

SOUDAN RAILWAY.

One of the Greatest Surveys of Modern Times.

The Viceroy of Egypt's Proposed Railroad to the Equatorial Regions.

Elaborate Report of the Great English Engineer, Mr. John Fowler.

From the Second Cataract of the Nile, Along the Bank, Across the River, Traversing Deserts and Terminating at Shendy.

Ships and Steamers To Be Hauled Two Miles Overland.

A Road 889 Kilometres Long, with 66 Engines and 1,100 Cars.

THE BRIDGE ACROSS THE NILE.

An Enterprise Costing Twenty Million Dollars To Be Completed in Three Years.

The Earthworks, Permanent Way, Viaduct, Arches, Telegraph Lines, Stations, Rolling Stock and Engineering.

A Journey of Sixty Days Reduced to Fifteen.

NOVEL FEATURES OF THE ENTERPRISE.

The Vast Wealth that Will Accrue to Egypt.

THE FUTURE EMPIRE OF KING COTTON.

An Exhaustive View of the Resources of the Soudan.

Traits of the Native Population.

A NEW ROUTE TO INDIA.

His Highness the Viceroy—Yuzuf! What is there in Northern Africa to justify the building of these 675 miles of railway? All the products of India can be grown there and worked there. The cultivable land is millions upon millions of acres. The soil is fertile, and once a railway passes through it and the interior countries must spring up; people will come and settle in the interior, and then the Nile will be bound to carry and nurture the interest by the rail; a general contact and dispersion will ensue; money and material prosperity will arrive, and then said His Highness, with a glow of pleasure and a burst of eloquence—when behind my corner of Africa! A railway will connect the Nile with the Red Sea. The same influences which have brought prosperity to the doors of the humblest village in Lower Egypt will invade the Soudan with the locomotive, and the races you have seen in savagery and poverty will, in ten years be a civilized, united community. I shall build the road east to the coast. I only await the surveys, and then the operations shall begin.—*Editorial of the Herald Correspondent with the Viceroy of Egypt, August 18, 1872.*

"I am gratified," said he, "that you have come among us. The world has forgotten Africa, and the name of the Soudan is not known beyond Egypt, and even there it is hardly believed. You have seen for yourself what there is, and you can write to your great journal what our future must be. Do you see that splendid prospect opening to the plain stretching back to the interior? We have more than 20,000,000 acres of such soil. I shall begin at once to cultivate. I have no machines, cotton gins, but when they are sent I am positive, with the support of Lower Egypt, that I can produce a revenue in a few years amounting to \$25,000,000, and the Soudan, developed to its fullest extent, thoroughly irrigated, with a good administration, is capable of producing 100,000,000 bales of cotton of the American size."—*Interview of a Herald Correspondent with the Viceroy of Egypt, March 18, 1872.*

The Viceroy of Egypt has fulfilled his promise—the long projected railway to the Soudan is about to be undertaken. This magnificent enterprise, preceded by telegraphic lines which now reach almost to the heart of the African Continent, is a project which has few parallels in history. It is but another example of the lofty purposes of the illustrious Ismail Pacha, who has linked the Red Sea to the Mediterranean by the Suez Canal; and who has lined the shores of the Nile with vast sugar plantations and refineries; who has made a grand spot of 3,000,000 acres of desert soil in the Delta provinces; who has reared Alexandria a second Venice in the dynasty of Eastern cities, and who has changed the squalid and filthy character of Cairo to the dignity and elegance of a European capital.

It requires little introduction to this vast scheme in order to impress upon the reader that, succeeding Sir Samuel Baker's expedition to the Equator, it is the first practical attempt to develop the isolated but productive regions of the African tropics. In our day there is no use of discussing the opening and civilization of new and barbarous countries without laying down the desiderata—telegraphs and railroads. Caravan progress has long been the bane of the East, but the present Viceroy has been the first to put his foot down and say:

"I MUST HAVE, I WILL HAVE RAILROADS."

Physical obstacles alone have long prevented him from laying the rail to the accepted sources of the Nile, and these obstacles have been of a nature and an extent that few can appreciate who are not familiar with the Valley of the Nile from the sea to Khartoum, the capital of the Soudan. The general character of Africa's surface renders any scheme of engineering not only very expensive but also difficult to accomplish.

Speaking at large, the continuous flow of water in the river is impeded by rocks and cataracts, and the immediate country surrounding these obstructions will not always permit the construction of ship canals; the deserts are vast and mountainous; the arable land is higher than the level of the Nile; fuel is scarce for steam engines and river navigation; skilled labor can only be obtained by importation; there are no native instruments or engineers; and every effort made with the population is one addressed to people who care as little for progress as they do for missionaries. Hence every attempt made by the far-seeing Viceroy to push his dominion farther into Central Africa has been accompanied by all the evil results which these numerous drawbacks necessarily engender. If his purpose had been a railroad to the city of Mexico or to the Pacific, as from New York, to him it would be as easy a problem as for ourselves. But his subjects differ from Americans, in that they are hampered by a religion opposed to a general commingling of the peoples, and teaching a leisure and an indolence sadly at variance with our ideas of industry and thrift.

With an idea has ruled, and that idea—progress. With Egypt's man has ruled, and that man—

The Viceroy. Take away the whole generation now existing and prevailing in America, and material progress would march on unfettered; but let the Viceroy and the high order of improvement that he has inaugurated be removed, it is to him, therefore, that those interested in the fate of that continent must look for a revival of the ancient glory and prestige of Egypt.

IN ALL HIS ENTERPRISES the Viceroy has constantly sought the co-operation of European skill. No traveler of note who has ever visited his domain has been permitted to depart without having been invited to give his views as to the best means to modernize and elevate Egypt. Mechanics, engineers, soldiers, writers and statesmen have laid before His Highness their impressions and examinations, and where he has found them in the least degree practicable they have been reduced to writing and preserved in the archives of the Ministry. It has been his constant habit to demand accurate information; to listen to new ideas and once, in possession of these, to place them in the hands of thorough and competent engineers for surveys and reports. In this way he has availed himself of the finest talents and the ripe judgment of the responsible and experienced travelers who go to Egypt for serious purposes. The tourist who lands at Alexandria, prepared to do the journey up the Nile, is not the average individual found running around the capitals of Europe. The trip is too expensive and surrounded by too many impediments. Hence, when it is decided to go to Egypt, a purpose other than that of ordinary sight-seeing is generally in view. Thus for years the Viceroy has been receiving and digesting the ideas of the best minds of the world, so that he has become thoroughly informed upon the abundant resources and the necessary improvements required to develop them. After bringing 3,000,000 of acres of cotton and sugar lands to the highest degree of cultivation in the Delta provinces, where he and said Pacha have constructed more than eight hundred miles of railway; after intersecting the beautiful territory with navigable and irrigating canals; in fine, after having provided the entire population with the means of a generous subsistence, he now turns to the Soudan, more than a thousand miles in latitude from his capital, and resolves to connect that isolated population, variously estimated at from 7,000,000 to 25,000,000 (if the White Nile be included), with Cairo by means of the rail. It is in itself a matter of some surprise that the Viceroy has been enabled to govern that Central African territory as well as he has governed it since he ascended the Viceregal throne. From the capital of Lower Egypt to the capital of the Soudan it is a journey of two months. The Soudan, in addition, has been a penal colony, and the retreat of the worst class of irresponsible Levantines, guilty of all classes of crime. His governors and officials have robbed him of his rightful revenues; the Arab tribes have been the victims of oppression and corruption, and all the provinces have suffered from misrule of the most baneful character. As General Grant wisely remarked in his last inaugural address, the astonishing facilities for intercommunication and travel have rendered government comparatively easy throughout the world. It is because the Viceroy wishes to control the Soudan from Cairo and place the inhabitants under his immediate protection that he is determined to build this railway, *coute que coute*.

MR. JOHN FOWLER, THE CONSULTING ENGINEER. Mr. John Fowler, who was invited by His Highness to prepare complete surveys of a railway to the Soudan, is one of the most eminent members of his profession. It is generally conceded that he is in no sense an enthusiast, but bases all his reports and recommendations on accurate scientific knowledge alone. To be called by the Viceroy of Egypt to undertake the solution of problems which might well render the most eminent authority diffident is given an opinion, but, after visiting the Nile countries himself and after employing an able corps of assistants, he has collected all the information submitted to him, and has prepared an exhaustive report, which has undoubtedly met the Viceroy's fullest approval. It should be borne in mind that many engineers have sought means of rendering the Nile navigable by blasting the cataracts and by ship canals, but that no one has yet prosecuted the severe inquiry which Mr. Fowler has so happily completed. It is Mr. Fowler's report which has suggested the present article.

GENERAL FEATURES OF MR. JOHN FOWLER'S REPORT. After a brief introduction, describing the circumstances under which he undertook the survey, Mr. Fowler proceeds to recommend—

First—A railway from Wady Halfa to Shendy, 889 kilometres long.

Second—A ship incline at the First Cataract.

Third—A bridge across the Nile.

Fourth—The avoidance of all construction involving tunnels or forries.

Fifth—The construction of the entire railway in three years.

Sixth—The estimate of the cost is \$20,000,000.

Accompanying the report is the map showing the construction already completed, including that which is necessary to make the communication complete between Cairo and Khartoum. The railway is already in operation for twenty miles above Roda, making a continuous line of more than five hundred kilometres from the Mediterranean sea southward. Between Roda and the First Cataract it is proposed, for the time being, to continue to move all products, merchandise and passengers, by the Nile to the First Cataract, which is about nine hundred miles distant from the Mediterranean when following all the tortuous windings of the river. At the First Cataract vessels are to be hauled overland, up a ship incline, a distance of three miles, and again launched in the placid waters above the rapids. Thence they will pursue their voyage to the Second Cataract, at Wady Halfa. Further navigation is impossible because of the obstructions in the river. Then the Soudan Railway begins, and following the great bend of the Nile, it crosses the proposed bridge at Koha, and, keeping along the river bank, diverges at Dabbe into the Bahiuda Desert, which it traverses, terminating opposite Shendy.

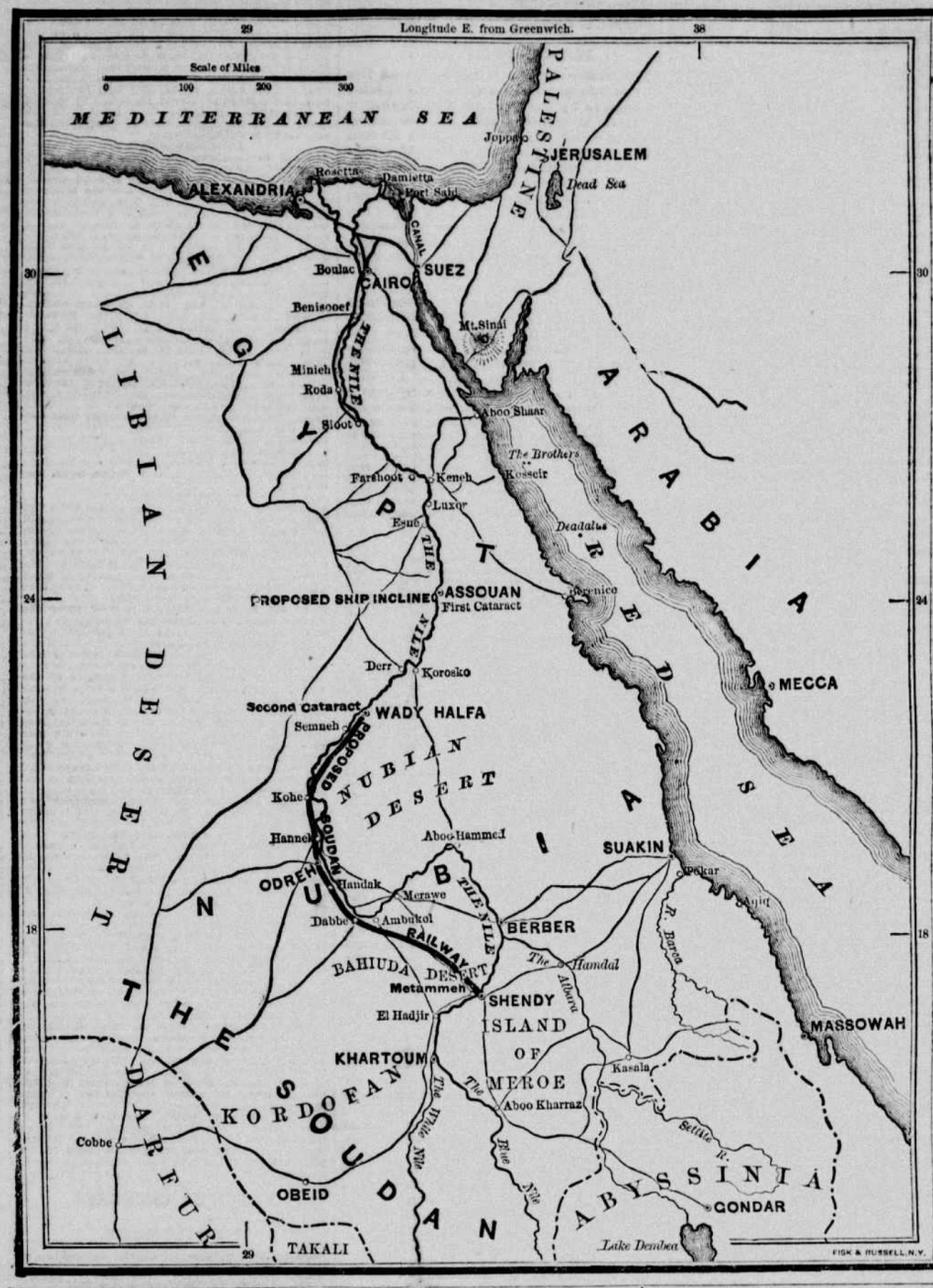
NATURAL ATTRACTIONS ALONG THE ROUTE OF THE PROPOSED RAILWAY.

It is hardly necessary to give a detailed description of the wonderful attractions before reaching the First Cataract. They are almost exhausted. Temples of the grandest proportions; obelisks bearing inscriptions recounting the history of ancient Egypt; tombs and mausoleums containing the remains of kings and warriors of the remotest periods; sugar plantations, and the still interesting and vivacious Gahwazee, who make so much scandal for travelers' bores are among the bright pictures of the gloomy river banks. The trip over to the gloomy river banks, at Wady Halfa, is a length of dangerous rocks and made to navigate perilous rapids, is a scene no one forgets who has paid the necessary tariff of \$50 and submitted to the native yells for "kashick." From the First Cataract, through Nubia to Wady Halfa, is the last section of the Nile travel ever performed by the tourist. He who goes beyond must pierce the hot lands of the Nubian Desert and prepare for a long camel journey to Berber, distant 425 miles. From Wady Halfa to the Second Cataract, then, the railway will commence and push southward along the bank of the river.

We will accompany Mr. Fowler in the route he has surveyed, supposing we have bought our ticket to Khartoum, and will take a brief business trip to the Equatorial regions. Starting from Wady Halfa, we reach, in a half an hour, the foot of the Second Cataract, and after winding among the rocks along the river bank we arrive in half an hour at the station near Sarris, leaving this point behind us we enter the Mohar Desert, and for another half hour pursue a tortuous and undulating course between rugged mountains rising precipitately on all sides, and across wild gorges, through which tropical food waters occasionally rush with violence; then emerging from the desert, we arrive at the station near Ambigie. Following the river bank, a number of large, isolated rocks, like pyramids, rise ahead of us, and we make a second run across the desert, where we have occasional glimpses of the Nile; and after passing the station at Akasha we go up for a third time the rocky ridges of the desert. Here the mountains are loftier than hitherto, one on the opposite bank of the hill being remarkable for its

THE LOWER NILE.

Map Showing the Projected Line of Railroad and Other Improvements.



rounded sides and projecting sandstone cap. Once more on the river's bank, we keep near the villages and patches of cultivated land, and speeding by the station at Ammora, we cross the Nile bridge at Koha, some four hours after the time of our start from Wady Halfa. Leaving Koha and the Nile, we pass for an hour across undulating ravines and sandy plains of the desert, again reaching the Nile near the caravan station at Fakir Bender. Passing near the river's bank through cultivated districts we reach the capital of the province, Dango. Our route now lies along the bank of the Nile, across sandy plains studded with mimosa clumps, to Handak, and thence onward to Dabbe. We have arrived at the termini of the caravan routes from Kordofan and Darur. Another hour's ride across an alluvial district, thickly covered with Halfa grass and shrubs, and we pass Ambukol. Leaving the Valley of the Nile and crossing the Great Bahiuda Desert, we drive forward during five hours to our final destination, Shendy. We meet nobody, and we want nothing, not even a drink for the panting locomotive. We pass all varieties of desert vegetation running along the southern bank of a long valley. After traversing plains which, during the rainy season, resemble lakes, we may encounter lofty columns of the sand, which are always harmless. Thus we arrive at Shendy, the southern terminus of the railway, and the Soudan city, now famous for the cruelties of Mex Sinner. What more delightful could we wish than this, through wild and desolate regions, sometimes passing the ruins of Roman civilization, sometimes encountering the warlike Bedouin on his swift horse?

GENERAL DESCRIPTION OF THE LINE. Mr. Fowler has spent much time in elaborating the details of the enterprise, and in the gauge and general character of the work he speaks with accuracy. The exact width of the narrow gauge, which has been adopted in India for future railway extensions is three feet three and one-quarter inches. On the vast level plains and valleys where the narrow gauge extensions will be chiefly made, the gradients will be extremely good, and therefore light engines and rails may be employed. On the Soudan Railway, where gradients of one in fifty must be adopted to economize the cost of construction, great advantage is found in the few inches of additional width of gauge between three feet one and three-quarter inches and three feet six inches. The Norwegian railways, which have been worked for some years with great economy and success, have a gauge of three feet six inches. It is proposed, however, to use a heavier rail than has been adopted either in Norway or India, so as to procure greater strength and enable more powerful engines to be employed. The dimensions and weights are as follows:—Gauge, 3 feet 6 inches; iron rails weighing fifty pounds per yard, with iron sleepers and fastenings of proper proportion; maximum inclination of gradients, one in fifty; maximum radius of curves, 500 feet.

It is proposed to have no rock cuttings and the excavations will be inconsiderable. Mr. Fowler believes that the entire construction can be done by the Egyptians. The line is divided into four parts, thus:—
Part 1—Wady Halfa to Koha Kilometres, 251
Part 2—River crossing 25
Part 3—Koha to Ambukol 349
Part 4—Ambukol to Shendy 289
Total 865
The railway involves no difficult engineering work of any nature. It is always kept near to the Nile, passing through villages and cultivable territory, in order to make it available for way travel and transportation. By this means it is hoped the desert Bedouins may be induced to live on the banks of the Nile and build up handsome and populous cities. In all cases the engineers have avoided mountains and depressions.

expedient. Mr. Fowler describes his plan as follows:—I propose to use the mechanical power of the descending water of the cataract to draw the boats along a ship incline overland, between the top and the bottom of the cataract. To accomplish this upon the right bank of the river there will be constructed a ship railway about three kilometres south of Assouan, and terminating at the top of the cataract in the harbor of Shella, north of the islands of Bigzin and Phila. The boats to be transferred from one end of the cataract to the other will be floated upon a suitable carriage or cradle, constructed to run upon the railway, and will be hauled overboard by powerful hydraulic engines of about four hundred horse power, placed near the centre of the railway. These engines will be safe and manageable, not liable to derangement, and of a class already largely employed by myself and others with success for drawing loaded wagons at a low rate of speed upon railways. The water to work the engines will be pumped up at a high pressure by a pair of large steam wheels, carried upon pontoons and driven by one of the smaller rapids at the lower end of the cataract. A convenient site will be found near Shaly for the erection of workshops, wharves and other conveniences. The total length to be traversed by the boats overland will be 3,657 yards, or about two miles, and the speed will vary from four to eight miles an hour, according to the weight of the boat. The machinery will be sufficiently powerful to haul steamers as well as loaded boats over the incline. The cost of the ship incline, machinery, workshops, wharves and all expenses required to complete the work ready for traffic will be \$1,000,000, and I am of the opinion that the entire work may be completed in one and a half years from the time of its commencement. The efficiency and convenience of this proposed ship incline for the object contemplated are indisputable, and its cost in comparison with its advantages small. It should, if possible, precede the Soudan Railway, so as to give increased facilities for general intercommunication and for the transport of men and material.

Mr. Fowler's plan is certainly a bold one, and it is worthy of study as applicable to our own American rivers.

A BRIDGE ACROSS THE NILE.

During the survey it was observed by the engineers that at Koha an irregular ridge of rocks extends a considerable distance across the Nile, with a deep water channel near the centre, affording considerable facilities for the erection of a bridge. A chart of the river was therefore prepared, and these with other particulars were sent to Mr. Fowler, then at Assouan, and decided that there was the proper point to cross the Nile to the left bank. Subsequent surveys have also been made in order to determine if a steam ferry would not be more practicable, but the original plan was found to be the best and least expensive. The erection of a bridge has, therefore, been decided upon, and in those desolate regions, where an engineer has done no work for 2,000 years, it will, indeed, be a curious spectacle to find the mighty river spanned by a plan planned by the most eminent of England's engineers. Ambukol, where the river's bank is unchangeable, and where the ancient have left remains of a pier of masonry, is the point of divergence across the Bahiuda Desert. An excellent harbor exists at this point. In all the territory contiguous to the Bahiuda Desert there are ruins left by the ancient Ethiopian Empire. Too remote for travelling archaeologists and too unwholesome for scholars like Mr. George Smith, rich qualities of historical lore lie buried in shallow graves throughout this territory soon to be included within the zone of civilization.

ESTIMATE OF THE COST.

The estimates for the construction of this railway have been very carefully elaborated. They include outlays for the purchase of material in England, its carriage to Alexandria and unloading there, freight from Alexandria to Cairo by rail and carriage by river to Wady Halfa; for the Nile bridge at Koha, for viaducts, arches and culverts, for a new tele-

graph line, for stations and workshops, including water stations in the desert and for rolling stocks, comprising sixty-six engines and 1,100 carriages. Every incidental expense is included, not excepting the item of engineering and superintendence, which comprises draughting and preparations of all necessary designs. The general summary of the estimate is in the following figures:—

	Per Mile.
Earthwork	\$1,407,720
Permanent way	\$2,549,249
Nile bridge	24,250
Viaducts and bridges	1,082,750
Telegraphs	615,000
Stations, &c.	225,000
Bolling stock	807,100
Engineering, &c.	1,620,250
	776,300
Total expense	\$10,520,900
	\$36,274

In the "cutting to bank" there is but 29,000 cubic metres of hard sandstone, schist and basalt, and 23,000 cubic metres of trap granite rock, of porphyritic or metamorphic types, and quartz; and in "cutting to spoil," 23,000 cubic metres of hard sandstone schist and basalt, and 18,000 cubic metres of trap granite rock, of porphyritic and metamorphic types, and quartz.

RESOURCES OF THE SOUDAN.

Mr. Fowler naturally shrinks from attempting to give, in accurate figures, the resources of the Soudan. As he asserts himself, they are practically without limit. The chief traffic which may be expected northward, however, after the establishment of the railway, will be in grain, sugar, cotton, gum, senega, dates, ebony, skins, aromatic woods, potash, gold, ivory, ostrich feathers, animals, mats and negro laborers; and the traffic to the Equatorial regions will be in cotton goods, machinery, cutlery, tools, tobacco, furniture, coffee, rice, earthenware, beads and fire arms. Figures prepared under the eye of the Governor General at Khartoum, and in our possession, give the actual resources now available in the Soudan. They are as under:—

- Two productive States, each larger than France.
- Two hundred millions of acres of cotton, sugar and grain lands.
- A semi-civilized population of 6,000,000 souls.
- A semi-civilized population variously estimated at from twelve to thirty million souls.
- A climate unequalled during eight months of the year.
- Blasting the cataracts already begun.
- A telegraph line to Cairo in working order.
- One million five hundred thousand camels.
- Six millions of beeves and sheep without number.
- Ten steamers.
- Four hundred barks.
- A navy yard at Arabah Island, twelfth degree North latitude.
- Six thousand soldiers, infantry; 2,500 cavalry.
- All the trades and industries represented by foreign mechanics.
- The port of Suakin and camel routes delivering by the Nile and Red Sea.
- Two million acres already under cultivation by durrah, corn and melons, &c.

Mr. Fowler says:—"Assuming the working expenses of the Soudan Railway to be sixty per cent of the gross receipts (which is seven per cent higher than the average working expenses of all the Indian railways) it can scarcely be doubted that the traffic from the local and through sources enumerated will yield a satisfactory return upon the small cost of the proposed railway. Under any circumstances a large increase to the national wealth of Egypt must necessarily follow such an opening up of its undeveloped resources. One of the national benefits which will be conferred by this great work will be the facility of transporting, under proper regulations, the surplus labor from Equatorial Africa to the cultivated districts of Egypt. * * * In conclusion, I think it my duty to state how well the orders of His Highness the Khedive were carried out, in the assistance which was always afforded to my surveys by every official between Cairo and Khartoum. * * * Not a single quarrel or unpleasantness or accident occurred throughout the whole period of conducting this great survey.

many embarrassments. The province of which Khartoum is the capital has been made to pay the expenses of Sir Samuel Baker's expedition. Hence there is not now over \$2,000,000 in coin in the entire region, while the proportional value is estimated at \$50,000,000. But labor is abundant, and the annual yield of ivory and gum continues undiminished.

CONCLUSION. Egypt is the strongest power in Africa. In fact, it is the only one possessed of geographical position, vast extent of interior territory and navigable streams, together with troops and officers suitable to the sultry climate and vast deserts. With Egypt, therefore, must begin the civilization of that continent. Though we may deplore the fact that it is Mahomedan conquest acquiring new peoples and rich countries, we must remember that it is not the Saracenic influence which isolated Southern Europe centres of age, and by which all mankind might have been repeating to-day the simple phrase, "There is but one God and Mohammed is His prophet." Had there been no such man as Charles Martel, Mohammedism has progressed with the age. The locomotive has softened the jealous, vindictive nature of the Arab, and where Bruce found himself a solitary wanderer in Lower Egypt nearly a century ago, without welcome or co-operation, we find Europeans in authority and influence.

Look at the map of Africa. No other Power has penetrated more than skin-deep into the Continent. All settlements—French, Portuguese, Dutch, English and Spanish—are purely coast colonies. But with Egypt it is different. Mohammed Ali, near the beginning of our century, had led an army almost to the Equator, and had the money he spent in making war in Syria, under Ibrahim Pacha, been devoted to the development of the Soudan, there might have been a very small field indeed for African exploration now.

But it is not alone in the fact that the Viceroy may fairly claim nearly one half of Africa, but that his domains are drained by the matchless Nile and governed by such invariable meteorological laws that Egypt may fairly be said to be the only country in the world where you can safely foretell the morrow. In whatever direction, therefore, the Viceroy is the natural master of Africa, and the religion of which he is a temporal and a liberal head in Egypt is best adapted to the negro, who never believes in one wife or in a formulated system of theology manufactured by men learned in the universities and skilled in Biblical polemics. His railroads, with a single exception, are the only ones in Africa; his jurisdiction now extends to the Equator, and the boundaries of his empire include a territory 2,000 miles from North to South and 800 miles from East to West, which sustains nearly thirty millions of people, civilized and savage. What an influence it will give to Africa when the locomotive pushes through this neglected and forsaken continent! What may not be the situation of the 70,000,000 of people who inhabit one-fifth of the territorial surface of the earth when the journalist sits down in the year 1,900 to recount the principal events of the expiring century! Will not people begin to wonder that, while a man may travel around the world in ninety days, there are still millions and millions of people in the heart of great continents whose very names are unknown? Let us acknowledge that this railroad of the Viceroy is the first practical attempt to solve the mysterious problems which daunted the Caesars and Ptolemys, and have ever since perplexed the curiosity of the scientific world. Tracing it to a natural end, we may live to see locomotives rushing along the line of the Equator, a busy commerce the Albert and Victoria Nyanzas, and the rail pushed southward to the Cape of Good Hope. We may behold the lazy negroes become thrifty agriculturists. We may find them abjuring heathenism and embracing a responsible religion. We may note the progress of medicine among them; that the naked have become clothed; that the roofless have become housed, and that finally a disorderly continent has become of the worthy habitations of man. The only continent which is an island, and the only one where the main population is homogeneous because of blood and temperament, standing across the highways to the East, with systems of railroads and great internal improvements, there is no reason why Africa should not become one of the fields of sustenance for the 3,000,000,000 of people who dwell in the world. It may seem like a dream to assert that all this can be accomplished within the lifetime of the present Viceroy. Yet nothing is easier. Every sea that washes an African shore is white with steamers and sail; Egypt is within a week of nearly every capital in Europe; her resources are boundless, and the Khedive laughs at outlay, and even encourages extravagance. The report of Mr. Fowler comes to us, therefore, at a moment when we are glad to give generous space to his undertaking—one in which so many interests of humanity and progress are conspicuous. It has always been the policy of this journal not only to suggest, but to encourage every grand enterprise which promised well to our race. But in the majority of instances when the HERALD has been the advocate of projects now a successful part of the vast machinery of this busy world, they have been purely American. Now we go 7,000 miles from home, and offer to the Viceroy of Egypt the benefit of these columns, which have so often sustained undertakings of an importance to the world which was entirely ignored. There is a daring and yet a wisdom connected with the Soudan Railway which belongs to America. The labor and expense which it will involve will be great, but the results growing out of its operation will be greater still. Let us hope, therefore, that the present decade will not close before the tourist, driven from Paris by the wintry blasts of December, can, twenty days afterwards, enjoy a tropical winter on the borders of the sweet water lakes of Central Africa.

LITERARY CHIT-CHAT. The Pall Mall Gazette points to Palmerton, Brougham, Sir David Brewster, Walter Savage Landor and Thomas Aquinas of men who have got the most pleasure out of life, and were still young at four-score years. It adds that "there are no better gifts, and none which lend keener enjoyment to youth, than pugnacity, self-confidence and vigorous animal spirits;" all of which were possessed by these octogenarians.

THOMAS H. DYER, who has written up Pompeii for English historical students, will soon publish a new work on "Ancient Athens, its History, Topography and Remains."

THE WATERING PLACE enthusiasm is manifest in the almost simultaneous publication of two separate works on the "Isles of Shoals." Mrs. Celia Chatter's dainty volume gives us the poetry of the little islands, while Mr. J. S. Jenness will publish a history of them, illustrated with pictures and maps.

NEW PUBLICATIONS RECEIVED. From D. Appleton & Co.—"The Mineral Springs of the United States and Canada, with Analyses and Notes on the Prominent Spas of Europe and a List of Seaside Resorts." By George E. Walton, M. D.