



MAJOR GENERAL HUGH ELLES, C. B., D. S. O.  
FROM A PORTRAIT BY SIR WILLIAM ORREN, A. R. A.

# THE TANK CORPS

BY

MAJOR CLOUGH WILLIAMS-ELLIS, M.C.

AND

A. WILLIAMS-ELLIS

WITH AN INTRODUCTION BY

MAJOR-GENERAL H. J. ELLES, C.B., D.S.O.

COMMANDER OF THE TANK CORPS

ILLUSTRATED



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# THE TANK CORPS

## CHAPTER I

A BRIEF ACCOUNT OF THE TANK, ITS CREW AND ITS  
TACTICAL FUNCTIONS, AS THEY WERE AT THE  
DATE OF THE ARMISTICE

### I

THE secrets of the Tank Corps have been so well kept that there are few civilians who even now know anything of Tanks or their crews beyond what might be learned from photographs, or a distant view of "Egbert" or some other War Bond or Olympian Tank.

The Censorship has seen to it that the civilian has had no opportunity of making himself familiar with the tactical opportunities and problems that the use of Tanks has introduced or with the conditions under which Tank crews fight.

It is for the civilian reader that the present chapter is intended. He is to be given some idea of the oak tree before he is invited to dissect the acorn.

If he has no idea of the appearance and habits of the Tanks that fought at the Canal du Nord or that pushed back the enemy at Mormal, he cannot be expected to thrill as he should over the vicissitudes of the first converted Holt Tractor. For to one who had never seen the engine of a through express the history of "Puffing Billy" would almost certainly prove insufferably tedious.

The authors, therefore, propose to deal, very briefly, with the modern Tank before plunging the reader into the dark ages of 1914, where, to pursue our analogy, Watt's kettle-lid and the "Rocket" dwell obscurely.

## II

Every detail of Tank Corps' training, equipment, and tactics has been modified in view of some limitation or opportunity arising from the structure of the Tank itself. Therefore, though this book is principally concerned with the development of the Tank Corps rather than with the intricate evolution of the Tanks themselves, the reader will find it necessary to have a general idea of the construction and workings of the different types of machine.

It would indeed be as idle to describe the anatomy of a snail or a lobster without mention of its shell, as to endeavour to separate the story of the Tank Corps from that of its Tanks.

When the War ended in November, 1918, there were, besides obsolete types which were still used for such work as carrying and the towing of supply sledges, three main types of Tank. First, the Mark V., which was 26 ft. long, 8 ft. 4 in. wide, weighed 27 tons, and had a horse-power of 150. The Male Tanks carried two 6-pounder guns, and one Hotchkiss gun. The Female carried five Hotchkiss machine-guns and no 6-pounder guns.

*The Mark V. Star.*—This Tank resembled the Mark V., except that it had a length of 32 ft. 6 in., and was designed for the transport of infantry and for the traversing of trenches too wide for the Mark V. Each had a normal speed of about five miles an hour, and was protected by armour up to five-eighths of an inch thick.

They were both so designed as to turn easily at their maximum speed, and carried attachments for use on soft ground, which increased the grip of the tracks.

Each was fought by a crew consisting of a subaltern and seven men, three drivers (two of whom normally fought the Hotchkiss guns), and three gunners.

The third type was the Whippet. The tracks were nearly as long as those of a heavy Tank, but the body had been reduced to a small cab perched at the back, rather as an urchin rides a donkey. It was armed with two machine-guns, managed by a crew of three men, and developed a speed of seven miles an hour. Whippets were designed for use as raiders and in conjunction with cavalry. In practice, however, the cavalry was seldom able to act with them. Partly in consequence of this, partly owing to the state of open warfare being of such short duration, the Whippets, though having brilliant feats to their credit (see the exploits of "Musical Box," Chapter XIII), remained creatures of promise rather than of achievement.

## III

As a rule Male Mark V. Tanks were used against Pill-Boxes and other "strong points," while the special work of Female Tanks was to deal with hostile infantry (for example, by sitting astride and thus enfilading their trenches), and then to finish the process of flattening the enemy's wire which the Male Tanks had begun.

All three types of Tank were capable of going across country. That is to say they could, for example, follow a pack of hounds anywhere, except perhaps in the Fens.

Ditches, heavy plough, banks, walls, hedges, or fences could all be negotiated.

Tanks could also go over many obstacles—notably

over wire—where the Field, even were they willing “to take a windmill in the harbour of the chase,” must go round.

But as a moment's reflection will show, there must remain in every country certain features which will prove absolute barriers to the progress of Tanks.

Chief among these are canals and deep rivers (unless spanned by strong bridges), very steep railway cuttings, railway embankments, marsh, or woods in which the trees are too strong to be pushed over, and too dense-set to be steered through.

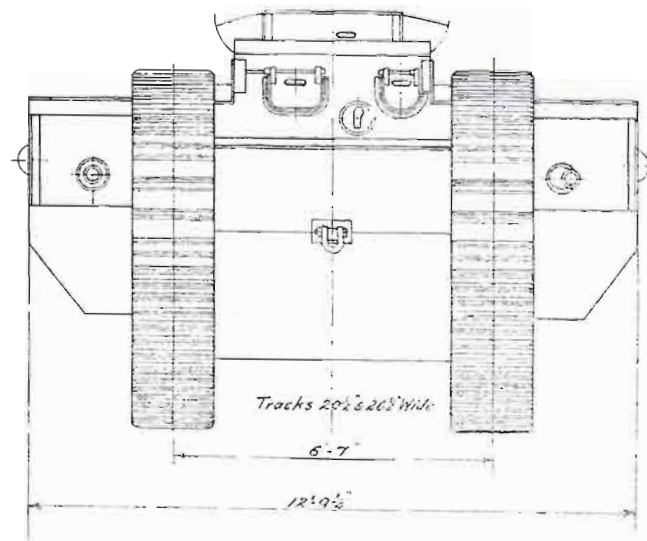
Besides these natural, or at least civilian, obstacles, there will be inevitable military obstacles in any country that has been fought over.

For example, old half-blown-in trench systems make ground “awkward,” and Tanks operate at extreme disadvantage in country like that round Ypres, which was by 1917 a continuous network of water-logged shell and mine craters, with no original ground left at all.

Again, by the close of hostilities the number of anti-Tank devices employed by the Germans was very considerable. They paid the new arm the compliment of an intricate system of defence and counter-offence which included concealed Tank traps made on the model of elephant-pits, formidable double-traversed trenches, a branch of special anti-Tank artillery, heavily reinforced concrete stockades, and an elaborate system of land mines.

With so many obstacles to avoid or to negotiate, with their fate often hanging upon a prompt and accurate use of their guns, the crew inside the Tank were doomed by the conditions under which they fought to an almost incredibly limited view of the surrounding world.

When the flaps were closed (see diagram show-



GENERAL ARRANGEMENT OF MARK V. TANK—  
FRONT VIEW



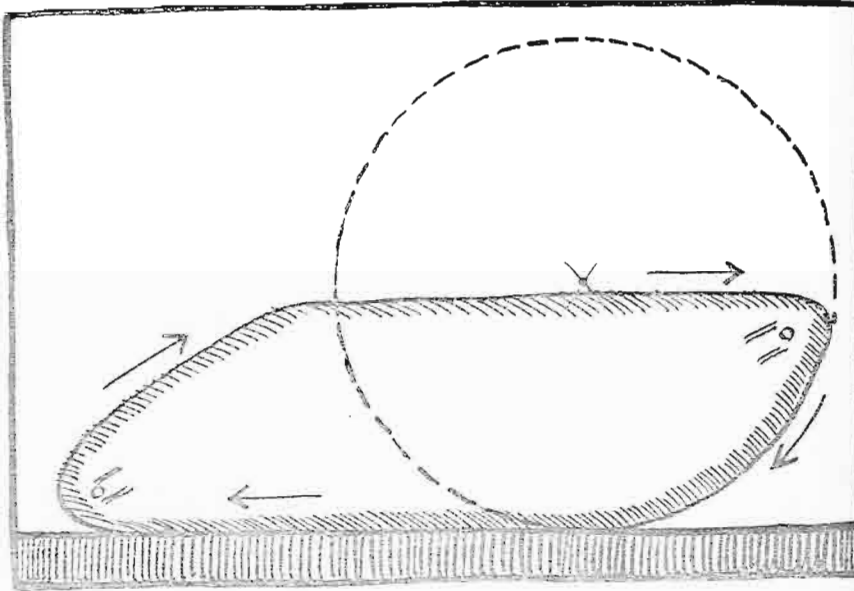


DIAGRAM SHOWING HOW THE CATERPILLAR METHOD OF TRACTION CARRIED OUT THE PRINCIPLE OF THE "WHEELERED TRACTOR." SEE NOTE AT END OF CHAPTER II.

ing interior of a Mark V. Tank), as they had to be directly the Tank came under close fire, the crew were in almost complete darkness, and had to rely upon their periscope or, alternatively, upon minute eye-holes (about the size of the capital O's used in this text) bored through the armour-plating. If the fire was at all heavy the periscope was usually quickly put out of action, and the officer and gunners had only the extremely limited view afforded by these holes.

They were thus almost entirely dependent upon their maps, the special Tank compass, and upon the information which a preliminary reconnaissance of the ground had given them.

This circumstance not only profoundly modified the training of the officers and crews, but also necessitated the organisation of what was almost a new service. This service was the "Reconnaissance" branch of the Intelligence. When the Tank Corps was ordered to take part in an attack, the Reconnaissance Staff was responsible for the preliminary survey of the proposed battle site for a report as to where and how Tanks could best operate, and finally for a series of detailed maps and sketches. In these maps and sketches the route of every individual Tank was set forth from landmark to landmark, together with the assigned objectives of each machine and the obstacles which it was likely to encounter. These maps and sketches were compiled from aerial surveys, captured German maps and documents, information gained from local inhabitants, accounts given by prisoners, the original Ordnance survey, and from personal reconnaissance. By 1918 this system had been so developed that the infantry came to rely almost entirely upon their accompanying Tanks for direction.

This added greatly to the importance and responsibility of the work both of Tank Reconnaissance officers and of commanders.

## IV

Topographical information can only be adequately conveyed to a more or less trained receiver, and it was therefore found necessary to add an elementary course on Reconnaissance to the already long list of subjects in which the members of every Tank crew must train. The crew were an assemblage of experts.

An average of about a month was spent by every soldier at the training depots and battle-practice grounds. Here each man did about ten days' course as a driver or gunner, learned revolver-shooting, signalling, and the management of carrier pigeons, and went through a gas course. In view of the probability of casualties, each man was also given a working knowledge of every other man's job. But most vital of all—the conditions under which Tank crews fought being out of the common trying and arduous—the scheme of training aimed at creating a high sense of discipline; that *esprit de corps* and that tradition of valour which teaches men to endure the unendurable.

This supreme end it achieved, as a perusal of the Tank Corps Honours List will show.

Such, then, were the Tanks and their crews in the autumn of 1918.

In the pages which follow, the reader will see from how crude an embryo the Tank sprang, and through what hair-breadth escapes alike from official overlaying and annihilation by the enemy, it passed in the four years of which we are about to relate the history.

## CHAPTER II

THE EARLIEST TANKS—GENERAL SWINTON—ADMIRAL BACON—THE HOLT TRACTOR AND THE EVOLUTION OF THE "LAND CRUISER"

## I

THE War had only been in progress for a few weeks when the first idea of the first Tank was born almost simultaneously in the minds of General E. D. Swinton, Major Tulloch, Captain Hetherington and Mr. Diplock, and—if we are to believe rumour and their own account of the affair—of several hundreds of other gentlemen.

"Born" is perhaps not quite the appropriate word. At any rate it is to be understood, if not in a Pickwickian, at least in a Pythagorean sense.

For by 1914 the Tank had successively passed through several tentative and inconclusive incarnations.

In 1482 Leonardo da Vinci invented a kind of Tank; \* a wooden "War Cart" was used by the Scottish in the fifteenth century.†

There were designs for a Tank for the Crimea, but the project of this weapon was abandoned as being barbarous. Lastly, a really practical design for a kind of "Caterpillar" to be driven by steam was made in 1888.

\* "I am building secure and covered chariots which are invulnerable, and when they advance with their guns into the midst of the foe even the largest enemy masses must retreat, and behind them the infantry can follow in safety and without opposition."

† It differed from an ordinary chariot in that the two little fat hollow-backed horses, which are depicted as providing the motive power, were like the crew, enclosed within the wooden armour.

## CHAPTER IX

## THE THIRD BATTLE OF YPRES

"Quenched in a boggy Syrtis, neither sea  
Nor good dry land—nigh foundered, on he fares,  
Treading the crude consistence; half on foot."

*Paradise Lost.*

THE night of July 30 was dark and wet, and towards morning a fine mizzling rain blurred the outlines of the star shells that lit up the lines. Along fifteen miles of front the English and German guns had roared against each other all night.

The waiting men shivered in their wet assembly trenches.

About three o'clock on the morning of the 31st there was a lull in the firing. A low soaking blanket of Scotch mist had crept up and lay heavily enfolding the opposing armies. Zero hour was drawing near. All along the front, men were feeling for the little footholds above the fire-step.

At 3.50 the streaming darkness was rent along the seven miles of attack. Thermite and blazing oil flared out, and such a barrage as had not yet been crashed upon the enemy's line, and infantry and Tanks scrambled and lurched in the darkness in and out of shell-holes over the torn and slimy ground.

The German front line fell at once along the whole seven miles. Until nearly eight o'clock men and Tanks could hardly get through the mud fast enough to come to grips with the enemy. On each Corps front there were many machines that got ditched on the enemy front

line as they nosed about here and there, seeking to mop up lurking machine-gun nests and snipers.

There some of them remained stuck fast, not having seen the main body of the enemy at all, so immediate had been his retreat.

His artillery was, however, active enough, and as the Tanks floundered or stuck utterly in the mud, his guns and his low-flying aeroplanes took steady toll.

All morning we pressed on, the enemy Command patiently conserving the power of its armies.

The doings of a group of Tanks belonging to the 3rd Brigade give an extraordinarily good idea of this part of the action. They were fighting on the 19th Corps front.

\* "At 11.30 a.m. message was received that a Battalion of Argyll and Sutherland Highlanders were held up on the right. Tank 'Canada' moved in this direction and silenced enemy machine-guns in the Railway Embankment, assisted by the Tank 'Cuidich'n Rich.' When patrolling in front of the infantry whilst they were consolidating, Tank bellied.

"At the same time enemy barrage came down, and both Tank 'Canada' and Tank 'Cuidich'n Rich' received direct hits. Five of the crew remained with the infantry, and assisted in repelling a counter-attack, two of the men being wounded.

". . . Tank 'Cape Colony' arrived at Low Farm and proceeded in front of the infantry. Came under heavy shell-fire and bellied. Whilst unditching, Tanks 'Cyprus' and 'Culloden' were observed under heavy fire from anti-Tank guns, which were in position on the high ground beyond. Both 'Cyprus' and 'Culloden' were seen to be hit.

"'Cape Colony' then came under heavy M.G. fire from both flanks. On request of infantry 'Cape Colony'

\* 3rd Battalion History.

proceeded to a wood on right flank, where they were held up.

"Although not fired upon from the Tank, several enemy machine gunners surrendered to the infantry, on seeing the Tank approach. 'Cape Colony' now turned N.E. towards Beck House, where a good view of anti-Tank guns, which had been shelling 'Cyprus' and 'Culloden,' was obtained. Whilst manœuvring to take these guns in flank or rear, the Tank sank in a swamp, water rising to the engine cover. Boche aeroplanes circled low overhead whilst unsuccessful attempts were made to unditch. Enemy shelling then became very heavy, so Lewis guns were taken out and Tank locked up.

" . . . Flag Tank 'Cumbrae' was delayed half an hour by bellying in a trench near Bill Cottage, went in front of the infantry towards second objective. Opened fire on enemy who were disappearing in direction of Delva Farm. Ground was quite water-logged, and Tank bellied in a borrow pit. Whilst digging out was fired at by a sniper, and by an aeroplane flying low overhead. Time was then zero plus 9 hours (i.e., 12.50 p.m.).

" . . . Tank 'Caithness' came under sniper and machine-gun fire near Beck House. No bullets penetrated armour-plating. Proceeded in company with Tank 'Carstairs,' which silenced enemy M.G. fire. Cameron Highlanders then advanced, and Tank followed, bellied near Zonnebeke Stream. Mud was up to floor level and door of sponson was pushed off its hinges. Enemy aeroplane circled overhead, and fired on them whilst attempting to unditch. Eventually Tank 'Carstairs' came to the rescue, and Tank was got clear.

" . . . Tank 'Culloden' had her unditching gear carried away by barbed wire near Hill Cottage. Unditching beam was recovered, but again broke loose, until secured with rope. Just west of Frost House shell burst under front of Tank. Whilst crossing light railway half-way between Frost House and Square Farm, a second shell hit roof door and killed one gunner. Tank stopped, and it was found petrol pressure pipe was cut. Time 9.15 a.m. A third shell struck behind right spon-

son. Crew were withdrawn from Tank, and took up a position in shell-holes near Square Farm. Tank was still being shelled, undoubtedly by an anti-Tank gun, about ten shells being fired at it in five minutes, six of which hit the Tank.

"Tank 'Cyprus' was then seen to be hit by the same anti-Tank gun. At 10.15 a.m. survivors of Tanks 'Culloden' and 'Cyprus,' together with undamaged Lewis guns, withdrew to Battalion Rallying Point, after pigeon messages had been despatched reporting the situation.

" . . . Tank 'Carstairs' arrived at Black Line near Beck House, but infantry had not then arrived.

"Tank soon bellied in boggy ground, but was unditched successfully. Just west of Borry Farm Tank 'Caithness' was found badly bellied, and with unditching gear lost.

"Having been informed by 6th Cameron Highlanders that the second objective had been captured, Tank 'Carstairs' hitched on to Tank 'Caithness' and towed it out. Enemy shell-fire was extremely heavy, and an aeroplane flew over, firing at crew with machine-guns during the operation.

"Instructions were then received to return to Battalion Rallying Point."

Another very gallant action was fought by a Tank crew also belonging to this Battalion.

They started the battle in a Tank named "Ca' Canny" under command of Lieutenant H. P. M. Jones, who was killed near Wilde Wood. The crew carried on under command of Corporal Jenkins until about 11 p.m., when the Tank "bellied" hopelessly. Corporal Jenkins withdrew his Lewis guns and crew, and, placing some of them on the top of the Tank and some on the ground, kept up an effective fire on the enemy, who were then attempting a small counter-attack.

He then transferred his men to another Tank,

"Clyde," whose crew had all been wounded. They fought this Tank for a further two hours, but at about three o'clock "Clyde," too, stuck in the mud and proved inextricable. He and his crew then returned on foot to their Battalion Rallying Point.

With the 18th Corps, the 1st Brigade Tanks were on several occasions signalled for by fairly distant parties of infantry, who proceeded to "set" them at strong points that were giving trouble. This system worked extremely well, and had a particularly impressive moral effect on the enemy. Several occasions are recorded on which enemy garrisons did not wait for the Tank which had been thus "whistled up" to get near enough to fire, but surrendered as soon as they saw it coming.

Our advance had continued for about ten hours, that is, till nearly three in the afternoon, when our enterprise seemed to have succeeded.

As early as nine in the morning we held the whole of our second objective north of Westhoek.

By the afternoon we had entered St. Julien, Frezenberg and the Pommern Redoubt, and had taken the crossings of the Steenbeek and Stirling Castle.

Glencorse Wood and Inverness Copse had proved more difficult, but even here we held a footing on the ridge.

We had "ripened the oak," we were now to feel the force of the rebound.

That afternoon in a downpour of rain the enemy counter-attacked along the fronts of all three Corps. There was a fierce struggle, in which in many instances Tanks were able to do a good deal of execution.

We were shelled out of St. Julien. North of it we withdrew to the line of the Steenbeek, and we were

obliged to fall back from all but the western outskirts of Westhoek.

All afternoon we slowly lost ground, yet when night fell we could still boast a battle well begun. It was, after all, never meant to be a one-day attack, and to-morrow we should start well. We had everywhere taken and held our first objective, that is, the low muddy ridge from which the enemy had so closely threatened the original Ypres arena.

The second flat valley and the higher ridge from Paschendale to Staden now lay before us.

At least we were in a good position for to-morrow's attack. Mr. Buchan thus in effect analyses our gains:

Along two-thirds of our line of attack we held our first objectives. On half of the remaining third we had only fallen just short of our final objective. On the remaining sixth we had even slightly exceeded our final objective. We had besides taken 6000 prisoners and a quantity of machine-guns.

## II

All that night the enemy counter-attacked us doggedly, resolved upon driving us down again. All night we fought to keep what we had won, and prepared the redoubled blow that we meant to deliver next day.

That blow was destined never to be struck. The wind that brought the rain blew out our hopes of victory.

\* "The weather had been threatening throughout the [first] day, and had rendered the work of our aeroplanes very difficult from the commencement of the battle. During the afternoon, while fighting was still in progress, rain began, and fell steadily all night.

"Thereafter, for four days, the rain continued with-

\* From Sir Douglas Haig's Despatch.

out cessation. . . . The low-lying, clayey soil, torn by shells and sodden with rain, turned to a succession of vast muddy pools. The valleys of the choked and overflowing streams were speedily transformed into long stretches of bog, impassable except by a few well-defined tracks, which became marks for the enemy's artillery. To leave these tracks was to risk death by drowning, and in the course of the subsequent fighting on several occasions both men and pack animals were lost in this way. In these conditions operations of any magnitude became impossible, and the resumption of our offensive was necessarily postponed until a period of fine weather should allow the ground to recover. As had been the case in the Arras battle, this unavoidable delay in the development of our offensive was of the greatest service to the enemy. Valuable time was lost, the troops opposed to us were able to recover from the disorganisation produced by our first attack, and the enemy was given the opportunity to bring up reinforcements."

It was nearly a fortnight before the 5th Army could again attack.

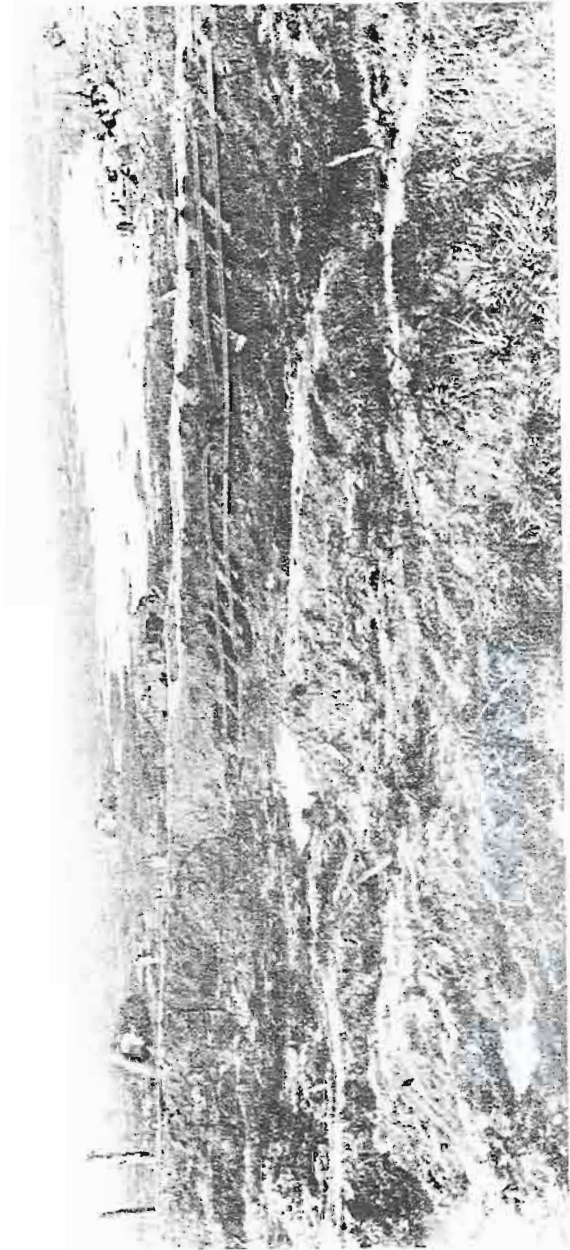
The disappointment of the Higher Command was acute; acute, too, were the physical and mental miseries suffered during that fortnight by the Tank Corps and all the other arms engaged.

Their magnificent efforts, their sacrifices, were of no avail. There they lay day after day, drenched by the inexorable rain, those in the forward area half choked in the rising streams of liquid mud.

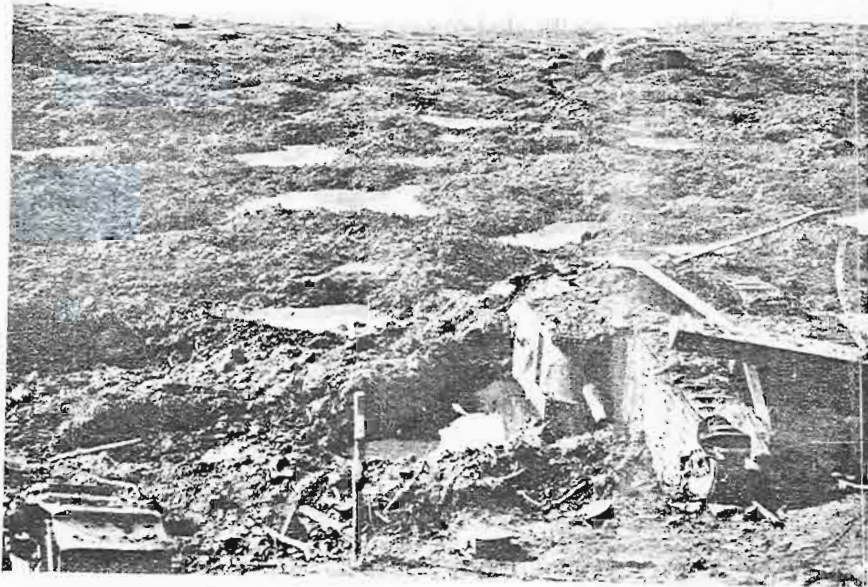
It was in no sunny frame of mind that the 5th Army Headquarters Staff read the verdict of the three Corps upon the day's work done by the Tanks.

The three Summaries were agreed that the courage and perseverance shown by Tank personnel had been admirable.

One Corps, however, had given way thoroughly to the



A MUDDY SWAMP (THE WRECKS OF SIX TANKS MAY BE COUNTED)



"CLAPHAM JUNCTION" NEAR SANCTUARY WOOD



"THE SALIENT"

spirit of the time. They practically reported that Tanks had been of no use to any one, and moreover that they were never likely to be. With the 30th Division they had been unable to deal with certain machine-gun emplacements; with the 24th they had been late, they always drew enemy shell-fire; and with the 8th Division one Tank had even lost direction and been reported as firing on our own men.

Another Corps had found Tanks helpful, and said all they could for them.

Tanks had greatly assisted the Gordons and Black Watch at Frezenberg, they had dealt effectively with concrete dug-outs; with the 55th Division they had broken the wave of an enemy counter-attack at Winnipeg, and everywhere their moral effect on the enemy had been of great assistance. Twenty-four Tanks had been put out of action by bad going or shell-fire.

A third Corps with fewer machines had in many cases reached their objective without being held up. The Tanks had in these cases merely followed the infantry, but they reported that without Tanks the capture of the strongly wired position of Alberta would have cost the 39th Division dear, and that on the Steenbeck near Ferdinand Farm the enemy, who had bolted at the mere sight of a Tank, had been "dealt with" at ease with a machine-gun by infantry of the 51st Division.

Upon these Summaries and upon later failures the Commander of the 5th Army was subsequently to base a generally unfavourable report upon Tanks.

The report may be condensed into a simple syllogism:—

1. Tanks were unable to negotiate bad ground.
2. The ground on a battlefield will always be bad.
3. Therefore Tanks are no good on a battlefield.

He added to this, that being no longer a surprise to the enemy, he considered that Tanks had lost their moral effect, and had no value used in masses.

This report was not officially presented for some weeks, but the Higher Tank Command must early have perceived the drift of affairs. The events of the first day and the manner in which those events were interpreted gave only too much data to the prophetic spirit. The junior Tank personnel knew little of what was going on. Like Burns's mouse, they were only touched by the present, the throwing away of what had cost them so many weeks of toil. To the Higher Tank Command was reserved Burns's own fate:

"But, ooh! I backward cast my ee  
(On prospects drear!  
 And forward, tho' I canna see,  
 I guess and fear."

What would be the results of the initial ill-success of the battle, and of the further Tank failures which seemed only too probable when an advance which had begun so ill was continued, after perhaps two or three inches more rain?

How were the final arbiters, G.H.Q. and the War Cabinet, going to regard such failures? Tanks had been employed under grotesque conditions, and after all, they had failed in common with every other arm. Were the events of the next few weeks to be disastrous enough to consign them irrevocably to Bottomless Perdition?

At best their hopes of expansion would most probably be nipped. Their establishment would be reduced, and Tanks would be used in *petits paquets* again, by ones and twos as they had been in the past, because, once more, there would never be enough machines for an effective action.

As the days wore on, and the rain continued (at the rate often of an inch a day), one of these alternative fates seemed inevitable.

The gloomy surmises of the Tank Headquarters Staff were only too well founded. The authorities were in fact suffering from one of the worst cold fits which the pilots of the Tank Corps at home and abroad ever endured.

Tank Corps Headquarters heard it all. They knew well enough that in well-informed but irresponsible London circles the remark, "I hear the Tanks are going to be abolished," was a common one; that often in such gossip circumstances of person and date would be added.

For all this they had no certain refutation. If only Tanks could even now do something that would catch the eye of authority. Some little "show" exploit. Something that would at least make a summary condemnation unlikely. The battle would have to be continued some day. Tanks would have to play their part, but in that intolerable swamp was it likely that they would do anything except engulf themselves—literally and metaphorically—yet deeper than before?

There, however, lay the Tanks' best hope. Chance and their own exertions might bring them a success even in Flanders.

### III

Thirty-six Tanks belonging to the 1st Brigade had remained in Army Reserve. On August 16, the weather having been less wet for a day or two, the first and most considerable of a series of renewed attacks was to be made.

Twelve Tanks were to co-operate with the infantry on the Langemarck-St. Julien front.

On the night of the 13th the Tanks began to move up. The roads were already congested with other traffic, and the Tanks were not to be allowed to make use of them.

\* "The country they had to traverse was all very deep in mud, and the Tanks wallowed on their bellies in ground too soft for the tracks to hold. The approach was continued during the following night, but in spite of the repeated use of unditching beams, the mutual help of Tanks in towing each other, and the valuable assistance of a Tunnelling Company, it was recognised on the 15th that none but the four leading Tanks could hope to reach the line in time to take part in the battle. These four made strenuous efforts to complete the journey the next night, but without success. None of them could overcome the difficulties of the ground, and the infantry had to go into attack without them."

The infantry attacked, and after the action a nest of pill-box strongholds north-east of St. Julien still remained untaken.

Like most of these little fortresses, they had been extremely skilfully placed. An unwary advance would be trapped in their wire just within convenient range of their machine-guns.

They were so small, scattered, and well concealed as to be almost impossible targets for heavy guns, and as they were built of reinforced concrete at least three feet thick, the ordinary high-explosive shell thrown by a field gun had no effect upon them.

This particular nest consisted of four pill-boxes of more than average size.

\* From the History of 7th Battalion.

Three of them were hidden in the ruins of farmsteads. That in the Mont du Hibou was manned by a garrison of about eighty men, and the Cockerott was still more strongly held. Triangle Farm and Hillock Farm were slightly smaller. It was essential that they should be taken, and General Sir Ivor Maxse, commanding the 18th Corps, was informed by the Brigadiers concerned that their capture would probably cost us 600 to 1000 casualties. He and Colonel Baker-Carr (commanding 1st Brigade of Tanks) then considered the possibility of a Tank attack.

Colonel Baker-Carr, admirably undismayed by the dismal events of the 16th, optimistically guaranteed the fortresses at half the estimated cost to the infantry, and the attack was arranged. One innovation he specially asked for. There was to be no shelling, but he was to be granted the concealment of a smoke barrage. Having once decided to entrust the affair to the Tanks, General Maxse was zealous to give them every possible chance of success and did not hesitate to modify his orders to suit their considered demands. Only twelve Tanks were to be employed, and they and their infantry were to use the roads for as far as these served them. Colonel Baker-Carr decided to form a composite Company from "G" (7th) Battalion under the command of Major Broome.

The resulting action, small as were the numbers engaged, will ever find a place in the annals of the Tank Corps.

\* "In spite of the appalling condition of the ground, for it had now been raining steadily for three weeks, a very memorable feat of arms was achieved."

The four strong points were triumphantly captured.

\* W.T.N.

\* "Phenomenal results were obtained at very little cost, for instead of 600 to 1000 casualties, the infantry following the Tanks only sustained fifteen!"

At 4.45 a.m. on the morning of August 19, the artillery isolated the doomed strongholds in clouds of dense smoke.

The action had been carefully rehearsed. Two Tanks were to be used against each pill-box, and they were to take them in rear, so striking where the forts were most vulnerable, and at the same time cutting off the garrison's retreat.

Just before six o'clock the enveloping manoeuvre was complete, and the first pill-box—Hillock Farm—fell, nearly all its garrison having fled.

At 6.15 two Tanks reached the Mont du Hibou, and fired forty rounds from their 6-pounder guns into the back door of the stronghold. Sixty of the garrison fled, of whom about half escaped or were shot down, and the rest surrendered to the infantry as soon as it came up.

Triangle Farm fell ten minutes afterwards. The garrison had put up a fight against the Tanks and our infantry killed them all, mostly with the bayonet.

At the Cockeroff the attacking Tank † got ditched within fifty yards of its victim. But at sight of it the garrison of over 100 "withdrew." The Tank and its infantry immediately opened fire with their Lewis guns, and more than half the fugitives fell.

‡ "Our infantry then consolidated the Cockeroff. This completed the capture of all objectives.

\* W.F.N.

† The second Tank detailed for this strong point had—in common with the two reserve Tanks—believed or become ditched on the way up.

‡ Official Summary.

"The Tanks waited till consolidation was well forward before returning.

"Casualties—Infantry: no killed, 15 wounded.

"Tank Personnel—Killed: Officers, none; other Ranks, 2. Wounded: Officers, 2; other Ranks, 10."

In one of the strong points we found a German officer who had been hanged by his men.

The St. Julien attack, as it was afterwards called, proved a sufficient counterblast to the 5th Army report.

The friends of the Tank Corps made the most of it. It was a brilliant little exploit, and once brought to notice, the casualty figures pleaded too loudly to be ignored.

It is probably no exaggeration to say that it was in some measure to the Tanks which won the little Battle of St. Julien that the Tank Corps owed the opportunity of winning the Battle of Cambrai.

#### IV

From August 22 till October 9, by which time hope of British success at Ypres had been more or less abandoned, the Tanks fought in about a dozen minor actions. They made almost as many more unavailing attempts to fight. Like the rest of the Army, they spent much vain labour and knew the weariness of much frustrated effort. They made elaborate and toilsome movements in preparation for attacks which were never launched. They struggled night after night to get up to some battle which eventually had to take place without them. Tanks had now invariably to move upon the roads, as the ground between had finally and definitely been reduced to impassable swamp. The roads naturally formed standing targets for the German gunners. We lost heavily in men and machines. General Elles had orig-

inally estimated that one machine in two would get into effective action. Now, in view of the appalling ground conditions, he revised this, only reckoning on one machine in ten getting into effective contact with the enemy. This modest estimate was as a matter of fact seldom exceeded.

Whenever Tanks did get into action, however, they usually did well, though rarely decisively, in spite of the standard of extraordinary courage which was steadfastly maintained by the crews.

The briefest review of most of these depressing little engagements is all that need be given. They were remarkable for nothing except the heroic patience shown day after day by every arm of our attacking forces.

On August 22 a minor attack was launched by all three Corps. Small parties of Tanks fought with each.

With the *2nd Corps* in Glencorse Wood four Tanks of the 2nd Brigade were of some service, and did considerable execution.

With the *19th Corps* eighteen Tanks of the 3rd Brigade were used on the off-chance of their being able to reach the objectives. The going was more than ordinarily atrocious, the whole of the Frezenberg-Zonnebeke road having been shot away. One Tank fought a very remarkable action, engaging the enemy near "Galipoli" for sixty-eight hours.

With the *18th Corps* twelve Tanks of the 1st Brigade headed an attack on Bülow Farm, Vancouver, Winnipeg, and other strong points. They proved useful, and several Tanks were in action for longish periods.

Two things are remarkable about this operation: first, that every Tank which ventured to leave the road instantly bellied. One was "drowned" in six or seven feet of water.

Secondly, the remarkable way in which they affected enemy *moral*. In several instances parties of the enemy surrendered at the sight of them. Prisoners in their examination said that they could have held up infantry, but "felt helpless against Tanks."

Next day, on August 23, four 2nd Brigade Tanks went into action near Inverness Copse. The operation had had to be undertaken in a hurry, liaison was bad, and the attack a failure.

On August 26 four Tanks fought with the 33rd Division in the neighbourhood of Jerk House (near Glencorse Wood). The morning was misty, and an enemy shell unfortunately exploded a dump of smoke bombs just behind our lines. The attack was a failure. That night an inch of rain fell, and four Tanks which were to have operated with the 14th Division next day, August 27th, never reached their starting-point. Thirteen men were wounded and an officer killed on the way up.

Nearly three weeks elapsed before Tanks were again in action, and several battalions from the 2nd and 3rd Brigades were moved back to a new training area near Arras. A certain number of "Replacement Tanks" were issued to remaining battalions. The 1st Brigade stood ready in case they should be wanted at short notice, but no attacks of any sort were launched, probably partly on account of weather, and partly because a section of the 5th Army front was in process of transfer to the 2nd Army.

By the middle of September the relief had been completed, and again we endeavoured to press on.

On September 20 a fairly successful assault was made along the whole line. 2nd Brigade Tanks took part near Inverness Copse, and 1st Brigade Tanks near Triangle and Wurst Farms. But the ground being known to be

unusually appalling in both areas, they had been given minor parts. These parts they played with fair success, and they undoubtedly scared the enemy a good deal. On the 18th Corps front 3rd Battalion Tanks had rather better luck.

The efforts made by the crews to get to the battle at all were superhuman.

Trees had been felled across the road by the enemy, resting breast high on their branches and the tall stumps from which they were not completely severed. At Wurst Farm also this kind of obstacle had been opposed to the Tanks—the butts of the trees lying obliquely and at a slope, forming a barrier very difficult to surmount.

If one leading machine got into difficulties struggling in the dark through or over these obstacles, the whole string of Tanks behind would be hung up, the deep swamps on either hand making it impossible to leave the road.

The Tanks, however, arrived, and are reported to have “inflicted many casualties.”

On September 26 fifteen Tanks operated near Zonnebeke Village. The attack was not a success, though the Tanks did a great deal of good work.

On October 4 took place the last two actions of this battle in which Tanks succeeded in playing a part. The first was fought by twelve Tanks of the 1st Brigade, who had the honour of taking part in the capture of Poelcapelle. It was a most successful little attack, and after reducing three strong points which guarded the outskirts, the Tanks hunted through the main street and out beyond the village.

In the other action four Tanks of the 1st Battalion were to take part in an attack upon Juniper Cottage on the line of the Reutelbeek.

Not only was this, like the other, a successful little action, it was ennobled by affording the background to one of the most patiently courageous actions of the War.

It was on October 4 that Captain Robertson fell upon completing a service for which he was posthumously awarded the V.C.

Tanks and infantry were to endeavour to cross the Reutelbeek and drive the enemy from the positions which they held on the further bank.

There was only one bridge over the marshy stream. If, in the half-light of the early morning and in the confusion of battle, they missed this crossing-place, their one chance of success was gone.

Captain Robertson, the officer commanding the section of Tanks, early realised that here lay the crux of the little operation for whose success he was responsible. For three days and nights he and his servant, Private Allen (subsequently awarded the D.C.M.), went carefully backwards and forwards over the ground under heavy fire, taping the routes for the Tanks.

Working without a break, this task took him until half-past nine on the night before the action.

It was time to get the machines up.

He started out at once again with his Tanks. The weather was dark and misty, and from inside a Tank it was impossible to see the way over the heavily shelled ground. Captain Robertson therefore walked ahead; they reached the assembly point in good time, and at 6 a.m. on October 4 he led them into action.

In imagining the rest of the story we are to remember that Captain Robertson had already been continuously under fire and without sleep for three days and nights.

The roads and every other landmark had all been

wiped out by the shelling, but the bridge still stood. Captain Robertson still led his Tanks on foot, facing besides the shells an intense close-range machine-gun and rifle fire. He must have known that to go forward on foot means certain death.

He and his convoy were by now well ahead of the infantry. Still he led his Tanks on, carefully and patiently guiding them at a foot's pace towards their objective.

They reached the bridge, and one by one the Tanks crossed over. He led them on towards a road that would take them straight up to the enemy positions, the machine-gun fire growing more and more intense as they advanced.

They reached the road, and as they reached it, Captain Robertson at last fell, shot through the head.

But the Tanks went on, and succeeded in their mission. The object for which Captain Robertson had so deliberately sacrificed his life was achieved.

The 2nd and 3rd Brigades had by now gone back to Arras to refit their machines, and to replenish their ranks. The 1st Brigade, however, made two more efforts to take part in the fighting. The battle was by now recognised as a serious British check. The Germans' "elastic tactics" and the weather had together delayed us for so long that they had defeated us.

We had inflicted heavy losses on the enemy, and had in the act suffered still more severely ourselves.

Our hopes of clearing the coast were gone.

At the end of ten weeks we had achieved gains which had been on the programme for the first fortnight.

The whole plan of campaign had to be reconsidered, and to take Passchendaele must now be our ultimate ambition.

On October 7 two Tanks were to operate ahead of their infantry and endeavour to capture two fortified farms. Halfway to their objective a derelict Tank blocked the way, and the two advancing machines became ditched on trying to make a detour. By the time they had been unditched it was too late to go on.

On the 9th eight Tanks were to have attacked strong points on the Poelcapelle Road. At midnight on the night of the 8th-9th they started for their objectives.

The road was everywhere encumbered with blown-up limbers and the bodies of dead teams.

Large shell-holes had been blown in it.

The Tanks managed to get on as far as the Poelcapelle cross-roads, but the enemy then began to shell the road heavily. The leading Tank ditched in a new shell-hole, the second Tank as it waited to pass was set on fire by a direct hit.

These two wrecks formed a complete barrier to the advance of the rest of the column.

No way being found by which the surviving Tanks could circumvent the obstacle, and the shelling having grown hotter, it was decided to return.

But they had not gone far on the return journey when they discovered that on the way up the last machine of the column had somehow fouled an old derelict Tank. The remaining machines were trapped, and could neither go forward nor back.

The efforts of their crews proved vain, and they were all five lost, some being hit by enemy shells and the crews killed or wounded, and some ditched in vain efforts to make their escape across country.

The enemy continued to shell the road, which was one we were obliged to use, and it was a work of extreme

hazard and difficulty to clear it of the wrecks by which it was completely blocked.

The work was, however, performed. Every night for a week Major G. L. Wilkes,\* the 1st Brigade Engineer, used to go up the road as far as he could in a Tank. Then he would get out and work till morning. Most of the wrecks he blew up, some he and his small party of men were able to tip over into the swamp.

The scene on the first of these expeditions is thus described by an engineer officer who accompanied him :

"I left St. Julien in the dark, having been informed that our guns were not going to fire. I waded up the road, which was swimming in a foot or two of slush; frequently I would stumble into a shell-hole hidden by the mud. The road was a complete shambles and strewn with debris, broken vehicles, dead and dying horses and men; I must have passed hundreds of them as well as bits of men and animals littered everywhere. As I neared Poelcapelle our guns started to fire; at once the Germans replied, pouring shells on and around the road; the flashes of the bursting shells were all round me. I cannot describe what it felt like; the nearest approach to a picture I can give is that it was like standing in the centre of the flame of a gigantic Primus stove. As I neared the derelict Tanks, the scene became truly appalling: wounded men lay drowned in the mud, others were stumbling and falling through exhaustion, others crawled and rested themselves up against the dead to raise themselves a little above the mud. On reaching the Tanks I found them surrounded by the dead and dying; men had crawled to them for what shelter they would afford. The nearest Tank was a Female. Her left sponson doors were open. Out of these protruded four pairs of legs; exhausted and wounded men had sought refuge in this machine and dead and dying lay in a jumbled heap inside."

\* Major Wilkes was awarded the D.S.O. for this piece of work.

So ended the tragedy of October 9, the last of a series of hopeless adventures.

A few Tanks were later moved up to a new railhead, with the hope that better weather might enable them to take part in the final attack on Passchendaele, the attack which was to end the Flanders offensive. But the weather did not mend, and it was without the help of Tanks that by a final effort the heights of Passchendaele were stormed and taken in the first week of November. We held our gains. The high ground was ours, the weary armies might rest, and the tragic nightmare of the Third Battle of Ypres was over at last.

When time brought the verdict of the Official Despatch upon the work of the Tanks, it was neither an unjust nor an unkindly one:—

\* "Although throughout the major part of the Ypres battle, and especially in its later stages, the condition of the ground made the use of Tanks difficult or impossible, yet whenever circumstances were in any way favourable, and even when they were not, very gallant and valuable work has been accomplished by Tank Commanders and crews on a great number of occasions. Long before the conclusion of the Flanders offensive these new instruments had proved their worth, and amply justified the labour, material and personnel diverted to their construction and development."

It was not to be long before the Corps had an opportunity of proving their worth indeed.

\* Sir Douglas Haig's Despatch.