

CAMPAIGNING IN THE LAND OF THE KOPJE.

ONE of the deplorable features of warfare is the fact that a modern campaign always provokes a flood of militant poetry. Most of it is very bad poetry, though most of it fortunately is also soon forgotten. An occasional passionate outburst, nevertheless, sinking deep into the hearts of the people. Among such must be included the recently published little poem of William Watson, who was one of the "also rans" not long ago for the British poet laureateship. This poem, which stirred up the jingoes of Great Britain to white heat, runs as follows:

When lofty Spain came towering up the seas
This little soldier laid to dust and quell,
And mottled her that she fell.
Ah, not today is nature on our side!
The mountains and the rivers are our foe,
And nature, with the heart of man allied,
Is hard to overthrow.

This outspoken and rather indiscreet young poet has described the South African military situation in a nutshell.

the war office in London and the world at large that the struggle in South Africa has marked a revolution in the methods of military warfare. Old standards of attack and defense have been upset. Out of the exceedingly unpleasant experiences of the British forces during this Boer war have come many new maxims. The old military manuals used to declare that an attacking force in the enemies' country must have three times the number of men of that of the defenders. That old axiom has been for all time dissipated. As Richard Harding Davis pointed out regarding the advance of General Buller beyond the Tugela, the country rose hill after hill like the waves in a rough sea. What each hill held of the enemy could not be guessed until its crest had been felt by the British. Each wave of that great, rolling sea of rock had to be fought, diminutive battle after battle. Such frontal attacks could be made only at a tremendous sacrifice of men. As for flanking, such a thing was impossible. The Boer knew the country,

In the meantime the foe exhausted his own fire, and when the lull came in the laden rain the rush usually took place. With the magazine rifle this sort of thing is out of the question. At Modder River the Boers built their trenches at the very edge of a steep river bank, and this afforded them sufficient cover for the movement of re-enforcements and the bringing up of supplies, nearly all of which was done quite out of sight of the attacking British. The smokeless powder gave no hint of the source of the volleying. The magazine rifle gave the Boer plenty of reserve fire, and his fine artillery played from some secure position in the far distant background.

When the news of General Buller's third repulse on the Tugela reached England, there was a brief space of time when British faith in their once glorified general wavered. It was a bitter blow to the jingoes, who had swallowed this somewhat indiscreet general's assertion that there would be "no going back." When Buller did go back,

precisely the sort of country in which the burgher sniper and sharpshooter was most at home. The way in which Joubert's men succeeded in holding back the British, valiant as were the men on either side, was a clear demonstration that the Boer had adopted the method of warfare most suited to the country in which he was campaigning. Although the English looked upon the relief of Ladysmith as a great success for their forces, it was such only in a qualified degree. The British losses had been tremendous, and their final advance through the mountainous passes of Natal was possible only after the practical withdrawal of the Boer forces. In fact, if Field Marshal Roberts had not sized up the general situation and caused the drawing off of Joubert's forces by menacing Bloemfontein, it requires no military expert to see that Ladysmith must soon have fallen into the hands of the Boers and that Buller would have remained, battered and checked, for many a week on the wrong side of the Tugela.

a supply of ammunition for the 15 pounders. Half way up the hill each load was guided from a protecting shelf of rock to its destination. Not once was there any scarcity of shells on the hill crest. This feat of French was one of the most remarkable of the campaign, for by getting the 15 pounders up on Coles kop they could be so trained that they dropped shells into the Boer lines 3,000 yards away and so assisted in cutting off their retreat.

Some idea of the way in which Mother Nature has fortified his country for the Boer may be obtained from the fact that its only doorways are such rough and narrow passes as Laingsnek and Van Reeman's pass. This latter pass is the loophole into the Transvaal through which creeps the Netherlands railway, running from Delagoa Bay to Pretoria. Either of these rocky mountain passes can be garrisoned by a comparatively small force of men in such a way as to menace the passage of an army of thousands. In fact, all the Natal frontier that fringes the land of

sance and an occasional stolen march by night for the creation of some new line of trenches first by the one end then by the other.

On the whole, it may be stated that the South African campaign has taught the military world many very valuable lessons. One has been the advantage of long range guns. Another has been the necessity for cavalry and the advantage ensuing from the mobility of mounted troops. Still another is the lesson that an entrenched enemy, armed with the modern magazine rifle and using smokeless powder, is able to stand off a force many times his superior, and that this same superior attacking force must stand at least ten to one if the attacking general wishes to make sure of his success.

TRISTRAM W. WILCOX.

THE AUTOMOBILE IN WAR.

The army automobile has been partially adopted in England, and its practicability is at present agitating military circles to a great extent in

DRAWBACKS TO LIFE

IN SOUTH AFRICA.

Climatic and topographical peculiarities are among the chief inconveniences that British soldiers have to contend with in South Africa.

During the rainy season the "dust devil" is without doubt the curse of the land. The dust, suddenly arising in great clouds on the horizon, gathers into a whirling, rushing mass, sweeping everything before it in its wild, wavering course and blotting out the landscape like a dense fog. These storms of dust and sand, though of frequent occurrence, rarely last long and are usually followed by rain. The "dust devil" is heartily hated by Tommy Atkins.

The rinderpest, that has been the cause of such great loss among the



THE DUST DEVIL.

army horses, is particularly prevalent during January and continues as late as April. It is caused by vapor arising from the devils on the ground and being breathed in by the horses. The symptoms are very similar to those of malarial, and low lying areas or pastures are the dangerous places. One of the peculiar features of the disease is that, although it appears every year in one or more places, it becomes general over large areas only in certain seasons. It appeared exceptionally early this year among the horses. About 95 per cent of those affected die, while among mules and donkeys only 25 per cent or even less of the cases prove fatal. Horses that have been exposed to the disease three times and have recovered are known as "salted" horses, and are practically immune against the pest. Various experiments by the Bacteriological Institute at Grahamstown have shown that no material can be obtained from the bodies of animals which have died of the malady that can be used in practice to produce immunity in healthy animals.

The tsetse fly, which is about three times as large as the common house fly, is greatly dreaded by farmers and herdsmen alike. It attacks the cattle and horses, and within a few hours the animals are dead. A less dangerous but more troublesome pest is the ubiquitous white ant, which is about one-quarter of an inch long. It will eat through anything except iron or steel and can only be destroyed by killing the queen, which is sometimes one inch in length. The ant hills make conspicuous landmarks.

There are no forests in South Africa that can be used for building purposes. The little wood that does grow is tree size is not available for either building above ground or for underground work, because it decays so rapidly. All the timber used for constructive purposes is brought from foreign parts.

The land is generally covered with a scrub growth. During the height of the winter season the Boers burn the grass which grows in profusion on the open veldt. They do this to increase the productiveness of the pastures for cattle during the following season. The veldt fire burns almost nightly, capping the hilltops with a wavering line of light which seems to cut the sky with a vivid dash of color, outlining the rise and fall of the hilly country. Fires are often the result of accident, but more frequently they are set by the farmers for purely precautionary purposes. The grass has a tendency to become sour during the fall season, making very dangerous fodder for the cattle. The simple process of burning the grass produces an alkaline manure which is a fine fertilizer for the soil. Horses especially dislike the field fires, and whenever they hear the crackling of the flames rush wildly in the opposite direction. The rush of burned out little animals is something extraordinary to see. They scramble helter skelter before the field fire, regardless of any danger in front of them. Many of them go headlong into the nearest water and are drowned. The systematic firing of the veldt is said to be a preventive of malaria, owing to the decaying matter being promptly disposed of instead of being allowed to slowly decompose.

A cause of much suffering in South Africa is the lack of drinking water. The water of the Tugela and the Modder rivers is poisonous and cannot be used for drinking or cooking purposes, but, strange as it may seem, native animals can partake of it without any danger. Buller's troops, when camped along the Tugela river in December, brought all the water that was used in camp from Frere by narrow gauge railway. The scarcity of water is one of the greatest trials of the British soldiers during the present invasion, as the Boers made it a rule to destroy all the wells in any neighborhood they visited.

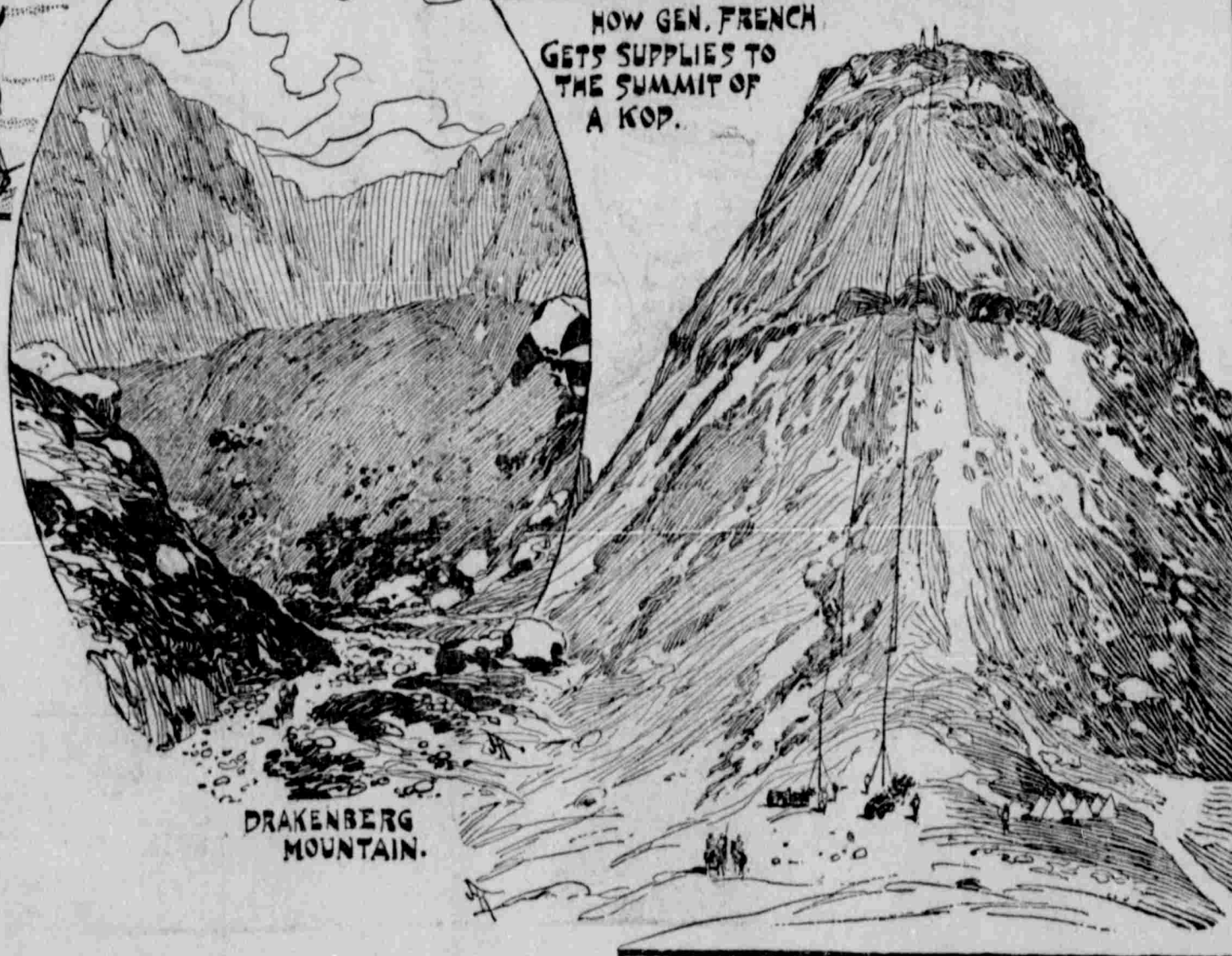
THE DEADLY KICKING HOWITZER.

This deadly modern weapon of warfare has been doing good work in the Transvaal war. Yet, owing to the fact that muzzle loading howitzers weighing from four to ten tons were used in a former generation, the ordinary civilian has scarcely comprehended the true meaning of a "5 inch breechloading howitzer," whose "bore" when parallel is three feet seven inches from the ground. Unless all "stand clear" when this gun is fired, the recoil, in spite of the "drag shoes," will inevitably knock the loaders over. So abominably does the howitzer kick that it positively jumps on its own account backward a distance of five yards even with "drag shoes"—a brake like those used on wagons—while without "drag shoes" it runs back from 25 to 30 yards. When firing at a range of 1,600 yards, 50 per cent of the rounds drop within a space of 25 yards.

THE BLACK ROSE.

The fashionable flower par excellence in St. Petersburg is the black rose. This flower, which is jet black in color, is the result of ten years' toil and thought by a florist named Fetissoff. This man has produced some remarkable effects in the garden. His latest success with the black rose has stirred up quite a sensation among the lovers of flowers in Russia. Some fine specimens have been sent to the czar by Fetissoff, and a beautiful collection of them has been sent to London.

HOW GEN. FRENCH GETS SUPPLIES TO THE SUMMIT OF A KOP.



DRAKENBERG MOUNTAIN.

A PASS IN THE DRAKENBERGS.

It has, in truth, been the rivers and the mountains of the lower end of the dark continent that have made the struggle against the Boers such a tremendous one for the British. This the Boers themselves anticipated long before the outbreak of the war, and their method of campaigning has been of a nature calculated to extract full advantage from every opportunity offered by the peculiar physical conditions prevailing in their country. The Boer knew he had nature on his side, otherwise it would have been suicidal for him and his little republic to declare war on the British empire, with its tremendous wealth, its almost limitless resources and its varied and far-reaching military experience.

South Africa, in the first place, may be described as a fertile plain, a waterless desert and a mountainous wilderness. It has practically all the distinctions of climate, conformation and general conditions that are to be found anywhere in the world. First, there is the coast country, and then the hinterland, with its rough mountains and its tablelike plateaus. Then comes the Great Karroo, the vast rolling desert that embraces the Transvaal and the Orange Free State, fertile enough in the rainy season, but bleached and barren and dry as a bone during the rest of the year. These inland deserts cannot support the life which crowds upon them. Day by day food has to be poured in. An invading army going into that country must have a far distant base of supplies, and great as are the distances, the lines of communication must at all times be kept open. This, naturally, is no easy task. The very conditions which made the country north of the Vaal and west of the Drakenberg mountains so inaccessible to the British of 40 years ago and kept it walled off from the different Cape colonies until the Boers were bold enough or desperate enough to pierce that forbidden north have made it during the present campaign a stronghold to its defenders and rendered it a difficult task for the British forces to round up the armies of Oom Paul and his people.

Two decades ago, when the "ruijns" and the burghers were at war, the British found it just as hard to get into Boer territory. It was at Laingsnek and Majuba Hill that they learned their little lesson. At these battles Boer armies infinitely smaller than the English in number completely defeated and routed the latter, and did so with comparatively little loss. In fact, it has slowly dawned on the English officer,

he held the passes and could cut off any movement of the less mobile attacking force.

It was a maddening position for the British. It was not simply because the British commanding officers made tactical errors that so much English blood was ineffectually spilled along the banks of the Tugela. The science of modern warfare had changed, and the military leaders of Tommy Atkins had not yet realized the fact. Three things had combined to bring this lesson home, to the combatants of both sides. One was the rough nature of the country, the other was the magazine rifle, and the third was smokeless powder. It was not a welcome or pleasant change for Tommy. He discovered that he had to fight a foe whom he never had a chance of getting sight of. With absolutely no reduction in the hardships and dangers of warfare, it was robbed of its old time element of excitement and opportunity for personal distinction. Hard work took the place of heroism. The painful dragging of immense naval guns up steep hills, shouldering artillery up mountain sides and the eternal digging of trenches took much of the romance out of the thing for both men and officers. Today, with the new weapons and with smokeless powder, it has been established that at least ten men, when attacking, must meet one man entrenched before his position can be carried. At the disastrous battle of Magersfontein, for instance, where the British were moved down in heaps, the Boers were entirely out of sight and were not even seen by many of the British. In fact, there were English soldiers fighting away through that battle who did not catch sight of one single Boer during the entire engagement. These burghers, though vastly outnumbered, lay comfortably in their trenches and quietly sniped the British as they approached into the zone of fire. Their position, it is true, had been chosen with great care and much skill, but such a position might have been taken up in any part of South Africa outside of the unbroken veldt. The three lines of trenches at Magersfontein were as impregnable as a triple walled fortress, and it was nothing but mad and blind courage to try to rush them. This, of course, the British tried again and again to do, clinging to their old tradition of the irresistible British charge. It took some time to disillusionize them, and the lesson was a very bloody one.

With the old fashioned single shot rifle of 30 years ago, the rush was altogether a different matter. The plan then was to hold your fire and advance,

and went back three times most ignominiously, there was a popular reaction of feeling, and the man who had been looked upon as the prospective savior of Ladysmith was reluctantly regarded as a bragging and bombastic blunderer. Buller, it is true, may have been slightly indiscreet in the language of his home dispatches, but it was not until after Ladysmith had been finally relieved and the supercilious correspondent had actually traversed that forbidding country that stretches between the little Tugela and the beleaguered town that the real difficulties of the case were appreciated and presented to the reading public. In fact, many have since expressed wonder that the heavy artillery of the British was ever moved over such rough country. The Tugela itself is a rocky and rugged banked little stream, and it must also be remembered that it was crossed while in the flood by the English general. The territory between the river and the town where General White was shut up is made up of a series of shaggy and broken kopjes, rough, rocky slopes and deep ravines, affording the best opportunities for Boer intrenchment. It was

When General French grasped the situation at the battle of Colesberg, he not only ordered his men to scale Coles kop, but also directed that the artillery be taken to the top of this great rock. Younger officers looked at the rock and said it was impossible. Even though a big gun or two were posted on the hill, it was pointed out, it would be impossible to carry ammunition to such a height. To the crest of that rocky eminence it was 1,400 feet from the camp in the plain below, and it was all that a man, free and unburdened, could do to scale the rocks. General French persisted that the guns had to go up, and up they went. Three ropes were attached to each gun. Thirty stout men took hold of each rope, and foot by foot those huge engines of death were drawn skyward. When the guns were posted on the summit, the question of getting up ammunition had to be considered. This difficulty was solved by stretching a steel cable from the summit to the British camp some 1,500 feet below. On this steel cable a small cart, and up and down this inclined wire the little car went, on each round carrying

Oom Paul is made up of the wildest and ruggedest mountains, completely wailing the one country off from the other. That the rougher country in which much of the campaigning took place has been a godsend to the Boers may be judged from the fact that in the one instance where the struggle has occurred in open and level country they have not had the success they experienced when among their befrienders kopjes and rocks. This is instanced in the siege of Mafeking, which held out week after week when it was solemnly predicted by even the British themselves that Baden-Powell and his little beleaguered army were doomed. Most of this little army were irregulars and volunteers, and, although for a considerable time they were outnumbered by the besieging forces, they were able to make a bold stand against the Boer lines. It was simply a matter of trench building, the object of Baden-Powell being to keep the Boer line of intrenchments as far out from the town as possible, and that of the Boer officers, of course, simply the reverse. So the situation resolved itself very much into a prolonged artillery duel, with an occasional reconnois-

France. Some experiments have been made with automobiles with formidable rams at each end, and some with parapets, so that while the carriage is in motion the soldiers can be discharging rapid firing guns. In the service of protecting baggage trains such armored "mobes" can be of incalculable value. The variety of designs in these self propelling carriages makes them useful in scouting expeditions and for other purposes. Automobiles designed for active service that cover 15 miles an hour on ordinary roads are among the latest experiments in England.

The fashionable flower par excellence in St. Petersburg is the black rose. This flower, which is jet black in color, is the result of ten years' toil and thought by a florist named Fetissoff. This man has produced some remarkable effects in the garden. His latest success with the black rose has stirred up quite a sensation among the lovers of flowers in Russia. Some fine specimens have been sent to the czar by Fetissoff, and a beautiful collection of them has been sent to London.

JUST ODDS AND ENDS.

The story of Mr. Thomas Edison's constant smoking while at work seems to be only partially true. He puts a cigar in his mouth, and becomes so absorbed in his work that he often forgets to light it, although he keeps "drawing on it" vigorously all the time. One of the eccentricities of Sir John Lubbock, who was recently raised to

the peerage, is his fondness for live insects as pets. He once made a favorite of a wasp he caught in Spain, and the insect grew so fond of him that it would be still in his hand to be stroked. Congressman Champ Clark of Missouri has little reverence for the United States senate. In course of a speech in congress the other day he quoted from

an address delivered by Senator Clark of Montana, to whom he referred as "a venerable member of the house of senators."

Senator Frye of Maine was once offered \$400 to write an article for a leading magazine, but refused, saying the figure was not large enough. "How much would you require?" asked the editor. "Twenty thousand dollars," answered the senator, which, of course,

put an end to the negotiations. "And, do you know," said Mr. Frye to a friend afterward, "I couldn't have written the article anyhow!"

The privilege of running the American bar at the Paris exposition has been awarded to Major S. P. Gross of Lexington, Ky., over 42 other applicants. According to A. J. Daly, the United States district attorney for Alaska, the

majority of the residents of that territory are in favor of making Juneau, instead of Sitka, the capital. "Sitka," he says, "is on an island, while Juneau is on the mainland and can be reached at any time. There are 14 lawyers there to four in Sitka. Juneau is close to Skagway and other important points, and even Governor Brady favors the change." Mark Twain related in a recent ad-

dress that he once set out to ride from Hartford to Boston on a bicycle, got tired of it after five miles and took an express train. "What time did you arrive?" asked a friend in Boston. "About 7." "What! And you don't mean you've ridden all the way on your bicycle?" "Enough of it," said Twain. "To prove it could be done." Professor William James, the eminent psychologist of Harvard, says: "I began

to be interested in psychology when I first, as a very small boy, began to read for myself. Of course, the science was called 'mental philosophy' then, but, as it was in those days, it was my favorite study, just as literature was for my brother, Henry James." The home of the shad when it leaves the river for the sea after spawning is unknown, and nothing whatever is known of its habits or food.