THE INFANTRY SCHOOL
FOURTH SECTION
COMITTEE "H"
FORT BENNING, GEORGIA

ADVANCED COURSE.
1928-29.

OPERATIONS
OF THE
WESTERN DETACHMENT
1ST BRIGADE, TANK CORPS (US)
SEPTEMBER 26- OCTOBER 11, 1918.
(PERSONAL EXPERIENCE).

CAPTAIN THOMAS C. BROWN, INFANTRY.
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Very good source- Written soon after event while facts were fresh in mind.

Grant.
2d Lieut., Engineers.
Lieut. Grant was attached to the Western Detachment on Sept. 26, 1918. I do not know his full name and it does not appear in any of the Tank Corps records. He made a verbal report to me of his actions on Oct. 4th. I checked his statements with an account given by his driver and believe them to be true.

Gibbs, Harry E.
1st Lieut. Tank Corps.
Lieut. Gibbs made a verbal report to me of his actions on Oct. 4th and 5th upon his return. His statements checked with those made by members of his platoon and I believe credence should be given them.

Mayne, Harry M.
There is no written account by Lieut. Mayne of this action, but he gave me a detailed verbal statement on Sept. 28 of all that happened in "A" Company during the first day's battle. From what I myself saw, and from the accounts of other members of the company, I think Lieut. Mayne's statements correct. (Very good).

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Capt. 345th En. Tank Corps.
This statement was made to me by Capt. Compton while he was making an inquiry into Lieut. Steel's actions on this and subsequent dates.

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War Diary 304th Brig. Tank Corps.

War Diary 345th Bn. Tank Corps.
MARGINAL ABBREVIATIONS USED.

Battlefields.  "Battlefields of the World War".
Compton.  "Verbal Statement to writer".
Conrey.  "Written report of action".
FO No. 57, 1st Corps.  "Field Orders No. 57, 1st Corps".
FO No. 2, 304th Brigade.  "Field Orders No. 2, 304th Brigade".
FO No. 2, 344th Battalion.  "Field Orders No. 2, 344th Battalion, Tank Corps".
Gibbs.  "Verbal report of action".
Grant.  "Verbal report of action".
Map.  "Verbal report of action".
Mayne.  "Verbal report of action".
Proctor.  "The Iron Division in the World War".
Shipley Thomas.  "History of the A.E.F.".
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Steel.  "Verbal report of action".
War Diary.  "War Diary 304th Brigade, Tank Corps".
War Diary, 345th Battalion.  "War Diary 345th Battalion, Tank Corps".
Weed.  "Written report of action".
INTRODUCTION.

In order that the operations of the Western Detachment, 304th Brigade, Tank Corps, may be intelligently discussed, it will be necessary to go back to the organization of the unit and deal with the history of its elements, and discuss briefly their struggle for a place in the sun, that is, the privilege of taking part in the two great offensives of the American First Army. This was the only American tank unit to which this honor fell.

The 344th Battalion, Tank Corps, was organized on April 28th, 1918, from personnel then undergoing instruction at the Tank School, near Langres, France, under command of Captain George S. Patton, Tank Corps.

The 345th Battalion, Tank Corps, was organized on June 6th, 1918, at the same place, and from like personnel, and was commanded by Captain Sereno E. Brett, Tank Corps (1).

On August 19th, 1918, the two battalions were organized into the 304th Brigade, Tank Corps, then known as the 1st Brigade, Tank Corps, under command of Lieutenant Colonel George S. Patton, Tank Corps (2).

At this time the only tanks available for the instruction of these two battalions were the 25 training tanks in use at the Tank School, many of which had been used since March 23d, 1918 (3).

While many of the officers of the newly formed Tank Corps had had long experience in the Regular Army, their knowledge of tank tactics and operations in support of Infantry units was very limited, their only source of information being taken from the few months experience of the British and French with the new weapon. This information was not always to be relied upon, and was at times very misleading, as we learned through bitter experience later on. Our doctrine was that tanks must conform to the tactics of Infantry. They were an auxiliary arm and must conform (4).

On August 24th, 1918, the first 40 of the 144 new tanks arrived at Bourg from the great tank assembly plant near Orleans, France, and were assigned to the 348th Battalion. By August 28th both battalions were fully equipped with tanks and were busy tuning them up in preparation for field service (5).

This original tank equipment was all that was ever furnished these units. No replacements for destroyed or disabled tanks could be furnished by the French owing to the great demand of their own units (6).

The Brigade, as a unit, took part in the reduction of the St. Mihiel salient by the American Army, from September 13th to September 2.
15th, 1918. At the conclusion of this operation the unit was assembled in the Bois de Hazelle, near Bernecourt, on the night of September 15th-16th, where damaged tanks were overhauled and repaired in preparation for the next operation (7). The first tank units in the history of the American Army had received their baptism of fire and now considered themselves veterans, though fairly young ones.

On September 16th, 1918, the 304th Brigade, Tank Corps, was relieved from duty with the 4th Corps, and ordered to report to the Chief of Tank Corps, 1st Army, to carry out his instructions (8). The Brigade Commander reported to the Chief of the Tank Corps at Ligney-en-Barrois on September 16th. Here the map and a French report on the possible use of tanks in the Meuse-Argonne sector was gone over. A reconnaissance was made of the front east of the Argonne Forest and it was decided to use Clermont-en-Argonne as a detraining point for the tanks when they should arrive. The 304th Brigade, Tank Corps, was accordingly attached to the 1st Army Corps for the coming offensive (9).

On September 20th, 1918, the 344th Battalion arrived at the detraining point (Clermont-en-Argonne) during the night, and went into concealed positions about two kilometers north.
of that village, where the Battalion trucks were already located, having come by road (10).

The 345th Battalion, less Company "C", arrived at the detraining point (Clermont-en-Argonne), early in the morning of September 24th, were unloaded and went into camp on opposite slope of hill near detraining point, by 10:00 A.M. How they escaped observation by German aviators is not understood, as visibility was excellent the last one and one-half hours of the operation, but no airplanes were seen. The detraining point was shelled during the whole of the operation (11).

During the stay in the tank parks near the detraining points extended reconnaissances were made by the commissioned and non-commissioned officers of the two battalions. Liaison was established with the 28th and 35th Divisions and plans for the coming attack were worked out.

Forward dumps of gasoline were established in each sector of action, as the St. Mihiel offensive had taught the necessity for a supply of gas well forward (13). At 7:00 P.M., September 25th, the Battalion left the tank park for the intermediate positions, or, as termed then, to "positions of readiness". This position for the units detailed to operate west of the River Aire with the 28th Division, was just north of Abancourt Farm, and was reached about 10:00 P.M. (14). At this point a final check was made of
all mechanical troubles developed during the approach march, tanks completely serviced and personnel re-oriented as to their duties for the morrow, then some sleep. At 3:00 A.M., September 26th, the assault company (Co. "B", 344th Bn.) and the support company (Co. "A", 345th Bn.), with 16 tanks each, moved out to take up their assault positions. Company "B", 344th Battalion, was commanded by Captain Newell P. Weed, Tank Corps. Company "A", 345th Bat-
talion, was commanded by Captain Dean M. Gilfillan, Tank Corps (15). The 8 reserve tanks belonging to the two companies operating west of the River Aire were placed under command of 1st.Lieut. Thomas C. Brown, Tank Corps, with instructions to follow the support company at two thousand meters. (16). These reserve tanks had orders to carry 60 gallons each of gasoline to a designated point, to be used as a refill for all tanks at the end of the day's fighting. In addition to this, each of the assault tanks carried 20 gallons of gasoline on their tails into the fight, the osten-
sible purpose being to use it as a refill when needed. As might have been foreseen, this scheme miscarried slightly, as many well-meant schemes have a habit of doing, especially in battle (17). Our reserve tanks had more the appearance of a Gypsy caravan than of a combat unit entering onto
a battlefield. One soldier of the Quartermaster Corps whom we passed, asked one of our men if we were moving into Germany for a long stay. The query brought this reply: "You guys can't do your stuff where there's shootin' so we carry our own".

**GENERAL SITUATION, September 15, 1918.**

On July 18th, 1918, the Allies launched the first of a series of successful offensives that were to reduce numerous small salients, until by September 26th, 1918, the German Army was back to its main line of resistance, the famous Hindenburg Line. This was probably the most strongly built system of defenses anywhere on the Western Front (17-a).

The High Command now decided to launch a general offensive with the main objective of cutting the German lines of communication between France and Germany, thus forcing evacuation or capture of all German troops in France.

The part assigned the American Army in this grand offensive was to be the right pivot of all the armies to the west, with the special mission of penetrating the enemy lines between the Meuse River and the Argonne Forest, and, in conjunction with the advance of the 4th French Army west of the Argonne, to squeeze the Germans Out of the Forest itself (17-b). After this
should be accomplished, to move against Sedan, cutting the Mezieres-Sedan Railway and closing the central entrance to France.

ZONE OF THE AMERICAN FIRST ARMY.

On September 20th, 1918, the zone of the American First Army extended from the Meuse River westward as far as La Harazée, taking in the front of the Second French Army to that point (18). Of purely American troops the front was divided into three corps sectors, the Third Corps on the right, the Fifth Corps in the center, and the First Corps on the left, meeting the Second French Army in the center of the Argonne (19). The 304th Brigade, Tank Corps, was assigned to the First Corps, which in turn attached it to the 28th and 35th Divisions (20).

TERRAIN.

The sector of the 28th Division, to which unit the Western Detachment of Tanks (Company "B", 344th Battalion and Company "A", 345th Battalion) was attached, lay between the River Aire on the east and the eastern edge of the Forêt d'Argonne on the west, covering a width of 3500 meters (20+4). The River Aire, which in part formed the east boundary of the Division, is a crooked, sluggish and marshy stream, generally unfordable below Varennes. Rising abruptly from the west side of the river rises the plateau of the Argonne. This

(18) Shipley Thomas, p.236.
(19) FO 57, 1st Corps.
(20) FO No.2, 204th Brigade.
(20-a) F.C.57, 1st Corps.
plateau from the river to the edge of the forest is a flat, open plain some 1,500 meters wide, cut by many transverse ravines running east to the river (20-b). The ridges and big noses which were formed by these ravines offered excellent defensive positions for the German machine gunners, and on the larger of these promontories was situated light artillery which took the troops advancing along the river in enfilade and sometimes from the left rear (20-c). The forest itself, in the latter part of September and the first part of October, 1918, was a dense mass of trees, underbrush, barbed wire, fallen timber and old trenches. Vision within the forest was limited to a few yards except on roads and trails and along lanes cut by the Germans for machine gun fire, covering vital avenues of approach (20-d). The preliminary reconnaissance made of this sector had shown that it was generally unfavorable for the use of tanks until Montblainville had been passed. There was found to be suitable ground, however, between the Aire River and the forest, for the deployment of one tank company (20-e). In addition to the natural obstacles, the Germans in their four years' occupancy of this sector had constructed a very elaborate system of trenches, barbed wire entanglements, and numerous other obstructions (20-f).
PLAN OF ATTACK.

Plan of attack of the 304th Brigade, Tank Corps, September 26th, 1918: 344th Battalion, less one company, to the 35th Division. One Company (Company "B") 344th Battalion, to the 28th Division.

345th Battalion to operate under orders of Commanding General, First Corps, Company "A" in 28th Division sector, west of the Aire River, and Companies "B" and "C" in the sector of the 35th Division east of the Aire River (21).

The 344th Battalion to lead the attack until the American Army objective was reached (see attached map), when it was to be passed through by the 345th Battalion and would then revert to Corps reserve. The 345th Battalion to follow the leading Battalion at 1500 meters to the American Army objective (see attached map), where it was to pass through the leading Battalion and take up the assault (21-a). The reserve and training tanks, loaded with gasoline and oil, to follow the support company at 2000 meters until further orders (21-b).

Zone of Action, Western Detachment (28th Division):

Right: BOURVILLES (incl.) - VARENNES (incl.) - MONTEBLAINVILLE (incl.) - APREMONT (incl.) - FLEVILLE (excl.) - St. JUVIN (incl.).

Left: A line parallel to right boundary and about three and one half (3½) kilometers to the west of it.
Line of Departure: Line 500 meters south of present enemy front line trenches from point (03.8-70.0) - LA PIERRE CROISEE (21-c).

The 28th Division attacked in two columns, the 55th Brigade, including the 109th and 110th Infantry, on the right along the river; the 56th Brigade, made up of the 111th and 112th Infantry, on the left, went through the east edge of the Forest (22).

It will be noticed that this plan of attack is peculiar in that it splits a tactical unit and assigns one company from each of the two battalions to support the 28th Division. The reason for this splitting of units is as follows: The tanks of the 344th Battalion were in poor mechanical condition owing to the fact that they had run about 60 kilometers further in the St. Mihiel offensive than had the tanks of the 345th Battalion, hence it was decided to use them in the first phase of the attack, before they deteriorated to such an extent mechanically as to render them unfit for action (23). As events turned out, this was an unnecessary precaution, as the objective prescribed for the first day was not reached until September 28th (24).
OPERATIONS ON SEPTEMBER 26th.

At about 3:00 A.M., Company "B", 344th Battalion, and Company "A", 345th Battalion, with sixteen (16) tanks each, moved from their position of readiness at Abancourt Farm to the line of departure behind the American front lines. H-Hour was at 5:30 A.M., and at this hour a heavy fog blanketed everything, making it extremely difficult to maintain direction or to keep in touch with troops being supported. Company "B", 344th Battalion, led the attack and was to precede the Infantry across the German trenches, but the crossing proved so difficult that the engineer troops attached to the tanks had to be called on for help, and by the time the tanks had cleared the trenches the Infantry had passed on. After getting his tanks across the trenches, Captain Weed advanced with his tanks until he caught up with the Infantry, who were held up by machine gun fire just northwest of Fte.Boureuilis. He sent several tanks to reduce the resistance and moved north with the rest of his tanks. Sometime later he got separated from his company, due to the density of the fog, and was captured by the Germans, but fortunately a tank appeared at this time and the Germans ran and left him. He then led his company to the west toward the forest, assist-
ing the infantry to advance by reducing machine gun resistance (26-b).

When the Infantry was held up just north of Pte. Boureuilles, Company "A", 345th Battalion, Captain Dean M. Gilfillan commanding, which had been following the assault at 1500 meters, entered the fight on the right of Company "B", 344th Battalion (27).

The reason for or cause of this unit's entering the fight at this time has never been satisfactorily explained. No orders to that effect were issued by higher authority. The attack order directed that it was to follow in reserve until the American Army Objective was reached (28). This objective, in the sector of the 28th Division, ran just south of Montblainville, which was not reached until September 27th at about noon (28-a). It is a fair assumption that the Brigade Commander did not order the move, as all records show that at this time he was giving his whole attention to the operation of the units on the east side of the Aire River and was forward with the assault troops, where he was wounded while directing an attack of infantry troops on a machine gun nest (29). The commanders of both battalions were also on the east side of the Aire, where they remained during most of the day (29-a).
During the early morning the fog lifted and a brilliant sun shone down and revealed to the gaze of a detached observer a vast panorama of battlefield covered with an apparently endless confusion of infantry, tanks and machine guns, moving, moving, ever moving—North (30). When the fog had lifted the German machine gunner was getting over his first surprise and was beginning to get back onto his job. The rat-a-tat-tat of his gun could be heard in an ever increasing crescendo from the front and flanks. Especially vicious were those nests secreted in clumps of trees and specially prepared and concealed positions along the edge of the forest. The effect of this fire was soon evident. Soldiers disappeared from the face of the plain like magic and could be found only in ravines, in ditches and gullies, behind brush and any obstacle to shelter them from this deadly hail—but ever moving north. The tanks were, at this time, the most prominent objects on the landscape. They resembled a bunch of rockets shooting across the field. Remembering their experience of a gasless St. Mihiel, the tanks went into action on September 26th with cans of gasoline tied to their tails, to be used for a refill later in the day (31). Curiously enough, when the fog lifted the German gunners spotted this highly inflammable cargo and immediately turned a stream of incendiary bullets onto the gas drums. The result, as can
be imagined, was sometimes startling, especially to the occupants of the chariots. If the tank kept moving the fire usually resulted in no damage to the vehicle, as the air currents kept the flame streaming to the rear and away from the tank. The sight was one that will probably never be witnessed again in battle. No more gasoline was carried into the assault on outside containers (32).

The tanks advanced across the open plain and along the edge of the Argonne Forest, attacking machine gun nests and assisting the advance of the Infantry wherever possible. A German communique of this date stated: "Fleets of small tanks, each armed with a single gun or machine gun, appeared with the rapidity of weasles in and behind our gun positions, where this weird crew spewed up like the broth of Hell *****".(33)

About 9:30 A.M. Captain Gilfillan, Lieutenants Steele and Mayne, Company "A", 345th Battalion, entered the village of Varennes with a group of tanks (34). They found the village full of Germans, who, upon the appearance of the tanks, tried their best to get out. The tanks inflicted severe punishment on the retreating Germans. Lieutenant Dietz states:

"At the time of the Argonne fighting I was a sergeant in Co.'A' 345th Bn. I was in
command of the third tank in the first platoon of that company under Lt. Mayne.

"Co. 'A' was to follow, 2 kilometers, as I remember it, in rear of Co.'B' of the 344th Bn. on the left of the Aire River during the first day. However at about 8:30 A.M. Sept. 26, we increased our speed and overtook the company we were following at Varennes. We entered the town in column my tank being the third in the column. Quite a number of machine gun nests were encountered and dislodged on the outskirts of the town and just within its limits. We had advanced but a short distance down the principal street of the town when the column halted. The tank directly in front of me pulled out of column. I then saw Lt. Mayne with his head poked out of the turret door of his tank gesticulating madly and yelling something which I of course could not hear, so I opened the doors of my turret, rather unwillingly for machine guns were still in evidence, to determine what was wanted. Lt. Mayne motioned and yelled at me to go ahead. I did so alone for as he did not advance and gave no directions to the other tanks none followed me. I did not at the time and do not yet understand the reason why I with a machine gun which was useless against the machine gun nests we encountered, should
be sent out alone, but I advanced as I had been ordered and encountered and disposed with a number of Germans running here and there about the buildings. Arrived at the end of the street I was uncertain whether to turn toward the bridge crossing the river or to turn to the left. A large mass of the enemy at the foot of the hill on our left decided me. I started to the left and opened fire. I believe I had killed or wounded the greater part of them and the rest had scattered when four or five machine guns opened on the tank from all sides". (35)

The resistance was so strong from the vicinity of this village and along the river that the infantry could not follow the tanks. Captain Gilfillan was seriously wounded and gassed while in Varennes, his tank being struck by a shell and burned (36).

The tanks then evacuated Varennes and fell back to the Infantry positions south of the village (37). Lieutenant Mayne and his platoon from Company "A", 345th Battalion, Tank Corps, had a conference with the Infantry Battalion Commander south of Varennes and it was decided to attack the town again shortly after noon. The plan was for the tanks to skirt the edges of the village, closely follow-

16.
ed by the Infantry, keeping down machine gun fire while the Infantry closed on the village and mopped it up (39). The operation was successful though the Infantry and Tanks had to face a severe fire from machine guns, artillery and anti-tank guns. The Infantry occupied the village at about 1:30 P.M. (39).

After the capture of Varennes all coordinated effort between the Tanks and Infantry, as units, was at an end (40). The two tank companies had become completely disorganized. Little groups of tanks exploited the terrain to the north and west of Varennes seeking such enemy resistance as they could find (41). At this point the tanks should have been assembled in a protected ravine just south of Varennes for reorganization and assignment to a new mission if desired. It was obvious at this time that the attack was practically stopped (41-a).

The reserve and training tanks, under my command, had been ordered to follow the reserve company at 2000 meters, but when the fog had lifted we found ourselves within about 1000 meters of the leading elements. The tanks, with their valuable cargoes of gasoline and oil, were immediately placed in the cover of a deep ravine just south of Varennes. When this was done and a halt outpost established, I, accom-
panied by a runner, started forward on a re-
connaissance and to establish contact with
some of the commanders in the front lines.
The going was very difficult, as the whole field
was swept by machine gun fire from the edge of
the woods. We finally reached the road run-
ing west from Varennes, where we had to take
cover from machine gun fire coming from the.
forest and from a particularly pestiferous
machine gun nest in the little clump of trees
about 1200 meters west of Varennes. While
we were here a company of infantry just to
our left started toward Varennes along the
south side of the road. They had only pro-
ceeded a few yards when they were compelled
to take cover. This they did by jumping into
the ditches along each side of the road.
They proceeded on their way by crawling along
on their hands and knees. I asked a sergeant
where they were going. He stated that they
were trying to get into the head of a ravine
some 200 yards to the northeast, with the idea
of getting north along the slopes just west of
the Aire River.

This particularly vicious machine
gun nest about 1200 meters west of Varennes,
which I have just mentioned, had a complete
sweep of the plain to the northwest and southwest
of the town and completely covered the road running out of Varennes toward the Forest. I saw three different attempts made by tanks to destroy this resistance. When the tanks reached it the little patch of woods covering the knoll in which the guns were located assumed the sylvan quietness of a perfect day of peace, not a man nor a gun in sight. As soon as the tanks moved on out of range, this perfect peace was suddenly broken by the well-known activities of these nests of Hell. I later examined this particular machine gun position and found a complete system of dugouts capable of holding the personnel for at least six machine gun crews and equipment. This position was so well camouflaged that a close examination was necessary to discover any signs of occupancy. The last attempt I saw made against this particular nest was made by Lieutenant Thomas D. Steel, Company "A", 345th Battalion, with his platoon of four tanks, at about 3:30 P.M. He went by the position in column with about 25 yards distance between tanks, each tank firing into the nest as it approached and passed it. What effect this fire had I do not know, but I do know that this same nest was active again soon after the tanks had passed on. This was a perfect example of
non-cooperation between Tanks and Infantry. Lieutenant Steel, and his tanks passed on out of sight into the forest and I did not see them again until after dark on the evening of September 27th, 1918. He was reported as missing and it was supposed that he was either captured or killed, as that part of the forest into which he went was still held by the Germans. It seems, by his own statement made to me, that when he got into the forest and scouted about for a bit he concluded to call it a day and started south. He went in this direction until he met some supply train trying to cross trenches and get forward. They were stuck, so he turned his combat unit into a tractor section and helped the whole outfit across. He stayed on this job the whole of the next day. When asked for an explanation of his actions he naively stated that he considered the getting of supplies through was just as important as fighting (40). The Battalion Commander stated that Lieutenant Steel should be court-martialed, but later thought better of the matter and let it drop. (41).

At about 4:00 P.M. Captain Weed received word that the operations for the day were over and we started to rally what tanks
were running to the south of Varëannes. Captain Weed stated to me that he had orders to assemble the tanks at Pte. Boureuilles for reorganization. This was done and they reached there about 6:30 P.M. (42). Soon after reaching this administrative rallying point, Captain Weed was evacuated on account of having been gassed. This left 1st Lieutenant Thomas C. Brown, Tank Corps, the only officer present, in command of all tanks on the west side of the Aire River. 2d Lieutenant S.L. Conrey, Company "B", 344th Battalion, joined us later in the evening with three tanks which he had brought back from the front (43). At just about dark a 2d Lieutenant Grant reported to me for duty. He stated that he had been sent up by Brigade Headquarters (Tank). I asked him if he had ever been with tanks before. He said "No" but he was more than willing to learn. He was with us until October 5th, and a more willing and gallant officer I have never had the pleasure of meeting. I am of the opinion that his real mission was to command the detachment of Engineers attached to our units. He never worked at this job but turned himself whole-heartedly into a tanker. His name does not appear in any of the official documents of the tank units and I have often wondered where he went after leaving us (44).
The rallying point chosen was very ill advised, as it was too far (about five kilometers from the assault lines) to the rear, causing too much mechanical wear and tear in coming back and then going forward again (46). The reasons given for this decision were (1) that the supply train could not get forward with gas and oil, and (2) that shell fire was too severe nearer Varennes (46). I am inclined to believe that the latter was the real reason, as the reserve and training tanks, which carried refills of gasoline and oil, had not entered the fight and still had their gasoline. A much better point would have been just south of Varennes near the river (47). But probably the most important reason why Boreuilles should not have been chosen was the fact that the village was astride the main highway traversing the Aire River valley. The bridge at this point had been blown up by the retreating Germans but a new one was completed sometime during the night of September 26th-27th, allowing all of the dammed up artillery and supply trains to pass that way. Pte. Boreuilles was changed from a quiet ruin of the evening of September 26th to a hectic scene of activity in the early hours of September 27th (47a). Such tanks as were found to be in a fit mechanical condition to continue the operation the next day were gotten ready. Except for the
very simple things very little could be done in the way of resupplies during the night, on account of having no light (47-b).

Orders were received during the night for all available tanks to move forward next morning and join in the attack of the 111th Infantry against La Forge Ferme and Montblainville (47-c).

The 28th Division had advanced on this date along the River Aire to a point about 1500 meters north of Varennes, but their left flank had been unable to advance on account of enemy resistance from Perrières Hill, which was about three kilometers in rear of the right element. This left a long flank exposed to machine gun fire from the forest and to enfilade fire from artillery to the front (47-d). It seems that this was to be the scheme of maneuver against the Argonne Forest. The 28th Division was to advance its right down the Aire while its left remained in contact with the 77th Division, which was to advance but slowly through the forest as the Germans were flanked out (47-e).

We knew this scheme of maneuver was being carried out but we thought it was forced on our troops by the strength of the German defenses in the forest. It affected tank operations to a considerable extent, as the two points of active
contact with the enemy were along the Aire River and in the edge of the forest, neither of which was very good tank terrain (47-f).

All officers should have been informed of this scheme of maneuver and its object early in the action. Too much was left to the imagination of inexperienced officers.

OPERATIONS ON SEPTEMBER 27th.

The 1st Corps issued orders in the early morning of September 27th for a continuance of the attack at 5:30 A.M., designating the objective as the Combined Army First Objective (48). The Tanks were ordered to attack with the Infantry. The only tanks able to comply with this order were four tanks that had gone up along the Aire River with the Infantry the afternoon before and had not rallied with the other tanks at Fte. Boureuilles.

These four tanks were under command of 1st Sergeant Lester W. Atwood, Company "A", 345th Battalion, Tank Corps. Sergeant Atwood had taken this opportunity to indulge his often expressed desire to enter combat as a tank commander. He stated to me that he had reported to the commanding officer of some regiment that was operating along the river (the 110th Infantry). He was directed to have the tanks precede the Infantry, following the rolling barrage. As it turned out, the only barrage
available was that furnished by the infantry weapons with the regiment. They went forward during the morning, helping the Infantry in the capture of La Forge Ferme, just south of Montblainville, and the village of Montblainville itself. After the capture of the latter village these tanks then moved west into enemy territory along the edge of the forest, from where a large volume of machine gun fire was coming (49-a).

Of the tanks assembled at Pte. Boureuilles, only eleven (11) were found to be in a fit condition for battle (49). Another platoon was put in shape by noon and joined the forward group in Montblainville in the late afternoon, but with the loss of two tanks— one by artillery fire and one through mechanical trouble—on the way up. (50) The eleven tanks that left the assembly position early in the morning made the error of trying to move up across country between the forest and the river. This terrain was so badly cut up by trenches and pitted with shell holes that the tanks had difficulty in getting through at all. The hour for the morning attack was long past. We had reached a point about one kilometer northwest of Varennes and were amusing ourselves by taking shots at small groups of Germans who
could be seen at frequent intervals up on the hillside to the west of us, and in returning machine gun fire that was coming from the edge of the woods, when a message came from the Brigade Commander directing that the tanks patrol the edge of the forest and silence the machine guns that were holding up the left regiment in the 28th Division sector (112th Infantry). We immediately proceeded to locate the advanced positions of this regiment and found them about 600 meters south of Les Escomportes Ferme, northwest of Varennes. The case was hopeless from the start. The underbrush was as thick as the hair on the proverbial dog's back and was still clothed in its foliage. It was impossible to see ten yards in any direction except up paths or roads. When our tanks entered these thickets everything was peaceful and quiet, but as we were leaving they would give us a farewell salvo with all the machine guns near. All of the lanes and roads were blocked with great bundles and rolls of barbed wire and felled trees, making them impassable even for tanks. We proceeded through and along the edge of the forest for about two kilometers until we were almost due west of Montblainville. We were not aware of the fact that this village had been taken by our troops until we met the four tanks that were operating out of there to the west. As
we were not accomplishing anything tangible, and were well within the enemy lines, we thought it advisable to get in touch with our own troops again. As we left the forest and started east we seemed to be passing through all of the machine guns and anti-tank guns that had been kicked out of Montblainville. They peppered us from all sides with their small stuff, adding a big "wham" every so often from their wicked 16mm anti-tank gun. This gun was very effective and would penetrate tank armor very easily with a normal impact. The fact that the gun was about as dangerous to the firer as to the one fired at saved us considerable trouble. The general practice seemed to be to place the butt of the rifle against a tree, point it in the general direction of the target, and pull the trigger. The few dead gunners of this class who were found had very heavy pads in the shape of short pillows fastened to their shoulders. As we came out into the open just west of the village the artillery opened up on us. We lost one tank from this fire. After getting the tanks under cover from artillery observation I reported to the Battalion Commander of the Infantry unit that occupied the village. The infantry line ran around the west side of the town in an old overgrown and half-filled-up trench, then around
and through the cemetery which occupied the high ground in the north edge of the town. There appeared to be no enemy to the east toward the river, or at least there was no fire coming from that direction. The position was getting enemy fire from the front, the left and from the left rear—not a comfortable place to occupy with night coming on. The Infantry Commander asked me if I would move my tanks against the machine guns to his left front, as they were causing him the most losses. I told him that it would be worth trying if he could spare enough Infantry to mop the devils up after the tanks chased them into their holes, otherwise we would only get a lot of artillery put down on us without accomplishing anything. He could not furnish any infantry support and agreed that I was probably right and called the party off. He then requested that we remain in the village to assist them in case of a counter attack which he was expecting. We stayed there until evening and then pulled back to Varennes for a refill of gas and oil, this being as far forward as our supply trucks had come. We here met up with the kitchen and received our first hot meal since the evening of September 25th.

(51) Pers. Exp.

A rather amusing incident happened to one tank crew during this expedition into
the enemy's forest retreat. According to the
sergeant's story, they were driving up one of
the woodland lanes when they met up with a
German kitchen set up and doing business with
a prepared dinner of corned beef and cabbage,
with trimmings, all ready to serve. Of course
the cooks, K.P.s and interested bystanders
were somewhat surprised to first hear and then
see this iron monster break into their culinary
establishment. They immediately took to their
heels, being helped along by a round of "HE" from
the tank's one-pounder. According to the
boy's story, they got out and helped themselves,
and to prove their yarn they brought with them
a bucketful of the corned-beef-and.

During the day orders were received
placing both tank units west of the Aire River
in one detachment and placing 1st Lieutenant
Thomas C. Brown in command of the group (52).
The commander of the forward groups, Captain
Ranulf Compton, Tank Corps, directed that the
tanks remain in Varennes during the night and
that the necessary mechanical adjustments be
made next morning before the tanks moved out.
This, I think, was a mistake. The tanks should
have been left up front near the Infantry, and
should have been supplied there instead of hav-
ing them come back for servicing. I found
that when the tanks were drawn back every even-
ing for supply and minor repairs the men and some officers developed a rear echelon complex and did not want to remain near the front lines during the night. It was my experience that to allow men to enjoy the comparative luxury and quiet of even one kilometer in rear of the assault lines makes them soft and unwilling to move forward to assault positions in the very early hours of the morning. Another count against the practice is that the movement back and forth causes a quite appreciable mechanical deterioration that should be avoided (53).

OPERATIONS ON SEPTEMBER 28th.

Fifteen tanks were assigned to the 28th Division on this date. Owing to the delay in Varennes we did not reach the Infantry position until about ten o'clock. At this time the Infantry had advanced to the high ground just north of Rau-de-Vervaux, about 1000 meters south of the town of Apremont, where they were held up by enfilade machine gun fire from the edge of the forest to the west which swept the whole plain to their front and left (54). In reaching the infantry position the tanks were compelled to cross the high, bare ridge just out of Montblainville, with a perfect skyline exposure. The German Artillerymen had this ridge perfectly registered and could, and did,
put concentrations on it within thirty seconds of the least sign of movement to cross. We were no exception to the rule, and I am inclined to think that we received rather more than the usual allotment. They followed us with fire right down into the ravine where the Infantry supports were located. Here we got roundly cursed out by rank and file for drawing artillery fire to their position. The tanks crossed the ridge in column at about fifty yards distance. We had no casualties. At the request of the Infantry Commander, one platoon of tanks was sent against the machine gun positions in the forest that were causing the Infantry so much trouble. They accomplished very little other than to draw artillery fire, as no guns could be located in the thick underbrush. About eleven o'clock General Nolan and one of his staff officers came up to inquire into the situation and to devise some means of getting forward. He asked me if the tanks could get into Apremont and when could they go. I told him that we could try and would be ready to move within fifteen minutes. He set the hour for moving at 12:30 P.M. As it was impossible to get anything across the plain south of Apremont on account of machine gun and artillery fire, the scheme was for the tanks, in column, to move up.
the road under cover of the high cliff that extended along the west side of the Aire River valley all the way to the village. This was a rather unusual formation with which to invade enemy territory, but it was the only one that fitted that particular situation. Everything started as planned but did not get very far. The winding road soon lost us to sight of the Infantry but we thought they were following us. One tank (the rear one) had been detailed to act as a connecting file, but it seems that he neglected his job, as we did not know for certain that the Infantry was not following until we reached Apremont. We paraded through the village then back and down as far as the river, where we could see that the bridge was out, then back to locate our troops. We met no serious resistance, as most of the German occupants had taken care to keep out of sight during our raid. We found the Infantry held up by machine gun fire some 800 meters back. It seems that the Germans had light machine guns concealed along the high cliff to our left and as soon as the tanks had passed they opened up on the Infantry and made them take cover. The expedition was reorganized, the supposed enemy positions along the cliff were shelled with 37mm guns and machine guns, and another
try was made, with the same result as the first one, except that the tanks did not pass through the village this time. A third and successful try was made about sundown and Lieutenants Bowes and Roy in command of ten tanks preceded the Infantry into Apremont and the village was in American hands. The formation for this last and successful try was somewhat different from the previous two. The tanks were split up into small detachments and distributed along the Infantry column to take care of any machine gun fire from the bluff along the road by smothering it with high explosive shells from the tank 37mm guns. The Infantry Commander requested that the tanks remain in the village during the night to help ward off the almost inevitable counter attack. One platoon was left in position just below the town and the rest of the tanks returned to Montblainville where the advanced C.P. and Park had been located (55).

As has been noticed perhaps, the Tanks had ceased to operate as companies. All tanks had been pooled into one group and operated as such without regard to company designation (56). I believe this to have been a mistake, as it tended to kill esprit and gave the men a feeling that they did not belong to anything- a sort of orphan feeling.
OPERATIONS ON SEPTEMBER 29th.

The allotment of tanks on this date to the Western Detachment was fifteen (57).

There was no special activity on the 28th Division front on this date other than to advance the right slightly and to consolidate their position in Apremont. The left was still held up by the enemy position on Le Chene Tondu.

Two platoons of tanks under Lieutenants Gibbs and Roy were sent into Apremont to be used in case of need. Some patrolling was ordered to the north but the attempt brought a quick reprisal from the German artillery and was abandoned, as no Infantry action was contemplated (58). The tanks were held all night in Apremont under the immediate orders of General Nolan, to be used in the event of an expected German counter attack, which did not materialize. The remainder of the tanks were held in reserve at the assembly position (59).

OPERATIONS SEPTEMBER 30th.

No operation of any note took place on the Division front during this date. Two tank platoons were held in readiness at Apremont during the day and night, but no action developed (60). On this date F.O. No. 61, First Army Corps, directed that all tanks be
345th Bn.
F.O. 61.
Pers. Exp.

(61) War Diary 345th Bn.

withdrawn to reserve position in the vicinity of Montblainville. This was done with the exception of the two platoons in Apremont (61).

OPERATIONS OCTOBER 1st.

The 55th Brigade on this date organized a local attack to the west of Apremont to the stream of Croisette. The time of the attack was set for six o'clock. Everything was ready and the attack got off as scheduled, the two platoons of tanks commanded by Lieutenants Heitz and Louiselle proceeding the Infantry. But it seems that the Boche had launched a counter attack of their own against the village at 5:30 A.M. The two attacks met on the open field just west of Apremont. The Germans were probably as much surprised as we were at the daylight encounter. The fight only lasted a matter of minutes, but during this time five tanks were completely wrecked by direct artillery fire, three of them with their crews inside being burned. A total of seven tanks of the ten engaged were left on the field as casualties (62). Two German officers and 36 enlisted men were captured by the Infantry (63). Summary of Intelligence, Ist Army Corps, dated October 2d, 1918, contains the statement regarding this action: "Prisoners of the 2nd Ldw. Division

Operations.
(63) War Diary 345th Bn.
state that 'in the counter attack north of Apremont they were completely demoralized by our tanks, as most of the soldiers as well as most of the officers had never seen tanks before. The tanks did very effective work and after having gone through the lines, turned around and came back through them again, at the same time inflicting casualties '"/(64). The remnants of the tank platoons at Apremont were withdrawn into reserve in the vicinity of Montblainville and two fresh platoons under Lieutenants Roy and Bowes were sent to take their place (65).

On October 2d and 3d the Division which we were supporting made no concerted attack. The Corps was getting ready for the attack on October 4th. The time was utilized in preparation for the coming attack and in giving the men a rest in the assembly area (66). During this period the repair unit was sent up to the assembly position to make some very much needed repairs. They did excellent work, although the assembly area was under constant shell fire. I have been criticised severely for selecting and holding on to so exposed a position as Montblainville for an assembly area. I had carefully looked the ground over and decided that I would rather take chances with indirect artillery fire on high
ground than to suffer almost certain casualties from gas in some protected ravine; and, besides, the village, though completely wrecked, offered quite a bit in the way of shelter. There were several wine cellars that had escaped destruction, and the men made good use of them when they came back from the front on quiet days.

OPERATIONS ON OCTOBER 4th.

Sixteen (16) tanks were assigned to the 28th Division sector for operations on this date (67).

Two platoons (10 tanks) supported the right element of the 28th Division in their operations along the Aire River toward La Forge. The first plan had been to attack northwest directly against Chatel Chehery and the preliminary reconnaissance had been made by tank officers during the afternoon. But this plan was changed some time during the night, which left very little time for reconnaissance, and that had to be made in the dark (68). The plan for tanks was for one platoon to go ahead with the advance units of the Infantry to engage such targets as might be designated by the Infantry. One platoon was to follow farther back and protect the left flank, which was exposed to machine gun fire from the woods near Le Menil Ferme and...
Hill 244 (69). This Division occupied a very peculiar position on this date. Its left flank was still held up on Le Chêne Tondu, and the Bois de Taille L'Abbe was not to fall until October 6th, four days later, and after the capture of Chatel Chehery and Hill 244. (70) On the morning of October 4th a light mist obscured the valley and hid the advance from the German artillerymen on the hills to the left front, but was not heavy enough to blind the machine gunners who fired into the flanks of the advancing Infantry at ranges as close as 800 meters. The tanks protecting the flank attempted to stop this fire, but without any decided results. When tanks approached the vicinity from which fire appeared to be coming, all activity ceased and guns and gunners disappeared, only to reappear as soon as the tanks had moved on. The haze disappeared about nine o'clock and exposed this flank platoon to the view of artillery observers. Within a very few minutes it seemed that the clouds were raining high explosive shells. The tanks had to take cover in the woods along the river bank and were of very little use the rest of the day. One tank commander in this platoon completely lost his head when the artillery came down and headed for Apremont across perfectly open country. The German artillery tried to snipe him
but he got away safely, much to the regret of
the rest of us. He arrived in Apremont and
told a wild tale of a German attack coming that
way, but fortunately was not believed. So far
as is known, this was the only American tanker
that ever ran away during action (71). The
platoon that went forward with the Infantry had
little or no trouble. Lieutenant Grant, Engineer
Corps, who commanded one of the tanks in the for-
ward platoon, separated himself from his unit and
proceeded down the river alone. He entered the
village of La Forge; made an extended reconnais-
sance, and came back. He reported that he had
found no Germans in the village but indications
of recent occupancy (72). Why the village was
not occupied by the Infantry at this time I do
not know, but it was not taken until late after-
noon, and then after severe fighting (73). On
account of poor tank terrain along the river
north of La Forge the tanks were not used again,
so were withdrawn to the vicinity of Apremont
late in the afternoon and placed in Division
reserve, where they stayed during the night (74).
On the left flank of the Division the 56th Brig-
ade was held up by Le Chene Fondu and called
for some help. Lieutenant Gibbs was sent with
one platoon of tanks. He remained there all
day and during the night (75).
The 28th Division pushed its attack down the west side of the Aire River north of La Forge until they were held up by cross fire from Chatel Chehery on the west and from Abbatiale Fme. on the east. Late in the evening the 110th Infantry forded the river, took Abbatiale and Pleinchamps farms and rested their right near the foot of the famous Exermond Ravine (76). The line of the 28th Division now ran at nearly right angles to the main battle line, from the foot of Exermond Ravine along the Aire River to Le Chene Tondu in the Argonne, a distance of about six kilometers, and facing Chatel Chehery, Hill 244 and Bois de Taille L'Abbe (77). On this date the Chief of Tank Corps, 1st Army, submitted a report to G-3, 1st Army (American), in which he stated that the 304th Brigade, Tank Corps, had lost in fighting crews, killed and wounded: Officers 52%, includes 4 out of 6 captains, 12 out of 24 lieutenants. Enlisted men 25%. Tanks ditched or disabled and under enemy's artillery fire 70, or 50%. With normal advance of 5 kilometers can put in the fight on 5th and 6th 72 tanks, on 7th may be able to fight 48 tanks, on the 8th 32, on the 9th 16, and on the 10th finished (78).
OPERATIONS ON OCTOBER 5th.

Fifteen tanks were available for operations in the Western Detachment on this date. The Division did not call for tanks during the day, but they were moved up in close support and returned to their assembly position at night (79). Lieutenant Gibbs, who had remained with his platoon in support of the left Brigade operating against Le Chene Tondu, reported to me after he returned that the tanks did not have much chance, as the Germans used close-up artillery, gas and flame throwers. This is the only incident that I know of where flame throwers were used against tanks. Lieutenant Gibbs lost four of his five tanks in this operation (80). Some historians state that Le Chene Tondu was reduced on October 4th, but I am inclined to believe it was not wholly captured until October 5th, and I am borne out in this by the War Diary of the 345th Battalion, Tank Corps, and by the statement of Lieutenant Gibbs made to me at the time (80-a).

OPERATIONS ON OCTOBER 6th.

No attack was made by the Division on this date, and by direction of the 1st Army Corps tanks were held in reserve and repair work was pushed on disabled machines (81).
OPERATIONS ON OCTOBER 7th.

The 28th Division planned for and executed great things on this day. They attacked in two directions, the right Brigade crossing the Aire River on foot bridges attacked due west against Chatel Cheshery and Cotes 244 and 223, while the left was to advance from Le Chene Tondu and the ravine northwest of Apremont against the Bois de Taille L'Abbe (82).

It was in this latter phase that the tanks were to follow in close support of the Infantry, rendering aid wherever called for. Owing to the poor mechanical condition of the tanks they were not put ahead of the Infantry and were not to be called for except where the Infantry was held up by machine guns (83). This date, to paraphrase General Ludendorff, was to be the black day of the Western Detachment of the 304th Brigade of Tanks on the Aire River. About midnight on October 6th I received an order, by telephone, from my Battalion Commander, Captain Ramul Compton, to support the 110th Infantry (I may be in error as to the regiment) in their attack next morning from the vicinity of Apremont. He further directed that I place 2d Lieutenant Thomas D. Steel in command of the eight tanks available, without other officers to help him. He still further directed that
I instruct Lieutenant Steel\$ that he was to report to the Colonel commanding this regiment at exactly 7 o'clock next morning for instructions. I protested this arrangement insofar as sending Lieutenant Steel\$ alone was concerned, but without getting the order changed.

There should have been at least one other officer with that number of tanks. The expedition got away next morning and arrived in Apremont at the appointed time. I disregarded the Battalion Commander's orders to the extent of accompanying Lieutenant Steel\$ to Apremont and helping him with the tanks, but did not go with him when he reported to the Regimental Commander to receive his orders. The attack got off as planned and the tanks disappeared over the hill following the Infantry. I followed after them a few minutes later and thought it rather peculiar that I saw nothing of the tanks when I got over the hill, but supposed that they had gone into the woods at some point just to our front. I searched for tank tracks but could find none.

I then went to the Regimental C.F. and inquired as to the position of the infantry lines and if any tanks were with them. I could find no trace of them there. We then started on a scouting expedition and found where their tracks had turned off to the left rear. We followed...
their tracks and found them nicely parked in a little valley about 800 meters southwest of Apremont and at least two kilometers from where they should have been. I asked Lieutenant Steele the whys and wherefores for his being there instead of up with the Infantry to the northwest. His reply was that he was instructed by the Colonel of Infantry that if they met with no resistance at the initial stage of the attack he was to assemble his tanks at some point and await orders. The resistance to the Infantry was slight, as the attack coming against Chatel Chehery and Hill 244 from the east cut in rear of the German position in the Bois de Taille L'Abbe and forced its evacuation with but minor pressure from the southeast. The explanation did not explain, but I had to take it. As events transpired, there was no great amount of damage done, except to our prestige. We moved forward with the tanks and they were later called for west of Hill 244, but before they got there the cause for their need had been removed. No further action was had on this date and the tanks assembled at Apremont for the night. I reported this occurrence to the Battalion Commander and after talking the whole matter over he concluded that this young officer was just plain dumb in matters military, rather than timid to the extent of running away from a
fight. I can vouch for his personal courage on other occasions where to run away seemed the only sensible thing to do (84). As I look at things now, I can see that I was wholly to blame for the unfavorable position in which we found ourselves. As a commander on the ground and knowing the limitations of the lieutenant in question, I should have disregarded the instructions of my Battalion Commander, who was six kilometers away, and gone with the platoons myself, or at least have detailed a competent officer, of which I had several, to accompany Lieutenant Steele. I have always felt that I failed in my duty on this date.

No tank operations were had by the Western Detachment during the period October 9th, 9th and 10th. What few tanks were running were held in reserve (85). The 82d Division had taken over the sector of the 28th Division, and this hard-fighting and gallant division after 13 days of fighting were moved to reserve and given a much needed rest (85-a).

On the night of October 10th I received orders to take a platoon of tanks to the vicinity of Pylon, in the forest northwest of Montblainville, for operation with the 77th Division on the morning of October 11th, with
Further orders for me to report to the Commanding General, 77th Division, at his headquarters at 7:00 A.M. (86). Now Pylon was well within the 28th Division sector and had been taken some five or six days previous to this. The Tank Commander was instructed to report to the place designated, and if no one was found there with instructions as to what was wanted, the tanks were to move on west until the axial road of the 77th Division was reached, where they were to await further orders. The latter is what happened (87). I reported at the 77th Division headquarters as directed and found them located in a concrete structure that had apparently been built for some German officer of high rank, as it contained all of the conveniences and some of the luxuries of a well-kept home, the whole being surrounded by flower gardens and trimmed shrubbery. On my arrival I found one officer on duty, a lieutenant, and he informed me that the General was asleep and could not be disturbed. I waited until eight o'clock, when the General appeared. I reported to him and stated my business. He was much surprised and said that he had not asked for tanks and did not know anything about the matter. He then made inquiry of his staff, but they apparently knew no more than he did. The General then asked me some questions con-
cerning the use of tanks and whether or not they could operate through wooded swamps. I explained to him that they would not do so well in that sort of country. He then said that they had not asked for tanks but as they were there they might as well be used, and for me to take them up the main road until I found a front line regiment, report to the commanding officer thereof, and he would tell me what to do. We started north and had gone several kilometers when we were overtaken by a motorcycle messenger with an order relieving us from duty with the 77th Division and directing our return to Montblainville (88). Thus ended our expedition into strange territory. The thing that stuck in my craw the longest about this last little foray was not the useless work and worry,—that was part of the job— but the fact that the 77th Division Headquarters did not offer me any breakfast, when I could see it on the table ready to be eaten just as I left. I had had nothing to eat but a cup of coffee since the evening before. We started out this morning at three o'clock.

When we reached our assembly position late on the evening of October 11th, orders were awaiting us directing the relief of the tank units from the line for reorganization and the formation of a provisional company from the personnel and tanks of all units to operate
east of the Aire River in support of the First Division. So far as I can find, no statistics are available as to casualties in the Western Detachment, 304th Brigade, Tank Corps, during the period September 26th-October 11th, 1918.

ANALYSIS AND CRITICISM.

Taken as a whole, the operations of the tanks in the Western Detachment may be considered as successful. They materially assisted the Infantry to advance on many occasions and saved them many casualties, especially on the first day.

The morale factor was always present, whether or not the tanks were used. Troops seemed to feel a sense of security when tanks were present, whether justified or not.

The effect on the enemy was probably the greatest factor. The German soldier feared tanks and never got over the fear of them, and the very fact that tanks were present in any sector seemed to make them nervous and uneasy. They had no positive means of combating tanks other than by direct action of cumbersome artillery.

The tactics were faulty in many instances—especially when they were used as raiding parties in the edges of the forest unsupported by infantry troops,—nothing to gain; much to be lost.
The formation in column on one road on entering Aprémont the first time, on September 28th, was faulty and might have resulted in disaster had the enemy posted an artillery piece in a concealed position along the road to fire on the column at close range. Surprise was probably the reason for lack of such a disposition on his part,—surprise that we should adopt such a vulnerable formation. They were prepared for our coming across the open plain. We didn't go that way.

The entrance of the reserve unit into the fight on the first day was, I think, the most costly error of the whole operation. There were enough tanks in the assault company, if used in the proper place, to have accomplished all that both of them did, leaving a complete and unused unit to take up the advance with the Infantry the following morning. I believe the commanding officer of Company "A", 345th Battalion, was responsible for this early commitment of the reserve, and it was due not so much to necessity as to a desire to get into the big show as soon as possible, without regard to his orders and without thought of the effect his act would have on future operations.

After the capture of Varennes all tanks should have been rallied south of that place for reorganization and re-orientation.
They were of very little, if any use to the infantry the remainder of the afternoon, as there was complete lack of coordination.

The carrying of gasoline on the tails of combat tanks entering battle displayed poor judgment and underestimation of the intelligence of the enemy.

The point selected for the administrative rallying point was too far to the rear. This error could have been corrected later in the evening but I lacked the aggressiveness necessary to change an existing situation not of my making.

A detailed reconnaissance should have been made the night of September 26th-27th to find a good route of advance, so as to insure the arrival of the tanks at the Infantry position the next morning in time for the attack at 5:30. This was not done.

The error of having the administrative rallying point too far from the Infantry front lines was repeated constantly throughout the whole operation. This error was remedied somewhat later by leaving the tanks with the Infantry and supplying them by other means from the assembly position.

The consolidation of the two companies into one group was, I think, a mistake. The companies should have been kept as separate units regardless of their strength.
This would have made for better esprit and would have fostered that pride of organization that is wholly lacking in provisional units. Each company should have been kept together and separate from the other, and only one unit used each day, except on special occasions, thereby giving to the company one day in which to make all minor repairs, clean equipment, etc. This would have put each organization on its metal in the endeavor to keep more tanks on the line than the rival company.

Cooperation was very poor between the Infantry and Tank units. This was due in most part to the ignorance on the part of each of the capabilities and limitations of the other. Tank tactics were unknown at that time to most infantry officers, and were very little understood even by tank officers. At the Tank School at Langres, the mechanics of drills and formations had been stressed to the neglect of methods and means of cooperation with the Infantry. A tank officer supporting or attached to an infantry unit should be a part of the combat team and should be given all information of the situation, both general and special, that is usually given an infantry staff officer. This was not done, and tank officers were usually in the dark as to what was to be accomplished other than in their
immediate sector. Brigade and battalion commanders, especially the latter, should keep the front line tank unit commanders informed each day of what is going on in the unit sector to the right and left, and what objective all this effort is leading up to. Such information was non-existent in our units during this operation. As an instance: I did not know until after the war that it was a part of the plan for the 28th Division to move up the Aire River on its right, leaving its left far behind, and gradually flank the Germans out of the forest. I might have acted differently had I known this.

The Battalion Commander had his command post too far to the rear after the second day. He should always have been near his front line units so that he could exercise direct control and influence the actions of his subordinate commanders. Our Battalion Commander did not visit us for the period September 26th—October 10th.

Tanks should not be used for patrol purposes. This was done frequently without any benefit being derived therefrom. Observation from a tank is too limited for such use.

Tanks should not be sent far from their base for operation in another sector, as was done on October 11th, without first knowing what is wanted and where. Lack of coordination shown here.
On October 7th the Battalion Commander acted unwisely in detailing an incompetent officer to command a unit in combat over the protest of the commander actually on the ground. The commander of the unit failed in his duty when he did not modify the Battalion Commander's order regardless of consequences to himself. Lack of aggressiveness is unpardonable, but this is mainly due to inaccurate or no knowledge of the general situation and the commander's plans. All officers must be thoroughly and carefully instructed so that they may understand the part they are to play in the general plan.

LESSONS.

The lessons to be learned from this series of small actions, as set forth in terms of the Principles of War, are as follows:

(1) The Principle of the Objective was at all times adhered to— that of assisting the infantry units to which attached to advance and obtain their objective, thereby causing the enemy to withdraw.

(2) The Principle of the Offensive was observed throughout, with but one notable exception, that of October 7th.

(3) Mass was employed in the initial action by placing units in depth (column of
companies). It was violated later in the first day when the reserve company merged with the assault company without orders, leaving little or no reserve for the Corps Commander. On subsequent dates tanks were, with a few exceptions, used only at critical places. Tanks were too few in this division sector to affect its operation as a whole. Tanks should be used in great numbers when the main effort is being made. We may say that the tanks always attacked in mass, as the Germans had no tanks with which to meet an attack with weapons of this character.

(4) Economy of Force was not always observed—notably the first day when all units were thrown into action without orders and when not needed.

(5) Movement is one of the fundamental characteristics of tanks. Their immunity from small arms fire presupposes that tanks will maneuver against resistance that has immobilized all other ground combat elements. This principle was violated on October 7th when the tanks were withdrawn soon after the assault and held immobile in rear of the lines.

(6) Surprise was obtained in the initial attack by concealment in woods and making all movements at night. This principle was violated at Clermont on September 24th when
the 345th Battalion detained in broad daylight and moved to assembly positions. After the initial attack surprise was obtained only by appearing from unexpected directions and by movement to assault positions under cover of darkness.

(7) The Principle of Security was usually observed by moving at night. In some cases this principle was flagrantly violated by movements across open terrain in broad daylight, notably north of Montblainville on September 28th.

(8) The plan for the initial tank attack was simple in the extreme. Orders were short and free from hampering contingencies. On subsequent days orders were mostly oral or short written messages telling only what was to be done, where and when, leaving to the subordinate his full initiative as to how.

(9) The Principle of Cooperation was probably violated more often than observed. This was due in most instances to a lack of knowledge of the capabilities and limitations of each of the arms by officers of the other. The tank was a new weapon and many officers had never even seen one, let alone made a study of its use. Infantry plans and intentions were seldom made known to the tank commander.
Higher commanders, notably battalion commanders, failed to keep their subordinate commanders informed as to their intentions and plans so that all could work together to the common end. Liaison between tank commanders and infantry commanders at the front was very weak. They very seldom got together and discussed how support could best be rendered the Infantry. This, I think, was due to inexperience on the part of the tank commanders. This should have been corrected by the higher command.

The outstanding lesson brought out by this series of small tank actions was the totally inadequate number of tanks for an operation of this magnitude. Had the American Army possessed, even approximately, the number of tanks provided for in the plan for the spring campaign of 1919, the breaking of the German line would have occurred several weeks earlier than it did. Also, that any nation, whose armies are opposed to the armies of a nation of equal rank and who fails to keep abreast of the other in the adoption of new weapons, is almost sure of defeat. The Germans failed in this one instance of tanks and would have been defeated ultimately for this reason, all other things being equal. ... The mechanized force, as an important combat unit of any army,
was born during this war, and any nation that fails to nourish this infant unit of its army is sure to pay dearly for the neglect soon or late.

QUESTIONS AND ANSWERS.

(1) Q. What was the training and experience of the Tank Brigade prior to the Meuse-Argonne offensive?
   A. Its units had been in training since March, 1918. It had participated in one major battle—St. Mihiel. It was a new arm and but little was known of its capabilities and limitations.

(2) Q. What was the formation of tank units for the attack at 5:30 A.M. September 26th?
   A. Column of companies, first company in line of platoon columns, second company to follow at 1500 meters. Reserve and training tanks to follow reserve at 2000 meters.

(3) Q. Why was the order to carry extra gasoline on tails of combat tanks an error?
   A. The gasoline was set on fire by use of incendiary bullets, or tracer ammunition, fired by the enemy. When not set on fire, containers were pierced and contents lost.
(4) Q. What was the mission of tank units in the attack of September 26th, 1918?
A. To support the advance of the 28th Division.

(5) Q. Did the original formation in depth continue as directed?
A. No. The reserve company was committed early in the day.

(6) Q. Did the Infantry occupy Varennes when first taken by the tanks?
A. No. The Infantry followed the tanks on their second entrance, at 1:30 P.M.

(7) Q. Were there any coordinated attacks by tanks on September 26th after the capture of Varennes?
A. No. Tank units were completely disorganized and should have been withdrawn for reorganization.

(8) Q. Did a spirit of cooperation exist between Infantry and Tank units during this offensive?
A. The spirit existed but due to the inexperience of officers of both arms it failed more often than it succeeded.

(9) Q. Was the sending of tanks on missions against machine gun nests in the woods, without infantry support, a proper use of tanks?
A. No. Their efforts were dissipated, with no permanent results.
(10) Q. Did Battalion Commander keep forward commanders fully informed of the situation and of what was to be accomplished?
A. No. The Battalion Commander gave no information of what was being done or of what the higher command was trying to do. He did not try in any way to stimulate the action of his forward units by his influence.

(11) Q. Was tank assembly position too far to the rear?
A. Yes. Took too long to get to the Infantry positions; also caused undue wear and tear on machines.

(12) Q. Were any replacements available for tanks broken down or destroyed by the enemy?
A. No. Replacement tanks were not furnished.