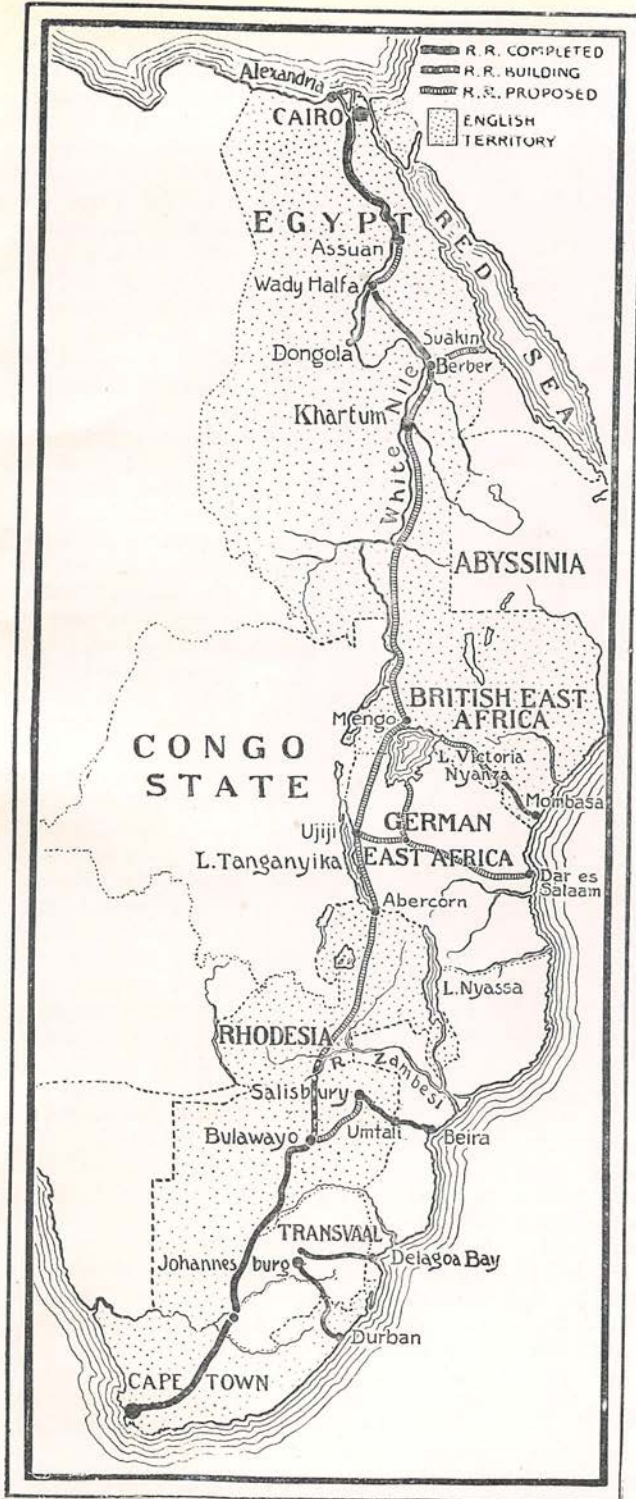


THE CAPE TO CAIRO RAILWAY.

By W. T. STEAD.*

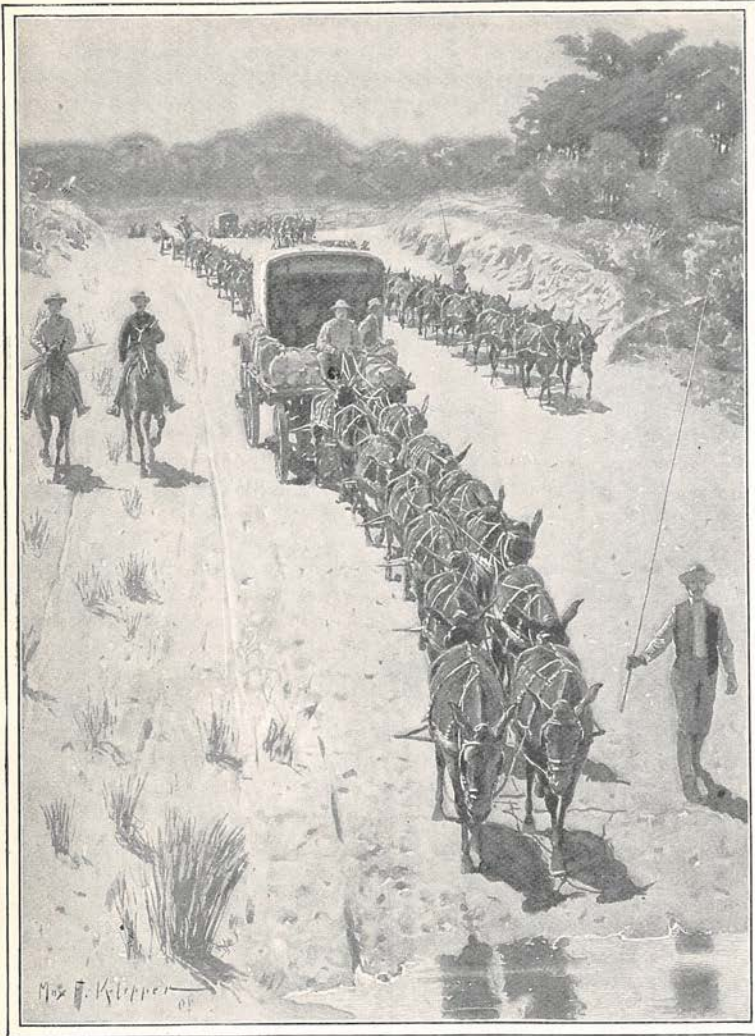
LAST year at St. Petersburg, when I was talking to Herr Rothstein, he suddenly surprised me by an observation on the secret forces which appear to dominate the actions of men. Herr Rothstein, although but little heard of outside Russia, is one of the dozen notable personalities who influence the policy of that great Empire. He is a Jew, and a German Jew. But he is M. Witte's Jew; and as the financial adviser of the Imperial Finance Minister he is a man of mark as well as a man of wealth, a man of influence, and a man of power. But although knowing and respecting him as financier and as statesman, I was hardly prepared for the philosophical observation which fell from his lips on the subject of the great transcontinental line which Russia is building across northern Asia.

"This railway," said Herr Rothstein, "like many others of the same nature, is being built under the compulsion of an impulse or an instinct which it is impossible to justify on financial, political, or military grounds. The sacrifices which their construction entails will never be repaid, at least, to the men who make them. From a financial point of view I could name a score of other methods of investing money within the



LINE OF THE CAPE TO CAIRO RAILWAY THROUGH AFRICA, COMPILED FROM THE LATEST SOURCES OF INFORMATION. SEPTEMBER, 1899. 363

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“CAPE TOWN TO CAIRO”: THE PRESENT METHOD OF TRANSPORTATION.

Empire that would pay handsomely, pay far better than this transcontinental railway can ever hope to do. But nations appear to be sometimes possessed by an uncontrollable passion to bring together the uttermost ends of a continent, quite irrespective of rational motives. It is a kind of demon which drives them; and I can only suppose that the impulsion is intended to promote the general good of mankind. Certainly, in our case, the sacrifices are much more obvious than the gain to Russia.”

It was surprising indeed to come upon such a theory from such a source. A materialistic German Jew, whose life is spent in the direction of a banking business, is not exactly the man from whom one would

naturally expect to hear the Oracles of God. But the men of Israel have for thousands of years been a prophet-race, and not even the roar of the Bourse can silence the echoes from the silences of the other world, which, like the murmur of the sea in the shell, are ever reverberating in the ear of the Jew. It must be admitted that Herr Rothstein had reason for his theory of the Universe. If the affairs of men are presided over by an Invisible Deity, benevolently disposed to the welfare of mortals, anxious to bring the ends of the earth together, and to link into one family all the world-scattered children of men, what more efficacious means could be adopted than a kind of demonic possession impelling them to make sacrifices which are real and immediate, while

the benefit is remote and universal.

If this be the case with the Siberian railway, what can be said of the Cape to Cairo line, but that it is a still more striking illustration of Herr Rothstein's doctrine? From a political point of view the British Empire will profit even more than Russia by the building of the Asiatic through-railway, over which in a few years will pass all the mails between England and her colonies and dependencies in the Pacific. From every point of view the construction of the line across Siberia is more important to the English-speaking world than the Cape to Cairo railway. To shorten the time in which one can travel round the planet from sixty-five to thirty-three days is an achieve-

ment of supreme value to the only race that has planted its families all round the world. When the Siberian line is built, Shanghai, which is now thirty-five days distant from London, will only be divided by a fortnight from the General Post Office in St. Martin's-le-Grand. The effect upon the British Empire of the opening of the Siberian railway in all matters of literary, domestic, commercial, and political communication will be as if some gigantic convulsion of Nature had swung the Australian continent thousands of miles nearer to the Mother Country. But no British money is being spent in accomplishing this enormous undertaking so fraught with advantage for the Empire. The task is accepted joyfully by the Russians, who out of their poverty are producing millions to be expended in this work of destiny. £40,000,000 will be spent on the Siberian line before it is completed. In seven years they have hurried on the work of

construction at both ends, building 785 versts or 520 miles per annum, nearly double the rate at which the Canadian-Pacific was built; and for five years more must they continue their building before the great task is ended.

The Cape to Cairo railway offers few of the advantages to the British Empire that the Russians are securing for it by building their line across Siberia. According to the most sanguine estimate ten years will elapse before the first train will steam from the Cape to Cairo. When it does arrive it will not materially shorten the distance between London and the Cape. At present no one can reach Cairo in less than four or five days from London. And London is to the modern Englishman what the Forum was to the men of old Rome. It is the centre from which all distances are measured. But in the old world distances were marked by mileposts. To-day we have substituted almost universally



"THE PIONEER OF THE RAILWAY": A TRACTION ENGINE LEAVING MACEQUECE, ON THE LINE OF CONSTRUCTION OF THE CAPE TO CAIRO RAILWAY.

the hourglass for the milestone. Places are so many hours or so many days distant from London. Nothing has been so remarkable a phenomenon of recent years as the continual shrinkage of the world. But the Cape to Cairo railway will not materially diminish the dimensions of the planet. After it is built no express will traverse the Continent in less than eleven days. Add to this the four or five days between London and Cairo, and we have fifteen or sixteen days for the overland route as against seventeen or eighteen days by sea.

If England and Russia would but agree to build a short connecting line of 500 miles across Afghanistan, the effective distance

between the Cape and Cairo. The two ends of the African continent have absolutely nothing in common, except that they are both African, and that both are at present under the shelter of the British flag. There is no interchange of commodities between British South Africa and the dominions of the Khedive. The two extremities of the line have no more points of contact beyond the stretch of uninterrupted land which divides them than if they were in different planets. If there were any trade the goods would go by sea. As for the mails, the gain of a day or two would not counterbalance the wear and tear and risk of transshipping and of other drawbacks of the land route.

To build the line would cost £10,000,000 at least—possibly twice as much. It is extremely doubtful whether it would earn a dividend, or could even be worked except at a loss. And yet, notwithstanding all these obvious and indisputable considerations, it is by no means impossible that the Cape to Cairo line may be in working order in 1909.

Why it should be so, why the keenly practical and stolidly unimaginative Briton should be bending his

energies and lavishing his resources in order to construct a line from the Cape to Cairo, it is difficult to explain, except on the theory of Herr Rothstein—that the Providence that rules mankind has willed that the ends of the world should be linked together and that the continents should be bridged by the iron rail; and so, obedient to the invisible Power behind the veil, mortal men hasten to carry out their appointed task. That may be—perhaps is—the occult source from which such activities spring, but the outer and visible reasons why the Cape to Cairo line is coming into being are simple and obvious enough. The first and dominating cause is the fact that the idea has fascinated the imagination of Mr. Rhodes, and the second



CLEARING THE ROUTE.

between London and Bombay would be diminished by more than one-half. The Merv-Quetta junction railway would enable Englishmen to reach Bombay in ten days after leaving Charing Cross, whereas now by the quickest route they cannot arrive in less than three weeks. But the construction of that line is barred by international jealousy, which for the moment is an obstacle far more insuperable than mountain ranges.

If the Cape to Cairo line is not urgently wanted in order to expedite communication between London and the extremities of Africa for Imperial or military reasons, it is still less wanted from the point of view of a dividend-earning investment. There is at this moment no through traffic of any kind

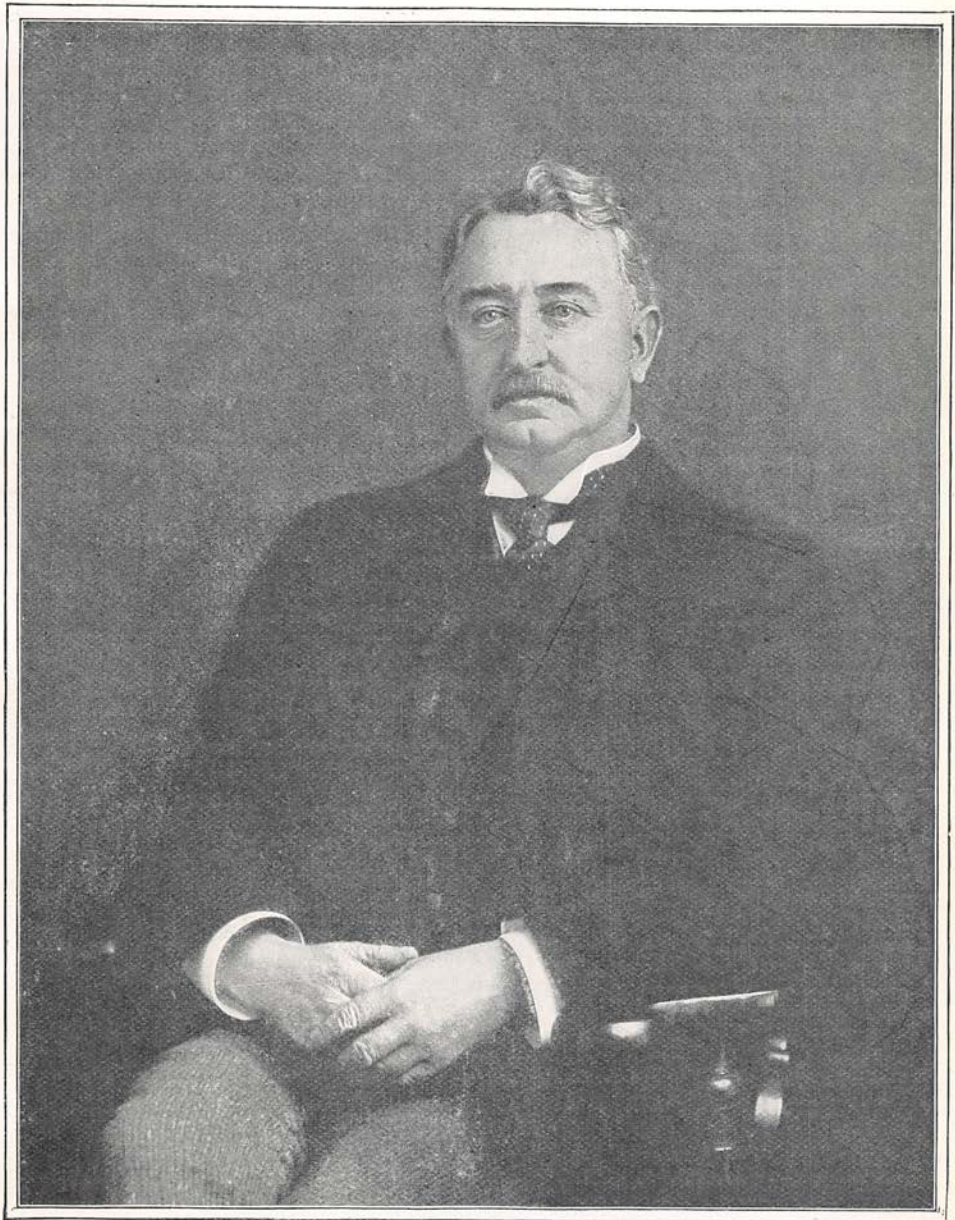


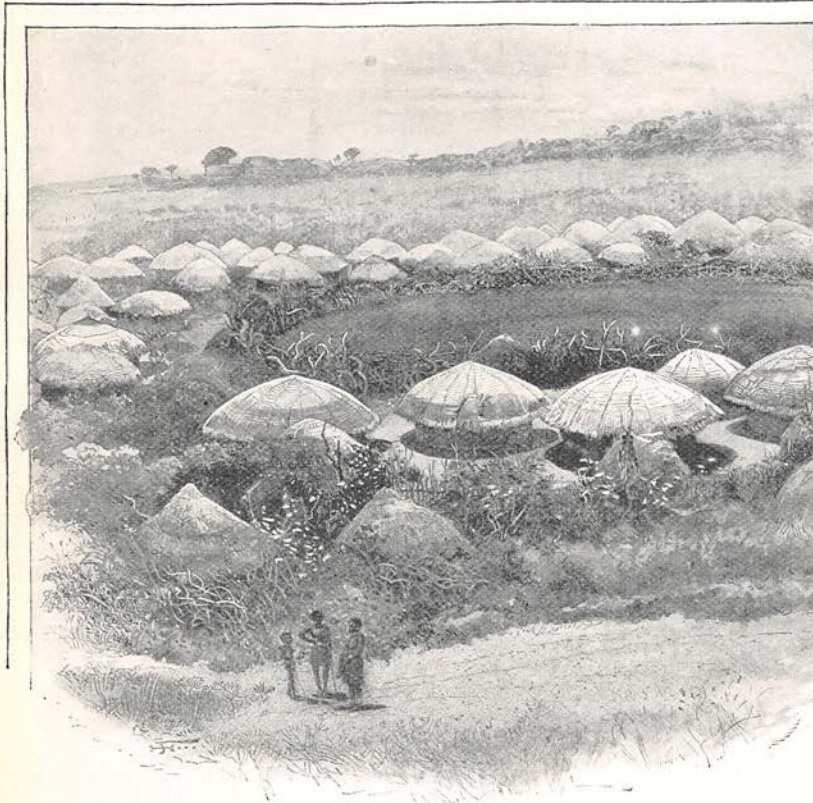
Photo by]

[W. & D. Downey, Ebury Street, W.

C. J. Rhodes

and hardly less potent reason is the fact that the Cape and Cairo both begin with the letter C. Possibly this second reason ought to have precedence over the first, for who knows how much of the fascination which has caught Mr. Rhodes's fancy was due to "apt alliteration's artful aid"? If the Cape and Cairo had possessed different initials, the suggestion of a through continental line might never have suggested itself to Mr. Rhodes. But the notion of linking the two places, each of which

Him" finds no passion more potent for the promotion of His ends than the suspicion and distrust of the Powers. The opening up of Africa and China would have been postponed for a generation had the natural instincts of adventure, commercial enterprise, and humanitarian zeal not been stimulated by the dread of foreign rivalry. The mere proclamation of the determination to build a railway from the Cape to Cairo reassured public opinion as to the permanence of British tenure in the Nile valley. It



A TYPICAL KAFFIR KRAAL, OR STOCKADED VILLAGE.

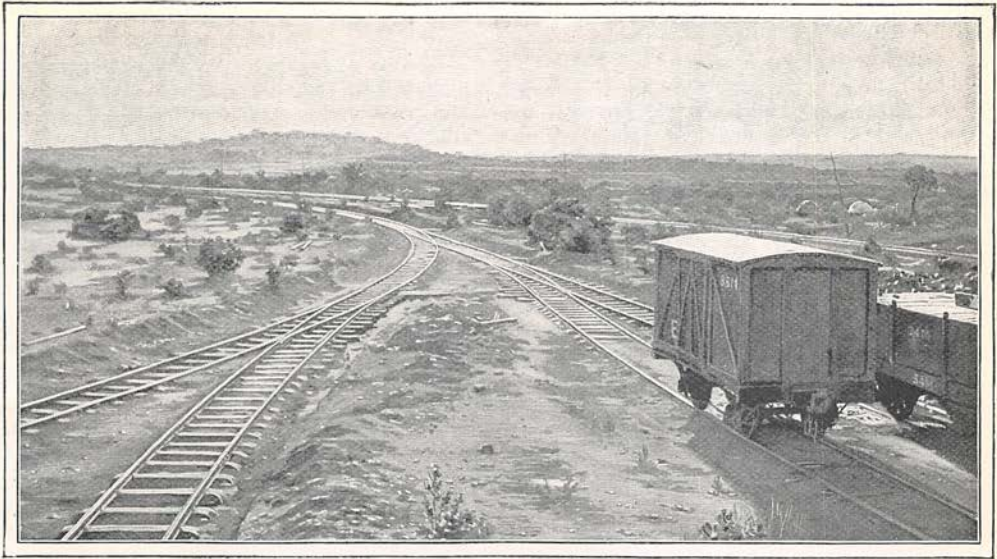
Drawn from a photograph taken near Bulawayo, the present Northern Terminus of the Cape to Cairo Line.

commenced with the same capital letter, "caught on," and the gigantic enterprise is already making progress from the realm of the imagination into the domain of accomplished fact.

After these two leading motives there must be mentioned, as a potent third cause, the jealousy of the nations, and especially the anxiety of many Englishmen for the security of their somewhat precarious position in Egypt and the Nile Valley. He "who maketh even the wrath of man to praise

is true the railway, even when constructed, will not paint the African map British red from the Mediterranean to the Table Mountain; but it undoubtedly tinges the whole intervening region with the ruddy glow that heralds the dawn of Empire. Had the idea taken anything approaching its present shape in the days when the German claims to East Africa were being considered by the British Government,

there would have been very stringent provisions made to secure a strip of territory down the side of Lake Tanganyika, along which the Cape to Cairo line would have had undisputed right of way. Unfortunately, the dream of Mr. Rhodes had not then even been dreamed. So it came to pass that a solid block of German territory intervenes between the northern and southern termini of the line, across which Mr. Rhodes must carry his railway as best he can, on terms the deciding factor in which lies not in London,



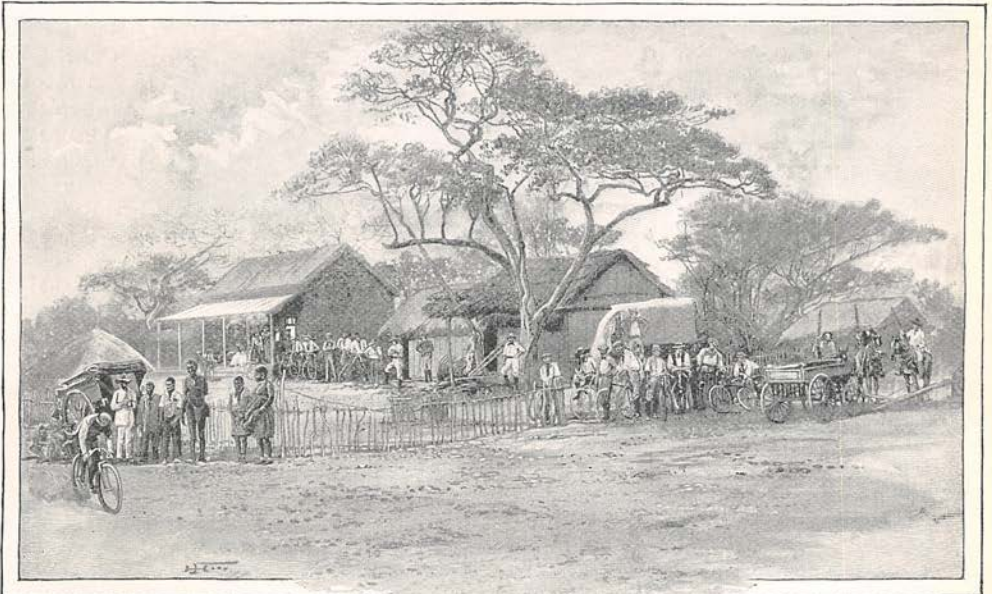
VIEW FROM THE COAL STAGE, BULUWAYO.

The Main Line of the Cape to Cairo Railway is on the right.

but in Berlin. That, however, only increased the desire of the British Imperialist to provide against any further interruptions of the continuity of British red between the Cape and Cairo.

It would not be easy to say when first the magic formula, "From Cape to Cairo," fell from the lips of Mr. Rhodes. Certain it is that when he first advocated the extension

of Cape Colony northward, no idea of carrying the flag beyond the Zambesi had ever flitted across the firmament of his imagination. Possibly the invitation sent him by General Gordon to accompany him to Khartoum in 1884 may have first turned his attention to the Cairo end of the trunk line. Kinglake, in a memorable passage, one of the best instances of successful

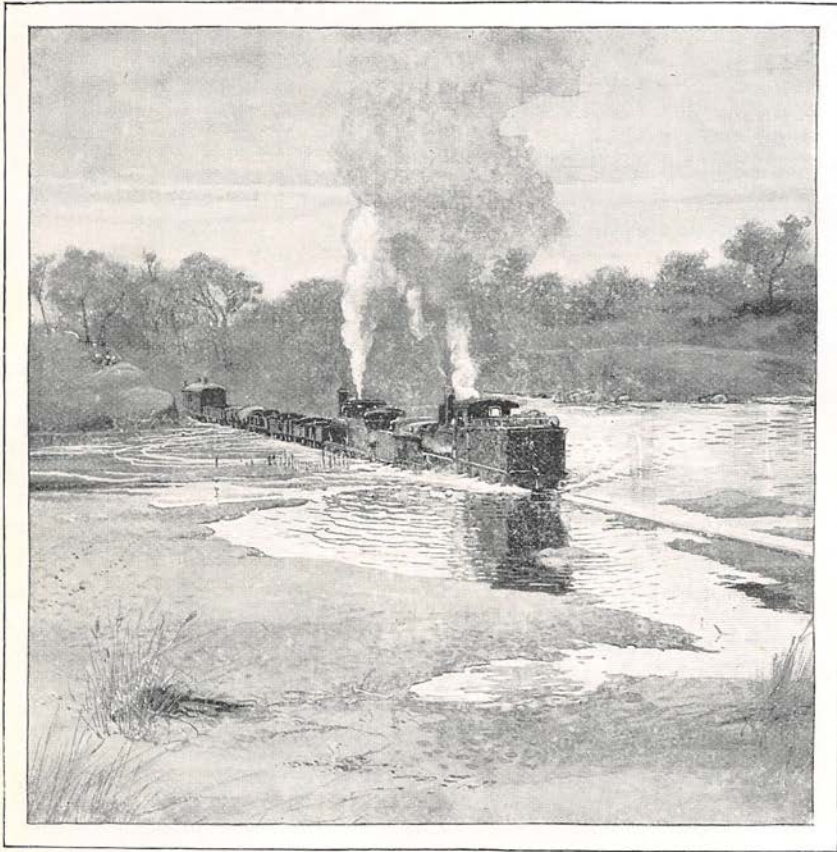


"THE TRAVELLERS' REST": AN INN NEAR BULUWAYO, ON THE LINE OF THE CAPE TO CAIRO RAILWAY.

prophecy in modern literature, foretold that the Englishman leaning forward to protect his beloved Indian Empire would some day plant a firm foot in the valley of the Nile. It is possible that it was during that year of storm and stress, when his heroic friend waged his long battle against the Mahdi behind the ramparts of Khartoum, that Cecil Rhodes, leaning northward, ran in imagination a railway which, of course, could have no other terminus but Cairo. Alex-

securely fixed in position, giving the steeplejack easy access to the summit. When Mr. Rhodes began to plan the construction of his Cape to Cairo railway he flew his kite over the continent. Some five or six years ago—time flies fast when men are building empires—he startled the world with the announcement that he intended to construct an overland telegraph line from the Cape to Cairo. At first men jeered. When he appealed for funds from

the public with which to lay down his wires through Central Africa, the Stock Exchange for once was deaf to his appeal. The Mahdist rebellion was then in full possession of Khartoum and the Egyptian Sudan. Ever since Gordon's death the vast belt of territory between the Equatorial lakes and the Nile at Dongola had been hermetically sealed against European civilisation.



A "TRAIN FORD" ACROSS THE SHASHI RIVER, ON THE CAPE TO CAIRO RAILWAY.

andria would be its real terminus on the Mediterranean, but the Cape to Alexandria railway would have been no magic talisman to stimulate the imagination of man. Cape to Cairo probably suggested itself, and was immediately adopted—one of the unforgettable phrases which make history.

When steeplejacks wish to ascend a lofty spire they are accustomed to fly a kite so that its string falls across the pinnacle. To this string a stout cord is attached, by the aid of which a rope and ladder are soon

How could Rhodes hope to get his lines through Mahdidom? "Oh, as to that," replied Rhodes, with boyish confidence, "when the time comes I shall know how to square the Mahdi." People shrugged their shoulders and said that the fanaticism of the Mahdi would be proof even against the wealth of Mr. Rhodes. Then other objectors asked how the telegraph poles were to be protected from the white ants, those scavengers of Central Africa, to whose teeth nothing is sacred that has not within it the principle of

life. "Make them of iron," replied Rhodes. "But against the wandering herds of wild elephants what avail will be your iron poles? These huge pachyderms would use the telegraph poles as scratching-posts." "We shall see," was Mr. Rhodes's reply. "And if you don't subscribe for the Cape to Cairo telegraph stock I will find the money myself and go ahead."

Nine-tenths of the money had to be found by Mr. Rhodes personally. But he is not a man to be balked in his purpose. He at once began the construction of the line, starting from the northern terminus of the Cape telegraphic system. He has pushed the line northward through Rhodesia to Umtali in Mashonaland, which is 1,800 miles from the Cape, and is pushing it on through Nyassaland to the southern end of Lake Tanganyika, another 700 miles further north. The total distance to be covered is 6,600 miles. At the same time the Egyptian Government, under British auspices, was pushing its telegraphic system southward from Wady Halfa. Its

advance was intermittent, the erection of the telegraph poles being necessarily dependent upon the pushing back of the outposts of the Dervishes. Last autumn, however, the destruction of the power of the Khalifa at Omdurman enabled the Anglo-Egyptian

authorities to reopen the long-closed telegraph office at Khartoum. Khartoum being 1,300 miles from Cairo, this reduces the distance to be spanned by the telegraph wire to 3,500 miles; or, if we reckon Abercorn on Lake Tanganyika as its northern terminus,

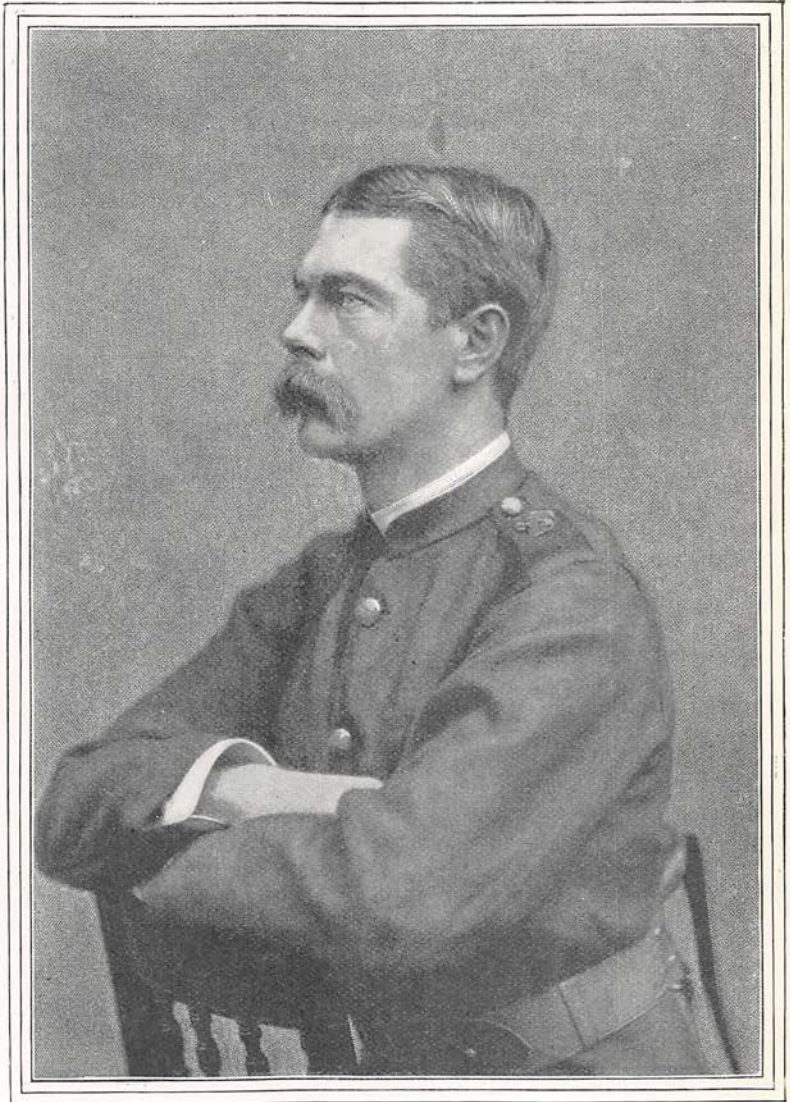


Photo by]

[Elliott & Fry, Baker Steet, W.

LORD KITCHENER OF KHARTOUM, SIRDAR OF THE EGYPTIAN ARMY.

only 2,800 miles. It is being rapidly eaten into at both ends—more rapidly in the south than in the north. Still, nearly one-half of the continent, and that the most difficult half, remains to be crossed. How difficult it is may be inferred from the fact that, whereas

the line was put up at the cost of £50 a mile in Rhodesia, it is estimated that it may cost from £80 to £100 per mile in the territory between Umtali and the extreme southern limit of the Egyptian Soudan.

From Umtali the telegraph line strikes

to the southern end of Lake Tanganyika. From Abercorn it will enter German territory and skirt Lake Tanganyika on the east. The Germans gave Mr. Rhodes leave to carry his line through German territory on condition that he would, in addition to

his own through wire, lay down at his own cost a separate line between Rhodesia and British East Africa, the wire of which is to be used solely for the telegraph traffic of German East Africa, to be the property of the German Government, and to be maintained in repair at Mr. Rhodes's expense. At the end of forty years the German Government may take over the line without paying compensation of any kind. Beggars must not be choosers; and the German Government, having Mr. Rhodes at its mercy, drove this bargain before giving him wayleave through territory which it has neither colonised, civilised, nor occupied. After leaving German territory the telegraph line will



Photo by]

[Elliott & Fry, Baker Street, W.

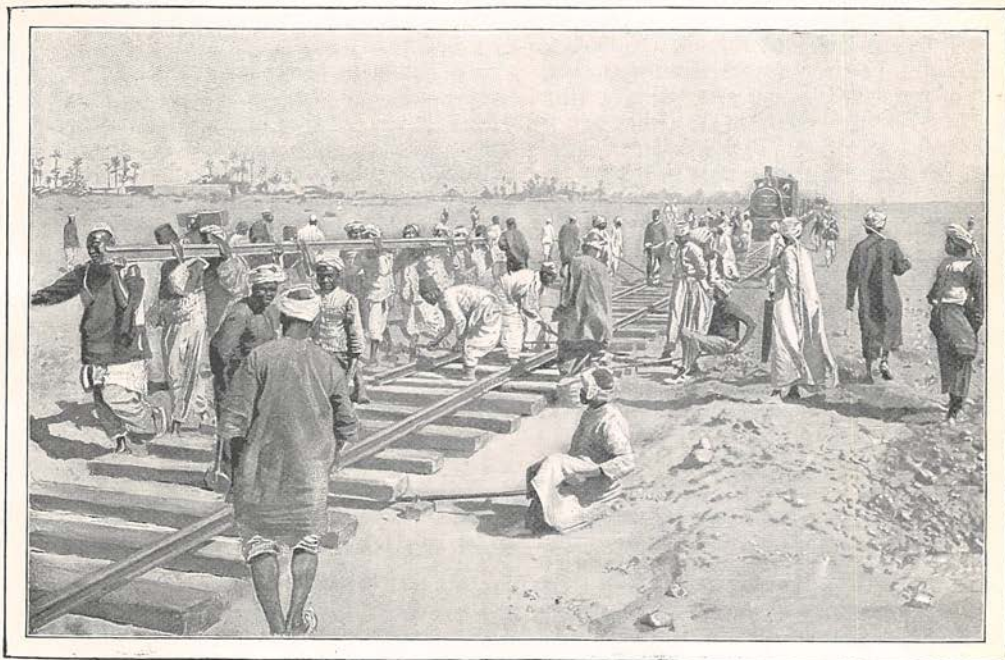
LORD CROMER, BRITISH CONSUL-GENERAL IN EGYPT.

northward to Tete, where it crosses the Zambesi and joins the telegraphic system of Nyassaland at Blantyre. Thence it skirts the lake on the western coast to Karonga, which was reached last December. From Karonga the route lies through Rhodesia

make its way to Mengi, in Uganda, and then, avoiding the malarious valley of the Nile between Lake Albert and Khartoum, it will traverse the edge of the plateau that skirts the frontier of Abyssinia and make a junction with the Anglo-Egyptian system



UNLOADING AMMUNITION AT THE RAILHEAD OF THE SOUDAN MILITARY RAILWAY.
Photo by René Bull, Correspondent of "Black and White" in Egypt and the Soudan during the operations of the Sirdar.



ARAB AND SOUDANESE GANGS AT WORK ON THE SOUDAN MILITARY RAILWAY.
In the distance is seen the train drawing up sleepers and rails, which advances as the rails are bolted together.
Photo by René Bull, Correspondent of "Black and White" in Egypt and the Soudan during the operations of the Sirdar.

on the frontier of the Soudan. With the exception of the 700 miles of German territory, the whole distance from Cape to Cairo is already coloured British red on the African map. That distance may be reduced to 300 miles, if the beginning of German territory is reckoned at the north end of Tanganyika instead of the south. England has a right of free navigation over the whole length of the lake—400 miles; so that in reality, of the 6,600 miles which stretch between Cape and Cairo, the travelling Briton need only for 300 miles stray beyond the protecting shadow of the Union Jack.

The transcontinental telegraph company, unlike the Cape to Cairo railway, can be justified as a financial speculation. The cost of telegraphing to South Africa at present is 5s. per word. Communication goes by cables on the east and west coasts of the continent. The capital invested in the African cables is estimated at from three to four millions sterling. To keep the cables in repair six vessels are constantly employed, three on each coast. To build the overland line costs from £50 to £100 per mile. Averaging it at £75, the total cost of putting up the telegraph wire across Africa would be less than £500,000. The cost of upkeep is also much less for the overland line than for the submarine cable. It may, indeed, be calculated that the cost of maintenance will be largely met by local messages, none of which are, of course, at the command of the cable companies. The net result is that when the overland wire is in working order Mr. Rhodes will be able to reduce the cost of telegraphy at once from 5s. to 3s. 6d. a word, and earn a good dividend besides.

The telegraph poles which carry the Cape to Cairo wire are 18 ft. in length. Eighteen go to the mile. As they weigh complete 113 lb. they are made in two sections, one weighing 55 lb., the other 58 lb., each of these forming a load for a native. The wire is galvanised iron, and so far it has been

respected by the natives. Even the Matabele wire, "the white man's wire that talks," was seldom interfered with by the rebels. All the poles are of British manufacture. Those in Rhodesia have been brought up from the Cape. Those in Nyassaland came in *via* Chinde at the mouth of the Zambesi. The northern section will be supplied by the Nile, while for the central portion Mr. Rhodes hopes the Uganda railway will be opened in time for him to avail himself of the transport.

So much for the telegraph line, which it is expected will be in working order in five years' time. It is, however, the Cape to Cairo railway that has most attracted the attention of the world. It is not built yet; hardly half of it is contracted for. But it is following closely on the heels of the telegraph, and Mr. Rhodes recently invited me to be present at the laying of the last rail on January 20th, 1909. In ten years' time the line, it is calculated, will be completed and ready to carry the mails from Cairo to the Cape. The cost of the whole line is estimated at £25,000,000. But as over 3,000 miles are at present constructed the total required for the central section will not exceed £15,000,000. Mr. Rhodes, indeed, put it recently at only £10,000,000. His estimate was 3,229 miles still needed to be built, and that they could be built at a cost of £3,000 per mile. This, however, is a somewhat sanguine estimate. Since it was framed Mr. Rhodes has seen cause to vary the route, in order to avoid the swamps of the Nile Valley—a commendable object, but one which will not diminish the mileage of ironway. The cost of constructing the Cape railway through Bechuanaland was £3,000 per mile; but in Rhodesia, owing to the greater cost of carriage and the increased cost of labour, the railway bill ciphered out at £3,800 per mile. It will be strange if the cost is less than this in the centre of Equatorial Africa.

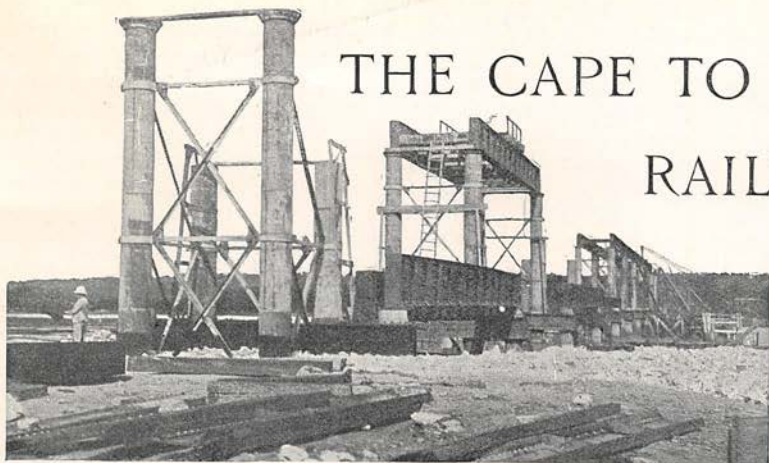
(To be concluded.)

THE CAPE TO CAIRO RAILWAY.

BY

W. T. STEAD.*

PART II.

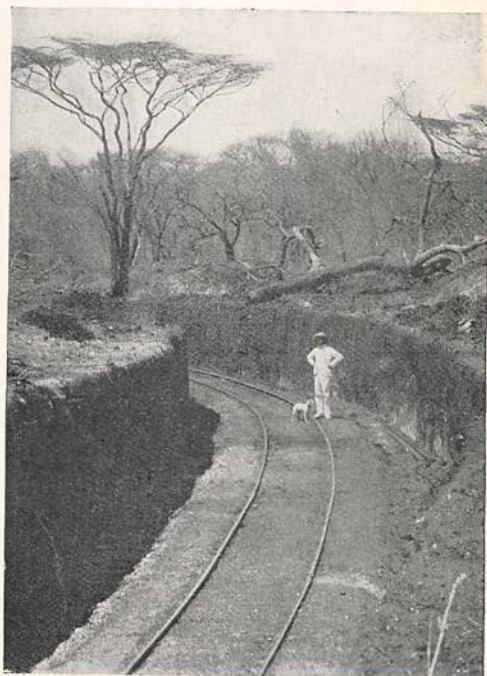


BUILDING MACAPA BRIDGE.

THE task of bridging the continent of Africa by a railway has been facilitated by the necessities of war. Hosea Biglow's familiar saying about "civilisation getting a lift in the powder-cart" was seldom more appositely illustrated than by the recent war in the Soudan. When the Sirdar, General—now Lord—Kitchener, began to work out the carefully calculated plan of campaign which he had matured for striking down the Dervishes of the desert, he found himself confronted by this almost insuperable difficulty. The heart of the enemy was situate just 1,200 miles south of Cairo. To reach that heart and deal it a deadly blow, 1,200 miles (chiefly desert) had to be traversed by an army, every mouthful of whose food, to say nothing of its powder and shot, its forage, and all its other impedimenta, must be despatched from a base 1,200 miles to the rear of the fighting front. In the previous invasion of the Soudan Lord Wolseley had endeavoured to overcome this immense difficulty of transport by utilising the Nile and despatching an army in row-boats, past the cataracts, to Dongola. The experience of that expedition hardly justified the repetition of the experiment. If, therefore, the great blow was to be struck at the heart of Mahdism, the desert between Wady Halfa and Berber must be bridged by a railway. The building of that railway was the basis of the whole campaign. Without the railway the Khalifa

would still have been supreme in the Soudan.† All the Queen's horses and all the Queen's men would have been powerless to reach the

† Lord Salisbury, speaking on May 17, said: "By the building of a railway across the country we have recently conquered Egypt and the Soudan. No doubt the Sirdar wielded many weapons, and no weapon less surely than that of his own splendid intelligence and skill. But if you go out of that and ask what material



A CUTTING NEAR MSONGAILU.

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Dervish despot behind his desert panoply. Fourteen years ago an attempt had been made to pierce the wilderness of arid sand which formed the Mahdi's invulnerable harness by means of a railway starting from Suakim. The rails were sent out, and the plant; but the line was never constructed, and has not been built even to this day.

General Kitchener was more fortunate. He began quietly, working steadily; and at last, after nearly two years' persistent labour, diversified by a couple of bloody battles, he succeeded in carrying his war-road across 350 miles of desert to the Atbara. There was comparatively little engineering to do. The desert is level. Its drawback is not difficult gradients, but the scantiness of water. Between the starting-point at Wady Halfa and the terminus at the Atbara there are only two wells. One place per 175 miles where you can quench your



FORT UMLUGULU.

thirst under an African sun cannot be considered an ideal allowance. The line was

weapon he wielded, I say he won by the railway, and the railway alone. That railway, which he was able to build at the rate of about two miles a day, from Korosko to Khartoum, enabled him to succeed where with far larger forces and under other conditions he might have lamentably failed. I can imagine nothing more likely to exalt and satisfy the dreams of any railway engineer than the thought of what the Sirdar had in his hands. Conceive the power of building a railway at the rate of two miles a day across a country where there were no tunnels, hardly any cuttings, and no embankments, where you had an unlimited command of labour and no difficulties about money. Then they had the advantage of the splendid skill of the lieutenant, one of the Queen's subjects, of French extraction, in Canada, who is now the Railway Commissioner in Egypt, and whose wonderful skill enabled him to build this railway with a rapidity and facility which contributed in no small degree to the splendid success of the enterprise."

constructed for the most part by the natives, the Egyptian soldiers lending a hand under English supervision. When the Dervishes were beaten in the earlier campaign, their disbanded soldiers eagerly sought employment in making the line along which a few months later a force of twenty-three thousand men was to be hurled against the capital of the Khalifa.

The children of the desert were filled with awe when first the silence of the primeval solitude was broken by the puffing of the steam engine. Down at the other end of the Cape to Cairo line the simple Matabele, when first confronted by a locomotive, were certain that the strange machine was worked by the labour of an indefinite number of oxen, which they assumed were shut up

inside. Hence, when the engine stopped, they gathered in curious crowds waiting to see the door open and the oxen come out, nor could they for many days be persuaded that the power of the locomotive could come from other than the strength of the ox. The Arabs of the Soudan, more imaginative than the Matabele, saw in the fire-horses of the railway one of the Djinns of the Arabian Nights, harnessed by the magic of the Infidel

to the long train of cars. The steam engine was to them a living, sentient being—of which belief there is curious evidence in the fact that on one occasion a Sheikh made an impassioned remonstrance against the cruelty of making so small an engine drag so huge a train!

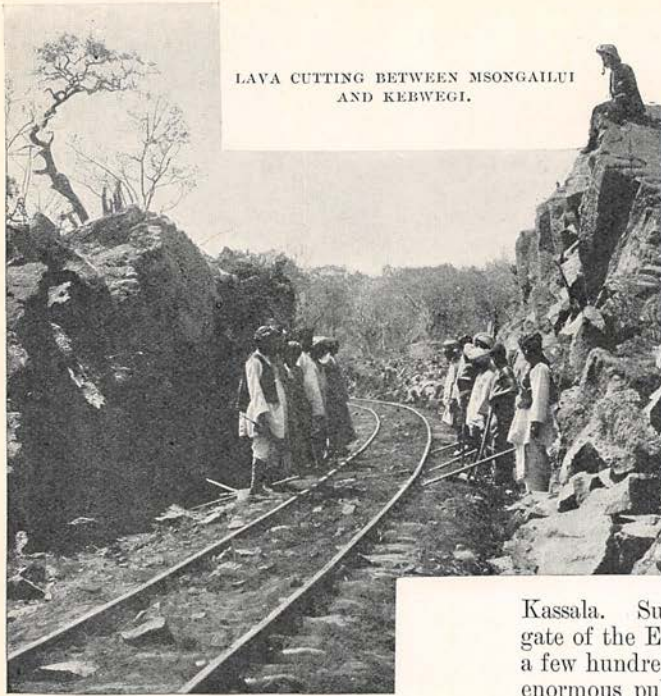
Further progress was stopped by the difficulty of bridging the Atbara. It was decided to throw a bridge across the river before the July floods. The time was short. Tenders were invited from British bridge-builders on a specification which was so elaborate that when the tenders arrived it was discovered that the structure would take two years to erect, as it was not capable of being launched. Fresh tenders had to be invited in hot haste, and to the infinite



BULLOCK TEAM FORDING A RIVER ON THE ROUTE OF THE RAILWAY.



CARAVAN CROSSING THE MATOPPO HILLS.

LAVA CUTTING BETWEEN MSONGAILUI
AND KEBWEGI.

The ultimate route of the Khartoum railway is uncertain. Originally, the idea was entertained of carrying it along the Nile valley through Fashoda to Sobat, where the trunk line from the south was to have effected a junction. More careful examination of the proposed line of route has compelled a modification of this scheme. It is more likely that the railway will be deflected eastward, and, like the telegraph, will skirt the western frontiers of Abyssinia. There is also some talk of building the much discussed Suakim-Khartoum branch; but at present the notion is not to cross the desert to Berber, but to trend southward by

Kassala. Suakim is undoubtedly the seagate of the Egyptian Soudan; and a line of a few hundred miles in length has always an enormous pull over its rival whose haulage exceeds a thousand miles.

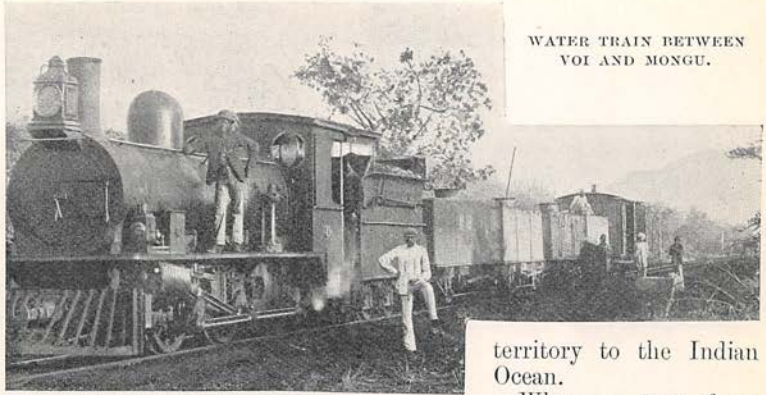
The railway is often spoken of as the rival of the steamship. It would be more correct to regard it as the servant. A hundred years ago a great engineer was asked before a Parliamentary Committee why, in his opinion, had rivers been created? He answered without hesitation, "To feed

dismay of the British public it was discovered that the Americans beat their rivals hollow, both as to time and as to price. The order was not a very large one. The total cost of the bridge was only £6,500. But no incident in recent years has brought home to the British public more forcibly the extent to which the British manufacturer has been beaten by his American rival than this matter of the Atbara bridge. No English firm could undertake to deliver the bridge either at the price or in the time which it was supplied by the Americans. Within thirty-seven days of the receipt of the order, the seven spans of the Atbara bridge left New York harbour for their destination in Egypt. The line south of the Atbara on to Khartoum is already in course of construction.



DISTRICT ENGINEER'S OFFICE, KEBWEGI.

canals." Railways with more truth may in like manner be said to be built to serve seaports. A railway without a seaport is like a plant without a root. Hence, even this transcontinental line will depend for its prosperity chiefly upon the number and facility of its points of access to the sea. Its northern terminus is Alexandria, once one of the greatest of all seaports, and still the most thriving harbour in the African continent. The southern terminus is at the base of Table Mountain. Between these two extreme ports, separated by 6,000 miles, there is at present only one port from which the Cape to Cairo line has access to the ocean. This is where the little 2-ft. gauge Beira-Salisbury railway crosses the malarial region of Portuguese South Africa, 200 miles south of the delta of the Zambesi. Beira is the natural seaport of Rhodesia. When Portugal sells her colonies, Beira, with Delagoa Bay, will pass into the hands of the English. But at present, satisfactory working arrangements enable the Rhodesians to receive and despatch merchandise across Portuguese



WATER TRAIN BETWEEN VOI AND MONGU.

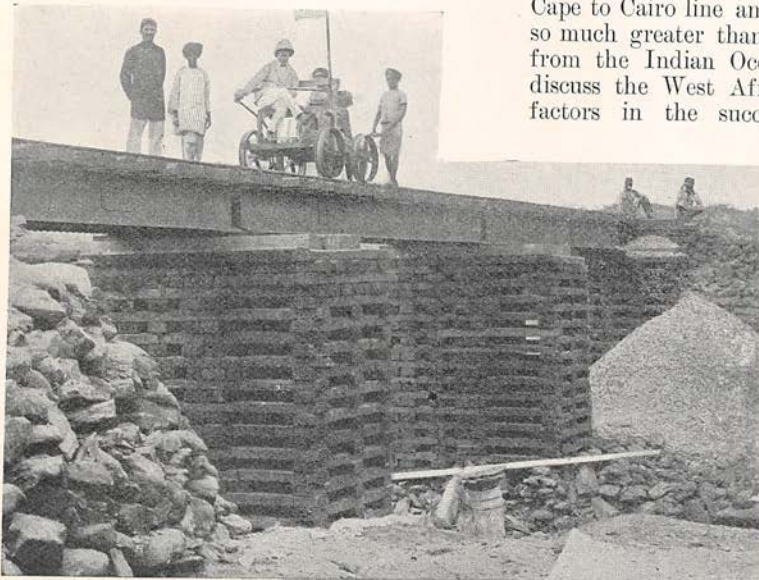
territory to the Indian Ocean.

When we turn from the railways from the sea-coast which actually exist to those which are already projected, or are partly constructed, we find that the Cape to Cairo railway may count upon having access to the sea by means of independent lines running westward into the interior on the East Coast at five different points. To the West Coast there is at present talk of two railways, one crossing German territory to the British post of Walfish Bay, the other stretching across the Congo Free State, which would unite the Atlantic with Lake Tanganyika. The latter is something more than a project, for the Belgians have partially surveyed the route, and the telegraph and telephone—the pioneers of the railway—have already linked the great inland lake with the Congo waterway. The distance, however, between the Cape to Cairo line and the Western Coast is so much greater than that which divides it from the Indian Ocean, that we need not discuss the West African lines as material factors in the success of Mr. Rhodes's project.

The railways from the East Coast which will feed the great trunk line are as follows:—

(1.) The Natal railways, which start from Durban and at present terminate in the Transvaal.

(2.) The Delagoa Bay railway, starting from the port of that name in Portuguese territory and terminating like the Natal railways in the Transvaal.



BRIDGE OVER THE TSHAU CULVERT.



RAILWAY TRACK THROUGH THE SASHI RIVER.



A TRAIN FORDING THE SASHI RIVER.



MAJOR CORYNDON'S CAMP, VICTORIA FALLS.

At present, and so long as President Kruger is supreme in the Boer Republic, there will be no junc-

haul one hundred and sixty tons and make the journey in sixteen hours. Hence in the broader gauge sixteen trains could do the work which now needed three hundred and seventy-five. As the result of the change

in gauge the freight will be reduced from £11 to £8 per ton.

(4.) The German East African railway, which is still a subject for discussion at Berlin. This line, the preliminary survey of which has been undertaken, will

start from Tabora, and, after crossing the German Protectorate, will throw out two branches, one terminating at Ujiji on Lake Tanganyika, the other at some post on the Victoria Nyanza. The first section of this line—only one-sixth of the whole—connects Tabora with Morgoro in Ukami. Although only 110 miles in length, it is estimated that it will cost £600,000 to build—an average of nearly £6,000 per mile. The cost of building the railway to the lakes cannot therefore be less than £4,000,000.

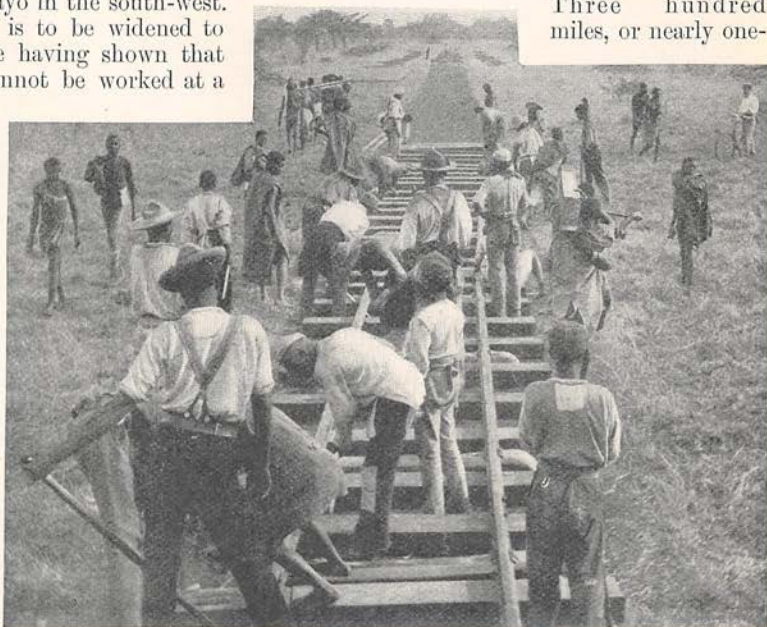
(3.) The Beira railway, of which I have already spoken, crossing Portuguese territory, enters Rhodesia at Umtali, from which point it is in communication with Salisbury on the north and Buluwayo in the south-west.

The Beira railway is to be widened to 3 ft. 6 in., experience having shown that a 2 ft. gauge line cannot be worked at a profit. How important is the question of gauge may be seen from a statement made by Sir Charles Metcalfe as to the difference of the results in the haulage on 2 ft. and 3 ft. 6 in. gauge railways. On the 2 ft. gauge they could only haul twenty tons per locomotive, and it took three days to make the journey from Beira to Umtali. With a 3 ft. 6 in. gauge, one locomotive could

haul one hundred and sixty tons and make the journey in sixteen hours. Hence in the broader gauge sixteen trains could do the work which now needed three hundred and seventy-five. As the result of the change in gauge the freight will be reduced from £11 to £8 per ton.

(5.) The British East African railway from Mombasa to the Victoria Nyanza. This line is now in course of construction.

Three hundred miles, or nearly one-



LAYING THE RAILS TO BULUWAYO.

half of the entire lines, have been built across the lowlands nearest the sea at a cost of £1,750,000, which makes the average cost about the same as the German estimate. The remaining half, which is more difficult from an engineering point of view, will bring the total expenditure up to a sum far exceeding the original estimate of £3,000,000. The lake terminus of the Mombasa railway will be close to the German frontier on the eastern shore of the Victoria Nyanza. The Cape to Cairo line will pass on

line differs from that of all other African railways. The gauge of the Egyptian railways is 4 ft. 8 in. The gauge of the South African lines is 3 ft. 6 in. But the gauge of the Mombasa line is 3 ft. 3 in.*

(6.) Between Mombasa and Suakim on the Red Sea there is a stretch of 1,800 miles as the crow flies, a belt through which there will be no access to the sea. Not until we reach Suakim can the Cape to Cairo line extend a branch to the sea. Whether *via* Berber or *via* Kassala, there is no doubt but



THE VICTORIA FALLS ON THE ZAMBESI RIVER.

the western coast of the lake. Owing to the extraordinary perversity of the British Foreign Office, the gauge of the Mombasa

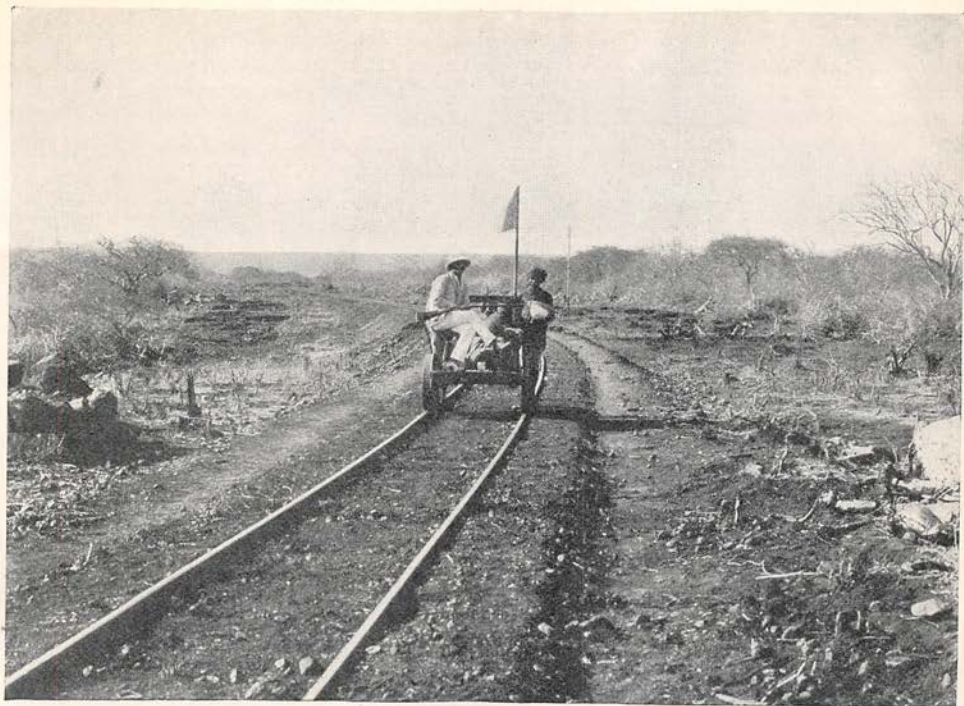
* I cannot do better than quote here Lord Salisbury's brilliant description of the difficulties to be overcome in the making of this line:—

“Well, at present we are constructing, I cannot say with brilliant success, the Uganda railway across 550 miles of unknown country. We have a cutting, I am sorry to say, and embankments to undertake. With no great command of labour, and a limited supply of money, we don't go quite so fast as the Sirdar was able to build the Korosko and Khartoum railway, but the building is advancing steadily, with such accidents, of course, as in such a country you must perhaps expect. We suddenly discovered that we had a wrong notion of the configuration of the country, and that by altering it we were able to save 100 miles of our track. That shows the surprises that meet you in a new country. There are other surprises of a less agreeable kind. The

that the grand trunk will some day reach the sea at Suakim.

In constructing the Cape to Cairo line it

whole of the works were put a stop to for three weeks because a party of man-eating lions appeared in the locality, and conceived a most unfortunate taste for all our porters. At last the labourers entirely declined to go on unless they were guarded by an iron entrenchment. Of course, it is difficult to work a railway on these terms. There were many other difficulties to encounter, such as no water, no food, and a great disinclination on the part of the natives to work for any consideration whatever. Yet, in spite of all those difficulties, we have completed more than half of the railway to the lake, and in the course of the year we shall have reached the lake. That means the subjugation, and therefore the civilisation, of the country. Nothing but that railway could give us a grip of the country which would enable us to take the responsibility of such a vast extent of territory.”



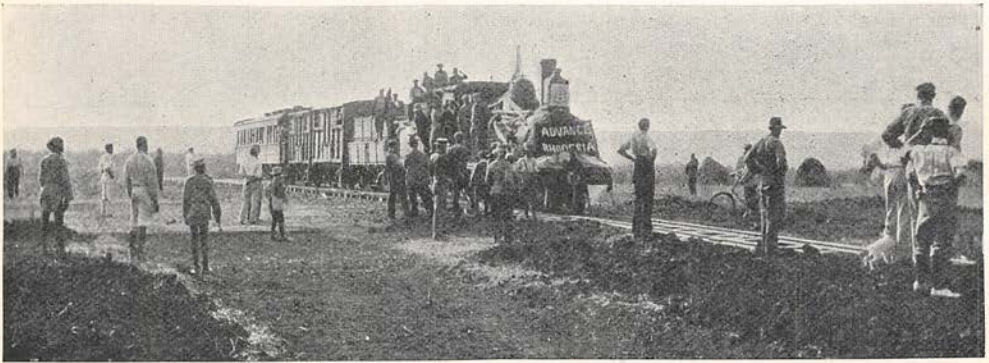
A TROLLEY RUN BETWEEN TSHAU AND GUMANI.



NATIVE WORKMEN.

is to be expected that at first, at all events, its builders will avail themselves of the remarkable series of waterways which line their route. Even to this day, although the railway runs 350 miles south of Wady Halfa, the Egyptian Government is content to rely upon the Nile for the 200 miles which lie between Assouan and Wady Halfa. If Mr. Rhodes were to utilise all the lakes on his way, he would be able to get a lift of 400 miles on Lake Nyassa, 400 more along Tanganyika, and nearly 300 on the Victoria Nyanza, so that at least one-third of the gap yet to be bridged could be crossed by steamer. If, in addition to the lakes, he decided to utilise the Nile below Khartoum, it is possible to travel when the Nile is high 450 miles from Khartoum to Fashoda; and if the floating vegetation could only be cut through by steamer and the waterway kept clear, he might go by boat to the

have got itself built in sections, and it would never have been discovered that it was a Cape to Cairo line until the last gap had been bridged and the trains were actually running. This rule-of-thumb, happy-go-lucky method of procedure has for the first time given place to an attempt to carry out, step by step, the various parts of a vast conception. Whether the express train ever starts from Cairo to the Cape or not, the thought that some day it must start will dominate all the plans of all the engineers and pioneers who will be employed in opening up East Africa. All these schemes will first of all be considered from the standpoint of Mr. Rhodes's idea, and judged accordingly. And this is quite as true of the Germans as it is of the British. So great is the power of thought, that an abstract idea which was ridiculed by practical statesmen a few years ago as a visionary



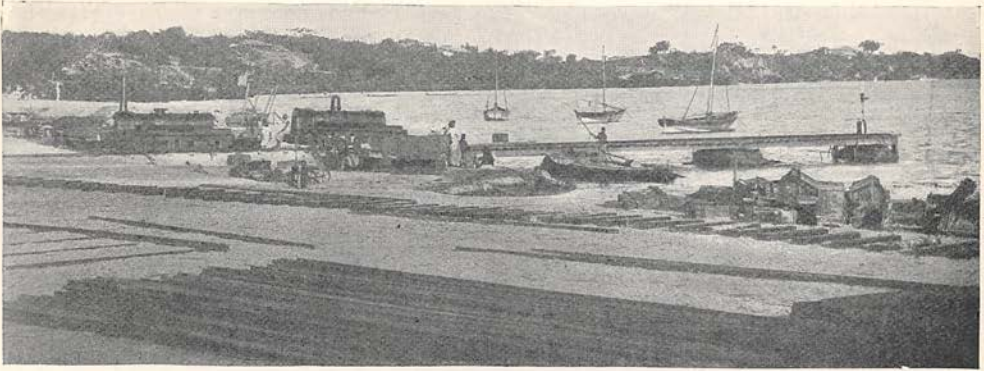
THE FIRST TRAIN THAT ARRIVED AT BULUWAYO.

Albert Nyanza, which is 750 miles further south. By thus utilising both river and lakes, the distance to be covered by rail would be reduced to a little more than 1,000 miles. Mr. Rhodes's idea is, however, to carry the railway the whole distance, so as to avoid transshipment, and to escape the malarious marshes between Khartoum and the Albert Nyanza.

The essential and distinctive characteristic of the Cape to Cairo line is that, almost for the first time in the history of the British Empire, the piecemeal efforts of widely separated workers are visibly harmonised into a stupendous whole by the colossal conception of one master mind. Most of the achievements of the English have been more or less unconscious and unintended. In Seeley's phrase, we founded our Empire in a fit of absence of mind. But for Mr. Rhodes the Cape to Cairo line would

absurdity has now taken up its place in the world as one of the great factors governing the evolution of civilisation on a vast continent.

It is impossible in the scope of this article even to allude to the Empire of Rhodesia, a region many times vaster in extent than the United Kingdom of Great Britain and Ireland, which bears the name and attests the thaumaturgic might of its illustrious founder. Suffice it to say that the great adventure, in support of which private investors have sunk over seven millions sterling, in cheerful confidence that the ultimate results will bear fruit in solid dividends, is at last justifying the faith of its supporters. War, cattle-plague, famine—almost all imaginable misfortunes have afflicted the latest born of our Colonies. But one misfortune it escaped—it never lost faith in its founder or faith in its future;

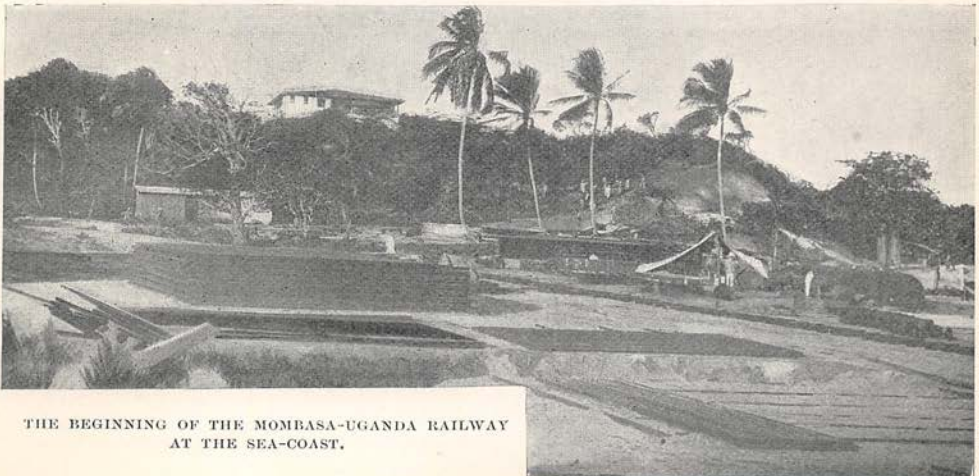


LANDING MATERIALS FOR THE MOMBASA-UGANDA RAILWAY.

and by its faith it was saved. The gold mines are now realising results better than those hoped for when the land of Ophir was still unexplored; and in that circumstance, perhaps more than in any other, lies the chief hope for the speedy construction of the great trunk line.

Mr. Rhodes began his end of the line by building six hundred miles of railway from Vryburg in Bechuanaland to Buluwayo in Rhodesia. The construction was hurried because the cattle-plague, by destroying the oxen of South Africa, rendered transport impossible. The railway was not built by the Chartered Company—the East India Company of South Africa, which came into existence to enable Mr. Rhodes to execute his great designs—but the Company formed for its construction received a twenty years' subsidy from the Chartered Company of £10,000 per annum, and the Company besides guaranteed five per cent. interest on the first mortgage debentures and debenture

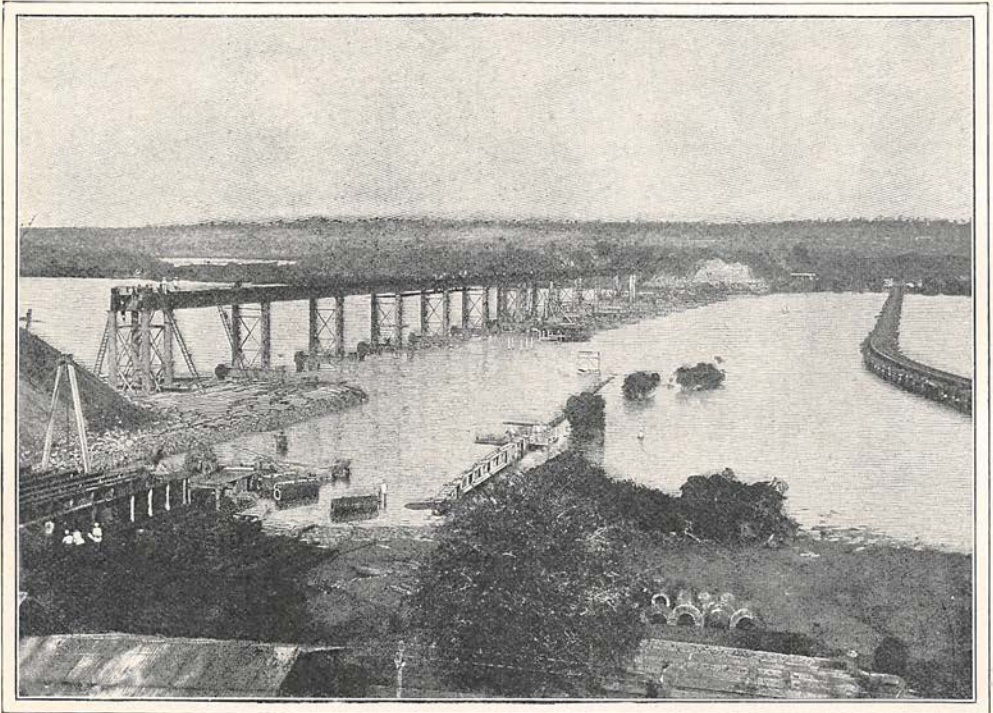
stock. The cost of building the line was about £2,000,000, towards which the Imperial Government, through Sir William Harcourt (then Chancellor of the Exchequer) contributed £200,000. The line has been very successful, and its success has naturally led to a demand for a further extension. No practical proposal, it need hardly be said, has ever been made as yet to construct the Cape to Cairo line. All that is at present in negotiation is the construction of the northward extension of the Bechuanaland railway to the gold and coal regions of Rhodesia, which it is necessary to tap in the interests of the Colonists themselves. Even if there were no Cape to Cairo grand trunk line in the air, the building of the railway to the gold region of Gwelo and the valuable coal-field of the Mafungabusi district would be indispensable. The Bechuanaland Railway Company needs coal. At present it has to carry its fuel as well as its freight from the Cape to Rhodesia. Hence its cars return



THE BEGINNING OF THE MOMBASA-UGANDA RAILWAY AT THE SEA-COAST.

empty. When the Mafungabusi area is tapped, where seventy miles of coal-beds lie waiting the pick of the miner, not only will the railway find fuel, but it will also find mineral to fill the cars at present returned empty. The hundred miles from Buluwayo to Gwelo are all surveyed and pegged out ready for the constructor. From Gwelo to Mafungabusi, a distance of 150 miles, another section is surveyed, and will be taken in hand at once. Beyond Mafungabusi there are only 150 miles to cross before the line will reach the Zambesi. This river it is proposed

that the line of route at present contemplated may be abandoned. The telegraph route, for instance, differs widely from that which the railway will follow. It is easy to sling a telegraph wire across ravines without regard to gradients which would baffle the engineer of a railway. The telegraph line crosses Portuguese territory at Tete, and makes its way to Blantyre, and then skirts Lake Nyassa to Karonga. The original design of the railway is to run it west of Zumbo, midway between Nyassa and Bangwoolo, along a healthy, open plateau which skirts the



MACAPA BRIDGE—MOMBASA-UGANDA RAILWAY.

On the left is the partially completed iron bridge; on the right is the temporary timber viaduct, constructed for working purposes.

to bridge just outside the Portuguese frontier, about 500 miles east of the Victoria Falls, where a short bridge of a quarter of a mile will carry the line across the one great river it will meet on its northward way. Mr. Rhodes hopes to cross the Zambesi in five years' time.

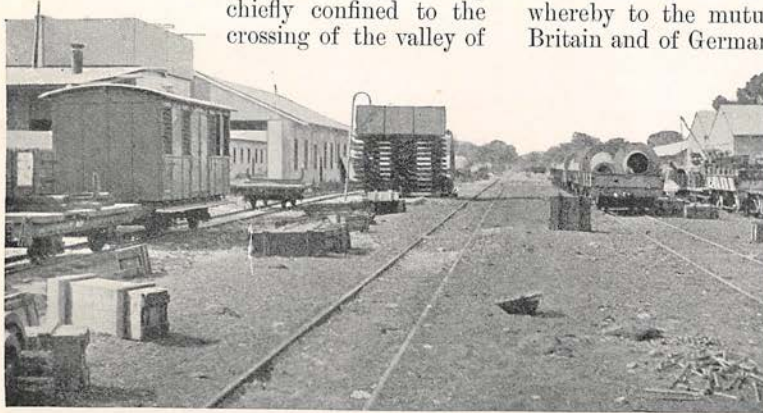
Up to this point the Cape to Cairo line may be said to have materialised, or to be in a fair way to materialise. North of the Zambesi the line exists only on paper and in the imagination of Mr. Rhodes. No regular survey has been made, and it is quite possible

Loango Valley, to Lake Cheroma, 220 miles north of the Zambesi. From thence it will strike 280 miles across country to the southern end of Lake Tanganyika. The cost of constructing the line from Buluwayo to Tanganyika is estimated at about £3,000,000, 900 miles at about £3,000 per mile. Land costs nothing; labour is cheap. In the diamond mines Mr. Rhodes pays his stalwart natives as much as 300 dollars a year. But on the Zambesi labour is plentiful at eighteen dollars per annum. The men employed in pegging out the telegraph line between

Nyassa and Tanganyika are paid in a currency of calico estimated at less than a dollar a month. The engineering difficulties are not great, being chiefly confined to the crossing of the valley of

southern frontier of German East Africa. What will happen then it is premature to discuss to-day. Mr. Rhodes no doubt believes that he will be able to arrange terms whereby to the mutual advantage of Great Britain and of Germany he will be permitted

to carry his line through to Uganda. But while preparing for all eventualities, Mr. Rhodes, being a practical man, prefers to concentrate his energies on the next step, which in this case is the northward extension of the Bechuanaland railway to the Mafungabusi coalfield.

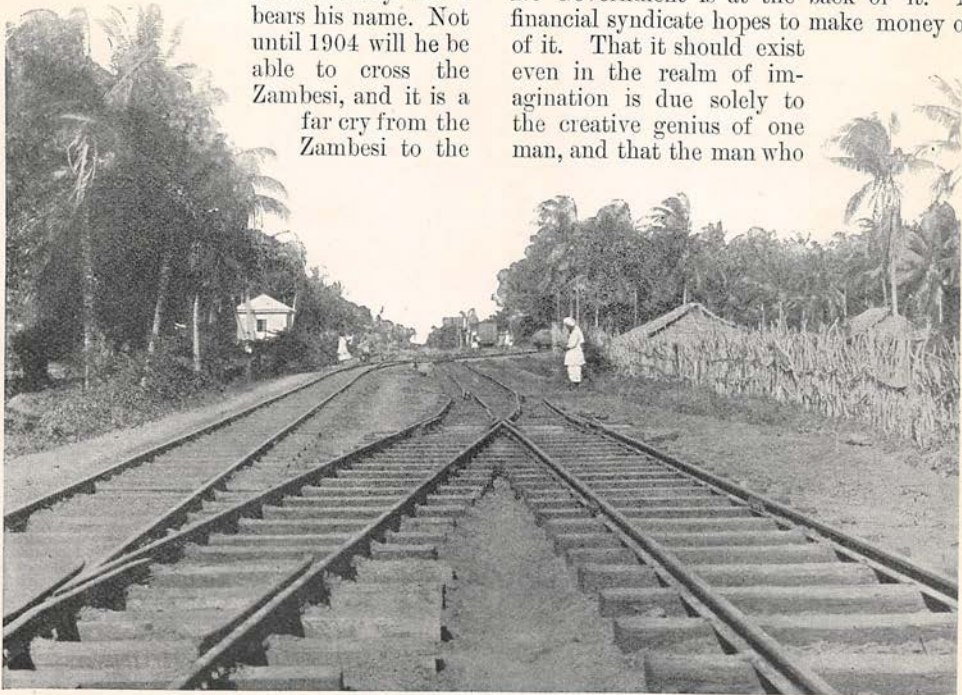


AN UP-COUNTRY STATION.

the Zambesi and the rapid descent from the plateau to the shores of the Tanganyika.

Nothing has yet been arranged with the German Government for the railway right of way across German East Africa. Mr. Rhodes is not worrying himself about what must be done five years hence. He is content to arrange for the immediate necessities of the Colony which bears his name. Not until 1904 will he be able to cross the Zambesi, and it is a far cry from the Zambesi to the

sketch of the Cape to Cairo line. It is the first great trunk railway ever designed to span a continent from north to south. It is the first railway projected to cross the Equator at right angles, and the only railway in the world which has ever been designed to traverse territory across which no road, trade route, or human trackway has yet existed. No Government is at the back of it. No financial syndicate hopes to make money out of it. That it should exist even in the realm of imagination is due solely to the creative genius of one man, and that the man who



CHANGAMWE STATION.



COOLIES' TRAIN WITH MATERIALS AT SULTAN MOHAMED STATION.

only three years ago was stripped of all his official positions and solemnly censured by a Parliamentary Committee. But the greatness of Cecil Rhodes is not dependent upon official positions. His official positions, indeed, were only the certificates of an influence which existed before they were granted and which their withdrawal was powerless to affect. The Cape to Cairo railway is only the shadow of the African Colossus falling athwart the continent which is dominated by his personality.

[The striking photographs which accompany the foregoing article on the Cape to Cairo Railway emphasise the enormity of Mr. Cecil Rhodes's self-imposed task. For permission to utilise the photographs illustrating the Cape section of the main railroad to Cairo we are indebted to the British South Africa Company; and for those illustrating the Mombasa-Uganda section of the line we have to thank the Uganda Railway Commissioners.]



OPENING OF THE IRON RAILROAD BRIDGE ACROSS THE ADZIE RIVER: A RECENTLY COMPLETED PORTION OF THE CAPE TO CAIRO LINE.