Armored Trains in War.

What Their Uses Will Be, as Indicated by Their History in South Africa

The most important lessons to be learned from the war in South Arica are those derived from a study of the new war material because that is all of the most modern type, and most of it has never before been tested in actual war. Among new material thus tested may be mentioned the balloon and the bicycle, which have had considerable application. The British, however, are making use of a material which is not only entirely new, but the extended use of which in war was hardly contemplated by the great military nations before this war, namely, armored trains.

In general an armored train consists of a locomotive and cars, covered each with armor plate sufficient to furnish protection against direct artillery fire. The armored sides of the cars have one or two rows of openings for small-arm fire from the interior as well as openings for rapid fire or machine guns. Each car can carry about twenty men, and in order to give the train the requisite mobility it is not intended to have more than from six to eight cars as a maximum; consequently such a train will take about a company (120 to 160 men)

The weak point about such a train is the locomotive, consequently for safety it is placed in the middle of the train. But this necessarily reduces its speed, for the engineer is dependent on the lookout in the forward car for his imformation regarding obstacles; moreover, he must be constantly prepared to come across breaks in the road. An armoured train, therefore, may be regarded as a means of transporting a single company, protected against infantry fire, at a rate of not more than twenty five miles an hour.

The phrases of a campaign in chronological order are as follows:

(1). Mobilization and strategic deployment.

(2). Operations in the theatre of war,

(3). Minor actions on the lines of communication.

We will briefly consider the possible uses of armoured trains in these three stages of the campaign or sections of the theatre of war.

(I). During Mobilization and Stragetic Deployment.—The great advantage of being prepared for field operations before the enemy is, induces all nations so to prepare for war in time of peace as to reduce the time required for mobilization and strategic deployment to a minimum, and of course, every means is taken to delay the mobilization and deployment of the enemy. Now, in the early stages of a war the border is guarded by isolated detatchments only, and it may become possible, by means of an armored train, to force this outer line and take strategic points in the enemy's country before he can occupy them in force.

This outer line may be penetrated either by surprise or by force. For a former, a cavalry or cyclist detachment would have the advantage, since it could select its own point of attack, whereas an armored train is confined to the railroads. But in view of the great importance of railroads in war to day, it is hardly to be expected that any lines crossing the border will be left unguarded, so that surprise is ruled out any way; here, then, is the opportunity for an armored train, especially as the first troops of the enemy to arrive on the border will probably be mere detachments of border troops or infantry. After breaking through the line the armored train has great advantages over the cavalry or cyclist detachment. It has greater speed, and can carry a greater quantity of material for destruction, and when its work of destruction is done, it can hurry back before the enemy can interfere. Of course, the enemy may prepare to destroy it at some point nearer the border, but the destruction it has effected may warrant the loss of the entire train. An armored train, in such work, had the advantage over an unarmored one that it affords protection against the fire of the enemy's infantry and cavalry detachments and patrols that are sure to be met, and confers a considerable moral effect, besides conveying in safety the explosive needed for blowing up bridges, roads, &c.

(2) During the field Operations—In the sphere of actual operations a varied picture presents itself: In the front of the armies are the covering and reconnoiter ing cavalry bodies, to a depth (at the outset) of two or three days march; then follows an area covered with the columns of the advancing troops, probably two days march in depth; and finally the country covered by the trains of supply, also about two or three days' march in depth. All the space in these sections is needed for the troops, the material and the supplies, and there is no room or occasion for an armored train. But after the enemy is defeated and retires, while our own troops, after the first pursuit, are compelled for some reason (to restore order, to await supplies or reinforcements, &c.) to inaction, the enemy taking advantage of our condition to destroy railroads, &c., then is the time for an armored train again, and its work is much the same as in mobilization or deployment. Indeed, the uses made by the British in South Africa of armored trains have been mainly during these two stages. On one occasion an armored train from Kimberley surprised a party of Boers destroying the railroad, but was compelled by artillery fire to return to that place; and on another, an armored train from that town was used in repairing the railroad. At Colenso an armored train did good service in bringing up a portion of the Dublin regiment in time to relieve a party of volunteers holding a fort. The train from Cape Town bringing guns for Mafeking before the siege was derailed by the Boers and destroyed by artillery fire.

In the vicinity of fortifications however, will probably be the greatest application of armored trains—in reconnoissance, in destruction of the enemy's works, in the rapid transport of troops or guns from one point to another to meet emergencies, &c.

(3) On the Lines of Communications—In future wars the immense numbers involved in the armies of operation will necessitate supplies being constantly obtained from the home country, consequently long lines of communications will be required. These are particularly subject to raids by detachments of the enemy, because they cannot be protected at every point, since this would require too many troops, which would be taken from the front, where they are most needed. These lines are generally protected by detachments at the most important points, and when any point is threatened the nearest detachments moves out against the enemy. For rapidity cyclists or cavalry would be best, but the former cannot always be used, and the latter are pressingly needed at the front, consequently this again is the place for armored trains, which not only can move fast enough to surprise the enemy, but are also protected against his fire, and also can carry the material for immediately repairing any damage. The immense advantage of armored trains in this section of the field will probably determine their application on a very large scale. They will not only serve the purpose well, but will also economize troops, and thus leave a greater number for the front.

To sum up, then, armored trains will find some application during the mobilization and strategic deployment of the army, very little in the theatre of active field operations, except in the vicinity of fortifications, where they will find extended use; and most of all on the lines of communications where great numbers will probably be employed.

Turkish Time.

A recent visitor to Constantinople reports one custom of the Turks which causes a vast deal of trouble and confusion.

This is the Turkish system of reckoning time. A Turk holds that the day begins exactly at sunset; at that time he sets his clocks and watches at the hour of twelve.

As the sun has the same habits in presiding over Turkey that he exercises with regard to other localities, it may easily be seen that this system of reckoning time necessitates setting the clocks every day.

It appears that a watch which could run for weeks without gaining or loosing a minute would be of no special value to a Turk.

The Mean Thing.

There were two typewriters in the room. One was in use and the other was not. The young man sat down near the one that was not in use and watched the young woman who was busy with the other.

Inadvertently the young man touched the bell of the machine near him, whereupon the young woman yanked the carriage of her machine back and started a new line.

The young man chuckled, and a minute later he touched the bell of the machine near him again. The young woman started another new line.

The young man laughed and tried it again with equal success.

'Willie,' called the young woman to the office boy when she had taken the sheet out of her machine, "telephone to the typewriter people to send a man over here right away to fix this machine. It's all out of order, and I can't for the life of me see what's the matter."

The young man laughed some more and then made his escape. He has not returned. He is afraid to go back.

THE HOUSE OF AYER.

New Canadian Office of an Old Established Concern Which is Continually Expanding.

The well known proprietary medicine firm of the J. C. AYER CO, Lowell, Mass., has recently opened an office in the Bell Telephone Building, Montreal, in order to give closer attention to their Canadian business. It is not generally known that they already have a large laboratory in Montreal, having manufactured there for several years. The intention is to make the business thoroughly Canadian and to strengthen their facilities so as to keep pace with a constantly growing demand.

The J. C. AYER CO. are not only one of the largest manufacturing concerns of their kind in the world, but they are among the largest advertisers, spending a million dollars every year in Newspaper advertising.

For sixty years the leaders in regard to family medicines, they are more in evidence today than ever before. The home office has just completed improvements costing $100,000, which represent new new ideas and new methods in the manufacture of Ayer preparations. They intend that every bottle of the Ayer remedies shall be prepared as carefully as a druggist compounds a medicine by prescriptions and in reorganizing their Canadian facilities they anticipate in advance a largely increased business.

CORNERED BY A CINNIMON.

Experience of an Unarmed Man With a Huge Bear in a New Mexican Canyon.

"The truth is mighty and will prevail," remarked Col. Lovett, the veteran Westerner, who tells a great many good stories and always accompanies them with affidavits, "and it prevails in various ways. Let me tell you how on one occasion it prevailed upon two Englishmen to give up their comfortable places in the smoking compartment of a sleeper. It was down in New Mexico I came aboard at Albuquerque with a very agreeable companion in the guise of a Chicago man. I had only met him half an hour before train time and didn't know his name, but he was a good fellow all the same, and I was glad he was going through with me to his own town. It was a hot day, one of those New Mexican hot days that makes a cake of ice curl up like a feather in a flame, before it melts it, and when we fixed ourselves about our berths and got into the smoking room, we found the only two seats by the windows, where there was a breath of air, occupied by two Englishmen, who looked as if they had come to stay. They had been up the country on a hunting expedition, and the stories they were telling were tremendous. But they were not interesting enough to make it pleasant for us away from the window, and I made up my mind to get them out of their nice places if I could, and put two other people in there I knew of.

'I knew that if I could ever get a story started, they would listen, for they do love to hear a Yankee tell stories, so I waited my chance because they had a lot of good ones themselves. After a while though, there was an opening and I broke for it.

'Do you remember, Colonel,' I said in a loud voice to the Chicago man who might have been a Major-General for all I knew, 'that little experience I had with a bear some years ago?

'He wasn't looking for a break like that and first he recoiled, but he sprung back in an instant and lit on his feet.

'Well, no,' he said, trying to study out the time and circumstances, 'but go ahead with it and it I've heard it I'll stop you.'

'I nodded at him in recognition of his catching on, for I had mentioned to him that I thought we get them out, and started ahead with my story, which I had no idea of beyond something that would have a moving power to it, seeing that most of my hunting had been for mineral deposits.

'You know—I went on trusting to Providence and talking at the Englishman rather than to my companion, though they were polite enough to stop their own talking and listen to me—I was one of the party that surveyed the last State line between New Mexico and Colorado and one day up in the Taos country I had my experience I was riding along a mountain trail, and feeling the need of a smoke, I hung my gun to the saddle horn, and taking out a plug cut I was slicing off enough for a pipeful with my pen knife, when all at once my horse reared, almost falling back on me, and I slipped off as he whirled on his hind legs and made off down the trail. In a minute the singing of a rattler just before, coiled up in the road, explained the horse's strange and unexpected conduct, and I resolved to put the snake where he would not serve anybody else as he had served me. My gun and revolvers were fastened to my saddle, and my saddle was with my horse going down the trail, but rocks were plenty, and I knew the horse would not go far, so I set to with rocks and finally killed the snake.

'The Englishmen seemed to think there wasn't much in my adventure and showed signs of suming their own stories, but they recalled that there was a bear somewhere, so they held off and I proceeded. I saw my horse about half a mile away, and after cutting off the snake's rattle which had sixteen rings in it, showing that he was seventeen years old, I went after the horse and my armament.

"The horse was over on another ridge, and in trying to reach him by a short cut, I got down into a steep ravine and there I scared up the biggest cinnamon bear that I ever saw in my life. Blamed if I don't believe he would weigh a ton, and I know he looked to me to be higher than an elephant as he came toward me, and I was totally unarmed. If I only had my gun I could have put up a fight all right, and got him, but it was only as a last resort that I dared to tackle him with a penknife for a weapon with all the chances against me. There was nothing left me but to run for it and I went off up the ravine like a scared wolf. You see if I had gone up the hill or down it, the bear would have nabbed me in no time, but going along the side of a steep place, the bear's legs are thrown out of gear, with one side so much higher than the other, and a mancan out run him if there is any sort of going. The ravine kept getting steeper on me as I went up it, and I had to keep slanting down all the time and the bear was gaining.

At last it get to be a regular canon with walls 500 feet high and nearly straight up and down, and I had to take to the bed of the dried-up creek at its bottom, and keep going the best I could. There was a turn in it about a quarter of mile further up and I hoped when I got there that there might be an open for me to take to the side hill again. I looked over my shoulder and the bear wasn't a hundred miles behind me and coming over the rocks lumbering like a Conestoga wagon. I got to the turn all right with the bear about fifty miles behind, and by all the gods, the d—canon stopped short off, with perpendicular walls all around me that seemed to stop only at the sky. There wasn't a crack in them big enough for a gnat to get through, and there I was, not a dozen yards from that old cinnimon, hot and mad after his long chase—Gun and revolvers a mile away on my horse, and me having nothing to defend myself with except a little penknife that you couldn't have killed a chicken with. I don't think I was ever so badly scared in my life, and I shook all over as I felt the bear's hot breath in my face.

"I stopped a minute to get breath. Both Englishmen were bent over eagerly listening and I could fancy I could hear them saying to themselves that the Yankee was going to tell how he tackled a cinnimon bear as big as an elephant and slew it with a penknife.

"'Well,' exclaimed my companion who had become very much interested himself, 'what did you do'"

"'Nothing,' I said as calmly as I could, nothing: what could I do with only a penknife? The bear ate me up.

"It took the Englishman about two minutes to get over the strain and catch on. Then they looked at each other, and with faces that did not clearly indicate whether they were more disgusted with me for being a coward or dispised me for being a liar, they got up in silence and stalked out of the smoker. The next minute we had the seats by the windows, and I'm a goat if those Englishmen came back to disturb us all the way to Chicago. Which proves," concluded the Colonel, "that truth is mighty and will prevail."

CHINESE NOTIONS OF GUNNERY.

Lord Charles Beresford's Amusing Account of What He Saw at Shanghai.

Lord Charles Beresford, discussing the opening in China for mechanical engineers, gives an amusing description of Chinese arsenals.

'I would like,' he says, 'to tell you one or two stories thoroughly characteristic of the Chinese. At Shanghai in the superb arsenal under the superintendence of Mr. Bunt and Mr. Cornish, both British mechanical engineers, I saw an Armstrong gun which had had the breech piece repaired in a most clever manner. As a matter of fact, it was really a Krupp gun, but with an Armstrong breech mechanism. On asking for explanations, I was told that the original breech piece had been blown out, and on visiting a fort later on I found out how and why. At this fort I congratlated the mandarin on having the guns (67 ton) mounted in proper positions, and I was afterward shown the powder used. I then said: 'You surely do not use the powder in those guns?' 'Oh yes,' replied the mandarin 'we do.' 'But it will blow the breech pieces out.' 'Yes it does,' was the reply. One gun on being fired blew the breech off and killed fourteen men, and then they tried the other gun and killed twenty four men.

Later on I visited another battery, where there were five six-ton guns. Observing the arrangement of these, I asked the mandarin where his 'front was. The mandarin pointed in one direction, but the guns pointed in another. I mentioned this, and the mandarin nodded, and said he thought there was some mistake. I then pointed out that only one gun could be fired safely in the desired direction. 'Oh, no,' replied the mandarin, "we should fire them all. At my request the experiment was then made, and on pointing the guns around as desired they became en echelon, so that the wave of concussion of one gun would have destroyed the detatchment on duty at its neighbor. Knowing this, I placed soldier's hats and clothes about the guns, and on firing the latter in succession these garments were blown sky high. 'You see?' I observed to mandarin. 'Yes,' rereplied the latter, 'we should have had some men killed, but the shot would have reached the enemy, wouldn't it?'

'At another place there was a 60 ton muzzle loading gun, at which the arrangements were such that the gun was actually loaded in the magazine. Already sponged gun or burning wad might, therefore, have blown the whole up. I pointed this out, remarking that I had never seen anything so dangerous. The mandarin smiled, clapped me on the back and said: 'You are the cleverest man I have ever met. That is just what happened last year. We did fire the gun and the magazine blew up. I will show you where.' About fifty men had been killed in this explosion, but no alteration had been made in reconstructing the battery. Later on I went to a powder mill and found there excellent machines of German make. I noticed, however, that there was too much power in the pan, and, further, that the windows were all open and protected by gratings. Hence it was possible for dust or grit to blow in, and getting into the pan, it would be liable, by the friction caused, to start an explosion. I pointed this out and the mandarin replied: 'Yes, it blew up like that last year; this is the new place we have built since.'

"The Chinese were also delighted with me at other arsenals having no European superintendent when I showed them to set their speed and feed gearing for the tools.

"In one place I found a man boring a 6-pounder gun, and the tool protesting most vigorously the ill-treatment I showed the man how to adjust it, and got it going properly. The workmen gathered in a corner and talked excitedly, I asked what they were saying and was told: 'They are saying that England produces the most wonderful mandarins in the world. We have many, but not one of them knows anything about any of the machinery in the shop.

Mixed Emotions.

London Chronicle: To illustrate the feeling of Ireland toward the predominant partner, an actor who has lately been touring tells the story of an old waiter in a Dublin hotel.

'When are you going to get home rule in Ireland, John?' was the question.

'See ye here, sorr,' said the old man, 'the only way we'll get home rule for ould Ireland will be if France—an' Russia—an' Germany—an' Austria—an maybe Italy—if they would all join together to give these blayguards of English a rare good hiding. That's the only way to get home rule anyway.' Then, as he looked cautiously round, a twinkle of cunning and a smile of courtesy were added to his expression. 'And the whole lot of 'em 'shoved together could'nt do it,' he said.' 'Oh—it's the grand navy we've got.'

His Last Witticism.

Of the late Doctor Poor, a missionary in Ceylon, a man of pleasant humor, the New York Observer tells this anecdote:

During one of the periodical epidemics of cholera which swept Ceylon, Doctor Poor was violently attacked. A messenger was at once dispatched for Samuel F. Green, M. D. a medical missionary residing about five miles away. When Doctor Green came into the room, Doctor Poor exclaimed:

'Well, this is a bad prospect! Here is a Poor patient and a Green doctor.'.

This was his last witticism.

Housekeeper—Oh, dear! I haven't a cent of change. But you can just leave a 25-cent piece, and I'll pay you tomorrow.

Iceman—I don't know about that lady. Suppose you ain't got the money then?

Housekeeper (indignantly)—well, if I haven't I'll let you take your ice back.

Road Agent—Your money or your life!

Goldstein (from interior of coach)—How much off for cash?