necessary provided they are available. Under separate cover I am sending you a copy of the November-December 1932 Journal which includes an article entitled "Accompanying Artillery" by Lieutenant H. H. Hunt. It gives a summation of the probably success that can be expected, and may be of some assistance to you.

Concerning the Japanese Army and its employment of accompanying artillery, there is nothing I can find in their regulations. Some of the M.A.'s reports indicate that the Japanese have not made much improvement in their artillery employment since the Russo-Japanese War. They are still fighting it. In their late "unpleasantness" in China it must be remembered that they had little opposition and consequently moved their guns, the divisional artillery, up within three or four hundred yards of the Infantry front line. This was because the Chinese had practically no artillery and few if any machine guns to make them take positions further back.

On Saturday I will collect the information and forward it to you. With best of luck to all the Field Artillery contingent and to you and Ruby, I am

Very sincerely,

Dean Hudnutt

Dean Hudnutt, Major, Field Artillery
Secretary-Editor

DH;LP