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BRAZILIAN RAILWAYS.

According to the last report of the Minister of Agriculture, Commerce and Public Works, the total number of miles of railway, constructed and under traffic in the empire of Brazil, up to the 31st of December, 1878, was 1,643 miles. The total amount of capital invested in this extent, as near as can be estimated from the sources of information at our command, in default of official returns, is about £ 23,500,000, or an average of about £ 14,300 a mile, including both wide and narrow gauges. In the total extent here given, 742 miles are broad gauge, and 901 miles narrow gauge, the greater part of which has a gauge of one metre—the standard of the country.

The first attempt at railway construction in Brazil took place in 1852. On the 12th of June, of that year, the government issued a decree conceding an exclusive right and privilege to Ireno Evangelista de Souza (Visconde de Mauá) for the construction of a railway, twelve miles in length, from Mauá, a small place on the bay of Rio de Janeiro, to Fragozo, at the foot of the mountains, on the road to Petropolis. This was the first railway built in Brazil. On the 26th of June, 1852, the General Assembly passed an act authorizing the construction of a railway that should start from Rio de Janeiro and terminate in the provinces of Minas Geraes and São Paulo. By the terms of this act the government guaranteed interest on a capital stock up to £ 3,500,000 at the rate of seven per cent. per annum in gold. Under this enactment the Dom Pedro II Railway Company was incorporated and one hundred miles of the line were constructed. In crossing the mountains encircling Rio de Janeiro, tunnels, grades and other works of the most expensive character were rendered necessary, and at the completion of its first hundred miles the company found that its entire capital had been expended. Then, to relieve the company from its embarrassments and to secure its completion, by a decree dated July 10th, 1865, the government took charge of the road and repaid its stockholders, in government bonds, the entire capital invested. Since then the road has been extended to its present length of 365 miles and has been managed exclusively by the government. In addition to this extent, thirty-five miles are now under construction.

By a legislative enactment of the 7th of August, 1852, a privileged grant was conceded to Edward Alfred Mornay for the construction of a railway from the city of Pernambuco to the São Francisco river. From this grant originated the present Recife ao S. Francisco Railway, seventy-eight miles long. It was built by an English company, the government, by legislative enactment, guaranteeing interest on an invested capital of £ 1,685,000, at the rate of seven per cent. per annum in gold. The net receipts on its last year's traffic having been insufficient to pay the above interest in full, the government was obliged to pay the difference which amounted to £ 31,000. During the last eleven years the government has paid on account of guaranteed interest on the capital stock of this road, in default of net receipts, a total sum of £ 770,000. This enormous deficit proves that there is either an excessive amount of capital invested, or that the country, through which the line runs, is not yet sufficiently developed to support a railway—a contingency that should have been investigated and anticipated before building the road. More than this, it proves the good faith of the Brazilian government in its contracts to guarantee interest on the capital invested in railways—a good faith which is all the more noteworthy when the financial difficulties of the country are taken into account and the extraordinary measures and sacrifices which must be experienced in order to meet these enormous annual expenditures of interest. Whether this measure of the government in guaranteeing interest on railway investments, has facilitated the raising of capital, is a question which we shall discuss more at length in the future; in this connection it is sufficient to say that, so far, it has proved a complete failure as an inducement for the investment both of national and foreign capital.

The same decree which authorized the construction of the Pernambuco railway, also authorized the construction of a road from Bahia to Joazeiro, on the São Francisco river, and the grant for the same, by decree of December 19, 1852, was given to Joaquim Francisco Moniz Barreto. The seventy-seven miles of this road now under traffic was built by an English company, and has a government guarantee of seven per cent. per annum on a capital of £ 1,800,000. This enterprise has proved a very heavy burden to the Brazilian government, owing to the circumstance that the political influences of the time when it was built—in which the President of the province bears no enviable share—was exerted to use it for personal rather than for economic ends. Instead of tapping the agricultural districts of the interior where it might aid the increase of population and afford an outlet for surplus production, it starts from the seaport of Bahia and runs almost parallel with the coast where it serves the true purposes of a railway only in a very modified degree.

To make up the seven per cent. interest on the capital invested in this road, the government was obliged to pay last year, owing to a deficiency in the net receipts, the sum of £ 115,000. From the building of this road in 1860 up to 1877—seventeen years—the Brazilian government has paid to the English company owning this line, on account of guaranteed interest, the enormous sum of £ 2,270,000, or a little over one and one-fourth times its original, invested capital of £ 1,800,000. And the contract has still sixty-three years to run!

The steady extension of the Dom Pedro II railway through the central province of Rio de Janeiro by the general government, and the large amount of public money annually invested in it, soon excited the jealousy of the northern and southern provinces. To allay this jealousy, and to secure it as certainly as the government was finally obliged to extend the construction of the Pernambuco and Bahia lines and to inaugurate a system of railway communication in the South. In their unjust demands upon the government the northern provinces entirely overlooked the fact that while their two railways cost the national treasury an annual outlay of about £ 150,000 without any returns whatever, the Dom Pedro II road pays, in net receipts, to the Brazilian government an average interest of five and one-half per cent. per annum on its total, actually-invested capital of £ 8,500,000. However, by a decree of the 28th of September, 1872, the government entered into a contract for the surveys of an extension to the Bahia road, and shortly after for a similar extension to the Pernambuco line.

On the 9th of March, 1876, the government contracted for the construction of two hundred miles of the extension of the Bahia railway, adopting a gauge of one metre instead of the gauge of five feet three inches, used by the English company. Seventy miles of this extension will be ready for traffic by June next. At the end of the same year, 1876, a contract for the grading of about one hundred and fifty-five miles of the extension of the Pernambuco road was also signed by the government, the metre gauge being specified as in the other case. About seventy miles of this extension are under construction, twenty-four miles of which are now ready for the rails.

On the 26th of April, 1856, the government authorized the incorporation of a company to build a line of railway from the port of Santos to Jundiáhy in the province of São Paulo, a distance of eighty-one miles. In this enterprise, as in the others, the government guaranteed interest at the rate of seven per cent. per annum on its invested capital, which amounted to £ 2,650,000. The company was organized in London, work was begun in 1860, and the line was opened for traffic on the 16th of February, 1867. Up to 1872 the net receipts on this road were insufficient to meet the interest on its capital stock, and the government was obliged by the terms of the contract to make good the difference which amounted, up to that time, to £ 280,000. According to a stipu-

lation in the contract, however, which provided that half the net receipts over eight per cent. on the invested capital should revert to the government in repayment of the sums paid for the road as guaranteed interest, that amount is now reduced to £ 165,000. This railway is the best paying road in the empire and is considered to be the best managed. It crosses the mountains, at a height of 2,600 feet above the level of the sea, by employing four successive inclined planes, four and three-fourths miles long, and rising at the rate of 570 feet to the mile, or a grade of eleven per cent. Its great prosperity is due to the fact that it is the only outlet for the province of São Paulo, the richest and most thriving of the empire, and to its being the trunk line of over four hundred miles of narrow gauge feeders. The gauge adopted was five feet three inches.

During the interval between 1865 and 1873 little or nothing was done by the government in behalf of railway communication, excepting the slow extension of the Dom Pedro II and the annual payment of guaranteed interest on the roads under construction. This payment of the semi-annual interest being made only upon the occurrence of a deficiency in the net receipts, the liquidation of the traffic accounts by the fiscal engineers of the companies and the government often gave rise to very serious and troublesome questions relating to the discriminations which should be made between the traffic expense and the capital account. More than once these disputes have occasioned the temporary suspension of the payment of interest due, and by this means have largely discredited the system of guaranteeing interest on the capital invested in Brazilian railways. Though there were few practical results during this period, the evolution of railway construction was not at a stand-still. The people had already seen the practical advantages of railway communication and, as in other countries where the economic conditions contributing to the success of a road were but slightly appreciated in comparison with its results, they were at last seized with that most irrational and mischievous of manias, the railway fever. Fortunately for Brazil, however, the consequences were not so serious here as in other countries, not because the people were wiser and profited by the experience of others whose follies had brought disaster upon themselves, but simply because there was no spare floating capital in the country which could possibly be invested in this newly-discovered "gold mine." Under the influence of this mania, hundreds of grants were solicited from the provincial assemblies, preliminary surveys were made, and unnumbered "prospectuses," promising ten, fifteen and twenty per cent. dividends, were offered to stock subscribers. In all these schemes the principal aim of the speculators who were fortunate enough to secure a privileged grant for a provincial line, was to transfer it, for five or ten per cent. of the estimated capital, to the companies which they should succeed in organizing. The majority of them, however, found out too late that they had "caught a Tartar," and that the money and time which they had expended in securing and offering these schemes was merely so much non-productive capital. Some of them, on the other hand, were good and promising grants, especially those which started from some sea-port or as branches of the trunk lines built with the assistance of the general government, and traversed the coffee-producing districts of Rio de Janeiro, São Paulo and Minas Geraes. The one great and general difficulty which enterprises of this class always encounter, the want of capital, soon confronted them all, and the provincial governments were at last obliged to come to their aid. To enable these private enterprises to secure the required capital, the credit of the provinces was pledged and the public money was freely used; it was the same old experience which our foreign readers know so well—the lavish bestowal of public credit, the eventual distress and repentance when the full effects of their prodigality were brought home to them. In Brazil the people are just beginning to feel the consequences of these errors; both the national and provincial legislatures have been compelled to

increase taxation in order to meet the interest on the constantly-increasing consolidated debt created by an excessive expenditure of public money and credit in unprofitable railways and other public works.

Under the pressure of political influences, the provincial governments followed the example of the general government and passed laws guaranteeing seven per cent. interest on the nominal capital of several of these provincial railway privileges. This inducement, however, proved insufficient to attract the capital required for building the roads, and the option was soon after accorded to the companies of accepting either the seven per cent. interest guarantee, or a subsidy of £ 1,600 for every mile of narrow gauge railway effectually opened to public traffic. The Leopoldina road—one metre gauge—in the province of Minas Geraes, begun in 1871 and connecting with the terminus of the Minas branch of the Dom Pedro II line, was the first to take advantage of this option, and for the seventy-two miles of its line now in operation, it has received altogether from the provincial treasury of Minas Geraes about £ 118,000.

The capitalists and rich coffee planters of the province of São Paulo, having full confidence in the financial resources of that province, unhesitatingly subscribed for the stock of some of the most promising of the projected lines in São Paulo, trusting entirely to the seven per cent. interest guarantee of the provincial government. Although these roads passed through moderately well-cultivated coffee districts and were burdens upon the provincial treasury only for a limited number of years, they were even then a cause of serious difficulty to the finances of the province. The first railway built in São Paulo under the provincial guarantee of seven per cent. interest, was the line from Jundiáhy to Campinas, twenty-eight miles in length, which connected at Jundiáhy with the São Paulo railway from Santos. This line was afterwards extended to Rio Claro, Pirassununga, and Mogy-Guaçu, a total length of one hundred and sixty-nine miles. It has a gauge of five feet three inches. The decree authorizing the incorporation of the Paulista Railroad Co., which built this line, was dated the 28th of November, 1868, and the company last year paid a dividend of eight and one-half per cent. There are now under traffic in the province of São Paulo six hundred and forty-four miles of railway.

The first railway built in the province of Rio de Janeiro under provincial auspices, was the União Valenciana, the decree granting its charter and authorizing its incorporation being dated the 11th of September, 1867. It was constructed with a gauge of three feet seven inches. In support of this enterprise, the government subscribed for shares up to twenty-five per cent. of its estimated capital, and paid therefor £ 22,000, the nominal capital standing at £ 88,000. Direct aid of this description was not continued by this province; it proved too heavy a tax upon the treasury.

It is not our intention at this time to enter into details regarding the origin and present condition of each private railway enterprise in Brazil. Before discussing that branch of the subject, we shall consider the policy and purposes of the general government in granting aid and protection to the more important lines projected and under construction, the measures taken to realize and render this policy efficient, and the results which have grown out of the system itself. It was not seen that the benefits to the country, had these enterprises been left to individual associations, would have been the same; and so the government persisted in the commission of this great error, which many European governments have committed as well, that of building up and directing private enterprises, of making itself responsible for interest upon the private capital invested in them, and finally of meeting an annual outlay for guaranteed interest and railway construction of over £ 1,500,000, or over twelve per cent. of its total receipts. Wherever it can be proved by statistics that a railway will not pay, there no railway should be built; but it must be confessed that the govern-

ment has not always acted in accordance with this principle, but has trusted rather to the anticipated future development of localities to meet the heavy expenses of establishing railway communication.

The credit of the provincial governments proving insufficient to induce the investment, to a desired extent, of either national or foreign capital in the numerous railways projected in the different provinces from 1865 to 1873, efforts were made to involve the credit of the general government in their support. Through the pressure brought to bear upon it the general government finally issued the decree, No. 2,450, of the 24th of September, 1873, which sanctioned the enactments of the provincial legislatures, guaranteeing seven per cent. interest upon railway investments, on the following conditions and restrictions. In the first place the decree recognized only those provincial railway companies which could prove by their estimates and by the statistics of local production a net receipt of four per cent. per annum on their estimated capital; in the second place, the total amount of capital to bear seven per cent. interest, to which the government sanction should apply, was limited to £ 11,125,000; and, in the third place, but one railway in each province could avail itself of these provisions, and then only on the condition that it should form a principal line of communication between a producing, agricultural centre and a port of exportation.

Had these wise and just restrictions been rigidly adhered to it is quite possible that many of these provincial enterprises would have been fairly successful, and certainly at a much less pecuniary expense and sacrifice to the public treasury. However, through the influence of political jobbers, they were entirely thrown aside, and their only effect, so far, has been to assist the depreciation of Brazilian public credit abroad through the persistent hawking of national privileged, guaranteed seven per cent. railway grants about the London money-market.

At the present time railway projects representing over £ 7,000,000 with interest guaranteed at seven per cent. per annum, are on the market trying to find subscribers. Out of the maximum of £ 11,125,000, upon which seven per cent. interest is guaranteed by this law, £ 10,000,000 of which have already been granted to different railway enterprises, only about £ 3,500,000 have been able to find subscribers. Of this latter sum, the greater part was taken only upon the further guarantee of debentures, the balance of shares being given as security for the debentures themselves. The São Paulo and Rio de Janeiro railway, one hundred and forty-three miles long and connecting the São Paulo terminus of the Dom Pedro II road with the city of São Paulo, managed with great difficulty to raise £ 600,000 by share subscriptions, which was just one-half its total capital stock upon which the general government had guaranteed seven per cent. interest. The balance of £ 600,000 was raised by debentures issued in London at 96%, which were guaranteed by the net receipts of the road and the balance of shares yet unused, these being redeemed as the debentures were liquidated. The total length of railway built and under traffic under the provisions of this law since its passage up to the present time—six years—is only two hundred and thirty miles.

As a further example of the slight importance given to these seven per cent. guaranteed railway shares, and of the preference given to railway debentures in the London market, we mention the following fact. On the 10th of November last the "Great Western Railway Company of São Paulo" for debentures up to £ 1,500,000, upon which seven per cent. interest was guaranteed only by the net receipts of the company's lines. The shares of the former, bearing the government guarantee, were only partly taken and that, too, with great difficulty; while the debentures of the latter were all taken immediately and in a few days stood at seven per cent. premium.

(To be continued.)

THE CURRENCY.

When we consider that the truths of monetary science are not intuitive, but that to reach them close and prolonged study of the subject is absolutely necessary; when we consider that the great father of the science, Adam Smith, was himself the author of one of the most mischievous errors that has ever prevailed in connection with the subject, viz: that to maintain the convertibility of a paper circulation was a sufficient and perfect guarantee against excess—an error which subsequent experience has clearly demonstrated to every intelligent student of the subject; for, it has been abundantly evident, wherever a mixed currency has been used that it has been only after a serious perturbation of prices, stimulating an excessive importation while depressing the export trade, that the corrective of convertibility came into action;—when we consider that those speaking by supposed authority, in high places, give utterance and currency to such propositions as those which were enunciated a few days since, by a deputy and banker, in an address to the Chamber of Deputies, and which were suffered to pass without question; when, we say, these things are considered it cannot be a matter of surprise that error, in reference to this subject, should become popularized.

The gentleman referred to presented in substance two propositions, both of which, in our judgment, involve error. The first that the notes issued by the Treasury and bearing interest,—Bilhetes do Tesouro—constitute a portion of the currency; the second that the prevailing rate of interest in a country furnishes a barometer upon which to base a judgment as to whether the currency is excessive or not.

In regard to the first proposition, it is notorious that rarely, if ever, do treasury notes, bearing interest, perform any of the functions of a currency. They are resorted to for investment, and as a general thing no more enter into circulation than government bonds—apólicas. So far from performing any of the functions of currency, they serve to increase the offices of the currency, and are, to that extent, a factor in sustaining its value.

The second point made by the deputy, was that the relatively high rate of interest in this country was evidence of a deficient circulation. Than this no greater fallacy was ever assumed.

The rate of interest in a country indicates the varying relations of the supply of capital to the demand for it, and in young countries like Brazil, where there is so much need of capital for the development of rich, but dormant resources, the rate of interest will always be higher than in older countries, where, in the process of time, large accumulations of capital have been made, while time has also operated such a development of their resources that the demand for capital in proportion to its accumulation is relatively less than in young countries.

But while the rate of interest thus indicates the varying relations of the supply of capital, as compared with the demand for it, it is by no means a reliable indicator of the relations of the volume of a currency to the legitimate needs of a country in this respect, and for a very obvious reason.

With every addition to the currency of a country the sum of price of exchangeable commodities is advanced—some advancing more, others less, in proportion to their greater or less abundance, compared with the demand for them. And although a sudden large increase of a currency may temporarily affect the rate of interest, it must be evident to every reflecting mind that, so soon as the sum of price of exchangeable commodities shall adjust itself to the new volume of the currency, money will be no more abundant relatively than it was before the addition was made to the currency, and the increased amount of currency will then cease to exercise any influence over the rate of interest.

From 1850 to 1857 the currency of this country was increased from Rs. 52,000,000 to Rs. 98,000,000, and a table published in 1859, presenting the prices at that time of nine or ten leading articles, as compared with the prices of the same articles in 1850; showed an advance in the sum of price of 60 per cent.

Now, we have not ready access to the quotations of interest at the two several periods, but we will venture to affirm that the rate of interest was no less in 1859 after the addition of Rs. 46,000,000 had been made to the currency than it was in 1850, because with the vast increase which had occurred in the sum of price, the addition to

the currency had been absorbed and money was relatively no more abundant in 1859 than in 1850.

As we have sought to explain in the articles on this subject which appeared in the Anglo-Brazilian Times of the 2d ult. and 5th inst., paper money is not capital, and although in its capacity as a representative of capital it is useful so long as the sum of its value in circulation shall not exceed the value of the metal which would circulate in its absence and which it substitutes, the moment this value is exceeded, as it unfortunately may be when the currency is issued from a source inspiring confidence in ultimate redemption, it becomes hurtful, fastens chronic redundancy and false, artificial prices upon the country;—and, the deputy and banker heretofore quoted to the contrary notwithstanding,—instead of retaining, induces the flight of capital from the country.

So far as new operations are concerned, it would matter little to the operator whether he paid 50000 or 100000 for a given article, provided these two sums represented equal quantities of gold; that is, it would matter little to those embarking in new operations if the depreciation of a currency kept pace with the excess of the issue, but this does not occur, as we have explained elsewhere, and the result is the maintenance of false gold prices for all commodities whether of import or home production, injurious to the best interests of the country.

We maintain that the present currency of this country is greatly excessive, and we have assumed the excess to be somewhere in the neighborhood of Rs. 80,000,000\$. Whether this estimate be correct or not no intelligent man, in the presence of the phenomena which are apparent to the most superficial observer, namely a false relation in the value of the currency: to gold, an apparent favorable "balance of payments," and an exchange in the neighborhood of 20 pence, or some 25 per cent. below par, can hesitate in admitting that the only explanation is a redundancy of the circulating medium.

We have said that, notwithstanding the declaration of the deputy and banker to the contrary, the progressive depreciation of the currency of a country causes the flight of capital.

It may not be uninteresting, in this connection, to cite the case of an important English house. Many years ago this house was established here, probably when the value of the currency was somewhere between 50 and 60 pence. It was possessed of a handsome capital. Its business was a very important one and its books showed large yearly profits, but, after a career of some thirty years or more, upon making up its capital account, it found that, notwithstanding its large profits, its capital represented less sterling than when it commenced. In view of this result the business was liquidated and the partners retired in disgust from the country.

We have asserted and maintain that no country can hope to enjoy anything like permanent, much less progressive prosperity while under the baneful influence of an excessive, depreciated, fluctuating currency; and, whatever the motives may be, those are not true friends of Brazil who would counsel her to maintain such a currency, unless it be friendship to Brazil to desire to see her currency reduced to the condition of that of Buenos Ayres where the paper dollar, issued originally at the par of the silver dollar, now represents only about 4/100 parts of that dollar.

ROBERT CLINTON WRIGHT. Rio de Janeiro, 17th April, 1879.

THE AMERICAN MINISTER.

In looking over the files of our journal, we find in The South American Mail of June 23, 1876, an extract from an eloquent address delivered shortly before at Columbus, Ga., by Hon. Henry W. Hilliard. When we published the extract nearly three years ago, we had not the honor of Mr. Hilliard's personal acquaintance and certainly did not imagine, any more than he himself, that he would be to-day the United States envoy at this court. The sentiments so eloquently expressed are eminently national in their tone and would seem to preclude the possibility of those sectional opinions with which he has been most unjustly charged. As the extract in question will possess a renewed interest to many of our readers, we republish it in full.

"We have come out of a great intestine war, but the republic is stronger than it was before the storm tried its foundations. We are one people; the government is our government; its flag is our flag; the whole country is our country; it is a great

country; the sun at his rising gilds our main deck with golden beams; to the Atlantic coast, and he sheds his parting splendors upon it where its boats on the shore of the Pacific at his setting. It is a country that a man may love and be proud of. We are yet in our youth. What is a century in the life of a nation? The political system under which we live is the freest on the globe. It has stood the severest tests; it still towers in majestic proportions, peerless as Mont Blanc among the Alps, and it will stand. It is founded on a rock. It recognizes the right of the people to govern themselves. When the government was organized, many of its friends doubted—its enemies predicted failure. They were afraid of the people. It was thought by some of the ablest statesmen who took part in the framing of it, that it was not strong enough—they wished to bind the people. But it is to-day the strongest government on earth. It has shown its powers in foreign wars, and it displays its strength in maintaining its authority at home. We have learned to treat the people—the great, generous, true people. In casting upon another century of our national existence, we have everything to cheer us. We have animating prospects. Our country will advance in wealth and prosperity and power and glory. We shall lead the way for the nations in the path of true empire—the development of the principles of just government. We must preserve the constitution; we must maintain the union. The government will find its most powerful supporters in the friends of constitutional liberty. It is to be an imperial or a democratic government. It is a federal republic, deriving its powers from the consent of the people and to be administered to their good. Their will, expressed not by the voice of a majority without regard to the fundamental principles of the government, but in the authentic forms provided in the constitution, is the supreme authority. I see around me many that I have known from my youth. We have sometimes differed in our political views, but I have always accorded to them what I know they attributed to me—impartiality. In casting upon you my countrymen, to devote yourselves to the cause of the country. We must save the republic. We must set up a standard against corruption, and draw to it from all parts of this broad land true men—from the rock-girt coast of New England to the tropical plains of Texas; from the shore beaten by the waves of the stormy Atlantic to the golden slope of California, the friends of free government will answer to the call of men who know no section, and trample under their feet the meaner issues that have too long divided us. They will take the constitution and hold it up that it may catch the fire of the century about to rise upon our country, and exalt it to that supreme place that it held when the illustrious Southern who sleeps upon the banks of the Potomac, first swore to support it as he laid his hand upon the helm of the new government. I appeal to you, my countrymen, to hear me, to consecrate yourselves to the great work. Rise to the grandeur of a free patriotism that embraces the whole country. It is high time that the quarrel as to past issues should cease. We have fought the battle, and the South may exclaim, 'Hic jacet the King of France on the field of Pavia—'All is lost but honor.' Those who wish to prolong the strife may bring accusations against us; they may charge that we resisted the government; that we asserted our independence; that we took up arms to maintain it; but they cannot take from us the glory of having been from the beginning, through all the eventful past, loyal to the constitution. We confide our cause to men of every age—and to history. We enter upon the new century to do our part in the development of this country. All conflicting causes have passed away. There can be no conflict between the interests of the North and South.

The American sees the wide expanse of the territory washed by the two great oceans of the world, and he feels that every part of it is his country. Aboard he feels that he is an American, he travels under the protection of the flag of the republic known and honored in all the seas of the world; and he trends the streets of the cities of modern Europe or stands amid the ruins of empires that have perished, with the glowing consciousness that his own is the freest, greatest, happiest government ever established upon the earth. The great central government binding powerful states in indissoluble union; forty millions of people; speaking the language of Shakespeare and Milton; living under the institutions of christianity; rapidly growing in population, in wealth, and in power; rearing great cities; converting the wilderness into a garden; sending out ships to bear their products into all the ports of the world; displaying in the sight of all nations the great standard of the republic; resplendent with the light of freedom—this is the picture that we behold to-day, and the humblest man in the country may say with intense enthusiasm that animated a Roman in the proudest days of the empire, "I am an American citizen."

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PUBLISHED TRIMONTHLY

on the eve of departure of the American packet, the French packet of the 15th, and the Royal Mail packet of the 24th of the month.

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RIO DE JANEIRO, April 24th, 1879.

We take pleasure in calling the attention of our readers to the first in a series of articles on Brazilian railways, which will be found on another page. The importance of the subject and the magnitude of the interests involved are already well known, but of the details of the system, or systems, under which these railways have been built and are now managed, the general reader is neither fully nor correctly informed. It is designed in these articles to present the whole subject clearly and impartially, and to this end we can vouch for the accuracy and thoroughness of the work without the slightest reserve.

—OUR ATTENTION has just been called to a report, which met the American steamer at Bahia, to the effect that this journal is inimical to the American steamship line and proposes to do it every injury in its power. The report originated from some source in this city where we had good reason to expect friendly support instead of active enmity. The refutation of a deliberate and gratuitous slander is not always an unmixed pleasure, yet it is a duty which we owe to ourselves and to our friends to stamp this statement as unqualifiedly and maliciously false. Opposition, even unfriendly to Mr. Roach's enterprise has formed no part of our programme hitherto; it does not enter into our present feelings in the slightest degree; it has no part in our association with our purposes for the future. As far as we can legitimately assist any personal or special interest without injuring others equally deserving, we shall use our influence in behalf of this line. We yield the palm to no one in our loyalty to American interests and in our desire to advance them whenever they come to us with the necessary guarantees of good faith and honorable motives; our intentions in this matter are so well known that it never occurred to us that our position would ever be questioned. We can not feel that this slander has been anywhere accepted as true, but—bah! a formal denial is a waste of time and space; a gratuitous slander is best stamped in the words of Horace Greeley, "You lie! you villain, you lie!"

THE RECENTLY published report of the ex-President of Paraná, Dr. Rodrigo Octavio, contains a detailed account of the attempted colonization of Russians in that province. Both because of its official origin and of its full presentation of the official side of the controversy, this report is interesting and valuable; to a certain extent it will be one of the documents upon which all future discussions of this unfortunate affair will be based. *Inter alia* the ex-President states that when he entered upon his administration—February 23, 1878—he found about two thousand Russian colonists lodged in Ponta Grossa, Lapa, and Palmeiras, the beginning of an immigration which it was calculated would finally attain a total of twenty thousand. The people of Paraná were enthusiastic over this movement; they received the Russians cordially and gave them valuable presents of money, stock and goods. It is stated that in one colony every family received a present of four cows. They were allowed to select their own lands, and they chose the campos; they were advised as to the non-productiveness of these lands and as to the proper methods of planting crops, and they lamented the ignorance of their advisers on the subject of agriculture; they were remunerated with for using their antiquated plows and were informed of the superiority of the American plow, and they laughed at their informants. The President urged that their attention should be turned to cattle-raising, but they cling to their old

preferences of tilling the soil, and sowed their corn and beans as they would wheat. In Russia they were cut off from the rest of the world, lived in miserable villages, devoted themselves to the cultivation of wheat, passed the greater part of the year in idleness because of the rigors of the climate, were exempt from war service, learned to write their names and read their religious manuals, obeyed implicitly the priest and government commissioner, and were bound in so narrow a circle that every activity and noble aspiration were repressed. As a consequence they are ignorant, intolerant, indolent, timid, envious, uncharitable, avaricious, and easily deceived. When sick, they prefer the priest to the doctor; they treat their women as slaves, beating them and compelling them to work in the fields; they are quarrelsome and envious, as shown by their living together in the meaner rooms of a large house rather than permit any of their number to occupy the better rooms; they are deficient in public spirit and enterprise in that they will not repair the public highways, nor even the fences necessary to the protection of their crops. Some of them were industrious and prospered accordingly; the majority, however, have done nothing but sleep and smoke. Their resolve to leave their lands and the country was sudden and inexplicable, the successful joining with the unsuccessful colonists in it. Some alleged the sterility of the soil as a reason for this resolve, others the lack of priests, and others the failure of the government to supply them with money. Work being supplied them on the public roads by the government, they improved the opportunity with avidity until it was seen that they were procuring by it the means to leave the country, when the work was withdrawn. In leaving their lands they either sold for a mere song or destroyed everything they could not take with them. In conclusion the ex-President exclaims: "What more in reality could be done for these colonists?"

IF WE WERE to enter upon a general discussion of the subject of colonization, our answer to the question of the ex-President of Paraná, "what more in reality could be done for these colonists?" would be "nothing!" Too much has been done already. The fault does not lie in the failure of the Brazilian government to do more for the discontented Russians; it lies rather in the system which leads it to do too much. And we suspect, moreover, that the honored ex-President, in his effort to throw the blame on these colonists and to degrade them before the world, has done too much also. He was placed in the difficult position of having several thousand immigrants, ignorant of the laws, the language, the productions and the climate of this new country, placed under his charge and made dependent upon his care and direction for the contentment and advantages and prosperity which were denied them in their old homes. This result he failed to attain, and to justify this failure he places on record a document charging them with idleness, ignorance, bigotry, stupidity, brutality, avarice, and all the rest of the faults which it is possible for a human being to possess. We do not understand that these people were promised lands, and money, and paternal care because of their angelic virtues; neither is it to be presumed that the disadvantages under which they are said to have labored in Russia would specially fit them for a pastoral life on the campos of Paraná. Even in the harshest light that can be turned upon them and their former surroundings, it is admitted that they have lived in an inhospitable climate and under the tyranny of the Russian czar a hundred years. What conclusion, then, can we draw when we find them withdrawing from Brazil, voluntarily and *en masse*, after only a two-years residence? Is it that they are more discontented, more ignorant, more intolerant, more idle, than when they tilled their wheat-fields in Russia? or is there yet some deeper and better reason for their "inexplicable" resolve, which it has not been thought best to place before the public. If it be urged that their bigotry and intolerance stood in the way of their advancement we have only to reply that the most successful colonists ever known, the Puritans, were even more so; if it be claimed that they were idle and indifferent, we ask how it is that they have managed to provide food and shelter unaided for the long, severe winters of the North, and whether idleness was unknown in Brazil before their coming; and if they be weak and

ignorant, how is it that they left their German homes a hundred years ago in order that they might dwell together in peace and worship God freely and fully as they thought best, and are leaving their Russian homes to-day in behalf of the same high principles? They are not so ignorant but what they recognize the unquestioned supremacy of certain great ethical principles, nor are they so weak but that they voluntarily and unhesitatingly abandon their homes and property when the sovereignty of these principles is overthrown. We do not doubt but that there were many petty causes of complaint against them, but none of these are of sufficient importance to warrant a special report to the general government, nor to warrant domiciliary visit from the highest official in the province. As this long and curious indictment does not contain the more serious charges of drunkenness, theft and murder, as it certainly would have done had the same number of Italian, French, German, English or Irish peasants, or of Brazilian *capangas*, been placed under the same circumstances, it is reasonable to suppose that their offenses were of so trivial a character as to warrant neither executive intervention nor official defamation. We have seen other parts of Brazil where fences were down and the roads were out of repair, we have seen valuable fazendas where the hoe is yet omnipotent and the American plow is unknown, we have seen many a Brazilian who has spent days, even years, with no other occupation than sleeping and smoking, we have seen communities where the people are bigoted and intolerant and priest-ridden; but of these there is no official complaint, nor voluminous report. These faults are no more characteristic of the Russian colonists than of other nationalities; they are equally bad whatever may be the nationality, or language, or environment which has given them shape and individuality. The true reasons for this exodus are yet to be given and it is to be hoped not only as an act of justice to these people, but also for the future advancement of Brazil, that they will be given soon. One of these reasons is given by an experienced observer in another column; the others are undoubtedly as easily determined and avoided as this one.

CAMPOS GERAES OF PARANA.

Messa. Editor.—As the lamentable results of the Russian colonization in Paraná are now occupying a large share of public attention both in the discussions of the Senate and in the press, some observations that I was able to make in a recent trip in that province will, perhaps, be of interest to your readers.

The region selected for the colonies was that of the *Campos Gerais*, or open plains, of the centre of the province. These campos have been described with enthusiasm by all travelers who have visited them, of whom the most notable is the famous French botanist, St. Hilaire. I may say at the outset that, having traveled considerably in various parts of Brazil, I have never seen in the empire or elsewhere a country so pleasing to the eye as this of the *Campos Gerais*; and that, if I had not received some little geological and agricultural instruction, both theoretical and practical, I should doubtless have been equally enthusiastic in its praise.

In the ascent of the *serrinha* which marks the beginning of the *Campos Gerais*, the geological structure of the region is clearly revealed, and on penetrating into the interior it is as clearly evident that the same structure extends, not only throughout the whole campo region, but also far into the succeeding forest region. The *serrinha* presents a magnificent bluff nearly 300 feet high of coarse white sandstone in horizontal beds. On reaching the top and entering the campos, one sees that the soil is derived from the disintegration of this rock and is consequently composed of pure sand mixed with vegetable matter small in amount since from the incoherent and porous nature of the soil all light and soluble matter is easily washed away. Where for any reason this vegetable matter has remained or has been accumulated in depressions of the surface, the soil is sufficiently strong to support a growth of pines which form the small scattered forest patches known as *capões*. In general, however, the soil is too poor to support anything but grass, and, except in the *capões*, even shrubbery is absent. This very sterility is a cause of the extraordinary beauty of the region since grassy plains are always more pleasing to the eye than wooded or shrubby ones.

Aside from its poor quality, the soil is deficient in quantity, the disintegration of the rock being only superficial, or the products of disintegration being too light and incoherent to resist the washing action of the rains. In many places the rock is perfectly bare and in general is only a foot or two below the surface.

Going westward, as the city of Ponta Grossa is approached shale begins to appear intermixed with the sandstone, and becomes more and more abundant to the west until finally it predominates over the latter. The decomposition of this shale, has proceeded deeper and it gives a thicker and heavier soil which is, however, as much too argillaceous as that from the sandstone is too arenaceous. It is, however, better than the latter and on the slopes and in the hollows where there has been a mixture of the two kinds of soil, the result is a soil that is fairly, but never more than moderately good. These areas, however, are small in comparison with those of poor soil.

The small amount of humus that has accumulated on these campos during the long ages that they have been above water and in a condition to permit the growth of land vegetation, is a striking proof of an almost complete absence of the mineral constituents of a good soil in the underlying rock. Geologically the region is much more ancient than has been supposed, belonging to the Devonian age, and there is evidence that since that age it has always been in the condition of dry land, and in conditions to receive accumulations of humus from such vegetation as could grow upon it.

The reason of the treelessness of certain areas of the earth's surface is a much debated one, but to my mind it is not far to seek for the region in question. It is simply sterility of soil. This explanation does not, however, apply to the prairies of the Mississippi valley, the pampas of the Rio de la Plata, and many of the other treeless areas of Brazil with which one instinctively compares the *Campos Gerais*, inconsiderately expecting to find in them the same fertility.

That any vegetation whatever sustains itself on the *Campos Gerais* is to be attributed to the favorable conditions of heat and moisture with which they enjoy, since similar areas under less favorable conditions are almost or entirely barren. Paraphrasing the words of St. Hilaire who describes these campos as a terrestrial paradise, I should say that they are but a little less beautiful than paradise and but a trifle more fertile than the Sahara.

The fatal error into which both parties to the colonization fell, the Russians on one side and the government on the other, was a very natural one since the appearance of the region is so wonderfully deceptive; but it is not wholly excusable since only a very slight knowledge of geology was requisite to have avoided it.

ORVILLE A. DERBY.

Rio de Janeiro, May 1st, 1879.

LEGISLATIVE NOTES.

—A bill authorizing the government to create an agricultural colony in each province for the education of the free children of slave parents, has passed its first reading.

—A bill has been introduced by Baron Homem de Mello which authorizes the government to allow banks to establish a mortgage department and to loan money on rural property at seven and eight per cent. interest.

—With reference to the reported troubles on the Venezuelan frontier, the president of the council stated in the Senate, that dispatches just received from the president of the province of Amazonas made no mention of them.

—A bill was introduced by Senator Junqueira revoking the recently promulgated decree reforming the system of public instruction on the ground that it is unconstitutional. An interpellation on the same decree is now pending in the Chamber of Deputies.

—The first session of the present legislature was closed and the second session opened May 3d, with the usual ceremonies. The speech from the throne called the attention of the chambers to the necessity of the electoral reform, the balancing of receipts and expenditures, the continuance of the public aid to the northern provinces, of legislation for the greater security of persons and property, for an improvement of the sanitary conditions of the empire, and for the amelioration of the condition of agriculture. For this last the creation of establishments of rural credit and the acquisition of laborers are recommended.

—The Chamber reorganized May 5th with but slight modifications of the organization of last session.

—The army bill and the bill approving the contract with the American steamship company passed in the Senate April 29. The house amendment to the latter, requiring the steamers to touch at Maranhão, was approved notwithstanding the opposition of the government.

—The committee on elections presented their report on the senatorial elections of Minas Geraes and Espírito Santo approving the former and annulling the latter. The report being accepted, Afonso Celso was admitted to his seat as senator from Minas Geraes.

—By a vote of 84 to 12 the Chamber accepted the report of the committee on the constitution and powers declaring that the Chamber of Deputies alone can present charges against a minister of state, whether the charges be of a political or private character and whether the minister be a deputy or senator, or neither. In accordance with this decision the papers of the Banco Nacional case were presented to the Chamber on Monday where they have been referred to a special committee of seven.

—The discussion on the first reading of the constitutional reform bill is calling out the best talent of the Chamber of Deputies. Souza Carvalho, Francisco Sodré, Franklin Dória, França Carvalho, Lourenço de Albuquerque and Belfort Duarte have spoken in favor, and Pedro Luiz, Saldanha Marinho, Caviao Paixoto, Joaquim Nabuco, and Jose Bonifacio against the bill. The opposition takes the ground that the bill is not a liberal one in that it is imposed by the crown, restricts the action of the constitutional assembly to the simple approval of certain curial and dried measures, and that the provision that voters shall know how to read and write and have 400¢ of income disfranchises a large majority of the population of the empire. The speech of José Bonifacio in opposition to the bill created a profound sensation and is spoken of as the greatest oratorical effort, not alone of this session, but of this region. We will give in our next issue an abstract of this notable speech. The first discussion closed April 7.

THE INTRA-MERCURIAL PLANETS.

In the *British and American Mail* of January 9th, there appeared a brief translation from a criticism by M. Liais on the reported discovery of intra-mercurial planets. The article was sent to Professor James C. Watson, of the University of Michigan, U. S. A., who unquestionably ranks with the best of living astronomers, and in a reply, recently received, he alludes to M. Liais' criticism in the following terms:

"M. Liais is doubtless a good observer, but I have yet to see anything from him which goes in the least to overthrow M. Le Verrier's theories of Mercury. It cannot be disturbed by any theories which M. Liais may evolve out of his consciousness. His dispute of the genuineness of Dr. Lescarbault's observation in 1859 is simply a negative observation, of very doubtful value to say the most.

"As to the intra-mercurial planets I have to say that I did observe two objects near the sun on the 29th day of July last, during the total eclipse, which were very probably such planets. The positions which I observed have been duly published to the world, and as M. Liais did not observe this eclipse it is of very little consequence what his views are as to the genuineness of the observations."

—There recently died at Manapurú, in the province of the Amazonas, a man named Antonio Bernardo de Alcantara, who is said to have been over 150 years of age. He had served on a Portuguese frigate and came to Brazil with D. John VI.

—The British barkentine *Prize* was recently wrecked at Maranhão. The vessel was loaded with 470 tons of coal. The crew was rescued by some fishermen.

—The sixteenth report of the Sorocabana railroad company gives the receipts of the road from June to December, 1878, as 773,057\$616, and the expenses as 142,628\$437, leaving a surplus of receipts over expenditures of 31,310\$177.

—On the 23rd ult. the station of Santa Eschiza was opened on the Leopoldina railroad. Preparations are making for the opening on the 3rd inst. of another station, eight kilometres further on, which is to be called Porto do Santo Antonio. Santa Eschiza is 50 kilometres distant from Porto Novo do Cunha, and is situated in an important coffee-producing locality in the northern part of Minas Geraes.