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Russia's New Era.



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RUSSIA'S NEW ERA

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RUSSIA'S NEW ERA.

BEING NOTES, IMPRESSIONS AND EXPERIENCES—
PERSONAL, POLITICAL, COMMERCIAL AND
FINANCIAL—OF AN EXTENDED TOUR
IN THE EMPIRE OF THE TSAR.

WITH STATISTICAL TABLES, PORTRAITS, SNAPSHOTS
AND OTHER ILLUSTRATIONS.

By R. J. BARRETT, F.R.G.S.,
EDITOR OF "THE FINANCIER AND BULLIONIST."

*Author of "Canada's Century," "Handbook of Canadian Securities,"
Co-Editor of "Anglo-African Who's Who."*



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AND OTHER ILLUSTRATIONS.

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BY R. A. BARRETT, M.A.

EDITOR OF "THE LANCET" AND "THE TIMES"

LONDON: JOHN BARNES, 11, N. B. ST. MARK'S PLACE, E.C. 4.

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1891.



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MEMORANDUM

TO : THE SECRETARY OF THE ARMY
FROM : THE CHIEF OF THE BUREAU OF MILITARY AFFAIRS
SUBJECT: [Illegible]

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INTRODUCTORY.

MISIMPRESSIONS OF RUSSIA.—MY EXPERIENCE OF RUSSIAN TRAVELLING.—WHY I VISITED THE COUNTRY.

GREAT misapprehension and many mistaken notions have prevailed in this country concerning Russia and her people.

But now King Edward and the Tsar have met: England and Russia have fraternised. The mists of prejudice are clearing off and old estrangement seems an evil dream.

Misunderstandings in the past were largely due to ignorance—to fanciful suspicions and to mutual distrust. Yet Englishmen long resident in Russia have told that nowhere else in Europe are our countrymen so sure of hospitable treatment and of personal esteem. Nor have those well-informed witnesses been backward in acknowledging their admiration of the Russian's fine qualities, or faltered in their confidence that Russia will justify in time the highest expectations of her friends.

Whilst the misunderstandings spoken of endured, Russia was certainly the victim of misrepresentation—mainly on political grounds—by certain journals in this country. Any suggestions that Russia affords promising openings for the investment of English capital would have been scouted in some quarters as either ridiculous or most objectionable. Yet it is certain that English enterprise might be worse and less profitably employed than in some of the numerous openings which it is one object of this book to point out as existing in the land of the Tsar. Englishmen well acquainted with Russia know the absurdity

of many of the misimpressions to which I refer. But mistaken ideas that have been long engrained must be refuted in order that nations who ought to know each other better shall start on the basis of mutual respect. I seek in the following pages to combat misconceptions that have hitherto prevailed, more especially those relating to the Russians as traders, to English commercial relations with them, and to Russian industrial enterprises in which English capital may with advantage be placed.

To one mistaken idea I may refer here in advance. It is the belief which some of my countrymen entertain that foreigners are not safe when journeying in the land of the Tsar; my experience has been that a stranger travelling there—aye, even in Siberia—is as safe as in any other European country. In the spring and summer of 1907 I made a tour of several months' duration in Russia, whither I went to observe for myself the condition of the people and to report impartially on what I saw. I travelled thousands of miles, both in European Russia and in Siberia, and was never molested, nor did I meet with the slightest discourtesy anywhere. I came away convinced that so long as a stranger keeps off politics he is quite safe from interference or insult. The Russian Government is the most paternal in the world, and—doubtless in its own interest—takes the utmost care of those who become, in a sense, the guests of the nation.

My chief object in visiting Russia was to ascertain the prospects of British commerce and the openings for British capital. When I left England my plans were, so far as formed, to interest myself in Russian finance and industry; to make myself acquainted with the Ministers of Finance and Commerce; to learn if there were safe and profitable channels for the investment of British capital, and, finally, if there were time, to see something of the more easily accessible mineral districts of Russia and Siberia.

It was not my province to take a partisan view of Russian politics; but I kept my eyes and ears open to what was going on, and in the following pages faithfully relate what came to my

knowledge, withholding nothing that is cognate to the main object of my mission. I relate both my own experiences and the information I gained from various sources. The statistical matter quoted is either taken from Russian official returns, collected by the Committee of Statistics of the Ministry of the Interior, or supplied by the Minister of Finance; or was communicated to me in interviews with which I was favoured by influential personages in St. Petersburg and elsewhere. And here let me acknowledge, also, the assistance I have received from members of the *Financier* staff in the preparation of the matter placed at my disposal.

The following memorandum gives the values in English of the Russian moneys, weights and measures used in this book:—

The Russian rouble equals 2s. 1½d. English, or thereabout, according to the current rate of exchange.

The Kopeck is the 100th part of a rouble, or about one farthing.

1 Pood = 36·12 lbs.

62·025 Poods = 1 ton (2,240 lbs.).

1 Vedro = 2·704 gallons.

1 Sagen = 7 feet.

1 Deciatin = 2,400 square sagens = 2·7 acres.

1 Verst = 500 sagen = 1,116 yards, or ¾ mile approximately.

The first part of the book is devoted to a general survey of the history of the subject. It begins with a brief account of the early attempts to explain the phenomena of life, and then proceeds to a more detailed consideration of the various theories which have been advanced from time to time. The second part of the book is devoted to a critical examination of the principal theories, and the third part to a discussion of the present state of the subject and the prospects of future research.

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CHAPTER I.

POLITICS AND FINANCE.

THE SECOND DUMA.—I ATTEND ITS LAST SITTING.—WHY THE TSAR DISSOLVED THE DUMA.—HIS INTENTIONS TOWARDS THE RUSSIAN PEOPLE.—THE THIRD DUMA.—INTERVIEW WITH THE MINISTER OF FINANCE.—THE BANKRUPTCY BOGEY.—PEASANTS AS TAXPAYERS.—COST OF THE RUSSO-JAPANESE WAR AND HOW IT IS PROVIDED FOR.

I ARRIVED in St. Petersburg just in time to be present at the last sitting of the second Duma! That experience had not entered into my calculations when I left London, but events meanwhile had been moving to an early culmination. So, having an inkling of what was likely to befall, I attended the fateful sitting as a spectator.

The political atmosphere of the Chamber was not electrical. The demeanour of the 400 odd Deputies was unexcited. Such of them as addressed the House did so in stolid fashion. The proceedings were tame and unimpressive compared with recent acrimonious meetings of the London County Council.

Yet the dissolution of the Duma was foreseen. Both inside and outside the House it was deemed inevitable. The Tsar's Ukase, therefore, caused no surprise, nor was its issue followed by any sign of turbulence. Indeed, the general tranquility that afterwards reigned in St. Petersburg was a humdrum contrast to the state of things which the Press correspondence published in England suggested.

It is true that additional troops had been brought into the Capital as a precautionary measure, lest the hot-headed, the

ignorant, or the ill-affected should make the dissolution of the Duma a pretext for disorder or loot. Such a precaution is not peculiar to Russia ; it would most certainly be adopted in any country or capital under like circumstances.

Seeing St. Petersburg as it actually is, and knowing the lurid aspect in which Russia was being depicted in certain English journals, one could not help wondering whether Russia has not suffered in the past from published distortion and exaggeration.

It was in order to observe political movements for myself that I contrived to be present at the last sitting of the Duma. I made careful observations in St. Petersburg, gleaning information wherever it was to be obtained. I was not content to rely wholly on Russian sources of intelligence. I have spoken with British and other foreign residents there, and I find that they confirm the impressions I have formed.

From what I saw and heard, I am persuaded (1) that the seriousness of disaffection in Russia has been greatly exaggerated, and that such exaggeration has been due in some cases to animus ; (2) That the Tsar and his Government are earnestly desirous for Russia's development on the lines of progress, prosperity and enlightenment ; (3) but that, having regard to the complexities of a tremendously difficult problem, they are bound to be Conservative, rather than Radical, in their methods of reform.

The forces of Conservatism and Radicalism antagonise in every civilised country. They have irked each other for generations in our own. It is our boast that we lead Europe in respect of political freedom, popular rights and social advancement. But those cherished blessings only came when fitness to enjoy was manifest. They have been won by no sudden upheaval, but by slow evolution. Once the short cut of revolution was tried in England ere the nation as a whole was ripe for the subversion of old ideals, and the natural consequence was a severe reaction.

Later in the day, Russia has reached the stage in her political history when the evolution of Constitutionalism from Autocracy begins. Only those who have visited Russia can appreciate how momentous a change that implies. Whence came the enlightened impulse ? Who was the leader of the people in the pathway

of reform ? The Autocrat himself ! That great act of self-abnegation should not be forgotten by the impatient and the censorious. Let it not be forgotten either that to the Tsar the world owes the Hague Peace Congress, which is the hope of nations now—which may yet prove the greatest agency for good ever devised by man. His proposal was none too well received at first by a cynical generation, but it is bearing goodly fruit.

The Tsar has never swerved from his avowed determination to give Russia constitutional government. When the first Duma was dissolved he did not declare that its failure implied a return to absolutism. He called a second Duma into being. When that went the way of the first he still adhered to his resolution, and convened a third Duma, which is now devoting itself in a more business-like way to legislation.

Regard the situation in the light of antecedent circumstances. Recall the diatribes that were rife when the first Duma was dissolved—the sinister designs imputed to the Russian Autocracy. Who defends the first Duma now ? By the changed opinion of to-day it is generally acknowledged to have been egregious and impracticable.

Such a body of root-and-branch men, dreamers and doctrinaires, would scarcely have been possible even in a primitive community starting on a new existence ; it was out of the question in an established Empire like Russia at a period of great national stress. Hence its dissolution.

Better work was expected of the second Duma. Its composition was not, seemingly, so grotesque, and the members assumed a more business-like air, as if conscious of their predecessors' absurdity. But the revolutionary leaven was at work there too. There was a deliberate endeavour to force the pace unduly, to thwart the Government, and to hatch treasonable schemes. When the heterogeneous composition of Western Parliaments is considered, it is not surprising that an assembly so new and so crude as the Duma should comprise queer elements, but it is mortifying to learn that certain of these were hostile to established law and order—that they sought to compass their ends by other than constitutional means.

"It was not with the will or desire to strengthen Russia, to make perfect her new administration, that many of the delegates of the nation set to work, but with manifest tendency to augment her troubles and to assist in the disruption of the State." Such was the Tsar's indictment of the second Duma.

"Lastly," said His Majesty, "an act was committed unheard of in the annals of history. The judicial authorities discovered a plot by a section of the Duma against the State." Given *prima facie* evidence of such complicity, would—or could—any other Parliament on earth shield the suspects from the operation of the law? Then why the Duma?

The Tsar dissolved the second Duma as he had dissolved the first, but he did not lose faith in the ability and willingness of Russians to serve their country in a legislative assembly. The following passage from his Ukase is impressive:—"Believing, however, in the patriotism and national spirit of our people, we find the cause of failure on two occasions of the activity of the Duma in the fact that, owing to the novelty of the work, and imperfection of the electoral law, the legislative institution was composed of members that were not truly representative of the needs and desires of the people."

And so a new electoral law was promulgated. Inveterate critics of Russian policy inveighed against that law, and predicted that it would have ill results. They declared that it gave absolute power to the landowners (the landowners have nothing to do with the town constituencies), but they also said that the third Duma would be more extremist than its predecessors! The statements are mutually destructive. They suggest that the critics cannot discover plausible pretext for condemnation, and both have been falsified in the event.

Again, view the present situation in the light of antecedent circumstances. If error there has been, was it not the too-generous concession in the first instance to heterogeneous populations not quite ripe in the mass for so great a change? In other countries the process of political evolution has been gradual from a narrow to a broad basis of enfranchisement and representation. In Russia there is not less but greater need for such prudential

policy. Had the electoral limitation now effective been imposed at first, the original Duma might have justified itself as a national institution. A more liberal course was followed, and events have shown that it was premature.

In saying this, one must not be interpreted as meaning that progress is barred. I believe the contrary to be the case. Let the Duma proceed on safe and patriotic lines, as the third Duma appears to be doing, and in Russia, as in Western Europe, the extension of constitutional blessings will be commensurate with the growth of popular intelligence and zeal to labour for the attainment of Russia's high destiny.

I am not alone in thinking that the Tsar cherishes noble aspirations for the welfare of his people and the peace of mankind. On the latter point the evidence of the Hague Congress suffices. As regards the former, the testimony of high-minded, independent Englishmen who have been admitted to his confidence is conclusive; their faith in him is invulnerable. The task he has undertaken is one of enormous difficulty. He has set himself to evolve order from the domestic chaos that followed the exhausting conflict in the Far East. He has met with disappointment where he might reasonably have looked for loyal co-operation and support. But still he has faith in his people, and all well-wishers to Russia—all good Europeans—must fervently hope that his faith will be justified.

Englishmen who have lived long in Russia, and have a stake in the country, assure me that the recent troubles—magnified as they have been—are but the growing-pains of a country which is bound to be a world's wonder. There are men of noble mind, high attainments and fervent patriotism in Russia. Such men are bound to come to the fore ere long. Then the fantastic episode of the two moribund Dumas will be forgotten in the achievements of a worthier administration.

Among the many important interviews with representative men which I was fortunate enough to obtain in the course of my visit to Russia, none transcends in interest or in value that with which I was favoured by the Minister of Finance. To be brought face to face with the man to whose charge are committed the

financial destinies of the great Muscovite Empire, and to hear from his lips a full and illuminating account of the condition and prospects of the Russian Treasury are experiences which could hardly fail to make a deep impression. Before my arrival in St. Petersburg I had heard a good deal about M. Kokovtsov. He had been pictured in some quarters as a strong man struggling with adversity ; in others as a weak man, incapable of performing a task even less onerous than that which he had assumed. This much, however, I knew—that he had taken control of Russian finances at what was unquestionably a critical stage of their history, and that he had grappled with the complicated problem of providing for the Empire's abnormal needs in a manner which deserved, as it would likewise appear to have commanded, success.

To assume the mantle of a statesman-financier of world-wide reputation like Count Witte was no light task in the best of times. To have undertaken the responsibility during a period of exceptional difficulty was a duty from which even a financial Colossus might have shrunk. The magnitude of the enterprise appears, however, to have possessed no terrors for M. Kokovtsov. And I think it will be admitted that the success which has so far attended his efforts to evolve order out of chaos, and to establish Russian finance upon a sound foundation, amply warrants the confidence reposed in him by his Imperial master, the Tsar. He has proved himself to be the very man of whom Russia had need in the hour of financial crisis. Under his careful supervision all obstacles, economic and bureaucratic, are being triumphantly overcome. He began by recognising the necessity of cutting his coat according to his cloth. He saw that the correct solution of the fiscal problem he was called upon to deal with lay in the direction of curtailing expenditure rather than in that of raising an augmented revenue by general and practically indiscriminate additions to taxation. And the policy of retrenchment foreshadowed in a memorable memorandum which he drew up for the Tsar has been put into practice with admirable results. Not only has he been able to make a definite approach towards establishing an equilibrium in the Russian finances, but he has been able to do so without

inflicting any intolerable hardships upon the taxpayers, and that, surely, is an achievement which proves him to be, not only an able financier, but, what is of no less importance in a country like Russia, a wise and prudent statesman.

It is not easy, I think, to exaggerate the difficulties with which M. Kokovtsov was confronted on his assumption of office. His Excellency, in the course of our conversation, drew a parallel between the financial situation in Russia after the conflict with Japan and that existing in this country at the close of the Boer War. But in making this comparison M. Kokovtsov, I fear, did himself but scant justice. The problem which our Chancellors of the Exchequer were called upon to solve was simplicity itself contrasted with that which the Russian Finance Minister had to tackle. Our credit was virtually unshaken, while our resources were enormous. To raise millions without casting an intolerable burden upon the payers of income-tax and the consumers of tea was an easy matter. Moreover, our Ministers were not faced with grave political difficulties in the shape of widespread discontent and revolutionary agitation. M. Kokovtsov, on the other hand, had, in framing his financial policy, carefully to consider the political exigencies of the hour. He had both to provide for exceptional liabilities and at the same time to avoid stimulating the popular unrest by increasing the burdens of taxation. His undertaking was, therefore, one of enormous difficulty, compared with which that of our own Chancellors of the Exchequer was mere child's play.

At the risk of appearing to assume the rôle of *advocatus diaboli*, I was obliged to put many pointed and, it may seem, disagreeable questions to the Minister of Finance. But it was essential that I should make use of the opportunity afforded, by putting before M. Kokovtsov some of the most sweeping and damaging charges brought by Russia's financial critics, in order that he might, if possible, provide an official reply to his country's traducers. Far from resenting any animadversions upon Russia's financial condition, his Excellency appeared to welcome them, for the reason, as I subsequently discovered, that he experienced no difficulty whatever in effectively refuting them. His replies, I

cannot help thinking, will be found most reassuring, and will serve to demonstrate how ill-informed is much of the criticism to which Russian finance has been subjected.

I began by pointing out, and I must confess that I did so with some misgiving, that some of Russia's critics contend that she is on the high road to bankruptcy, and will soon be unable to meet her National Debt liabilities.

M. Kokovtsov smiled at the suggestion, and replied by citing some cogent figures, which should effectually dispose of the contention. He informed me that, including 20,000,000 roubles for annual amortisation, the Russian National Debt services for 1907 and subsequent years would require 385,000,000 roubles per annum, a sum forming but 17 per cent. of the total ordinary revenue of the Empire (2,271,000,000 roubles), and representing, on the basis of population, an annual debt charge of only 6s. per head. In order to illustrate how this burden compares with that of other nations, M. Kokovtsov supplied me with the following very striking and suggestive table :—

	Annual Debt Service Charge.	
	Percentage of Total Revenue.	Annual Debt Charge per Head, Shillings.
Russia	17	6
Hungary	30	13
France	34	25
Italy	22	13½
Roumania	30	10¼
Spain	25	17¼
United Kingdom	20	12¾
Japan	30	6½

The above figures, if they prove anything, show conclusively that Russia is no worse off than other countries as regards her debt burden, if she is not, as a matter of fact, more favourably situated.

But no mere comparison of the above figures can give an adequate idea of the relative burden of National Debt in the countries mentioned. While it is a fact that in France, England and Spain the National Debt services are provided for almost exclusively out of taxation, the Russian Government possesses

enormous sources of revenue having nothing in common with taxation. Among these may be included :—

1. State railways, extending over 25,000 miles, the capital value of which is equal to half the Russian Debt, and whose net earnings (the excess of gross receipts over working expenses) fluctuate between 120,000,000 and 140,000,000 roubles.
2. State forests, and various rents and leases of Government real estate, yielding 70,000,000 roubles per annum.
3. Monetary capital, and money owing to the State, yielding a minimum of 20,000,000 roubles. This includes the profits of the State bank, which, as is well known, is a purely Governmental institution.
4. War indemnities (from China and Turkey), 10,500,000 roubles.

Making due allowance for these special sources of income, independent of taxation, it will be found that the net annual debt charge is not 6s. per head, but only from 2s. 3d. to 2s. 6d., or six times less than in Spain, ten times less than in France, and four and a-half times less than in the United Kingdom.

The subject next discussed was that of the alleged impoverishment of the Russian peasantry.

“It is contended in some quarters,” I pointed out, “that the Russian peasants are so impoverished that they refuse to pay their taxes, and that there is no chance of their being able to pay them. From this assumption,” I added, “the conclusion is drawn that, as the peasants form the bulk of the taxpayers, the financial stability of the country is greatly endangered.”

Both contentions were forcibly disputed by the Minister of Finance.

“Let us now examine,” M. Kokovtsov began, “the impoverishment of the Russian peasant in relation to the receipts of the State revenue.

“By means of direct taxation (land tax, &c.) the Government collects from the peasants of the 50 provinces of European Russia—the said peasants own freehold property to the extent of

300,000,000 acres—less than 15,000,000 roubles a year—that is, about 2s. per family, or 1½d. per acre. In 1906 the Russian peasants paid into the Treasury, over and above this land tax, 35,000,000 roubles for land redemption, all payments under which head have since been abolished. The fact remains that the peasants could, and did, pay these 35 millions.

“Even supposing that in 1907 the peasants all over Russia refused to pay the direct taxes due from them, then the loss incurred by the Government would not amount to 1 per cent. of the total State revenue.

“The really important question,” his Excellency proceeded, “is whether they are able to pay the indirect taxes on articles of consumption. Recent experience proves that the peasant’s desire for spirits, tobacco and other luxuries is very great, while his ability to satisfy this desire,” M. Kokovtsov shrewdly concluded, “is not inconsiderable.”

M. Kokovtsov added that the data in the possession of the Ministry of Finance for the first five months of 1907 went to show that the peasants were not only paying their State taxes properly, but that the same may be said of their local taxes.

The Minister of Finance next referred with satisfaction to the growth of the national revenue. In the Budget estimates for 1907, he remarked, the ordinary receipts are calculated to fall short of the actual revenue received in 1906 (2,271,669,948 roubles) by 96,276,000 roubles. As a matter of fact, the receipts of the first six months—necessarily the lean half of the year—exceed those of the corresponding period of 1906 by 27,000,000 roubles, so that the national revenue is, so far, some 75,000,000 roubles in excess of the estimates. More definite returns for the first four months of the year show that the ordinary receipts alone for that period amounted to 699,000,000, while the total expenses, ordinary and extraordinary, for the same four months, amounted to 686,000,000 roubles. Thus, the ordinary income showed a surplus of 13,000,000 roubles over the ordinary and extraordinary disbursements combined. That, it must be admitted, is an extremely satisfactory state of affairs.

It may be well here to state that the Finance Minister’s

Memorandum for the 1908 Budget gives 147,000,000 roubles as the estimated excess of ordinary revenue over expenditure in 1907.

Another gratifying fact is the growth of the country's foreign trade. From particulars supplied to me by the Ministry of Finance, it appears that the exports for the first six months of 1907 were valued at 422,000,000 roubles, and the imports for the same period at 324,000,000 roubles. There was thus an excess of exports amounting to 98,000,000 roubles. These results have been surpassed only in three years within the past decade—namely in 1906, 1905 and 1903—years which followed very good harvests. On the other hand, the harvest of 1906 was a particularly bad one.

When one considers the fact that the exports for the second half of the year are invariably bigger than those of the first, and that the harvest of 1907 was satisfactory, it is reasonable to hope that for the whole of the year the excess of exports will be from 250,000,000 to 300,000,000 roubles, or amply sufficient to meet the balance of the country's foreign obligations.*

M. Kokovtsov very lucidly explained in the course of our conversation the effect of the war with Japan upon the National Debt of Russia.

It appears that at the outbreak of the conflict—namely, in January, 1904—the National Debt of Russia, exclusive of the Mortgage Bonds of the Nobility and the Peasants' Land Banks (which are securities very similar to those issued by the British Government under the Irish Land Act), amounted to 6,636,000,000 roubles. At present, on the other hand, after paying all the expenses entailed by the war and its consequences, the National Debt stands at 8,729,000,000 roubles.

That is to say, that during three-and-a-half years it was increased in round numbers by 2,093,000,000 roubles. The corresponding annual debt charges, it should be added, have increased by 95,000,000 roubles.

As explained above, these liabilities in respect of funded debt

* The actual excess of exports over estimates during 1907 has since been officially reported as 296,800,000 roubles.

are to a considerable extent covered by assets, a great part of which were acquired by means of Government loans, liabilities under this head being included in the National Debt to the amount of 2,500,000,000 roubles. Nor are the railways bought up by the State the only assets of the Russian Government that can be set against its liabilities. There are various other State properties, to which I hope to be able to refer in detail in a subsequent chapter.

The expenditure entailed by the Japanese War and the manner in which it was met were other matters on which the Minister of Finance supplied me with valuable official information.

It seems that the expenses of carrying on the struggle, and of its subsequent liquidation, from January, 1904, to the end of 1907—*i.e.*, for all the four years—comprised :—

(a) 2,132,000,000 roubles expended in the three years 1904-6 ; and

(b) 124,000,000 roubles of estimated expenditure in 1907 for liquidating the war ;

or a grand total of 2,256,000,000 roubles.

This, it need hardly be said, does not cover the entire outlay, past, present and future, entailed by the war, as the military stores, &c., have hardly yet been brought to the state they were in prior to the war, and a considerable amount of money will have to be spent on new battleships, and other replacements.

We are speaking now only of the expenditure actually incurred in 1904-6, and estimated as actually incurable in 1907. This amounts, as has already been stated, to a total of 2,256,000,000 roubles.

Naturally, the chief resource for covering all this expenditure was the issue of loans. The most varied forms of borrowing were adopted. There were, for instance, issues of both foreign and interior loans in the strict sense of the term, as well as issues of Exchequer bonds and Treasury bills, both in Russia and abroad. It is unnecessary, however, to dwell in detail on these Treasury bills, as at present they may be considered as finally redeemed.

In Russia alone securities to the amount of 720,000,000 roubles were issued between January, 1904, and July 1st, 1907 ;

while so-called foreign loans were issued simultaneously in Russia and abroad to the extent of 1,375,250,000 roubles. On adding up all these loans (whether interior or foreign, short or long term) we arrive at a grand total of capital issues of the nominal amount of 2,095,250,000 roubles. But it is hardly necessary to add that the actual amount realised on these loans was far below this figure. With the exception of the short-term securities issued in Russia only, all the loans were issued perceptibly, and even considerably, below par, especially the Five per Cent. issue of 1906, which did not yield 84 per cent. net.

As a matter of fact, the aggregate net proceeds of the various issues amounted to 1,908,843,500 roubles. On the other hand, as I have already stated, the total actual expenditure on the war reached 2,256,000,000 roubles. The deficiency of approximately 347,000,000 roubles was covered by the free resources at the disposal of the Russian Treasury at the outbreak of the war.

The figures given me in course of this interview were those of the Budget statement of 1907. In the third chapter I will give a summary of the Budget for 1908.

CHAPTER II.

THE TSAR AND HIS MINISTERS.

HIS MAJESTY'S PROGRESSIVE REIGN.—THE PRIME MINISTER
AND MINISTER OF FINANCE.

H.M. NICHOLAS II., TSAR OF RUSSIA.

HIS MAJESTY, the present Tsar, of whom a portrait is here given, has reigned close upon fourteen years, having succeeded his father, Alexander III., as Emperor of All the Russias, November 1st, 1894. His mother was the Princess Dagmar of Denmark, sister of Queen Alexandra. The Tsar was specially educated for his high position, and so far from being, as some of his detractors assert, unacquainted with political affairs and the condition of his own and other countries, he has studied closely constitutional history and political and social economy. He is an excellent linguist, speaking several European languages, and has a thorough knowledge of English literature. Nicholas II. must be regarded as one of the most liberal of the Tsars. He is admittedly, on the evidence of Englishmen who have made his acquaintance, a man of broad sympathies and of a kindly and benevolent disposition. It is recorded of him that when



THE TSAR.

Tsarevitch, during the famine of 1891, he was, at his own request, appointed President of the Committee of Succour and worked hard personally in the organisation and distribution of relief. He has always taken the deepest interest in the welfare of his people and has himself devised measures for the amelioration and betterment of political and social conditions.

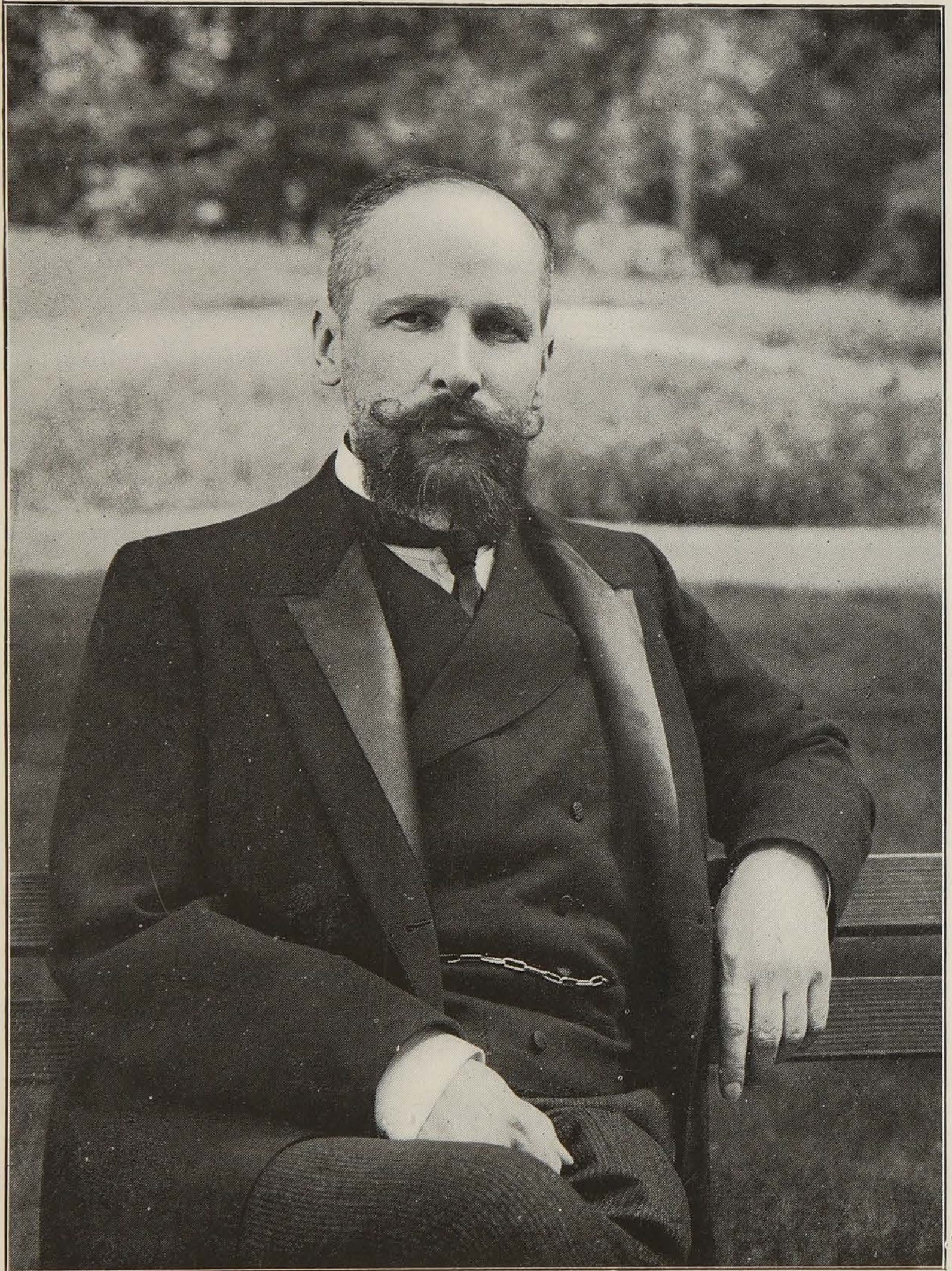
The reign of Nicholas II. has been almost as fruitful of great reforms for the Russian people as that of his ancestor, Alexander II., who gave emancipation to the serfs and was known as the "reforming Tsar." Nor have his efforts for the benefit of humanity been confined to his own people. In 1898 he made the important proposals for maintaining the peace of the world and the substitution of arbitration for war, which led directly to the Hague International Peace Conference of 1899, and indirectly to the holding of the second Peace Conference of 1907: also to the establishment of a permanent Court of Arbitration, sitting periodically at the Hague. The Tsar is said to have been influenced in the issue of what has been called his peace "irenikon" by reading the remarkable book written by M. Bloch, a Polish reformer, on "The Future War," and the very fact that he, the Autocrat of what was, perhaps, the most powerful military empire on the earth, read, and was impressed by a work of this character, shows how closely the Tsar follows contemporary opinion and the views of critical writers.

The most important of the domestic reforms of a political character carried out under the direction of the Tsar has been the establishment of the Duma, or National Parliament, to "take a constant and active part in the elaboration of laws" for the Empire. The Tsar declared in his proclamation on the subject that it was his desire to give to the people the firm foundation of public liberty, based on the principle of the inviolability of the person, freedom of conscience, freedom of speech and assembly, and to establish the rule that no law should come into effect without the approval of the Duma. The promise made to the people in this proclamation the Russian Emperor has done his best to carry out, although both the first and second Dumas elected were soon dissolved. The reason of their dissolution was

that they were found impracticable for law-making. As the Tsar remarked to M. Golovin, President of the Duma, at the New Year's Day reception, 1907, the "bickerings between parties rendered useful work impossible." In a later manifesto, he pointed out that on the part of those elected to the second Duma, there was a "manifest tendency to augment the country's troubles and to assist in the disruption of the State." He also complained, and with good reason, of the "hostile spirit which prevented the union of a sufficient number of members desirous of working in the interests of the country." In a word, owing to the violent squabbles of the party groups, no working majority could be formed and the Duma became a virtual anarchy. There was also a conspiracy against the State discovered in the second Duma. Consequently, the electoral law was modified, and, adhering to his resolve to create a workable legislative body, the Tsar convened a third Duma. This has shown a more reasonable spirit, and it has now been for some months assisting in passing useful legislation. It has criticised the Budget and reduced estimates, but no disposition has been shown to interference with the Duma's reasonable performance of the function of criticism.

In 1906, the Council of the Empire, which has an equal share in legislation with the Duma, was also placed on an elective basis. Other important reforms that have been carried out, or are in process of execution, and that were brought forward largely on the initiative of the Tsar, are the distribution of a large area of Crown lands and the purchase in the market of other land for distribution among the peasantry, who have been helped to acquire it on easy terms of purchase; the reform of local administration in the direction of self-government; reform of the Courts of Justice; the recognition of freedom of religion, and measures for the promotion of education and the improvement of the condition of the peasantry. The Tsar had repeated his intention to extend the liberties of the people and given proof of the earnestness of his intention, but, necessarily, in a country like Russia, constitutional reform must be a plant of slow and gradual growth.

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M. STOLYPIN,
Prime Minister of Russia.

The Tsar married in November, 1894, shortly after his accession, the Princess Alix of Hesse, by whom he has four daughters and a son.

STOLYPIN.

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FEW statesmen of recent years have been called upon to perform a more arduous task than the one entrusted by his Imperial master to Peter Arkadyevich Stolypin, Prime Minister of Russia. That he will succeed in performing this task to the satisfaction of his Imperial master and the people of Russia is, I consider, not only possible but probable, for M. Stolypin, while ever appreciating the necessity of hastening slowly with great reforms, is also fully awake to the dangers underlying undue delay in matters affecting the interests of his nation as a whole.

As the author of the comprehensive scheme for internal reform in Russia's methods of government, M. Stolypin took from the first a liberal and enlightened view of the responsibilities of his position. That his proposed enactments failed to win the approval of the extremists in the Duma and in the country was almost to be expected. Nor did the fact that a considerable section of the older bureaucracy looked askance at reforms their training and traditions led them to believe could not be successfully grafted on the life of the Russian people cause much surprise to the present Prime Minister's supporters.

M. Stolypin is a reformer sprung from the administrative classes in Russia, but it may be necessary to remind my readers that he is not the first. Within the memory of many men who are not middle-aged to-day, much more magnificent proposals than any the Tsar's Prime Minister has favoured have been put forward by various statesmen and politicians. Unfortunately, those schemes for ameliorating the lot of the people rarely became effective. That was partly due, no doubt, to the lethargic fashion in which the people themselves accepted the offered boons, but largely owing to the strenuous, if noiseless, opposition offered by an all-powerful bureaucracy. This body, providing as it does the

personnel of the administrative section of the huge Russian Empire, has been liable in the past to allow routine and tradition to hamper the natural national development—to forget that when the Tsar's grandfather freed the millions of serfs he meant them to be free men, and have at least a voice in national affairs, and to overlook the fact that the surest road to successful commerce and industry is to develop and foster native enterprise and initiative, rather than to depend upon alien assistance and guidance. Individually, no doubt, the thousands of men who in some position, great or small, took part in the administration of the affairs of the Russian Empire might, without fear of contradiction, be described at some time or other in their careers not only as ardent, but, according to the standpoint, enlightened patriots. But, as I have just indicated, liberal views become narrowed if only through the cramped working of the machine, and there can be no doubt whatever that when the present Tsar ascended the throne of his fathers, at an age when youthful ideals of national government have been somewhat tempered by experience, the position he had to face was surrounded with difficulties.

That the political development of Russia was checked during the earlier years of the Tsar's reign by the conduct of numerous bodies of so-called reformers is beyond question. But if these outbursts showed the Tsar that political freedom on the lines demanded by these bodies spelled nothing short of anarchy, they helped further to convince him that progress and the general development of his Empire were impossible unless material changes could be effected in the methods of administering the affairs of his great heritage.

To find the men capable of carrying out his views in the matter of reform, his Majesty had, with but rare exceptions, to depend upon the bureaucratic class, and the fact that from this class he has been able to draw ministers not only of ability but thorough believers in his enlightened policy is confirmation of the contention that, when freed from routine and tradition, there is a liberality and breadth in their views of national government denoting statesmanship of a high order. Rarely men of

aristocratic lineage—drawn, indeed, for the most part from the middle and professional classes—and seldom, if ever, recruited from the ranks of the people, the Russian bureaucracy represented—and, for that matter, still represents—a high level of intelligence and administrative and executive ability. The really able man had opportunities afforded him of rising to the highest positions in the State, and, indeed, outside France, it is difficult to name another country in the world where the *novus homo* had, and has, such an equal chance. The career of M. Stolypin is in many ways, I submit, a case in point.

Born in 1862, Peter Arkadyevich Stolypin, President of the Council of Ministers, Member of the Imperial Council, Minister of the Interior, Secretary of State of his Imperial Majesty, and Lord Steward of the Imperial Court, is still in his prime. He was educated at the grammar schools at Wilna and Orlov, subsequently graduating in the Physico-Mathematical Faculty of the University of St. Petersburg.

At the age of twenty-two he entered the Russian Civil Service, and for a brief period was attached to the Ministry of Agriculture. His interests, however, were directed to public works, and he soon became Marshal of the District of Kovno; later on he was promoted to the position of Marshal of the Province of the same name. In 1901 he was appointed Governor of Grodno, and, two years subsequently—in 1903—he was further appointed Governor of Saratov.

Down to 1905 M. Stolypin's administrative work had been entirely confined to the provinces, and, without question, the experience he gained in the various positions he held during those twenty years of active administrative work has stood him in good stead in his later career.

Just prior to the assembling of the first Imperial Duma, Count Witte went out of office as the Chief Minister of the Tsar and was succeeded by M. I. L. Goremykin. In the Goremykin Cabinet M. Stolypin held office as Minister of the Interior, and when the first Duma was dissolved the Tsar appointed him President of the Council of Ministers, leaving the Ministry of the Interior portfolio in his hands. In 1907 he became a member

of the Imperial Council, and early this year (1908) was appointed Secretary of State of his Imperial Majesty.

To M. Stolypin and the members of his Cabinet has fallen the arduous task of initiating, with what help the National Representatives can afford them, the large programme of reforms which he has drawn up for the benefit of Russia with the consent and approval of his Imperial Majesty. These reforms do not reach the levels anticipated by many hot-headed reformers who figured none too sensibly in the debates of the first Imperial Duma, but they unquestionably embody legislation of a character calculated to ameliorate the lot of the people, and further, on sane and reasonable lines, the exploitation of the enormous undeveloped resources of the Russian Empire. His varied provincial experience as a high official has convinced M. Stolypin that reforms on the lines he has indicated are best calculated to serve his master's and his country's interests, and it will not be his fault if, when these proposals become law, they are not administered to the advantage of the community as a whole.

KOKOV TZOV.

FOR a lengthy period of time Russia has been extremely fortunate in the statesmen who have held the honourable, if onerous, office of Minister of Finance to the Empire. Occasionally, and that not in the far-distant past, holders of this post have been called upon to display something little short of genius to prevent the finances of the Empire lapsing into a condition of unspeakable confusion through some unlooked-for natural calamity, or to make good expenditure resulting from military expenditure. Bad harvests in a country much of whose prosperity depends upon agriculture cannot always be provided against, even by pursuing a policy of most conservative finance, and from bad harvests huge areas of Russia have suffered periodically in the past, as they may also in the future. A Russian Finance Minister can never put the prospects of crop failures wholly from his



THE MINISTER OF FINANCE.

W. S. D. L.

mind. He knows that such failures entail expenditure over a much longer period than the interval between harvests, and that until the increased revenue which the development of Russia's natural, but hitherto unexploited, resources provides, agricultural distress must always be reckoned with in Imperial Budgets.

But with the dawn of Russia's new era Finance Ministers will have less anxiety to face from the expenditure represented by an active military policy on the confines of the Empire. That Russia as a great Power must always expect to spend heavily upon the upkeep of her army and her navy is a foregone conclusion. But so long as such expenditure is not disproportionate to her natural revenue and does not represent the maintenance of land and sea forces on an excessive scale, such outlay must, I submit, be deemed legitimate. The Anglo-Russian Agreement may mean that military economies can be effected in Asiatic Russia, and that revenue will be diverted to the development of national resources. Natural exploitations must create new and legitimate sources of revenue, which, in part, at any rate, can be devoted to relief in other directions where the pressure of taxation has been felt in the past. The relief foreshadowed in Russia's new era will not be obvious at once. It is bound, in the nature of things, to be very gradual, and, perhaps, the Russian people will be slower than the intelligent outsider to perceive and appreciate the change.

One very desirable result will inevitably arise out of the change in Russia's policy—one relating to the Empire's external credit. With new sources of revenue steadily developing, and aggression either in Europe or in Asia no longer an integral part of the Empire's foreign policy, an excuse for circulating absurd reports as to Russia's solvency will be no longer furnished. It has been the practice of the Minister of Finance for many years past to publish for home and foreign consumption a mass of Imperial revenue and expenditure statistics, which, at first sight, appal with their very prolixity and minute observance of detail. These annual statements, however, never failed to convey to the intelligent student of national finance one fact of prime importance, namely, that Russia, even during her periods of large

military expenditure, was, as a State, more than solvent ; the circumstantial statements circulated throughout the European stock markets against her credit could only be attributed, therefore, to bourse manipulators of the baser sort. It is none the less a regrettable fact that responsible journals in this country have in the immediate past given currency to such malicious fabrications, although easy research would have shown the writers of such contributions that not only was Russia at such a particular juncture more than able to meet all her obligations to foreign creditors, but that she had never once defaulted in the payment of interest upon a single external loan.

Recent Budget statements have shown that Russia, even during a period of internal political unsettlement and a series of bad harvests, has been able, without foreign borrowing, to meet a very respectable portion of the enormous expenditure which the war with Japan entailed. Now, however, those responsible for the conduct of her finances are in a position to consider whether the Empire would not be a material gainer by the consolidation, and, possibly, the redemption, in whole or in part, of certain war loans on terms more in keeping with Russia's status as a world-Power. This and other matters pertinent to the well-being of the Empire, M. Kokovtsov, the Minister of Finance, is wholly competent to deal with as they arise, a statement amply borne out by the brief review of his career as a servant of the Tsar, which I append.

Valdimir Nikolayevich Kokovtsov, Minister of Finance, Secretary of State of his Imperial Majesty, Senator, and Active Privy Councillor, was born on April 6th, 1853. Having taken his degrees in Law and the Science of Finance in the Imperial Alexander Lyceum, he entered the service of the State in his twentieth year as a member of the staff attached to the Ministry of Justice. While connected with this Department he laboured ardously, and subsequently figured prominently in the work arising out of the great scheme for prison reform in Russia, being in 1882, or nine years after his entry into public life, appointed to the post of Director of the Chief Board of Prisons in Russia. As Director and as a rational reformer, his careful administration

of a by no means easy post attracted attention to his unquestioned capacity, and it is not surprising to learn that in 1890 his services were transferred to the Chancellory of the Imperial Council. Here he first occupied the post of Assistant Secretary of State; two years later he was promoted to that of Secretary of State in the Department of Imperial Economy of the Imperial Council; in 1896 he was again advanced, becoming Assistant Imperial Secretary.

This office he held for a brief period only, for Count (then M.) Witte was Minister of Finance and required the help of an able and energetic assistant in his department. M. Kokovtsov accordingly became Assistant Minister of Finance, and for six fruitful and busy years retained that position. He was an active participant in all the important financial operations during that period, which, *inter alia*, included the introduction of the spirit monopoly—an Act which not only has provided the State with a splendid source of easily collected revenue, but has freed the peasantry from the domination of alien spirit vendors. During this period he managed for a time the Chief Board of Non-Assessable Taxes and of the Crown-Sale of Spirits, being advanced to the dignity of a Senator in 1900.

In 1901 he acted as President of a Special Committee appointed to inquire into the economical condition of the Central Black-Soil Zone in European Russia, and at the beginning of the ensuing year participated, as a member, in the labours of a Special Conference which inquired minutely into the wants of certain rural industries and the conditions of the workers engaged therein.

From 1902 he acted as Imperial Secretary till February, 1904, when he was appointed Director of the Ministry of Finance, and in March, 1904, his appointment to the post of Minister of Finance was confirmed. A year later he was created Secretary of State of his Imperial Majesty, and temporarily left the Ministry of Finance, being appointed a Member of the Imperial Council. He returned to the Ministry of Finance, however, in April, 1906, retaining his seat on the Imperial Council, and has successfully negotiated the numerous and inevitable difficulties

which arise out of the *post bellum* administration of a nation's finances.

M. Kokovtsov has participated in all the important social reforms elaborated and initiated of late years in Russia by the Imperial Government, rendering conspicuous service to the Empire in the difficult task of framing the regulations in connection with the creation of the Imperial Council and the Imperial Duma.

CHAPTER III.

BUDGET AND IMPERIAL CREDIT.

THE BUDGETS FOR 1907 AND 1908.—EQUILIBRIUM IN 1907.—
NEW LOANS IN 1908.—RAPID FINANCIAL RECOVERY SINCE
THE WAR.—THE CREDIT OF THE EMPIRE.—CAUSES OF
DEPRECIATION AND PROSPECTS OF RECOVERY.—SECURITY
OF BONDHOLDERS.

THE Budget of a nation, presented intelligently, is very interesting to those who will study it with care and attention. It describes and opens up the inner workings of the nation's commercial and administrative life. It enables us to gauge the future prospects of prosperity.

The Budgets of the Russian Empire for 1907 and 1908 present much interesting matter to those who know little or nothing of this vast and rich territory and its wonderful resources. The Budget for 1907 was the first that has been presented in which the representatives of the people had a right of participating in its examination and discussion.

Before proceeding to go into details relative to this year's Budget, it is only right to cast a glance at the state of the Imperial Treasury previous to 1907. The war with Japan was, and is at the present moment, a bad influence on the state of the Treasury. In January, 1904, when the war broke out, the Treasury had a sum of 381,345,875 roubles at its disposal,

perfectly free from any claims whatever. Not only was this amount completely expended in 1904 and 1905, but by the beginning of 1906 there was a deficit of nearly 158,000,000 roubles. This was not merely the result of the war, for events at home likewise played an important part in causing this deficit, there being a diminution of nearly 88,000,000 roubles in revenue receipts in the last three months of 1905 as compared with the same period of 1904. This was owing to the various strikes throughout the country, in addition to the expense of maintaining order, paying indemnities and replacing damaged and destroyed properties. Then, again, the item of "extraordinary expenditure" must be taken into consideration, for, although the war was practically over, there was the expense of maintaining the troops still on a war footing, the cost of evacuation, transportation and maintenance of prisoners of war, and other incidental expenses to be provided for. In consequence of these extraordinary expenditures, which amounted to 405,375,775 roubles, the Budget for 1906 showed a deficit of 481,114,001 roubles, which, in default of other resources, was covered by means of loans. Over and above this, means had to be found also to provide for the deficit of 158,000,000 roubles at the beginning of the year, as well as for the amortisation of the short-term securities issued in 1905, amounting to 144,000,000 roubles, making the aggregate shortage, therefore, for 1906, 783,000,000 roubles. The total revenue (including the realisation of the Four per Cent. Rentes and the Five per Cent. Loan of 1906 and short-term securities) realised in 1906 not only covered all the ordinary and extraordinary expenditure for that year, together with the deficit for 1905, but the short-term securities issued in 1905 were redeemed, and on January 1st, 1907, there was a balance of 60,000,000 roubles—more than sufficient to cover the unredeemed remainder of the short-term securities, to the amount of 53,000,000 roubles.

The above figures do not, of course, show the complete effect of the war on the Budget, for, in consequence of the former, the "ordinary" expenditure has increased, and particularly so in the case of payments on loans, which in 1906 amounted to 357,000,000 and in 1907 reached the sum of nearly 381,000,000

roubles, owing to the increase of Russia's indebtedness. Then, again, the increased pension-list has to be provided for, and the loss of the squadron must entail considerable extra expenditure. Finally, there are many other disbursements made by various departments in connection with the war, which undoubtedly also had a considerable influence in the reduction of revenues.

THE BUDGET FOR 1907.

The Budget is divided into two distinct parts: (1) The "ordinary" revenue and expenditure, and (2) the "extraordinary" revenue and expenditure. The estimates in the Budget for 1907 were:—

	Roubles.
Ordinary revenue	2,174,963,544
Extraordinary revenue	296,721,328
Total revenue	<u>2,471,684,872</u>

	Roubles.
Ordinary expenditure	2,173,130,171
Extraordinary expenditure	298,554,701
Total expenditure	<u>2,471,684,872</u>

The total expenditure provided by the Budget of 1907 was subsequently increased by 45,196,500 roubles, of which 28,500,000 roubles were assigned for famine relief, and 16,696,500 for other requirements. On the other hand, certain items amounting to 12,549,682 roubles, which were objected to by the Financial Commission of the State Council or the Budget Committee of the Duma, were excluded from the ordinary expenditure, and a further sum of 6,344,381 roubles, chiefly conditional grants, were excluded by the Council of Ministers. Thus, 18,894,563 roubles in all was deducted from the total given above, making the ordinary expenditure 2,173,400,874 roubles. There were also some transferences from ordinary to extraordinary expenditure, and the extraordinary expenditure was increased to 324,585,916 roubles, so that the total was 2,497,986,809 roubles.

The ordinary revenue was estimated at 2,320,000,000 roubles ; but owing to the redemption of short-term securities, and the consequent postponement of further loans, the extraordinary revenue only reached 135,425,000 roubles (instead of 296,731,328), making a total revenue of 2,455,425,000. The Budget of 1907 thus left a small balance to the good, and the financial equilibrium was attained without any fresh borrowing.

THE BUDGET OF 1908.

But it will be otherwise in the present year, during which it may be necessary to borrow in order to provide for all the "extraordinary" requirements of the Empire. The draft Budget, which the Committee of the Duma were engaged in discussing while this book was being prepared for press, showed the following estimated receipts and expenditure :—

	Roubles.
Ordinary revenue	2,318,887,000
Ordinary expenditure	2,317,550,169
Surplus	<u>1,336,831</u>

	Roubles.
Extraordinary revenue	7,000,000
Extraordinary expenditure	197,965,697
Deficit	<u>190,965,697</u>

Less the small surplus of ordinary revenue over expenditure, there is shown a deficit of 189,628,866 roubles, which it is proposed to cover by a loan or loans. The estimated ordinary revenue is 143,900,000 roubles more than in 1907, and 47,200,000 roubles more than the actual receipts of revenue in 1906. The estimated ordinary expenditure is 144,100,000 roubles in excess of the assignments for 1907. This includes 55,700,000 roubles more for the war services. In extraordinary expenditure there is a reduction of 57,100,000 roubles in the expenditure entailed by the late war and its consequences, and of 81,900,000 roubles in famine relief. But there is an increase of 10,800,000 roubles in the amount assigned to railway construction, and of 2,200,000 roubles

in advances to railway companies. On the whole, extraordinary expenditure shows a decrease of 126,600,000 roubles.

ORDINARY REVENUE.

It may be well to glance at a few of the items of revenue and expenditure.

The "ordinary" revenue, as presented in the Budget, it may be explained, includes all the principal forms of taxes and duties levied throughout the Russian Empire and, as set forth here, not only give an idea of the absolute amounts, but also of their relative importance and the place they occupy in the general resources of the country.

The most important source of "ordinary" revenue is the spirit monopoly, which is estimated to yield 30 per cent. of the entire revenue. The Government sale of spirits was introduced in 1894, and is now in force all over Russia, excepting the Transcaucasus and the Transcaspian territories. The revenue from this source, of course, depends on the consumption of spirits, and we find that 1906 comes to the front with 85,415,000 vedros of alcohol (40 per cent. pure), making an average of about a vedro or $2\frac{1}{2}$ gallons per capita. This amount is not large when one takes into consideration that every village—no matter how small—has its "shink," or inn at which spirits are sold, and from which the State derives a profit. The estimated revenue for 1908 from this source amounts to 696,225,000 roubles.

State or Government railways were built either by the Government, or by joint stock companies, from which they eventually passed into the hands of the State. The construction of railways was carried on by Government both from the general resources of the Treasury and from loans specially contracted to cover the expenditure incurred. On the redemption of private lines by the Government, the obligations of such lines are likewise transferred to the State, and the payment of the principal and interest on the stocks and bonds of such companies is made a first charge on the net receipts. Should, however, the receipts be not sufficient to meet these charges, the shortage is made

good by the Government, and, as such, is entered as a debt against the company. On the redemption of railways by the Government, the shareholders receive supplementary remuneration in proportion to the profits made by the company, such amounts paid being charged against the company as a loan.

Of the total length of 60,000 versts of railway lines in Russia, the State controlled in 1907 41,167 versts, carrying 6,580,346,000 poods (or about 100,000,000 tons) of freight, and nearly 100,000,000 passengers. The total receipts amount to 489,000,000 roubles, or 11,878 roubles per verst; while the working expenses for the entire length amount to 401,445,000 roubles, or 9,751 roubles per verst.

The revenue derived from railways is made up of the passenger fares and freight charges, a State tax of 15 per cent. on passengers and goods carried in passenger trains, and of miscellaneous receipts not directly connected with the State working of railways—such as telegraph receipts, hire of rolling stock to railway companies, &c. Besides the earnings of State-worked lines the Government receives certain sums from railway companies—from its share in their profits, and from several other obligations of the railway companies mentioned under different headings in the Budget, as well as overcharge of freight not claimed by senders, &c.

The estimated receipts from railways for 1908, including the 15 per cent. "State tax," make in all a revenue of over 530,750,000 roubles, or 22.9 per cent. of the total "ordinary" revenue.

The receipts from State properties are collected principally from the leasing of properties and enterprises, and represent also the interest on State funds in the hands of foreign and home bankers. This last item, including profits derived from Government banking operations, amounts to about 23,000,000 roubles, while the total revenue from State properties and funds reaches 126,660,000 roubles. Besides the rents from a variety of sources, the State draws a considerable revenue from its forests (58,483,000 roubles), oilfields (12,093,000 roubles) and fisheries (2,549,000 roubles). The rents and leases of State undertakings and the income from Government works, technical establishments and

stores bring in 13,539,679 roubles. Gold mines are only estimated to yield 523,000 roubles this year.

The estimated amount of revenue from royalties is 88,800,000 roubles, and includes the Postal service, with its 51,445,100 roubles, and the Telegraph and Telephone service (31,141,000 roubles). The balance is distributed between the mining-tax revenue and Mint profits. The former amounts to but 290,000 roubles, levied on copper and pig-iron, while the Mint profits are 5,650,000 roubles, the latter representing the profit made by the State on the difference between the market price of silver and the Mint price, which is always above the market.

Next in order to the spirit monopoly and State railways, the Excise and Customs receipts, or "indirect taxes," follow with 490,034,000 roubles, or 21.1 per cent. of the total "ordinary" revenue, and comprise the amounts of duty levied on each of the following products :—

	Roubles.
Liquors	41,679,000
Tobacco	51,564,000
Sugar	93,236,000
Petroleum	38,053,000
Matches	16,015,000

The larger half of the above total, viz. : 249,487,000 roubles, represents the Customs revenue.

The two largest items under the liquor tax are spirits and beer. The duty on the former is 11 kopecks per degree of pure alcohol, and provided last year a revenue of over 8,000,000 roubles (this year's estimate 12,610,000 roubles), while beer is responsible for 15,000,000 roubles (this year 18,500,000 roubles). The Customs revenue is derived from duty on imported goods. These receipts, which fell off to a considerable extent from the very first year of the war, rose again in 1906, and even exceeded the receipts for 1903, and there was a further increase in 1907.

Land, Personal and other taxes come under the heading of "direct" taxes, and include the following :—

(1) The State land tax, various land taxes in the Polish provinces, Siberia and other districts; taxes on real estate (chiefly in towns and boroughs); the hearth tax in boroughs and

villages in Poland ; the tent tax on the Steppes ; rents from peasant colonists on State lands in Siberia ; the State tax on inhabited houses and other assessed taxes. The income from these sources is estimated at 61,577,000 roubles, the land tax alone producing more than a third of this amount, and real estate 18,693,000 roubles. (2) State tax on commerce and industries, consisting of the principal tax on trade licenses, amounting to 90,727,000 roubles. (3) Tax on securities and accounts current. This is levied on incomes derived from Government and other securities, interest on deposits in banks and special current accounts, and is estimated at just under 21,000,000.

The heaviest item under the Duties section is the revenue stamp duty—52,200,000 roubles. The duty on deeds of sale, death and legacies is 23,575,000 roubles ; the 15 per cent. railway tax, already referred to under State railways, 19,000,000 roubles ; harbour dues, 3,104,000 roubles, and the fire insurance duty, 4,600,000 roubles. The latter is levied on all kinds of fire insurance of all property, both real and personal, at the rate of 50 kopecks per 1,000 roubles of the amount insured, but in no case more than 20 per cent. of the premium. Miscellaneous duties, estimated at over 10,000,000, bring the total under this section up to 116,949,000 roubles.

The total amount of reimbursements due to be paid the Treasury during 1907 from various sources is 72,500,000 roubles. This amount is made up of advances made to railway companies, Government employees and officials, hospitals and infirmaries, savings banks, schools, &c., and includes subventions to State and official institutions, &c.

War indemnities to be received during 1908 from Turkey, China and Bulgaria amount to 10,691,000 roubles.

Under the heading of Redemption of Land by Peasants, the estimate for 1906 was 35,000,000. The estimate for 1908 is only 507,000 roubles. This is due to the Manifesto of 1905, which decreed the final abolition, from 1907, of such payments to the State. The amount in 1907, and due in 1908, is only from a small class of peasants, who had allotments of State land under different conditions prior to the liberation of the serfs.

Various miscellaneous revenues, in addition to 488,000 roubles derived from the sale of Government lands, bring the total of ordinary revenue in the estimates for 1908 to 2,318,887,000 roubles, exceeding the estimates for the preceding year by 143,900,000 roubles.

ORDINARY EXPENDITURE.

The Ordinary Expenditure in the Budget for 1908 is distributed in the following manner :—

	Roubles.	Per Cent.
State undertakings	762,900,000	32·9
State defence	499,900,000	21·6
Public Debt	386,000,000	16·6
Administration	} 668,700,000	28·9
Miscellaneous		
Total	2,317,500,000	

The expenditure of the Ministry of the Imperial Household is put down at 16,359,595 roubles, the same as in 1906 and 1907, while the estimate for the maintenance of the higher administration of the Empire is 7,675,000 roubles.

Church administration, maintenance of clergy, bishops, the various palaces, cathedrals, monasteries and convents, &c., is allowed 29,739,000 roubles.

The Ministry of the Interior is assigned 144,124,000 roubles ; Finance, 428,549,000 ; Foreign Affairs, 6,208,000 ; Education, 53,149,000 ; Justice, 58,943,000. The Ministry of Ways of Communication, having charge of the working of State railways, &c., is granted 552,299,000 roubles.

The Ministry of Commerce and Industries, from a total of 33,000,000, has 13,750,000 assigned to the Mining Department.

Agriculture claims 58,987,000 roubles, of which the Forest Department received over 18,000,000.

The War Minister will have at his disposal the sum of 433,142,000 roubles, which includes the following items:—The maintenance, armament and equipment of the troops, with the staffs and medical services and military schools; the Civil Department, which includes the maintenance of the military administration of Turkestan, where the military organisation of the district institutions has not yet been replaced by civil; the maintenance of a separate corps of gendarmes, and subsidies from the State to the deferred-pay pension fund of the Army. The expenditure of the War Ministry likewise includes an assignment in case of a rise in the price of provisions and forage, which is in the Budget and amounts to 8,000,000 roubles, but not in the estimates of the War Ministry, and also the civil administration in some Cossack territories. The estimates for 1908 are 43,554,000 roubles more than 1906. This includes an increase of the grant made in 1905 for improving the condition of private soldiers, consisting of increased pay, extra rations, tea, underlinen, &c. The maintenance of troops absorbs 314,442,000 roubles, this being the heaviest item of expense, and 41,393,000 roubles more than in 1907.

Ministry of Marine.—The bulk of the allowance for this Ministry—87,092,000 roubles—is for “State Defence.” The Budget for 1907 provided only 5,000,000 for new ships, for, until the confirmation of the new shipbuilding programme, the only work done is in completing ships now in course of construction. This year shipbuilding is assigned 1,733,000 roubles more than in 1907. The total of these estimates for 1908 is 12,097,000 roubles more than those for 1907.

The Audit Ministry—which acts as auditor for the Government—receives an allowance of nearly 10,000,000 for expenses.

The estimate in the Budget for the Public Debt, is to the exact amount of the Government obligations on its loans, and reaches 385,966,000 roubles.

The Budget very wisely provides a fund for “unforeseen

requirements " that may arise in the course of the year. This fund amounts to 10,000,000.

In comparing some of the items of revenue and expenditure we find that Russia's great source of income is its spirit monopoly. The Budget for 1908 gives the revenue and expenditure of this monopoly as 696,225,000 roubles, and 213,984,000 roubles, respectively, leaving a net profit of more than 400,750,000.

The State railways do not make such a good showing compared with the monopoly, for obvious reasons. In the first place, there was an increase in the working expenses in 1907, amounting to 30,000,000, due to the increased cost of materials, labour and manufacture, estimated at 9,000,000 roubles, to the inclusion of 2,003 versts of new lines, the working expenses of these requiring about 4,000,000 roubles ; and, finally, the further increase of traffic in 1907 required a proportionate increase of expenditure, estimated at 8,000,000 roubles. The Government cannot apparently keep the average working expense per verst down to a reasonable average. It is gradually increasing. In 1902 it was 8,409 roubles per verst ; in 1906, 9,290 roubles, and in 1907, 9,649 roubles. One of the causes is supposed to be the rise in the price of fuel and other materials, as well as the greater cause of labour. In the Budget for 1908 the working expenses of the State railways show a further increase in assignments to the extent of 35,906,000 roubles, and the total expenditure upon them is 517,000,000 roubles, being 41,000,000 more than in 1907.

One of the departments for which a provision of 1,863,000 roubles is made is the Administration of Studs, having for its object the development of horse-breeding in Russia.

EXTRAORDINARY RESOURCES AND EXPENDITURE.

In the Budget for 1908 the only extraordinary resources are the following : Perpetual deposits in the State Bank, estimated at 1,900,000 roubles ; the sale of State lands to the peasantry, to be paid for in instalments, the amount in 1908 being put at 100,000 roubles ; and repayments of alimentation loans to

peasantry, estimated at 5,000,000 roubles. These sums make 7,000,000 roubles, and together with the estimated surplus of ordinary revenue over ordinary expenditure (1,336,831 roubles) will be employed to cover part of the extraordinary expenditure for 1908.

Grants for extraordinary expenditure in the Budget for 1908 are made for the following purposes :—

The liquidation of war expenditure and claims arising therefrom, and not settled for in 1907, a total of 66,888,000 roubles, which is 57,137,000 less than in 1907.

Famine and other relief funds 7,732,000 roubles, only, against no less than 89,057,000 roubles in 1907.

The construction of railway lines is estimated at 59,387,000 roubles, an increase of 10,773,000 on 1907.

For the purpose of covering the expenditure of the Chinese Eastern Railway, it is proposed to advance the Company, on the security of railway bonds guaranteed by the Government, the sum of 7,500,000 roubles.

For the expropriation of the right to liquor revenue belonging to private persons and institutions prior to the introduction of the spirit monopoly, and due in 1908, is the amount of 3,680,000 roubles.

At the end of 1906, for the purpose of augmenting the resources of the Treasury, an issue of short-term securities of the Treasury was made in Germany to the nominal value of 52,978,905 roubles, which are still in circulation. These securities were issued payable on different dates in 1907, but their redemption was postponed until this year by an arrangement with the Bankers, and consequently the necessary amount to meet them has been assigned in the Budget. It is 52,979,000 roubles. These sums bring the total of the extraordinary expenditure for 1908 to 197,965,697 roubles, being 126,620,218 roubles less than in 1907.

It was expected that the fulfilment of the Budget of 1907 would leave the Ministry of Finance with a balance of 18,000,000 roubles, being excess of ordinary revenue over ordinary expenditure. But this could not be taken into account for covering extraordinary expenditure in 1908, as the revenue for the last

three months of 1907 had not been verified when the estimates for 1908 were prepared.

The total of extraordinary revenue mentioned above (7,000,000 roubles) will, together with the estimated surplus of ordinary revenue over ordinary expenditure (1,336,831 roubles) be employed to cover a part of the extraordinary expenditure for 1908. The Minister of Finance, as I have intimated, proposes to cover the shortage of 189,628,866 roubles by means of loans. But the amount of loans it is proposed to issue in 1908 will depend on whether the fulfilment of the Budgets for 1907 and 1908 will yield any surplus to be transferred to the free balance of the Treasury ; or whether, on the contrary, the revenue will prove insufficient to cover the expenditure for 1907 and 1908 in full. Should the receipts of revenue be favourable, the Minister of Finance will consider it his duty to have recourse to loans only to the amount strictly necessary, as was the case in 1907, when there was a considerable reduction on the first estimates of the amount of loans to be issued.

NATIONAL CREDIT.

The Minister of Finance in his statement calls attention to the growth of the National Credit since the War, as evinced, among other things, by a continual increase of cash deposits in the State Savings Banks, showing a progressive accumulation of small capital among the middle and lower classes of the population. The accretion of deposits in 1906 showed an excess of deposits over withdrawals of 65,000,000 roubles, which is more than the average annual increase in the normal five years' period of 1899-1903 (42,700,000 roubles). In 1907 the rate of increase of cash deposits in the first seven months of the year was also greater than that average, but this was partially due to a rise in the rate of interest paid by the savings banks from 3·6 per cent. to 4 per cent. Commercial credit was also in a comparatively favourable position in 1907, but in the latter part of the year, Russia, like all other European countries, felt the effects of the

financial crisis in America, and of the monetary stringency. Russian funds were affected by the fall in prices, and the State Bank had to put up its discount rate to $7\frac{1}{2}$, as that of the Bank of England was for a time advanced to 7. The course of exchange gradually improved during the year, but the Russian rouble suffered a slight relapse towards the end of 1907, owing to the perturbed state of the money markets.

The Minister of Finance makes these temperate observations in concluding his explanatory statement of Russian finances in 1908: "There is good reason to think that the state of our credit abroad will not suffer essentially (from the unfavourable monetary conditions); the renewed activity in trade and industries, and especially the increase in our exports, will, under favourable circumstances, sufficiently counteract the bad effects of the factors above mentioned. Although the past year's harvest has not proved as abundant as had been expected from the state of the crops when ripening, it is nevertheless sufficiently plentiful for exportation abroad."

The indications as to the present year's winter crops are not wholly favourable, but it is too early at the time this is written to judge of the harvest of 1908, and there may be some improvement in this branch of Russian national industry.

Enough has been said to prove that Russia's financial outlook, far from being as black as it is painted by hostile critics, is in reality an exceedingly promising one. The cost of the war has been provided for without unduly increasing the burden of debt, and even now the total indebtedness of the Empire per head of the population bears favourable comparison with that of other countries. Moreover, the virtual equilibrium of the Budget has been re-established, and there is every indication that, if the current year's operations do result in a debit balance, the deficiency will not be one of serious dimensions. The financial resources of the State are enormous, and by the exercise of ordinary prudence, the Ministry of Finance should, in future years, experience little or no difficulty in providing for the needs of the nation without resorting to further borrowing.

Apparently the period of unproductive borrowing is at an

end, and if loans are issued in the future, it will be for the most part for expenditure of a reproductive character. If, for instance, the Government wishes to acquire railways now privately owned, or to extend existing State lines, it may become necessary to raise additional capital. But in such circumstances the most captious critic will have nothing to find fault with. In all countries the acquisition and construction of railways are recognised as legitimate objects of State expenditure, and if Russia chooses to adopt this most natural method of stimulating the development of her natural resources, even her enemies cannot criticise her.

The rumours which gained currency in Paris some time back that M. Kokovtsov, the Russian Minister of Finance, who had been visiting the French capital in the course of a holiday tour, had obtained the consent of the French Government to the early issue of a loan of £130,000,000, was clearly the work of some not very accomplished *farceur*, and may be dismissed as a Parisian *coq à l'âne* of the usual type. It soon evoked a categorical denial from St. Petersburg, and no one familiar with the present condition of Russia's finances can feel surprised that the whole story was officially characterised as "totally devoid of foundation."

Personally, I must confess to have been quite amazed by the report in question, even though it emanated from a news agency which has a propensity for circulating stories as unreliable as they are sensational, for in the course of my interview with him in St. Petersburg last year the Minister of Finance most definitely assured me that there would be no Russian loans whatever during 1907, and that proved to be the fact. Any issue that may be made this year will, however, be for productive purposes, and will stimulate the material development of the Empire. It will not, in short, be a dead load of fresh debt, but a prudent expenditure of capital on useful public works, yielding an adequate return and calculated to increase the wealth and prosperity of the country.

It may appear strange that, in spite of Russia's comparatively strong financial position, the credit of the country abroad should remain at a relatively low level. That Russia's credit has been

extremely low is unquestionable. Explanations or no explanations, there is no getting away from the fact. Her securities have been quoted on a lower basis than those of any other State borrowers, save, perhaps, the Republic of Colombia and the Province of Buenos Ayres. Her credit, taking her Four per Cent. Bonds as the basis of comparison, is lower than either Spain or Turkey. It may appear curious that the financial repute of the Sick Man of the near East should be held in appreciably higher esteem than that of the Tsar of all the Russias. Yet such is the case, and few can deny that the circumstance constitutes an extraordinary anomaly. Turkish finances, it may be contended, are now under international control and to that extent are on a different plane from those of Russia. But international control does not carry with it any international guarantee, and the Turkish bondholders will, in all circumstances, be dependent upon the proceeds of certain assigned taxes in the dominions of the Sultan. In other words, international control alone cannot be held accountable for this glaring anomaly.

The exceptional depreciation of Russian credit, even if it is unjustifiable, is capable of perfectly plausible explanation. It is due partly to financial and to a still larger extent to political causes. In the first place, we must not lose sight of the fact that the decline in national credit has not been confined to Russia. Every country, for reasons which are now well known and acknowledged, and which need not be enumerated here, has had a more or less similar experience in the course of the past five years. In the case of Russia, however, the difficulties of the position were aggravated by two important facts: first, the necessity of extensive borrowing; and, secondly, political disturbances at home and consequent anxiety on the part of bondholders. Fresh borrowing at any time tends to depreciate national credit, but when it is undertaken in an abnormally unfavourable market, and at a time when the borrowing Power has been subjected to apparently disastrous defeats on sea and on land, the consequences are bound to be serious. Added to her financial difficulties, Russia has throughout had to contend with the most systematic and unscrupulous attacks upon her political

stability. Time after time it has been predicted that she was on the brink of revolution and that her default upon her debt charges was only a question of months.

As calm and impartial observers believed and expected, neither of these dismal prophecies has been fulfilled. The manner in which Russia has surmounted her difficulties, political and financial, has taken her enemies completely by surprise, and has won the admiration of her friends. Her critics have been dumbfounded and are reduced to sullen silence. But they are extremely well-organised, and, being actuated by racial hatred, they are still ready, on the first available opportunity, to begin a fresh attack no less unscrupulous than the last. When they do recover their powers of speech, I can only hope that Russian bondholders and investors generally, warned by past experience, will not be bamboozled by their next effusions. The Russian Government, provided it pursues its present prudent policy on political and financial questions, need not be alarmed by the lame and impotent attacks of its enemies within and without the Empire. A Government which has survived the criticisms of the past few years can afford to face further antagonism, however unscrupulous, with equanimity.

Already there are signs that politically, financially and industrially the country has entered upon a new era of revival. Peace reigns at home, and the Government has recently been able to effect satisfactory arrangements which give promise of a long spell of friendly intercourse with the only two foreign Powers with which there was any possibility of its being brought into conflict—to wit, Japan and England. The financial improvement is visible in the expansion in public revenue and, as noted above, in the steady growth of savings bank deposits. So far as industrial progress is concerned, the trade returns and reports from various manufacturing centres tell a gratifying tale. It is evident that the worst effects of the war and of the subsequent disturbances in industrial centres have passed away and that a period of material recuperation has set in. Prosperity is very welcome, not only because it must increase the well-being of the people, but because it must tend to simplify the task of constitutional

reform. A prosperous people is seldom discontented and is more inclined to approach the problem in a reasonable spirit than a poverty-stricken population, ready, in its despair, to risk a devastating revolution.

It is small wonder that, in these circumstances, Russian credit should recently have undergone a distinct improvement. Singular to relate, Russia is practically the only country that can point to an appreciation in the price of its stocks in the course of the past twelve months. The securities of the other Powers have further depreciated within that period, whereas those of Russia are substantially higher than a year ago, the Five per Cent. Loan showing an appreciation of 15 points in the past 12 months. It may be said that the revival in Russian bonds is due to the fact that in this case there was altogether exceptional room for improvement. Still, the fact remains that a revival has occurred, though, as already pointed out, the credit of the country is even now considerably lower than that of other nations whose assets and resources are insignificant, both absolutely and in relation to area and population, compared with those of Russia. Sooner or later this anomaly will be at an end and Russia will enjoy credit commensurate with her position as a first-class political Power possessing immense financial resources.

Before the war Russian credit was almost as good as that of Germany, and better than that of Italy. To-day, judging by the price of her stocks, it is lower than that of a Balkan State or a South American Republic. It is inconceivable that this state of things can continue indefinitely. Sooner or later the market value of her bonds will be restored, not, perhaps, to its old level—for monetary conditions are different from what they were formerly—but at least to a figure which will re-establish her financial superiority over the minor nations of the Old and New Worlds. As recently as 1903 Russian Fours were quoted at over 103. To-day they are worth only about $87\frac{1}{2}$ to 88. Part of the depreciation is due to influences which have adversely affected the market value of all kinds of securities. But, even when this circumstance is allowed for, it must be admitted that the decline in Russian bonds has greatly exceeded the fall that

has taken place in other international securities. Take, for instance, the case of Hungarian Fours, which in the same interval depreciated only from $103\frac{1}{8}$ to $93\frac{1}{2}$. On the other hand, Spanish Exteriors have risen from $85\frac{1}{4}$ to $95\frac{1}{2}$; while Turkish Unified Four per Cent. Stock has advanced from $86\frac{1}{4}$ to 96.

Let it be granted that the war with Japan was bound to have an unfavourable effect upon Russian credit. All I contend is that its influence has been exaggerated and unjustified. Even if due allowance is made for the increase in indebtedness, the anxieties created among investors by unscrupulous rumour-mongers, and the various political difficulties with which Russia has had to contend, it must be allowed that a depreciation of over 20 per cent. in the credit of the nation far exceeds the bounds of reason and common-sense. No impartial observer, I imagine, believes that, financially speaking, the great Muscovite Empire—which, whatever its military and naval disasters, is destined, because of its immense natural resources, to achieve great triumphs in the peaceful domain of industry and commerce—is inferior to Spain and Turkey. Before the war it enjoyed a credit inferior only to that of great nations like England, France and Germany. When the effects of the struggle have passed away it will surely be entitled to equal consideration.

The fears of an impending default on the part of Russia, once so industriously stimulated by her enemies, have now, it may be hoped, definitely disappeared. It is no longer fashionable to talk knowingly of Russian insolvency, and no sane investor in England or on the Continent seriously believes for a moment that there is any danger of Russia ceasing to meet her obligations with unfailing regularity. If Russia wanted to default, she could have done so long ago with every show of plausibility. French investors might have been greatly perturbed, but in the end they would probably have submitted, however grudgingly, to some fresh arrangement. The fact that Russia did not, at the most critical period of her history, both politically and financially, ask her bondholders to submit to the smallest sacrifice, is proof positive of her desire to act honourably to her creditors, however great her difficulties.

Russia's difficulties, however, have proved the investor's opportunity. The depreciation in the market value of her bonds has provided the prudent capitalist with exceptional chances of remunerative investment. In the scare of 1906 her Four per Cent. Bonds stood below 69, while the new Five per Cent. Bonds were obtainable at 13 points below the price at which they were issued (89) to the public a few months before. At one time it was positively asserted that a further collapse was inevitable, and that interest payments were on the point of being suspended. But there were far-seeing and confident investors who did not believe those stories, and who have since had the satisfaction of seeing a substantial profit on their investment. There are many, too, to-day who believe that the Russian revival is only in its infancy, and who are prepared to back their opinions in no unmistakable fashion. Their rewards, I doubt not, will be equally gratifying. The recent firmness of Russian bonds, evoked widespread notice and surprise, though not, perhaps, among those who are aware of the strong support now being accorded to Russian securities in well-informed and influential quarters.

It is unnecessary here to repeat the many cogent reasons that have been advanced for feeling confidence in the ability and the desire of Russia to meet all her obligations. It has been pointed out that, even now, the indebtedness of the Empire, with the war debt added, is relatively light in proportion to the population. Moreover, it has been shown that the present annual service of the enlarged debt requires only 17 per cent. of the total ordinary revenue of the Russian Empire. Finally, the receipts of the Treasury are showing steady growth, political unrest has practically subsided, and the country is entering upon a new era of peaceful industrial prosperity.

RUSSIAN BOND PRICES AND YIELDS.

For the benefit of those who may be contemplating an investment in Russian securities at the present comparatively tempting prices, I append a list of the bonds known on the London

Stock Exchange, with the latest prices and the yields offered to potential purchasers :—

Loan.	Rate of Interest.	Amount Outstanding.	Price.	Approximate Yield per Cent.
	Per Cent.	£	£	
1822	5	4,445,736	104-108	4 $\frac{3}{4}$
1859	3	2,027,800	67-69	5
Nicolai Railway, 1867-9 ..	4	19,697,265	87-89	5
Trans-Caucasian Rly., 1882.	3	7,641,847	70-72	4 $\frac{3}{8}$
Consolidated, Series I. ..	4	26,471,805	87 $\frac{1}{2}$ -88 $\frac{1}{2}$	4 $\frac{7}{8}$
Consolidated, Series II. ..	4	46,968,276	87 $\frac{1}{2}$ -88 $\frac{1}{2}$	4 $\frac{7}{8}$
Consolidated, Series III. ..	4	12,123,003	84-88	5 $\frac{1}{4}$
Rentes, Series I., 1894 ..	4	265,000,000	78-80	5 $\frac{1}{8}$
Bonds	3 $\frac{1}{2}$	15,307,432	77-80	5
Dvinsk, &c.	4	2,795,680	83-85	5
1906	5	13,101,000	97 $\frac{1}{4}$ -97 $\frac{3}{4}$	5 $\frac{1}{8}$
Volga-Bougoulma Railway	4 $\frac{1}{2}$	1,386,324	88	5 $\frac{1}{8}$
Moscow Loan	5	1,889,560	96 $\frac{1}{4}$ -96 $\frac{3}{4}$	5 $\frac{1}{8}$

CHAPTER IV.

CURRENCY AND BANKING.

THE RUSSIAN CURRENCY.—THE GOLD STANDARD.—THE NATIONAL DEBT, AND HOW IT IS PROVIDED FOR.—THE STATE BANK AND BANKING METHODS.—JOINT STOCK BANKS.—LAND BANK.—SAVINGS BANK DEPOSITS.—SPECIE MOVEMENTS.

HAVING, in the preceding chapters, given an interview with the Russian Finance Minister, and dealt with the Budgets for 1907 and 1908, I now refer to incidental matters of which some exposition is necessary for the right understanding of Russian economics. These include (1) the established ratio between gold and paper money, to ensure stability for the paper rouble ; (2) certain banking institutions and methods ; (3) the evolution of the National Debt and the Budget provision for the service in the current year ; (4) the imports and exports of specie.

When you go to your bank and ask for five golden sovereigns in exchange for a five-pound note, you get them—provided the note is a good one. If, twelve years ago, say, you were to have presented a hundred-rouble Russian Government bank-note to

the cashier of this very same Imperial Government Bank that issued the note, and asked him to give you gold in exchange for this note, you would have found him making rapid calculations after which he would have handed you out the gold, but not to the amount of 100 roubles ; instead of this amount, you would have received about 65 roubles in gold, and the rest (about 1 rouble 66 kopecks) in silver. In other words, you would have received about 65 roubles in gold in return for 100 roubles in paper. If you take a 25, 50 or 100-rouble note and examine it carefully, you will find that on the face of it the Imperial Government Bank promises to redeem the note "on demand" for its full face value "in gold or silver coin."

This expression looks well on paper, but it worked out very badly in practice—at least in Russia. Russia must have gold to pay the interest on her loans and to pay back the principal when due. Foreign countries that lend Russia money do so in good golden sovereigns, golden Napoleons, or 20-mark gold pieces, and they consequently want the principal and the interest paid back in gold. When you received a bill of goods in Russia from some foreign country, and you were presented with a Custom House bill for import duty for, say, 40 roubles, this meant 40 roubles in gold, not paper currency, and in order to pay that bill you would have to go to the banker or money-changer and buy gold, on which you would have had to pay a premium of about 50 per cent. ; otherwise, for the 40 roubles in gold you would have had to put down about 60 roubles in paper currency.

This, at least, was the case up to 1895. But in that year, the Ministry of Finance, in order to put an end to the continued fluctuations in value of the paper rouble, which changed, practically speaking, every day, perhaps only a fraction, yet sufficient to cause a continual trouble in knowing the exact value of the rouble to-day compared with yesterday, offered facilities for all payments to the Treasury and railways being made in gold at a certain ratio between gold and paper currency, to be determined from time to time by the Minister of Finance. In 1895 this ratio was established at 1 rouble and 48 kopecks in paper currency for 1 rouble in gold, the golden imperial (10 roubles) thus being

taken for 15·24 in paper and the new 10-rouble gold coin at 14·80 in paper currency.

In 1896 a new value was established, 15·48 for the old and 15 for the new coin, the ratio between gold and paper being thus 15 paper roubles for 10 golden roubles, or imperials. This was confirmed in 1897, and it was proposed to maintain it, and impose upon the Government Bank the duty of accepting paper money at the above ratio in exchange for gold. During the same year the golden imperial (15 roubles) and the half imperial (7 roubles 50 kopecks) appeared as a permanent introduction of the new ratio, and there it has been maintained since.

A regular value of the paper money currency having thus been introduced, a law was passed in 1897 to the effect that paper currency may be issued by the Government Bank when necessity occurs, but on the following conditions. If the amount of paper currency does not exceed 600,000,000 roubles it must be guaranteed by half that sum, while every issue above this amount must be guaranteed to the full amount in gold deposited at the Bank. This guarantee fund was represented in 1906 as follows :—

	Millions of Roubles.
Total amount of paper currency	1,206·0
Total amount of gold in Treasury and Bank	1,038·6
Percentage covered by gold reserves	86·1
Guarantee fund in gold to cover paper currency ..	986·0
Percentage of paper currency covered by above gold fund	81·7

Having in 1897 sufficient gold for specie payments (the amount was 1,206,000,000 roubles on December 31st, 1896), the Government undertook, as M. Routkovsky puts it, in his pamphlet on Russian Finances, “to deliver the country from the incontrovertible currency.” The silver rouble was then the unit of currency, but in consequence of the constant fluctuations in the price of silver, the white metal was considered by the Imperial Russian Government, as by the Governments of most other European countries, to be too unstable to be used as the standard monetary unit. It was therefore decided to make gold the unit of currency, and only to use silver for subsidiary coins. The

credit note was given the value in gold which it had in commerce on the average of the three preceding years, viz., $66\frac{2}{3}$ kopecks in gold, or two-thirds the value of the former gold rouble. By this means the reform was introduced without disturbing the existing economical conditions of the country. The Imperial Ukases of January 3rd, August 26th, and November 14th, 1897, and the Coinage Law of July 7th, 1899, have definitely settled the currency question on the basis of gold as the standard of value. The unit is a rouble containing 0.7742 grains of pure gold, and equal to 2s. 1.45d. of British currency. The State Bank of Russia is the only credit institution which has the right to issue State credit notes, exchangeable at par at the State Bank and its branches, and both gold and credit notes are legal tender to an unlimited amount. The exchange of State credit notes at par with gold is guaranteed both by the gold reserve and by the whole State property, forests, railways, State lands, &c. Silver is no longer included in the metallic reserves of the State Bank for the purposes of redemption. It is still legal tender for taxes and dues to the Government to an unlimited amount, but no private individual is bound to accept silver to the amount of more than 25 roubles. The effect of this currency reform was that gold and silver coin rapidly took the place of the notes withdrawn from circulation and the volume of currency increased considerably. So also did the stock of gold in the State Bank, and in circulation. At the end of 1899 the amount of gold was 1,566,000,000, of which 927,000,000 were in the State Bank and the Treasury, and 639,000,000 in circulation.

The Bank notes issued during the war began to be withdrawn from circulation in 1906, and their withdrawal was continued in 1907. On January 1st, 1907, the amount of notes in circulation was 1,280,000,000 roubles. During the first half of 1907 there was a withdrawal of a temporary issue made in 1906 to the amount of 90,000,000 roubles, and besides that, 10,000,000 roubles of former issues. During 1907, owing to increased exports of grain, there was a special run on the State Bank, amounting in all to 200,000,000 roubles. The issue of notes was, however, only 160,000,000 roubles, so that by October 23rd, 1907, there were

only 1,340,000,000 roubles issued into circulation (of which 56,500,000 roubles were in safes of the State Bank). The amount of gold in circulation on October 23rd, 1907, was 605,900,000 roubles, and the gold stock in the State Bank had risen to 1,254,800,000 roubles.

Reference was made in the last chapter to the Russian National Debt, and the following figures show how this has grown during the past 40 years :—

	Roubles.
In 1862 the amount was	1,376,000,117
In 1872 the amount was	2,290,000,000
In 1882 the amount was	4,356,000,000
In 1892 the amount was	4,976,000,000
In 1902 the amount was	6,643,927,000
In 1903 the amount was	6,651,836,000
In 1904 the amount was	7,081,746,000
In 1905 the amount was	7,841,164,000
In 1906 the amount was	8,625,560,000
In 1907 the amount was	8,729,000,000

On January 1st, 1906, the National Debt was composed of the following items of loans :—

	Roubles.
Three per Cent. Loans	554,310,356
Three-and-a-Half per Cent. Loans	166,582,173
3·60 per Cent. Loans	200,000,000
3·80 per Cent. Loans	84,125,400
Four per Cent. Loans	5,441,418,745
Four-and-a-Half per Cent. Loans	253,894,312
Five per Cent. Loans	1,093,110,888
Five-and-a-Half per Cent. Loans	38,462,875
Six per Cent. Loans	9,259,259
Total	<u>7,841,164,008</u>

During 1906 the permanent debt was increased by 1,275,151,101 roubles, but Treasury Bonds to the amount of 490,756,392 roubles were paid off.

At the outbreak of the Russo-Japanese War, in January, 1904, the National Debt of Russia, exclusive of the Mortgage Bonds of the Nobility and Peasants' Land Banks, amounted to 6,636,000,000 roubles.

The increase in the Debt since 1904 is due largely to the provision for war expenditure, but also in part to expenditure in famine relief. In the course of three years (1905-1907) the Treasury expended 240,000,000 roubles on food, seed, and other necessities for the famine-stricken districts. The net increase in the States capital liabilities were, in 1904, 430,000,000 roubles ; 1905, 759,000,000 roubles ; 1906, 784,000,000 roubles. In 1907, besides the postponement of payments on short-term securities, there were 12 series of Four per Cent. Rentes issued, to the nominal value of 120,000,000 roubles.

At present, after paying all expenses entailed by the war and its consequences, which amounted to 2,256,000,000 roubles, the National Debt is 8,729,000,000 roubles.

On summing up the total of the extraordinary expenditure on the war for the years 1904-6, and comparing it with the resources used to meet it, the result is as follows :—

RESOURCES.

	Roubles.
Realised from loans in 1904	382,038,000
Realised from loans in 1905	638,274,250
Realised from loans in 1906	704,531,250
Realised from short-term securities, 1905	151,176,799
Realised from short-term securities, 1906	336,398,433
Balance of grants of previous years (prior to 1904)	800,000
General resources of the Treasury	385,498,013
Total	<u>2,598,716,745</u>

EXPENDITURE.

	Roubles.
Expenditure entailed by the war and its consequences for 1904-6	2,131,818,000
Redemption of short-term securities, 1905 ..	14,997,960
Redemption of short-term securities, 1906 ..	444,934,733
Expenses of issuing Five per Cent. Loan of 1906 and short-term securities	6,966,052
Unredeemed short-term securities (since redeemed)	52,978,905

The total of the expenditure equals the amount of the total of resources—2,598,716,745 roubles. The above data are far

from giving a complete picture of the influence of the war. They only show the expenditure which is classed as extraordinary.

But the ordinary expenditure has likewise increased in consequence of the war, particularly so in the case of payments on loans, which in 1903 were about 290,000,000 roubles, and in 1906 amounted to 357,000,000 roubles, in 1907 reached the sum of nearly 381,000,000 roubles, and this year the amount is 386,000,000 roubles, owing to the increase of the national indebtedness. Pension assignments have also increased considerably, owing to pensions granted to wounded military men now on the retired list, and to the families of the men killed in the war. The loss of the squadron must likewise entail considerable expenditure. Finally, there are many other disbursements, which it would be difficult to follow up in detail, made by various departments in connection with the war.

According to a law passed in 1886, the deposits of the Savings Banks, commercial and loan banks, as well as the Transcaucasian and other charitable boards, were transferred to the State on liquidation, and the Treasury undertook to pay the interest and capital on such deposits. As many of these latter were never claimed by the owners, and had to be escheated, the assignments for interest and capital on the deposits of these late banks are fixed at the average expenditure of the last three years.

Many of the loans of former years have been fully redeemed or converted, and no assignments are made under that head in the Budget, but as the redeemed securities and their coupons are still in circulation, and are presented for payment, the National Debt estimates, therefore, include a special provision under the head of "Payments on redeemed loans, the grants for which have been closed." This assignment is likewise calculated at the average actual disbursements for the last three years.

On loans that are paid abroad the bankers are allowed a commission of from $\frac{1}{8}$ to $\frac{1}{2}$ per cent. on the sum paid out. For receiving deposits of Russian Government securities for custody, with a receipt indicating the name of the depositor, the Banque de France is paid at the rate of 20 centimes for every bond of the nominal value of 1,000 francs or under, with an additional 10

centimes for every consecutive 1,000 francs or part of that sum. Finally, every year expenditure is incurred on changing and drawing securities, or transmitting redeemed bonds and coupons from abroad and on printing securities. With the exception of the last item, which can be exactly calculated, all the other above-mentioned expenses are reckoned at the average actual outlay for the previous three years.

Although all of Russia's foreign liabilities do not come under the head of "National Debt," yet they have to be reckoned with for what they are—liabilities. These consist principally of the following :—

1. That part of the National Debt which is in the hands of foreigners—not living in Russia.
2. A certain amount of the mortgage bonds of the Nobility Land Bank.
3. About 80 per cent. of the bonds and a certain part of the shares of existing railway companies.
4. Stocks and bonds of foreign joint-stock companies operating in Russia.
5. Stocks and bonds of Russian joint-stock companies held by foreigners.
6. Undertakings and property belonging to private foreign subjects.
7. Money lent on short terms by foreign banks and capitalists to Russians.

Before the beginning of the Russo-Japanese war, Russia's annual disbursements under the above heads as foreign liabilities were estimated at about 220,000,000 roubles, while at present they represent a charge of about 260,000,000 roubles per annum.

There is only one so-called "State Bank of Russia," which is in reality the Government. The two are the Russian State financially.

The Russian Treasury is the State with regard to the fulfilment of the Budget ; the Bank of Russia is the Russian State carrying on banking operations. The Russian Treasury has a current

account at the Government bank, just the same as a partner of a banking institution might have a private account with his own firm. In the same way, in the ordinary course of things and under normal conditions, the Russian Imperial Treasury has always a very considerable balance at the Government Bank, and it is only in cases of great calamities that this balance may fall to an insignificant amount, and there may even be an overdraft—theoretically speaking.

At the beginning of the Russo-Japanese war the balance at the Government Bank due to the Russian Treasury reached 419,000,000 roubles, in consequence of which the Government Bank was enabled to limit its issues of notes to 746,000,000 roubles at the time when the total guarantee fund (including gold in hand and balance of the Russian Bank in foreign banks) of these notes exceeded 1,000,000,000 roubles. This excess was owing to the receipt of these enormous deposits prior to the war. Therefore, in gradually withdrawing these vast sums for war expenditure, the Treasury in no way disturbed or affected the stability of the bank in question, just as the withdrawal of an important and large account from the books of a sound banking institution would not affect its status. When the balance of the Imperial Treasury was exhausted (which it never really is) the Government Bank had still its guarantee fund, sufficient to cover the redemption of notes presented.

When doing business outside of the Empire, the Imperial Treasury and the Government Bank separate, and each of them has its own current accounts in London, Paris and Berlin and other places. The former keeps these accounts for facilitating its transactions regarding its foreign loans, the payment of interest, &c., as well as making payments on Government orders for the convenience of its foreign Embassies, &c. The Government Bank keeps its foreign accounts for its own foreign banking operations. The Imperial Treasury renders no statements and is answerable to no man, while the bank is a public institution and is responsible for its actions, and must render an account of its doings to the public and its depositors, one of which—and the principal one—is the Treasury.

The situation of the Russian Government Bank on February 8th, 1907, was as follows :—

ASSETS.								Roubles.
Cash and credit notes	..	..	..	..	..	..	..	1,294,085,000
Portfolio	..	..	..	..	..	..	..	191,582,000
Advances, loans, &c...	..	..	..	..	..	..	..	301,170,000
Stocks, bonds, &c.	..	..	..	..	..	..	..	90,881,000
Branch accounts	..	..	..	..	..	..	..	296,992,000
								<hr/>
								2,174,710,000
								<hr/>

LIABILITIES.								Roubles.
Capital and reserve	..	..	..	..	..	..	..	55,000,000
Notes in circulation	..	..	..	..	..	..	..	1,230,000,000
Deposits	..	..	..	..	..	..	..	478,407,000
Treasury current account	..	..	..	..	..	..	..	84,797,000
Branch accounts	..	..	..	..	..	..	..	342,914,000

In the Estimates of the Budget for 1907 the estimated revenue from “commercial profits of State Bank” was put down at 17,000,000 roubles, and in the Estimates for 1908, “profits on State capital and banking operations” stand for 20,997,000. The Russian Government Bank is therefore actually the property of and a business enterprise undertaken by the Russian Imperial Government.

Ordinary banks were first introduced into Russia in 1864. Before that the Government Bank—the official bank of the Empire—was practically the sole institution of its kind in Russia.

The banking system in Russia is in reality only in its infancy ; the vast majority of commercial transactions are settled with ready money, which is used for the payment for grain and other produce. This ready money, so far as interior markets are concerned, means exclusively paper currency. Although in larger commercial centres, like St. Petersburg, Moscow, Odessa, Kiev and Warsaw, cheques and drafts are used to some extent, as a rule all bills are paid in paper currency. If we take the principal commercial and industrial centre of Russia—Moscow—we will find that every merchant there has always a large amount

of paper money on hand. You will meet some of the wealthiest Russian merchants in Moscow—millionaires—who, as a rule, carry about with them thousands of roubles tucked away in their top boots or in their inside pockets.

According to an official return there were in January, 1907, 35 joint stock commercial credit banks in Russia, having a total capital of 211,100,000 roubles. Of these, 10 were in St. Petersburg, of which nine have a capital of 130,000,000 roubles. The tenth is the Russian branch of the Credit Lyonnais, whose capital is not included in the above. At Moscow there were five banks with a capital of 29,000,000 roubles. Of the provincial banks there were two each in Warsaw, Lodz and Rostov on the Don, and one each at Revel, Biellostok, Wilna, Voronesk, Kasan, Kieff, Minsk, Nizhegorod, Odessa, Oral, Pskoff, Riga, Tiflis, and in Central Asia; the capital of these 20 banks being 52,100,000 roubles.*

The operations of the State Peasants' Land Bank have been considerably extended by the Manifesto of 1905. Up to December 31st, 1906, this bank had agreed upon the purchase of 2,303 estates, with an area of 8,937,500 acres, for the total sum of £38,737,000, of which the sale of 764 estates, of an area of 3,167,615 acres and a value of £13,979,000, had been carried through, while terms had been agreed to regarding 1,058 estates, with an area of 4,400,000 acres. Advances have been made by this bank for purchases made direct by the peasants in 5,350 cases, affecting 2,600,650 acres, of the value of £12,147,000, so that, during the above term, the peasants had acquired 5,768,265 acres, while a further 5,770,000 acres had been examined and reported upon for purchase. From November, 1905, to the end of January, 1907, this bank decided to purchase on its own account 2,687 estates, with an area of 8,701,379 acres, at a cost of £39,026,658, while the proprietors of 1,297 estates, with an area of 5,291,968 acres, agreed to the terms offered by the bank. Notwithstanding this, the bank acquired, during this period only 870 estates, having an area of 3,507,142 acres, at a cost of £15,504,642, or about £4 8s. per acre.

* See Appendix No. 1.

During this period the bank decided to advance the peasants for the purpose of enabling them to purchase 2,530,942 acres of land direct from the holders of the private estates, the sum of £12,445,148. With part of this amount, together with previous advances made to the peasantry, the quantity of land acquired by them amounted to 1,770,349 acres, valued at £8,300,385. In order to meet the payment of the cost of the land acquired by the Peasants' Bank, as also the advances made to the peasantry, the bank was obliged, up to February 1st, 1907, to issue bonds to the amount of over £9,000,000, bearing interest at 6 per cent. per annum. Apart from this, the arrears, amounting to nearly £3,000,000, were transferred by the bank. The total amount thus provided for by the bank was over £12,000,000. State banks for mortgage loans to the nobility up to 1905 had owing them 750,000,000 roubles. Of the smaller mortgage banks there are about 60, both for nobility and peasantry.

The number of State savings banks increased during the period of 1897-1906 from 4,354 to 6,664, and the number of depositors from 2,500,000 to 5,500,000. On December 31st, 1906, the deposits in these banks exceeded £104,266,666, without taking into account interest to the amount of £3,125,000. In addition to this, there were in the savings banks at the end of that year paper securities valued at £24,583,333. During the 10-year period (1897-1906) the amount of deposits more than doubled, while the paper securities increased more than five-fold. In 1905 there was a decrease in the deposits of over £11,000,000, while in 1906 there was an increase of deposits exceeding £17,656,250, thus wiping out the former decrease and leaving a net increase of £6,572,915 as compared with the preceding year of 1904. The decrease of 1905 was caused by the internal troubles which produced a panic amongst the depositors. The balance of cash deposits on October 1st, 1907, amounted to 1,090,700,000 roubles and, as recorded in the previous chapter, in the first nine months of 1907, the increase of cash deposits amounted to 55,700,000 roubles, or 13,000,000 more than the average annual increase for 1899-1903.

Very little silver is produced in Russia, and consequently

considerable quantities are imported from London for coinage purposes. The imports were especially heavy in the four years 1896-1900, when the Bank of Russia bought over a hundred million roubles' worth for coinage requirements. The exports and imports of silver for 11 years are shown in the following table :—

COIN AND BULLION ONLY, EXCLUSIVE OF SILVER GOODS.

Years.											Exports. (1,000 Roubles.)	Imports. (1,000 Roubles.)
1895	..	..	..	..	..	..	..	..	..	..	1,757	21,653
1896	..	..	..	..	..	..	..	..	..	..	2,786	42,680
1897	..	..	..	..	..	..	..	..	..	..	6,774	70,440
1898	..	..	..	..	..	..	..	..	..	..	4,510	30,566
1899	..	..	..	..	..	..	..	..	..	..	2,255	33,745
1895-1899 (5 years' average)											3,616	39,816
1900	..	..	..	..	..	..	..	..	..	..	17,944	28,940
1901	..	..	..	..	..	..	..	..	..	..	3,704	9,365
1902	..	..	..	..	..	..	..	..	..	..	6,243	6,121
1903	..	..	..	..	..	..	..	..	..	..	1,756	6,996
1904	..	..	..	..	..	..	..	..	..	..	34,711	19,209
1900-1904 (5 years' average)											12,872	14,126
1905	..	..	..	..	..	..	..	..	..	..	40,356	57,377

It is to be observed that throughout these 11 years the imports have, with one exception, exceeded the exports, and in most cases to a very large extent. The average excess for the first five years was 36,200,000 roubles and for the second five 1,254,000 roubles. Silver is exported to Asia, but only to an inconsiderable amount, except during the late war, when the shipments, both overland and by sea, reached a very high figure. Part of this exportation was effected in the following manner :—Tens of millions of silver roubles were sent to London to be melted down, and bars of highly-refined silver were obtained in exchange and sent to Manchuria.

The gold movements for 11 years are shown in the following table :—

Years.											Exports. (1,000 Roubles.)	Imports. (1,000 Roubles.)
1895	..	..	..	..	..	..	..	..	..	..	306	34,743
1896	..	..	..	..	..	..	..	..	..	..	315	134,919
1897	..	..	..	..	..	..	..	..	..	..	5,967	139,077
1898	..	..	..	..	..	..	..	..	..	..	358	100,923
1899	..	..	..	..	..	..	..	..	..	..	48,555	48,476
1895-1899 (5 years' average)											11,100	91,628
1900	..	..	..	..	..	..	..	..	..	..	116,368	5,122
1901	..	..	..	..	..	..	..	..	..	..	68,319	8,668
1902	..	..	..	..	..	..	..	..	..	..	866	29,857
1903	..	..	..	..	..	..	..	..	..	..	2,821	20,919
1904	..	..	..	..	..	..	..	..	..	..	3,801	6,978
1900-1904 (5 years' average)											38,435	14,309
1905	..	..	..	..	..	..	..	..	..	..	6,914	6,125

The average excess of gold imports in the five years 1895-1899 was 80,528,000 roubles, and in the following five years the average exports exceeded the imports by 24,126,000 roubles. Besides the imports, Russia replenishes her stocks of the precious metal by the product of her own gold mines, which have an output of over 40,000,000 roubles annually. Prior to the nineties, the bulk of Russia's gold output used to be exported, while the imports of gold into the country were inconsiderable.

CHAPTER V.

RUSSIAN TRADE OPENINGS.

IMPORTS AND EXPORTS.—A FAVOURABLE YEAR.—PRACTICAL HINTS AND PRECAUTIONARY COUNSELS.—RUSSIAN TRAITS.—GERMAN ACTIVITY.—OPPORTUNITIES FOR BRITISH MANUFACTURERS.—CHARACTER OF RUSSIAN TRADERS.—NO BUSINESS DIFFICULTIES OR OFFICIAL OBSTACLES.—SOME INTERESTING INTERVIEWS.—AMERICAN AND ENGLISH TESTIMONIES.—COMMERCIAL MUSEUM AT ST. PETERSBURG.—MACHINERY IMPORTS.

THE basic principles of commercial success at home and abroad are the same in both cases, but the methods applied in carrying them out are different. The manufacturer and the traveller doing business in the home market only know its requirements and all the surrounding difficulties, whereas the



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British manufacturer going into foreign fields is obliged to study the world's markets and their surroundings. He will also be obliged to renounce his home methods and apply such methods as are best adapted to the particular national requirements of the country he intends doing business with. Throughout the world to-day, marvellous opportunities lie to the hand of men capable of conception of action, or capable of crystallising brain thought into such form that the tools are created whereby the end desired is attained.

The Russian Empire to-day offers one of those inexhaustible fields of opportunities for the British manufacturer who is willing to conform to the demands and requirements of the country. The firm that, in opening up business with Russia, starts out with the idea of forcing on the buyer goods or machinery that are not exactly what he wants, is not only making a grave mistake, but is hurting the good name of the British manufacturer, and is damaging the value and quality of British manufactures in general.

If you have the right goods at the right price, and will make your goods known to the world, you will create trade. No single market or country is best for all manner of commodities, but Russia, with its vast expanse of territory, offers the British manufacturer an unlimited market. In the present chapter my aim is to point out the mistakes made and to offer suggestions to those desirous of doing business with Russia.

But first let me give a few figures showing the extent of Russia's external trade. The following table shows in millions of roubles the value of Russian exports and imports, and the increase or decrease each year from 1899 to 1906. This includes the period of the Russo-Japanese War (1904-5) when Russian imports fell off; and also the following year, when Russian external trade was, to some extent, affected by civil disturbances in the industrial centres. In 1906 the imports again increased, but an official memorandum points out that the abnormal expansion of 25·4 per cent. in this year was due to Vladivostok and Nicolaievsk being "flooded with foreign goods in consequence of the abolition of custom imports in the East during the war."

The imports through the European frontier in 1906 showed an increase of only $10\frac{3}{4}$ per cent.

—	Exports. Value in Million Roubles.	Increase.	Imports. Value in Million Roubles.	Increase (+) or Decrease (—)
		Per cent.		Per cent.
1899	627·0	—	650·5	—
1900	716·4	+ 14·2	626·4	— 3·7
1901	761·6	+ 6·3	593·4	— 5·2
1902	860·3	+ 13·0	599·2	+ 1·0
1903	1,001·2	+ 16·4	681·7	+ 13·8
1904	1,006·4	+ 0·5	651·4	— 4·4
1905	1,007·2	+ 7·0	635·1	— 2·5
1906	1,092·9	+ 1·4	796·4	+ 25·4
1907	1,001·9	—	624·4	—

As regards 1907, the full official returns had not reached me up to the time of going to press, but the figures given above show the total value of exports and imports from and to Russia across the European, Caucasian and Black Sea frontiers, including the trade with the Grand Duchy of Finland. Reduced to pounds sterling, the total value of this trade amounted in the year 1907 to £172,568,316. The value of exports reached £102,866,632, and that of the imports was £69,701,684. Compared with the year 1906 the exports were lower in value by £2,593,473, or 2·5 per cent. On the other hand, the imports showed an increase of value amounting to £4,447,684, or 6·7 per cent. On the whole, the bulk of the trade of 1907 shows an increase of £1,854,211 over that of the preceding year.

The Consular report of Mr. Vice-Consul C. Mackie states that: "The year 1907 was, on the whole, a more favourable one for Russia than its predecessor. This was particularly the case in

agricultural respects, agriculture constituting the basis of this country's prosperity. The harvest of the past year, although less than the average for the preceding quinquennial period of 1902-1906, was superior to that of 1906, and the material wants of the agricultural class forming the mass of the population found more or less satisfaction. The effect of the better yield of the grain crops in 1907 on the economic condition of the peasantry in some provinces and districts was, however, not so favourable as might have been expected, the latter requiring further pecuniary aid from the Government for their sustenance and also assistance for obtaining seed after the harvest of 1907 had been gathered. This was not so much due to the failure of the crops in the provinces and districts referred to as to the local resources having been exhausted owing to the deficient yield of the harvest of 1906, and to some extent to the fact that a large number of hands from the works and factories in the towns had been obliged to return to their villages.

“ In commercial respects the year under review cannot be said to have been for Russia a very advantageous one if compared with preceding normal years, though the manufacturing industry of the country—the prosperity of which is mainly dependent on the results of the harvest—showed some improvement as compared with the year immediately preceding. The metallurgical industry seems again to have suffered most for want of orders, and the decrease of work in this branch has undoubtedly caused some distress among the working classes.”

The importation of foreign goods into this country is on the increase. Of manufactured articles imported in 1907, the following proved to have been supplied in greater quantities :—Textiles ; machines and apparatus of cast iron, wrought iron and steel ; agricultural machines ; reaping and sheaf-binding machines ; firearms ; brass and tin-plate manufactures ; motor cars ; physical instruments, appliances and apparatus ; and musical instruments. The articles supplied in diminished quantities were :—Clock and watch-makers' wares ; machines of a particular class and hand tools ; cars for electric traction ; cast iron, wrought iron and steel wares. In the course of the past two years the increase of imports

has been 136,900,000 roubles, and the figures are considerably over the average of the previous five years.*

In certain branches of trade in which England has lost ground, it is not the demand that has decreased, but it is the business enterprise and activity of the German representatives that has increased, and in this way taken away trade from Great Britain. Old methods must make room for new and up-to-date methods. Two things are necessary to success in every undertaking—namely, experience and brains, or in other words—knowledge and enterprise. The school in which experience is obtained is always a hard one, and I fear the British manufacturer does not profit by it—at least as far as Russian trade is concerned. That is where the German gets the better of the Englishman. German firms advertise successfully, and make their goods and machinery known all over the country by means of agents, who visit the

* The following table, taken from figures of Russian trade published in the *Viestnik Finansov*, shows the countries of origin of Russian imports during the past seven years :—

Country.	Average for 1901 to 1905.	1906.	1907.	Increase or Decrease in 1907 over or under the Average of 1901-1905.
	Roubles.	Roubles.	Roubles.	Roubles.
Germany	221,100,000	270,400,000	311,400,000	+ 90,300,000
Great Britain	102,900,000	104,400,000	114,300,000	+ 11,400,000
United States	47,400,000	45,100,000	53,300,000	+ 5,900,000
France	26,800,000	28,200,000	28,600,000	+ 1,800,000
Austria-Hungary	23,400,000	21,300,000	23,600,000	+ 200,000
China	19,700,000	18,500,000	15,800,000	— 3,900,000
Egypt	13,700,000	12,200,000	12,200,000	— 1,500,000
Holland	10,800,000	13,200,000	11,500,000	+ 700,000
Italy	9,900,000	10,800,000	13,000,000	+ 3,100,000
East Indies	9,000,000	9,300,000	11,500,000	+ 2,500,000
Belgium	7,000,000	7,200,000	9,000,000	+ 2,000,000
Norway	6,800,000	6,000,000	7,900,000	+ 1,100,000
Turkey	6,400,000	6,600,000	6,500,000	+ 100,000
Switzerland	5,400,000	1,600,000	2,200,000	— 3,200,000
Denmark	5,100,000	5,600,000	5,400,000	+ 300,000
Sweden	4,300,000	6,500,000	11,200,000	+ 6,900,000
Roumania	1,800,000	800,000	2,100,000	+ 300,000
Finland	23,700,000	32,000,000	29,300,000	+ 5,600,000

The above table shows that the greater part of the increase fell to Germany, whose trade improved 90,300,000 roubles. That country supplied 39 per cent. of Russia's importations in the average of the years 1901-1905 and 45 per cent. thereof in 1907. Great Britain's share of the increase between the two periods named was 11,400,000 roubles. But, whereas her share of Russia's importations (average) for the period 1901-1905 was 20 per cent., it had fallen to 16 per cent. in the past year.

remotest farms and villages to secure orders. The English traveller, on the other hand, is seen very seldom. The British manufacturer prefers to secure some local agent and entrust him with the sale of his goods. This may be advisable in some lines, but it is a grave mistake in other instances, especially so in the agricultural and other machinery lines. This is due to the fact that in most cases this local agent has several other similar lines, and it is to his interest to push those on which he has the most profit. The British manufacturer, unfortunately, is not so liberal as his German competitors.

While on this subject I cannot do better than quote what Consul-General C. S. Smith, at Odessa, says on this point :—

“ Certain persons of no standing pay one rouble (2s. 1d.) and get their names entered in British directories. British firms at home, hearing that work is to be done, enter into communication with these individuals, and even adopt them as agents, without making adequate inquiries as to their reliability, though frequently their reputation is such that no local merchant of any position will deal with them. Even references, where they are given, may in reality be very questionable documents, however promising they seem outwardly.

“ The British firm then suffers losses, and discredit falls indiscriminately on the guilty and the innocent. Firms of high standing in Odessa positively refuse to give information, lest, being falsely confused with dishonest dealers, they should lose their reputation. It would be to the interests of all if prospective British traders in Odessa goods were to make careful inquiries on the spot before entering into relations with unknown buyers or sellers. When information is needed, inquiries should always be personally made, especially in country towns, where it sometimes happens that the signatures of directors are forged by clerks, who are bribed by the buyers in question to write letters favourable to themselves. Needless to say, the very existence of these documents is unknown to the authorised directors or managers. Many of these buyers or agents are men of straw or hand-to-mouth speculators, without a penny or a scruple to their credit.

"Their methods are as follow. In the first instance a British seller ships cargo and entrusts the documents to a bank. The local buyer renders prompt and exact accounts in such an exemplary manner that he is eventually entrusted with the documents directly. After a while he informs his seller that there is no trade to be done that year, and that he will hold over the cargo till the next year for a warehouse rent of, say, 10 roubles per month. The cargo is, of course, never heard of again."

In speaking of travellers, it will, perhaps, be of interest to state that all commercial travellers in Russia must provide themselves, on arrival at the Russian frontier, with a traveller's licence at a cost of 50 roubles (about £5), to which must be added 10 per cent. for various other extras. In addition to this, they must take out in the same manner a trading licence for the person, firm, or company on whose behalf they are travelling, unless the firm or company in question already has a representative in the country, who, of course, has his own trading licence. The cost of the above-mentioned trading licence is 150 roubles (about £15), with an additional 30 per cent. for extra charges. If the traveller arrives after July 14th the cost will only be half the above—for the remaining half-year. A member of a firm on visiting Russia need only provide himself with a trading licence in his own name, a traveller's licence in this case being unnecessary. Should the firm, however, already have a representative in the country, no trading licence is necessary for this particular member, as the tax is then paid by the local representative of the firm. Foreigners of the Jewish community may obtain trading licences in Russia only by special sanction of the Ministers of the Interior, Finance and Foreign Affairs. The law relating to commercial travellers in Russia does not extend to Finland, where British commercial travellers are exempted from the payment of all travellers' taxes.

Let me suppose, for the sake of illustration, that the firm of Smith and Jones manufacture a certain class of machinery for which there is a demand on the Russian market. I will also presume that this firm has never done any business in Russia, but is enterprising enough to want to try. In that case the first

thing to be done is to send a representative to Russia to look the field over. This representative must be a thorough man of business ; he must understand the working of the machinery, and he ought to be able to speak Russian, so that he can prosecute his own researches and make his own investigations without the medium of an interpreter or second party. When in Russia, he ought to make it his business to visit, if not all, at least the principal centres of industry that afford an outlet for his machinery. The class of machinery already in use in these various centres must be examined, and he ought to find out what are the results produced and the kind of work done by them. His next step would be to compare this machinery with his own. Should the latter not do as good work as the former, it would be waste of time and money to attempt to compete, without knowing that he could make his own do better work.

It is a mistake, and a grave one, that is committed by some manufacturers who attempt to foist their goods on to the Russian buyer, whether he wants them or not. Another fatal error is made by the manufacturer of machinery who persists in selling the latter because it does the work to satisfy himself, and because it is the kind of machinery used in the home market. Admit that his machinery does the work, if not better, at least as well as that of his future competitors, who are already in the market. This is a point in his favour, but he ought to make all the efforts possible to make his production do better work, and, if any slight alterations will help to attain such a result, he ought not to hesitate one moment.

Then, again, he must not measure or judge of this better work by his own standard of merit, but the standard must be in accordance with the demands and requirements of the existing Russian buyers, who, in their turn, have to supply their customers and satisfy the exigencies of the local market, which may be entirely different to the "home market," or, possibly, even of any other country. Once certain that his article can do better work and produce better results than that sold by his competitors, he is fairly sure of his ground, even should his price be a trifle higher.

The next question is that of freight, as it plays an important part in the price of the article. He will find there are several possibilities that present different inducements in the way of cheaper transportation facilities. The next information ought to be the amount of duty to be paid on this particular make of machinery, the amount of which must not be considered prohibitive, as it is the same for all foreign makers, and if the Russian wants the goods or machinery the duty comes out of his pocket when he makes the purchase, the foreign manufacturer merely advancing the amount for the time being.

When all these preliminary points are settled, our manufacturer can go ahead, but he must first investigate carefully. He must be well advised, and must see for himself. He must protect his patents, and secure the best possible local representative, who has no similar line to compete with or undersell him. He must lay his plans carefully, and not approach the matter in a half-hearted way; he must put the same energy and determination into it that he does into his own home trade. He must also not forget that experimental efforts are possible. He will have to feel his way, and then come to definite conclusions, and formulate a sensible plan of operations suited to the requirements and temperament of his customers. When he has found the right road he must put on full steam ahead, and then the competitors that follow him will have to spend a shilling where he has spent but sixpence.

If Smith and Jones decide to handle the trade in a vigorous and energetic manner, a catalogue must be supplied to their representative, or single leaflets, with a full description of each machine separately and in the Russian language, must be provided. If the prices for this kind of machinery sold by other foreign makers are given in roubles, the British manufacturer must give his price in roubles, inclusive of freight, duty and other charges, and the price quoted must be f.o.b. the freight car at the local railway station or on board the steamer at the dock. There are times, of course, when this is not practicable, owing to the wide range of fluctuations in the rate of exchange. There was but little fluctuation at St. Petersburg in the exchange on London

during 1906, but in the latter part of 1907 it was to some extent affected by the disturbed monetary conditions which were felt more or less by all nations.

When perfectly sure that they can compete, both as regards results and price, with other foreign makers, Smith and Jones may commence by covering the field. A traveller who understands the practical working of the machinery can then work in conjunction with the local representative, who will give him all the assistance possible. This traveller must, at certain periods of the year, cover the ground thoroughly ; he must be able to speak the language, and understand the ways and temperament of the Russian buyer. In doing business with the latter, the traveller must always bear in mind the fact that he is dealing with a Russian. He must not "rush him" ; he must get at him gently, and make him his friend first of all. It will be to his interest to impress his customer with a desire to please, and study his interests at the same time. The social side is the most important factor in trade and commerce with the Russian, and if our traveller understands this, the mere fact of his being an Englishman will do the rest. There is no getting away from the fact, the "Anglitchanin" is a *persona grata* in the Russian Empire, but this advantage must not be used in an offensive and undignified way. The stiff British domineering manner must give way to that cosmopolitan spirit of affability which is so hard for the average Englishman to acquire.

The most important point to be considered in the Russian trade is the question of credit. This is one of the difficulties that keep many British manufacturers from entering the Russian market, but, if you want to do business in that country, you must give credit. It is the custom, and you cannot alter it. As an example showing how this credit system is worked, I will mention the annual fair at Nijni-Novgorod. It is on during the month of August, and extends into September, lasting in all about six weeks. The goods and merchandise bought at the previous year's fair are paid for before the actual opening of the fair of the current year, and the merchant who does not settle his bills stands a very poor chance of getting any new bills of

goods, unless he makes an arrangement, by renewing his bills and paying something on account. But even in this case he must be a very well-known merchant, who has established a good credit for several years previous.

The Russian merchant looks at the question of credit from a different standpoint from ours. He maintains that, if a man's credit is good, the money is good, and, if he gets his 6 to 8 per cent. for that money, he considers he is getting an extra profit, and the money is just as good as in the bank. The Russian's faith in humanity is great; he is a good-natured, whole-hearted, sincere and honest fellow, and he believes every man is honest until he finds him out otherwise. Present-day cant and hypocrisy have not yet impregnated the Russian's heart; the modern uncharitable way of looking at things finds no harbour in this honest man's nature.

The real Russian is always willing to help another in trouble, and many a Russian has helped his competitor and got him out of a tight place. As an illustration, I will mention the case of a German manufacturer who went to the fair with a large quantity of German jewellery. He had heard of the enormous business transacted every year at Nijni-Novgorod, and, without making any extensive inquiries, he collected quite a valuable lot of goods from various manufacturers in Germany, which he obtained on three, four and six months' credit.

On his way to the fair he made the acquaintance of a well-known Russian merchant from Moscow. The latter gave him some hints and advice, and recommended a certain hotel, where he himself was in the habit of staying every year. Furthermore, seeing that the German had never been there before, and was entirely ignorant of how business was transacted there, he told him whenever he wanted to know anything to come to him, and be careful with whom he dealt and in whom he confided. In short, these two became "friends."

The Russian very quickly introduced a Jew "runner" to the German, who started at once to sell bills of goods. His first customer was a Tartar from Siberia, from some place the German had never heard of before. Every man who came was a stranger,

and wanted the usual credit—12 months. The German, when he awoke to the situation, found that he would have to wait 12 months for his money, whereas all the goods would have to be paid for by him within six months. Then the question came up, Who are these men? Will they pay at the end of 12 months? He was not a rich man, but he must maintain his credit and meet those bills, and he felt sure that the German banks would not discount those long-term notes. He felt lost.

He invited his Russian friend to dinner, and in confidence explained his position. The first question put to the German was as to the amount of profit made on these goods, which was rather handsome. One question led to another. In the end the Russian saw the somewhat unpleasant predicament of his German "friend," and offered to help him, and it was only through his assistance and advice that the German was saved. Every bill of goods was submitted to the Russian. If the buyer's credit was good he would discount the bill and give the German the cash, less 10 per cent. interest, the bill or note being endorsed by the latter "without recourse"—no liability in case of non-payment. In cases where the good Samaritan would not accept the bills he would tell the German all he knew about the merchant in question. In some instances part cash was paid, and the balance on credit, &c., the German taking all the responsibility on his own shoulders. This Russian merchant is one of the merchant princes of Moscow.

An Englishman who has lived many years in Russia told me that he would as soon trust a Russian as he would an Englishman. The dishonest element in Russia is not the native.

The bankruptcy law in Russia is somewhat lax, and allows a firm which finds itself in difficulties to avoid a real bankruptcy by making an application to have its affairs managed for a time by a committee of creditors, which paves the way to many "possibilities." In Poland, no such arrangement is possible, which leads many purely Polish firms to make their nominal headquarters at St. Petersburg, or elsewhere in Russia, in order to take advantage of this privilege should they find themselves in trouble.

It behoves the manufacturer, therefore, to be careful in giving credit, and those whom I have interviewed on this subject maintain that, if a certain amount of care and caution is exercised, there is not much more possibility of loss than there is at home.

I have talked to the representatives of several firms that are doing business with Russia, and I find that the man who has succeeded has nothing to say against the country, while the man who has not succeeded has nothing good to say about the country and its people. Some firms, on the other hand, do not care to say anything at all, good or bad.

One large firm in particular, that I know is doing a large and successful business in Russia in a special line, did not care to say anything at all. I am very well acquainted with the saying that every man knows his business best, and I admit the truth of the adage, but a fact of this kind only goes to prove the absurd conservatism of the old school of English business men.

The questions I asked those who are doing business with Russia were :—

1. What are, in your opinion, the present possibilities of our trade with Russia ?
2. What do you think are the future prospects ?
3. Have you met with any difficulties in your experience of business relations with Russia ? If so, what were they ?
4. Have you had obstacles of any kind put in your way by the Russian Government or any authorities you may have had anything to do with in any transactions you may have had in Russia ?

My idea in putting these simple general questions has been to get at the root of the matter. We want to find out why Great Britain is not making the progress in Russia that it is entitled to and is in a position to make.

I have been fortunate in meeting a gentleman whose experience of Russia makes his statements of considerable importance. The gentleman in question is an Englishman who has had many years' business relations in Russia ; he has travelled the country,

and knows its people and speaks the language perfectly. I will let this gentleman tell his story in his own words :—

“ I have lived in Russia many years. I have travelled the whole length and breadth of ‘ the Empire of all the Russias.’ I have transacted business in St. Petersburg, Moscow, Warsaw, Lodz, Kiev, Charkov, Odessa and the Caucasus. I have been to the fair at Nijni-Novgorod and the Siberian fair at Irkutsk, and have been down in the mines and seen the Russian convict chained to his barrow for life. With reference to your first question, I may say that in my opinion the present prospects for Russian trade are fairly bright. The future prospects are very much brighter, for the simple reason that Russia in a few years hence will have made rapid strides in every direction. As to the difficulties I have met with in business, they amount to nil, and I have never met with any serious obstacles from the Government or any authorities.

“ The best managed business enterprise possible must, of course, meet with certain ups and downs. This is inevitable. I have met the officious bureaucrat—you will find the officious official in every country ; but these do not present difficulties, they are merely obstructions that are very easily swept or kicked out of our path. I have encountered in Russia nothing but courtesy and goodwill from the higher officials. My experience shows that an Englishman, above all other nationalities, receives every possible consideration the subject of such a great nation is entitled to, provided he minds his own business and attends to it, and does not meddle—knowingly or deliberately—with political matters. You will notice I made the stipulation, ‘ knowingly or deliberately,’ and I will give you facts in my own experience to prove this statement and qualification.

“ While in Odessa, the most cosmopolitan city in the world, my business brought me in contact with Englishmen, Germans, Frenchmen, Jews and Russians in many branches of trade and commerce. The English grain broker in that busy port is a very busy man in the season. Such banking houses as Ralli, Rodocanachi, Maas, Brodski and the representatives of the Rothschilds and many other well-known bankers do a very flourishing

business. The English stevedore makes fortunes there, and the shipbroker is not far behind. The coal merchant thrives very well, and the agricultural implement agent makes very good money. Foreigners in that city own considerable property, and are looked upon with respect and consideration. The German predominates, and the German Club is the rendezvous of all the influential Germans in the city. In the height of a busy season I have counted as many as 30 British steamers in the splendid harbour and outside, waiting for their turn to unload."

I had another very interesting interview with Mr. J. F. Cummings (of the firm of J. F. Cummings & Co.). This is an American house connected with the National Fire-Proof Company of New York. This firm carry large stocks of vitrified stoneware casings, and are contractors and builders of complete subway systems. They are now building the entire underground municipal telephone system of St. Petersburg, which, with the exception of a few branch lines, is almost completed. This work was started in 1904, and the bulk of it was completed in the latter part of 1906. The total length of the subway is 34 miles, costing in the neighbourhood of about 3,000,000 roubles. The number of men employed in the work averaged 1,500 a day. The engineers engaged in this work and the principal foremen are English and American. The rest of the workmen and labourers are all Russians, who, according to Mr. J. F. Cummings' statement, are as intelligent and willing a body of men as he ever wants to handle. All the material used in the construction of this subway—the first ever built in Russia—came from the United States, except the steel, which was supplied by the local manufacturers, and was in every way up to the standard.

This gentleman's experience with the Government authorities was perfectly satisfactory in every way. All the payments were made as agreed upon. There was no delay in this respect; no attempts made to pick any flaws in the contract, and no difficulties were placed in the way. His business relations with the authorities were most satisfactory. The most interesting part, as related by Mr. Cummings, was the fact that, before

entering into negotiations and making their estimates for the proposed work, the firm were warned and seriously advised to leave the business alone, because "You will not get your money. They will make all kinds of trouble, and you will never be able to finish the contract." This is a fair specimen of the advice given by the ignorant. As a matter of fact, there were five bidders for this contract—two Russian firms, one German, one Austrian, and the firm in question, who were the second lowest, notwithstanding which they secured the contract, and have almost completed the undertaking, not having met one single obstacle or hindrance of any kind.

The managing director of Milners' Safe Company, Limited, upon being interviewed, stated that, although the volume of business done by them in Russia is not large, yet what is done is on the whole satisfactory. He considers the prospects there very fair, and the possibilities good for the future. They had encountered no difficulties from any authorities. The chief obstacle in the way of doing business was the price, which was so much cut under by the Germans. Then, again, safes were being manufactured by local firms, and, although those of the latter and the Germans were not so good, and could not stand the severe tests, yet the price was quite a feature.

From the information I have gathered from firms in the City who are doing business with Russia, the general opinion is that both the present and future prospects for trade with Russia are very bright. All the circumstances point that way, and in spite of the recent political unrest, the trade of Russia in general does not appear to have suffered from the prevailing uncertainty as to the trend of events. The cotton trade of the Moscow district, as already mentioned, is satisfactory. The business done by the various mills and factories of the St. Petersburg district has been exceptionally good.

I was glad to hear that a movement was on foot for the establishment of an international commercial museum in St. Petersburg, in which samples of the manufactures of the various nations may be exhibited. The idea promises to be worth the consideration of all who are concerned in the promotion of British trade,

and if put into execution might prove a valuable means of furthering the interests of British exporters.

The year 1906 was not very favourable to commerce in Odessa. Though there were no disorders on a large scale, the restoration of commercial confidence was hindered, and, though the harvest was good in places—in the South of Russia—it did not as a whole fulfil expectations. The year, therefore, was not very prosperous for Odessa trade. The demand for agricultural implements was somewhat larger, but a radical improvement is needed to revive the industry in this district. Now that the internal troubles of this Black Sea port have practically ceased, business has been improving again.

The worst sufferer from the late disturbances has been Poland, for not only every branch of industry and trade, but individuals, suffered more or less severely from the enhanced cost of labour and the disputes, strikes, &c. The spinning, weaving, bleaching, printing and dyeing works all had their share of troubles. The great centre of these industries, Lodz, has been a heavy loser. In spite of all these troubles, the import trade into Russia of machinery of all kinds is gradually increasing and there is room enough for improvement.

The importation of machines and apparatus of all kinds grew from 7,616,000 poods weight in 1905 to 8,764,000 poods in 1907. The advance in weight of all kinds of agricultural machines imported was 1,132,000 poods. Thus agricultural machinery accounts for all the increase. The item spinning machinery and parts rose in value from 138,200,000 roubles in 1905 to 161,100,000 roubles in 1906 and 199,000,000 roubles in 1907, but as prices had risen this importation is not so important in point of quantity as it looks.

Russia is in the market for hardware of all kinds—tools, steam-hammers, planing machinery, sewing and knitting machines, gas and naphtha and electric motors and dynamos, agricultural implements of all descriptions, steam-engines, traction-engines, printing machines, &c.

The figures showing the value of imported sewing and knitting machines and automobiles give a very healthy increase. Of the

former, the value for 1905 was little over 5,000,000 roubles. In 1906 these figures rose to over 8,000,000, while for the first four months of 1907 the amount was over 3,000,000, which gives a fair indication of the total for the entire year.

During 1905 the value of automobiles imported into Russia did not exceed 200,000 roubles. In 1906 the amount was 2,000,000 roubles, and for the first four months of 1907 the value was considerably over 4,000,000. For a new industry, practically speaking, these figures speak well for the future.

In concluding this chapter and summing up what I have already recited, let me say that the main reasons why some of our manufacturers find it difficult to do business are as follows :—

1. Spasmodic and careless representation.
2. Wrong methods of solicitation.
3. Indifference to, or lack of knowledge of, local conditions and requirements.
4. Refusal to make certain small changes in machinery that has proved "satisfactory" at home.
5. An exhibition of too much "superiority."
6. Limited facilities for intelligently handling the demand when it has been found.
7. Unwillingness to allow or modify domestic sale conditions or conform to those of the country exploited.
8. The desire to compel the Russian buyer to learn English in order to help him (the manufacturer), instead of learning Russian to facilitate matters for the buyer.

The total abolition of each and every one of these barriers is easy and suggests no commercial revolution. Every successful exporter has solved the problem and found it easy. Let the others go and do likewise.

CHAPTER VI.

PHYSICAL AND POLITICAL FEATURES.

AREA.—POPULATION.—CLIMATE.—RIVERS AND LAKES.

IT may be desirable at this stage to give a brief general survey of the Russian Empire, indicating in outline the features of its physical and political geography.

By the Treaty of Portsmouth (Maine), after the Russo-Japanese War, Russia was deprived of the Southern portion of the Island of Sakhalin, and she had, in 1868, by agreement with the United States, given up her territory on the North American Continent. The total area of All the Russias in Europe and Asia is now 8,647,657 square miles (English), being about one-seventh of the entire land surface of the Globe.

Of this great Empire, 1,996,743 square miles are in Europe, and consist of Russia proper, 1,862,524 square miles, divided into 50 provinces; Poland, 10 provinces, 49,018 square miles; the Grand Duchy of Finland, 125,784 square miles, and Cis-Caucasia, 3 provinces, 85,201 square miles. Asiatic Russia consists of Siberia, 9 provinces and governments, covering 4,786,730 square miles; Trans-Caucasia, 10 provinces and districts, 95,402 square miles; 4 provinces of the Steppes, 710,905 square miles; Turkestan, 4 provinces, 400,700 square miles; and Trans-Caspia, 213,855 square miles.

The latest actual census of the Empire was taken in 1897, but there was a revision of the figures in 1905 by the Central

Statistical Committee, an estimate being made by taking the census of 1897 as the basis, and adding the yearly increase of population. The official report of the 1905 revision showed a total population of 146,796,600 souls, distributed as follows :—

European Russia	.. .. .	107,625,000
Poland	.. .. .	10,774,900
Caucasus	.. .. .	10,259,600
Siberia	.. .. .	6,568,000
Central Asian Provinces	.. .. .	8,751,800
Finland	.. .. .	2,816,500

The ethnological character of the population is very varied and embraces a large number of races. Russians comprise some 95 millions; Poles, 8 millions; Turco-Tartaric races, 8 millions; Jews, 5 millions; and the rest consists of Lithuanians, Letts, Finns, Lapps, Germans, various Slavonic tribes, Armenians, Kalmucks, Buriats, &c.

Between 1856 and 1897 the population of the Empire increased no less than 74 per cent.

The great majority of the population of Russia obtain their living by agricultural pursuits, and therefore the populous cities are relatively small. According to the census of 1897 the number of towns was only 1,321, but of these some three-fifths were under 5,000 inhabitants, only 104 had over 25,000 and only 19 over 100,000. The proportion of the urban population was in that year stated to be only 14 per cent. of the whole, as against 97 in Great Britain. But the proportion has since increased rapidly, many flourishing industries, which have attracted the peasantry to the towns in larger numbers, having sprung up in recent years. The distribution of town and country population was thus estimated in 1905 :—

	Urban.	Rural.
European Russia	13,215,100	94,410,700
Poland	2,377,100	8,397,800
Caucasus	1,151,800	9,107,800
Siberia	526,600	6,041,400
Central Asia	1,096,200	7,655,600
Total	18,366,800	125,613,300

The cities and towns of over 100,000 inhabitants are St. Petersburg, 1,429,000 ; Moscow, 1,092,360 ; Warsaw, 756,426 ; Odessa, 449,673 ; Lodz, 351,570 ; Kiev, 319,000 ; Riga, 282,230 ; Kharkov, 173,989 ; Vilna, 162,633 ; Kazan, 143,707 ; Saratov, 137,147 ; Yekaterinoslav, 135,552 ; Kishinev, 125,787 ; Astrakan, 121,580 ; Rostov-on-Don, 119,476 ; Tula, 114,733 ; Helsinfors (Finland), 106,067. The above are all in European Russia. In Asia are Baku, 179,133 ; Tiflis, 159,590 ; and Tashkent, 155,673.

As regards climate, Russia, extending as it does between latitude 40° and 70° North, lies mainly within the temperate zone, but a portion of the extreme north stretches beyond the Arctic Circle. The climate, though showing considerable diversity, is generally described as cold, the great extent of wind-swept plains, both in European and Asiatic Russia, presenting few barriers to the Polar currents. In the extreme north the winter lasts for some nine months, and in every part it is severe, with the exception of the Crimea and other portions of Southern Russia, which are warmer. There are great variations of temperature, and the heat of summer is in many parts much greater than that of our own islands. The rainfall is small, except in the Baltic provinces, but during the winter a large part of the country is covered with snow to a great depth. Notwithstanding its rigorous character, the climate of Russia is healthy, and the natives frequently live to a great age. Cereals are grown extensively up to 60° and most of the fruits of temperate climes are raised south of 50° latitude.

Sir D. Mackenzie Wallace, in his interesting book on Russia, says : " If it were possible to get a bird's-eye view of European Russia, the spectator would perceive that the country is composed of two halves, widely differing from each other in character. The northern half is a land of forest and morass, plentifully supplied with water in the form of rivers, lakes and marshes, and broken up by numerous patches of cultivation. The southern half is, as it were, the other side of the pattern—an immense expanse of rich arable land, broken up by occasional patches of sand or forest. The imaginary undulating line separating

these two regions starts from the Western frontier about the 50th parallel of latitude, and runs in a north-easterly direction till it enters the Ural range at about 56° N.L."

This, however, only gives a rough view of the features of the country. In the agricultural region there are various zones of cultivation. To the south of the latitude of St. Petersburg, the climate becomes more genial, and in the black-earth district, which runs in a diagonal zone from about 45° in the south-west to 55° in the north-east, the soil is rich, possessing a high degree of natural fertility, which renders farming on a large scale more profitable than in other parts of the country. South-east of the black-earth zone are the Steppes, vast sandy plains, on which the occupations of the inhabitants are mainly pastoral.

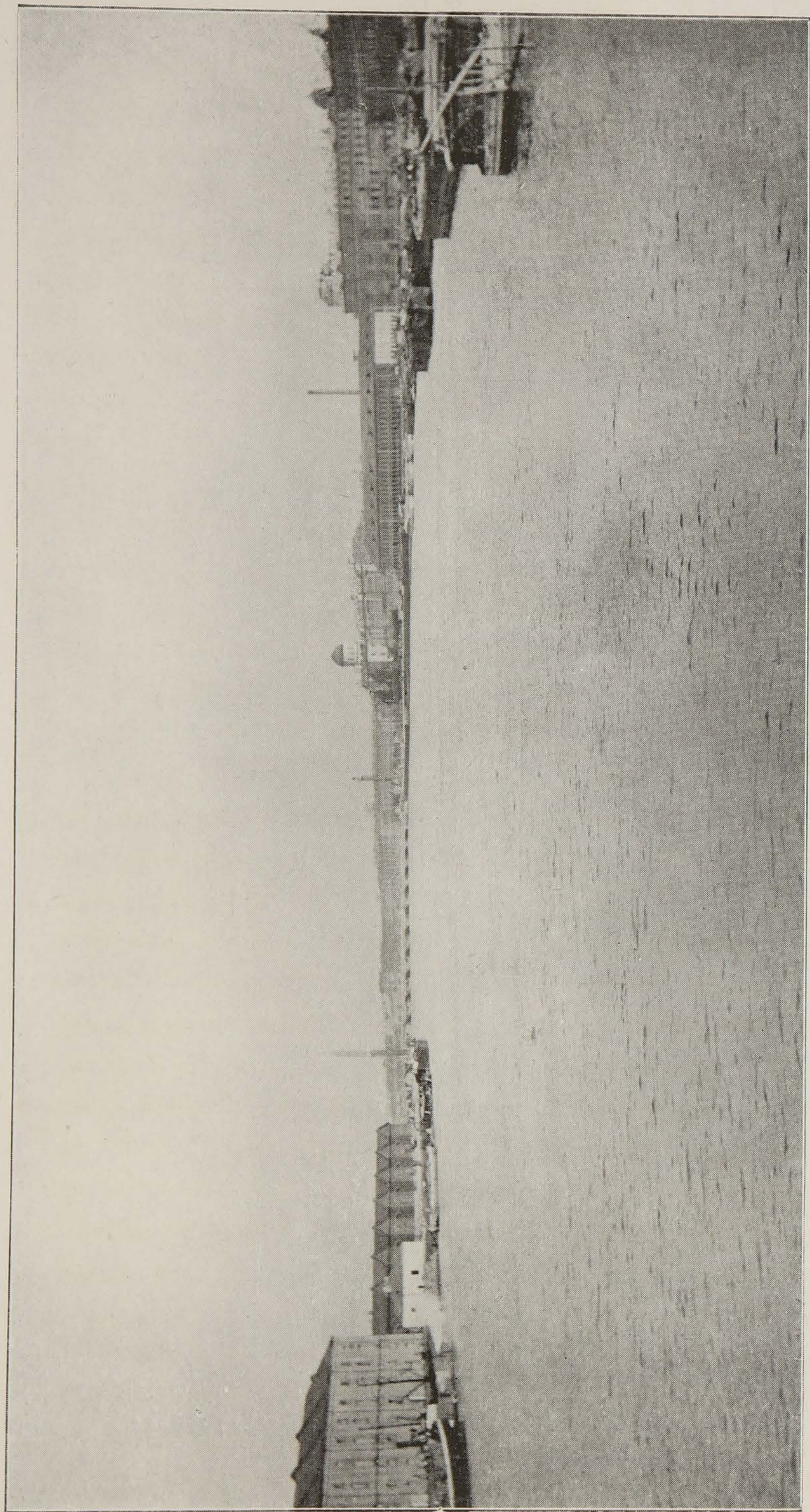
A great part of the surface of the Empire is under forests. Those in European Russia cover an area of 474 millions of acres ; in Finland, 50.5 millions ; in Poland, 6.7 millions ; in the Caucasus, 18.7 millions ; making a total of 550 millions of acres, or 39 per cent. of the whole. In the Ural provinces forests cover 70 per cent. of the area, in the two Northern provinces, 68 per cent. ; in the four Lake provinces, 57 per cent. The State is the largest owner of these forests, possessing in European Russia 285,985,941 acres ; in the Caucasus, 12,826,387 acres, and in Asiatic Russia, 360,519,435 acres (exclusive of the Amur region) ; in the Amur region, 288,742,000 ; a total in Europe and Asia of 948,073,763 acres of forests.*

Russia is well supplied with inland waterways. In European Russia, exclusive of Finland, there are 76,500 miles of rivers, canals and lakes ; of which, 16,080 are navigable for steamers, 8,105 for small sailing vessels, and 26,800 for rafts. The Volga is the largest river of Europe, having a course of over 2,000 miles, and is navigable almost throughout its entire length. Other

* These figures do not quite agree with those given by Sir D. Mackenzie Wallace, who states that official statistics show that European Russia contains in round figures, 406,000,000 deciatins, of which 78,000,000, or 19 per cent., are forests, or land unfit for cultivation ; 106,000,000, or 26 per cent., arable land ; and 65,000,000, or 16 per cent., pasturage. A large part of the land classified as unfit for cultivation consists of swamps, but much has been done in late years by drainage to make tracts of these available for pasturage or cultivation. The Great Pinsk swamp, the drainage of which was begun by the Government in 1872, was so converted, and by 1897 an area of 2,855,000 deciatins (over 7,500,000 acres) had been reclaimed.

large rivers—largely navigable—are the Ural, Dnieper, Dniester, Don, Dvina, Duna and Neva. The Volga, Ural, Kouma and Terek are the principal rivers falling into the Caspian sea; the Don runs into the Sea of Azov; into the Black Sea fall the Dnieper, the Dniester, the Kouban and the Bug; the Baltic receives the waters of the Neva, Vistula, Niemen, Narva, Ulea, Kenie and Tornea, and into the White Sea and Arctic Ocean flow the Onega, Dvina, Mezen and Petchora. In Siberia, the Ob, Yenisei, Lena and Amur are great rivers, each of which is longer than the Volga. In the North of Russia-in-Europe are also a large number of lakes, both of fresh and salt water. The principal of them are Lake Ladoga—the largest lake in Europe—which has an area of 6,200 square miles, and Lake Onega, covering 3,500 square miles. Both these discharge their waters, via the Neva, into the Baltic. The smaller lakes, Bielo-Ozero, in the Government of Novgorod, and Kubinskoye, in Vologda, are important links in the inland water communications.

By means of its navigable rivers and lakes, and an extensive system of canals, Russian trade and inland communications have been greatly facilitated, apart from the rapid progress made in late years in the construction of railways, to which reference will be made in a later chapter. There is direct communication by water between the White Sea and the Baltic, in the North and North-West, and the Black Sea and the Caspian, in the South and South-East. On the principal rivers there are now good services of passenger steamers, but in the northern part of the country navigation is interrupted by ice during the winter months.



THE RIVER NEVA

CHAPTER VII.

RUSSIAN CITIES.

ST. PETERSBURG.—MOSCOW.—WARSAW.—NIJNI-NOVGOROD.—
KIEFF, &c.

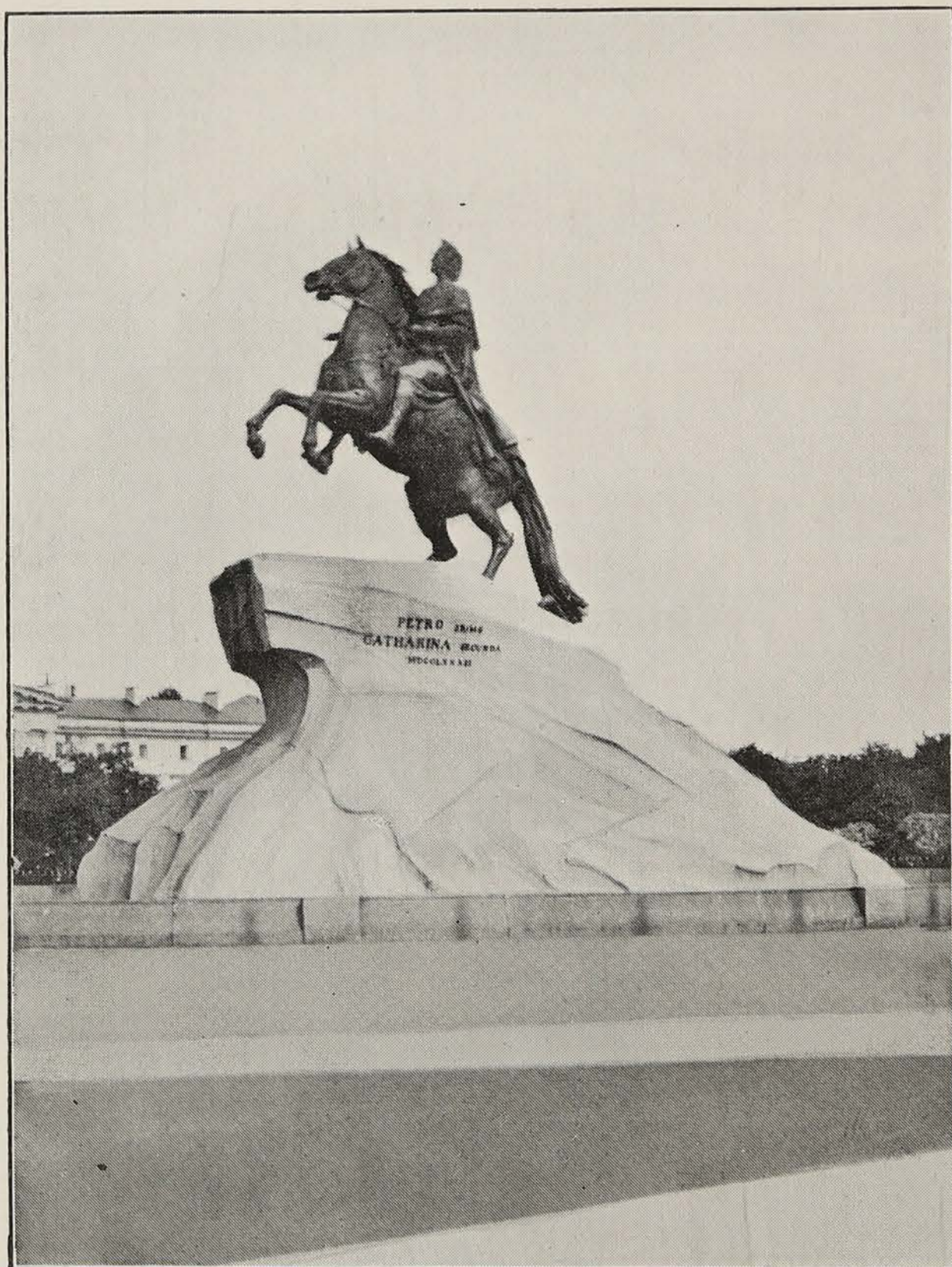
A SPLENDID city: splendid in its spaciousness, in the dimensions of its buildings and its thoroughfares, and in its cosmopolitan gaiety. Such were my first impressions of St. Petersburg, and such, in the main, are my permanent recollections of the capital of the Russian Empire.

To approach St. Petersburg one has to pass through a vast tract, hundreds of miles in extent, of very uninteresting country; and the contrast is therefore the more striking, and the sensation of pleasurable appreciation all the more emphasised. St. Petersburg's situation is peculiar, and embraces several of the islands forming the delta of the Neva, upon the southern bank of which noble river the greater portion of the city stands. Within its boundaries there is, consequently, a considerable expanse of water—this latter, in fact, comprising some 1,330 acres, as compared with rather more than 21,000 acres of more or less solid land upon which the city is built. The population of St. Petersburg is round about 1,500,000, and includes a great many foreigners, embracing almost every known nationality.

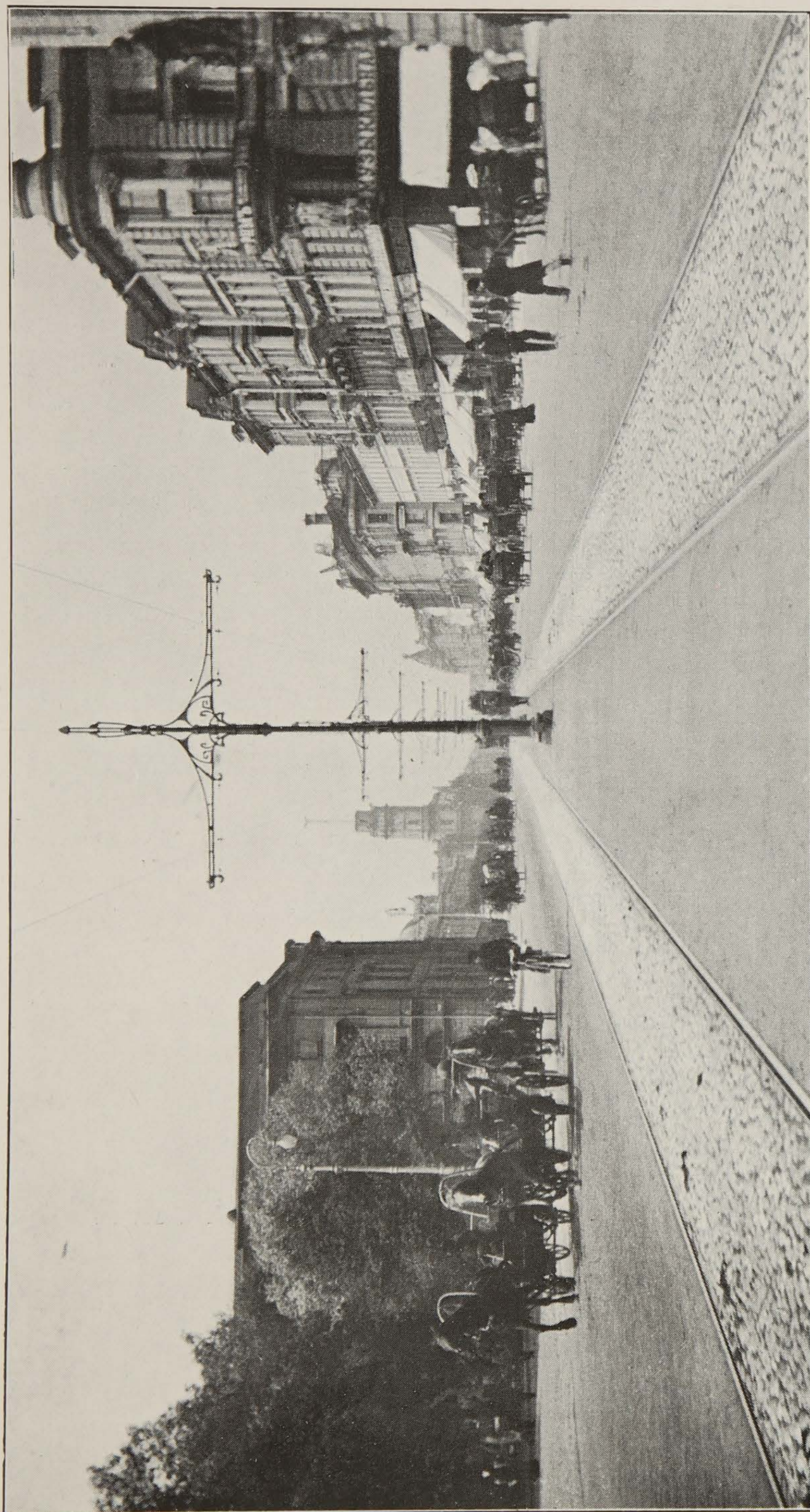
Founded in the year 1703 by Peter the Great, St. Petersburg is in its main features essentially modern. Many of its streets are of splendid dimensions, the Nevski Prospect, for instance, being nearly three miles long with a width of 130 feet, and there are several others within measurable distance of these proportions. A series of quays encircle a large portion of the city along the curving bank of the Neva, and form a magnificent thoroughfare, faced by many of the most important buildings and palaces for which the city is famous. Commencing on the western side, near the new Admiralty and dockyard, is the English Quay, abutting upon which are the British Consulate and the English Church, the Nicholas (War Office) Academy and the Senate; while close by are the Grand Duke Nicholas Palace, the Synod and the Military Courts of Justice. Continuing along the river front, one comes to the famous statue erected to the memory of Peter the Great, who is represented upon horseback, in heroic proportions, with a huge granite block as a pedestal, measuring 44 feet long, 22 feet wide and 27 feet high. This stands at the commencement of that portion of the river-side thoroughfare which is designated the Admiralty Quay, upon which, as its name implies, the Admiralty buildings are situated, and which overlooks in the rear the Alexander Gardens, near one extremity whereof stands the splendid cathedral dedicated to St. Isaac.

The Palace Quay follows, and here is situated the world-famous Winter Palace, the colossal and magnificent residence of the Tsar. Reference to the Winter Palace reminds me of a conversation I had with a gentleman who occupies a high official position in St. Petersburg. In the course of a stroll we had reached the great square upon which the Palace faces; and my thoughts, not unnaturally, turned towards the events which transpired just where we were standing on that fatal day which we in England designated Red Sunday. I ventured to make a remark to my companion which, no doubt, indicated to him the direction in which my thoughts were running. He at once took up the subject and put it before me in what was, I must confess, a new light, and a standpoint from which I had not previously considered it.

In effect, he said: "Assume, now, that the scene were



THE MONUMENT TO PETER THE GREAT IN ST. PETERSBURG.



NEVSKI PROSPECT IN ST. PETERSBURG.

transferred to London, say at the time when Ireland was in a state of rebellion, when Lord Frederick Cavendish and Mr. Burke were murdered in Phoenix Park. Imagine that at that time the leaders of the rebellion in Ireland—my friend persistently referred to the state of affairs which existed in Ireland in the early eighties as ‘rebellion’—had come over to London, bringing with them their revolutionary followers, and had been joined by hordes of ruffians, the scum of London and other parts of the country, announcing their determination to present a petition to the Queen in person. Suppose that the authorities strictly forbade such a proceeding, gave due warning that it would not be permitted, and placarded London with notices to that effect; but that the malcontents still insisted and assembled to carry out their purpose. Assume, also, that the authorities became aware that the mob was fully armed and, accordingly, as a necessary precaution, had the military in readiness. Conceive farther, that in spite of all, heedless of warnings and fully aware of the steps the authorities had taken to maintain law and order, this armed and dangerous mob, headed by known agitators and revolutionaries, had reached almost to the very doors of Buckingham Palace, or wherever the Queen was at the time—all ordinary measures having failed to restrain them—what would have happened? Would not the order have been given to fire?” What my reply was is of no consequence; but I admit this was putting a new light upon things. And when I satisfied myself, as I afterwards did, that the leader of the crowd on that occasion, Father Gapon, was proved to be not the priest impelled by a sense of duty to stand up for his flock, but a revolutionary agitator, I confess I could not help feeling that my friend had a good deal on his side when he complained, somewhat bitterly, of what he considered the unjust criticisms of that event which were made in England and other countries.

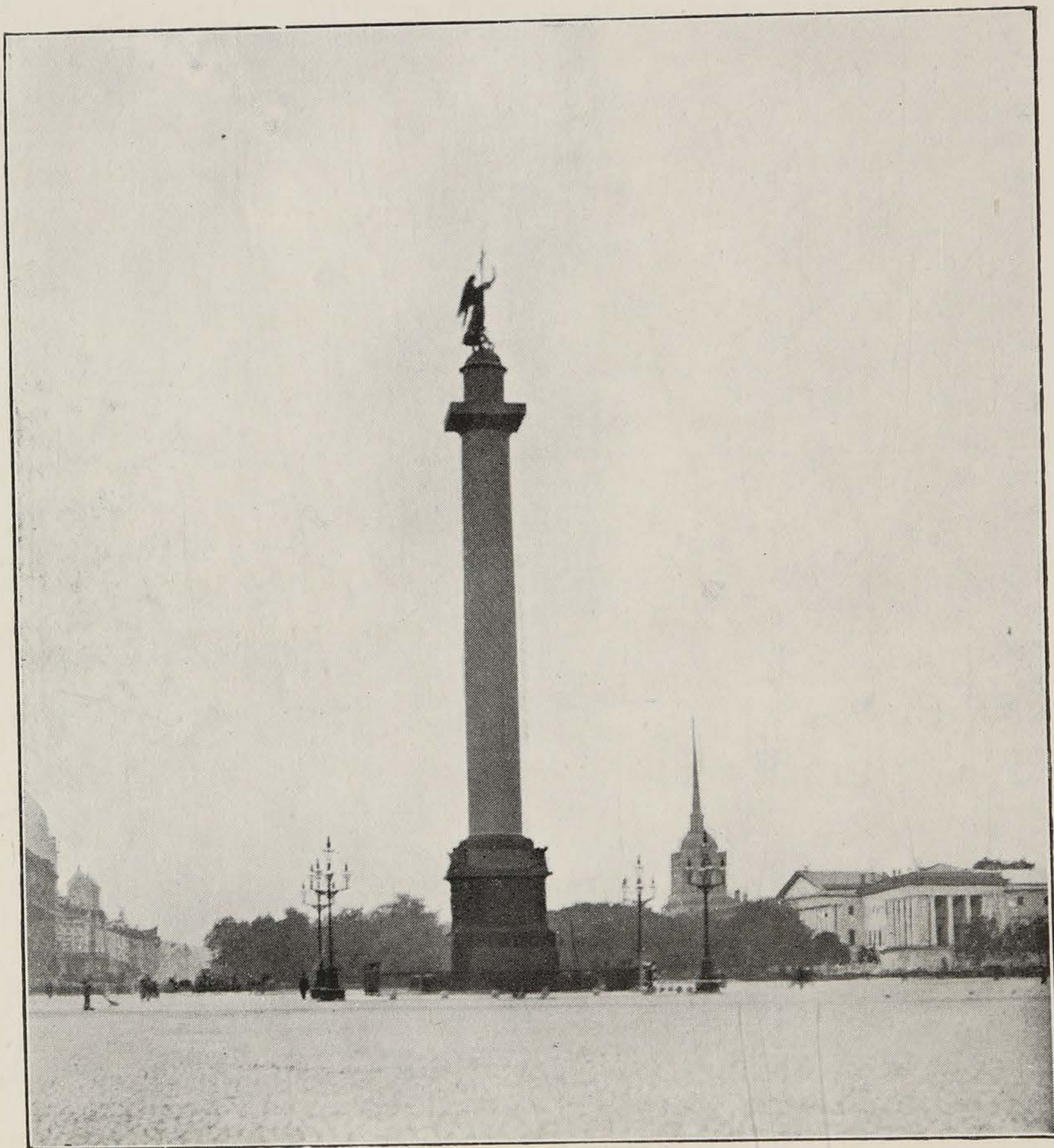
In close proximity to the Winter Palace is the Hermitage, which also is one of the royal palaces, but has been converted into a magnificent Gallery of Art. It contains the finest collection of pictures in Russia, numbering some 1,700, which include many masterpieces, besides statuary and other specimens of both

ancient and modern art, all of which are the private property of the Sovereign. In this locality, also, but not immediately facing the river, are the Foreign Office and various other governmental and public buildings. Continuing along the front, one passes several palaces, such as the Marble Palace and the Grand Duke Michael's Palace and other magnificent structures, until one arrives at the British Embassy. It is a habitation worthy of the representative of Great Britain, and may be said to terminate this splendid thoroughfare, which in its situation and the magnificence of its line of buildings, is probably without an equal. The quays extend for some miles further, but contain little of interest until the Smolnyi Cathedral is reached, and this, a beautiful building of white marble, is situated almost behind the portion containing the other buildings mentioned, the quays, of course, following the bend of the river. In close proximity to the British Embassy are the splendid Summer Gardens, with their avenue of statues, and also the Plain of Mars, an immense open space, which was formerly a marsh, but has been transformed at almost incredible expense into a macadamised parade ground.

There are numerous statues and monuments in St. Petersburg in addition to that of Peter the Great, including a great granite Doric column, over 80 feet high, erected by the Emperor Nicholas I. to the memory of Alexander I., which shows unmistakable signs of the disintegrating effects of the climate, as do many of the buildings in St. Petersburg. The monument commemorating the Russo-Turkish War of 1877-1878 is a notable structure, as also that in memory of Catherine II. and the equestrian statue of Nicholas I.

The Academy of Sciences embraces several departments, and includes a very fine museum and a library of some 300,000 volumes. The Imperial Library far outnumbers this, however, containing, as it does, some 1,200,000 volumes, upwards of 30,000 manuscripts and 75,000 engravings. This collection, for the original compilation of which the Polish libraries paid tribute, is one of the most valuable in the world.

The various islands upon which St. Petersburg in part stands are connected with the southern bank of the Neva—whereon is the



ALEXANDROVSKY COLUMN IN ST. PETERSBURG



A ST PETERSBURG WATERWAY.



THE FORTRESS OF ST. PETER AND ST. PAUL.

principal portion of the city—and also with each other and with the northern bank of the river, by a number of bridges. Communication is also kept up in the summer time by a service of ferries. One of the bridges, which springs from the line of quays in close proximity to the British Embassy, leads to the fortress of St. Peter and St. Paul, a huge pile of buildings—part fortress, part prison—whose forbidding exterior forms a fitting setting to the grim purposes it has served, and whose sombre aspect accords with the purpose to which the church, which forms part of the structure, is put as the last resting-place of the Russian rulers.

Another of these bridges leads to Basil's Island, which is in a measure devoted to business pursuits, and where is to be found the Bourse, or Stock Exchange, a position which, compared with the main portion of the town, would scarcely meet with the approval of the habitués of Throgmorton Street.

Also situated in what a Londoner would call "across water," are various other buildings and institutions, such as the Military Prison and Hospital, the Arsenal, the St. Vladimir Cathedral, the Aquarium, the Zoological Gardens, the Military and Naval Colleges, the Meteorological Observatory, the Alexander Gardens and the Finland railway station.

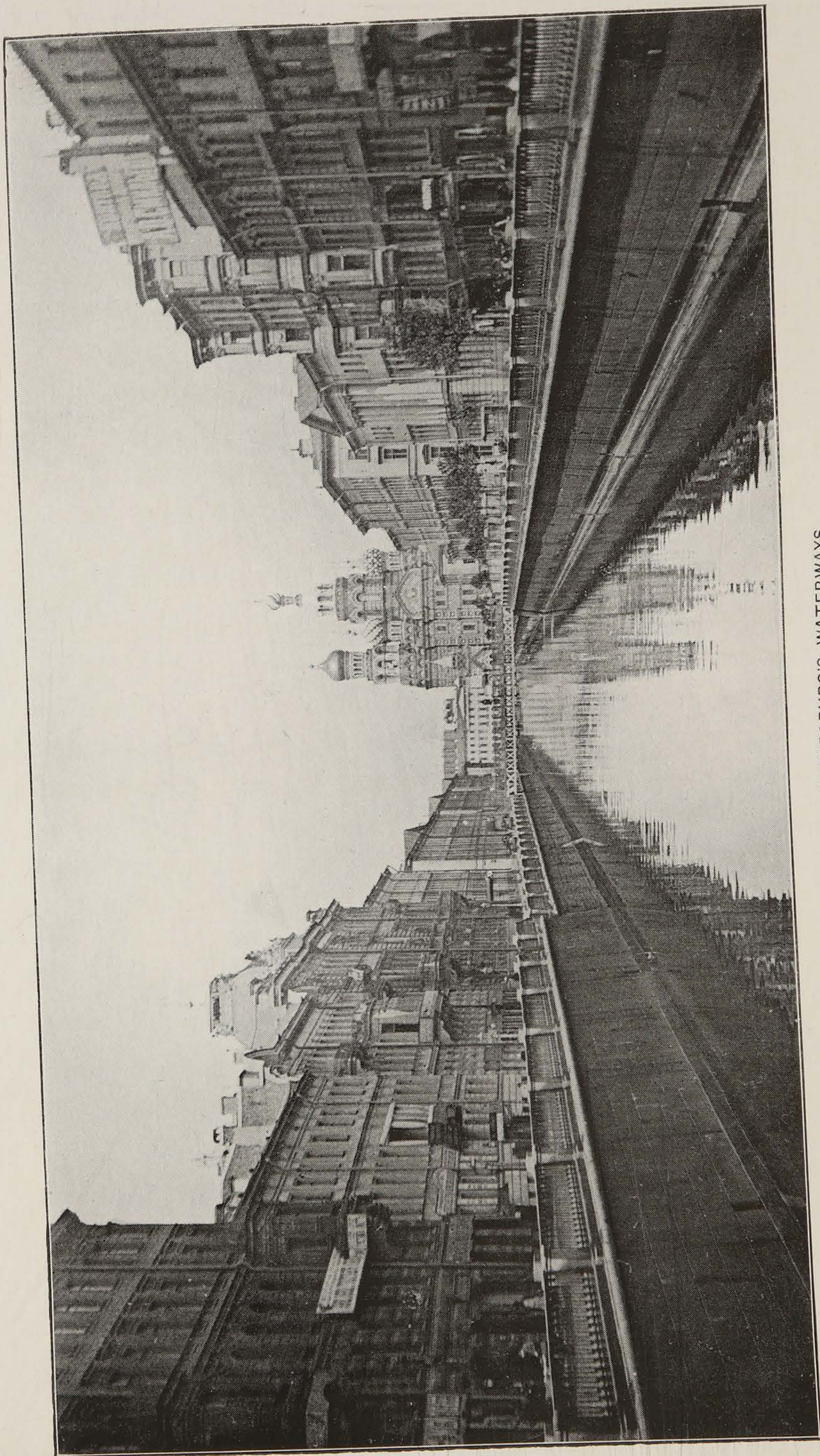
Other railway termini are the Nicholas station, whence travellers start for the south and the east, including Moscow and Siberia; the Warsaw station, where terminate the lines from Vienna, Berlin and Europe generally; and the Peterhof, the point of departure for and arrival from Reval and the Baltic ports. As a railway centre St. Petersburg is not especially important, however, even in relation to Russia itself. It lies too far north of the more thickly-populated parts of the Empire, the principal centres and towns of which are better reached from and in closer touch with Moscow or Warsaw, or the Baltic ports, such as Riga and Libau.

There are, I am told, more than 400 churches in St. Petersburg. It is, indeed, a city of churches and palaces, of which latter about a dozen are appropriated by the ruling monarch and members of the Imperial family. The Cathedral of St. Isaac is a stupendous structure, and one can readily accept the statement that it is

one of the largest churches in Europe. Not being learned in architecture, and this being in no sense a guide-book, I shall not attempt a description of this huge building, the vastness of whose proportions is perhaps its most striking feature to a casual beholder. Constructed of granite and marble, it is only about half-a-century old—that is to say, in its completed form, although the earliest portions of the edifice are twice that age, for it took just about that length of time to build. It is 336 feet high to the top of the cross which surmounts the principal cupola, and the interior is elaborately decorated, precious stones, gold, silver, bronze and marble being used in profusion. A feature which impressed me very much was the great number of polished granite pillars which form part of the exterior. These number 112 in all, each is 60 feet high, with a diameter of 7 feet, and weighs, it is said, 128 tons. As a thing of beauty, the building will not compare with many of our own noble cathedrals, or those of other European countries; and it, of course, lacks the tempering influence of time and the halo of antiquity. What impression it inspires is traceable to a sense of vastness. This is, I think, the dominant note of St. Petersburg. Some of its open places are almost oppressive in their spaciousness.

For its size and population, St. Petersburg does not appear to a Londoner to be any too well provided with theatres (of which there are, I believe, less than half-a-dozen) and places of amusement, as we interpret that term. But gaiety is, as I have said, a prominent feature of life there. Cafés and restaurants are numberless, and each one is in itself a place of enjoyment not confined merely to the satisfying of the demands of the inner man. Music is everywhere—not always, it must be confessed, in consonance with the delicately-attuned ear—and the scenes presented by the more fashionable cafés throughout the day and well into the night are redolent of brightness and gaiety in their most attractive form.

Whatever may be lurking beneath the surface; whatever political differences may be agitating the nation, and occupying the minds of the residents of all classes—St. Petersburg is, to a temporary visitor such as I was, a delightful place of abode,



ONE OF ST. PETERSBURG'S WATERWAYS.

and its inhabitants the most charming and hospitable of companions.

It is impossible to contemplate the St. Petersburg of to-day, however, in spite of its magnificence and its gaiety, without casting one's mind back over the not very lengthy period (as the lives of cities go) of its existence, and realising something of the immense influence which has been exercised by its creation, and by him who founded it, upon the events of the last two centuries.

I have said something, in haphazard fashion, about the prominent features of St. Petersburg; but not one of those features, not one of its innumerable magnificent buildings can, in my opinion, surpass in interest that little wooden house—"shanty" it might almost be called—which still stands, across the water and away from the heart and gaiety of the city of to-day—in which dwelt Peter I. while his great plan for the building of a new capital was coming into being. Had this scheme been merely the building of a new town, however important, there would be no need to dwell upon it; but, in the intention of its founder, as in actuality, the building of St. Petersburg meant vastly more than that.

The building of St. Petersburg meant, in fact, the beginning of Russia as a European Power. Prior to that event she was regarded as, and was, Asiatic rather than European. And it was Peter, the dweller in this wooden shanty (he was not called "the Great" until later years, when he had indeed well earned the distinction), that brought this stupendous change about, the full import of which may, perhaps, not yet be calculated.

A man of immense strength of character; his early life passed in turmoil, which attended his ascent of the throne; beset throughout a large portion of his reign by wars without and strenuous insurrection within; treating with relentless severity the opponents he crushed—this was the ruler who built St. Petersburg as his crowning effort to place his country among the civilised nations of the world.

Utterly regardless of tradition and prejudices, hating ceremony and set formalities, Peter was, of course, quite out of place in ceremonious, dignified, orthodox Moscow; and this may have

had something to do with the determination to which he came. But be this as it may, having established an army and a navy, and set on foot manufactures and commerce—having, in the course of these efforts, himself visited many countries, worked on board ship, served as a private soldier and through the various military grades ; having worked as a labourer abroad, including a period of three months in England, where, at Rotherhithe, he mixed freely with his fellow workmen—having done all this and taken back with him great numbers of sailors, engineers, artificers, and so on, to assist in carrying out his canal and other schemes—this remarkable man proceeded to erect St. Petersburg. Nor was this project a mere whim.

The idea of building a city upon a site so utterly unsuitable as that of St. Petersburg then was, would doubtless never have occurred to anyone of normal capacity ; nor would the task have been proceeded with even had it done so. But considerations of this kind weighed not with Peter the Great. Consisting largely of swamp and morass, the difficulties presented by the selection of this spot were stupendous, and might well have been regarded as unsurmountable.

But Peter had conceived a great idea, and his avowed object in building St. Petersburg was to make “a window by which the Russians might look into civilised Europe.” That was the project conceived in the master-mind of this man, and no mere physical difficulties must be permitted to stand in the way. He had recently captured this territory from Denmark, the position was on the seaboard, and therefore in direct communication with Europe and that civilisation with which he longed to get into closer touch, and here must stand his future capital. Nature herself might seem to oppose ; but all opposition—even Nature’s—must be swept on one side.

It was ; but at what cost ? And not merely in money, though that is incalculable. Accounts differ, and the margin is wide, but the probability is that the operations cost nearer 200,000 than 100,000 lives. And so arose the St. Petersburg of to-day. The Senate was removed from Moscow as early as 1714, and the new city became the new capital of a practically new Empire.



A MEMORIAL TO A MURDERED TSAR.

Prior to those events, the Russian Empire embraced a large portion of the Continent of Europe, it is true ; but it is only since the building of St. Petersburg that she has formed an integral part of the European political system ; has taken an active and prominent place in the affairs of Europe, as well as of Asia, and has risen to her present position among the nations of the world.

Small wonder, then, that that unpretentious little wooden structure on the bank of the Neva is preserved with veneration, and regarded with affection by the dwellers in the great and beautiful city which has sprung up around it, and by the inhabitants of the Empire at large.

And as one looks back to the inauguration of a new Russia by Peter I., one almost involuntarily, but not unnaturally, asks oneself : And what if, in the years to come, the reign of Nicholas II. should also be looked upon as the commencement of a New Era for Russia ? And why not ? The changes brought into being by Peter the Great were mainly political. I have a firm conviction that the reign of the present Tsar will become famous as marking the awakening and development of Russia upon the lines of commercial and industrial prosperity.

If I may venture to make a comparison, the methods and manners of Peter the Great, however successful they may have been in meeting the requirements of the period in which he lived, would be altogether unsuited to our day. And time alone can reveal what the outcome of the present reign will be. But in one respect, at all events, the two monarchs, so utterly unlike in many ways, are completely at one—namely, in their absolute and unbounded desire to further what they believed to be the best interests of Russia.

During the 14 years he has occupied the throne, the Emperor Nicholas has had to confront difficulties and control events which none but an able and powerful monarch could accomplish with success, as he has done. I hold the opinion—strengthened by all that I have been able to gather from personal association with not a few of those whose judgment and knowledge are really worthy of acceptance—that the present Tsar is, in an unostentatious

but none the less effective manner, a strong ruler—strong in his resolve to further the interests of his Empire and his subjects by what he believes to be the best methods—strong in the determination not to be led from that position, even though those subjects whose welfare he has at heart may at times be themselves disposed to adopt different views.

As for the Grand Dukes, I am quite sure that the notion which is so prevalent in England is an altogether mistaken one. As a party, or concrete body, the Grand Dukes do not exist. Doubtless, the Emperor at times, as is only natural, consults with his relatives, members of his own family, some of whom are men considerably older than himself and of great ability and experience ; but that any one or other of them is allowed to dominate the personal will, or to unduly influence the acts of the Tsar, I do not believe ; nor is there, as I have said, any such thing as the Grand Ducal party, in the sense which is so often represented.

Politically, Russia is going through a most important period of evolution. I believe the Russian people are awakening to the fact that malcontents have misled them—that the Tsar is ready and anxious to do all that is possible in their interests and for their welfare ; and that the process of gradual development, and not revolutionary methods, will best bring about, not only the improvement in their own lot towards which they are looking, but also the welfare of their Empire, which every Russian has so deeply at heart. I believe that we are upon the eve of such a tremendous development of Russia's enormous natural resources that all else will of necessity become subservient to it. In such an event, there will grow up—there is, in fact, already growing up—a large and constantly increasing industrial population. Under these conditions there will follow, of necessity, a very material modification of the political and social positions, the effects of which will be so stupendous and so far-reaching that it is difficult to trace them even in imagination. Is it not, then, quite probable that, in the time to come, when Russia has taken her place, as she must do, in the foremost rank of the commercial and industrial nations of the world, the reign of Nicholas II. will be regarded as marking a New Era of the Russian Empire,





PICTURESQUE MOSCOW.

quite as great, and in all likelihood far greater, than that inaugurated by Peter I. in the building of St. Petersburg?

MOSCOW.

As one approaches Moscow, the mediæval capital of ancient Russia, it is impossible not to indulge in some reflections on its historic past. A first glimpse of that magnificent and picturesque city, even as seen from the railway along which one approaches it across the great and unattractive plain of Central Russia, convinces one that the pictures one has mentally created of the world-famous city are in no sense exaggerated, but, on the contrary, fall far short of the reality which is presented to the physical view. Truly, in Moscow the East merges in the West, and within its boundaries are to be found the characteristics of both.

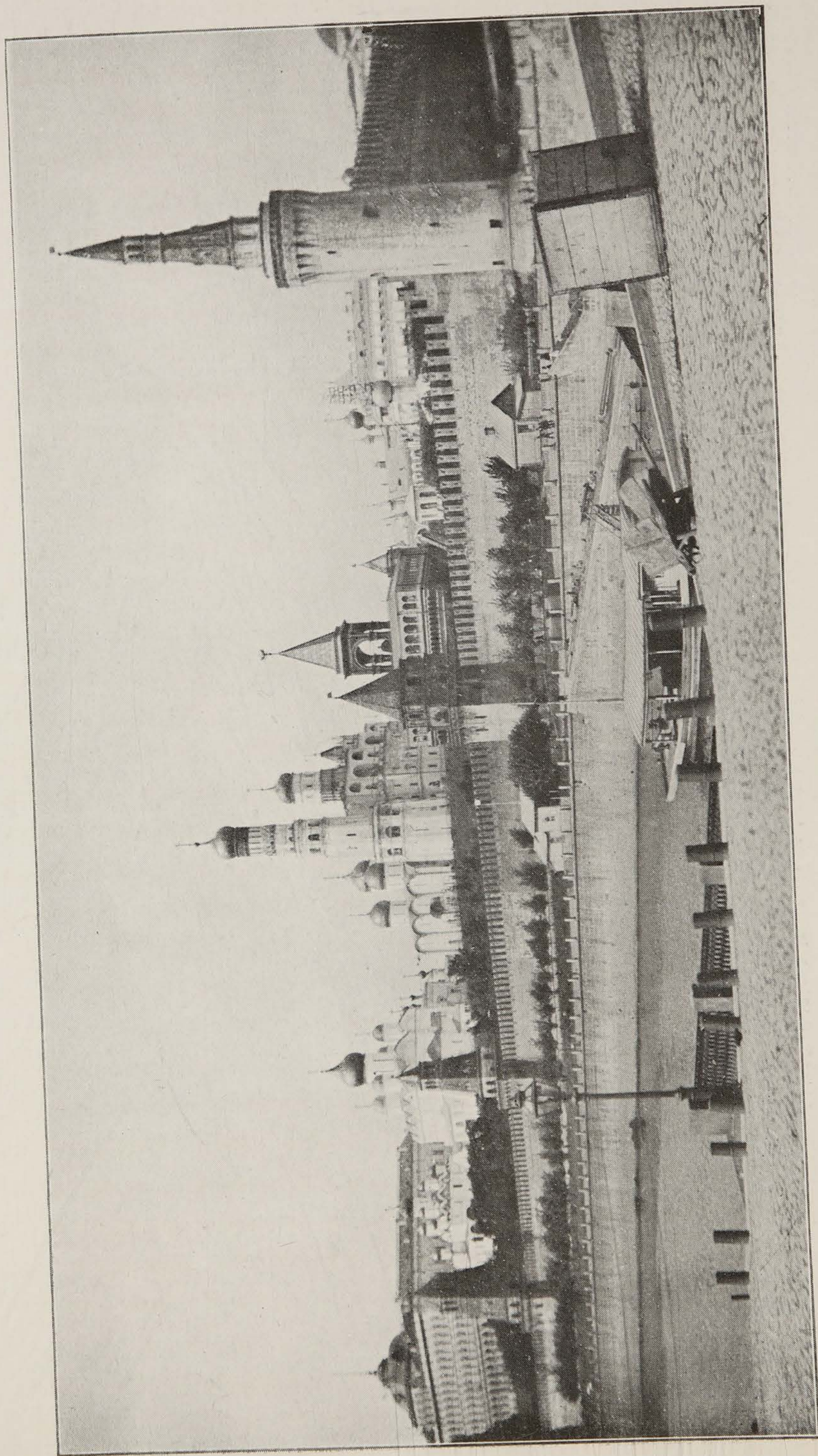
The view which presented itself to the mediæval traveller who centuries ago looked down upon the city from Salutation Hill was much the same as that which is presented to-day as seen from the same spot, or from any of the heights with which Moscow is encircled, and which form its site. The popular idea that Moscow, like Rome, is built upon seven hills, may not be exactly in accordance with the facts; but the city covers several eminences which vary from some 500 feet to upwards of 800 feet in height. It is intersected by the River Moskva, a tributary of the Oka, which is here joined by a smaller river called the Yaouza.

Moscow has a population of well over a million people, is some seven miles across from north to south, and nine miles from east to west, and embraces, with its suburbs, an area of about 40 square miles. Many of its ancient glories remain, notwithstanding the tremendous conflagration which terminated the Napoleonic visitation; but there is also another side to the Moscow of to-day, and one which is pregnant with enormous possibilities, and the prospects of a great commercial and industrial future. For, as

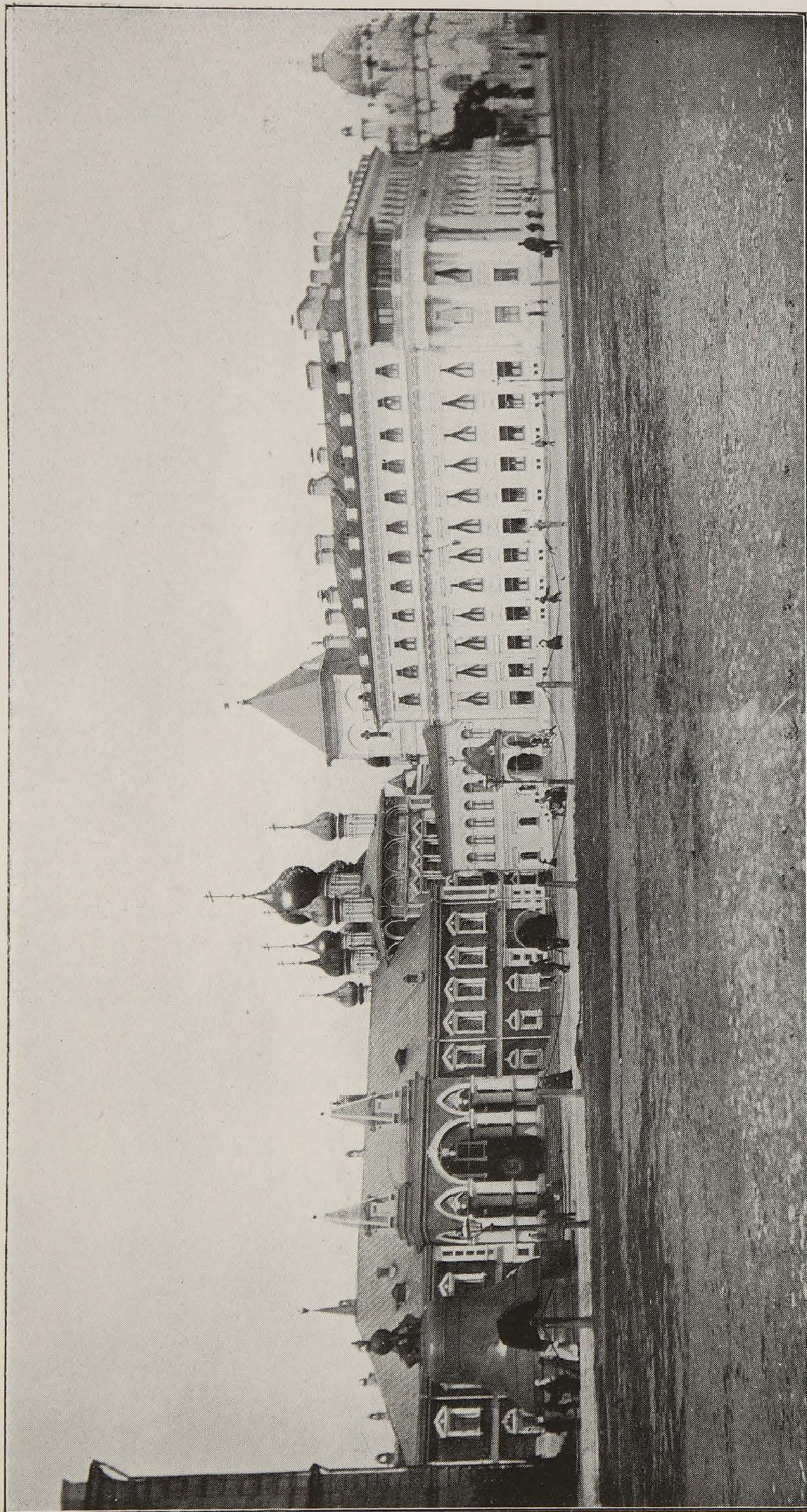
I shall show later on, Moscow is an important centre in this respect, and has an outlook of limitless possibilities.

I have no intention of compiling a guide-book to Moscow, or anything of the kind, but it is impossible to write about this most captivating and enchanting city without giving some expression to the impressions left upon one's mind or saying something about its most prominent and characteristic features. I have already referred to my first view of the city, and that was only strengthened and increased upon a closer acquaintance. A first view of Moscow, with its hundreds of churches, monasteries, palaces and similar buildings, whose countless towers, spires and cupolas, glittering with gold and almost every possible shade of colour—green, red, brown, pink, lilac, and so on—creates an impression and presents a spectacle the recollection of which it is impossible ever to erase.

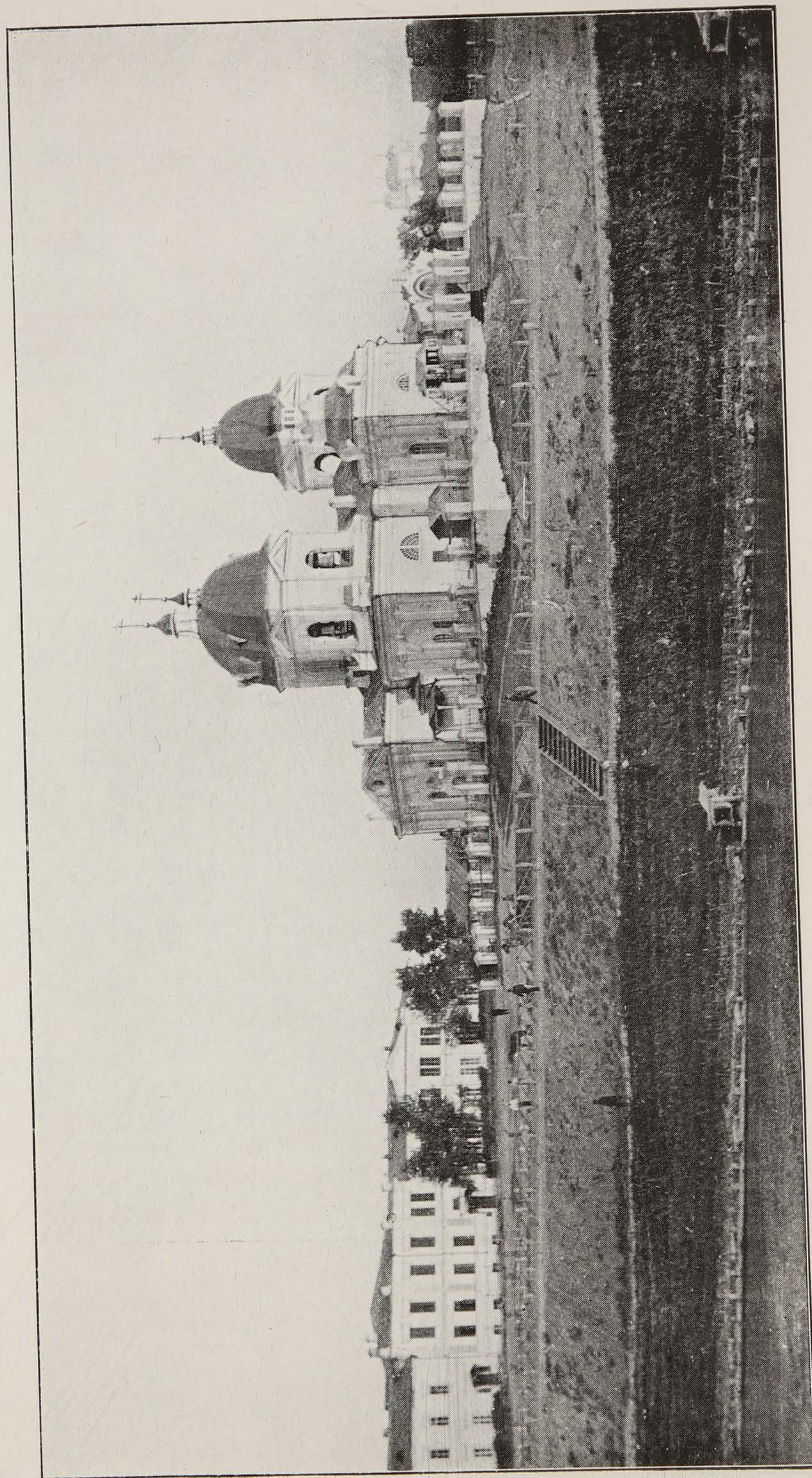
The Kremlin is, of course, both by reason of its situation and the intense interest which it arouses, the very heart and centre of Moscow. The origin and exact meaning of the word *kremlin* is not quite clear, but it is pretty certain that it means a fortress, or citadel, whatever else it may include. A great many people regard the word as referring only to one building or collection of buildings, and that one, of course, the Kremlin at Moscow. This is not correct, however. There are *kremlins* in various other towns throughout Russia, though none of them can be compared, either as regards size, magnificence, or historic interest, with that at Moscow. When a foreigner speaks of the Kremlin he means that at Moscow; and so, indeed, do all Russians, unless the term is qualified by adding the name of another town. This may be gathered, as almost may the deep and reverential feelings with which Russians regard the Kremlin, by quoting a sentence from *Viazemski*, who says: "The Kremlin is our sanctuary and our fortress; the source of our strength and the treasury of our Faith." All Russians do, indeed, look upon the Kremlin as something like a Holy of Holies; and when their minds turn to Moscow and its glories, it is to the Kremlin and all that it means to them that their thoughts most deeply penetrate. And what the Kremlin does mean to a Russian it is difficult for a foreigner—



THE KREMLIN



A PORTION OF THE KREMLIN.



A PORTION OF THE KREMLIN.



A PORTION OF THE KREMLIN.

to say nothing of foreigners who have no acquaintance at all with the country—to fully realise. Nowhere else, perhaps, are there to be found so many and such diverse relics; no place, perhaps, is so rich in historical associations, or appeals so strongly to patriotism and to in-born loyalty to his sovereign, as does the Kremlin to the Russian.

Situated on the Barovitsky Hill, on the bank of the river, the Kremlin is enclosed by a stone wall, several centuries old, varying from 14 feet to 20 feet in thickness, from 30 feet to 70 feet in height, and the circumference of which is about a mile-and-a-half in extent, and is pierced by five gateways. The various palaces, the cathedrals and churches, of which there are no less than a score comprised within the Kremlin's walls, with the pinnacles and domes surmounting these and the various gateways and other buildings, combine to form a pile of the most fantastic, and in many instances what struck me as even grotesque, architecture, the effect of the whole being exceedingly picturesque.

The Cathedral of the Assumption, wherein the present Tsar was crowned—or, rather, crowned himself, as is customary with the autocratic monarchs of Russia—following a long line of ancestors from Ivan IV. onward, is one of the most venerated of the sacred buildings of the Kremlin, and is the State Cathedral. Its exterior is not particularly impressive, nor is it especially of large dimensions; but its interior is richly decorated, with a lavish use of precious stones and metals, and is remarkable for its ikons. Among the latter is the exceedingly highly-prized Mary of Vladimir, which is regarded as miraculous, and is attributed to St. Luke. Be this as it may, this ancient picture, which was taken to Moscow at the time of the Tartar invasion, having previously come from Constantinople, has for ages been held in the deepest veneration both by Tsars and peasants alike. Any artistic merit it may ever have possessed is now hidden beneath the exceedingly rich garniture of precious jewels with which it is encased, the gems alone being valued at upwards of £100,000. Another of the many ikons is also said to be the work of the Apostles, but I lay no claim to any special expert

knowledge in Art, and did not make the attempt to trace its history.

The Cathedral of the Archangel Michael contains the remains of the Tsars who reigned prior to the time of Peter the Great, all the Tsars since the founder of St. Petersburg having followed that monarch to his burial place in the Cathedral of St. Peter and St. Paul, in the capital. The Cathedral of the Annunciation is more picturesque and more elaborate in style, and is more closely associated with the daily life of the royal palace, in close proximity to which it stands. All the churches are replete with relics of various kinds ; and the Church of the Transfiguration has additional interest from the fact that it is said to occupy the site of the first building ever erected on the hill on which the Kremlin stands.

The Grand Palace of the emperors is a fine, comparatively modern building, constructed of white stone and surmounted by a gilded cupola, and has, in fact, only been erected some 60 years. There is also a smaller royal residence within the Kremlin walls. The Monastery of the Miracles stands between the two palaces, and is a mean, straggling, dilapidated-looking building from the outside, and I had not an opportunity of visiting the interior, which, I was told, was well worth doing, but not easy of accomplishment. The State rooms are still used by the head of the Church in Moscow. The Convent of the Ascension is close by, is also of ancient foundation, and is the burial place of the wives and sisters of the Tsars. There is a fine open space known as Senate Square, where are situated various buildings, differing in character and in degrees of antiquity. These include what was formerly the Senate House, a huge rambling structure, which has been converted into the Law Courts ; and facing this is the Arsenal, a large but very commonplace building. The newest addition to the prominent features of the Kremlin is the magnificent and imposing monument which has been erected to the memory of the Tsar Alexander II. Rising above all other structures within the Kremlin is the great campanile of Ivan Veliki. From the dome of this tower, which rises to a total height of 328 feet, a magnificent view is obtained of Moscow



MONUMENT TO MININ AND POJARSKY IN MOSCOW.

as a whole in its picturesque splendour. The scene is one the memory of which I shall ever retain, and which cannot imaginably pass away from the recollection of anyone who has once gazed upon it. Standing upon a pedestal near the foot of this tower is the far-famed Tsar Kolokol, or, as it is known to us, the Great Bell of Moscow, which, cast some three or four centuries ago, stands 26 feet high, is 68 feet in circumference, and weighs 185 tons—or did, for a fragment weighing some 11 tons is broken away, and has been left lying apparently where it fell, now some two centuries ago. There are a great number of other bells in Moscow, some of them of huge size. I should imagine that on occasions of high festival, or at any time when the cathedral and church bells are set in motion simultaneously (one of those in use weighs as much as 64 tons), the volume of sound set up must be tremendous; and that, although the effect would doubtless be very fine if heard at a distance, the din in conjunction with the noise of traffic upon the cobbled streets and roadways, must be not a little trying to persons not absolutely devoid of nerves.

There are many curious specimens of old-fashioned cannon to be seen scattered about Moscow, and especially in the neighbourhood of the Arsenal, where they number about 1,000 of varying kinds and sizes. These include 365 of the 400 guns which Napoleon took with him upon his ever-memorable march, and only nine of which he succeeded in bringing away with him at the termination of that, to him, campaign of dire disaster.

Outside the walls of the Kremlin, Moscow radiates in circles, as it were—the ancient, or “Chinese Town,” confined within its walls being sharply cut off from the “White Town,” with its shops, large dwelling-houses, and public buildings and institutions; and beyond this, again, the “Earthen Town” stretches to the outer ring of boulevards. Still further beyond, the suburbs commence, and these stretch so far away in the distance as to resemble the open country, until checked by the ramparts which enclose Moscow with their circumference, which measures nearly 40 miles. It will thus be seen that while the Kremlin, the heart

of Moscow, is closely packed with most of that which is greatest and most interesting in its history, the city itself is true to the general characteristics of Russia, and comprises vast distances and general spaciousness. It is, in fact, a huge city, only second in size, I believe, to our own capital. A good deal of this space is, however, at present only sparsely occupied, and this feature of openness, if one may so describe it, is increased by reason of the several eminences which the city embraces. Moscow has often been likened to an immense village ; and, as regards some portions of it, I am not sure that the description is an inapt one. In some sections of the city there are many houses built of wood, often having only one storey, and strips of garden, small lakes or ponds, with numerous trees, and occasionally even a field, so that those characteristics are not lacking which, as a rule, go to make up the usual village scenes. The appearance and habits of the residents in these localities, also, are not out of keeping with the illusion, which, however, is feasible only as regards a limited portion of this far-spreading city. But it matters not what it be called, Moscow is Moscow ; and it has been well said that nothing in Moscow is quite like anything anywhere else.

In referring shortly to a few of the more notable objects in Moscow outside the Kremlin, mention must first be made of the extraordinary Vassili Blajennyi Cathedral, than which no more amazing edifice was probably ever erected. It is one huge jumble, apparently without design, all sorts of architectural styles being mixed in confusion, without aim or design. Whether or no it be true that the distorted brain of Ivan the Terrible is reflected in this most weird of buildings, I cannot say ; but, to whomsoever it owes its origin, the effect is, at all events, unique, and may well impress those who behold it in varying ways, as it undoubtedly does—some becoming almost enraged at what they regard as an architectural monstrosity, while others, accepting it as wildly grotesque, welcome the opportunity of witnessing that which is without compeer among the ecclesiastical architecture of the world. The domes, of copper, painted lead, and three-cornered piles, are made to suggest the distortion of growing things, such as pine apples, pears, lemons, artichokes,



A MOSCOW CHURCH



THE CHURCH OF BASIL THE BLESSED IN MOSCOW

and so on, which are produced not merely in form, but, as far as may be, in colour also. The interior is peculiar also, and there are a large number of chapels of various shapes and sizes ; and, altogether, without attempting further description, it may safely be said that this is one of the most remarkable churches in the world.

Of quite a different character is the fine Temple of the Saviour, which was built as a thanks-offering and to commemorate the failure of Napoleon's campaign. A cathedral was commenced with this object in the year 1817, five years after the event, but ten years later this was abandoned. Yet another ten years appear to have elapsed, and then, in the year 1838, the present building was commenced and was completed as recently as 1881. It is a splendid edifice of white marble, of large dimensions and well-proportioned, and its huge gilded cupola is noticeable at a great distance.

Other important buildings and institutions in Moscow include a splendid university, which has a very valuable library of 200,000 volumes, and exercises much influence upon the intellectual life of the whole Empire. The Agricultural College, Commercial Academy, College of Music, a free University for Women, the higher technical school, various museums, numerous colleges (both for boys and girls) are among the public institutions of Moscow, besides innumerable private educational establishments and other institutions of all kinds, each making for further improvement, intellectually and in other directions, and consequently for the future development of the Empire.

And this brings me to the other Moscow, to which I made passing allusion earlier on. The Moscow of the Kremlin, if I may so call it, is essentially Moscow of the Past ; and however ennobling, however interesting may be that past and the study of it, Moscow to-day is unquestionably awakening very rapidly to the possibilities, indeed, the practical certainties, of the future which lies immediately before it. Moscow, of course, retains still, in its general appearance, the marks of its antiquity, and its streets are not laid out with that architectural correctness and modernity which characterises St. Petersburg. The process of

modernising must, of necessity, be gradual, and even the most go-ahead and up-to-date pioneer of commerce would surely wish that every regard in this respect should be paid to the unique character of the city. Thus, at present, we find palatial new buildings jostling side by side with those more picturesque, perhaps, but certainly somewhat dilapidated and ramshackle constructions which have formed the Moscow of the past; just as in its streets and thoroughfares and public places one finds the still only half-civilised mouzhik, in his unsavoury sheepskins, mixing freely amongst the smart and up-to-date commercial and business population, and going about unconcernedly amidst the crowds of well-groomed men and elegantly-dressed ladies of modern Moscow.

The twentieth century is unmistakably leaving its mark upon Moscow in no uncertain manner. Moscow has, of course, long been a centre of commerce and trade, and, to an extent, of manufacture for generations. It cannot be said, therefore, that these are being introduced exactly, although they are being so extended and modernised, that that which was formerly merely domestic is now becoming general and cosmopolitan, and embraces a considerable foreign element.

It will, doubtless, come as a surprise to the great majority of people in England to hear that there are to-day in Moscow cotton factories as up-to-date in their equipment as any in Lancashire, and giving employment to vast numbers of spinners and others. These factories certainly are something of a revelation to those who can only yet associate the name of Moscow with mediæval times and regard it as an interesting city, not troubling much about the affairs of to-day, but dwelling more upon those of the past. If you happen to be in the neighbourhood of these mills, as I was one day, at a time when the operatives are leaving work, and see the multitude of them—as many as 10,000 to 15,000 being employed in one mill, I was informed—I know of nothing more calculated to bring home to one the reality that Moscow is indeed awakening and advancing to take her place among the great cities of the modern world.

The value of land in Moscow is increasing with great rapidity.



STREET IN MOSCOW



A STREET IN MOSCOW.



A MOSCOW THOROUGHFARE.

There is much speculation in land going on just now, and building operations are being pushed forward with almost feverish haste, there being credit institutions of various kinds which do much to aid in these operations. An exceedingly busy scene is presented on the Exchange also, where among the bustling crowds are to be seen men of almost every nationality, prominent among the foreign element being, as throughout Russia, many Germans, whose keen business instincts are fully awake to the rapid development which is taking place here.

I noticed, too, and was particularly struck by the fact, that this rapid transformation of Moscow is now being furthered and participated in by all classes of the community. Even the Slavophiles, who until well within the last half-century, were the sworn foes of anything tending to further European enlightenment and the modernisation of Moscow, are now giving up wrangling about the proper place Moscow should occupy in the history of the past, and have, with no little vigour and energy, turned their attention to the proper equipment of the modern Moscow to take her place as the centre and heart of the modern Empire. For such, in my opinion, Moscow is undoubtedly destined to become. Her situation, if nothing else, marks Moscow out for this. She is already the principal centre of the railway systems of the Empire, and with the expansion of trade and commerce in all directions, and particularly the immense strides which are taking place in developing the Empire to the eastward in Siberia, everything points clearly to Moscow, the ancient capital of mediæval Russia, becoming in the near future the capital in reality, if not in name, of a new empire founded upon the basis of commercial activity and industrial enterprise.

That such a new era is dawning in Russia I have not the least doubt; and be its development gradual or instantaneous—I myself believe that enormous strides will be made in the immediate future—there cannot, I think, be any sort of question that Russia has entered upon a new era, which must assuredly place her in that position amongst the nations to which she rightly aspires, not only because of her geographical position and of the vastness

of her extent, but also by reason of her great and varied interests, the immensity of her mineral wealth, and the almost illimitable resources which she has at her command.

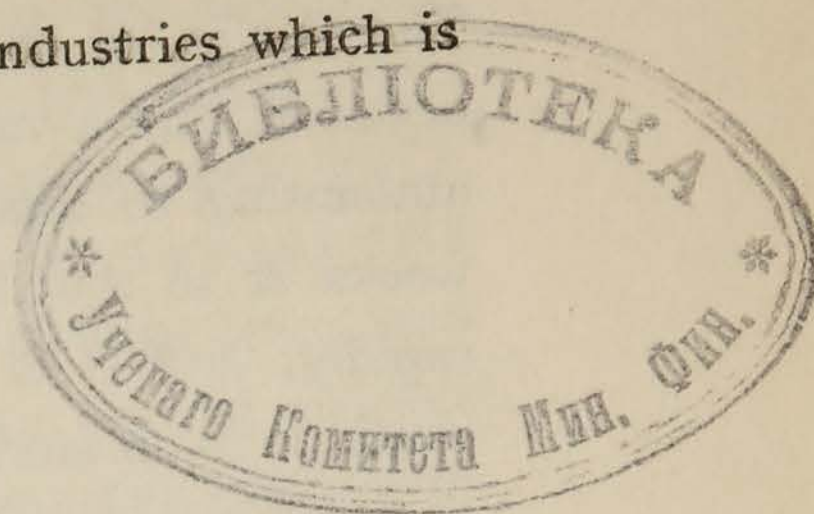
WARSAW.

WARSAW, formerly the capital of Poland, and now the chief town of the Vistula Province, is a very handsome city, and also an important one in many respects. Beautifully situated on the bank of the River Vistula, the principal part of the city stands on a plateau or terrace, some 100 feet above the river: it contains about three-quarters-of-a-million inhabitants, of whom many are Jews, and there is also a strong German element. Across the river, which is spanned by two fine bridges, is Praga, a pleasant suburb of Warsaw. Warsaw is an important railway junction, with five railways radiating from it, and is rapidly developing in importance as the chief industrial and commercial centre of the western portion of the Russian Empire. Its chequered history notwithstanding, Warsaw is one of the pleasantest and most animated cities in Europe, with a great number of places of amusement, fine squares and gardens, and a great number of splendid buildings. These include no less than 150 palaces, many of which belong to the old Polish nobility, and there are also several cathedrals and some couple of hundred churches, many of them of great size. There is a University and numerous other educational foundations, of which the Musical Conservatoire is famous throughout Europe; also scientific institutions of all kinds, a remarkably fine library and Museum of Art, the two latter still being of much interest, notwithstanding the tribute they have been called upon to pay to enrich similar collections at St. Petersburg.

As regards its industries, Warsaw is rapidly going ahead in the manufacture of iron and steel, and also of boots and shoes, hosiery, gloves, plated goods, carriage building, &c. A large trade is also done in corn, coal, leather, wool, hops and other commodities; and Warsaw will, without doubt, take a prominent

part in the great development of trade and industries which is taking place throughout Russia.

NIJNI-NOVGOROD.



FEW places in Russia are better known, at least by name, or appeal more strongly to the imagination of the foreigner, than Nijni-Novgorod, or Nijni, as it is more often called by Russians themselves. Everyone knows of the far-famed fair which is annually held there, and which affords one of the most remarkable sights in the whole world. Nijni is some 270 miles east of Moscow, and is an interesting town, well placed at the juncture of two fine rivers, the Oka and the mighty Volga. The city may be said to consist of three clearly defined parts. Of these, the upper is the most important, and is very picturesquely situated, covering three craig-like hills, which rise sharply to a height of some 400 feet. Here is the Kremlin (the wall surrounding which is more than a mile-and-a-quarter in extent), and also the finest streets and public buildings. Within the Kremlin are the Governor's residence, the arsenal, barracks, law courts, monasteries, and two cathedrals, the Preobrajenski and the Arkhangelski. These latter are not very impressive edifices, but they contain many interesting relics of the past. There is also a fine square containing the monument to Minin and Pojarsky, the former of whom, the hero of Nijni, is buried in the Preobrajenski Cathedral near by. One of the monasteries is an object of great interest to vast numbers of pilgrims, who visit it annually and gaze upon a sacred picture which is said to be the oldest in Russia, and to date from the year 933.

Several sharp descents lead to the lower town, where is the harbour, with numerous stores and warehouses, and where a very considerable volume of commerce is transacted, especially in fair time. The place where the fair is held forms the third section of the town, and is a flat sandy expanse lying between the two rivers, connected with the town by a bridge of boats.

The fair is, of course, still a most interesting and picturesque occasion, and a vast amount of business is still transacted at it, amounting to some £20,000,000 to £30,000,000 during the six weeks or so that the fair lasts. But its importance is waning rapidly, and it is practically certain that the diminution will continue in an increasing degree, now that more modern methods of commerce are developing and spreading with such rapidity, now that Nijni itself and the whole district, is in much closer touch with Moscow, to which city much of the business of the fair has already been transferred. Nijni-Novgorod is, however, likely to remain an important business city under modernised methods, for which its situation and its fine waterways well qualify it. It has a normal population of some 100,000, which is, however, increased by as many again when the fair is in progress. It may not be so well known, but the town is also an important educational and intellectual centre. The colleges and schools are very numerous ; there are no fewer than 15 libraries, mostly free, and one of them is exceptionally fine ; there are also several museums, with excellent art, historical, and scientific collections.

KIEFF.

KIEFF is one of the oldest and most-venerated towns in Russia, and is also one of those which, under the changed conditions, is likely to occupy a position of considerable importance in the future. Placed in the south-western portion of the Empire, on the highway between Moscow and Odessa, Kieff stands on the banks of the River Dneiper, and has a population of about a quarter-of-a-million, which is increasing rapidly. Like all Russian towns, it covers much ground in proportion to its population ; in fact, a stroll round the outskirts of Kieff involves a tramp of some 32 miles. Kieff has, not inaptly, been called the Canterbury of Russia, for here missionaries from Byzantium first planted Christianity upon Russian soil ; and its cathedrals and churches and monasteries are amongst the most revered in Russia, and are annually visited by immense numbers of pilgrims, who prostrate themselves before the highly-prized holy ikons in its

churches, and the relics of saints and martyrs in the catacombs of the monasteries. The town is picturesque, and stands on a succession of hills which rise about 350 feet above the river, which is here navigable, the tideway varying to such an extent that in the past much inconvenience and no little damage have been caused by floods. To cope with this difficulty, and to connect the different sections of the town, a magnificent iron suspension bridge has been constructed (the material for which, by the way, was manufactured in England), which is about half-a-mile in length and is regarded as one of the finest of its kind in Europe. The old town occupies the highest of the hills ; and in the centre of it stands the far-famed cathedral of St. Sophia, the oldest in Russia, the interior adornment of which is strongly reminiscent of the Byzantine founders of the city. A peculiarity of this famous church is that its breadth is greater than its length, it being 173 feet wide and only 118 feet long. The Kievo-Petcherskaya Monastery is a huge structure, the largest of its kind in Russia, and another famous monastery is that of St. Michael, or the Golden Heads, so called because of the 15 gilded cupolas of the original church. There are many other sacred edifices in Kieff ; while its educational and scientific institutions rank next to those of Moscow and St. Petersburg. The University has no fewer than 3,000 students, and it is well equipped with libraries and museums. While still retaining its emblems of antiquity, however, Kieff is rapidly becoming modernised, and developing as an industrial centre. Many miles of electric and steam trams have been constructed ; telephones and modern appliances generally have invaded the ancient city ; and upwards of 100 factories of various kinds are in full swing. Indeed, while Kieff must ever hold a foremost place in the history of the past, it is equally certain to occupy a prominent position in the commerce and industry of the future.

OTHER IMPORTANT TOWNS.

THROUGHOUT the Russian Empire there are upwards of 1,300 "towns," officially so-called ; but of these quite three-fifths are

very small, having, in fact, populations of less than 5,000 each ; others range up to 25,000 ; and few have as many as 100,000 inhabitants. I must make mention, however, of such places as Warsaw, Kieff and Nijni-Novgorod, not only on account of their interesting past and present importance, but also because of the great part they are bound to play in the new commercial era which is opening up before the Russian Empire.

CHAPTER VIII.

RUSSIAN RAILWAYS.

INTERVIEW WITH THE ASSISTANT MINISTER OF WAYS AND COMMUNICATIONS.—GOVERNMENT AND THE PEASANTRY.—DUPLICATION OF THE TRANS-SIBERIAN RAILWAY.—THE RUSSIAN RAILWAY SYSTEM.—THE STATE RAILWAYS.—GUARANTEES TO PRIVATE COMPANIES.—PROJECTED NEW LINES.

AS this chapter is to be about Russian railways, I cannot commence it better than by recording an interview I had, mainly, though not entirely on that subject, with his Excellency Privy Councillor V. Miassoyedoff-Ivanoff, the Assistant Minister of Ways and Communications.

During my visit to Russia I was fortunate in obtaining several interviews with Prince Khilkoff, and of hearing from him much of the early history, construction and working of the Trans-Siberian Railway, but from a variety of causes I was not able to see the present Minister of Ways and Communications. This I regretted the more at the time because I was anxious to obtain some indication of the policy of the Government in reference to the extension of this great railway. Was it intended to duplicate

the present line or to build a road parallel to the present line anything from 50 to 100 miles away? Two single lines obviously would not give anything like the carrying capacity of one double track, but, on the other hand, the construction of a railway through an entirely new country would unquestionably have great economic advantages.

I left St. Petersburg without being able to ascertain with any degree of certainty which of these schemes would be adopted, but I am happy to say that I am now able to give a tolerably clear indication of what is intended.

Privy Councillor V. Miasoyedoff-Ivanoff, the Assistant Minister of Ways and Communications, had been on a short visit to London, and I was privileged to hear his views upon the subject. M. Miasoyedoff-Ivanoff is peculiarly qualified to speak with authority, because he has held his present position for the past eight years. Like every other Minister I had the good fortune to meet whilst in St. Petersburg, he is a man of distinguished appearance, possesses very great charm of manner, and speaks French with great purity. I reproduce the conversation in the first person because it more exactly conveys his Excellency's views.

The first question I asked was whether this was his first visit to London.

"No; I was here 40 years ago. I do not recognise London, it is so changed; but there is one thing that has not changed—I do not see any difference in your fog. When I was here before it was for the purpose of purchasing iron for a bridge on the Caucasus. At that time we did not manufacture our own iron. I remember that I placed the order with Cochranes, of Dudley, and I may mention that the bridge made from this iron is still in existence. It is at a place called Vladikavkas."

"Would it be indiscreet to ask your Excellency if you have any more orders for iron in your pocket?"

"My visit," was the reply, "is strictly an unofficial one, and of a private character."

Our conversation here turned upon the rumours of the intention of the Russian Government to issue a new loan, and he

denied that there was any immediate intention to issue a foreign loan, and time has shown that was the case. He also expressed his views on the elections of the Third Duma, which were then in progress. I asked him :

“ Do you think it possible that the present Duma can satisfactorily solve the Agrarian question ? This, I understand, is really at the root of much of the trouble ? ”

“ I hope much will be done towards solving it. I may say, in this connection, that for some time past the Government have been receiving applications from the peasants to provide them with independent holdings of land. As you know, the greater part of the land in Russia is held on the communal principle, but there is abundant evidence to show that this system no longer continues to work well. To show how strongly this is felt, I may mention that now hundreds of thousands of applications are being received from the peasants themselves to do away with this system, and to provide means for them to hold the land individually.”

“ What is the attitude of the Government towards this movement ? ”

“ The attitude is a very favourable one, because it is recognised that if the land were independently held it would result in large bodies of peasants being formed all over the country with conservative ideas and principles. The influence of these would be thrown in the direction of opposing any violent revolutionary changes. Each peasant would then be a small property-holder, directly interested in the stability of existing institutions, and decidedly opposed to any extreme changes. So strongly is this the view of the Government that they are doing all they can to carry out this policy, even to the extent of giving financial aid.”

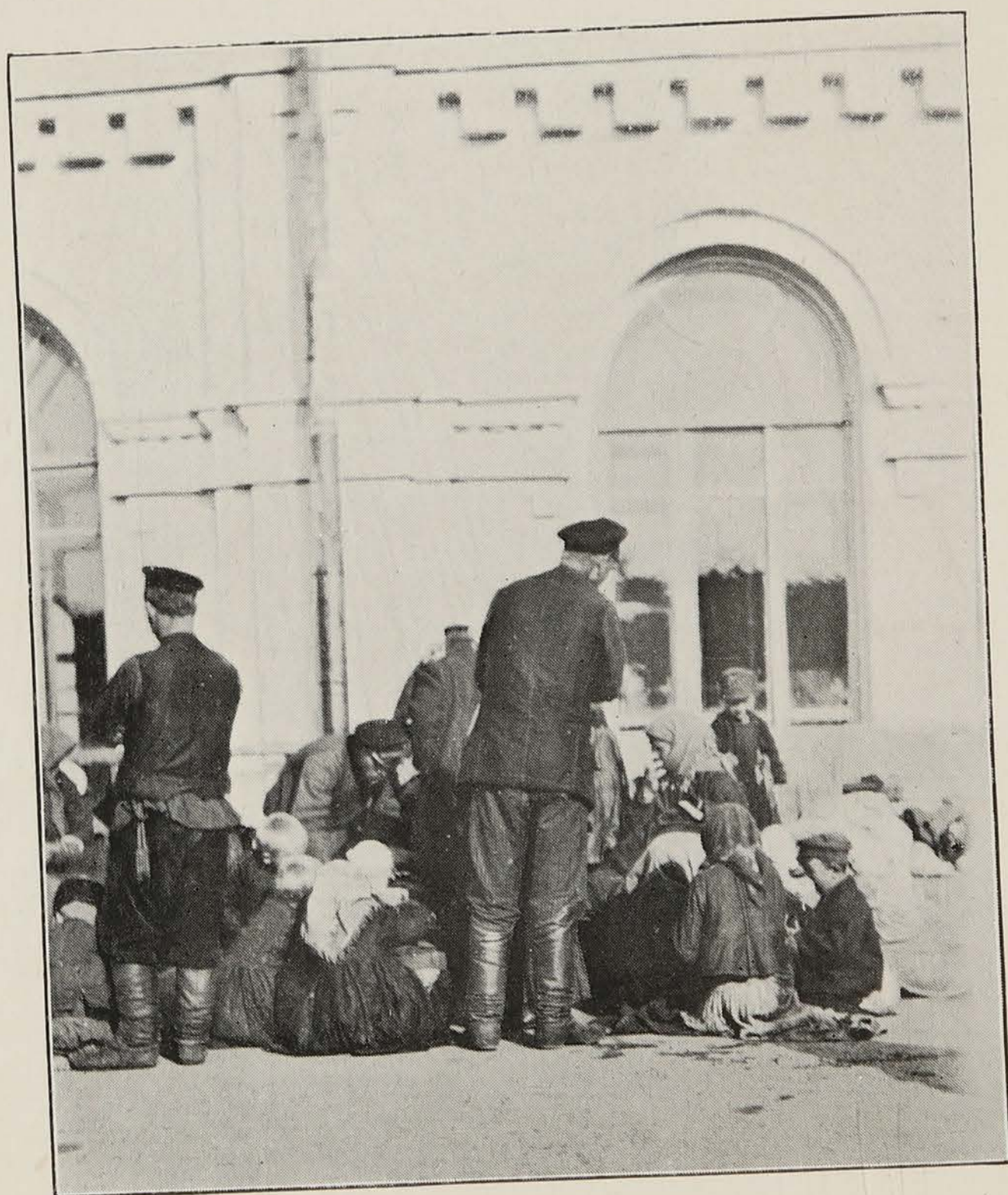
“ Can you tell me whether the immigrants who have been pouring into Siberia have become a part of the existing communal system, or have the Government inaugurated their new system by giving them independent holdings ? ”

“ Whenever and wherever possible they are receiving independent holdings. It is not a question of a sufficiency or an

insufficiency of land. In most cases, were the peasants to get more land, it would lie fallow and would soon be covered with weeds. What is really wanted is better cultivation. This is becoming more evident every day, and even the peasants themselves recognise it. I do not think it is realised generally how earnest have been the efforts of the Russian Government to remove the people from the congested districts to the splendid land awaiting agricultural development in our Siberia. It has not been an uncommon thing for us to dispatch as many as 14 to 15 trains of emigrants a day, and as each train carries not less than 800 emigrants, with many of their effects, you can understand what a great strain this has been to our Siberian railway, and it has, of course, very much interfered with the ordinary traffic in merchandise and grain. As you know, the number of trains it is possible to send on a single line is strictly limited."

"This brings me to a very interesting question. It is: Does the Russian Government propose to duplicate the present line of railway or build another line parallel with it?"

"The Minister of Communications has worked out an absolutely definite programme, to be submitted to the Duma, for increasing the transporting capacity of the whole of the railways of Russia, and also for the purpose of utilising our magnificent waterways. I may add that they propose to ask for 900,000,000 roubles, or £90,000,000 sterling, to be spread over five years, for this purpose. This sum is, of course, altogether apart from what is ordinarily applied for the improvement of our railways. This 900,000,000 roubles, after all, is not a very extravagant sum, for up to now the yearly expenditure on new railways and extension of existing railways has been only a little under 150,000,000 roubles a year. As a matter of fact, in some years we have spent considerably over this amount. Occasionally the expenditure has been 250,000,000 roubles a year. In regard to the Trans-Siberian Railway, we have already commenced to duplicate what we may call the difficult sections of the line. But this is not all. Our plan is to build another line through entirely new country, from Teumen to Omsk. Omsk,



EMIGRANTS.

as you know, is on the Trans-Siberian Railway. Between Omsk and Nerchinsk we shall duplicate the line. From Nerchinsk we shall build a new line to Khabarovsk. This is, of course, the other side of Lake Baikal. At present, as you know, part of the Trans-Siberian Railway—or shall I say Trans-Baikal Railway?—passes through Chinese territory. Now, the line from Nerchinsk to Khabarovsk will be entirely in Russian territory; from that place there is a line already to Vladivostock. Khabarovsk is a town, as you will observe from the map, on the Amur River."

"May I ask your Excellency how it is proposed to raise this £90,000,000 sterling?"

"This matter has not been discussed, and therefore there is no decision upon the subject. It will be put before the Duma. We are quite satisfied that the money can be provided, and this is as far as we have gone for the moment. I should like to further refer to the importance of the improvements we propose to effect in the waterways of Siberia. These improvements will be effected in those parts of Siberia which we are now settling with emigrants from the congested districts of Russia. The effects of these improvements and regulations will be of a very beneficial and far-reaching character. Not only will the railway be relieved, but by the utilisation of the waterways a very large amount of cheap transport will be available to assist in the opening up and development of the agricultural resources of the country."

"This brings me to a further very interesting question, and that is in regard to the expected revenue from this railway extension?"

"We cannot expect to make these improvements yield at once a sufficient revenue to pay during the first few years. But afterwards we are absolutely confident that the railway will prove to be a highly remunerative investment. I should have stated that the 900,000,000 roubles (£90,000,000 sterling) covers not only the construction of the railway but the provision of rolling-stock and full equipment of the line. In the old days we used to think that a railway required to be in operation for ten years before it would really pay; but, with the great development that may

be expected in the future, we hope that this period will be greatly shortened."

"May I ask whether Russia is in a position to supply the rolling-stock and rails for the extension of the Trans-Siberian system, or must there be recourse to foreign manufactures?"

"We think that our own people will be able to supply us all that we require, and we also, naturally, think that the ability of the Government to give these large orders will greatly stimulate and encourage our own native industries. I may add that we have had many proposals from abroad with regard to supplying rails and rolling-stock, but up to now the Government has not entertained any of them."

"I am particularly anxious to again emphasise the fact that the expenditure of the 900,000,000 roubles does not present any very extraordinary aspects. It is not an ambitious sum, and its expenditure is extended over five years. Its provision should not present any difficulties. I wish to make this clear, because the Government recognises that several of the new railways built in recent years have not yet been brought to the point where they become remunerative. It is not, therefore, the intention of the Government to go too quickly."

"May I ask if the Russian Government are prepared to encourage the private construction of railways, apart from existing State lines; and also whether Government guarantees for a portion of the capital would be forthcoming on approved enterprises—or, in other words, is there any Constitutional objection to foreign capital starting railways in Russia?"

"At the present time the prevalent opinion is that the new railways should be built by private enterprise, provided either at home or abroad. Up to now the Government have always given guarantees in regard to a portion of the capital required for the construction of these railways, except in the case of a few small and comparatively unimportant enterprises."

In conclusion I asked his Excellency a question as to whether he considered the political situation in Russia was improving. He replied by giving an emphatic expression of opinion that the political condition of Russia had been improving for some time,

and was continuing steadily to improve. With the return of the Duma, consisting of a majority of members known to be loyal to their Sovereign, there was every reason to believe that Russia was now on the eve of a period of tranquility, of revival of confidence both at home and abroad, and of an important financial and economic development.

This interview may serve as an introduction to some particulars respecting the Russian railway system.

Thanks to the enlightened policy of the Government, which recognises that adequate means of communication are essential to the development of Russia, great progress has been made in recent years in the work of improving the roads, canals and railways of the Empire. In regard to waterways, and to macadamised roads of national importance, it is sufficient to say that they are constructed and kept up exclusively at the expense of the State. In Russia there are no canals owned by joint-stock companies, like the Manchester Ship Canal in England. Roads of local importance were formerly built by the Government, but now their construction and upkeep are provided for by local finance (*i.e.*, by the resources of the *Zemstvo*, or local self-government, where it exists, and the resources of the provincial authorities in those districts where local finance is not in the hands of elected representatives). In the Budget of the Empire there are, annually, assignments of up to 11,000,000 roubles for waterways, and about 9,000,000 for macadamised roads. The expenditure of local finance on roads of local importance amounts to 9,000,000 roubles per annum.

Including Central Asia and Siberia, but exclusive of Finland, the Russian railway net stands second only to that of the United States.

According to a statement in the *Novoe Vremya*, on January 24th, 1908, the entire railway system reached a length of 61,003 versts, having been increased in the course of the year 1907 by 1,760 versts, mainly made up of new Government lines in the north from St. Petersburg to Viatka, *via* Vologda. The proprietorship of the Russian railways is divided thus: Government 40,895 versts, and private 17,159 versts, whilst there are

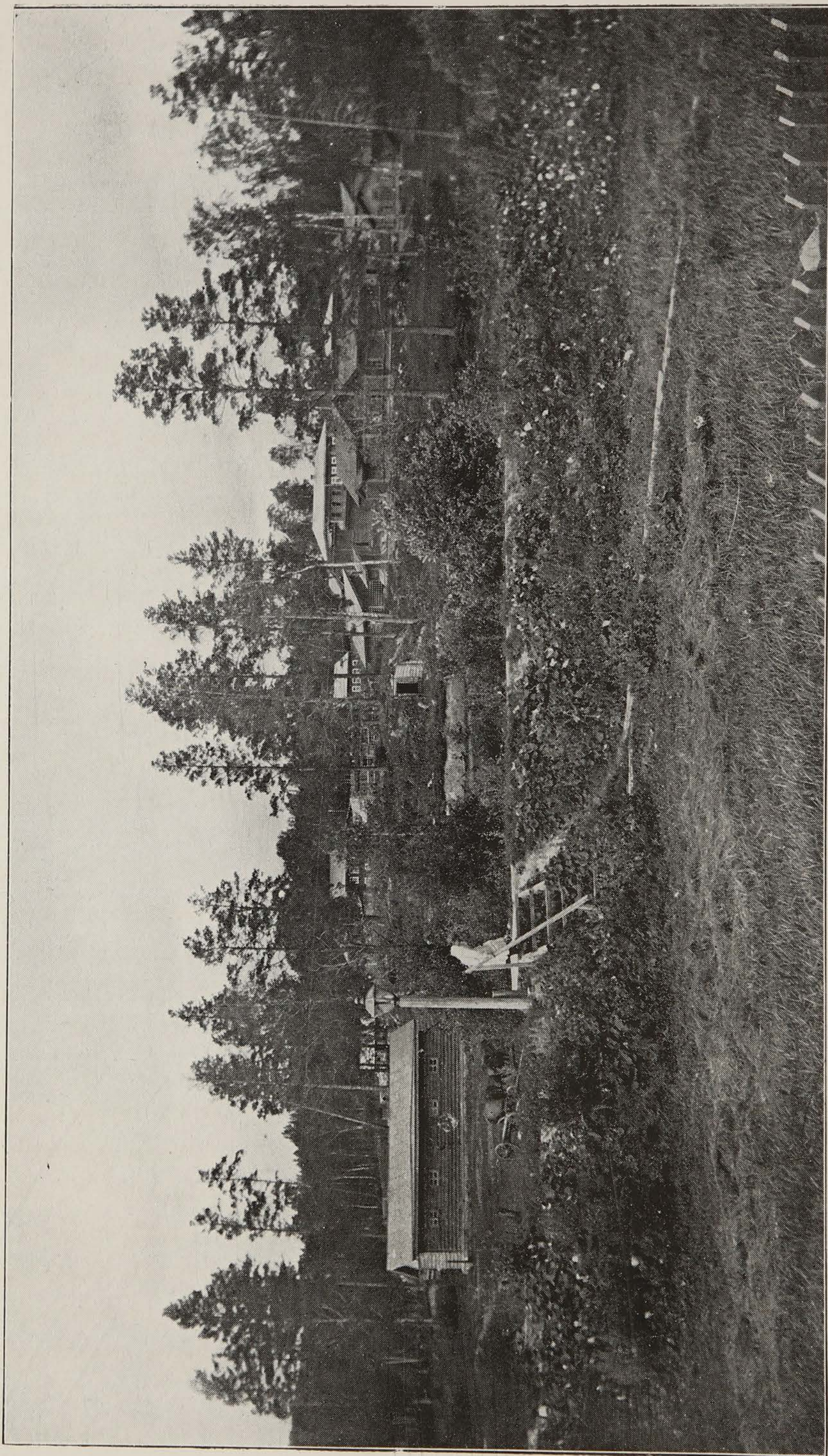
2,113 versts of railway of purely local interest. During 1907 there were 2,415 versts of railway under construction, of which 833 consisted of a second track along the Siberian Railway. During this year (1908) the length of State railways will be increased to 41,188 versts.

The passengers carried in 1907 on the State railways numbered 96,028,000, and the goods carried weighed 6,580,346,000 poods. The receipts for carriage amounted to 489,000,000 roubles.

In Russia the expenses of building, extending and improving railways are covered by special resources, some of which are never employed for such purposes in the rest of Europe and America. Part of the construction, &c., is carried on, as in Western Europe, by means of the share and debenture capitals of joint-stock companies. In a vast majority of cases, the debenture capital is guaranteed by Government, and this is sometimes the case in regard to the share capital also. Of the railways thus built, many were, at various times, bought out by the State, and the holders of the companies' bonds and shares received, in exchange for these, Government bonds specially issued for the purpose. Such bonds are included in the National Debt, forming about 30 per cent. of it.

What distinguishes Russia from Western Europe in regard to railways is the magnitude of the capital expended on railway building and development, without recourse to the issue of securities, but merely from the resources of the Ordinary Budget and its surpluses. In the Ordinary Budget of the Empire there is annually an assignment of 84,000,000 roubles (on an average) for the improvement and increase of efficiency of the State railways, *i.e.*, construction of second tracks, extension of stations, replacing simple bridges by better ones, acquisition of extra engines and cars, &c. As we know, in other countries, such as England for instance, such expenditure is covered by supplementary issues of bonds, so that, while the length of the English railways hardly varies, their debenture capital is annually increasing at a very considerable rate.

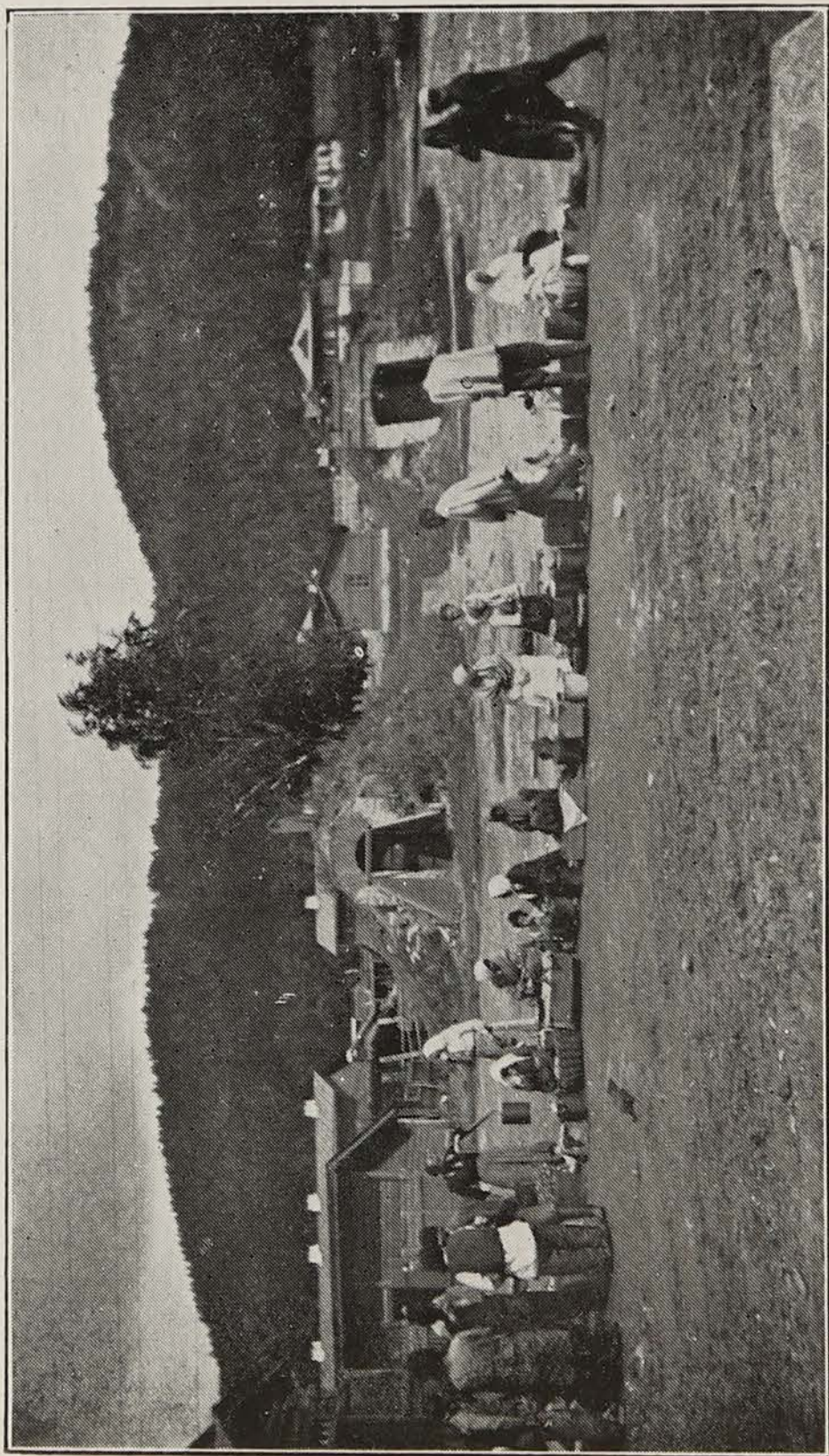
Besides the grants in the Ordinary Budget for the aforesaid purpose, assignments are made under the head of extraordinary



ON THE TRANS-SIBERIAN RAILWAY.

expenditure, to the amount of about 100,000,000 roubles per annum, for the construction of new railways by the State. In the Budget this expenditure is covered by the free balance of the Treasury, but on the fulfilment of the Budget it is invariably found that in the Ordinary Budget the excess of revenue over expenditure is far greater than had been estimated, and the yearly surplus is sufficient to cover the extraordinary expenditure on the construction of new railways. In other words, during the last 10 years the Russian Government spent up to 1,834,000,000 roubles of its ordinary revenue on increasing the efficiency of its railway net, and on building new lines. This may be compared to the state of affairs in a well-known English shipping company, which pays a far lower dividend than its considerable profits would warrant, but annually increases its fleet (or the value of the same) without having to issue new bonds or shares.

Another distinguishing feature of Russian railways is the following: some lines (for instance, the East China Railway) were constructed by so-called joint-stock companies, whose whole share and debenture capitals had been bought up by the Russian Government, no securities whatever being issued to refund the money thus invested by the State. In other words, such lines were likewise built exclusively at the expense of State finance, and the requisite outlay, as well as the expenditure on new State lines, was covered solely by the surplus of the Ordinary Budget. All this will be easily grasped by the reader if he calls to mind the fact that in Asia the Russian Government owns, among other things, 8,000 miles of railway (the Trans-Siberian, Orenburg-Tashkent, &c.) for the construction of which not a single bond or share was issued, and that the East China Railway, although nominally not the property of the Russian Government, is totally unknown to the public by its shares or bonds. This is something similar to the Uganda Railways, which were built practically at the expense of the English Government. But there is this radical difference between the Uganda Railways and the East China line, that for the construction of the former the English Government issued securities entering into



THE URALS.

The following railways are worked by companies :—

	Miles.
Riazan-Ural	2,387
South-Eastern	2,154
Moscow-Kiev-Voronezh	1,551
Moscow-Windau-Rybinsk { St. Petersburg-Vitebsk-Pskoff	832
Novgorod	104
Moscow-Windau	696
Moscow-Kazan	1,395
Vladikavkas	1,555
Warsaw-Vienna { Warsaw-Kalish	162
Warsaw Frontier-Alexandrovsk	309
Bogoslovsk	130
Bielgorod-Sumy	98
Lodz Factory Railway	50
Other lines	1,436
Total	12,859
Grand total (State and Companies' Railways)	41,761

The new lines opened for regular traffic during 1906 were as follows :—

	Miles.
January 1st (o.s.).—Obukhovo-Vologda, Northern Railways	365
January 1st.—Branch to River Sheksna, at town of Tcherepovetz, Northern Railways	1
April 1st.—Kubek-Tashkent, Tashkent Railway	524
April 1st.—Branch to River Syr-Daria, Tashkent Railway	33
April 15th.—Zvanka-Gostinopolye, Northern Railways	8
April 25th.—Andréevtzi-Siedletz, Vistula Railways	116
April 25th.—Branches to Andréevtzi, Gainovka and Tcheremha Stations, Vistula Railways	2
September 1st.—Goroblagsdat-Nadezhdinsk Works, Bogoslovsky Railway	121
September 1st.—Branch to Nizhni-Turinsk Works, Bogoslovsky Railway	8
September 1st.—Branch to Blagodot Mountain, Bogoslovsky Railway	2
September 20th.—Stari-Dorogi-Vertukhino, Libau-Romny Railway	12
October 15th.—Branch from Kalish to Prussian Frontier, Warsaw Railway	3
December 1st.—Vologda-Viatka, Northern Railways	393
December 1st.—Branch to pier at Kotelnitch, Northern Railways	2
Total for 1906	1,590

SECOND TRACKS ON EXISTING RAILWAYS,
opened for traffic in 1906.

	Miles.
January 2nd (o.s.).—Sukhednev-Zagnansk, Vistula Railways	12
April 25th.—Andréevtzi-Siedletz, Vistula Railways ..	116
April 25th.—Branch at Tcheremha Station, Vistula Railways	1
July 1st.—Skarzhisko-Sukhednef, Vistula Railways ..	5
July 1st.—Zagnansk-Kielce, Vistula Railways	10
October 5th.—Malkin-Warsaw, North-Western Railway ..	52
October 15th.—Sinelnikovo-Alexandrovsk, Southern Railways	47
October 15th.—Makoshino-Bakhmatch, Libau-Romny Railway	30
November 15th.—Kielce-Slavkof, Vistula Railways ..	88
Total for 1906	<u>361</u>

I am able to state on the authority of Prince Khilkoff, late Minister of Public Works and Railways in the Russian Government, that the following new enterprises are in principle decided upon :—

1. A second track for the existing Siberian line. The plans and estimates are made, according to which the cost of construction amounts to 140,000,000 roubles.
2. A new railway line in Siberia, to join the existing line with the Far East on the Pacific. Investigations and surveys for this work are in progress. The approximate cost is estimated at 260,000,000 roubles.
3. A new railway line from Tashkent to Tomsk, joining the lines of Central Asia with the Siberian ; surveys are in progress, but are incomplete. The approximate cost is estimated at 120,000,000 roubles.

4. Small lines in European Russia are being started by private companies, some of them being guaranteed by the Government.
5. Two canals between two large rivers joining the Black Sea with the Baltic. All of the existing canals are also to be deepened so as to admit vessels and barges with a draught of 14 feet. This system is planned with a view to the encouragement of local traffic and the transit of small sea vessels from one sea to the other. Preliminary surveys and plans are finished. The approximate cost would be 375,000,000 roubles, including interest for five years, redemption of capital and sundry expenses.
6. Several irrigation canals in Central Asia, to water very good land fit for cotton plantations and other purposes. The entire cost of the system is estimated at 300,000,000 roubles, but, of course, it will have to be executed gradually in small stages.

Capital is also required for various mining enterprises, which abound all over the Empire. In addition to gold, copper, iron and coal mines, naphtha is being located in many new districts.

The capital needed for all the undertakings mentioned above certainly could not be raised in Russia alone. Foreign capital could therefore be placed in that country with great advantage. To a certain extent it would be guaranteed by the Government, if offered on reasonable terms. There appears to be a prejudice among foreigners against forming companies in Russia on account of the supposed legal restrictions. But these difficulties, I am certain, are greatly exaggerated. Indeed, it is questionable whether a foreigner doing business in Russia has not much less to contend with than he would have, for instance, in Germany.

The possibility of connecting the Russian with the Indian railway system has been frequently mooted. It is rather a

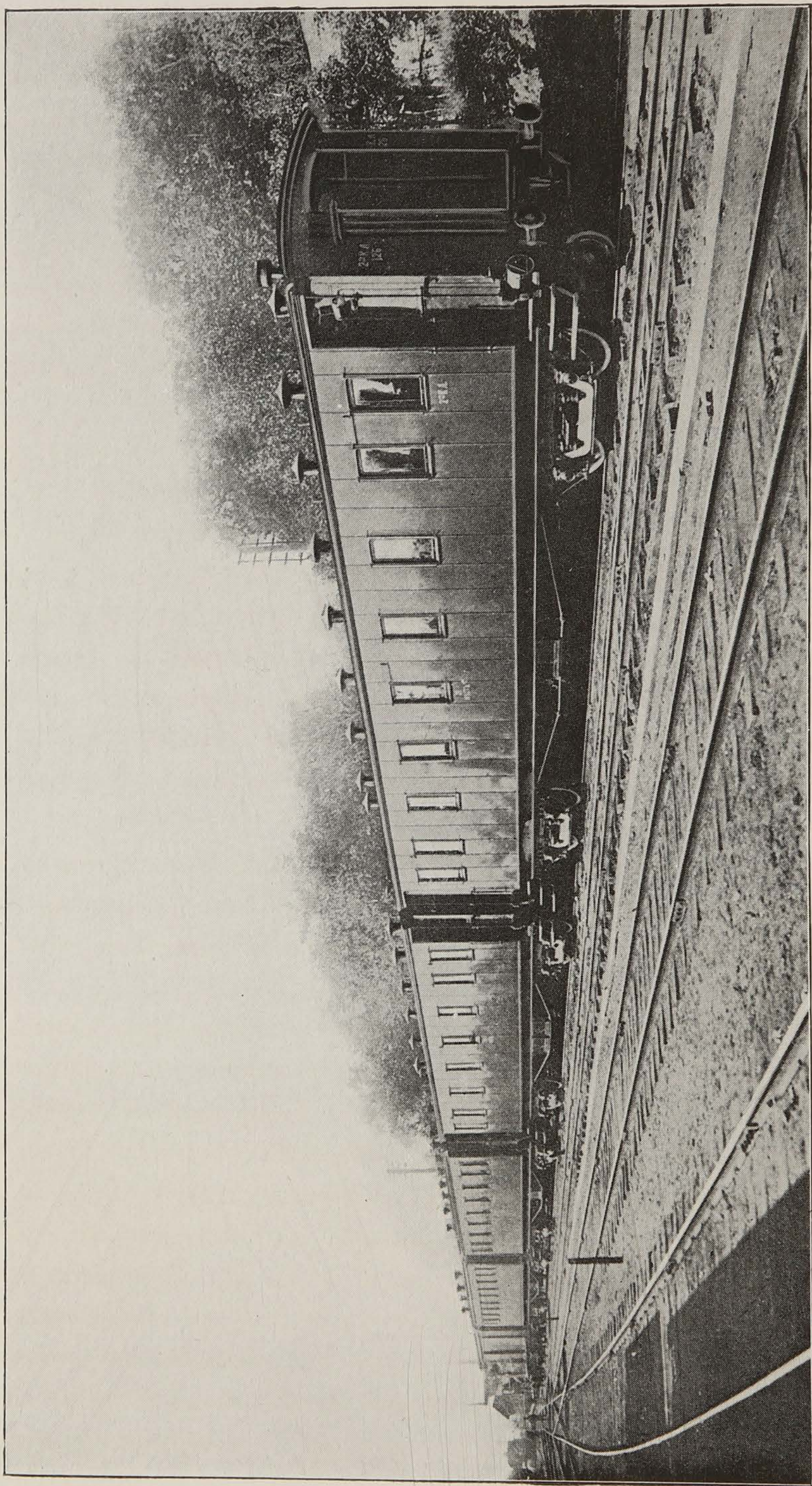
political than an economic question, and has hitherto been opposed solely by the military party in the Russian Government, but, in view of the perfect accord now existing between Russia and Great Britain, military considerations carry far less weight than formerly.

As I began this chapter with an interview with the Assistant Minister of Communications, in which he spoke about the proposed duplication of the Trans-Siberian Railway, I cannot do better than give some further account of that line, and my own experience thereon, and of Russian railways generally.

The journey of 5,527 miles from Moscow to Vladivostok can be undertaken under comfortable, even luxurious, conditions. The trip is well worth making, for it opens one's eyes to the vast potentialities of Greater Russia. Already there are many thriving cities in Siberia, and immigration into that country is being encouraged in every possible way by the Russian Government. When the double-tracking of the Central section of the Trans-Siberian Railway is completed, and the projected line has been built from St. Petersburg to Omsk, the utility of the system will be greatly enhanced.

At present the bulk of the foreign trade with Siberia is in German or American hands, but there are plenty of openings for British manufacturers who are prepared to supply the special needs of the colonists.

My experience of the Trans-Siberian Railway was a fortunate one, and will always remain a pleasant memory. I have travelled over the Canadian Pacific, the Grand Trunk, and on American railways, but have never met with such luxurious travelling conditions as on the great Trans-Siberian express. Not only sleeping but dining cars are provided, and these contain every requisite for a comfortable journey. In the first place, the broad gauge enables the carriages to be made of a width which would be quite a revelation to those accustomed only to the narrow, stuffy carriages in vogue on too many lines in this country. There is a library "on board"; a separate washing-place is provided for every two cabins, and on the trains there is a bath-room with a nickelled bath and a shower. After jolting



THE TRANS-SIBERIAN EXPRESS.

over the country in an open karabok (a sort of clothes-basket slung on poles without springs and attached to four wheels) one appreciates these comforts far more than I can describe. The attendants on the trains are the impersonation of civility and efficiency. Owing to the admirable manner in which the road-bed is graded there is no oscillation, and one glides across the illimitable steppes with no more inconvenience (perhaps less) than would be experienced in a journey on the "tube" from the Bank to the Marble Arch.

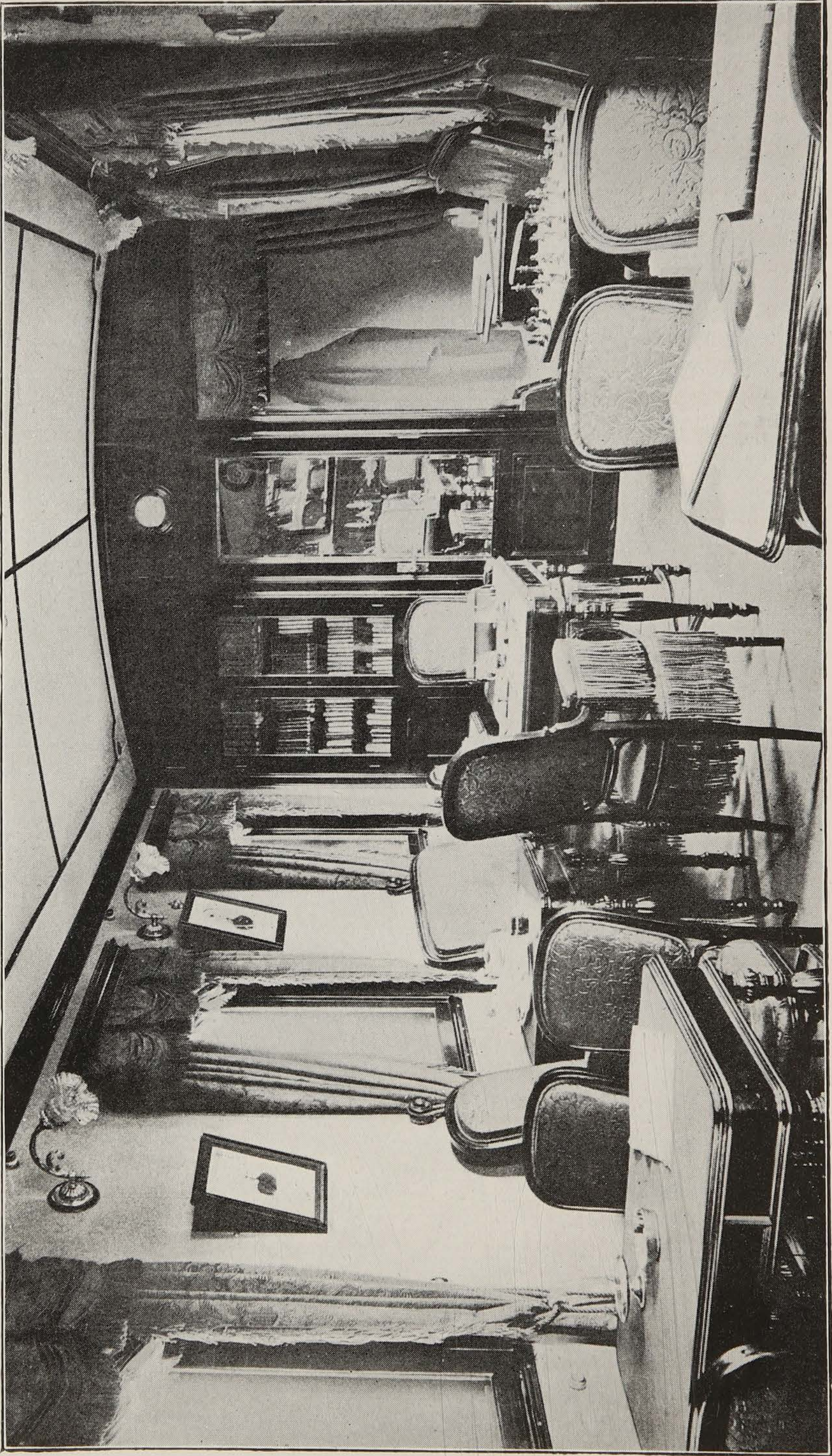
The Trans-Siberian Express leaves Moscow three times a week, and with only one change of cars, at Irkutsk, reaches Vladivostok in a little over 11 days. The total length of the system is 5,527 miles, but this mileage will be greatly extended when the projected new line from St. Petersburg to Omsk, which will afford an alternative and shorter route from this country, has been completed. To those in search of a new experience the journey to Vladivostok may be thoroughly commended. Considering the luxury in which one travels, the cost of the tickets is low. Including sleeping accommodation it works out at about £30 first-class for the 11 days' trip, and between £25 and £26 second-class.

The Russians are not "hustlers," and although some of my American friends were apt to grumble at the leisurely way in which things are done on the railways, the Britisher will not find much cause for complaint, especially if he is travelling for pleasure rather than with a view to beating the clock. Personally, I found it a great convenience to be amply warned of the approaching departure of the train, by the ringing of three bells at intervals of a few minutes. These preliminaries, with the rather cumbrous arrangements for the conveyance of luggage to the vans, involve a stop of about 20 minutes at most stations. But, although this means a slower rate of speed over the whole journey than would be achieved, say, on the Union Pacific, it allows one to obtain a little much-needed exercise. Passengers travelling by ordinary trains, which may not have a restaurant car attached, can obtain boiling water free of charge for making their own tea.

The great railway system which spans two Continents may be said to start from Ostend, where one travels over the Belgian State Railways through picturesque Bruges and Ghent on to Brussels. There you may see indicators "to Berlin and Siberia," and accordingly we take train through the German capital on to historic Moscow. This is the true "Gate of the East," for there the Siberian system proper commences. It is at present a single-track line, with the exception of a small section near Irkutsk, but within the next few years the whole of the Central section, from Omsk to Lake Baikal, will be double-tracked. After leaving Moscow the line passes in a south-easterly direction through Riazan to Riajak, where the junction is effected with the system serving the Southern Governments and Trans-Caucasia. Thence we turn almost due east to Samara in the Volga valley. The crossing of the Volga by a single bridge on the cantilever principle, perched high in the air over a tremendous gorge, is a little trying to the nerves if you are not used to it, and the train crawls slowly across the chasm, apparently afraid of creating too much vibration. Beyond Ufa we get into the Ural Mountains, the scenery of which provides a welcome relief from the monotonous plains.

Cheliabinsk, on the eastern watershed of the Urals, is important as the distributing centre of the immigration into Siberia. I saw many of these immigrant trains, the passengers packed together like sardines, but looking perfectly cheerful in the rather stolid way of the Russian peasant. The Government is doing everything possible to stimulate immigration into Siberia and Central Asia, by carrying immigrants at nominal rates, providing accommodation until assignments of land can be procured, and making small advances of money for the first season's farming. The Russian peasant readily adapts himself to new conditions, and is not troubled by many encumbrances in the way of personal luggage.

The cities of Siberia are large and prosperous. After leaving Cheliabinsk we arrive first at Omsk, a city of some 55,000 inhabitants. It is pleasantly situated on the Irtysh, a feeder of the great River Obi, and bids fair to eclipse Tomsk in importance, as



DINING SALOON ON TRANS-SIBERIAN EXPRESS.

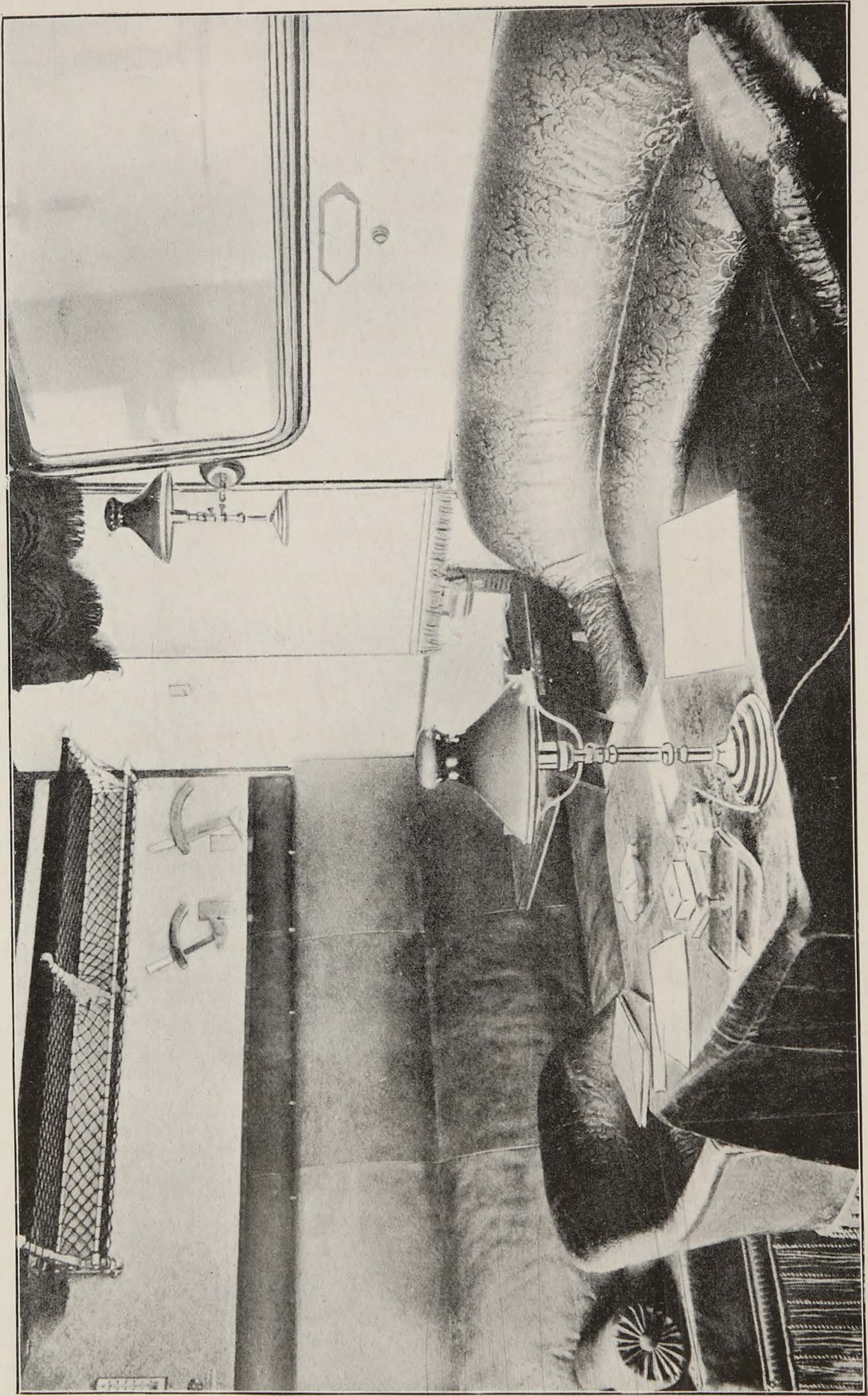
it will be the junction of the new line to St. Petersburg. But at present Tomsk, with its 75,000 inhabitants, is the largest city and is an educational centre with a University of wide reputation in Siberia. The other principal cities are Irkutsk, with a population of 60,000, Krasnoiarsk with 35,000, and Ob with 25,000 inhabitants.

As regards the Siberian villages, I cannot do better than quote the account given by Mr. Luigi Barzini in his book "Pekin to Paris," descriptive of the most memorable motor journey the world has yet seen:—"The first Siberian villages one passes through seem delightful. They have all the attraction of stillness, all the enchantment of country life. They look extremely picturesque, with their little houses, all built of rough tree-trunks, surrounded by wooden enclosures, joined together by plank paths, which are necessary for walking in the open when it is raining and the road is muddy. . . . There is wood everywhere in Siberia. It takes the place of iron, of masonry; it furnishes domestic utensils and often the tools of labour. You would almost think that as there was the age of stone and that of bronze, so there now exists a civilisation of timber—the Slav civilisation. We like all this because it is simple and wakes in us far dim memories and desires for a free and primitive life. Those houses, with their hanging roofs, with their doors sheltered under a porch that spreads over the road almost inviting the passer-by to enter, with those small windows whose white, varnished shutters stand out gaily against the darkness of the walls—those houses look homely and cosy. They have flowers on their window-sills and curtains to their windows. They give the impression of quiet well-being sheltering itself from the gaze of the world. But soon you notice an oppressive thing, and that is that the first village is like the second, the second like the third, the ninetieth like the hundredth, and so on for ever."

At Krasnoiarsk the traveller is in the hill country, which continues until he reaches Lake Baikal. Krasnoiarsk is a beautiful city, built in the valley of a tributary to the Yenesei and surrounded by mountains. It possesses many handsome churches

and other buildings, the typical dome of Russian architecture being very conspicuous. Between Krasnoiarsk and Irkutsk the scenery is of a most picturesque description, providing a welcome relief to the level, monotonous plains of Western Siberia. The hills are well-wooded, chiefly with pine trees, and in the distance one catches now and then a glimpse of the peaks of the Sayanski range of mountains, forming the barrier between this part of Siberia and the Chinese Empire. Irkutsk itself is a most surprising place to those who imagine Siberia to be nothing more than a barren wilderness. When we remember that Irkutsk is situated on the shore of a great inland sea, 3,300 miles from Moscow and over 1,000 miles from Vladivostok, its size and magnificence are truly wonderful. Next to Tomsk it is the largest city in Siberia. It possesses one of the finest cathedrals in the Russian Empire and 26 churches. Its streets are lighted with electricity, and as a rule are well paved. It has three daily papers, a large theatre, a handsome art museum, a technical school and a theological seminary. Moreover, it is a manufacturing city of no mean pretensions, and its factories are renowned for the production of porcelain. Here there are plenty of opportunities for British manufacturers to compete with the American and German firms who have already got a good hold on the place, as of most of the other Siberian cities.

The train skirts the southern shore of Lake Baikal, passing through a series of tunnels under the mountains, the construction of which was by far the most difficult engineering work on the whole system, and the admirable manner in which the difficulties have been surmounted speaks volumes for Russian grit and perseverance. Now, in Trans-Baikalia, the train passes through mountainous scenery until the frontier of Manchuria is reached. The northern part of this province, now technically an appanage of the Government of Peking, consists of great stretches of treeless prairie or grazing lands, the value of which is very inadequately appreciated, for the population is very sparse. To all intents and purposes it is still Russian territory, for the railroad is protected by Russian soldiers, and every few miles are seen houses strongly built of stone and capable of resisting an attack by Chinese



TRANS-SIBERIAN EXPRESS FIRST CLASS SALOON.

brigands. In these Russian soldiers are quartered, and the telegraphs and post offices are in Russian hands. Drawing nearer to Vladivostok, the country becomes more populated, and evidences of Japanese activity begin to appear. The marvel that two such progressive races should have come into conflict ceases, and one cannot help wondering how long the present *modus vivendi* will be respected by both sides. For, as matters stand, the real Russian territory on the Pacific is cut off from the rest of Siberia by this wedge of nominally Chinese land known as Northern Manchuria. The Chinese will never develop the country as it should be developed, and, judged merely from the standpoint of commercial progress, it seems a pity that Russia was not allowed a free hand in carrying out her plans of colonisation.

But this is a digression. At Vladivostok there is a beautifully-situated port and an abiding monument of Russian enterprise in the Far East. The journey is far from fatiguing, and some of my American fellow-travellers who made it expressed the opinion that they had felt a good deal more tired after a journey across their own Continent.

My general impression of Siberia was that it is capable of very great development, both as regards agriculture and minerals. The natural and proper colonist for the country is, of course, the Russian peasant, who is wonderfully capable of adapting himself to new surroundings and converting a wilderness into a fertile domain that will be a heritage to the Empire for all time. But the moujik does not move out of the neighbourhood of his village in Old Russia without receiving the strongest inducements from the Government to turn colonist. I have already outlined the extent of the assistance which the authorities are prepared to grant, but it is obvious that the resources of any Government would be severely taxed to supply the whole of the cultivable districts in so vast a country as Siberia with the means of support for the needful number of immigrants. Such facilities include the construction of railways and dwellings and the advance of money for the first year's farming. With the object of promoting colonisation on these lines the Government will welcome the

co-operation of foreign capitalists. When its great natural wealth is fully realised, I am convinced that the development of Siberia will proceed very rapidly, and those who are first in the field stand to derive the chief benefit.

The development of traffic on the Trans-Siberian line is shown by the figures of merchandise carried over it: in 1899 the quantity was 41,000,000 poods, in 1906 the amount had increased to 162,000,000 poods, or nearly four-fold.

I have already mentioned that the Russian Government is prepared to guarantee the capital of companies operating railroads under certain conditions. I am now able to say more about these conditions. They are as follow:—(a) Railways which are of no commercial importance, but are useful from a strategic, Imperial, or economic point of view, are built principally by the State, while railway companies are left to construct such lines as are likely to prove sufficiently remunerative in the near future. (b) The share capital of a railway company must form no less than one-third of its whole capital. (c) Railway bonds guaranteed by the Russian Government are guaranteed absolutely, from the very day of issue, irrespective of the completion or non-completion of the line in question. It is, therefore, obvious that the right of issuing such bonds is granted exclusively to syndicates whose reliability and solvency are beyond all doubt, while practically all such issues are invariably made through the medium of first-class banks. It is likewise understood that the proceeds of such issues are to be transferred to the respective railway companies by instalments, as certain sections of the line are completed, and that a certain amount of the proceeds is to be paid to the company only when the whole line is open for regular traffic.

The capital expenditure of the Treasury on State Railways from the resources of the Budget during the period from 1897 to 1907 is given below. It should be noted that in the estimates of the Budget the outlay on new railways is entered under extraordinary expenditure, and other railway expenses under ordinary expenditure, but as the actual ordinary receipts are considerably in excess of the actual ordinary expenditure, all the capital outlay

on the State Railway net is, in the end, practically covered by the resources of the ordinary Budget :—

Years.	A. Expenditure on New Railways.	B. New works on existing lines (laying second tracks, building and improving bridges, stations, &c., increas- ing the amount of rolling stock, &c.).
	Million roubles.	Million roubles.
1897	129·11	55·11
1898	113·96	86·11
1899	102·50	79·34
1900	59·19	90·17
1901	42·33	83·99
1902	165·66	100·84
1903	169·43	99·51
1904	95·44	90·34
1905	72·77	81·75
1906	42·34	74·50
1907	48·61	74·46
	1,041·34	916·12
	1,957·46 million roubles.	

In the 1908 Budget 59·38 million roubles are assigned for railway construction, and 79·07 for improvements of existing lines.

The extraordinary expenditure of 59,387,000 roubles on new construction provided for in the Budget of 1908, is thus apportioned :—

NEW WORKS :

	Roubles.
Tiumen-Omsk Railway	1,000,000
Eastern section of the Amur Line	3,000,000
Laying a second track in several sections of the Trans-Siberian Railway	9,000,000

CONTINUATION AND COMPLETION OF WORK ALREADY
BEGUN :

Moscow Metropolitan Railway	4,958,157
South section of Orenburg-Tashkent line	1,277,015
Second Ecatherina line	1,000,000
Bologoé-Polotsk	2,500,000
St. Petersburg-Viatka, with branch to Moscow	3,180,520
Perin-Ekaterinburg	10,960,300
Kherson-Nicolaiev	500,000
Sutchansk branch	324,214
Western section of Amur Railway (Sretensk- Pokrovskaya)	9,000,000
Rebuilding mountain sections of Siberian Railway	11,993,827
Survey, auditing and other expenditure	692,537

There is also included in the estimates a "conditional assignment" of 7,500,000 roubles to cover the expenditure on increasing the efficiency of the Chinese Eastern and the Assuri Railways.

As regards the Amur Railway, the Minister of Ways and Communications has laid before the Duma a project for the completion of the line. He asked for a vote of 248,000,000 roubles (or £26,105,263), for five years, for the Amur Railway, with a branch to Blagoveschensk, is to be completed by 1912. The construction of a section of this railway from Nerchinsk to Ourum, a distance of 151 miles, has already been commenced. The length of the line from Nerchinsk to Kharbarovsk will be 1,361 miles.

CHAPTER IX.

RUSSIAN SHIPPING.

DEVELOPMENT OF RUSSIAN SHIPPING.—THE PORT OF ST. PETERSBURG.—REVENUE FROM SHIPPING DUES.—RUSSIA'S MERCANTILE FLEET.—TONNAGE BUILT AT HOME AND ABROAD.—ENGLAND'S SHARE OF RUSSIA'S SHIPBUILDING.—HARBOUR IMPROVEMENTS AND SUBSIDIES TO STEAMSHIP LINES.

AMONG the efforts which Russia is making to extend her commerce, the development of her mercantile marine fleet must not be overlooked. Russian shipping has grown considerably in late years, but its rate of progress has not been regular, and it has experienced more than one set-back due to various causes. The ocean-going tonnage of Russia, according to a return of our own Board of Trade was, in 1906, 1,083,000 tons. This is in excess of the sea-going tonnage of the United States and of Italy. Of European countries Russia stands fifth as regards the tonnage of her mercantile marine, Great Britain being first, and the other countries possessing more than Russia being Germany, France, and Norway. The fluctuations in late years in Russian shipping are shown in the Imperial Finance

Minister's Budget statement of receipts from harbour dues on ships and merchandise, these including dues on vessels both entering and leaving ports of the Empire and a tax on coasters in the Amur region. Since 1902 the revenue receipts from this source have been as follows :—

										Roubles.
1902	..	..	..	..	..	..	..	..	..	3,992,000
1903	..	..	..	..	..	..	..	..	..	3,530,000
1904	..	..	..	..	..	..	..	..	..	3,493,000
1905	..	..	..	..	..	..	..	..	..	3,006,000
1906	..	..	..	..	..	..	..	..	..	3,262,000
1907	..	..	..	..	..	..	..	..	..	2,858,060
1908 (estimated)	..	..	..	..	..	..	..	..	..	3,104,000

The decline of the shipping trade in 1903, the Japanese war in 1904, and the disturbances in 1905 caused a great falling off in the business at the ports. But there was an improvement in 1906, and another improvement is anticipated this year, although the amount shown in the Budget for 1908 is below the average for the three-years' period of 1904-1906.

Recently the statistical section of the Russian Department of Merchant Marine of the Ministry of Trade and Industry issued an account of the ships in Russia's merchant fleet, but it is only brought down to January 1st-14th, 1907. According to this return, the Russian mercantile fleet on January 1st-14th, 1907, consisted of 3,388 vessels, with a net displacement of 678,067 registered tons. Of this total, 874 vessels, with a displacement of 418,230 registered tons, belonged to the steamship fleet, being 25·8 per cent. of the units and 61·7 per cent. of the net registered tonnage of the whole fleet. The remaining 2,514 vessels, having a net displacement of 259,837 registered tons, made up the sailing fleet.

Most of the vessels sailed the Black Sea and Sea of Azoff, which accounted for 41·4 per cent. of the steamers, with 42·4 of the total tonnage. Next, those of the Caspian Sea account for 29·8 per cent. of the steam fleet and 27·9 per cent. of the tonnage. The Baltic follows with 21·9 per cent. of the steam units and 23·6 per cent. of the displacement; 5·5 per cent. of the steamers, with 2·8 per cent. of the tonnage, sail the White Sea, and, finally, 12 vessels, or 1·4 per cent. of the units, and 12,937

registered tons, or 3·2 per cent. of the displacement, sailed the high seas. The return further summarises as follows :—

The carrying capacity of the steam fleet on January 1st–14th, 1907, amounted to 40,227,702 poods, as against 36,781,828 poods on January 1st–14th, 1906, divided as follows : Black Sea and Sea of Azoff, 43·7 per cent. ; Baltic Sea, 27·2 per cent. ; Caspian Sea, 24·8 per cent. ; and only 4·3 per cent. for the White Sea and high seas.

Three hundred and sixty-three vessels, or 41·5 per cent., with 62·5 per cent. of the total tonnage, belonged to joint-stock companies ; 31·6 per cent., with 19·3 per cent. net tonnage, belonged to private individuals ; 23·8 per cent. of the vessels and 17·4 per cent. of the net tonnage to non-share companies or commercial houses ; and 3·1 per cent., with 10·8 per cent. of the tonnage, to institutions.

The total value of the mercantile fleet on the date named was 125,598,083 roubles ; 654 steamers, or 74·8 per cent. of the total, were built abroad, leaving 24·4 per cent. as built in Russia, with a margin of 0·8 per cent. unaccounted for. The tonnage built abroad amounted to 86·2 per cent. of the total steam fleet. Most of the foreign-built vessels sail the Black and Azoff Seas—namely, 47·9 per cent. of the vessels and 42·4 per cent. of the tonnage ; while most of the Russian-built vessels sail the Caspian Sea—namely, 48·1 per cent. of the units, with 85·7 per cent. of the total of Russian construction, this, of course, being due to the geographical position of the Caspian. With respect to the construction of steamers by Russia, including Finland, for sailing the high seas, the part taken by the Fatherland is relatively small—namely, 19·7 per cent. of the total units and 2·7 per cent. only of the tonnage.

Of the countries which built steamers for the Russian fleet, England takes the first place, both as to units and tonnage—namely, 51 per cent. of the total of the foreign-built vessels, 38·2 per cent. of the grand total, and 62 per cent. of the total foreign-built tonnage, and 51 per cent. of the total tonnage of the steamers in the Russian mercantile fleet. Sweden comes next with 17·7 per cent. of the foreign-built, 13·2 per cent. of

the total units, and 13·5 per cent. and 11·2 per cent. of the tonnage respectively. Then comes Germany, with 12·8 per cent. and 9·6 per cent. units, and 11 per cent. and 9·1 per cent. respectively of the value.

The fourth position is taken by Austria, the fifth by Belgium, and the sixth by Denmark, and the value of the steamers built by other countries, such as Greece, France, Norway, Holland, Turkey, Italy, &c., came to less than 1,000,000 roubles.

The oldest vessels are sailing on the Black Sea and Sea of Azoff ; 81 of them have seen over 30 years' service.

Most of the steamers, or 92·7 per cent., are of iron and steel, in about equal numbers. Thirty-nine per cent. develop 300 I.H.P. or less, 108 develop 1,000 I.H.P. or more, and only eight develop over 2,500 H.P., most of these belonging to the Black and Azoff Seas.

Seventy-nine and a-half per cent. are driven by screws, of which 23·3 per cent. have twin screws. One hundred and sixty-five vessels, or 18·8 per cent., are paddle-driven. Of the boilers, 26·8 per cent. were made in Russia and 32·9 per cent. in Finland. As regards sailing ships, the report shows that Russia built most of these, or 95 per cent. ; then Finland. Only some 150 were built abroad. Nearly the whole fleet of sailers belongs to private owners.

Progress is being made in harbour extension and development, as well as in shipbuilding, in Russia.

The new port of St. Petersburg is gradually being improved. A preliminary scheme for the work to be undertaken has been drawn up, and part of the improvements and extensions have already been sanctioned and put into execution. The entrance to the Sea Canal from the River Neva is being widened, and is to be dredged to the depth of 28 feet. A quay is in course of construction, and the Gutuyev new basin, according to the scheme which is now being carried out, will be capable of accommodating 35 vessels. Many other improvements in connection with this port are projected.

The Ministry of Commerce and Industries assigned 2,971,000 roubles in 1907 to survey and new works and 2,254,000 roubles

to the repair and maintenance of harbour works. 3,378,000 roubles for new works and 3,040,000 roubles to harbour repairs and maintenance are included in the estimates for 1908, being increases on 1907 of 407,000 and 786,000 roubles respectively. There was a total expenditure of 5,750,000 roubles on commercial ports in 1907, and this year the amount will be 6,943,000 roubles, besides expenditure out of special port dues estimated at 4,600,000 roubles. The increase of 1,193,000 roubles in the expenditure on commercial ports in 1908, is due, *inter alia*, to the inclusion of a conditional grant of 500,000 roubles for the commencement of work on the extension and improvement of the port of Odessa, and for the organisation of harbours of refuge in the Baltic, an increase in the assignments for the repair and upkeep of port-works, to the amount of 262,000 roubles ; and of 525,000 roubles for the maintenance of dredging machines, steamers, mechanical appliances and workshops.

Subsidies are paid by the Ministry of Commerce and Industries to various steamship companies maintaining a service of sea-going steamers. A subsidy of 1,033,000 roubles is to be paid this year to the Voluntary Fleet for keeping up regular steamship communications with the Far East, this being an increase of 533,000 roubles over the corresponding grant for 1907. The total amount of these subsidies last year was 3,622,000 roubles, and this year it will be 3,969,000 roubles, an increase of 347,000 roubles.

Of the enterprise of particular companies, it may be stated that the Northern Steamship Company are about to establish a regular steamship service between ports in the Black Sea and the Far East, calling at Vladivostok and Nikolaevsk, and are increasing the service between Baltic and Black Sea ports. An application from a Danish firm for leave to establish a steamship service between Hamburg and the River Obi, and to import European goods free of duty by this line of steamers was under consideration by the Ministry of Finance when I left Russia.

A regular direct weekly sailing between Leith and St. Petersburg, with occasional sailings to Dundee, was maintained during the season of 1907.

A firm of steamship owners of Vladivostok and Shanghai

are opening a new line between Odessa and other Black Sea ports and Vladivostok and San Francisco.

To help in replacing the ships destroyed during the "Potiomkin" disorders, the Russian Transport Company have received from the Government a loan of 1,000,000 roubles, free of interest and repayable in 10 years.

CHAPTER X.

AGRICULTURE AND PASTORAL INDUSTRIES.

RUSSIA AN AGRICULTURAL COUNTRY.—COMMUNAL LAND AND ITS CULTIVATION.—AGRICULTURAL IMPROVEMENTS.—WORK OF THE ZEMSTVOS.—GRANTS BY THE MINISTRY OF AGRICULTURE.—THE HARVESTS OF 1906 AND 1907.—EXPORTS OF PRODUCE.

A VERY great part of Russia, both in Europe and Asia, is considered unfit for cultivation. In the North are the barren tundras, which are almost constantly frozen; in the North-West and Finland are large areas occupied by lakes and swamps; in the South-East is the immense sandy desert steppe, and a considerable area watered by the Volga is so impregnated by salt as to be difficult of cultivation, while great tracts—about a third of European Russia—are covered by forests. Yet Russia is an agricultural and pastoral country. The Russo-Slavonians were an essentially agricultural people, and to that circumstance, primarily, the gradual expansion of their dominion is due; they sought more land to cultivate as their numbers increased and the soil became impoverished by their primitive

methods of agriculture. Apart from the sterile tracts referred to above, the country between the Baltic and the Black Sea is extremely fertile, producing many kinds of grain, such as wheat, barley, buckwheat, millet and rye. Hemp and flax are also extensively cultivated, and in late years good progress has been made in the production of tobacco and the potato. Some five-sixths of the population live in the rural communes, and their occupations are mainly agricultural or pastoral.

The communal land is in great measure common property, belonging to the *Mir*, or Village Commune. Sir D. Mackenzie Wallace thus describes the method of communal cultivation (he is speaking mainly of the Northern Provinces):—"The arable part of this land is divided into three large fields, each of which is cut up into long narrow strips. The first field is reserved for the winter grain—that is to say, rye, which forms, in the shape of black bread, the principal food of the rural population. In the second are raised oats for the horses, and buckwheat, which is largely used for food. The third lies fallow, and is used in the summer as pasturage for cattle. All the villagers divide the arable land in this way, in order to suit the triennial rotation of crops. This triennial system is extremely simple. The field which is used this year for raising winter grain will be used next year for raising summer grain, and in the following year will be fallow. Before being sown with winter grain, it ought to receive a certain amount of manure. Every family possesses, in each of the two fields under cultivation, one or more of the long narrow strips or belts into which they are divided."

Besides this communal land, a considerable area of cultivable land has passed into the hands of the *mouzhiks* in late years. Under the Serf-Emancipation Act of 1861 large portions of the land belonging to the landed proprietors were ceded to the peasant cultivators "in usufruct," for which, however, they had to pay, either in labour or money, but the Government has helped them by means of Credit Land Banks. More recently, large tracts of the Imperial domains have been distributed among the peasants. The more substantial *mouzhiks*—those who have saved a little money—have also bought quantities of land from the

“noblesse.” In 1882 the Government created the Peasant Land Bank, which advances money to purchasers of the peasant class on the security of the land purchased, at the rate of $7\frac{1}{2}$ per cent., including sinking fund. In the course of 20 years, from 1883 to 1903, as many as 47,791 advances were made by the bank, and by this means about 18,000,000 of acres were purchased by peasant cultivators. This increase of land in the hands of the peasantry has been attended by a large increase in the amount of grain exported from Russia, the average annual exportation rising from under 1,500,000 tons in 1860 to over 6,000,000 tons in 1900, and there have been further increases since. The peasantry are still very primitive in their methods of cultivation, but in late years the Zemstvos (district and provincial assemblies created in 1864 on an elective basis) have adopted many measures for improving the agricultural education and methods of the peasantry. They have employed trained specialists to study the special capabilities and requirements of various districts, and to instruct the villagers in some of the higher branches of farming. Under these measures improvements have been introduced, increasing the yield of the cereal crop by a better selection of seed, and the use of modern appliances. Changes in the rotation of crops effected by sowing a greater variety of grasses and roots which serve as food for live stock, and improvements in the breed of live stock, have also been adopted. Manure is more generally used, and more scientifically applied, and there is an increased cultivation of fruit and vegetables. More attention is also given to dairy farming. The Zemstvos have further established depôts where improved instruments and better seed can be obtained at low prices, while bulls and stallions are kept at certain centres for improving the breed of cattle and horses.

The efforts of the Zemstvos to induce more extensive cultivation have been aided by the Government, and by the establishment of agricultural societies, mutual credit associations and village banks, to which in some cases the Government gives assistance. Many of the more progressive landowners have helped their tenants in the same way, and others have become practical agriculturists themselves.

Among other results of the improvements introduced in recent years, the cultivation of beet for the production of sugar has been greatly extended in the Central and South-Western Provinces, and flax—which was formerly grown mainly for domestic use—is now produced largely in Northern districts for commercial purposes.

As regards beetroot and sugar, 10,000,000 tons of beetroot were produced in 1906, an increase of 1,500,000 over 1905. The area under cultivation was 1,500,000 acres, producing 1,300,000 tons of sugar, the amount exported being 62,000 tons. Among the beet-sugar producing countries of Europe, Russia now stands first as to the area of land under cultivation, second as regards the total yield of roots and sugar and also as regards the number of factories—278—engaged in the manufacture of sugar, but lowest as to the yield of roots and sugar to the acre.

The following table shows the course of sugar production for five years, in tons :—

Year.	Tons.
1907-1908	1,250,000
1906-1907	1,270,000
1905-1906	857,000
1904-1905	821,000
1903-1904	1,019,000
Average	1,043,000 tons.

The average annual export of Russian sugar, covering a period of five recent years, was 346,000,000 pounds, amounting to 156,000 tons, or about 16 per cent. of the total production. Some of this goes to the East and to Central Asia, but by far the largest portion finds sale in competition with German and Austrian sugar in Great Britain, which country receives about a third of the world's exports.

The Ministry of Agriculture and State Domains was reorganised in 1905, and it now takes a more fatherly interest in the improvement of agriculture among the peasantry. Among others of its functions are the leasing to landowners of State property, and of land acquired through peasants' land banks, delimitation of peasants' allotments, and colonisation. The work of the

Ministry includes the encouragement of various descriptions of culture and of cottage industries, for which purpose it holds experimental fields, meteorological stations, and model farms, and employs a staff of specialists and instructors. It likewise carries on such undertakings as the exploitation of State forests, drainage of bogs, irrigation works, and peat-cutting. The grants to the Ministry of Agriculture for these various purposes this year exceed those of 1907 by 12,139,000 roubles, the greater part of this extra expenditure being under the head of land organisation and cultivation, and a large amount is for assistance to the peasantry in connection with these objects. The specific purposes to which the money is applied include maintenance of technical agricultural staff, experimental undertakings; purchase and distribution of plants, instruments, seeds; demonstrations, and subsidies to Zemstvos, communities and private persons for measures useful to agriculture. Last year there was a great increase in the number of land-prospecting deputations sent out by village communities, and migrations and development of colonisation resulted, and the grants for colonisation are this year largely increased.

The yearly increase in the exportation of corn—which is the principal commodity that Russia exports—is believed to have now reached its limits. A good corn harvest enabled the exports to be kept up even during the dearth of 1905, but in 1906 deficiency in the harvest in a large number of provinces, and which chiefly affected the black-earth district, caused a diminution in the exports of corn by 107,000,000 poods, or 15 per cent.

The total yield in tons of the grain harvest of 1906, not including oats, was 42,250,000, showing a diminution of 7,250,000 as compared with the average for the preceding five years. The potato crop was above the average, and yielded 25,000,000 tons. Very interesting experiments have been made during the last few summers by the Russian Government, by which an extraordinarily large yield of grain was obtained. By selecting the finest grains from the largest ears of wheat, and continuing the process with succeeding harvests, it was found that the

yield of grain was enormously increased. Six hundred selected grains, weighing less than 1 ounce, were sown on ordinary, unmanured ground, and the harvest weighed $15\frac{3}{4}$ lbs.

The harvest of 1907 was, as regards cereals, when compared with the crops of the quinquennial period of 1902-6, above the average—it yielded over 105 per cent. in 23 Governments, with a population of 33,564,000 persons ; about the average, or very near thereto (95 to 105 per cent.) in 17 Governments, with a population of 27,684,600, and below the average (under 95 per cent.), in 32 Governments with a population of 73,983,800 persons.

According to a Return of the Central Statistical Committee of the Ministry of the Interior, the total produce of all cereals (both winter and summer sown) in 1907, excepting oats, was as follows :—

	Poods.	Increase or Decrease on Five Years' Average.
In 50 Governments of European Russia ..	2,291,823,000	— 232,409,000
Northern Caucasus	227,032,000	— 3,571,000
Country of the Vistula	195,815,000	+ 5,357,000
Total for 63 Governments and Provinces of Russia in Europe	2,714,670,000	— 230,623,000
Trans-Caucasia	333,000	— 177,000
Siberia	137,617,000	+ 17,844,000
Central Asia	63,615,000	+ 17,897,000
Total for 72 Governments and Provinces	2,916,235,000	— 195,059,000

It will thus be seen that, as regards all cereals but oats, while the crops in Asia showed a considerable increase last year, the yield of those in Russia-in-Europe fell below the average by no less than 230,623,000 poods.

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Of oats and potatoes, the following figures are given :—

	Oats.	Potatoes.
	Poods.	Poods.
Fifty Governments	645,402,000	1,153,863,000
Northern Caucasus (3 Provinces)	17,454,000	19,824,000
Total of 53 Governments and Provinces	662,856,000	1,173,687,000
Country of the Vistula (10 Provinces) ..	64,308,000	544,443,000
Trans-Caucasus	12,000	77,000
Siberia	59,471,000	24,127,000
Central Asia	15,993,000	4,167,000
Total for 72 Governments and Provinces	802,640,000	1,746,501,000

The following figures are supplied in the Official Return as to the number of horses and cattle in the country last year :—

	Horses.	Cattle.	Sheep and Goats.	Pigs.
Fifty Governments ..	20,750,648	31,169,356	38,036,390	9,892,764
Country of Vistula ..	1,286,606	2,375,200	1,456,547	734,069
Total for 60 Governments and Provinces in Europe	22,037,254	33,544,556	39,492,937	10,626,833
Northern Caucasus ..	1,353,838	3,023,961	7,081,226	743,851
Trans-Caucasia ..	8,168	24,598	15,104	10,753
Siberia	3,021,184	3,896,134	4,299,382	823,932
Central Asia	1,917,108	1,816,241	7,621,874	73,784
Total for 72 Governments and Provinces of the Empire ..	28,337,552	42,305,490	58,510,523	12,279,153

The return from which the above figures are taken does not show the area occupied by the various crops. For this, the latest figures that I am able to give are those for 1905, and they are as follows :—(In millions of deciatins)

—	Cereals.	Potatoes.	Oats.	Grass.	Total.
63 Governments of Russia-in-Europe ..	63,688	3,589	15,620	27,812	110,709
Nine Governments and Provinces of Russia- in-Asia	3,324	75	1,146	5,534	10,079
Total for 72 Govern- ments & Provinces of the Empire ..	67,012	3,664	16,766	33,346	120,788

By these figures it will be seen that more than half the superficial area sown in 1905 was occupied by food cereals, two-fifths were occupied by oats and the natural grasses, and only one-thirtieth by potatoes. The total area occupied by the four groups was 2,231,000 deciatins, or 4·9 per cent. more than in the previous five years.

Of special cultures, in 1904, 3,887,259 acres were under flax and 2,001,036 under hemp. The production of flax in 1906 was 637,891 tons, 114,904 tons in excess of the amount produced in 1905.

In 1904, 175,720 acres were under tobacco, but this culture has considerably increased since that year. Tobacco planting in Bessarabia was largely extended during 1906. Experts were brought over from Macedonia and Anatolia, and in some cases whole estates are now being devoted to tobacco. The export of tobacco of all kinds, cigars and cigarettes for 1905 amounted to 3,500,000 roubles ; for 1906 to 4,500,000.

Large quantities of cotton are grown in Trans-Caucasia and the Central Asian provinces. The year 1906 was a favourable one for the cotton crops in Central Asia. The area under cultivation was nearly 600,000 acres, producing 139,000 tons, or more than

sufficient to meet half the demands of the whole native cotton-manufacturing industries.

The total quantity of wool produced during 1906 amounted to over 25,000 tons, as compared with 31,000 in the preceding year. The diminution in the yield is attributed to a reduction in the number of sheep, the limited quantity of land available for pasture, high rents asked for such land and the failure of the harvest. On the other hand, a great demand for wool is stated to have existed, and the demand is expected to increase still more in the future, owing to the rise in the price of cotton tissues, which may be replaced by half-woollen materials, as also the development in the manufacture of woollen materials resembling such furs as sealskin and astrachan, &c. For the latter purpose wool of the highest quality is required, and, in view of this, an increase in the importation of foreign wool was expected during the present year.

Dairy produce is now becoming a considerable rural industry in parts of Russia, and the exports are increasing. The butter shipments for 1905, 1906 and 1907 amounted to 30,000,000, 44,000,000 and 47,500,000 roubles respectively. In weight the butter exports, which amounted to only 630,000 poods in 1889, progressed almost uninterruptedly to 3,638,000 poods in 1907. Nearly 48,000 tons were exported from the Baltic ports alone during 1906. The value of eggs for 1905 was 60,000,000 roubles, and for 1906, 56,000,000 roubles. Last year there was a further decline to 53,000,000 roubles.

Among other cultures which are making progress may be mentioned rice and cocoon silk in Turkestan.

The forests of Russia, as already noted, contribute largely to the revenue of the Empire, and supply the material of very thriving timber and lumber industries. Some figures on this subject have already been given, but it may be well here to state that of the forest land, which covers a territory of 474,000,000 acres in European Russia, 50·6 millions in Finland, 6·7 millions in Poland, and 18·7 millions in the Caucasus, the State owns 64 per cent., while 23 per cent. belongs to the landed proprietors, and 9 per cent. to the peasantry. The administration of Crown

lands has 3 per cent., and municipalities, companies, &c., the remainder. The State forests are distributed as follows :—

	Acres.
European Russia	285,985,941
Caucasia	12,826,887
Asiatic Russia (exclusive of Amur region)	360,519,435
Amur region	288,742,000

The forest revenue is derived mainly from the sale of standing timber on State lands, wood materials and fuel. Also from hay raised in woods and on pasture lands within forest areas. In 1907, 47,692,000 roubles were raised by the State from the sale of timber, and 5,500,000 roubles from the sale of wood materials, &c., produced on forest land. There was a decreased exportation of timber in 1905, and a slight increase in 1906. As regards 1907, though the total export from State lands was smaller than in 1906, according to a St. Petersburg trade journal, notwithstanding the somewhat unfavourable conditions that attended the export of timber from Cronstadt and St. Petersburg, the export of sawn wood exceeded all previous figures. The total export of deals, battens, and boards, in standard dozens of 16½ cubic feet, was 1,838,222 against 1,777,261 in the previous year. The excess over 1906 is about 3 to 5 per cent. The increase has been entirely in the cheaper fir wood, and there has been a slight fall away in the pine export. The firm that exported the largest quantity was Osk. Steven, which shipped 23·5 per cent. of the total. As compared with 1906, nearly all the large firms did better business last year. The relative quantities taken by the largest respective buying countries were :—England, 964,973 st., against 1,043,467 st. in 1906 ; Holland, 389,104 st., against 348,663 st. in 1906 ; Germany, 327,589 st., against 287,181 st. in 1906 ; France, 108,243 st., against 70,246 st. in 1906 ; and Belgium, 49,313 st., against 26,704 st. in 1906.

Since this chapter was written, the more complete official returns of Russian trade in 1907, and comparison with previous years, have been published, and I take from the summary in the

Viestnik Finanssoff the following figures of exports of agricultural produce :—

—	Foodstuffs.	Animals.
	Roubles.	Roubles.
1896	381,500,000	15,000,000
1898	433,500,000	16,800,000
1900	381,200,000	17,900,000
1905	685,000,000	15,700,000
1906	597,500,000	27,300,000
1907	559,700,000	22,700,000

Beginning with 1900, the exportation of Russian foodstuffs progressed uninterruptedly to 1905, and the average for the five years was greater than that for the preceding five years, 1896-1900, by 185,200,000 roubles, or 48 per cent. The exportation of foodstuffs rose much more quickly than that of raw materials and half-manufactures. But the years 1906 and 1907 show a reversal, for the exportation of foodstuffs in these years declined, whilst that of raw materials and half-manufactures grew at an unprecedented rate.

The chief cause of the shrinkage in the wheat exports in 1906 and 1907 was the bad harvests, the former year, however, having benefited by balances held over from 1905. In the last months of 1907—November and December—the exportation of grain fell very low, amounting only to 9,454,000 poods in 1907, against 29,599,000 poods in 1906, and 44,686,000 poods in 1905. The report says there could be no question of exporting wheat to Great Britain last December when the price was 1 rouble 50 kopecks (3s.) per pood at Eletz, and only 1 rouble 48 kopecks (2s. 11½d.) in Sweden. On the average the prices in 1907 for every kind of grain, flour, &c., were much higher than in 1906, so that although the quantity exported fell as between the two years by 21 per cent., the value only declined by 9 per cent.

There is a substantial decline noted in the exportation of eggs—namely, from 2,993,000,000, of the value of 60,939,000 roubles in 1905, to 2,606,000,000, value 53,240,000 roubles, in 1907, and

the following table shows a similar movement in respect to caviare, fish, meat, tobacco, and cigarettes :—

Exported.	Poods.		Value in Roubles.	
	1906.	1907.	1906.	1907.
Caviare	149,000	119,000	2,665,000	2,069,000
Fish	909,000	605,000	2,924,000	1,966,000
Meat	532,000	401,000	3,149,000	2,469,000
Tobacco	527,000	402,000	2,582,000	1,735,000
Cigarettes	372,200,000	294,000,000	1,896,000	1,629,000

The decrease in the shipments of these products was largely compensated for by increases in the exportation of dairy products, sugar and spirits.

The following table shows the timber exports :—

	All Kinds.		Of which in Deals, Battens and Boards.	
	Poods.	Value in Roubles.	Poods.	Roubles.
1902	211,100,000	55,400,000	113,700,000	36,300,000
1903	249,400,000	65,200,000	119,900,000	38,300,000
1904	249,200,000	72,600,000	114,700,000	43,200,000
1905	268,100,000	76,300,000	127,800,000	45,900,000
1906	336,900,000	97,800,000	139,800,000	53,900,000
1907	342,400,000	107,400,000	154,200,000	60,400,000

The quality of the timber is reported as decidedly inferior to what it was. It is also recorded, by the way, that to Great Britain, the best market for Russian deals, &c., there has been a decline in the importations of from 3 to 4 per cent.

In the course of the past five years the export of linen has not varied much, but there has been a decided improvement in hemp, a big decline in silk cocoons, &c., as also in woollens. In respect to this last, the exports of which rose from 892,000 poods average in the years 1903-5 to 1,157,000 poods in 1906, and fell again to 796,000 poods in 1907.

In 1907 there was a fairly large exportation of linseed, 5,255,000 poods, though less than those of 1906 and 1905, which were 7,313,000 poods and 6,627,000 poods respectively. The export of oil-cake reached 30,461,000 poods, against 31,916,000 poods in 1906 and 27,063,000 poods in 1905. The weight of skins exported in 1907 was 1,124,000 poods, against 1,641,000 poods and 1,106,000 poods in 1906 and 1905 respectively. Bones were exported to the extent of 2,066,000 poods, 2,142,000 poods and 1,971,000 poods in 1907, 1906 and 1905 respectively. These figures comprise the main articles of exportation produced by the cultivation of the soil.

CHAPTER XI.

MINERALS AND MINING.

OUTPUT OF MINERALS AND POPULATION ENGAGED IN MINING—
PLATINUM, GOLD, COPPER, IRON AND IRON MANUFACTURES,
COAL, MANGANESE, PETROLEUM, SALT.

MANY parts of Russia are rich in mineral productions. Gold and copper are found in the Urals, in the Caucasus, in Siberia and elsewhere; iron is produced in South Russia, Central Russia, North and North-West Russia, Poland, the Ural and in Siberia. Coal is found in the same districts as iron, and the production is increasing. Russia produces 90 per cent. of the world's platinum, the Ural being the locality of the deposits of this metal, but recently a rich layer of platinum has been discovered in Kamchatka. The following table shows the yield of platinum during 10 years to 1906 :—

									Maximum Value per Pood. Roubles.
1897	..	341	poods	39	lbs.	..	..	..	3,717
1898	..	367	„	15	„	..	..	..	4,571
1899	..	363	„	17	„	..	..	..	5,628
1900	..	310	„	28	„	..	..	..	6,700
1901	..	388	„	39	„	..	..	..	11,000
1902	..	374	„	22	„	..	..	..	15,900
1903	..	367	„	13	„	..	..	..	13,700
1904	..	306	„	0	„	..	..	..	15,900
1905	..	319	„	34	„	..	..	..	17,450
1906	..	352	„	17	„	..	..	..	34,000

The gold production of Russia fell off in 1906 and 1907, mainly in consequence of a decreased output in the Ural district. In 1903 the amount of gold produced in Russia was 41,200 kilograms. The quantity was reduced to 37,502 in 1905, the Amur gold product falling from 611 poods in 1904 to 470 in 1905. But there are many mines, especially in Siberia, which are at present only in the developing state, and a large increase in the yield is looked for in the future. According to the Siberian papers, there is great activity in both prospecting and the development of existing mines going on, many of the properties being in the hands of British companies. It is stated that an English joint-stock company, called the Central Siberia, has begun operations in the Nerchinsk region, on territory owned by the Tsar's Cabinet, and is prospecting reef and placer gold. The extraction of gold in the Yenisseysktayga has been taken up by an English company, the Joint-Stock Company of Central Siberia. The same company leased his Majesty's grounds in the Trans-Baikal region along the rivers Kurenga, Gasimur, Budumkan, Urumkan, Urav, and the whole left shore of the Argun river with all its affluents. The lease is for a term of 25 years, on condition of carrying out detailed prospecting during the first three years, viz., 1907 to 1909—on all the leased grounds.

Further, the Siberian papers announce that, owing to the interest which foreign capitalists are taking, and the permission given by the Russian Government in 1907 to prospect formerly closed territories in Siberia, investigations of mineral resources have been started in many places, and are giving sometimes excellent results. In addition to the many known minerals of Kamchatka, a deposit of gold and silver has been found along the Inogda river. Mr. Bielelubski, who in May, 1907, started to search for gold and other precious metals in the Irkutsk and Balangonski districts, has discovered large beds in the upper part of the Bielaya river. Mr. A. K. Strekalovsky, of Nerchinsk, has discovered gold quartz in the environs of Nerchinsk. The survey for the purpose of building the West Amur Railway has also led to numerous discoveries of gold. Three auriferous areas are already claimed, 30 versts from the town of Nerchinsk, by

Mr. Nasiedkin. Many locations for working quartz and placer gold have been made in the sea region.

The Gold and Platinum Industries Congress has recently had under its consideration the regulations affecting foreigners engaged in the gold-mining industry in Russia, and has come to the conclusion that the right of exploiting gold should be extended, that restrictions on foreigners participating in gold mining should be withdrawn, and that the area of the limited zone should be reduced to a minimum. The same congress has approached the Government for a prolongation for a further period of 10 years of the exemption from payment of import duties on machinery and apparatus for the requirement of gold-mining industries. The above exemption expires on January 1st, 1909.

The copper production of Russia is increasing rapidly. In 1893 it was 8,922 tons ; it fell off in 1904 to 8,490 tons, but has since increased again. The production in poods was in 1906, 639,000 poods, and increased in 1907 to 902,534 poods. The 1907 production was from the following districts :—

	Poods.
Ural	457,906
Caucasus	310,237
Altay	2,000
Siberia and Kirghiz	66,157
Other districts	65,255

The copper from Siberia and Kirghiz is mainly the production of the Spassky Copper Co.

The deposits of copper in the Caucasus present vast opportunities. Enormous beds of coprolites have long been known to exist in Central Russia and in the Dircester basin. Estimates as to the quantities in the latter alone range as high as 27,000,000 tons.

The iron ore deposits of Russia are extensive and valuable, and so important has the iron industry become, that in recent years Russia has even exported manufactured iron to this country.

The Russian production of pig-iron up to 1905 has been as follows (in thousands of poods) :—

1901.	1902.	1903.	1904.	1905.
173,143 ..	156,816 ..	150,156 ..	179,900 ..	165,553

The output in 1905 came from the following districts :—

	Poods.
South Russia	103,094,000
Ural and Siberia	41,077,000
Central Russia	5,248,000
North and North-West Russia	784,000
Poland	15,350,000
	<hr/>
	165,553,000
	<hr/>

Russia has become a competitor in international markets in cast iron and various kinds of finished iron and steel, and the South Russian producers have joined the international syndicate in rails and other products. To the above table showing the pig-iron production up to 1905, I am able to add from the *Torg. Prom. Gazeta*, figures of the total exports of manufactured iron from Russia to various countries, in 1906, and for the first nine months of 1907.

	Cast Iron in Bars, &c.		Sheet and Merchant Iron and Billets.		Merchant Steel Billets and Rails.	
	All 1906.	Nine Months 1907.	All 1906.	Nine Months 1907.	All 1906.	Nine Months 1907.
Finland	—	—	203,000	751,000	4,000	11,000
England	80,000	19,000	10,000	16,000	6,000	628,000
Germany	274,000	326,000	16,000	217,000	3,000	26,000
Austria-Hungary	67,000	303,000	84,000	116,000	—	109,000
Belgium	304,000	270,000	—	—	—	8,000
Holland	192,000	39,000	—	—	—	155,000
Turkey	—	—	267,000	—	500,000	—
Roumania ..	—	—	1,000	128,000	—	912,000
United States ..	270,000	337,000	—	—	—	190,000
China	—	—	—	—	—	366,000
Mexico	—	—	—	—	—	232,000

Russia has also exported rails to India and Australia, and at the time this book is being prepared for the press, orders are being executed in South Russia for England.

There were 486 iron ore mines worked in 1905 in the Ural

district. The yield of iron and other ores amounted to 210,000 tons ; cast iron, 21,379 tons ; steel and iron rails, 85,951 tons ; pig-iron, 52,631 tons. In 1906 the total quantity of iron ore produced in the districts of Ekaterinoslav, Upper Dneiper, Cherson and Alexandrisk was 3,500,000 tons, of which about 500,000 tons were exported abroad. The South-Western Russian Met. Society has contracted to export to Italy 9,000 tons of iron rails. This implies successful competition with local Italian firms, in spite of a duty of 6 Of. per ton and freight charges amounting to £1 5s. per ton.

The following are the figures of the total production of cast iron and manufactured iron in Southern Russia in the years given :—

—	1903.	1904.	1905.	1906.	1907 (Eleven Months only).
Cast iron	74,811	101,111	97,412	92,982	100,982
Manufactured iron ..	58,984	62,288	65,295	58,769	68,743

Showing a considerable increase during 1907.

Coal is another mineral production of which Russia raises and exports considerable quantities. Owing to the falling off in the output of petroleum during the past few years, there has been an increased demand for coal. The following is the output from the coalfields of European Russia :—

—	Millions of Poods.		
	1904.	1905.	1906.
Donetz Collieries	803·3	795·9	891·6
Dombrovo „	287·0	218·9	282·8
Moscow „	14·1	14·3	18·1
Ural „	32·3	30·4	47·3
Caucasus „	2·6	1·8	2·7
	1,139·3	1,061·3	1,242·5

I have only the figures of the production of the Donetz Coal-fields for 1907; the total was 1,019,660,000 poods, which shows an increase of 110,980,000 over the return for 1906. In this district there was also 105,860,000 poods of coke produced in 1907, an increase of 11,620,000 poods on 1906. A railway has been built from the Donetz Coalfield with the special object of supplying the St. Petersburg market, which has hitherto received its supplies of coal by sea.

Manganese is another mineral which is largely produced in the Caucasus. According to a report of the Mining and Metallurgical Union of South Russia, the total world's production of manganese ore, of a quality such as is obtained in the Caucasus, during the last three years averaged 870,000 tons per annum, while in the year 1903 about 435,000 tons were exported from the Caucasus alone, or exactly half the quantity required by the steel industries of all countries, excepting Russia. The total output of the Nikopol Manganese Mines was, in 1906, 12,000,000 poods, and in 1907, 16,500,000 poods—a considerable increase.

Petroleum, or mineral oil, is one of the productions of which a large part of the world's output comes from Russia. Baku and the district have been the great centres of the petroleum industry, which has been largely worked by British companies. But, owing partly to labour troubles in that district, and partly to the natural exhaustion of the old workings, there has been a considerable decline in the production during the past year or two. There has been delay in opening new allotments in the Apsheron Peninsula, Baku, and the failure of a number of the older wells has occasioned a rise in the price of petroleum. This has led to an agitation in favour of letting out the remaining naphthiferous lands to contractors, for the purpose of supplying the naphtha at least on the old basis, so that the industries, and particularly the shipping on the Volga River, may get liquid fuel at a price that may not oblige them to turn definitely to coal, which many manufacturers and railways have already done in the country.

According to a report of the Baku oil industry by our Consul

at Batoum, the following are the figures of production, export and average price in each year of the past decade :—

Year.							Aggregate Production.	Total Exports.	Average Price of Crude.
							Poods.	Poods.	Kopecks.
1893	..	..	..	..	..	..	324,529,000	248,100,000	1·4
1894	..	..	..	..	..	..	297,551,000	288,400,000	3·1
1895	..	..	..	..	..	..	377,427,000	284,300,000	6·5
1896	..	..	..	..	..	..	386,117,000	306,800,000	7·8
1897	..	..	..	..	..	..	421,727,000	346,100,000	7·7
1898	..	..	..	..	..	..	485,943,000	393,000,000	9·8
1899	..	..	..	..	..	..	525,217,000	385,300,000	13·7
1900	..	..	..	..	..	..	600,764,000	443,100,000	15·7
1901	..	..	..	..	..	..	671,276,000	488,200,000	8·1
1902	..	..	..	..	..	..	636,831,000	513,400,000	6·7
1903	..	..	..	..	..	..	596,605,000	494,000,000	9·0
1904	..	..	..	..	..	..	614,972,000	491,800,000	14·6
1905	..	..	..	..	..	..	410,036,000	347,566,000	19·5
1906	..	..	..	..	..	..	447,704,000	290,922,000	25·5
1907	..	..	..	..	..	..	476,002,000	356,000,000	27·7

Besides Baku there is a fair supply of naphtha (or petroleum) obtained in another district of the Caucasus, viz., Grosny. The naphtha is found in the hills, and is more difficult to work than at Baku, owing to water draining into the lower workings. In 1906 Grosny produced 38,373,603 poods, and in 1907, 39,403,700 poods. These quantities are inclusive of 8,331,691 and 5,373,762 poods from spouters in 1906 and 1907 respectively.

On the opposite side of the Caspian Sea to Baku, there is the island of Tcheleken, where there is reported to be abundance of naphtha, and the firm of Nobels, as well as some others, notably a syndicate of Americans, are said to have bought large rights in the island lately, for the purpose of getting naphtha. The island also yields a large quantity of ozokerit-earth wax.

Considerable success has attended the search for naphtha in the neighbourhood of Anapa, in Kuban, on the Black Sea coast, besides at Maikop, &c., to which latter naphthiferous region it is proposed to build a railway line. Other naphtha districts are Kertch, near Anapa. Then, stretching away to the far North, there is the Petchora Basin, where naphtha in sufficient quantities has been found to make the opening up of roads of communication

a serious question, and the district is to be the subject of special geological and topographical examination on the part of the Government, with the development of the alleged great naphtha areas in view. Away to the far East there is the island of Saghalien, where naphtha has been found in plenty in natural lakes and at depth, after boring. There is also Ferghana, where a property is worked by Tchimion Company, producing naphtha and distilling kerosene in large quantity.

Salt is largely produced in Russia. The production of the five years 1900 to 1904 are thus given (in thousands of poods):—

1900.	1901.	1902.	1903.	1904.
120,511	.. 104,147	.. 112,467	.. 102,016	.. 114,384

Red granite of excellent quality was discovered in the vicinity of Abo, Finland, during 1906. Operations for the quarrying of the same have been commenced, and it is expected that large quantities will be exported in the very near future.

The Russian mining population is stated to be 193,914 in the Urals, 158,579 in South Russia, and 43,753 in the Western Provinces. The total number engaged in working metal was, in 1903, 549,000.

A report on Russian Trade in 1907, published by the *Viestnik Finanssoff*, gives the following figures of the exportation of metals and minerals from Russia during the three years 1905, 1906, and 1907:—

	Weight in Poods.		
	1905.	1906.	1907.
Coal and coke	3,252,000	5,709,000	13,152,000
Ores—			
Iron	13,561,000	28,765,000	54,642,000
Manganese	22,648,000	35,059,000	37,684,000
Cast iron	50,000	1,243,000	4,506,000
Iron	86,000	788,000	4,445,000
Steel	447,000	521,000	5,601,000
Slack	2,371,000	3,951,000	5,968,000
Copper	500	24,000	109,000
Platinum	116	387	304
Cement	706,000	490,000	4,415,000

	Value in Roubles.		
	1905.	1906.	1907.
Coal and coke	439,000	593,000	1,503,000
Ores—			
Iron	1,194,000	2,728,000	5,412,000
Manganese	4,609,000	6,828,000	9,256,000
Cast iron	20,000	1,257,000	2,661,000
Iron	144,000	910,000	4,584,000
Steel	484,000	495,000	5,400,000
Slack	331,000	633,000	681,000
Copper	1,000	260,000	1,250,000
Platinum	1,402,000	4,930,000	6,929,000
Cement	304,000	483,000	1,793,000

The explanatory note is added to this table that the exportation of cast-iron, iron and steel became possible partly because of the exceptional demand abroad, partly also because of special export tariffs, but particularly because of the measures taken by the producers themselves.

Having given the general statistics and facts about Russian metals and mineral production, I purpose in the next chapter to describe visits I paid to three of the mining districts of Siberia, where the mines are worked by English companies.

CHAPTER XII.

VISIT TO SIBERIAN MINES.

THE KOTCHKAR GOLDFIELDS. — TCHELIABINSK. — TROITZK. —
MINING METHODS.—TROITZK TO ORSK.—AN ADVENTURE.—
THE STEPPES.—WHAT I SAW AT ORSK.—ILLICIT GOLD
BUYING.

SIBERIA affords vast opportunities in its mineral resources. You will find mines of all kinds in this region. Many fortunes are to-day awaiting the lucky finder, and one hopes yet to see British enterprise and capital going to the front—if some brave spirit would make the right move in the right direction. There seems to be an idea that life is very unsafe in Siberia. I have not found it so, neither has anyone else who has been there. Only those who have not been there imagine it unsafe. Siberia is the country of the future. Its vast natural wealth is just being made known. It reminds one of the beautiful maiden of romance, who was born in a peasant's hut, in the thick of the densest of forests, and who never saw a soul but her parents, and had never been seen by a soul. Somebody will find her one of these days, and her beauty will astonish the world.

I paid a visit to three of the gold and copper properties of Siberia—the Kotchkar, the Orsk and the Spassky—and some account of what I saw there may interest the reader after the

somewhat dry mineral statistics which have been given in the previous chapter.

With a vocabulary limited to about 20 Russian words, I arrived at Tcheliabinsk for the purpose of finding my way to the Kotchkar goldfields, some 64 miles distant thence by post. As the Trans-Siberian express steamed slowly away from the station, and left me standing amidst a motley crowd of Russian emigrants, I must confess to a momentary feeling of utter helplessness. All around me were stalwart, bronzed, unkempt men, with stolid, patient faces, and barefooted women, many of them nearly as broad as they were tall, while children and babies innumerable were sprawling about in every conceivable attitude. Russian soldiers, with fixed bayonets, marched up and down. Outside the station there were hundreds of shanties and huts, where a brisk trade was evidently being done in sweets, black bread, oranges, dried fish and other similar delicacies. The roadway was about a foot deep in black mud, and here and there were karaboks drawn by ponies whose forelegs were so far over that it appeared they would soon have to run on their knees.

What struck me more than anything else were the crowds which thronged the pathways and the waste ground adjoining, where, apparently, a fair was being held. The Tartar element seemed to predominate, but there appeared to be present representatives of every race in Asia, and I must admit that I have never seen so unprepossessing a collection of human beings in my life. Truly, my introduction to Asia was not a very pleasant one. After I had found an abiding-place for the night, I commenced a tour of inspection with a view to finding the post-house. I then found, to my relief, that the collection of huts before me did not constitute the town of Tcheliabinsk. This was over a rise about two miles distant, and I was soon hanging on for dear life to a karabok as we bumped over the road in that direction.

Tcheliabinsk turned out to be quite a fair-sized town, with minaretted and domed churches and good-sized public buildings. Presently, I found a branch of the Merchants' and Traders' Bank, and I remembered that I had a general letter of introduction to the whole of the branches of this company. Entering, I was

introduced to an inspector of the bank from St. Petersburg who could speak English. This was truly a stroke of luck, because in the whole of the town there were probably not three people who could have understood good Anglo-Saxon. The manager received me like a man and a brother, and before half-an-hour had passed he was regaling me with a typical Russian dinner. Not even the Savoy could have produced better caviare, a finer steak of that truly royal fish the sturgeon, or a more tender, *petite* chicken.

All my difficulties disappeared as if by magic. I ascertained that I had to take a train to Biskhill, and there obtain a carriage, which would drive me the 50 miles to Kotchkar in a very few hours. I arrived at Tcheliabinsk Station at six the next morning, to find the platform still thronged with emigrants. Apparently they had camped there for the night, or it may be they were entirely a fresh lot. Every few hours on the journey out I had passed in the various sidings and stations long trains crowded with these poor people on their way to Siberia. On arriving at Biskhill I quickly succeeded in making arrangements to be driven to my destination, which, in the first instance, was the Troitzk Mines.

The nearest description I can give of the vehicle is that it was like a long clothes-basket suspended on two poles, which, in turn, were fastened to the axles of four wheels. The ponies, had they appeared in the London streets, would have been surprisingly eyed by the first inspector met of the R.S.P.C.A., but they trotted the 49 miles to Kotchkar without turning a hair, and without stoppage, except for a few seconds when I snapped some object of interest. On arrival—six hours after starting—they were allowed to rest for 15 minutes, and then, to my surprise, the driver started on his homeward journey without giving them a feed or a mouthful of water. (The terms were 3 kopecks per horse a verst.) These wretched-looking little animals would do 98 miles in the day practically without a rest, over a road which for the most part was not much better than a rough field, and which led across many steep gullies and along heavy gradients.

Various mines in the district, which it was my object to inspect, included the Troitzk, the Mines d'Or du Kotchkar—belonging to a French company—and a representative Russian-owned and managed property.

MY VISIT TO TROITZK.

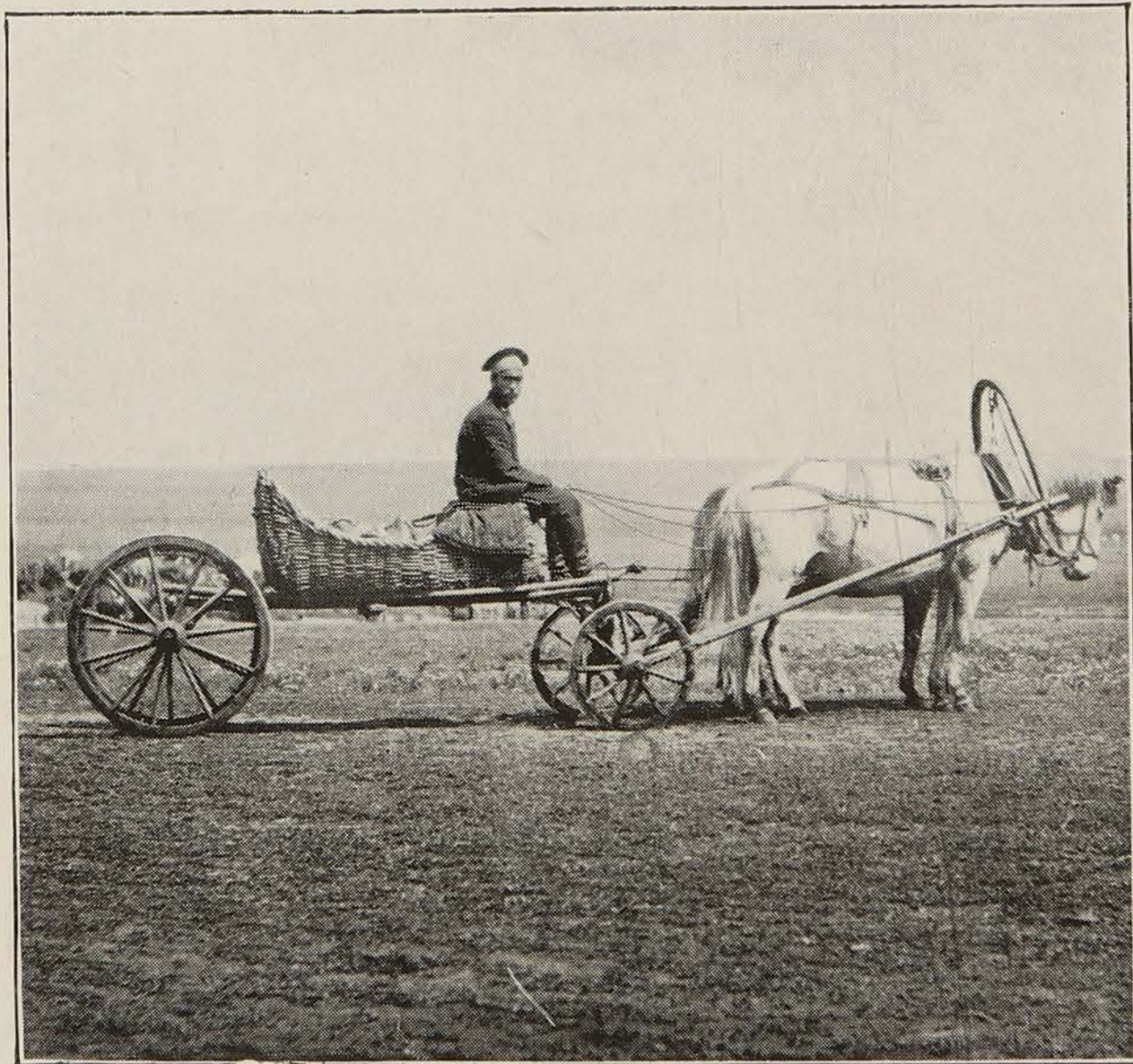
It was my intention, naturally, to devote the chief part of my time to the examination of the Troitzk, as it is an English concern. My readers must not, however, expect a detailed technical account of all these mines. I do not pose as a critic upon matters of a technical character, but desire to describe just what I have seen, to give the facts I have elicited, and to give such conclusions as any man of average common sense would have drawn if he were here and had the facilities afforded him I have enjoyed of obtaining a grasp of the whole subject. These facilities have been of the fullest possible character—otherwise my task would have been hopeless. The manager, Mr. H. C. Bayldon, whilst helping me in every possible way, has not sought to influence my judgment. At the outset he told me that he was convinced that he had the richest mine in the district, but the equipment was not good (I believe it was never claimed to be so), and that before any really substantial results could be achieved it was necessary to do many months of active development work and to reorganise the present equipment.

The result of my investigation and inquiries led me to the conclusion set forth below, and I give it exactly as it was written at the time. But in order that my readers may be placed in possession of the latest available information, I append the gist of the directors' report issued July 1st, 1908, which gives the results of operations from August 22nd, 1906 (the date of incorporation), to January 13th, 1908 (*i.e.*, December 31st, 1907, Russian style).

First and foremost, that in the nine to twelve months which elapsed between the examinations of the mines by the engineers and the completion of the purchase of the property by the English



HUMBLE FISHER FOLK.



A KARABOK.

company, the prior owners devoted all their energies to working the best part of the developed mine ; that they stripped every ounce of high-grade stuff they could lay hands on ; that they entirely neglected any development work other than that which was necessary to accomplish their purpose ; and that this development work was so badly done that it left a legacy of trouble to their successors.

The result of this was that when the present company commenced working there was comparatively little good ore easily accessible, though there was plenty of low-grade stuff, and that the manager was quickly face to face with the necessity of undertaking a comprehensive plan of development before he could hope to get a steady supply of good payable ore. To accomplish this, as I have stated, it was necessary to proceed with extensive development work on the present workings, or to treat the whole proposition as a new one. The temptations to proceed with the first alternative, however, must have been very great, because it would have resulted in obtaining much quicker returns, but, had it been adopted, the advantages would only have been of a temporary character, for the company would never have been a properly-developed proposition. There would always have been the risk of breakdowns, of the shafts collapsing, and of work being finally brought to a standstill. The manager decided to adopt the second course. That alternative involved much labour, the risking of great temporary disappointment to the shareholders, and the facing, possibly, of much adverse criticism. But in adopting it the directors acted in what must seem a thoroughly far-sighted and practical manner.

The policy was this :—

- (1) To construct two entirely new shafts, and to proceed as if the proposition were an entirely new one.
To make a new mine, in fact.

This course was the more necessary because the old shafts were not suitable for conversion into permanent mining shafts, owing to the system of mining adopted by the previous owners. No safety pillars had been left, and, in consequence, the shafts showed signs of partial collapse.

(2) To treat the existing workings as of secondary importance, but to work them, as far as practicable, in order to keep the mills employed.

(3) To proceed energetically to treat the tailings.

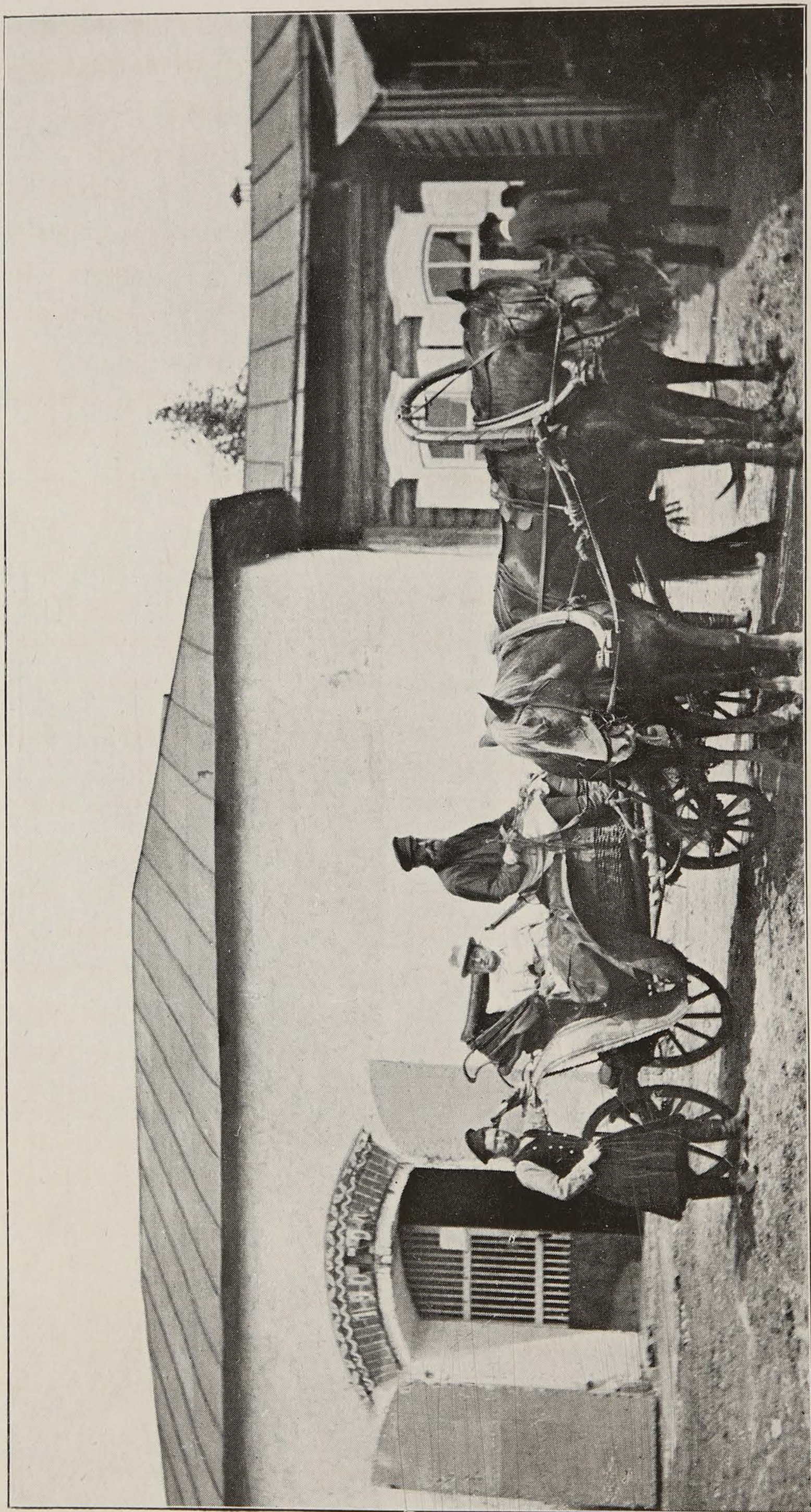
The result of this policy will, it is claimed, be as follows :—

That, when one of these new shafts is down to 450 to 500 feet, and the reef has been struck, the company will possess a mine that it will be possible to develop in a thoroughly economical and scientific manner.

Unquestionably this seems a very sensible course, because it would end in the company—providing, of course, that the reef maintains its value—possessing a property as good as the shareholders thought they possessed when the concern was floated in London. To me it seemed that there can be no question the property is well mineralised. The gold obtained by the previous owners with very imperfect means, the distances which the lodes have been traced in various directions on the property, and the quantity of gold obtained by companies in the immediate vicinity all go to show that the locality is a rich mineral one.

There have, of course, been other things than the want of previous development work which have militated against immediate success. There have been difficulties with the miners, brought about by the introduction of English methods; the English staff have had to obtain practical experience of working mines in a country where the conditions, laws, customs and language are entirely different from their own. Every English mining company in Russia has had these difficulties to face, and, until there has grown up a race of English mining engineers conversant with the language, every English company will have to pass through many early and vexatious troubles. From all I saw about the Troitzk property I am convinced that these difficulties have been manfully faced; that they are being steadily overcome; that the management are now entirely masters of the labour question; and that native prejudice is steadily yielding to persistent pressure.

I will now proceed to give a brief description of my tour through the camp. The combined area of the mines is about two miles.



A TROIKA—TRAVELLING IN COMFORT.

There are eight old shafts already sunk to depths varying from 304 feet to 425 feet, and there are two new shafts. One is down 225 feet, and the other about 100 feet. The main lode formation occurs at the extreme northern end of the Preobagensk mine and the extreme southern end of the Alexandrovsk mine, and can be traced in an easterly and westerly direction for a distance of 3,150 feet. The lode has also been traced a distance of 2,000 feet along its strike in the western part of the property. There are also many other lodes of importance, and upon several of these I saw tributers busily at work. The first idea that presented itself strongly to my mind was that the whole of the works are very scattered. This, I suppose, was inevitable, as two properties were amalgamated.

The proposed arrangement for centralising these works was explained to me, but the manager was careful to point out that not one penny more than was absolutely necessary would be spent upon surface work.

"We must get our main shaft down first; we want to see exactly what we have got. I pretty well know, but I am not taking any chances," was his statement to me. "When once we know what we have got, then the plans for centralisation, for new buildings and for bringing the plant up-to-date can be given effect to," was another of his statements.

"You have no doubt about striking the reef when you put your main shaft down?" I asked. "Not the least," was the reply, "but I want to see just how much there is of it, and what it will run to. When I know this, I can make my arrangements accordingly."

We started our tour at the offices, which are in a new wooden building about 20 feet high, and we then went on to the new assay and sampling house. I was there fortunate enough to see the scalings removed from the copper plates. A homely-looking washing-tub, half-filled with acids, was being energetically stirred with what appeared to be a canoe-paddle. There were about 8 lbs. of gold in the tub, I was told, but if I had been informed that it was dirty water, with a residue of small scrap-metal, I should not have been surprised.

From here I proceeded to the smelting-room, where I found three furnaces being worked with naphtha. "We find we obtain greater heat by the use of naphtha, that heat is more rapidly generated by its use, and that it is cheaper," was the explanation given me for its use. I then went into the extraction house, which is a substantial building about 80 feet long. The ordinary zinc precipitation process was being used. There are 17 cyanide leaching-tanks, each capable of holding 95 tons of tailings. The plant is capable of treating 6,000 tons a month. In the first month 4,180 tons had been treated, and the yield from this was 222 ozs. of fine gold. In the second month of working 6,000 tons had been treated, and it was expected that about 400 ozs. would be obtained, as the tailings were known to be richer. The plant appeared to have seen its best days; several of the tanks were leaking, tubs being arranged to prevent wastage. I was informed that it was proposed to erect new reduction works in a central position, easily accessible to the whole of the property.

There is a second reduction works, where there are five tanks, making a total of 22. I notice that the tailings dump is about half-a-mile off the present works.

The work of filling and discharging is done by contract, the amount paid being 25 roubles (or, roughly, £2 14s. 2d.) per tank. This, I believe, is very cheap. The cost of filling alone in South Africa is about 7d. a ton.

After leaving the works, I went to the tailings dump, which I found, amounted to about 15,000 tons. It is expected to yield an average of $1\frac{1}{4}$ dwts. per ton (say 5s.), and the cost of treatment will not be more than 2s. per ton, so that there would be a clear profit of 3s. per ton from the dump. Later on I saw another dump of about 2,000 tons, and two large slimes dumps of about 20,000 tons each.

A move was then made to the No. 2 reduction works. These are now closed down, and will remain so until the developments are more advanced. Had the previous miners continued their ordinary rate of development during their last year of ownership this would not have been necessary. But, in view of the position of affairs, the manager undoubtedly did the right thing—



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KIRGHESE.

unpalatable as it would no doubt be to those at home—in having the moral courage to shut down. In this house there were four Chilian mills, in all capable of treating about 100 tons of ore a day. I cannot say that this plant is in a very good condition ; but, after all, when the company was formed it was definitely stated that the appliances were crude, so that this is not a matter for surprise.

I next inspected No. 1 shaft from the surface of the Alexandrovsk shaft. I did not go down, because, although I might have been equal to climbing down the vertical ladders to the bottom, there was the question of climbing back, and that was a much more arduous proposition. But, as the reef does not glitter with visible gold, I do not think I missed much in refraining from indulging in a personally-conducted tour. I was informed that this shaft is now being equipped with a boiler and a steam pump. A move was then made to the new main shaft, which was naturally an object of very great interest. It was down at the time of my visit 220 feet. This result had been secured, I heard, in record time, so far as Russia was concerned. An average of 45 feet per month had been maintained, in very hard granite rock. Compared with South Africa and Australia, this may not seem a very brilliant performance, but in this country 20 feet a month in hard ground is considered very good sinking.

Those interested in Russian mining will naturally like to know how this improvement had been obtained. I accordingly made careful inquiries, with the result that I found it was the invariable Russian custom not to blast more than eight holes at a time, that very little care was taken to supply the men with sharp drills, and that generally the tools were in very bad condition. The Troitzk manager insisted upon 15 holes a day being blasted. The staegers—or mine overseers—did their utmost to frustrate this being accomplished, both by direct and indirect means. They represented that blasting eight holes a day was safe, that accidents never happened when the number was limited to this, and that the responsibility would not be theirs if, as a result of blasting a larger number of holes at one time, an accident occurred. Now, a workman is very much the same the world over. In England, if a foreign company were to carry

on mining, and were to introduce revolutionary methods, there would for a certainty be trouble; and if, as a result of those innovations, an accident were to occur—and who could be sure that one would not be made to occur?—it would go hard with the manager at the inevitable inquiry.

Be not, therefore, too hard in your judgment if the Russian miner resisted actively, as well as covertly, the unheard-of innovation of blasting 15 holes at a time. But in Mr. Bayldon the company has a man who does not fear responsibility, and the work has proceeded on the lines he laid down with perfect safety, and with very good results. The men are now beginning to realise that he would not subject them to an unfair risk—and has he not been with them time after time to show them he would not ask them to take a risk he would not share? He hoped before long to be able to blast 20 holes at a time, instead of 15, so that the shaft will go down with even greater rapidity than at present. In the meantime, the managers of all the other properties in the neighbourhood are watching the progress of his shaft with feelings not unmixed with envy. He has also taken careful interest in the tools, having secured the services of a special blacksmith to instruct the men in this respect. Another victory over Russian tradition has also been secured in regard to placing the holes to much better advantage.

From the shaft, I proceeded to No. 1 reduction works, inspecting the fitters' shops on my way. Six Chilian mills were at work. They appeared in much better order than at the other mill. The feeding work was being done by Russian girls, who seemed to work with much greater energy than the men. Indeed, seeing a lot of Russians engaged in their work rather reminded me of an English dockyard, where half-a-dozen Jack Tars may occasionally be seen carrying a paint-brush. In No. 1 mill about 70 to 90 tons of ore a day was being crushed.

I then inspected the second new shaft, which is being constructed in English style. It is on the same reef system, and was down 100 feet. Work had been stopped, owing to water having been struck, and was awaiting the erection of boilers, which had just arrived from England. The shaft is situated on a very



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well-defined series of old workings. From these workings a great deal of gold has been obtained in the past.

I then walked over to the Pokiovski reef. This runs about 1,500 feet south of the main reef series. A shaft was down here, which is being deepened. The present depth is about 130 feet, and it is intended to push on sinking until a depth of about 200 feet is reached. The small amount of work done on this reef, so far, is, I am advised by the manager, encouraging. The reef is of good width and of fair value, and holds out every encouragement of maintaining size and value at depth.

But any description of this property would be incomplete without a reference to the system of haulage at the shafts. I can well-imagine a trim English engineer, fresh from the mechanical glories of the Rand, literally being dumbfounded when he first saw this system. Imagine a huge, drum-like structure, arranged on a pole about 20 feet from the ground, two horizontal arms fixed to this, and below these arms two Siberian ponies which had seen happier days, driven by two ragged little urchins—and then you may form some idea of the up-to-date equipment at the shaft-head of the mines in this country. Of course, a few of the mines in the neighbourhood have proper winding engines, and in course of time Troitzk will be equally blessed, but until the underground work has reached an advanced stage the manager has no time, money or thought for the details of surface refinements. I should have stated that these drum-like structures are known as “Barabans.” I believe, however, similar contrivances can be found in Cornwall and many other mining districts.

I now leave the prosaic precincts of an unlovely mining camp to describe the infinitely more picturesque and interesting proceedings of the tributers. A large number of these are at work on alluvial claims on the company's property, a mile or so distant from the main camp. I left the ugly heaps of tailings, the dirty refuse dump, the common-place looking timber buildings, and in a very short time was on a broad plain, covered with little heaps of sandy soil. Here and there were small groups of brightly-attired men and women. Gorgeous scarlet blouses seemed to

be the mode. The majority of the workers were women and young girls. The men were at work at diminutive shafts, while the women were busily engaged in the washing. The shafts were anything from 10 to 20 feet deep, and at the top of each was a small windlass. I ascertained that the tributers sink the shaft until they strike the alluvial, which is a flat deposit. The wash varies from 6 inches to 2 feet thick, and, I am informed, yields about 2 grains per cubic yard. At the present time the company is buying about 14 lbs. of gold per month from these energetic workers, at 3 roubles 50 kopecks per zolotneek ($2\frac{3}{4}$ dwts.), and sells this gold to the bank for about 5 roubles 14 kopecks. The company, therefore, derives a very fair profit from the operations of these humble workers.

I inquired the conditions under which the tributers hold their claims, and was informed that they are granted 35 feet square, upon the condition that they sell the gold to the company at a stipulated price. The wash, I should have said, is brought to the surface in buckets. It is then conveyed in small carts, driven by very diminutive children, to a place set apart for washing—usually a rain-pool. The tributers' appliance for washing consists of a box about 2 feet 6 inches square. At the bottom of this there is a griddle. The wash is passed over sluices, these sluices consisting of wooden launders paved with stone, or in some cases with a piece of blanket. The gold is caught in the crevices of the stones, or in the mesh of the blanket, as the case may be. The lighter gangue is heaped up and treated a second time, and sometimes thrice. At the end of the day the sluices are cleaned up, and the gold is collected and put into a receptacle made for the purpose. This is brought down to the office or works, duly inspected, and paid for. The company has men on duty to control and supervise the washing.

I cannot finish this necessarily imperfect sketch of my visit to the Troitzk mine without some reference to the *personnel* of the English staff. In Mr. H. C. Bayldon the company has, I am convinced, a manager not only of great professional attainments, but a gentleman of high character and resolution. He is loyally supported by Mr. W. Whittuck, a metallurgist of



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considerable South African reputation ; by Mr. J. Angove, an underground manager of wide experience in practical mining in every part of the globe ; and by Mr. MacGrath, a post-graduate of the Royal School of Mines, who is well keeping up the reputation of his school. To all and each of these gentlemen I tender my sincere thanks, not only for the assistance they rendered me, but for so cordially extending the right hand of goodfellowship to an entire stranger.

The foregoing describes the properties as I saw them, and the operations in progress at the time of my visit. But, as I mentioned at the outset, the directors of the Troitzk Goldfields, Ltd., have since issued their report, which gives particulars of work done to January 13th, 1908, and assurances of future success. It is a very gratifying report, for it shows that initial difficulties have been overcome, and that the prospect now is decidedly encouraging—so much so that the directors feel justified in erecting a new reduction plant capable of treating about 6,000 tons of ore per month. Their anticipation is that the plant will be in operation by the spring of 1909, when it is expected at least 72,000 tons of ore will be blocked out and keep the mill running at its full capacity.

There is, happily, no fear of the work being retarded by lack of funds, for the Siberian Proprietary Mines, Ltd., who own more than half the issued capital, have agreed to advance up to £30,000 on very reasonable terms—which sum, says the report, “should be sufficient to bring the company to the dividend-paying stage.” That is good news for English investors, and it must confirm the faith of those whose belief in the prospects of Siberian mining has never faltered in spite of difficulties and delays.

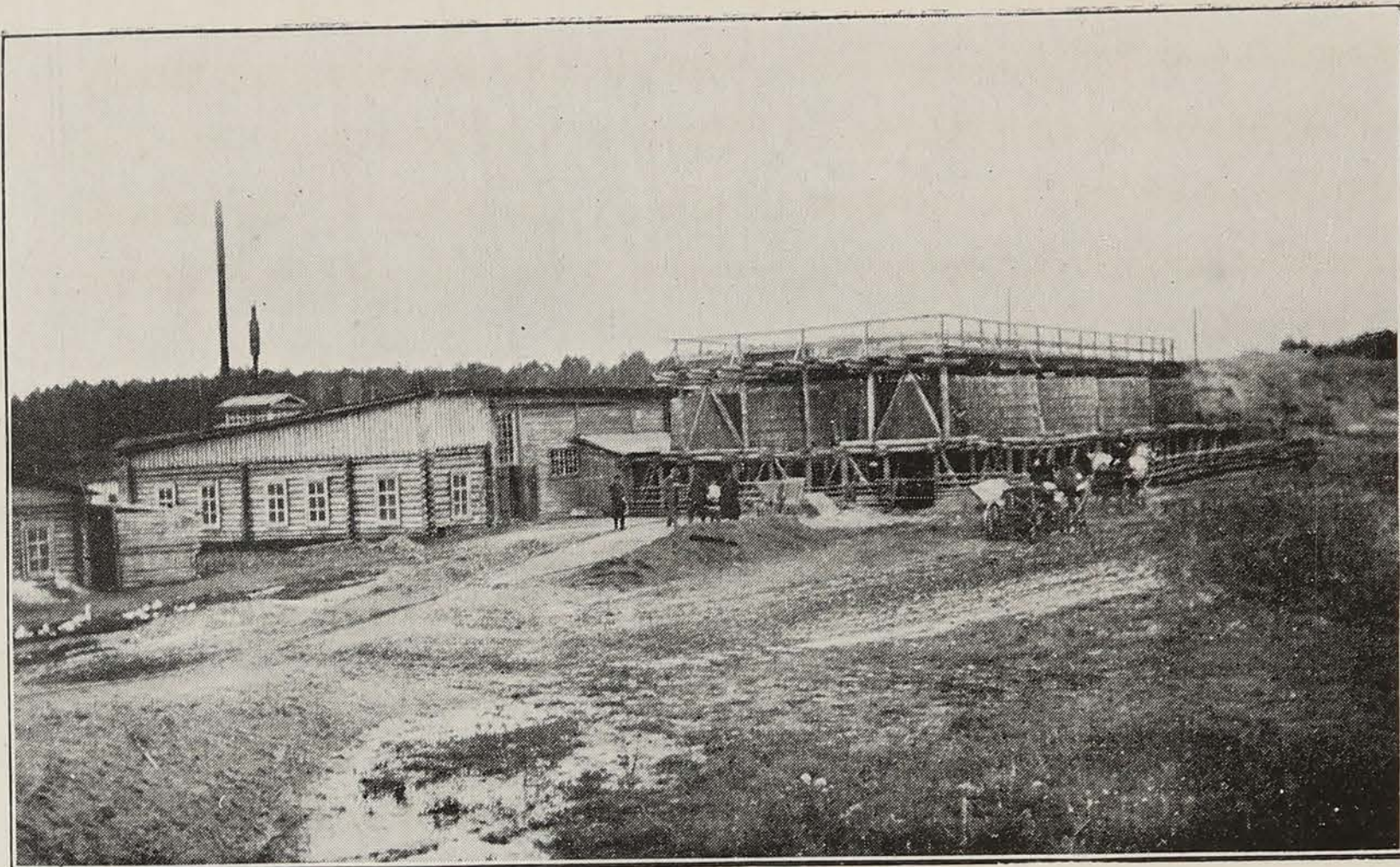
Mr. Heyman Orkin has been conspicuous in that respect, for his courage and tenacity have been indomitable. But his faith was firmly rooted in knowledge, for, as the pioneer of modern mining in Siberia, he realises the importance of the great storehouse of mineral wealth. Practically, he was the discoverer of the Spassky and other properties that now loom large in the public eye as having great potentialities. Like other pioneers, he

has had to overcome tremendous difficulties and to face many disappointments, but he has kept on his way unflinchingly, and the deserved success of intelligent persistence seems to have crowned his endeavours at last. But he has not been absolutely alone in proving the merits of Siberia's mining areas. He has gradually enlisted the sympathy and the support of influential companies, whose confidence is now equal to his own, and whose expectations are of the highest.

In the case of the Troitzk so far only a limited gold output could be looked for whilst development work was in progress—whilst ore reserves were being opened up and adequate reduction plant was lacking. The results already shown under the circumstances, are, however, most creditable to all concerned. They demonstrate beyond question that the Troitzk is no uncertain proposition, but an assured producer of gold on a scale likely to be lucrative. They are certainly of good augury for the near future when the properties are in full operation with adequate plant. Even under the disadvantageous circumstances hitherto prevailing, the output of the properties for about 17 months (or $14\frac{1}{2}$, rather, from the time the management of the mines was taken over from the former Russian owners) has amounted to £44,800. That production was achieved in spite of the following handicaps :—

- (1) Lack of ore reserves.
- (2) High percentage of development rock milled.
- (3) The ore stoped not having been as free from waste rock as it will be in the future, owing to primitive systems of mining and inexperience of workmen.
- (4) The present mill and cyanide plants not being calculated to give the best results possible.

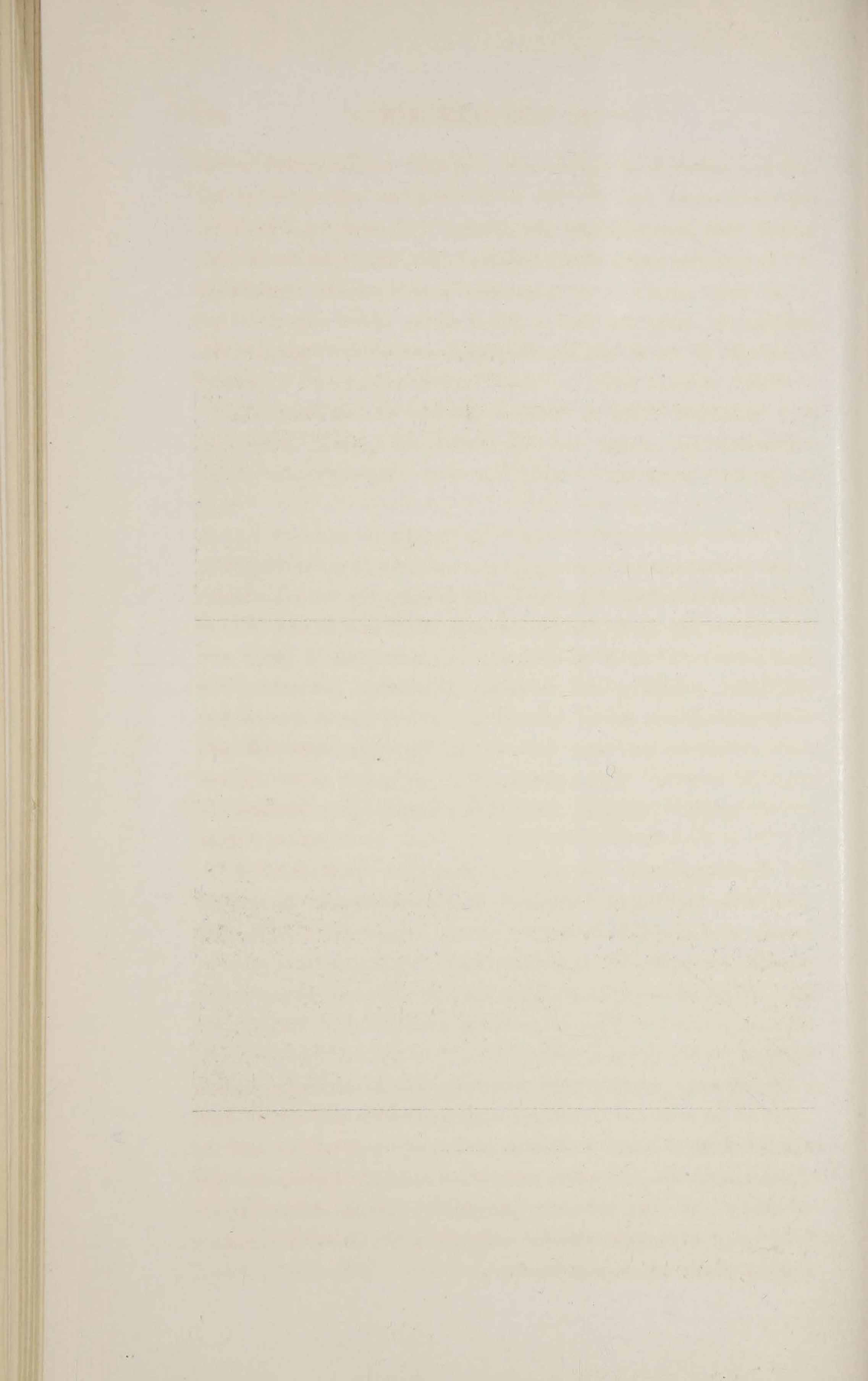
The output hitherto can, therefore, be regarded merely as an indication of capacity, whilst $5,185\frac{1}{2}$ feet of development and exploratory work was being done. Such being the case, it is surely warrantable to assume that excellent results will be shown when the equipment is complete and the work is in full swing. The general manager reckons that “with the equipment at the new main shaft in operation, adequate ore reserves established,



TROITZK.



A GROUP OF MINERS.



and new reduction works erected, a $6\frac{1}{2}$ -dwt. recovery, with working costs under 15s. per ton on a 6,000-ton milling basis per month, may be confidently anticipated." A recovery of $6\frac{1}{2}$ dwts. of fine gold represents about 27.3 dwts. per ton of ore treated, so, as the directors point out, substantial profits may be expected as soon as the operations are in full working order. In this connection be it noted that the properties are wholly vested in the company, subject only to a small royalty payable in respect of gold produced from a limited portion of the reef in the Alexandrovsky claim—the Alexandrovsky being only one of the four properties comprised in the company's 1,100 acres area.

The new main shaft referred to by the general manager is sunk in the central section of the mine ; its purpose is to connect with the present working at 430 feet, and develop the mine in depth. The connecting up of the old working from end to end at that level permits of the development of the main lode in depth and centralises pumping and hoisting operations. Another new working shaft is in the western section, and is intended to exploit that section of the main lode—so far only worked by tributers near the surface. The equipment of both shafts—which will include suitable pumping and winding plants—is in progress.

"It is very satisfactory to learn," say the directors, "that the developments of the 430 feet level have quite fulfilled the favourable predictions contained in Messrs. Hooper & Speak's report, and there is, moreover, every reason to believe that payable ore exists in large quantities at much greater depths. The sinking of the main shafts to the 500 feet and 600 feet levels is being pushed on with all possible speed, with a view to the opening up of fresh ore reserves."

In all respects the results achieved and the prospects opened up may be said to surpass reasonable expectation. The work already done reflects the utmost credit on the directors and the management, for it implies more than ordinary intelligence and efficiency. It has, moreover, proved the merits of the Troitzk properties, and every reliable indication points to conspicuous success in the not distant future.

THE ORSK MINES.

Since my visit to the Orsk mines, the directors have decided that it is unadvisable to exercise the purchase option on the properties. In arriving at that decision they have been guided by the report of Mr. S. J. Speak (of Messrs. Hooper & Speak, the company's consulting engineers), who has visited the mines with a view to ascertaining their actual and prospective value.

I venture to say they have decided wisely and that their alternative proposal is likely to be more satisfactory in the long run to shareholders. That the Orsk is not wholly lacking in merit—that it is sufficiently good to have warranted the test of development—nobody who has actually visited the mine, as I did, can have any doubt whatever. But a reasonable prospect is one thing : a proved and successful proposition is quite another.

The directors of the Orsk have not decided against the absolute purchase of the properties—except on much more favourable terms than the vendors seem likely to concede—without an adequate test of its capabilities. As the notes of my visit show, the directors have pursued a policy that was neither rash nor timid. They permitted such development as was necessary to warrant the exercise of the company's option or its abandonment.

A weak Board might have paltered with the facts ; an injudicious one might have persisted in a course which the facts of the case no longer warranted. But the directors of the Orsk have shown more grit and candour. They have decided to cut the loss instead of committing the shareholders to further obligations. Nor have they been content to say that the Orsk's development has been disappointing ; they have promptly endeavoured to discover a compensating prospect, and they seem to have been successful in that respect.

But before dealing with the new and better prospect opened up, the considerations that have led them to contemplate the abandonment of the purchase option on the Orsk properties require mention. The exercise of the options, be it noted, depended on the values disclosed by development work at depth.

If the ore bodies near the surface, which were remuneratively worked by the lessors, existed in payable quantities below water level, then the option to purchase the properties would be justified ; but, if not, the option must be abandoned, or the purchase terms must be very different from those originally specified by the vendors.

Mr. Speak, on his return to England, reported that, although he believed the mines to have considerable possibilities, the reefs selected for development had proved to be much poorer than was anticipated, and that it was improbable that sufficient ore could be developed within the remaining term of the lease to justify the purchase of the property at the price demanded or at any price likely to be accepted by the vendors.

Messrs. Hooper & Speak, in the general conclusions they append to the report, say :—"The property is vast and the reefs numerous. The four most promising reefs that were chosen for testing have given results considerably poorer than was anticipated. From this it does not necessarily follow that the other reefs, if developed, would prove equally disappointing, though it means that the chief expectations of the company have not been realised . . . We consider it preferable to cease all further expenditure and abandon the hope of purchasing the leased claims, in the meantime deriving whatever profit is obtainable by the extraction of the ore already opened up."

Wisely, under the circumstances, the directors have resolved not to proceed with the negotiations, but to hand over the property to the owners on the expiration of the lease in March, 1909, unless, meanwhile, a perpetual lease be granted, involving only a moderate royalty payment on the gold produced.

The failure of the Orsk to answer expectations means, of course, loss as well as disappointment to the company ; but the realised value of the bullion recovered from all sources—together with sundry receipts—amounts to £77,200, and substantially reduces the total which may have to be written off.

The report of the company issued on June 30th, 1908, deals with the foregoing incidents. After notifying the purchase for the modest sum of £4,000 of eleven promising alluvial mining

claims on the Suvunduk River, near the Orsk Mines, the report states that the Siberian Proprietary Mines, Ltd., the largest shareholder in this company, has promised financial aid in order that one or other of the promising propositions before the Board might be taken up.

“The Board have, therefore,” says the report, “much pleasure in announcing that arrangements have been practically completed, with the assistance of Proprietary Mines, Ltd., for the acquisition from the Russian Mining Corporation, Ltd., of a very promising alluvial mining property, situate in Eastern Siberia.” The property has been very favourably reported on by Mr. C. W. Purington, the well-known alluvial mining expert, who, at the time of writing, had left London for Eastern Siberia to manage the property.

Though shareholders must be disappointed that the Orsk properties have not proved so satisfactory as superficial indications suggested, they have reason to congratulate themselves on the frankness of the directors in their determination to prevent avoidable waste and their indomitable spirit in seeking to retrieve the situation by fresh effort.

The notes of my visit to the Orsk were written before the possibility of abandonment had been reckoned on, but I see no reason to modify them in any essential particulars, and, as they give an idea of the difficulties incidental to development in the case of properties so off the beaten track, I reproduce the notes as follows :—

MY VISIT TO THE ORSK.

A journey by road to the Orsk property from the Troitzk is supposed to occupy about 32 hours, but this is always providing that horses are immediately available at the various stations and that accidents do not happen. Now, as far as I can judge, a journey to the Orsk is generally attended by one, if not both, of these experiences. In my own case, fortune did not favour me. Hearing that the two last Englishmen who undertook the journey both caught smallpox, I decided not to linger at any

of the post stations on the way, but to go through night and day with only the stoppages necessary to change horses. But on two separate occasions I had to wait several hours before the necessary relays could be obtained, and, to crown all, about 80 miles from the start the "tarantas" was bodily upset into a river while going down a steep bank to cross a ford. As it was the witching hour of midnight, it took some hours to unload oneself from the vehicle, then to rescue the soaked baggage, and, finally, right the carriage. As all this had to be done in about a foot of water the experience was an uncomfortable one. Fortunately, only one of the three horses fell down, and the other two stood quietly. The result of it was that the journey took about 55 hours. Posting in Russia would be delightful but for one thing, and that is the merciless way the drivers treat their beasts. Of course, there are exceptions, but on this route, at any rate, they were very few. Armed with a thick Cossack whip of raw hide, the "izvoschik" thrashed his wretched little animals from start to finish without mercy. In many instances they had raw backs, and on more than one occasion the collar had chafed the skin and the harness was covered with blood. As far as my experience has gone, I have found the Russian moujik a thoroughly good-natured, kindly fellow in every other respect. I have never seen him strike any of his cattle when driving them into the villages, and his attitude to the pig which occasionally runs between his legs is one of kindly toleration. It is, therefore, somewhat strange that he should be so relentless to the animal which plays so large a part in his daily existence.

Apart from this, a drive through the Steppes is full of interest. The country is fairly flat through the part traversed by me. It is only cultivated to a small extent, but it is covered with most luxuriant vegetation. About every 20 miles there are villages, and these form an endless source of interest to the traveller. No matter how squalid a place may be, there is invariably a fine-looking church, whose dome and minarets can be seen sparkling in the sun for miles. The villages themselves are all of one pattern. There is a wide road through the centre, and this during the cooler parts of the day is occupied by troops of geese, ducks,

pigs with large families, calves and fowls innumerable. When the sun is out, shining in full strength, the live stock select all the shady places near the houses, which they share with countless babies and children. The houses are all of wood, and each has its farm compound. Directly the traveller dismounts from his vehicle he is surrounded by a curious crowd, who watch his every action with the deepest interest. Should he take from his pocket anything that especially excites their curiosity, he will be immediately surrounded, and there will be exclamations of wonder on all sides. The charge, I should have said, for posting is three kopecks per verst—one for each horse—but it is usual to give an extra three kopecks for the use of the carriage, and then there is the tip to the driver at the end of even 20 to 40 versts, according to the length of the journey. This is from 25 to 50 kopecks. I arrived at my destination at midnight, where I received a cheerful welcome.

I first visited the Safonofski shaft, which I found to be equipped with a 28 H.P. winding engine, made by Darcy, Paxman and Co., of Chelmsford, and a Tangye special steam sinking pump, capable of lifting 3,200 gallons of water 600 feet every hour. There was evidently very little water in the shaft, as the pump was only being used at about half its capacity. Standing at the brace of the headgear, I could see a line of abandoned shafts, where the tributers had worked along the reef until they reached the water level. I was at once struck with the substantial way the company had timbered the new shaft on this reef. At the time of my visit it was down 219 feet. The reef had been intersected at 162 feet deep, and the ore from here yielded in one month 4 dwts. 12 grs. of gold to the ton. But, as the ore formerly obtained by the tributers yielded 15 dwts. to the ton from this reef, it seemed not unreasonable to assume that the ore would improve upon the level being driven a little more on the strike of the reef southward. I should have stated that the shaft was divided into four compartments—two for the winding, one for the ladder, and one for the pumping. This plan had been adopted, I found later, on all the company's new shafts on this property.

The next object of interest I inspected was the Krashaia Jorka

shaft. This had been put down since Mr. Hooper's visit. It was 91 feet deep at the time of my visit, and this result had been accomplished in six weeks. It was being sunk through hard hornblendic granite. I could also trace the line of the reef from here by the abandoned tributers' workings. I ascertained that the tributers had obtained a little over 8 dwts. to the ton from this reef, or, rather, I believe, there are two reefs. The water level is from 60 to 70 feet, at which depth the company took possession. The position of the reef is at the western end of the Troitsky claim, or nearly north 400 yards of the Safonofski reef. The construction of the shaft was being done in the same substantial manner I had noticed elsewhere.

I then proceeded to the Miasski reef. This is on the Titchvonski claim. It runs north-east and south-west, and had been traced 1,500 feet, the whole distance being plainly observable by the line of tributers' workings. The shaft was down 266 feet, but the reef was cut by a cross-cut at 180 feet. The reef was of an average width of 2 feet 5 inches, and assayed 8 dwts. 4 grs. to the ton. The average yield obtained by the tributers was 20·8 dwts. From the landing-brace I could see a number of men and women working for alluvial gold close at hand.

The shaft is fitted with similar machinery to that I have already described, and, while inspecting it, I heard an amusing story. It is the custom in this country, when any new machinery is installed, for a priest to hold a short religious service, and in the presence of the workmen to solemnly give the machinery his blessing. While this was being done at the Miasski shaft one of the members of the English engineering staff inadvertently stood between an ikon and the workmen. Seeing this, the priest sternly exclaimed, "Sir, the people are not worshipping you, but the Almighty." It is said that to prevent any possible doubt upon the subject the Englishman made a hurried exit. There is a climax to the story, but, for fear that I might be thought guilty of profanity, I refrain from repeating it.

Leaving the shaft, I climbed down an open cutting about 60 yards away, made by the tributers before the company took possession. In the eastern end of the cut, about 15 feet down,

the reef was plainly visible, dipping towards the shaft. From here I went to the Novgorodov reef, which tributers had found payable for about 2,000 feet. They have taken very large supplies of ore from here, the average yield having worked out at 9 dwts. to the ton. I was informed that the ore lay along this reef in a horizontal direction, and varied from 18 inches to 6 feet in depth. The reef is of such a flat character that it has been sunk on its underlie. If a perpendicular shaft had been sunk cross-cuts would have had to be of considerable length. By sinking an underlie shaft this had been avoided. The shaft was down 273 feet. No. 1 level was driven north and south 200 feet each way. At 100 feet north and south of the shaft at the level winzes have been sunk. At the 200 feet it was proposed to sink other winzes.

I went down the shaft to the first level. It was splendidly timbered, and is quite the show place of the property. I was particularly struck with the appearance of the reef at the north end of the drive. Throughout both the hanging-wall and the foot-wall it was extremely well defined. At the level I have mentioned it was 2 feet 6 inches wide. The assays so far had been of an extremely variable character; they had gone as low as 5 dwts. and as high as 25 dwts. A tributer worked here for a comparatively short time and made a considerable sum of money. He got down as far as the present first level, when he was stopped by the inrush of water.

On leaving the shaft I followed the course of the reef southwards, and went to the new Goveroff shaft. This had been put down since Mr. Hooper's visit. It was down 54 feet. It was intended to be a counterpart of the shaft I have just described. It followed the reef all the way down. I went to the bottom and observed that it followed the line of the old workings. Very rich ore, I was informed, had been taken from this reef.

Subsequently during my stay at the mine I went to the powerhouse, which was equipped with a 120 H.P. engine. This engine was in an excellent condition, and at first I thought it was a part of the new plant. From here I went to the old mill. It was equipped with six Chilian mills, and all of these appeared to be in very good condition, and capable of a lot of work.

My next visit was to the new mill-house. This was really a very fine, substantial building. It appeared to be about 150 feet long, and the whole of the machinery was most conveniently arranged. The Chilian mills, six in number, were all brand new.

From the mills I went to the smelting room, where I was fortunate in seeing the whole process of converting the retorted gold into a bar of gold weighing about 13 lbs. This was the third bar which had been cast during the day. Leaving here, I watched with interest two small boys gathering up dust from the roadway into a pail. This they intended washing on their own account; but one of the officials had also followed their operations with interest. The contents of the pail were promptly confiscated and emptied into one of the mills.

There were no cyanide works on the property. Several of the mills, however, were kept employed with the ore from the tributers, with ore from the levels now being driven on three reefs, and with crushing the stock of ore purchased from the late owners of the property—at least, that which has not been treated. This ore was in two dumps.

I found most elaborate precautions were taken to prevent dishonesty on the part of the tributers. A ganger of known honesty was appointed to supervise every six puddling-boxes (where the gold is washed), and his duty was to watch the operations during the day and to collect the gold every evening. The ganger kept a tally of every cart-load of stuff which was delivered to the puddling-boxes, and, as the average gold return seldom changes to any great extent, he knew to even a few “doli” how much one day’s work should yield. If there were any shortage, he immediately reported it to the manager. The gold was brought to the offices of the company every evening in the locked boxes. The manager held the keys of these. The gold was then weighed, and the result entered in the Government and company’s account books. As a further precaution, the gangers were always of different nationality from the tributers. Thus, a Tartar was set to watch a Russian, and a Russian a Tartar. There was, of course, the possibility of a small amount of dishonesty—no system in the world would probably prevent that.

Now as to the conclusions I formed during my very interesting visit. They were as follows :—

That it was impossible to judge the real value of the reefs from the samples taken from so limited an area.

That it would be a mistake to form any definite opinion of the value of the reefs until further development work had been done. The great thing was to prove the existence of the reefs at depth.

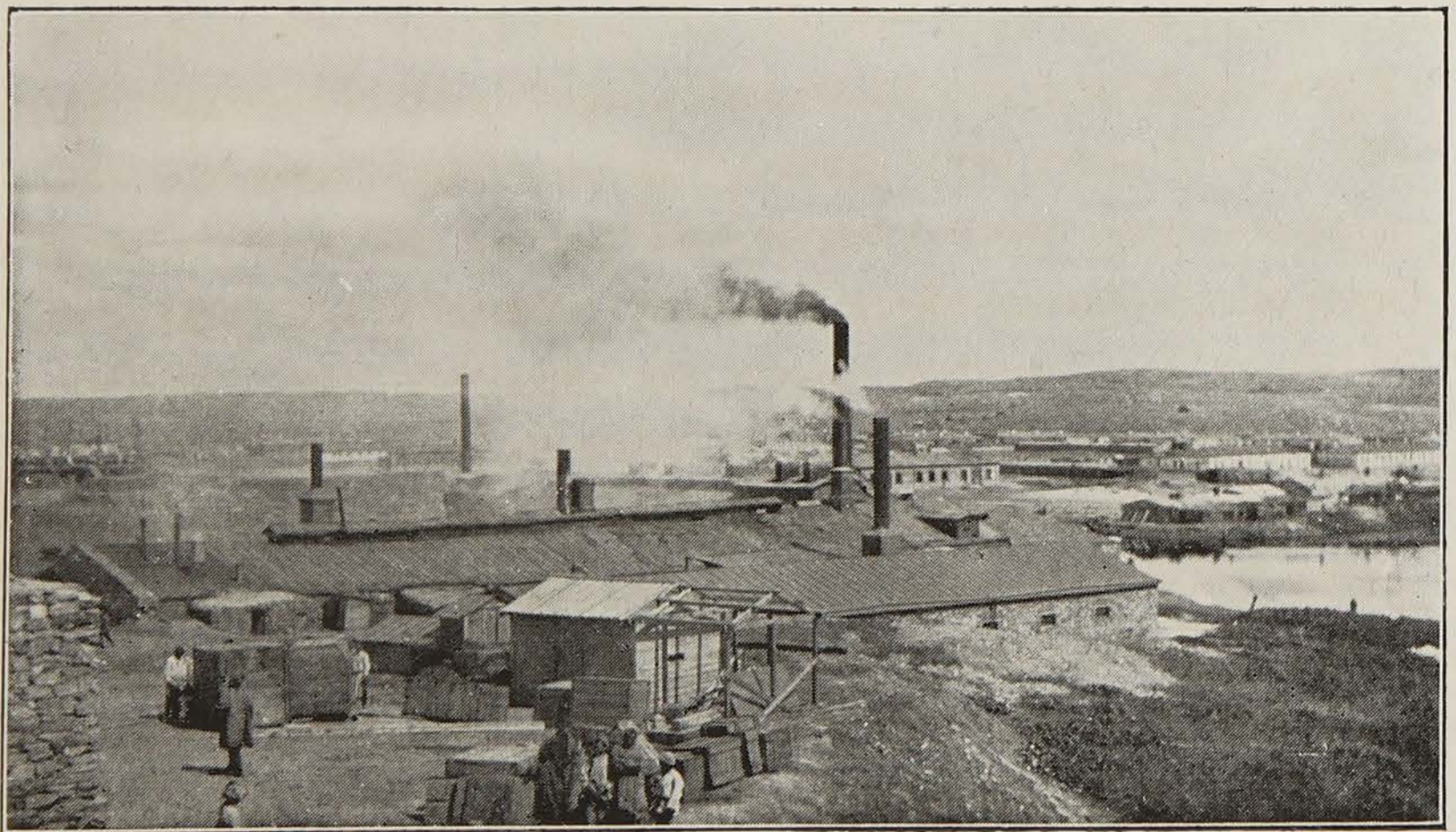
That the machinery taken over was in a thoroughly good condition, and that the machinery purchased by the company since the commencement of operations was the very best of its kind. Whether or not it would have been better to have delayed the erection of the mills for a little while is really of little relative importance.

That the property was of so extensive a character that so far it had only been possible to develop a comparatively small portion of it.

I was personally greatly indebted to Mr. R. Provis, the late manager, for the great assistance he gave me. No effort or trouble on his part was too great to enable me to see everything there was to be seen, and to form a reliable judgment upon the position and prospects of the mine. Mr. Provis was assisted by Mr. R. Farina, who was responsible for the underground work, and by Mr. G. Winslow, who had charge of the mill, the smelting, and the whole of the building and other works on the surface. Both had a very good working knowledge of the Russian language.



MINERS.



SPASSKY.

CHAPTER XIII.

THE SPASSKY MINES.

HISTORY OF THE MINES.—BYGONE METHODS.—MINING ON THE KIRGHIZ STEPPES.—THE JOURNEY.—THE KIRGHIZ.—THE CLIMATE.—THE KARAGANDY COAL MINE.—THE RAILWAY.—THE SPASSKY SMELTING WORKS.—YUSPENSSKY COPPER MINE.—THE OFFICIALS.

SPASSKY was an afterthought, and I hesitated about visiting it. The Spassky property is not easily reached; on the contrary it involves a journey by post of over 600 miles after leaving the Trans-Siberian Railway, and—I may as well confess it—there was another reason for my hesitation. The heavy depreciation which had taken place in the company's shares had seemed to indicate that the property was not fairly representative of the mineral wealth of Russia. I did not wish to expend time and energy in seeing anything but the best, or, at any rate, such properties as were likely to warrant the favourable regard of British capital. But when I arrived at St. Petersburg, and it became known that I was going to Siberia, I found that everywhere it was taken for granted that I should go and see two or three of the chief Anglo-Russian mines, and more particularly the Spassky. I was so impressed with the prevailing

sentiment and with what was expected of me that to Spassky I decided to go.

Before describing the incidents of the visit, it is necessary that the reader should be familiarised with the following points : The history of the copper mine before it was acquired by the English company ; the geographical position of the various other properties, such, for instance, as the smelting works and the coal mine ; and, finally, the developments which have taken place, and are taking place, in the copper and coal mines, and in regard to the erection and equipment of the new smelting works.

First, then, as regards the history of the Riasanoff properties, which include the Yuspenssky, the Spassky, and the Karagandy claims. The pioneer of mining in the Akmolinsk district of the Kirghiz Steppes, where the properties are situated, was a practical man named Popoff, who, in the first half of the last century, commenced to work on the silver-lead and afterwards on the copper deposits. "It is impossible," says Mr. E. Nelson Fell, in his preliminary report upon the mine, "to refrain from admiring the confidence and courage of old Stephen Popoff, who, in the early part of the nineteenth century plunged into this unknown country more than a thousand miles from any communication, the very name of which was a terror to most men." Popoff, who had large contracts for the supply of lead to the Russian Government during the Russo-Turkish War, died in the nineties after a chequered career, in the course of which he amassed and lost several fortunes.

Following in his wake to the Kirghiz Steppes came the Riasanoff family, from Ekaterinburg—a family already familiar with mining in the Yenesei district. It acquired these properties from the Kirghiz in 1864, and worked the mines till 1886. The mines were then closed down till 1898, since which time they have been worked, with various intermissions, to the present day.

Such success did the Riasanoff family achieve at the Yuspenssky mine that they did not go farther afield, but quietly worked the mine, to their very great profit, so that, while the

bolder schemes and, to some extent, the failures, of the Popoffs had made their names and mines well known over Russia and elsewhere, the name of Riasanoff and the fame of their mines has only lately been noised abroad. Yet, so far, the Yuspenssky mine—the most important, certainly, of the Riasanoff properties—is the only one which has been developed to any really serious extent.

As a matter of fact, it was not the first of the properties owned by the present company that the Riasanoffs worked. At the outset the mine now known as Spassky No. 1 was opened, and several thousands of tons were taken out and smelted. Then came the discovery of the deposits at the Yuspenssky. It is true they were 70 miles distant from the smelter, and the Spassky No. 1 was hard by. On the other hand, the Yuspenssky was richer and so wide that it could be quarried at a small cost. Spassky No. 1 and the other Russian copper areas ceased to be of practical interest. The shafts were allowed to fill with water, and attention was concentrated upon the deposits at Yuspenssky.

So extensive are the carbonate outcrops that, after having been worked for 40 years, they show no sign of exhaustion. But the methods of working the mines of the Kirghiz Steppes have been the rudest imaginable in the past. Mining was carried on in the Steppes many years ago by a race preceding the Kirghiz. These works are always called Kalmuck workings, the name popularly given to the race of men who inhabited the Steppes before the Kirghiz drove them out. Since that time no work had been done until the arrival of the Russians. These Kalmuck workings are all of the same character. The Kalmucks seem to have mined and filled up the excavations behind them, so that at present their workings can only be detected by a practised eye and by trenches which reveal their old fillings. These fillings are often full of ore, which will assay 10 or 12 per cent., and it was evident that this class of ore was of no use to them, but that they were seeking the extra rich copper oxides and native copper. They could not mine below water-level, and their workings are consequently very shallow, as water is nearly always encountered between 20 and 30 feet in depth. After the Kalmucks there

was a long period of mining quiescence, for the Kirghiz are not miners by nature, and finally the Russians came.

At the time the Spassky Company acquired the property, mining and mining methods and smelting were not conceived on a modern basis. Mining was practised on uniform lines by all, no matter what the character of the deposit might be. No exploration and no development was thought of, but a "glory-hole" was at once commenced, whether the deposit was a large, low-grade impregnation, or a small, rich, six-inch vein, and from this the ore was sorted out and sent to the smelter. When the "glory-hole" was about 30 feet deep a shaft appeared to have been commenced, and at 30 or 40 or 50 feet more the limit of resources was reached, and the mine abandoned. The only form of shaft-sinking known to the Russians was the vertical shaft, and the only form of timbering that of close setts, log-cabin style. The result was that the shafts were seldom sunk on the ore, and when they were on the ore the close timbering prevented any examination of the ore-body.

Such is the condition of hundreds of mines, or prospects, as they would be called in the West; the work done was no good for either exploration or development. The most experienced engineer could see no more at the finish than he could have seen at the start, and often not so much. It is stated that a Russian mining man who had spent a small fortune in this hand-to-mouth manner referred to his failures as the act of destiny. Mining, he said, was a lottery, and science and skill were of no avail.

The Yuspenssky mine, which has produced nine-tenths of all the copper of the Steppes, is the only one which was seriously developed, and is typical of the best class of work in the region. Yet even there the past methods were primitive. In order to smelt 15 tons of ore a day at the works, 54 tons of fluxes and fuel were required. There was not an assayer at the works or at the mine. The processes were crude and wasteful. Yet the copper ran about 99.5 fine, with £4 to £5 additional value in precious metals. It was sold direct with the stamp of the Spassky works upon it, and commanded a high price on the Russian market,

where the copper producers of the Empire are protected by a duty, recently raised to about £33 per ton, so that the price of copper in Russia is £33 per ton over ruling English quotations for best selected.

The fuel used at the Spassky mines and for household purposes was derived from the Karagandy coal mine, which is one of the company's properties. The past methods there, also, were wasteful; there was no evidence of design or plan. The cost of production had been as low as 3s. 11d. per ton at times. Samples of coal taken from the mine had shown it to be a variety between the lignite and the bituminous class.

So much for what I will call the ancient history of the Spassky property. Its new era commenced with the formation of the Spassky Copper Mine, Limited. This was the offspring of the Siberian Syndicate, Limited, and formed to acquire options on an extensive group of properties in the Steppes district of Siberia. The Spassky Copper Mine, Limited, acquired mineral properties, which it now holds, in the Government of Akmolinsk, in the Kirghiz Steppes, and was registered on July 9th, 1904. The authorised capital was £300,000 in £1 shares, all of which have been allotted and paid up. There are also Five per Cent. Debentures and loans to the extent of £170,000. The property owned by the company is freehold, and covers an area of upwards of 100 square miles. The chairman of the company is Mr. Arthur Fell, M.P., and the vice-chairman M. E. Sadi Carnot, of Paris, son of the late President of the French Republic; the other directors, as the Board has recently been reinforced, being Prince Khilkoff, late Russian Minister of Railways, Mons. J. P. Depelley and Mons. F. Robellaz, of Paris, the Earl of Chesterfield and Messrs. F. H. Hamilton and H. A. Scott.

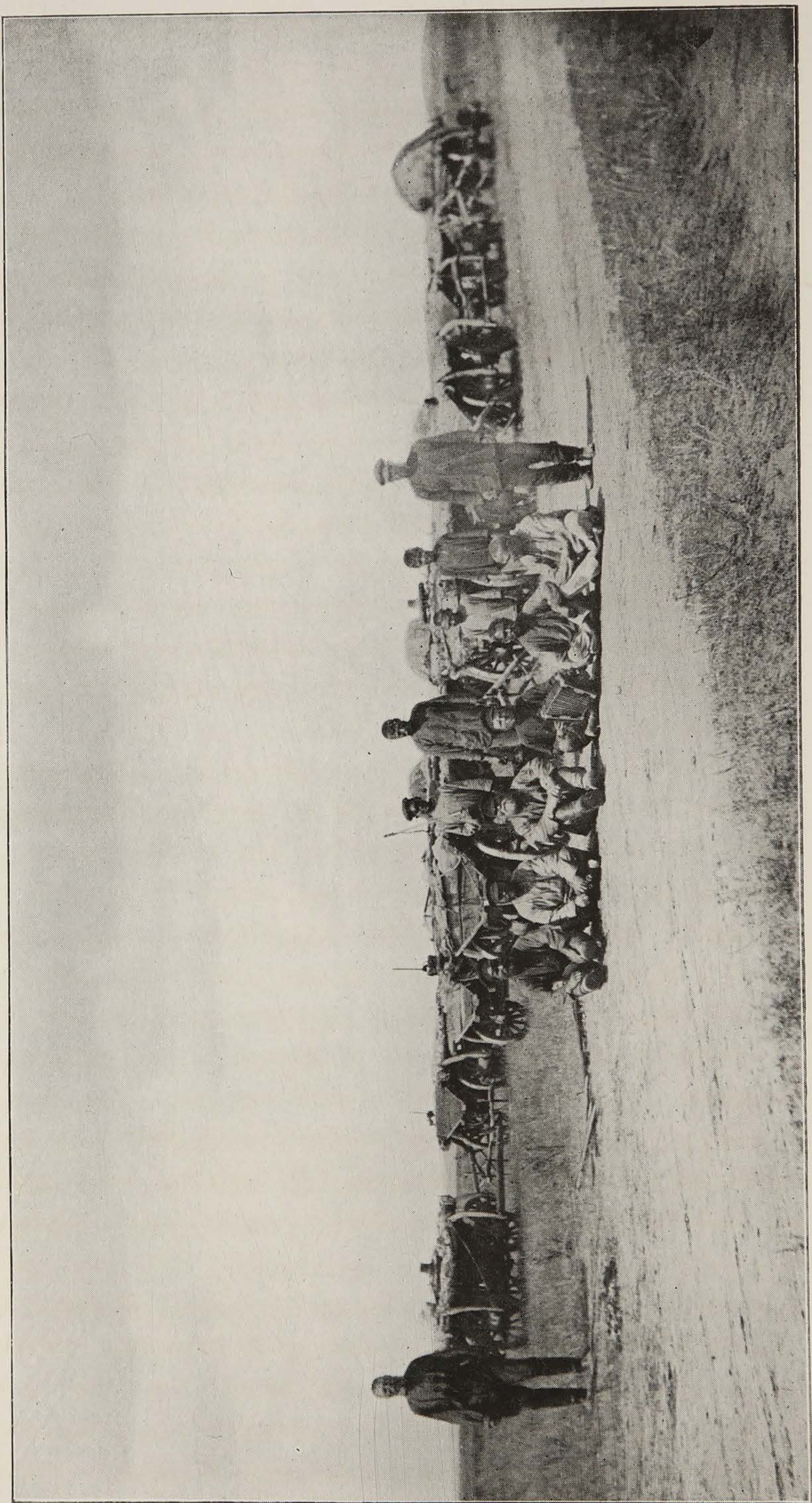
Until comparatively recently it was thought better that the properties acquired by the company should be held in Russia, in the name of the vice-chairman, but an application of the company to be allowed to operate in its own name within the Russian Empire has been granted, and it now enjoys the authorisation of His Imperial Majesty the Tsar, to operate.

Accordingly the properties have been transferred to the company itself.

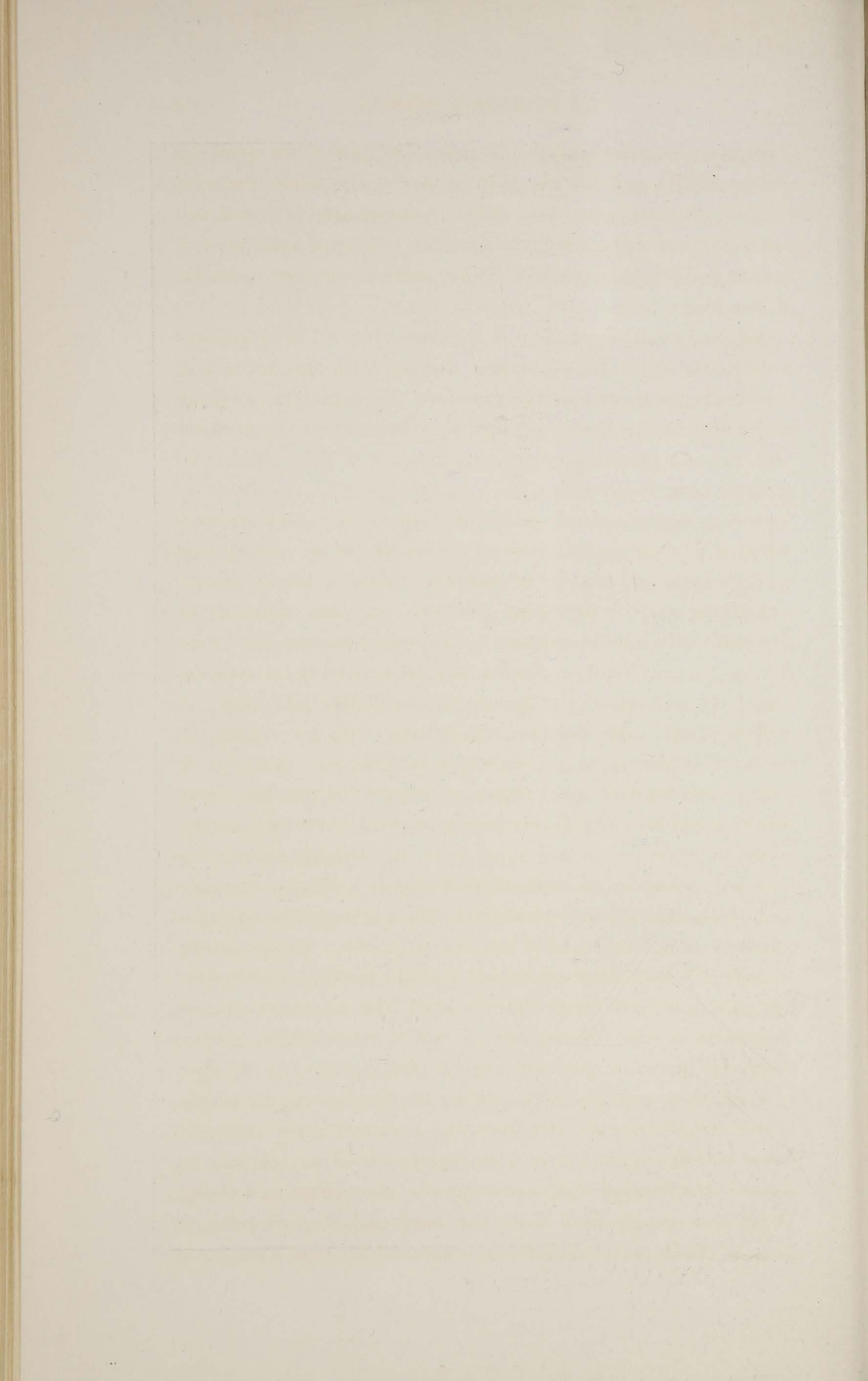
I arrived at the town of Petropavlovsk, on the Trans-Siberian Railway, with the haziest of ideas as to how I was to reach the property of Spassky, but, thanks to the kindness of the senior partner of the well-known firm of Messrs. G. F. G. Brandt & Co., I was enabled to quickly make the necessary arrangements. I propose to give a few details of my journey, because they will illustrate in a slight degree the enormous difficulties the Spassky Company have had to contend with in regard to the transport of their machinery, stores, &c. I found that the company's coal mines at Karagandy are close upon 500 miles distant by road, that the smelting works are 22 miles further on, and that the copper mines, known locally as the Yuspenssky, are a further 70 miles. In all, therefore, the total journey by road before me was close upon 600 miles. Careful calculations showed me that to do this journey there and back in a fairly expeditious manner would require the services of 120 horses.

If it took 120 horses to carry my 11 stone 8 lbs., plus a hold-all weighing, with its contents, about 28 lbs., what has the transport been necessary to carry the whole of the machinery requisite to successfully develop and work a coal mine ; the whole of the machinery, boilers, ironwork, &c., of a smelting works with a capacity for producing 300 tons of copper a month in the immediate future ; the entire plant and machinery, boilers, &c., for a copper mine of the size and importance of the Yuspenssky ; the whole of the steel rails, rolling-stock and plant for a railway 22 miles long, a distance of 500 miles ; the supplies of ore from a mine 70 miles away to keep the old smelting works going, and with coal from a mine in the opposite direction 22 miles distant ?

In many instances the roads on the Siberian Steppes are mere trails across the plains ; in others they have been made by the traffic. Even in the brief summer months the roads are so heavy that at times they are almost impassable. With three horses, there were times when I could scarcely make one mile an hour progress. Recollect, also, that Siberia does not enjoy



TREKKING.



a perpetual summer, and that between the time of the break-up of the autumn and the first grip of the ice the roads, paths or tracts—call them what you will—are impassable. If you will work out these calculations, I think you will agree with me that the successful rapid cartage of all this material was a very arduous undertaking.

Of what avail would the new smelter have been if the railway between the mine and the smelter had not been also finished, if the developments of and equipment at the mine had not kept pace with the other work, and, finally, if the results of the smelting with the old plant had been very much less than they have actually been?

It was not my intention at this stage of my story to have indulged in these speculations. I rather wished to have spoken of the charm and variety of Siberian travel. True, it has its vicissitudes and its hardships, but they are only sufficient to give zest to the man of ordinary healthy physique who has a love of "roughing it," and to whom a limitless horizon is an inspiring vista. To me a journey in Siberia had suggested the crossing of endless plains—arid, desolate and forlorn. But the reality, in this part of Siberia, at any rate, is very different. Scarcely an hour passed without some object of interest coming into view. Now it would be a long prairie train of wagons, hauled by camels, horses or oxen, or by the three kinds of draught animals; a little later, close by the trail, there would be a Kirghiz encampment, consisting of a few round tents. These strangely picturesque people are to be found more or less all over Siberia. For thousands of years they have led the strangely nomadic life they lead to-day. Untouched, unspoilt by civilisation, they were an endless source of interest to me. Never have I met a more kindly, gentle, hospitable race of people, and I found that this was the estimate in which they were generally held by the English mining people I met on my travels. Occasionally I passed great herds of cattle feeding on the country as they travelled on the way to Omsk. The Russian emigrant trains also afforded great interest. These poor people were from the famine-stricken districts of Russia. Each party consisted of several adults, and a swarm of

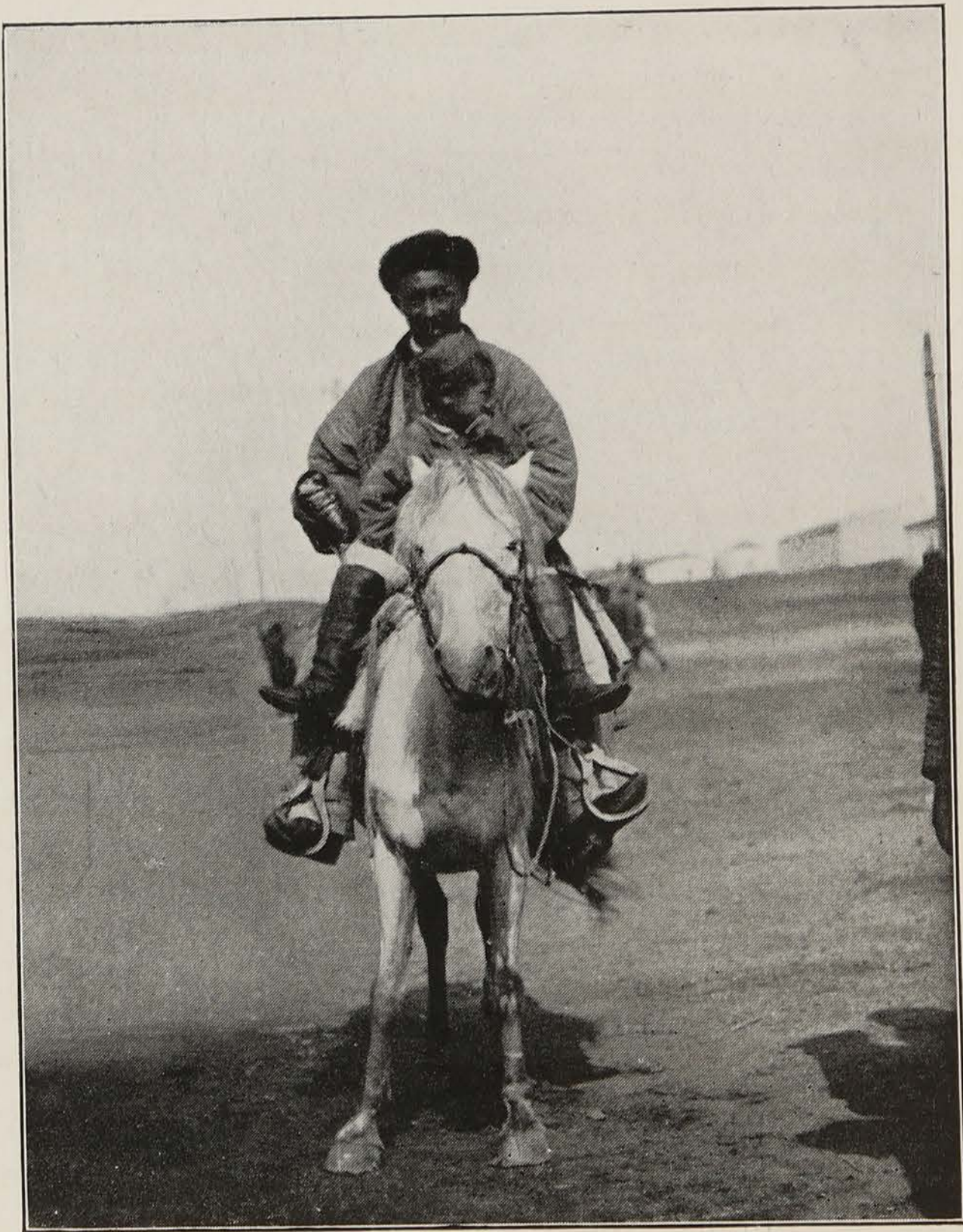
healthy-looking children. They usually had two or three carts (upon which their poor belongings were piled up), several horses, a foal or two, and sometimes a cow.

The villages, usually about 30 miles apart, are also not without interest. Indeed, I have never seen prettier pastoral scenes than those I frequently witnessed of an evening, when all the live-stock, which constitutes the wealth of the community, returns to the villages from the grazing grounds. And then riding in a troika, when the roads and the horses are good, is a very lively and sometimes an exciting experience—at any rate for a time.

If one has a Kirghiz driver, what usually happens is this: the moment the horses are let go from the post-house, they trot off at a terrific pace; the driver yells and shouts; the karabok travels most of the time on two of its wheels; and the occupant hangs on for dear life. When once the driver is out of sight of the village he slows down. Apparently, his idea is to make the villagers believe he does the whole journey at a gallop.

There are also many natural beauties in this part of Siberia. I doubt if the Italian lakes could show prettier scenery than that of the Gsenhaha, or Blue Mountains. In the vicinity of these mountains the country appears to be highly-mineralised, outcropping in many directions. I also passed a fair amount of timber and grazing land.

It is impossible not to refer to the climate. Although the heat from the sun during the day at times was very great, the air always seemed tempered by a cool breeze. And the evenings! Surely in all the world there are not more beautiful sunsets than those I repeatedly witnessed. For the artist who will faithfully portray a Siberian sunset everlasting fame awaits. I always posted day and night, not only for the sake of saving time, but because a Siberian night, even when the elements are unfavourable, influences one in a way that can be felt but is difficult to describe. All I can say is that Throgmorton Street seemed to be many hundred thousand miles away. And I did not travel under the most convenient of circumstances, so far as comfort was concerned. Had arrangements been made before I left England for my visit



A KIRGHESE CHIEF AND INFANT.

the company would, no doubt, have sent a comfortably-hooded tarantas to Petropavlovsk for me to travel in. This I should have kept for the whole journey, but, as it was, I did practically the whole distance in an open, springless karabok, unsheltered from the glare of the sun by day and the showers of rain which, with scarcely a day or night's interval, fall in that part of the country. But even travelling in this rough way was preferable to many a journey I have made in other parts of the world, when all the luxuries of civilisation have been at my command. So much for my journey to the company's property.

I did not inspect the company's coal mines on the first day of my arrival, but in order to give proper sequence to my story I will at this stage give the result of the visit I paid a few days later. I had not been long on the coalfield before I felt that the Karagandy coal mine had been unduly eclipsed by its associated copper property. At Karagandy there is a mine, with, it is asserted, enough coal to supply all Siberia, if necessary.

But, it may be asked, what is the use of all this coal if the demand is limited to the requirements of the company's smelters? The reply to this is that already coal has been shipped to Akmolinsk—a thriving town about 140 miles away—and that in the neighbourhood of the mine a population is steadily accumulating. When I was in St. Petersburg I heard on very excellent authority that it is now only a question of a very short time before a commencement will be made in duplicating the Trans-Siberian Railway, and that the line will pass within a comparatively short distance of the Karagandy property. At the present time the Trans-Siberian Railway is worked largely by means of oil and wood, owing to its distance from suitable coal deposits. But when once the new line is built the local coal will be available.

The total area of the property is about six miles by four miles. The Russians have worked the property for about 50 years by means of a number of little shafts along the outcrop. The deepest of these shafts is only about 70 feet; the average is very much less. At the time of my visit the company had sunk the Carnot shaft 238 feet. This shaft had gone through what is known

as the No. 1 seam, and was working No. 2 seam. The former seam is 5 feet thick, and the latter 5 feet 6 inches. Under this seam there is the Mariana seam, which is no less than 24 feet thick. I went along the Mariana shaft, and saw a trial shaft proving this to be the thickness of the seam. Underneath, 5 feet of fireclay—of which I shall have to speak later—was being worked.

I noticed that the Mariana seam outcropped about $1\frac{1}{2}$ miles south of the Carnot shaft. The engineers, at the time of my inspection, had driven on the dip of the seam about 280 feet, and on each side had gone about 200 feet. Unquestionably the coal is of excellent quality. It is difficult to compare it with English coal, because it is higher in ash—running to about 14 per cent. In the Carnot the coal is of the coking variety, whilst in the Mariana it is non-coking. The company, therefore, has coal suitable for household as well as for furnace purposes.

The thickness of the Mariana seam and the analysis of the fireclay below correspond very closely to the 10-yard seams of South Staffordshire. This is such a curious fact that the following comparison may be of interest :—

ANALYSIS OF FIRECLAYS.

	Karagandy, Siberia.	Stourbridge, England.
Silica	64.4	63.30
Alumina	23.0	23.30
Lime	0.5	0.73
Iron oxide	1.4	1.80
Magnesia	0.7	—
Moisture or organic matter.. ..	9.0	10.30
	99.0	99.43

I may add in regard to the coal that it is of a bituminous character, and that I heard that all its indications point to its being of the carboniferous age. The limestone below the seam contains the fossil *Productus Gigantius*. In the Carnot shaft the engineers have driven on both sides 700 feet, and driving work was actively proceeding while I was on the property. As I walked through the underground workings it seemed as if I were

in a tunnel cut in solid coal. The height of the tunnel, except in one or two places, was at least 7 feet. In one part I saw a second layer of coal being removed, 6 feet thick. I was particularly struck with the substantial way the mine was timbered. It seemed to me the "chocks" would have supported St. Paul's Cathedral. I entered the mine by an incline shaft, which is much to be preferred to being lowered in a swinging basket. And I had not far to go down before I saw the coal deposits.

Returning to the surface, I noticed that at that time the haulage was being done by a horse-whim, but this was to be superseded by steam power, and the system will then be the endless-rope one. The above-ground works include a boiler-house equipped with three boilers, and a fourth was being installed. All the boilers are of Russian make, and are in an excellent condition. In the engine-house there is a 100 H.P. engine, also of Russian manufacture. The coal, I noticed, was being screened by the old English type of bar-screen, dividing the coal into three qualities. I ascertained that the company were manufacturing fire-bricks from the very excellent bed of fireclay they possess. Naturally, a very large number of these are required for the furnaces and for the ovens at the smelter, and it must be of advantage to the company to be able to make these on the spot.

I was shown over the mine by the local English superintendent, Mr. E. Watson, and I am bound to say that this gentleman was indefatigable in his efforts to enable me to see the whole of the property, and to form a correct estimate of its value. I questioned him closely about the labour problem. His manner, in replying, was characteristic. "Look around," he said, "and you will see that we are getting quite a population here. A year or two ago the place was practically uninhabited, except for the men regularly employed here. We can get all the labour we want." Before leaving the coal mine, I should like to state that I received much help and assistance from Mr. P. O'Cattley, whose intimate knowledge of the Russian language must be of great value to his chief.

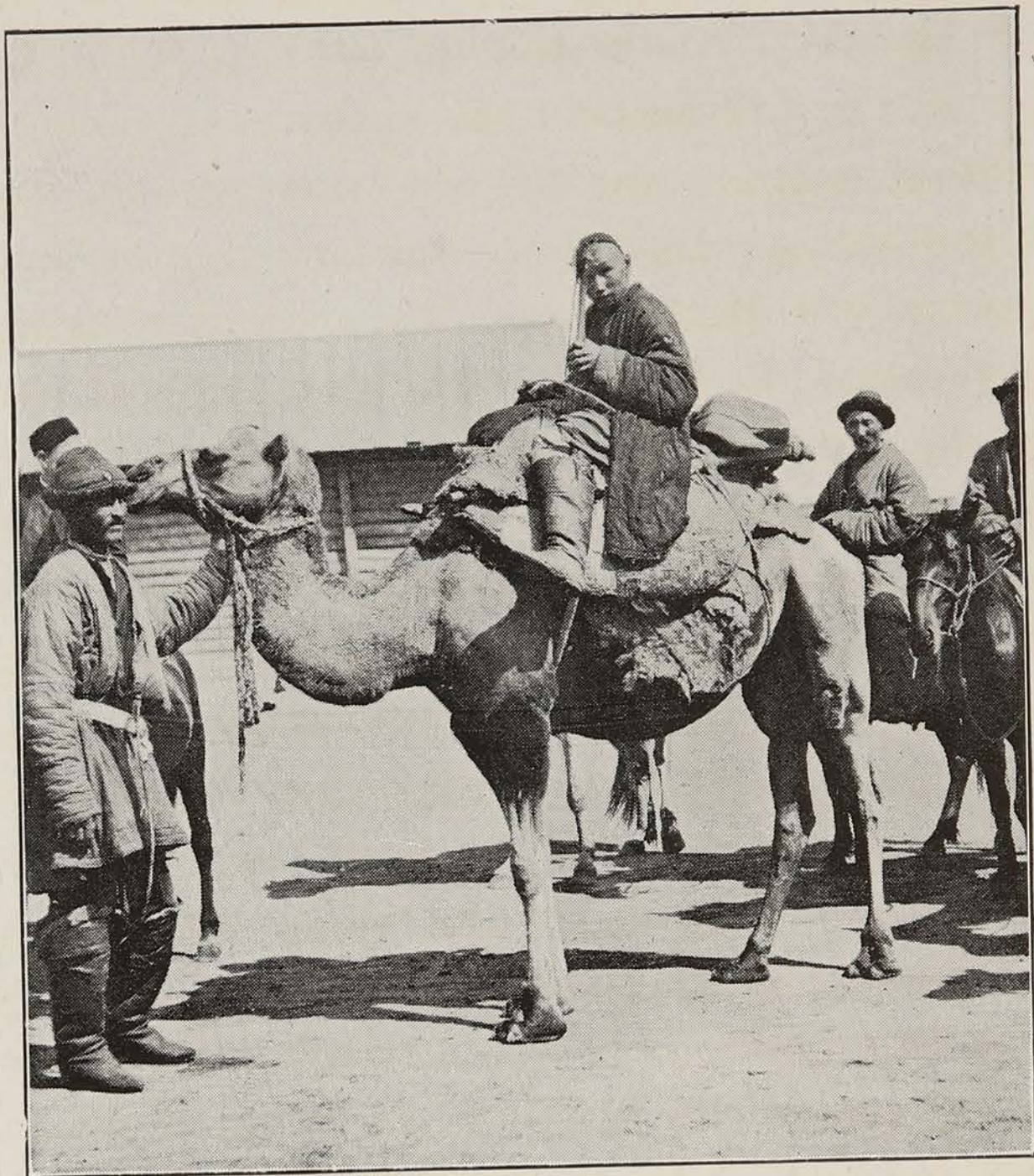
I must now give some description of the railway which has

been constructed from the Karagandy coal mines to the smelting works at Spassky. At the time of my visit it had been built to within four or five miles of the smelter, and connection with the limestone quarries was effected on August 1st, 1907. The decision to construct this railway was arrived at by the directors of the company in March, 1906. The track is 26·84 miles long, which represents the distance separating the coal mines from the smelting works, and the line is now in operation throughout.

It was impossible for me to study the transport question on the spot without being convinced as to the wisdom the directors have shown in building this road. It was an absolute necessity, and I believe that there would always have been a risk of a severe breakdown if this railway had not been built.

This will be clearly understood when I say that the amount of coal required to be carried by the railway aggregates 4,500,000 poods, or 72,000 tons, per annum of 300 working days, or at the rate of 240 tons daily. This total, I believe, includes the fuel not only for the smelters at Spassky, but for the power plant and household purposes both at Spassky and at the Yuspenssky mines, between which places the coal has to be transported by road. The provision of the railway, however, reduces the distance for cartage from 146 to 110 versts. In addition, 10,000 tons per annum of limestone have to be hauled from the quarries to the smelter. The economical and practical advantages to be derived from the railway are, of course, of the greatest significance. The cost of coal transport from Karagandy to Spassky by road was 4 kopecks per pood (5s. 3½d. per ton) in summer, and 5 kopecks (6s. 8½d.) in winter, whereas by rail the estimated cost is 1·15 kopecks per pood (1s. 7½d. per ton), or 0·72d. per ton per mile, including depreciation. The Board has decided to lay down a similar railway between the smelters at Spassky and the Yuspenssky mine to facilitate the transport of the ore, which has at present to be carted.

I inspected the rolling stock—which consists of four six-wheel coupled locomotives by Messrs. Hudswell, Clarke & Co., Ltd., of Leeds, and 40 coal wagons of 8-ton capacity, of Russian build—and also the arrangements for conveying the coal to the trucks



AN ARAB BEGGAR SINGING MY PRAISES.



KIRGHESE MINERS.

and from the trucks to the smelter. The permanent way has also been very well laid. The gauge is 2 feet ; the rails are of Vignolles section, they weigh 20 lbs. per yard, and are being supplied from Taganrog, on the Black Sea. I did not see the engineer, Mr. Maurice C. Mansfield, but I heard on all sides that he had thrown the greatest energy and enthusiasm into the work. What that work must have been can be best estimated when it is remembered that every ounce of rail, plant and machinery had to be brought 500 miles by road from the Siberian Railway.

I rode into Spassky, or Spassky Zavod, in the early morning, reaching it through a cordon of low, barren hills. In the basin thus formed are the Spassky Smelting Works and the village, or small town, which has grown up round about them, which, with the several neighbouring villages, has a rapidly-increasing population of between 10,000 and 20,000 souls, whose livelihood is obtained through the Spassky enterprise. The immediate neighbourhood is flat and irregular, and in some respects reminds one of some of the smelting districts of South Wales. The limits of the works are marked on the south by the windings of the Kok-Koozek River, and by a long-stretching old dam or creek. The works are situated on the north-western part of the area, and the town on the south-eastern part. The new works are situated near the north-western extremity, and their extensive proportions and substantial construction immediately prepossess one in their favour. They are in striking contrast to the ugly and ungainly old works, whose crude equipment has been improved out of existence. All the new buildings are substantially built of stone and roofed with iron.

Adjoining the old works is the refinery, and in their near proximity are the foundry, in which a new cupola has been erected, a machine shop, with a goodly equipment of machine tools, enabling ordinary repair and construction work to be efficiently executed, a smithy, a hay-yard and various stores, at one of which the inhabitants of the village can obtain their domestic supplies at scheduled prices. There also are the handsome new offices, a church and various officers' quarters. The terminus of the railway from Karagandy abuts in the form of a siding upon

the new smelting works and power-house, and a little distance away there is a locomotive shed and a wagon-repairing shop. In the immediate neighbourhood, too, there is a new dam in course of construction, so that the water of the Kok-Koozek may be accumulated and stored for use during the dry season.

Separated from the portion of the property just described by a branch of the Kok-Koozek is the village proper, where the Russian and Kirghiz populations have separate quarters. The houses consist of detached ranges of substantial stone dwellings, which are fast superseding the rude huts, built of timber and mud, which were characteristic of the old *régime*. It will be understood that the company has not been without its own housing problem when I mention that accommodation has had to be provided for many hundreds of Russian masons engaged in the building operations, and as many more hundreds of labourers, chiefly Kirghiz, besides a constant current of fresh arrivals of workers. The demand for housing accommodation has, therefore, been a continuously increasing one, and a difficult problem with which adequately to cope.

On the same side of the river is a handsome school, built by the company, who are fully alive to the importance of providing educational facilities in a region so remote from ordinary civilisation ; a bath-house, which is a most important sanitary provision at such a camp as that which exists at Spassky ; and a new hospital, admirably equipped, and regarded by many as being probably the finest hospital in all Siberia. At one extremity of the area is a dumping-ground large enough, one would imagine, to last for ever and a day. Then I need only mention the existence of the stables and a timber-yard, for, in short, there is a very liberal installation of all those "resources of civilisation" which are applicable to a first-class industrial enterprise of imposing dimensions and abundance of resource.

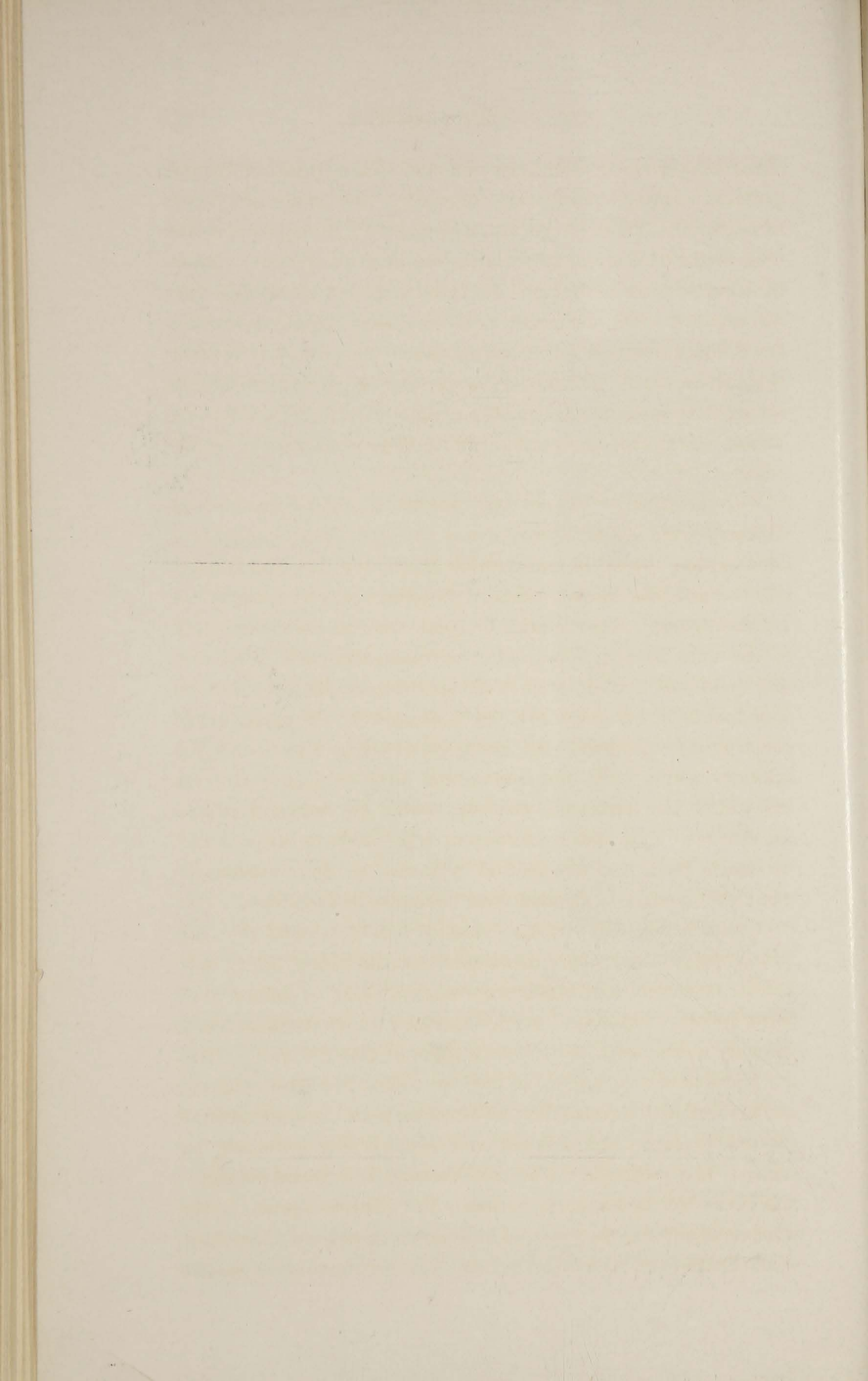
Although remote from most of those amenities which render life tolerable in civilised countries, Spassky is far from being devoid of animation. Here, indeed, East and West seem to meet and intermingle. The Kirghiz camp has a fascination of its own, for the Kirghiz are a purely Asiatic race, and Mohammedan.



A KIRGHESE ENCAMPMENT.



QUEER TYPES



Their disposition is essentially nomadic, and a crowd of Kirghiz presents a strange promiscuity of colour, and many odd types of mankind. There is, too, an element of the picturesque in the long teams of wagons, laden with ore, or coal, or stores, drawn by camels, oxen or horses. In the winter season sledges take the place of carts, and, odd as it may seem, road transport is more rapidly carried on in winter, when the ground is covered with snow, than in summer, when the roads are sometimes rendered impassable with mud and mire, especially in the rainy season. And now and then a prairie train adds variety to the scene.

On the occasion of my visit to the Spassky property my itinerary commenced with the new works. These comprise a commanding block of substantial stone and brick buildings, embracing a blast-furnace house, a Bessemer converter-house and a power-house. A peculiarity of these works is that three-parts of the main building is erected in an excavation made in the side of a rocky hill, and, in order to render this possible, the retaining wall had to be extended to a depth of 25 feet. This method of construction, combined with the substantial lines on which the masonry, girder work and iron roofing have been erected, gives the visitor the impression that the works are intended to last for all time. The entire installation is probably as large as any of which Butte can boast, and certainly no more modern or complete smelting equipment is to be met with anywhere.

Commencing with the blast-furnace house, I found that the dimensions of that department were 129 feet long by 72 feet broad. It houses four blast furnaces, which may be described as being of the "Spassky" type, inasmuch as in many respects they are quite unlike the ordinary types of blast-furnace. They are built entirely of brick, 240-inch by 48-inch, on steel columns, and are well tied and sheathed, the wearing portions being entirely exposed to view, and thus rendered immediately accessible for repair. The settlers are also of a distinct or "Spassky" type, and are 10 feet in diameter, and portable. The equipment of the blast-furnace house includes, of course, the necessary turntables, water-tanks—and careful provision has been made to ensure

an ample water supply and to protect the same from freezing during the rigours of a Siberian winter—flue arrangements and other accessories incidental to a smelting installation. I should mention here that experiments were in progress with a reverberatory system of smelting, and a reverberatory furnace has been laid down for this purpose. The outcome of the experiments depends almost entirely, however, upon the character and strength of the fire-bricks, which are produced from the clay recently discovered at the Karagandy coal mine, as previously stated. Nevertheless, Mr. E. Nelson Fell, who is conducting the experiments, seems to be confident of success, and, if so, the adoption of the reverberatory system will greatly facilitate smelting operations, by supplementing the output of the blast furnaces, enabling more silicious and lower-grade ores to be treated than is at present practicable. The blast-furnace department has been so designed that it can be extended indefinitely as circumstances may render expedient.

The Bessemer house next calls for remark. This important department, which measures 118 feet long by 72 feet broad, comprises two water-jacketed matte re-melting cupolas, two blowing stands for 2½-ton Bessemer converters (one only being equipped at present), a set of four re-lining stands and spare shells, a silica and pugging mill for converter linings, an elevator for handling the matte, a matte-sorting room, and the necessary dust-chamber, flue, air-pipe and conduit arrangements. This house is also served by an electric crane which travels on girders supported on columns, and arrangements are in progress for the introduction of another electric travelling crane of 5-ton capacity, to traverse the entire length of the building. The first-mentioned electric crane is used for charging the Bessemer converters and removing the slag.

The arrangements of both the blast-furnace house and the Bessemer house with regard to the reception of coal, limestone and ore, and the handling of the matte and slag, are of the most adequate description. The coal and limestone are delivered from the trucks on the railway siding alongside in buckets at the charging doors of the furnaces, and every facility for the rapid

and economical delivery of the raw materials is provided. The limestone used for fluxing purposes, be it said, is derived from the company's own quarries. It is of excellent quality, and nearly 10,000 tons are annually quarried and carried to the works. The limestone is also burnt to lime for building purposes, and I should mention that the stone used in the construction of the works, chiefly granite, was also quarried on the company's property. The quarrying and transportation of this and other building materials, and the work of building and laying out the property generally, have engaged the labour, on an average, of about 6,000 men. The iron ore, of which small quantities are also used for fluxing, is limonite of fair quality, which is also mined on the Spassky property.

I now come to the power-house, comprising an engine-house and a boiler-house, each of which measures 115 feet by 40 feet. The steam for motive power and other purposes is generated in four 100 H.P. boilers of the water-tube type, and of German manufacture, and is conveyed to four direct-acting, Root's blowers, three of which have a blast capacity of 12,000 cubic feet per minute, the fourth having a capacity of 8,000 cubic feet per minute. A separate engine and compressor provide air for the converters, while another engine of 147 brake-horsepower drives a dynamo, which generates electric power for the lighting of the premises, the operating of the electric crane, and the driving of the silica-pugging mill, matte elevator, and the pumps for water-distribution. I noticed that practically all the machinery in the new works, with the exception of the German water-tube boilers, is of British manufacture. In the course of my itinerary I happened upon a party of some 50 labourers hauling an iron chimney into position. This was accomplished to a weird musical accompaniment. One man would sing a solo, and the rest of the party would join lustily in the chorus, pulling together the while, after the manner of our bluejackets.

Since the present company took over the Spassky property, the old smelting works, with their obsolete plant and decrepit equipment, have been revolutionised. The old plant comprised six small brick blast-furnaces, two small blister furnaces, and

one small refinery. In 1904 the blast-furnaces collapsed, and were replaced by four new furnaces of modern type, while three new blister furnaces and a new refinery furnace were also laid down. The installation of this plant was prior, of course, to the construction and equipment of the new works, and, indeed, with the aid of the new plant, smelting operations proceeded systematically until the spring of 1906, when the coal deliveries from Karagandy, owing to the drastic exigencies of road transport, partially failed. Since that date smelting operations have been carried on under obviously disadvantageous and abnormal conditions. Anyone who could study the conditions of production on the spot, as I have done, must readily appreciate the enormous difficulties under which anything approaching to systematic smelting operations were carried on.

Nevertheless, from August 1st, 1904, until September 30th, 1906, there were smelted 13,024 tons of ore and 17,370 tons of old slags. The product of these was 1,784 tons of bar copper, of an assay value of about 99.65 per cent., representing a cash value, reckoned f.o.b. on the Trans-Siberian Railway at Petropavlovsk, 600 miles from Spassky, of £173,784, the cost of production and delivery there amounting to £109,384. Thus, even under most unfavourable circumstances, the old smelting works in their new dress were able to give a good account of themselves, and enabled the company to pay all expenses in Siberia and London, make a profit from the outset, and leave a profit carry-over to the good. The average copper contents of the ore during the year 1905-1906 was 19.3 per cent., as compared with 20.1 per cent. for the previous year. For reasons which I shall presently explain the average has since been lower, and in the future may be lower still.

Mr. E. Nelson Fell and the other officials at Spassky regard this preliminary experience as having been of the utmost value in enabling them to secure an insight into the smelting problem as applicable to the Yuspenssky ores. It fully demonstrated the fact that smelting with coal is a practical proposition, although it is surrounded with difficulties. From every metallurgical point of view smelting with coke is to be preferred, and after

experiments had been tried, under the direction of a qualified North of England engineer, to test the suitability of Karagandy coal for coke production, it was decided to lay down an adequate installation of coke-ovens, and smelting operations will thereafter be conducted with coke instead of, as at present, coal. In that event, the cost of copper production will be greatly reduced and the output of the smelters—100 tons a month in the old works and 300 tons in the new works, working with soft coal—will be tripled.

Smelting practice, whether with regard to the treatment of copper ores or other ores, differs according to the character of the ores and other considerations. At Spassky the method at present adopted may be thus briefly described :—The ore, brought by road from the Yuspenssky mine, is fluxed and fed to the blast furnace without roasting, the separation of the metallic copper and matte taking place in the 9-foot circular settlers to which I have already referred. Ordinarily the separation is remarkably good, the slags which run off containing only about 0·125 to 0·200 per cent. of copper, while the matte contains an average of about 56 per cent. copper. The life of the settlers is a short one, lasting only, as a rule, one or two days, when they have to be broken up, and the foul slags returned to the furnace. The resulting matte and copper, with a certain proportion of the richer ore, are together charged into a furnace of reverberatory type, which, I was told, is not met with outside the Russian Empire. It is a small, circular hearth, which contains the molten charge, upon which a jet of air impinges. The process really amounts to Bessemerising with an external blast. In this furnace the copper is brought up to a blister grade of about 98·5 per cent.; afterwards it is charged into the refining furnace, which is of the same type as the blister furnaces, whence it is cast into bars of very fine quality, about 99·5 to 99·8 per cent., which find a ready market. In the Bessemer house the matte will be charged directly into the cupolas, and afterwards converted into blister copper in the Bessemer converters, the matte and the slag products being handled by the electric travelling crane. There are, of course, numerous details of the process which I do not venture to describe, as I do not

presume to be either a metallurgical expert or a critic of metallurgical practice.

As I have already indicated, it is from the Yuspenssky copper mine, situated 70 miles distant from Spassky, that the company derive their supplies of copper ore. The mine can scarcely be said to have been developed at all in the past. Its owners assumed the vein to be only of such dimensions as they could see and the visible width was 20 feet. The ore, however, was remarkably rich, averaging 20 per cent. Later investigations under the auspices of the present company have proved that the vein actually runs from 45 to 70 feet in width, although all of the ore embodied in this volume is not of equally high grade. The practical effect of these discoveries was to lower the average grade, but to increase the ore reserves. Under these circumstances the company found that it was necessary to work upon a more extensive scheme of development than was originally intended. In short, the original intentions were entirely revolutionised by discoveries. It was expected to smelt on an average 20 per cent. ore, but, owing to the necessity for smelting the lower-grade ore as well, the average may be brought down to 12 per cent.

The deepest working in the mine is 350 feet. When the company took over the property they were working to 280 feet. The company investigated the deposit by means of hand diamond drills, and proved the continuation of the vein to a depth of 472 feet. Three bore-holes were drilled, and in each case the same satisfactory conditions were found as at a depth of 350 feet. While I was at the mine a further important boring result was daily expected, and this has since taken place, a rich streak of ore having been struck after drilling 125 feet 6 inches. The drill first went through some slate on the hanging-wall, which assayed 14.5 per cent., and then struck the rich streak. After drilling for 6 inches in this vein, the drill stuck, as it is impossible to work a diamond drill in this class of material. Nevertheless the core from this 6-inch stuff assayed 67.6 per cent. The vein was struck at a vertical depth of 122 feet. For the purpose of estimating reserves it has always been assumed at 70 feet vertical

below the 350, but this calculation is now nearly doubled. The discovery of the vein at 472 feet, with its rich streak in its normal position, indicates that the zone of secondary enrichment will continue.

The vein, then, as at present, may be said to extend from 40 to 70 feet wide, and to dip at an angle of 67 degrees. A typical section of the vein presents from 2 to 4 feet of copper sulphide, equal to 60 per cent. of "copper glance"; 10 to 25 feet of solid bornite, equal to from 25 to 35 per cent. of copper; and the remainder of the vein from 30 feet to 40 feet of lower-grade ore. About 40 per cent. of the ore is sorted out by hand, 10 per cent. is graded, and the remaining 50 per cent. of low-grade ore is available for concentration when the plant is ready. Mr. Fell has expressed his opinion that of the ore of over 10 per cent. there is enough above the 350-feet level alone to keep the furnaces running at full blast for the next six or seven years.

Having regard to the bore-hole demonstrations, it may fairly be said that the question of the life of the Yuspenssky has not begun to loom upon the horizon, nor is it likely to for a long time to come. So far as the cost of production is concerned, it is impossible for anyone not a mining or metallurgical expert to express an idea with any pretence of authority. The question, however, is a vital one, especially where such a fluctuating metal as copper is concerned, and the data are sufficient to form an approximate idea. There is, in the first place, the Russian import duty of £33 a ton to be considered. So far as can be learned, the duty is likely to remain at about that figure, but the responsible officials of the company prefer, for purposes of calculation, to disregard it. Unless they can afford to do so, they argue the position must be considered as inherently unsound. Still, it exists, and so long as it does it differentiates the position of copper mines in the Russian Empire from those in other copper-producing countries. Broadly speaking, however, the decisive factors must be taken to be cheap and plentiful fuel, cheap and fairly efficient labour—which is susceptible of being educated to a constantly higher standard—and rich and easily-mined ore. On this last point some comparisons with other great working mines are not

without interest. They are misleading if taken literally, because the characters of copper ore differ, and some are much more easily and cheaply smelted than others. Nevertheless, they are sufficiently indicative of the character of the Yuspenssky ore. The average of Rio Tinto ore, for example, is 3 per cent., while the Spassky ore may at present be said to average 12 to 15 per cent., although when the rich ore only was worked, the average was 20 per cent. The Butte ores average only from $\frac{3}{4}$ to 1 per cent. of copper, but the deficiency in this respect is compensated for by reason of the ores yielding gold and silver as well. The Bruce Mines in Ontario average 3 per cent., and, indeed, 3 per cent. is regarded as a payable result in most civilised countries.

To sum up this part of the question. I am informed that with the new plant copper should be produced at under £40 a ton, and eventually, given a railway from Spassky to Yuspenssky, at under £30 a ton. To obtain such a result as this last, management will, of course, speak the last word. The principal shafts at the Yuspenssky mine are the Vladimirsky and Annensky shafts, and both of these have been sunk to a depth of 350 feet. The ore has hitherto been raised by a horse winze, but now a powerful new winding engine, by Messrs. Robey & Co., Limited, of Lincoln, has been installed. When in operation this engine will be capable of hoisting 100 tons of ore daily. Amongst the other plant I saw in the mine, besides hand drills, were a new "Sullivan" steam drill, which will be employed in further testing the ore-body, an "Ingersoll-Sergeant" air-compressor, air-receiver, steam pumps and other accessories usual in a well-equipped mine. The ore from the various levels is conveyed to the bottoms of the shafts by means of chutes, but the sorting is effected on the surface, and better results than are at present obtained are anticipated when the sorting-house, now in course of erection, is completed. I noticed, by the way, a large open-cast, 60 feet deep by 175 feet wide, near the mouth of the main shaft.

The whole countryside is most highly mineralised, and quite a number of mines exist in the immediate neighbourhood of Spassky, which represent a possible reserve. For the present,

however, efforts will be concentrated upon the development of the existing undertakings. As I rode over the country round about Spassky I was impressed by the evidences of mineral wealth. I could trace the reefs outcropping for many miles.

A feature of the landscape is an eminence called Sacred Hill, on the company's property. According to Kirghiz tradition lode-lights were to be seen on this hill, just as, according to Cornish legendary lore, lode-lights were to be seen on the hills in Cornwall—a rather curious coincidence. The reef outcrops on Sacred Hill, and from the hill the lode runs east and west, the dip being one of about 7 degrees. Another physical feature of interest within a distance of two or three miles is a hill of solid ironstone. I made an ascent of this hill, but I retired somewhat precipitately, owing to a threatened thunderstorm making me think the point of 'vantage rather unsafe.

In the course of a chat with Mr. E. Nelson Fell—who, I should remark, was for several years resident general superintendent for the company, but, having resigned that position, he visits the property, in his capacity of consulting engineer to the company, twice a year—I was informed that the loyalty of the staff to the interests of the company was complete, and their efforts indefatigable. He also spoke in the highest terms of the help and assistance rendered by the whole of the Russian officials, from the Governor-General of the Kirghiz Steppes at Omsk and the Chief of the Police at the nearest town—200 miles away—to the humblest amongst the employees. The most cheerful assistance is ever readily forthcoming. Doubtless this is in some measure due to a recognition of the precautions taken to ensure the safety of the staff and the workmen, their welfare in illness or accident, and of the educational facilities freely provided.

These considerations have weighed largely with the company, who have extended an old industry and practically founded a new one, which gives ever-increasing employment to large numbers of Kirghiz and to skilled and unskilled workers of other nationalities. The wage of a skilled Kirghiz miner is about 2 roubles a day. The cost of unskilled labour has risen from 30 to 50 kopecks

a day. The company's policy has been entirely to revolutionise the living arrangements in the district—to establish the workers' quarters as a town, having numerous subsidiary villages—and the results so far have been eminently encouraging.

Some of my readers may be disposed to consider that I have made rather a long story of my visit to the Spassky property. Perhaps I have. If so, however, I feel I need offer no apology. Only by a personal inspection of the property, such as I was able to make, can the possibilities of the undertaking be ascertained, and from every point of view the fullest description is most desirable.

The Spassky Company has not only made a profit from its inception, but out of profits it has paid for its development work at the property, for the costly equipment of new mining and smelting plant of the best modern description, and for the construction of more than 20 miles of railway.

The Yuspenssky copper mine is a notable property. It is generally recognised that when copper ore yields 3 per cent. the result is payable. The impartial reader will hardly, therefore, fail to be impressed with the possibilities attaching to a mine whose reef runs to a width of 70 feet, and continues equally rich at depth, with even streaks proved to assay as much as 67 per cent.

The Yuspenssky mine does not stand alone. On the company's property there are many more proved deposits of copper, which might be worked as soon as transport difficulties can be overcome and other circumstances warrant the extension of enterprise. Hitherto the coal required for smelting operations has had to be carted by road, but now the railway is all but complete, and the transport can be effected at a fraction of its former cost.

The Karagandy coal mine is another property that has potentialities. There, in the heart of Siberia, a seam of coal is to be found as rich and as wide as any in the greatest of our Staffordshire show mines. When the construction of the projected second Trans-Siberian railway becomes an accomplished fact, the Karagandy coal mine may come into prominence.

There is one point upon which I have so far barely touched,

but with the importance of which I was vividly impressed when I was on the company's property—namely, the construction of a railway from the Yuspenssky mine to the smelting works at Spassky. The officials may doubtless be trusted to provide sufficient facilities for adequate road transport, so as to keep the smelter fully supplied with ore; but when one remembers that every ton of ore taken from the mine to the smelter by road costs 16s., the amount of outlay on this account totals up to a great annual aggregate. By the projected railway the cost would be reduced to an almost fractional amount.

A calculation I made on the spot, on the basis of 2,500 tons being transported by rail monthly, worked out at 4s. 6d. per ton.—a difference of 11s. 6d. The construction of the 70 miles of railway would probably run into £100,000; but if a railway were available, other mining undertakings would probably spring up within the area it traversed.

But however promising a property may be, it is of little avail unless the responsible conduct of affairs is in competent and trustworthy hands. In this particular the shareholders of the Spassky Company may congratulate themselves on being singularly fortunate. It is their good fortune to have in Mr. E. Nelson Fell (of the firm of Messrs. Pellew, Harvey & Fell, consulting engineers), as their chief representative, a man of the highest professional attainments. Added to a magnetic personality is a fund of indefatigable energy and unfailing resource, which are of sterling value to the best interests of the entire enterprise. Having seen him in harness on the spot, I know with what capacity he can overcome difficulties. I was not surprised to find that he was a *persona grata* with the Russian authorities, who, like engineers I met in different parts of Siberia, speak of his professional abilities in the highest terms. Moreover, his staff believe in him—always a good sign.

Mr. H. W. Mussen, who is one of Mr. Fell's "young men," has been on the property ever since it was acquired by the company. Full of tact, he is a tremendous worker, and delights in difficulties for the robust satisfaction of overcoming them. The technical superintendence of the smelting department is in the

able hands of Mr. E. G. North, who formerly had charge of important experimental work at the Rio Tinto mines under Mr. W. A. Carlyle. He does unobtrusively much valuable work at Spassky, with transparent earnestness and conscientiousness. He is ably assisted by Mr. Heywood, who is, perhaps, better known in the United States as a smelting authority than in this country. At the Tennessee he was responsible for making a record in smelting costs. I am giving these personal details because I wish to show that the best technical brains of two continents have been gathered at the Spassky. Mr. H. E. West is superintendent of the Yuspenssky mine, and brings to bear upon his work high professional attainments as a mining engineer. It was under his superintendence that the new mining plant has been installed. Among the other gentlemen with whom I was brought into close contact at the smelting works was Mr. C. H. Piffard, who has charge of the numerous subsidiary operations which are necessary for the carrying on of large works in a country where everything, more or less, has to be made on the spot. This gentleman has a great deal of American "hustle," knows how to handle men well and to get the best out of them, and, like all the other English staff of the Spassky Company, takes the greatest possible interest in his work. At the Yuspenssky mine I also met Mr. R. E. B. Vinicombe and Mr. T. R. Greenfield, and it may interest the friends of these gentlemen to know that they are doing good work and are greatly interested in their duties.

It would not be fair to conclude my personal references without a few words in regard to the Russian staff. As I was unable to speak the language of the country, little value, possibly, from a critical point of view, can be attached to my individual opinion. But I know that many responsible positions, both on the metallurgical and mechanical sides, are filled by Russians, and I also know that it is the definite policy of the company to employ as many Russians as possible as departmental heads. Of course, this policy can only be extended gradually, as the Russians become sufficiently educated in English and American methods of work. But from my observation, not only at this mine, but

at other Siberian enterprises, I am convinced that it is a policy which in the end will be advantageous.

Since my visit to the property substantial progress has been made. The Karagandy Railway has been completed and is running satisfactorily and the new smelters started work in May.

The winter season of 1907-8 was one of almost unprecedented severity throughout the Russian Empire, and the heavy snow falls and consequent floods in the early spring prevented progress being as rapid as it would otherwise have been, but the enormous construction programme which was undertaken is now practically at an end, and it was fully anticipated that the summer would see tangible results of all the work of the last four years in the shape of increasing outputs, lower costs and larger profits. Already, indeed, the production in May was a record for the mine, despite the fact that the early spring is one of the worst seasons for transport.

The Yuspenssky mine is now equipped on a permanent basis, and 100,000 tons of rich ore are available above the 350 feet level. Sinking to the 420 feet level is in progress.

CHAPTER XIV.

TRADE OPENINGS. BRITISH AND CONTINENTAL ENTERPRISES.

RUSSIA AS A FIELD FOR FOREIGN CAPITAL.—EXPERIENCE OF AN
ENGLISH TRADER IN MOSCOW.—GERMAN METHODS.—WHAT
ENGLISHMEN MAY DO.—OPENINGS IN THE CAUCASUS.—AN
OFFICIAL VIEW.—IMPORTS AND EXPORTS TO AND FROM
VARIOUS COUNTRIES.—THE COTTON INDUSTRY.—WHY GREAT
BRITAIN HAS LOST GROUND.—VARIOUS INDUSTRIAL OPENINGS.

THE average Englishman has a very vague idea of the possibilities of Russia as a field for the introduction of foreign capital and enterprise. To the person who does not know Russia, or who has been there only on a flying visit and who has not travelled the length and breadth of this vast storehouse of riches and immense possibilities, the country presents merely an enormous waste of land. The Englishman does not go down to the root of these possibilities. The information he receives about the country only tends to put him off the track, and once off, he does not take the trouble to get on again. If he can only be induced to try these possibilities we shall find that he will not let

go. He will be like all the Englishmen who are in Russia, or who are doing business with Russia—you cannot tear them away from the tit-bit. I have met many Englishmen in that country, and I cannot remember one single instance in which I heard a complaint about the business in hand. I do not know of any disappointments, and have never heard a word against the treatment meted out, or of difficulties being put in the way by the people or the Government. On the contrary, I have heard nothing but praise and satisfaction. There is no doubt that the Russian methods of business are different from those of Great Britain, but if we remember the good advice, “When in Rome, do as the Romans do,” we shall find it pretty easy sailing.

It is unfortunate, detrimental to our national interests, and tends to throw cold water on our efforts towards the expansion of our business in that country, that the reports we hear about the general commercial and industrial life of Russia are mostly far from correct. The supposed “difficulties” are magnified, and “facts” are distorted and exaggerated to such an extent that any idea we may have in the way of Russian possibilities is absolutely driven out of our minds on account of these so-called insurmountable “difficulties.”

While on this subject, I cannot do better than mention an interview I had with Mr. Watt, a well-known business man of Moscow, who is a British subject. These are his words:—

“I follow the English papers very closely, and I have been amazed at the misrepresentations in many of them in regard to Russian affairs. I suppose they are badly misinformed. For instance, in December, 1906, in the *Daily News*, during the riots, it was stated that the Red Square was barricaded with cars, and that the Kremlin wall was armed with maxim guns. Now, my office is in the Red Square, and during the whole of the ‘disturbances’ I went to it every day. I never saw a sign of disturbance or a single barricade, or heard a shot fired. I know there were no maxim guns on the Kremlin wall. All the trouble was in the outskirts, and this trouble was only just a small rising among the workmen, which was easily and quickly put down.

“It is true there were lives lost, but they were chiefly those

of inquisitive people who had no business to be where they were. It stands to reason that, if there were a body of rioters firing at the troops in the street, and curious people put their heads out of windows, or attempted to cross the roads, they were fairly certain of getting shot. The English people in Moscow had naturally the good sense to keep away; they were never in any way molested, and were just as safe as they would have been in London.

“I have given this as an instance to show how things were exaggerated. I could give many others. The fact is that a false impression is given in England as to the security of cities for doing business in. The result is that many English firms are refraining from doing business in this country, and consequently the Germans are pushing very hard, and are making great headway here. They are now getting a very considerable hold in directions where the English might have easily led the way. If representatives of English firms would, as you have done, look around for themselves, I am certain they would be favourably impressed with the openings there are here for their products.”

The German (who is not so well liked as the Englishman in Russia) finds no trouble in his business relations with the Russians, for the very simple reason that he does not look for trouble. He goes to Russia, he lives there, or makes an extended trip, and finds out what the Russian wants and gives it to him. The result is that to-day Germany heads the list of exporters to Russia. For the year 1905 she exported goods to the value of 235,000,000 roubles; in 1906 this was increased to 270,000,000 and in 1907 to 311,000,000; while Great Britain for the same periods exported only 97,000,000, 104,000,000 and 102,000,000 in value respectively.

Circumstances undoubtedly favour Germany in her commercial struggles and competition with England in the bidding for Russian trade. Her goods are cheaper. Then, again, Germany is favourably situated, because she is, practically speaking, on the spot: the goods are transferred from her back door to Russia's front door—the frontier. In spite of all this, we can compete with her, and do a much larger volume of business

with Russia than we are doing, if we but go to work in the right way.

Several years ago, when the waterworks and canalisation plants were being installed in a certain town in Russia, there was considerable competition to secure the contract for the delivery of the drain-pipes. The order was a large one, and was worth an extra effort to secure. The installation was in the hands of Englishmen. There were, practically speaking, only two firms in the running—English and German. The latter were, of course, cheaper, while the former supplied a much better-class material. The German representative was on the ground looking out for his interests; he never relaxed one moment in his efforts. The result was he got the order, because the English firm did not take the trouble to send a representative to look after their interests. This is one of many similar instances that have come under my notice.

Russia has an immense territory. There are 301,000,000 acres of arable land in European Russia alone, and 185,000,000 acres of orchards, meadow and grazing land, while forests cover 452,000,000 acres. I am leaving Siberia out of the question. The soil is rich, and there is land enough to include several small nations that has never seen the plough—virgin land, that is waiting for the labourer and the capitalist. The aristocracy is comparatively poor, the landowner and farmer are in the hands of the money-lender, and the Russian business man has no “business” about him.

This leads us up to the question—is the Russian Government favourable to foreign enterprise, and may the latter reckon on being supported? There is no doubt about the answer. The Russian Government is equally favourable to foreign and Russian enterprise—in the right direction. I do not think I am overstepping the bounds when I express the belief that no other country affords such possibilities for capital as the Russian Empire, not in one, but many directions. Moreover, no other country will give the capitalist such encouragement. One does not have to look far for the reason. It is simply because capital and brains are needed, and they are consequently welcome.

Foreign joint-stock companies are allowed to operate in Russia without any hindrance, and, since they enjoy this right, their position in no way differs from that of the corresponding Russian companies. In some very rare cases, when some particular field of enterprise is open to Russians only, there are always weighty reasons for such a restriction, but even in these cases the difficulties are not insurmountable. It is not natural that foreigners or foreign undertakings, merely by virtue of their being foreign, should expect better treatment than that accorded to Russians and Russian undertakings. Neither Russians nor foreigners can enjoy exclusive privileges in Russia, except by special laws enacted for the purpose in each separate instance. So far as exclusive privileges are concerned, they must not be considered unattainable. They can be obtained as long as their objects are legitimate, tend to the furtherance of the Empire's progress, and do not in any way interfere with existing Government monopolies or privileges.

The Englishman must not expect to go to Russia and run the railways of the country, because they are Government property. But Russia is making fairly rapid strides. The Englishman can supply the locomotives, he can build the freight and passenger cars, and can supply the rails. He will not be allowed to interfere with the spirit monopoly, because that is one of the Empire's chief sources of revenue, from which it derived an income of nearly 700,000,000 roubles for 1906. The postal, telegraph and telephone service is Government property, but there is nothing to stop England from supplying the wires and other necessary appliances required for the two latter branches.

The field of operations for capital, enterprise and brains in the land of the White Tsar is immense. Possibilities and opportunities are to be found everywhere, but the Englishman must not expect "fried pigeons to fly into his mouth," as the Russian proverb says. He must first catch the bird, and then cook it; afterwards he can eat at his leisure. I will again refer to my interview with Mr. Watt. Speaking of these possibilities, he says:—

"The resources of this country are tremendous. My

knowledge is not confined to Moscow alone, for I have an intimate knowledge of many other parts of this country. Take, for instance, the Caucasus, of which you in England know so little—except of its oil wells. The mineral resources of that part of Russia are enormous. There you will find some of the richest copper deposits in the world; you will also find gold, silver and other ores. You will naturally ask why the Russians are not taking up the workings of these mines themselves. The reason is—the want of capital. The country has spent enormous sums in building the Siberian Railway, and is spending vast sums in other directions, but it has not sufficient capital to do everything at the same time. I am sure that foreign capital, judiciously invested, would show greater results from here than from any other part of the world.”

In reference to the Caucasus, I may mention that I had the opportunity of interviewing Mr. D. M. Chambers, of the well-known London mining engineering firm of Chambers & Leaver. This gentleman has recently returned from a visit to St. Petersburg, Moscow and the Caucasus. During this time he had many opportunities of forming an opinion in reference to the possibilities of the investment of foreign capital in Russia. His view is that many restrictions and difficulties have been removed, and that those which now existed could be overcome with patience. His business in Russia was chiefly in regard to the rich oilfields in the Grosny district, but he heard on reliable authority of great copper, iron, zinc and other mineral deposits in the Caucasus. Samples of various minerals which were shown to him indicated very high values. Altogether, Mr. Chambers gave me the impression that he regarded many parts of the Caucasus as highly-promising fields for mineral exploitation.

As a very influential official told me in Moscow, “Many English firms have lost ground, and are not doing the business they ought to be doing, because they have not taken the trouble to make proper inquiries and follow up the business in the right way.” The Englishman has a great reputation as a traveller, yet, as far as Russia is concerned, he does not appear to interest himself very much in the country. The passport system of

Russia gives us an opportunity of finding how many Englishmen really do go to Russia. During the year 1906 there were 5,759 British arrivals (including 1,935 women) in Russia, while 4,909 (1,685 women) left the country. In other words, there was an annual "turnover" of 10,668 British subjects who entered and left the country during 1906.

For the sake of comparison, let us look into the roving instinct of other nationalities. The totals of incoming and outgoing persons of other nations (men and women) for 1906 figure as follows:—Austrians, 171,545; Germans, 94,058; Americans, 5,796; French, 16,664. The figures of other European nations are insignificant, but those of some of the Asiatics are interesting. The Chinese amounted to 96,157, and the Persians to 96,153.

In order to judge of the possibilities of a nation from a business point of view, we must know what inducements that nation offers in the way of trade. We will therefore see what Russia's export and import trade amounts to. Most fallacious opinions are formed by studying the figures for a single year, in place of longer and continuous periods, which give a much more correct idea.

The average annual value of the export trade for the five years ending 1900 amounted to 674,000,000 roubles; during the next period of five years this was increased to 895,000,000, while the year 1906 showed 999,000,000, of which nearly 600,000,000 was taken up by the export grain trade. The returns for 1907 give the value of exports as 992,000,000, showing a decrease of 7,000,000 as compared with 1906.

The average yearly value of the imports for the five years ending 1900 was 555,000,000; in the next corresponding period this average increased to 561,000,000. In 1906 the total rose to 624,000,000, while for 1907 the value is given at 696,000,000, an increase of 72,000,000 over the corresponding period of the previous year.

Comparing the export with the import trade, we find the former increasing by leaps and bounds in proportion to the latter. For the five-year period ending 1900 the average yearly value of the export trade was 121,000,000 above that of the import trade; the second similar period ending 1906 put the

average annual value of the exports at 334,000,000 above the imports. In 1906 the exports were 377,000,000 above the imports, and in 1907 the former exceeded the latter by 296,000,000.

These figures refer to European countries.

The value of the exports from Russia is distributed among the following principal nations (in millions of roubles) :—

—	1907.	1906.	1905.	1904.
Germany	290	284	255	234
Great Britain	228	225	249	230
Holland	114	108	126	99
France	73	76	64	61
Finland	50	47	39	46
Austria-Hungary	42	45	45	40
Belgium	37	41	44	44
Italy	34	52	62	53
Denmark	29	30	23	30
Turkey	18	14	15	24
Roumania	13	17	10	9
Sweden	8	9	11	11
United States	7	5	3	4
Norway	7	6	7	8
Egypt	3	2	2	4
Spain	2	8	19	8

The following figures give the amount in millions of roubles of imports into Russia from the principal European and other nations for the same corresponding periods as above :—

—	1905.	1906.	1907.
Germany	235	267	311
Great Britain	97	104	114
France	25	28	28
Austria	19	20	23
United States	40	44	53
Egypt	9	12	12
China	19	18	15

From the above figures it will be seen that Germany is at the head of the list, and there she means to stay. For the two years 1905 and 1906 Germany bought from her neighbour products to the value of 539,000,000 roubles, and sold her during the same period German goods valued at 502,000,000. While the stolid German was quietly performing this operation John Bull was looking the other way, and had to take what was

absolutely forced upon him—a paltry 201,000,000 roubles in return for his wares during 1905 and 1906, while he was obliged to buy from Russia to the value of 474,000,000. That is a considerable difference in figures compared with Germany. It surprises one who knows that these figures—especially those relating to the Russian imports—could be doubled were it not for British apathy and indifference.

A gentleman who represents a large Manchester house in Moscow, and at the same time has several other important agencies, expressed himself very forcibly on this subject. I do not give his name, for obvious reasons. His business is chiefly in machinery for textile mills. He assured me that the firm he represented in Moscow preferred to buy from England, but, when they could not get what they wanted, they were compelled to go to Germany. The fact is, the Germans give their representatives far greater facilities for doing business than English firms are prepared to do.

The so-called “independence” of the British manufacturer struck him as rather comical and out of place. He assured me most emphatically that the English manufacturer is not disposed—at any rate, at present—to try and satisfy local requirements. He makes a certain class of machinery, and if you do not like it, well—you can leave it. In several instances that came before my friend’s notice little failings were detected in the machinery which could have been very easily remedied or improved upon, but the Englishman would not listen to the idea. He pooh-poohed the whole thing, and really took very little trouble, if any, to put things right.

In Germany every effort was made to satisfy and suit local requirements, and if anything went wrong no pains or expense were spared to put the thing right and please the customer above all. This is one of the secrets of Germany’s success. It is an example that should be taken to heart by the Englishman. The German gives the Russian exactly what he wants and as he wants it. This gentleman readily admitted that there were firms in England that Germany could not touch, such as some of the manufacturers of spinning and weaving machinery, but, apart

from special lines, he considered we were losing ground, and especially in steam engines and electrical appliances.

Russia is advancing. Take the cotton-spinning industry as an example. In 1890 there were only about 3,000,000 spindles and 80,000 looms, working approximately 8,000,000 poods of cotton. In 1907 there were 8,000,000 spindles, 200,000 looms, and the amount of cotton worked exceeded 20,000,000 poods. The largest cotton mill in Russia is now under construction and nearly completed in the neighbourhood of Tver. It is a modern, model mill, and contains everything that the best Lancashire mills possess. The modern dwelling-houses of this mill are built to house nearly 3,000 workmen, and all the machinery is of the best up-to-date English make.

The prosperity of Moscow depends on the cotton industry, and there is no doubt that the position of this industry during 1906 was a decidedly advantageous one for many reasons. The competitors at Lodz were virtually eliminated by internal strife, constant strikes, &c., whereas the year went off quietly in Moscow. Had merchants in the ancient capital been able to supply the goods for which they had booked orders, 1906 would have been a record year. But owing to firms abroad being so very busy, many large orders given there would not be delivered till well on in 1908, so that the actual results of the improvement in business are not yet seen.

The main industry of the Moscow district, including seven provinces, is spinning and weaving cotton, wool and flax, but principally cotton.

The main import from the United Kingdom is mill machinery. As to spinning machinery, it appears that about 90 per cent. of all such machinery bought in the Moscow district comes from British firms. As regards other mill machinery and machinery in general the situation is different. Here, again, Germany is our greatest competitor, as well as many other countries that are now sending large contributions, and a very fair amount of mill and other machinery is now actually being made in Russia itself. The total value of such general machinery (not including agricultural implements) imported from Germany amounted to

19,000,000 and 20,000,000 for 1905 and 1906 respectively. From Great Britain the amounts were 7,500,000 and 9,000,000 for the same periods.

In considering the other principal items of goods imported into Russia during 1905 and 1906 by Germany and Great Britain, we find the value of these imports as follows:—Iron and steel goods (hardware): Germany, 10,000,000 roubles; Great Britain, only 2,250,000. Wire and wire goods: Germany, 6,750,000; Great Britain, 1,750,000. Simple agricultural implements, such as scythes, sickles, shears, clippers, &c.: Germany, nearly 6,000,000; Great Britain, not quite 1,000,000 in value; while Austria contributed 1,500,000. Complicated agricultural machinery, such as threshers, ploughs, &c.: Germany, 4,000,000; Great Britain, 3,000,000. Under this heading we are not only beaten by Germany, but we are allowing an entirely foreign element to creep in and beat us, so to speak, at our own game. The United States is gradually beating us in this field, and, in fact, the amount of business done by them in this line in Russia for 1905 and 1906 has actually exceeded our imports in the same line.

What do these figures show? They show as plainly as figures can that Great Britain is not only not maintaining her own, but she is losing ground in the export trade with Russia. This being a fact beyond dispute, the question that comes to our mind is, why is this? Is it because we cannot, or because we are indifferent, and do not care? We cannot admit the former, and are consequently compelled to attribute the blame to indifference. The possibilities and opportunities are not wanting. The conditions in Russia are gradually changing for the better.

The highest officials in Russia, as well as the business men I talked with while in Russia, all agree that there are no "difficulties." All the foreign countries are on the same level as far as the import duty is concerned. Machinery, implements and goods of any kind, no matter what country they come from, are all taxed alike; there is no discrimination in favour of one more than another. On the contrary, I think I may say without fear of exaggeration that the Russian Government is willing and

ready to do all it fairly can to encourage British enterprise. Though England introduced the first foreign agricultural implements into Russia, the United States in a very few years has developed its trade to such an extent as to exceed the amount of our business in this line, in spite of the well-known fact that labour is much more costly there than it is in our own country, and that it has to add a heavy charge for freight on to the cost of its products. Notwithstanding this handicap, the American is gradually taking our business away from us.

The problem is not a hard one. Its solution is easy, and is in the hands of the British manufacturer.

From my own knowledge and from the information I have been able to secure from various reliable sources, some of which I have given in previous chapters, I have no hesitation in stating that the Russian Government does not in any way attempt to hinder the English or foreign manufacturer in the introduction of his wares into the Empire. On the contrary, if it takes any action at all, it encourages and helps English enterprise and is willing to protect British capital in every way possible.

In corroboration of my assurances regarding the actual opportunities and possibilities in Russia, I will quote a statement made by Mr. James S. Boardman, of Messrs. L. Knoop & Co., of Moscow, who said: "This country has enormous natural resources and great openings for trade, and I should very much like to see the English take full advantage of them. I am certain that, once things have settled down politically, the country will go ahead, and there will be enormous possibilities for English trade. I think that the troubles are over. The Russian workman has already bettered his position considerably, and is likely to remain perfectly satisfied with what he has already secured."

The founder of the above-mentioned firm, Baron Knoop, introduced cotton-spinning machinery into Russia on a large scale; he established mills and equipped them with English machinery, and he maintains that in the cotton-spinning branch England has no competitors. As to weaving machinery, the English have lost ground. Looms of German and even Russian make are being introduced. In the printing and dyeing

departments, England's strongest competitors are again the Germans, and in order to hold her own England will have to make special efforts. In the general and electrical engineering line the Germans are ahead, for the reason that such firms as Shuckert, Siemens and the Allgemeine Gesellschaft have established large works in Russia.

The different fields for possibilities of trade with Russia are numerous, and, in order to point out these fields, I will mention the different special lines for which there is a demand in Russia. I have already touched upon spinning and weaving machinery, mill machinery in general and several other lines, and will deal with some of the many other special lines of more or less interest to the British manufacturer.

Machine tools are supplied mostly by Germany and the United Kingdom, although the former does nearly three times the amount of business done by the latter.

The best kind of leather, for belting, soles, &c., is supplied chiefly by Germany and England, the latter being very far behind Germany in the total amount imported. Nearly all the fancy leather goods come from Germany or Austria; the same with regard to boots, gloves, &c.

In chemicals and perfumes the Germans are again at the head of the list with about 8,000,000 roubles—England about 2,000,000. This is greatly due to the fact that the German language is current in nearly every chemist's shop, especially in Moscow, and German catalogues are naturally understood, and the orders consequently go to Germany. There is a very steady demand for chemicals used in photography. Aniline dyes come almost entirely from Germany, and the local works seem to be in close connection with that country.

There are several Russian and French soap manufacturers. The import in this line from the United Kingdom consists only of first-class brands of well-known firms, for which there is naturally but a limited market. The same with perfumes.

Fishing-nets are imported largely for use in the Black Sea. The present trade is chiefly with Sweden and Germany, in which countries there is a highly-improved kind of machinery, capable

of turning out nets of all sizes. The opinion is that, with enterprise and willingness to conform to Russian ideas as to sizes, &c., British nets ought to be able to compete on this market.

Owing to the high import duties, the former large trade in British paints and varnishes has almost ceased. Increasing quantities are produced in Odessa on British lines and with the aid of British experts. There are openings for manufacturers in these lines who are willing to establish themselves in Russia.

The surgical instrument trade is mostly in the hands of Germans, and there are possibilities in this market for British goods. The same can be said of drawing implements.

During the past few years, and more especially during 1906, there has arisen, almost entirely in the hands of German merchants, a large and increasing trade in different classes of suitings. It is said that in 1906 a single German firm made and sold in Russia goods to the value of about £40,000, and even then did not meet all orders, while one single agent, out of many in Odessa, sold for German firms as much as £5,000 worth. Yet the fact remains that British goods are preferred by Russia, when obtainable, on account of their superior wear and appearance. So undisputed is this superiority that a certain Leipzig firm actually imports British cloths to Germany and resells them in Russia at a considerable profit. The price of the British cloths exceeds that of the German only by about 10 per cent., and, under favourable conditions, they would seem to have a good chance of success.

Much of the German success is due to the efficient organisation of their advertising system, their circulars being prepared in Russian measures and the Russian language, and through the employment of experienced commercial travellers and agents.

Most of the black plates imported into Odessa are of British manufacture. A large stock was laid in before March 14th, 1906, to anticipate the new higher tariff which came into operation in that year. Prices, however, have risen, and a profitable trade could now be resumed from the United Kingdom.

Zinc is imported entirely from Belgium, where prices are lower than in London.

The chief supply of anvils and vices comes now from France.

England has almost lost this trade. Locks are now nearly all supplied by Germany and the United States. Here, again, England has lost ground. Sickles are supplied by America, scythes by Austria, and saws and axes by America, which has gone to the front and ousted England. Steel files, shovels, kitchen utensils, bedsteads, grindstones and earthenware pipes are supplied by England, while of plane-irons, chisels and carpenters' tools France is the chief supplier, England having lost ground. There is a great demand in Odessa for a cheap common steel, which the United Kingdom could easily supply.

There is a vast market for British fertilisers containing nitrogen. The nitrates find their way principally to Poland and the Kiev Government, for use on the immense areas under sugar-beet cultivation. The best South Russian field for nitrates would be among the fruit gardens and vineyards of the Crimea and Caucasus, where the highly intensive cultivation and the rocky nature of the soil demand the use of fertilisers.

Special dynamos are now being manufactured by Germany for delivery in St. Petersburg, Moscow, Riga and Revel. Lamps and electric-light fittings are also German.

A considerable number of suction gas plants, principally of German make, have been installed in Odessa for driving flour mills, and so far are acknowledged to be a cheap motive power, requiring less constant attention than steam engines.

British-made leather belting seems to hold its own, judging from the fact that every dealer wants only that. There is very keen competition on the part of Germany. There is no doubt that a large quantity of belting sold as British-made never came from Britain.

I have already dealt with agricultural implements, and should like to again emphasise the necessity for strenuous action on the part of England to maintain its position in this class of articles. There ought to be no difficulty in this respect. Ransomes' and Howard's ploughs ought to be able to withstand all the competition of the German makes. It is true they are dearer than the German, but they are a much better class of goods. Threshing machine sets, both steam and horse-power, dressing-

machines, harrows, drills, hay-presses, steam ploughs, traction and other steam engines, hay-makers, wine presses, maize threshers and mowers, and reapers and binders—there is a field that presents vast possibilities for future operations, and although it is fairly covered by such firms as Ransomes, Sims & Jefferies, Clayton & Shuttleworth, Marshall & Sons, Howard & Sons, Hornsby & Sons, Ruston & Proctor, and others who have been in the field for many years, and certainly ought to know the requirements of the local markets, there is still plenty of room.

From information obtained, I suppose this market is covered as thoroughly as any. I believe all the above-mentioned firms issue Russian catalogues and have branches in Odessa and other cities. As to mowing and reaping machines, the supremacy remains, and will remain, in American hands, for the simple reason that England has not the supply. From an interview I had with the firm of Walter A. Wood, who do the largest business in this line, I understand that this particular field presents exceptional opportunities, and the sales are gradually increasing year by year. Such American firms as the Johnston Harvester Company, the McCormick Harvester Company, the Deering Company, Osborne, Sons & Company, and the Adriance Platt Company are holding their own. The well-known Canadian firm of Massey-Harris, of Toronto, is doing a very large and increasing business with Russia in mowers, reapers and general agricultural machinery.

In discussing the position of the cotton industry in Russia with the well-known firm of John Hubbard & Company, I find the situation very encouraging, notwithstanding the fact that Russia herself produces about half the amount required. This firm has always found its Russian business very satisfactory, and had nothing to say about any difficulties of any kind.

The total amount in roubles of raw cotton imported into Russia in 1905 was nearly 67,000,000, in 1906 71,000,000. Of these totals, the United States in 1905 supplied 25,500,000, and in 1906, 27,500,000; Egypt, 8,750,000 and 12,000,000 for the two respective periods. The balance was divided between

Great Britain, the East Indies and Brazil. For the first four months of 1907 the total of raw cotton imported amounted to 29,250,000 roubles, an increase of 2,000,000 as compared with the same period of 1906. Of this amount, the United States sent 14,250,000 for the former period, or an increase of 2,000,000 over the latter. Egypt's figures are 4,500,000 and 6,250,000 respectively, the balance being divided among Great Britain, the East Indies and Brazil.

The above-mentioned possibilities, both in the export and import trade of Russia, give an idea of the many opportunities and openings in the way of business to be found in the Russian Empire.

Russia is going ahead all the time, and if it were possible to transplant the energy, capital, and brains and "push" of the United States into that country, its population would increase by leaps and bounds, for we should have all the emigration going Russia-wards, and in a very few years it would be one of the richest and most prosperous countries in the world.

As confirming these last remarks, I will repeat what a very prominent merchant of Moscow told me. This gentleman is one of the millionaire merchants of that city, and has had considerable business dealings with firms of all nationalities. These are his words: "Englishmen will not trade in a sensible manner in Russia. They expect everyone to speak English. They quote all their prices in £ s. d., and do not know the cost of carriage of goods, and do not take the trouble to find out what that cost is. It seems impossible for them to solve or get over any minor difficulties of this kind, and when in trouble they always answer: 'I must consult the firm.' With the German it is different; he knows everything, and no problem is too hard for him to solve. He is prepared for all emergencies. This is what the Englishman ought to be."

In the next chapter I will deal with some of Russia's home industries, and show what she produces in the way of manufactured goods.

CHAPTER XV.

RUSSIAN INDUSTRIES.

INDUSTRIAL EXPANSION UNDER M. WITTE'S ADMINISTRATION.—

LIMITED LIABILITY COMPANIES.—THE COTTON INDUSTRY.—

WOOLLENS, FLAX, HEMP, JUTE AND TIMBER. — FOOD

PRODUCTS.—METALS AND MACHINERY.—CHEMICALS.—ELEC-

TRICITY AND LIGHTING.—MISCELLANEOUS.—JOINT STOCK

COMPANIES.—RUSSIA'S AWAKENING.—ADVERTISING.

IN this chapter I purpose giving a short account of some of the more important productive industries of Russia. Various efforts have been made by Russian Ministers to establish new industrial undertakings in Russia, and to M. Witte, who was for many years Russian Minister of Finance, and more recently successfully negotiated for his country the Treaty of Portsmouth (U.S.) which terminated the Russo-Japanese War, the country probably owes, more than to any other of its statesmen, the great extension of limited liability enterprise which has taken place in late years. How great the industrial expansion under his administration may be judged from the facts that in 1892, when he took office, there were only 30,620 versts of railway in the country, and at the end of 1900 there were 51,288 versts ; in the former year the exports were in round figures valued at

£70,000,000 and in 1901 they had risen to £76,000,000, although in the meantime Russia had suffered severely from a series of bad harvests. The limited liability companies that sprung up under M. Witte's fostering policy were to a very large extent iron companies, the centre of the industry being South Russia. The ironworks in that district rose very quickly from 9 to 17, and in three years the output of pig-iron was doubled. In 1900 there were 44 blast furnaces working and 10 more in course of construction. Some of these for a time paid very high dividends—as much as 20 to 30 per cent.—but in 1900 there was a commercial crisis, in course of which a number of these companies failed. Depression succeeded for a time, but more recently renewed expansion of the industry has taken place, and, as noted in the previous chapter, it is now actively competing in international markets.

The first impulse to limited liability enterprise was, however, given long before M. Witte's time. In 1857 the first law was passed authorising joint-stock liability enterprises, and within two years thereafter 47 companies of the kind were founded, with an aggregate capital of 358,000,000 roubles. Previous to that only 26 companies, with a capital of 32,000,000 roubles, were in existence. The cotton industry in Russia on the modern factory system was established at an even earlier date than this. What had been previously a mere cottage industry began to be organised on modern lines about 1825, and large factories sprang up soon afterwards. Ludwig Knoop, whose firm has already been referred to, obtained permission to import English textile machinery in 1840, and this firm fitted up and obtained an interest in as many as 122 factories. The largest of these was built at Narva in 1856, and contained nearly 500,000 spindles, driven by water-power. Between 1861 and 1897 the number of hands employed in the Russian cotton industry rose from 120,000 to 325,000 and the estimated value of its products from 72,000,000 roubles to 478,000,000 roubles. In 1899 the number of spindles was over 6,000,000 and of automatic looms 145,000.

In the following figures for 1906 of Russia's cotton industry are included manufactories of cotton goods of all kinds, as well

as cotton yarn, cotton spinning and weaving, and the bleaching, printing and dyeing of cotton goods. There are in all about 745 factories occupied in this industry in Russia. They are distributed over the Empire as under :—

Location.	No. of Factories.	Production in Millions of Roubles.	Men Employed.
Moscow Government	250	160	100,000
Poland	170	90	49,000
Vladimir Government	131	160	120,000
St. Petersburg Government	34	52	23,000
Riazan Government	39	12	14,000
Saratov Government	44	15	12,000
Kostroma Government	33	50	32,000
Scattered	44	50	38,000
	745	589	388,000

Of the 90,000,000 produced in Poland, Lodz, the Manchester of Russia, alone produced over 60,000,000 roubles, the largest amount credited to one town in the whole of Russia. I mention a few of the more important establishments.

The largest cotton goods producers in Russia are two firms in the Lodz district. They both produce about the same amount per annum, which is estimated at about 15,000,000 roubles each. The oldest of these was established in 1854, and now has seven separate establishments employing 7,000 hands. This is the C. Scheibler Co. (joint-stock).

The firm of I. K. Poznanski & Co., also a joint-stock concern, was founded in 1872, and now employs about 6,500 hands. This is one of the most modern plants in Russia.

The Krenholme Cotton Works of Narva produce about 12,000,000 roubles' worth of spun cotton, &c., per annum, with 5,400 hands.

The Yaroslav Cotton Works produce about the same amount as the Krenholme Company, and employ about 10,000 hands.

The Kouvajev Print Works, the Morozov and Sons Company, and the Louis Geyer Joint-Stock Company all produce about the same yearly amount—10,000,000 roubles. The last-named is one of the modern Lodz plants, and was originally established in 1829.

There are several producing between 5,000,000 and 10,000,000 roubles per annum, and these are fairly well distributed over the Empire. When it is considered that Russia has 745 factories producing a yearly output of 590,000,000 roubles of cotton goods of all descriptions, employing 388,000 hands, when, moreover, the size, equipment and organisation of those factories are regarded, one cannot fail to be greatly impressed. Furthermore, when to this knowledge it is added that Russia to-day produces more than sufficient raw cotton to meet half the demands of these 745 cotton factories, it will be perceived that the Russian Empire is making good commercial use of its resources.

Next in order comes the woollen industry. Under this heading I include wool-washing establishments, the manufactories of woollen yarn, the spinning and weaving of yarn, wool-dyeing, the production of light woollen goods, felt goods and suitings. This industry claims 921 factories, with an annual output of nearly 130,000,000 roubles, finding employment for 130,000 hands. Of this number, Poland possesses about half—421 factories, with 46,000 employees, producing goods to the yearly value of 82,000,000 roubles.

The largest of these establishments is in Lodz. It is the Julius Heinzel Company's (joint-stock). This company has two separate factories. The first was founded in 1866 and the second in 1890. These two together produce over 9,000,000 roubles' worth of goods per annum, and employ 1,600 hands.

Another important concern is that of Leon Allart Co. (joint-stock), founded in 1878, also of Lodz. Its yearly production is over 6,000,000. Two other large concerns of Sosnowitse, Poland, each produce over 5,000,000 per year. The Thornton Woollen Company, an English concern at St. Petersburg, produces about the same amount, and employs about 2,000 hands. For the year 1906 Russia produced but 25,000 tons of raw wool, and there is, in consequence, a great demand for foreign wool.

Three large mills have been built in Narva, a cotton and flax mill and a cloth factory, all owned by different companies.

A large modern cotton mill has just been completed near Tver. All the machinery and appliances are of the latest and

best English make, and compare favourably with the best Lancashire mills. The modern dwelling-houses will contain accommodation for nearly 3,000 workmen.

There are in all over 300 factories engaged in the silk industry, with an annual production of 30,000,000 roubles, finding employment for 27,000 hands. The Silk Manufacturing Company of Moscow was founded in 1881. Its annual output is 4,000,000 a year. Of the 300 factories occupied with the manufacture of silk, half the number are located in the Moscow district.

Under flax, hemp and jute there are 414 factories, spread over the Empire, with an annual production of 70,000,000 roubles, giving employment to 50,000 hands. The largest of these is that of Hille & Dietrich & Co., a joint-stock company of Zyrardov, Poland. Its annual production amounts to about 10,000,000 roubles in linen goods of all descriptions. It was established in 1869.

The South Russia Hemp and Rope Works, in the Charkov Government, founded in 1875, makes hemp and manilla rope, tarpaulins, sacks, &c., to the amount of nearly 5,000,000 roubles. When it is considered that raw flax is one of the chief Russian exports, and that the native industry is nevertheless in a very flourishing condition, it will be seen that there is food for reflection. In addition to supplying the demands of these 414 factories, Russia exported during 1906 nearly 20,000,000 roubles' worth of raw flax and hemp, chiefly to England and Germany.

The four above enumerated industries employ 600,000 hands. There are 2,380 factories, with a total yearly output of 830,000,000 roubles. I would ask the British manufacturer interested in these branches of industry whether this does not present a field of possibilities. It seems to me a great field, but it is not taken advantage of as it ought to be. The German finds the field productive. Why not the Englishman?

Moreover, the factories working the raw product must have machinery to produce the finished article, and there, also, are possibilities for British enterprise.

The timber industry is one of the greatest in the Russian Empire, and offers possibilities which should not be neglected by

the manufacturer of requisite machinery. This industry comprises 1,428 factories, saw-mills, planing establishments, wooden box factories, piano factories, &c. The annual output is 150,000,000 roubles in value, and the number of hands employed is about 80,000. The following are a few of the most important producers :—

The Maksirnov Company owns three separate establishments. The original one was founded in 1881, and operates in the Saratov Government. Its annual production in lumber of all kinds exceeds 1,000,000 roubles ; the second factory was established in 1890 at Rostov-on-the-Don as a box and wooden case factory, producing about 500,000 roubles a year ; the third works, also making wooden boxes, &c., commenced operations in the Caucasus in 1898. Its annual production is also about 500,000 roubles.

The works of A. Kriegsmann, a joint-stock company, founded in 1843, and located in Riga, produce an annual output of corks to the value of over 1,500,000 roubles.

Another large concern is that of the White Sea Lumber Company, of Archangel, founded in 1872, producing lumber to the amount of over 2,000,000 roubles a year.

The export of timber for 1906 showed a considerable increase as compared with former years, and it further rose in 1907. The number of vessels laden with timber that left the Baltic ports during the season of 1906 was 378, mostly bound for England. The value for 1905 was 76,000,000 roubles ; for 1906, 92,250,000 roubles ; and for 1907, 107,000,000 roubles. The quantity shipped last year was 342,400,000 poods.

Under food products may be included (1) those products not subjected to Excise duty, such as flour, butter, starch, vinegar, mineral waters, coffee, chicory, hay, &c. ; (2) those subject to Excise duty, such as spirits, beer, grape and fruit spirits, sugar and tobacco. This industry claims 5,291 establishments or factories of all kinds and sizes, and employs about 50,000 hands. It is somewhat difficult to get at the exact yearly production in detail, but I find that about 200,000,000 gallons of spirits were manufactured during 1906, and that the gross revenue from the

sale of this quantity was 660,000,000 roubles. I also reckon that 278 sugar refineries during 1906 produced 920,000 tons of sugar, to the value of about 230,000,000 roubles, and that the tobacco production was about 100,000,000 roubles.

This industry is of some considerable interest to the English manufacturer, as it implies a demand for sugar machinery, beet-root cutters, apparatus for distilleries, hay presses, milling machinery, and many other implements necessary for the production of the above articles of food and drink.

The animal products industries include leather tanneries and the manufactories of all descriptions of leather for its many and various uses. They also comprise manufactories of leather belting, boots and shoes, leather trunks, and bags, harness, gloves, &c. Soap, tallow, candle and glue factories are also relevant, as well as manufactories of bristles and brushes, articles made from horn and bone, and hair goods, feathers, &c.

These industries are represented by 1,256 factories, employing about 35,000 men, producing an annual output of about 150,000,000 roubles. The figures may not be of so much interest to the British exporter as to the importer. In any case, they go to show that Russia is not asleep, and that she is making as much use of her natural resources as circumstances permit.

The Perm Railway are building extensive ice cellars along their line for supplying ice to the Siberian butter trains. As connected with food products, it may be here stated that a syndicate of Black Sea and Danube grain exporters was formed with the sanction of the Ministry of the Interior on March 17th, 1907. The object is to enforce the observance of contracts among its members under pain of heavy fines, which the syndicate has power to enforce in the Law Courts. This syndicate is, to a great extent, the work of leading grain shippers in Odessa, and is aimed chiefly as between exporters. It is also directed against unreasonable demands of labourers.

The metal and machinery group is very interesting from the standpoint of the British capitalist and manufacturer. It includes iron and steel works of all kinds, iron and brass foundries,

locomotive works, shipbuilding yards, engine and boiler factories, railroad, freight and tram-car builders, agricultural implement makers, wire and bolt factories, hardware and tool makers, gold, silver and nickel-plate workers, optical, surgical and drawing instrument manufacturers, and makers of firearms, ware of all kinds, pins, hooks, metal buttons, &c.

The number of establishments engaged under these different headings is 1,900. It is somewhat difficult to arrive at the exact annual output, but it may safely be put down at considerably over 150,000,000 roubles. Some of the most important—of which there are many—from the point of view of production, are :—

The Russian Locomotive Works, of Charkov, which were established in 1896 for the purpose of building locomotives and tenders, cranes, steam-hammers, boilers, bridge works, gun-carriages, &c. The annual output amounts to nearly 10,000,000 roubles ; 3,500 hands are employed.

The Hartman Company, of Ekaterinoslav, are credited with an annual production to the extent of 10,000,000 roubles. They manufacture chiefly castings, tubes and boilers, and employ 3,600 men.

The firm of Lilpop, Rau & Loewenstein, one of the largest concerns of its kind, is situated at Warsaw. It was founded in 1818, and has a capital of 2,000,000 roubles. It has branches at St. Petersburg, Moscow and Kiev. Among other articles the company produces iron and brass castings, boilers and machinery. It also undertakes the building of freight and passenger cars for tram and electric roads, and constructs bridges and other works. The annual output is estimated at over 5,000,000 roubles.

The Ural-Volga Metallurgical Company, established in 1898 in the Saratov Government, produces castings of all descriptions. The output is over 5,000,000 roubles a year.

The Tula Brass and Cartridge Works produce 6,000,000 roubles a year in value.

The Upper Volga Company, of Tver, builds railway freight and passenger cars to the amount of 5,000,000 roubles a year.

A. Barry & Co., an American concern, of Moscow, builds

bridges, towers, mills, reservoirs for petroleum, &c. Its annual production exceeds 3,000,000 roubles. There are a large number of all kinds of factories, credited with an annual production of over 1,000,000 roubles.

The chemical industries include chemical, paint and varnish works, and the manufactories of naphtha products, gas, matches, powder, dynamite, &c. These factories number 560. The yearly production of kerosene, mazut, benzine, lubricating, solar and machine oils, &c., in the Baku district amounts to nearly 100,000,000 roubles, which is produced by over 70 establishments. The largest producer is the Caspian and Black Sea Naphtha Company, with a yearly output of over 6,000,000 roubles. Poland produces chemicals, paints and varnishes to the extent of over 14,000,000 roubles a year, the largest of these being the German-Continental Gas Works, with its turnover of 3,000,000 roubles. The largest concern under this heading, and one of the largest in Russia from the point of view of the value of goods produced, is the Russo-American Rubber Company, of St. Petersburg. It was established in 1860, and its annual production is over 20,000,000 roubles.

The electrical industry is showing considerable growth, especially in the large towns, both in connection with lighting and tramway enterprises. According to a statement in the *Viestnik Finanssoff*, 480,000,000 kilowatt hours of electrical energy were consumed in Russia in 1906. This was the production partly of central municipal stations, commercial electrical stations, and private producing stations. The municipal stations produced 20·8 per cent. of the total, and commercial and private stations 79·2 per cent., the production of private enterprises being thus nearly four times that of municipalities. Tramway companies generally furnish their own electrical energy, and 2,370,000 kilowatt hours for lighting the streets were provided by stations of public authorities.

In regard to gas lighting, trading concerns provided 92 per cent. of the total production, and private concerns, for their own consumption, only 8 per cent. Out of 113,000,000 roubles spent on electricity, gas and kerosene, the proportions were: electricity 39·6, gas 5·8, and kerosene 54·6. Thus gas occupies a very

subordinate position, and kerosene or petroleum predominates as an illuminant. Electricity is, however, largely displacing kerosene in the large towns, and it promises in future to become the dominating illuminant.

An electric tram and light contract for Abo, in Finland, has been given to a German firm, and the conversion of the tramway system of Moscow to electric traction is steadily progressing. The subway telegraph system of St. Petersburg is nearly completed, and was constructed by an American firm at a cost of about 3,500,000 roubles.

Miscellaneous factories claim a variety of manufacturing concerns, both large and small, engaged in the production of lace, ribbons, braids, rubber goods, oil-cloth, fire-hose, artificial feathers and flowers, hats of all materials, buttons, umbrellas, paper and paper goods, books and toys, &c. It also includes glass factories, manufactures of porcelain, china and earthenware of all kinds, firebricks, lime, cement, tiles, slate, asbestos, &c.

They number in all over 3,000 establishments, employing over 80,000 hands, producing an annual output of over 130,000,000 roubles.

Some of the more important concerns under this heading are :—

The Maltsov Company, owning five separate factories in the Orlov Government. The first of these was established in 1780 and the last was added in 1848. The annual output of these five factories amounts to over 3,000,000 roubles, producing bottles, plate glass, mirrors and glass ware of all kinds.

The M. S. Kouznietsov Works manufacture porcelain, china and earthenware amounting to over 5,000,000 roubles in value per annum.

The Moscow Cement Company produces cement to the amount of about 3,000,000 roubles per annum.

The W. Howard Paper Company's production exceeds 3,000,000 roubles a year.

The Mittau Oil Cloth Works manufactures nearly 3,000,000 roubles' worth of oil-cloth per annum. These factories do not offer a particularly promising or extensive field for the British manufacturer, and are given solely with the idea of impressing the latter with the importance of the Russian Empire as a producer.

The Statistical Bureau of the Council of the Congress of South Russian Mine Owners has just issued a report on the share companies established in Russia in the year 1907. The totals as compared with those of preceding years are as follows:—In 1899 there were 445, with a capital of 430,878,997 roubles; in 1900, 330, with a capital of 336,833,249 roubles; in 1901, 211, with a capital of 140,152,401 roubles; in 1902, 116, with a capital of 69,147,563 roubles; in 1903, 110, with a capital of 82,402,500 roubles; in 1904, 130, with a capital of 94,049,888 roubles; in 1905, 117, with a capital of 99,738,000 roubles; in 1906, 166, with a capital of 127,263,625 roubles; and in 1907, 182, with a capital of 192,622,000 roubles.

According to the statement published by the Bureau, the great progress of share companies and joint-stock associations in Russia began in 1895, and continued without interruption till it reached the maximum of 430,878,997 roubles in 1899. In the following year a decrease is observed as compared with 1899, and in 1901 and 1902 the decline in the rate of progress became still more marked—namely to 140,152,401 roubles and 69,147,563 roubles respectively. Beginning again with the year 1903 a fresh but slow advance is noticed, continuing, however, till the close of 1907. The *Gorno Zavodsky Listok* observes that the advance in the capital of 1906 as compared with 1905 affects concerns that had been already authorised to begin operations; whereas the increased capital noted for 1907 as against 1906 is for quite new enterprises, and the increases of both years are principally found in the group of mining and metallurgical concerns, those of the South playing an important part. A special note is made of the decline in the number of foreign concerns authorised to operate in Russia between the years 1899 and 1906, and on their increase again in 1907. The *Torg. Prom. Gazeta*, commenting on the 1907 share company statistics, observes that 16 foreign companies were authorised to operate in Russia during the year, against only six in 1906. Of the foreign companies many were English.

I have endeavoured to convey a very fair idea of what Russia is doing in the industrial line; I have shown what she exports,

and I have indicated fields for enterprise, capital and trade. Before concluding this subject I should like to make a few more pointed remarks. Some are prompted by my own observation ; others have reached me from different sources, and express the opinions of those who are well qualified to speak.

In the first place it cannot be too clearly realised that there has been a great awakening in Russia, and that the people are directing their energies to the commercial and industrial exploitation of their native land. The Russian Empire is developing as rapidly as any other nation, but the development is not concentrated in one particular spot, or on one phase of industry, but is widespread and consequently not so apparent to a cursory glance. In the larger cities the former stagnation and apathy have disappeared : they are now communities full of promise, with abundant energy for the achievement of great results.

Even the Siberia of to-day is very different from the inert and barren country of former years. In place of that "dismal waste" so often spoken of, we find industrial progress, and instead of it being a land of "impossibilities," its commercial and industrial prospects point to openings for capital and enterprise. The Russia of to-day is the America of to-morrow, for she rivals the latter in extent and natural productiveness.

The Russian is not the lethargic, unambitious individual he is ignorantly supposed to be. Given the idea, shown the way and helped to make a start, he will go ahead. There are splendid trading possibilities in the Empire, but they cannot be had for the asking—they must be gone for and won.

The Russian is not averse to entertaining new ideas and innovations in the commercial life of the country. He is ready and willing to grasp modern methods, as an interview I had with Mr. F. E. Coe very plainly shows. Two years ago this gentleman started a branch of his advertising agency in St. Petersburg. It was, practically speaking, an experiment, for there is only one local firm in that business in St. Petersburg and the F. E. Coe Advertising Agency is the only other of the kind in that metropolis. It is to-day doing a very prosperous business, and in speaking of its prospects Mr. Coe said : "We are the only 'foreign'

advertising agency in St. Petersburg, there being only one other business of the kind there—a local concern. The business is showing a steady increase, and the Russians fully appreciate the advantages of method and system in advertising. They are always ready to take advantage of new methods, and, instead of turning a deaf ear to novel ideas, they will encourage them—especially if they come from an Englishman. The ideas and opinions of the latter are respected, and, in my opinion, there is no nationality that stands such a good chance in Russia as the British. While in Russia I had the greatest possible courtesy and good-will shown me, and I cannot speak but in the highest terms of all those with whom I have come in contact. In the place of difficulties I found nothing but encouragement and assistance from those in authority.

“I recently took a trip of some 3,000 miles through Russia, and was amazed to find so many signs of comparative prosperity. Close observation indicates that a large proportion of the people are potential buyers. The big shops of Berlin and Paris are truly magnificent, but it is a question whether the ‘grand magazines’ of Moscow and St. Petersburg are not absolutely the finest in the whole world.

“The vast country of Russia,” continued Mr. Coe, “opens up a vista of golden opportunities in the future to the courageous advertiser. A few years ago, there were, practically speaking, but a small proportion of the people who could read and write; this has now been changed, and since the excitement engendered by the Russo-Japanese war it is a common sight to observe cabmen and men of the working classes reading the papers. It would surprise the untravelled foreigner to see the Russian railway bookstalls, and the numerous native daily newspapers, weeklies and magazines they exhibit. The advertising field of the future in Russia is most attractive, and there are no bounds to its possibilities.”

In speaking of the methods of procuring business, this gentleman expressed himself as follows :—

“Many American advertisers have been worsted in their foreign advertising campaigns because they have insisted in

talking to the German, the Frenchman and the Russian, &c., in the same language they would use to the dwellers of New York and Chicago. The cosmopolitan advertiser, to be successful, must make a study of the national temperament of each land, and his business must be conducted in accordance with the idiosyncrasies of the people. This applies just the same to other branches of business and trade, and particularly so to the Englishman in Russia."

CHAPTER XVI.

THE SITUATION IN POLAND.

DOMESTIC INDUSTRIES AFFECTED BY LABOUR TROUBLES.—
AGRICULTURE.—RAILWAYS.—DAIRY FARMING.—TIMBER.—
TEXTILES.—MACHINERY. — AMERICAN METHODS. — PUBLIC
WORKS.—PROSPECTS.

THE total population of Poland, which presents such an enormous contrast to the rest of the Russian Empire, is 11,370,000, of which 75 per cent. are Poles, 15 per cent. Jews, 5 per cent. of German origin and 5 per cent. Russians. In the last 15 years the town population has increased by about 1,000,000 and the country population by rather more than twice that number. The influence of the strikes of 1905 made itself felt to such an extent that in that year, instead of increasing by about 230,000, the population increased only by about 60,000, and in 1906 it actually diminished. A great deal of this must, of course, be put down to emigration, but the birth-rate also diminished, particularly in industrial and trade centres, where the strikes were most felt.

Owing to the dislocation of trade and industry and the anti-Semitic riots, emigration, particularly amongst the Jews, increased considerably in 1906. In addition to this permanent emigration, a considerable number of Polish peasants go for some months to Prussia for field work, which is there better paid than in Poland. Both these emigrations, far from impoverishing, tend to enrich

the country, as it is estimated that those who go to Prussia bring back with them each year at least £1,000,000, whilst those who have established themselves elsewhere—principally in the United States—send back regularly very considerable sums of money to their relations whom they have left behind.

Owing to the serious troubles in 1905 and 1906, not only every branch of industry and trade, but every individual person, suffered more or less severely from the higher cost of labour and the disputes incident to the change. The men who are to-day receiving higher pay are practically no better off, as the general cost of living has increased proportionately, whilst, for every one who is apparently better off, many are reduced to misery and want by being thrown out of work. A statement recently made by one of the largest textile manufacturers in Lodz gives a very good idea of the conditions under which industry is now carried on in Poland. Practically all the large owners of factories in Lodz, this gentleman says, who are Germans, have been obliged to take up their residences at Berlin. These owners say that in the course of the last two years the pay of nearly everyone employed in their factories has been increased by 50 per cent., whereas their competitors, the Moscow manufacturers, who originally paid a lower rate of wages, have only had to grant a rise of about 20 per cent. Competition in the Far Eastern market under such conditions is, of course, impossible. It was hoped at first that the workmen, having once obtained such a substantial increase, would settle down and help by steady work to compete with Russian manufacturers, but the agitators incessantly put forward fresh demands. It was impossible to satisfy them. In the spinning departments work was constantly being stopped on account of discontented workmen. In the weaving departments each class of employees struck in turn. In the bleaching, printing and dyeing departments obstruction was continuous. Work was delayed, and enormous stocks of raw material or half-finished goods accumulated. The mechanical departments also took their turn to strike. In addition to these strikes, there were constant cases of theft, violence and intentional damage and obstruction of every kind.

The metallurgical industry suffered considerably less from labour troubles. The various other difficulties against which this industry had to contend, such as the impossibility of obtaining regular supplies in sufficient quantity of raw material, and the want of orders, necessitated a diminution of production. Some works reduced their working time per week by one-half, others discharged part of their men. Under such circumstances it was obviously absurd for the men to demand higher pay, and, although they did so, an arrangement with them was more easily come to than in the case of the textile industry, in which the men knew that the factories were overwhelmed with orders. The chief sufferers from the struggle for a higher valuation of labour were, however, those engaged in and dependent on the minor industries, many of which are completely ruined, and it is in Warsaw that the effect of the struggle is more generally felt than at Lodz. As regards the iron industry, although 1906 was considered a critical year, the British Acting-Consul, Mr. St. Clair, reports that 1907 was still worse.

In large metallurgical and textile works the value of the raw materials employed forms 80 per cent. of the value of the manufactured article, and labour only from 15 to 20 per cent., whereas, where hand labour is chiefly employed, the cost of labour is 50 per cent. or more of the value of the manufactured article. For this reason the increase of pay and shortening of the working day have been more felt in such minor industries than in the larger, and various lines of goods, in consequence of the increased selling price which has become necessary to cover the increased cost of production, can no longer compete with goods made in Russia and abroad. Industries at Warsaw are chiefly those in which hand labour predominates. The various lines of manufacture thus affected at Warsaw are:—Artificial flowers and fancy feathers, with which Warsaw has hitherto practically supplied the whole of Russia; straw hats and ready-made clothing and various fancy goods are in the same plight. It is the same with the manufacture of boots and shoes, which Warsaw could sell advantageously in the provinces and in Russia proper. Now they are no cheaper than those made in parts of Russia

and the provinces, and the supply of these markets is lost to the capital of Poland. The makers of locks and padlocks have suffered in the same way, for they cannot afford to compete with Russian makers in consequence of the increased cost of labour. The makers of silver and plated goods, whose business is on a large scale in Warsaw, and who can afford to give credit, suffered least of all.

The year 1906, so unfortunate for industry, was by no means so for agriculture. The harvest was above the average, and prices were good in consequence of the diminished import of grain from Russia proper. Then, again, agriculture suffered far less in 1906 from strikes and difficulties with workers than industry. 1907 was particularly profitable to the farmers, owing to the high prices of cereals, which were higher than in 1906.

The flax crop of 1906 was fair. The quality of the fibre was better than in 1905, and the average quantity of flax obtained per acre was $3\frac{1}{2}$ cwts. The crop of 1907 was also fair. Hay gave a satisfactory yield in 1906, the average being 16 cwts. per acre. In 1907 the crop was a poor one.

The potato crop was some 20 per cent. less than the average, and the quality was not good, in both 1906 and 1907. There was a considerable demand for potatoes for export, the prices being higher than those paid by the local starch factories and distilleries.

Hop plantations were in good condition in the spring of 1906, but they suffered later from the long-continued want of rain. Much damage was also done by insects and hail. In the end, however, the crop turned out to be not quite so bad, as far as quantity went, as was feared, the total yield in Poland being estimated at 1,000 tons, which is only about 20 per cent. short of the average crop. The quality was, however, very inferior, although the prices were much higher, owing to the demand. The 1907 yield was about the same as in 1906.

The beet crop of 1906 was well above the average. The quality was also better than the average. 1907 was an even better year, and the total yield was 1,661,867 cwts. more than in 1906.

There were 48 sugar refineries at work in 1906, one of which was forced to close in the summer on account of continual strikes. The average dividend paid by the 19 largest sugar factories for the year 1905-1906 was 12 per cent., but in 1907 the average was only 8.43 per cent.

Both the production and consumption of spirits in 1906 increased in Poland, as, naturally, did the Government revenue from this source. The increase in the consumption was very remarkable, not only in that it occurred in a year when all the population was suffering from the effects of the labour troubles, but because the greatest increase took place in the Governments in which industry is chiefly concentrated, and where the ill-effects were most felt. The production itself increased by 60 per cent. as compared with 1905. The reason for this was the increased demand in Russia proper, to which most of the spirit distilled in Poland is exported. 1906 was an exceptionally good year for spirit factories, as the difference in price between raw and rectified spirit, which in former years was only from 12 to 18 kopecks per vedro, was in 1905 25 kopecks, in consequence of which eight new spirit factories were started in Poland, bringing the total number up to 51. In 1907 prices ruled high, and there was an increased demand.

The brewery business is not a very profitable one in Poland. In 1906 breweries suffered considerably from strikes, which not only interrupted work, but forced on them a considerably enhanced rate of pay for their men, thus adding to the cost of production and further increasing their difficulties.

The profit derived by the Government from spirits in Poland is about 32,000,000 roubles a year, besides which the Excise on beer brings in about 770,000 roubles, sugar 5,000,000 roubles, petroleum 780,000 roubles, tobacco 152,000 roubles, and matches 13,500 roubles, or altogether nearly 40,000,000 roubles.

The supply of petroleum to Poland is almost exclusively in the hands of two firms, through whom the others, who supply part of the petroleum for this market, arrange to sell their produce on commission. There was considerable inconvenience

in Poland during last autumn owing to a shortage of petroleum, which was caused by the railways being fully occupied in carrying foodstuffs for the famine-stricken districts on the Volga.

Although railways did not suffer in 1906 from actual strikes of their men, as in 1905, they suffered indirectly from the struggle between labour and capital, as, whilst their expenses were very much increased by the higher wages which they had been compelled to grant their men in 1905, traffic diminished very considerably as a result of the labour troubles in industry and trade, and there was a very serious curtailment of the quantity of raw materials and manufactured goods requiring carriage. Still, railways did better than in 1905, except the Warsaw-Vienna line.

The only railway construction carried out during 1906 in Poland was the completion of the lines from Andrzejew to Siedlec, a distance of 117 miles, and from Bologoje to the latter, 562 miles, which had been begun in 1902. Efforts are being made to find the money to construct a line from Czenstochov to Sieradz, a distance of 100 miles, for which permission has been granted. A narrow-gauge line connected with the Warsaw-Vienna Railway was begun in 1907 and is in course of construction.

As regards dairy farming, the idea of producing butter and milk for other than local consumption, and of co-operating in order to obtain more advantageous conditions in the disposal of such dairy produce, is gradually spreading in Poland, where there are now 220 societies for the production and disposal of such articles. The nature of dairy produce for export is gradually changing. Before the outbreak of the Russo-Japanese war Siberian butter was exported in large quantities to Germany, and Polish butter, which was produced on a small scale, left little surplus over the local demand. The export of Siberian butter, being temporarily suspended during the war, Polish dairy farmers took advantage of the opportunity to get a hold on the Berlin market, and when the war was over Siberian butter merchants, not finding the same opening in Germany, turned their attention more to the supply of butter to the United Kingdom. Almost

all the export of eggs from Poland is to Berlin, the export to England being very small. The export of geese and ducks is principally to Germany.

The demand for pig products, particularly bacon for export to Germany and England, is on the increase. The local pig is in need of considerable improvement, and for this reason a large number of estate owners have lately imported breeding animals from England, and several schemes are on foot to establish bacon export factories in Poland.

The export of timber from Poland in 1906 was considerable, and prices were high. The results were less favourable in 1907, the exports being only about one-third previous year's. In former years a considerable part of the timber exported—about 40 per cent. of the total amount—went to England and about 35 to Germany. In 1906 the former took timber to the value of £2,000,000 only, whereas the latter took £3,000,000 worth.

The metallurgical industry in Poland is on the down grade. Polish ore is poor in iron, and ore has to be brought from the South of Russia and abroad, whilst local coal, not being suitable for making coke, the latter has to be brought from Galicia. The Polish ironworks have consequently come to the conclusion that they cannot compete with the South of Russia in casting iron and heavier forms of output, and they are consequently changing their production to lighter forms of machinery and other iron produce. The pioneer in this direction is the Huta Bankowa Works, belonging to French capitalists, which have already opened works for making agricultural machinery, tools and iron pipes. The output of coal in 1906 was about 4,500,000 tons; in 1907 nearly 5,500,000 tons.

The production of zinc amounted to 9,455 tons in 1906 and 9,675 in 1907.

The value of house property fell heavily at Warsaw during 1906, and the demand for building materials was, consequently, very small both in 1906 and 1907. The demand for cement, however, unexpectedly improved in 1907, there being a large demand for Northern Silesia.

At the beginning of 1906 there appeared to be every prospect

of the year being a very good one for textiles, but the labour troubles soon put an end to these prospects. The factories at Lodz—the Manchester of Russia—were only able to work about 40 weeks in the course of 1906. The value of the 1907 output of cotton goods exceeded that of 1906 by £2,700,000, the value being about £6,700,000, but this is below the normal production, as the factories worked only about nine months during 1907. In consequence of the higher price of cotton, it will now be possible to import many classes of the finer cotton fabrics from England and Germany. There is a great demand for fabrics, payments are regular, there have been very few failures, and the long credits customary in Russia have been very much restricted.

The year 1906 was quite abnormal in the wool trade, and manufacturers had to contend with great difficulties with their workers. There has been a considerable rise in the price of the raw material, but prices of the manufactured article have not gone up to the same extent on account of competition of centres less hampered by labour troubles and imported goods. The local woollen industry was in a bad way in 1907, and foreign goods are able to compete successfully with the local products.

The conditions of the jute trade in 1906 and 1907 were not unfavourable as regards demand, as there was no scarcity of orders, so that manufacturers might have been fully employed had there not been much time lost by labour troubles. Prices, however, were not remunerative, as, although they were higher, they were not proportionately so to the increased cost of the raw material and to the enhanced cost of production, due to the advances conceded in wages to the workers. There are in Poland three jute works, with 11,000 spindles and about 950 looms, having a production of about £750,000, and giving employment to about 4,500 hands.

The linen trade was somewhat better in 1906 than in the preceding year. There was a good demand for all classes of linen fabrics, so that there has been no want of orders. Prices have gone up, but not to the extent required to cover the advanced price of the raw material and the higher rate of wages.

There was a very small demand in 1906 for machinery and

mill furnishings. Manufacturers in Russia have more confidence in the future, as they have not suffered to any great extent by labour troubles, and so have been investing in machinery. In Poland no one knows what the future will bring, and some large firms are seriously thinking of closing their works and transferring their machinery to Russia.

There was a scarcity and consequent high price of hides in 1906, the price being 50 to 60 per cent. higher than in the preceding year. This scarcity was due in a measure to the increased export to America, the latter having bought up practically the whole supply.

The importation of paper is steadily diminishing, as Finnish paper is able to compete successfully in the Polish market. Only paper of the finer sorts and for printing illustrations is now imported, and that only in small and steadily decreasing quantities, as the Finnish and Polish mills gradually improve their production.

Owing to the good harvests in 1906 and 1907 the import of agricultural machinery, especially of steam threshers, which are chiefly of English make, increased considerably. Unfortunately, however, several of the principal English makers were so busy that they were unable to accept orders for prompt delivery, which were, therefore, secured by German firms, who were better prepared to meet the demand. British makers of such machinery have now to take into account as a dangerous competitor a Vienna firm whose machines are said to be little, if any, inferior to those of British make, and who grant their customers far easier terms and sell at considerably lower prices. The demand for combined drills to sow grain and distribute artificial manure at the same time is on the increase. Reapers, mowers and harrows were imported in 1906, as usual, chiefly from America. Ploughs were imported principally from Germany, but local works are gradually improving their production, and are beginning to compete successfully with foreign firms in this line. A machine of British invention and make for thinning beet will find a demand next year.

The agricultural societies, who are the largest buyers of

foreign agricultural machinery, are of opinion that British makers of agricultural machinery are, as a rule, badly represented here. One of the best-known British firms is represented by a German firm, who supply with the British machines many parts of German make, which are not well made, in consequence of which the machines do not work satisfactorily.

American makers sell their goods better than British because they study the market, and generally employ as their agents only first-class firms, whom they treat much more liberally than British firms do their agents. They also maintain considerable stocks of goods in Russia, from which they can fill orders promptly. Besides this, they make a speciality of supplying competent men, usually Americans, who are continually moving about the country, to do any repairs that may be required, which is of great importance in a country where men capable of repairing complicated machinery are few and far between.

Of public works very little was done in 1906 and 1907 in comparison with what had been intended, partly on account of the restriction or total withdrawal of appropriations for the purpose, but chiefly owing to difficulties as to labour. At Warsaw the so-called "fourth" bridge, a supplementary railway bridge, on which Russian labour is chiefly employed, made good progress, and its completion this year (1908) is expected. The construction of the "third" bridge has been handicapped and delayed by constant strikes.

There is a proposal to reconstruct the Alexander Bridge, and also to build a "fifth" bridge for railway traffic, but the project of building a central station is to be settled first. Electric traction was to have been introduced on the Warsaw town tramway system by October 1st, 1906, but there has been much delay, although the work is well in hand. It was intended to build the cars for this system in Poland, but none of the local works would accept the order, which was, therefore, placed in Germany. Electric lighting has also been introduced. The drainage and water supply of Praga, on the right bank of the Vistula, a suburb of Warsaw, has been commenced, and is to cost £150,000.

When money is available, a considerable amount of work will have to be done on the River Wisla, the most pressing being the completion of the regulation works near the Austrian frontier, for which £300,000 were assigned in 1890, but for the completion of which more money is needed. For the strengthening and repair of the banks of the same river near the German frontier £100,000 are needed, whilst at Warsaw the winter harbour and quays, 2 miles long, are also waiting funds. The cost of the water supply arrangements and drainage works projected is estimated at £1,500,000.

Public works of all kinds leave much to be desired, and there are plenty of improvements to be done in the future.

The total value of the rural products of Poland is estimated at £60,000,000 a year, but the value of industrial products only £40,000,000. The total number of factories is over 10,000, employing some 276,750 hands.

Although the picture I have drawn of the present demoralised state of things in Poland is certainly not inviting, yet this country presents many opportunities for enterprise and trade. The present uncertainty, I presume, will not last for ever, and I maintain this is the time to look around so as to be able to take advantage of the opportunities when conditions improve. Representatives of British firms going to Moscow and St. Petersburg and other trade centres of Northern and Central Russia cannot do better than step off at Warsaw—it is on their way. They can from there visit the principal industrial and other towns of Poland, and find out for themselves such opportunities as exist for openings for trade and enterprise.

CHAPTER XVII.

THE ATTRACTIVE CAUCASUS.

THE CAUCASUS AS A TOURIST AND HEALTH RESORT.—TRADE OF
BATOUM.—SHIPPING.—THE BAKU OIL INDUSTRY.—BRITISH
TRADE WITH BAKU.—LOCAL REQUIREMENTS.—POTI.—
NOVOROSSISK.

THE vast expanse of land lying on the south-eastern shores of the Black Sea and stretching towards the Caspian Sea—a territory as large as France—is called the Caucasus, and is undoubtedly one of the richest morsels of Russia's wealth. This fine country really presents much better opportunities for enterprise, capital and trade than Siberia, for the simple reason that transportation facilities all along the south-eastern shores of the Black Sea and parts of the Sea of Azov are plentiful and freights are cheap. This is a beautiful country. Its aspect is entirely different from that of any other part of Russia.

The mountain scenery can be favourably compared with that of the Himalayas—it is so much grander than anything else in Europe. The never-to-be-forgotten view of Mount Elborous—18,572 feet above the level of the sea—with its snow-capped peak, is one of the sights of the country. High up in the mountains are many beautiful lakes, that rival any in Europe, and are, moreover, a veritable paradise for the fisherman. There is sport of all kinds for the man with the gun, and the invalid will find among the mountain resorts that beautiful, health-giving air that few other localities can give. Sick people are sent here from all parts of Russia on account of the life-giving purity of the mountain air. Borjom, the Pearl of the Caucasus, is only 140 miles from Batoum. Its famous mineral springs are known to but a few. It is the Russian Wiesbaden.

There are many health resorts in the mountains, and in the region known as “Mineral Waters” there are hydropathic establishments and sulphur baths that rival any in Europe. Every year these places are becoming more luxurious. In 1900 8,000 people were registered as “taking the cure” at the various health resorts on the European side of the Caucasian range of mountains; for 1902 the figures were 25,000; for 1903 they were 40,000, and in 1906 they reached almost double this total. Palatial hotels are rising at all the principal centres for the use of the wealthy, but comfort is also assured to visitors of moderate means in clean and comfortable hotels.

The Caucasus has, like Poland, suffered during the past two years from great unrest and local troubles on the one hand, combined with periodical strikes and a serious strife between capital and labour on the other. Under the influence of these disastrous circumstances, the commerce of Batoum, the chief port on the southern shore of the Black Sea, suffered considerably. The trade of this port has fallen off to so great an extent that a large proportion of the inhabitants have been deprived of the means of earning a living. With a view of finding employment for those who have been thus thrown out of work, the construction of waterworks has been undertaken, and works for the prevention

of the inundation of certain parts of the town by inrushes from the sea during bad weather are also in contemplation. Harbour improvements, with the introduction of proper equipment and appliances for a modern port, are also proposed, and it is reported that representations are to be made at St. Petersburg to allow the transit of foreign-manufactured goods through the Caucasus to Persia. Should the latter privilege be secured, the people of this district in general, and the inhabitants of Batoum, as well as the Trans-Caucasian Railway, in particular, will derive great benefit from the measure, seeing that close upon 80,000 tons of merchandise, which now finds its way from Europe to Persia through Turkish Asia Minor, is sure to be diverted in the direction of this port.

There are no indications at present of further development in the import trade of British-manufactured goods into the Trans-Caucasus, the volume of which has always been small. Although the quantity of machinery imported during 1906 was considerable, this was mainly due to the sudden demand for machinery created by the erection of new plants to replace those which were burned down during the fires at Baku, and for the works belonging to the copper mines at Dzansoul.

The principal articles of import from England to the Caucasus are machinery, tubes, tin, fire-bricks, hardware, haberdashery, sulphate of iron, white lead, steel, chemicals, lead, &c.

Trade between Batoum and the United States, which has taken some time to develop, is steadily increasing, and during 1906 reached considerable proportions. The principal items of export to America are clover-seed, camel-hair, manganese ore, gats, almonds, liquorice-root (which grows wild), carpets, wool, raw salted sheep and goat skins. The number of sheepskins exported to America in 1906 was 745,800; manganese ore reached the total of 8,500 tons, liquorice-root 8,450 tons, wool 5,000 tons, and over 7,000 carpets and rugs of all descriptions.

There is no doubt that in the course of a year or two Batoum will become the principal point of outlet for the mineral wealth

of the central and western provinces of the Caucasus, the mineral deposits of which are daily becoming more and more valuable.

The future is full of promise for mining development in this country, and presents enormous opportunities for British capital and enterprise. The Caucasus Copper Company, which acquired copper deposits in the province of Batoum, has about completed its new smelting plant, and the company expects very shortly to commence smelting operations. The magnitude of this concern, combined with the large quantities of copper ore on its properties and the up-to-date machinery which has been erected, fore shadows a very prosperous future for the new enterprise. Two other British companies were floated during 1906, which have acquired concessions on combined timber and manganese ore-bearing estates in the Government of Koutais. The prospects before these companies are very good, for both of their products are in great demand, and the prices are good.

The manganese ore industry developed remarkably during 1906, and was carried on with considerable success. In fact, it has been prospering ever since the latter part of 1905, when the demand for manganese in European and American markets increased by leaps and bounds.

Messrs. Moss & Ellerman, of Liverpool, opened a new line of British steamers between Liverpool and Batoum in 1906. The Deutsche-Levant Line now almost permanently keeps a steamer loading on the berth at Batoum, and compels other companies to regulate their rates of freight more or less according to the fluctuations dictated by it.

The return of shipping entered and cleared at Batoum during the year 1906 was 1,314 vessels of all nationalities, carrying 639,941 tons. Of these, Turkey heads the list with 798 vessels and 22,647 tons. Next in order come Russia, 208 vessels and 86,323 tons; France, 83 vessels and 137,209 tons; England, 60 vessels and 125,679 tons; Germany, 56 vessels and 94,293 tons. The balance is composed of Austria, Belgium, Greece, Italy, &c.

The return of principal articles of import and export to and from Batoum during 1905 and 1906 shows, in tons :—

IMPORTS.

	1905.	1906.
Tin-plates	5,709	3,720
Timber	7,835	57
Bricks, tiles and fireclay	4,411	3,685
Colonial goods	336	205
Sulphur	861	—
Copper, iron and steel	1,180	1,473
Tin, lime, lead, &c.	583	763
Machinery	1,175	1,573
Chemicals, paints, oils, &c.	500	238
Sulphate of copper	940	1,763
Other articles	1,056	2,250

The value of the machinery item for 1905 was £277,300.

EXPORTS.

	1905.	1906.
Petroleum products	592,952	470,217
Wool	4,007	5,080
Liquorice root	12,756	8,450
Manganese ore	16,070	16,506
Grain and flour	17,476	1,744
Walnut and other woods	572	1,636
Carpets	54	899
Cocoons, raw silk, &c.	867	580

Although the oil industry has not yet recovered its former position after the serious set-back received in 1905, confidence is gradually returning, and trade prospects are much brighter. The general opinion is that, provided the next twelve months can show more or less uninterrupted work, there may still be a prosperous future for the oil industry in Baku, although it is said in some quarters that the present Baku oilfields are "giving out."

The total amount of illuminating oil exported from Baku in 1906 was 71,528,834 poods, in 1905 73,672,783 poods, and in 1904 153,642,406 poods.

The amount of lubricating oil exported from Baku in 1906 was 15,114,682 poods, in 1905 10,666,081 poods, and in 1904 15,513,264 poods.

Baku exported 204,000,000 poods of petroleum residuum in 1906. During the previous year the amount was 266,000,000 poods, and in 1904 over 300,000,000 poods.

The crude production for 1906 amounted to 477,703,933 poods, in 1905 it was 410,036,246, and in 1904 it reached 614,000,000 poods. Owing to the shortage of production in crude oil during the last two years the prices of crude and residuum are high, and are likely to remain so during the ensuing year.

Baku exported 71,500,000 poods of kerosene in 1906—less than half the quantity exported in 1904. This is accounted for by the fact that the high prices received for residuum make it more profitable to manufacture a greater quantity of this product and proportionately less kerosene; also there has been very little demand for kerosene for export, the Baku producers finding it impossible to compete on the European markets, one obstacle being the high freights charged by the Government for railway transport between Baku and the seaports, and another being, of course, the high price for crude. The petroleum producers have repeatedly petitioned the Government to reduce the rates, and this matter is now under serious consideration.

The pipe line between oil wells and Baku was completed during the past year, and is now in good working order. It is unfortunate that this line did not exist when it was most needed.

Now that the pipes cover the whole distance, it appears there is little kerosene to pump through them.

The average number of wells baling per month in Baku was 1,555 in 1906, as compared with 1,700 in 1905, while for 1904 the figures were 880. The average number of wells drilling per month was 279 in 1906, 141 in 1905, and 350 in 1904.

The number of new wells that started producing in 1906 was 239, as compared with 140 in 1905 and 165 in 1904. There were 1,443 wells lying idle in 1906; in 1905 and 1904 the numbers were 2,423 and 1,400 respectively.

In touching upon this subject, I cannot do better than quote what the Acting British Vice-Consul, Mr. McDonell, at Baku, says about British traders and the Baku market :—

“ Taking it for granted that British traders wish to see their goods on the Baku market, and judging from the correspondence received here it would seem so, there are several points on which our competitors are certainly showing more energy than ourselves. Whereas the British firm invariably requires cash on documents or a very short credit, our competitors are always willing to give as long a credit as possible, and generally do their utmost to give the best possible terms. Again, when placing something new on the market, foreign firms will send their goods on consignment to their agents, often even paying the duty themselves; recognising that the agent runs a certain amount of risk when endeavouring to push a new line, they themselves are willing in their turn to take a certain amount of risk in the matter of payment. It must be remembered that the business methods here and in the United Kingdom are entirely different, and the credit system here plays an important part. As to the risks in the matter of credit, these can be easily minimised by responsible and trustworthy agents on the spot. One or two British firms, one especially, are doing very good business by having their own men out here. It was a very noticeable fact that, after the wholesale destruction in August, 1905, the oilfields had hardly finished burning before the town was filled with German, Austro-Hungarian and Swedish travellers, each ready with some special conditions, but no British traveller appeared, with the exception

of those already on the spot. Another point worth noting is literature ; many very good trade papers are sent from Germany to the principal firms here free of charge, but I do not know of a single British trade paper sent without a subscription paid in advance."

From the point of view of British trade, machinery, materials, &c., should be the most interesting branch in Baku. The principal requirements for the Baku fields and industry are machinery and appliances.

Electrical appliances of all kinds are needed. Apart from electric-lighting plants, electricity is coming in very much as a motive power for drilling and pumping on the oilfields. All electrical plants are supplied from Germany.

Steam engines of about 40 H.P. are greatly used for driving all kinds of machinery. These engines have hitherto come entirely from England, British-made engines still holding their own.

Pumps of all kinds and dimensions were, until a short time ago, supplied exclusively from England, but now a greater number of foreign pumps are being sold. These pumps are much cheaper, and the conditions of payment in many cases easier. Pumps of the Cameron, Duplex and Riedel type are principally used.

Steam turbines have only recently come into use on the oilfields, and are now being used a great deal for driving electric dynamos and for pumping installations. They have also been used with success for driving drilling rigs and baling drums in wells. Their chief advantage, besides a slight economy in steam, over the ordinary steam engine is their compactness and the comparative ease with which they can be moved from one well to another.

Oil motors are used very considerably for driving drilling machinery in prospecting wells, as well as for pumping. They are also used in the oilfields where adequate space for a boiler-house is not obtainable, or where the number of wells does not justify the erection of a boiler plant. These motors must be made to burn crude oil.

American air-compressors for pumping oil wells are also used considerably.

Steel for high-grade tools is almost entirely imported from England. Sheet lead was at one time supplied solely by England, but lately lead from Germany is being imported. Tin is also imported only from the United Kingdom.

For the past two years the state of the surrounding country has been such as to more or less close this field. The situation, however, seems to have improved materially of late, and when it becomes more normal there should be a good sale for agricultural implements and machinery of all kinds. These ought to be as little complicated as possible, as the labour is not very skilled, and in many places there may be no workshop or skilled mechanic within 100 miles.

There is a demand for rice-cleaning machinery.

The cotton industry in the Transcaspia, Arak and Coara districts has of late increased very considerably, and is being pushed forward very energetically. All cotton plant should be of the American type—with saws instead of rollers—as the cotton grown here is American, not Egyptian. Several German firms have already supplied some of this machinery.

Owing to the state of the country lately, there has not been much demand for irrigation plants ; in fact, several of the existing installations are now lying idle. As matters improve, however, there will doubtless be an increasing demand for these plants.

There is a large scheme under consideration for wine-growing in the Transcaspian district on a very extensive scale. This will call for wine presses and machinery.

Nails, a very important item, are supplied from Russia. Gas-pipes, well casing, &c., are also Russian. Belting and camel-hair is supplied mostly from Germany, only the finer grade comes from England. German belting is cheaper and rougher, the conditions here, owing to the dust and sand, being such that a fair quality belting is not required. Competition in wire ropes is impossible, as they are now mostly manufactured on the spot, the steel being British. Cement is also supplied from Russia

or made locally, there being two cement factories here. Boilers and fittings are also Russian ; fireclay and fire-bricks are imported from England only.

Poti is the second principal port of the Caucasus. The exports of this port for 1906, which were expected to reach unprecedented figures, did not come up to expectations, owing to the unsettled state of the country and labour difficulties. This is the chief outlet for the manganese ore mines of the country, the demand for which was very considerable throughout the year 1906, the price of this commodity having risen to 60 and 80 per cent. above that of the preceding year.

Works for the extension of the harbour and increasing its depth, thereby giving additional accommodation to vessels engaged in the coasting trade, are in course of progress.

An elevator for loading manganese ore has been erected. A permanent bridge across the River Moltkva, five miles from Poti, on the road leading to the railway station on the Batoum trunk line, is now being constructed. One hundred and eighty-two steam vessels flying the British flag entered and were cleared at this port during 1904-5-6, with a total tonnage of 340,000 tons, while nearly 500,000 tons of manganese ore were exported from this port in 1906.

The total quantity of merchandise imported into Novorossisk, third port of the Caucasus, for the year 1906 was 36,000 tons, consisting chiefly of agricultural and other machinery, hardware, files, &c.

The return of shipping at this port entered and cleared during 1906 was 815 vessels, carrying 1,420,000 tons, while for the year 1904 the number of vessels was 4,700, with 4,200,000 tons. These figures clearly show the difference between prosperous and bad times, and give one an idea of the business that is really done at such an insignificant port as Novorossisk. The Englishman who wants to see the possibilities of the Caucasus as a field for enterprise and trade ought to visit Batoum, Poti, Novorossisk, Tiflis and Baku, not omitting the copper and manganese mines of the district. They will speak for themselves.

The local representatives of one of the English petroleum

companies, in an interview expressed great hopes for the future, and in answer to my question whether they had ever met any difficulties in their business transactions with Government or other officials, they positively stated that their business relations at Baku were perfectly satisfactory in every respect, and instead of "difficulties" they had encountered nothing but courtesy and goodwill.

CHAPTER XVIII.

FINLAND.

NEGLECTED OPPORTUNITIES OF TRADE WITH THE GRAND DUCHY.

—IMPORTS AND EXPORTS.—RAILWAYS AND SHIPBUILDING.—
FINANCE.—MINING.—LABOUR TROUBLES.—THE OUTLOOK.

WHEN considering the possibilities of trade with Russia, the Grand Duchy of Finland must not be forgotten. "Why does the great British nation leave Finland so much out in the cold?" asks a well-known business man of Helsingfors. "It is true that Great Britain buys about half of our products, which consist of timber, paper, butter, &c., but I maintain much more could be done than is being done now," he continued.

Finland is another example of the German invasion and enterprise. The thriving German colony in Helsingfors numbers over 1,000, while there are several smaller colonies in other districts. The British colony in the entire Grand Duchy amounts to but little over 60 souls. The total population of Finland is nearly 3,000,000.

Finland does not own coal, iron or any other mines to any great extent, but the vast expanse of her forests only requires to be more generally known to be better utilised. The majority of these are Government properties, and are carefully husbanded, so that the supply of trees will last for centuries, whereas private forests seem to be rapidly disappearing.

The Russo-Japanese war has had but little or no direct effect on the trade of Finland. The Customs receipts have shown a steady increase. These amounted to £1,892,345 in 1906, while in 1905 and 1904 they were respectively £1,538,276 and £1,488,583. Railway receipts and the great increase of money at all the banking institutions show a not inconsiderable rise in the national prosperity.

With regard to the opportunities for enterprise and capital in Finland, I may quote a few remarks made by the British Consul at Helsingfors :—

“ I am frequently asked by Finlanders why there is no British store or co-operative association here, which would undoubtedly prove a success, at least in Helsingfors. Might I, then, suggest, as a preliminary, the dispatching of some competent representative to study matters on the spot and the methods of business? Helsingfors is but four days from Hull direct, or can be reached via Stockholm or St. Petersburg by rail in three days.

“ I venture to think that such an establishment would prove a great success, if started with sufficient capital and ably managed. Some 20 years ago there existed an English establishment, which did good business. Since then several of our Continental rivals have got over their shops the word ‘ English,’ but it is merely for the pushing of foreign wares, as a rule.”

The total trade of Finland in 1906 amounted to about £24,000,000, the largest sum hitherto reached. In 1905 it exceeded for the first time £20,000,000. To show the steady increase of trade, the comparison between 1901 and 1906 is very marked. For the former year the export trade amounted to £7,472,000 and the latter to £10,607,000 ; the imports for these same years were respectively £8,624,000 and £12,541,000. There is no doubt that with more energy and some forethought British exports could be enlarged and a steadily-increasing trade could be maintained between the two countries.

The number of Finnish vessels engaged in the foreign trade of Finland in 1905 was over 6,000, with a tonnage of 940,000, while other nationalities showed up as follows :—Russian, 947 vessels, with 148,000 tonnage ; Swedish, 666, with a tonnage of 258,000 ;

German, 483, and 273,000 tonnage; Danish, 404, and 244,000 tonnage; Norwegian, 366, and 261,000 tonnage; and British, only 231 vessels, with a tonnage of 219,000. In 1904 the number of British vessels trading with Finland was 288, and their tonnage was 310,000, which at the time was next to the Finnish tonnage.

The French decimal system has been introduced into this country, so that the Finnish official statistics are made up accordingly.

The import of coal in 1906 amounted to 195,395 metric tons, against 180,286 in 1905. Of the former 187,531 metric tons, and of the latter 172,249 metric tons, came from Great Britain.

The imports of Portland cement in 1905 amounted to 30,000 metric tons and 43,700 metric tons in 1906. More than half of these amounts came from Germany.

The value of the importation of electrical, agricultural and other machinery in 1906 was £622,440, and £534,000 in 1905. Of these amounts England furnished hardly 15 per cent.

There is a great falling off in the import of British rails to Finland compared with about ten years ago, in spite of the steady and always increasing demand, although there was an increase in 1906 compared with that of 1905. In 1906 the total imports of rails amounted to 18,047 metric tons, against 12,819 metric tons in 1905. Of these amounts Great Britain supplied 43 metric tons in 1905 and 4,504 in 1906. The increase in the demand for rails will continue, owing to the new lines under construction and others to be built in the near future.

The value of raw cotton imported in 1906 was £542,000, against £407,640 in 1905. More than half of these amounts came from Great Britain. The value of tissues of all kinds imported in 1905 was £628,000, while in 1906 it amounted to £740,000—mainly from Germany.

Of other imports of a minor significance, but in which England is interested, I may mention the following :—

The total number of head of cattle imported in 1905 and 1906 was 275, of which 110 came from the United Kingdom. The

imports of fresh and preserved meats rose from 1,284 metric tons in 1905 to 2,624 in 1906. The United Kingdom supplied in 1905 and 1906 161 and 313 metric tons respectively. The import of salt fish amounted to 3,381 metric tons in 1906, against 3,121 in 1905. The import from the United Kingdom in 1906 was 1,925 metric tons, against 2,192 metric tons in 1905.

The total import of starch for 1905 and 1906 was 288 metric tons, of which England supplied 14 metric tons. The balance came mostly from Germany and Belgium.

The total imports of apples, oranges, lemons and grapes for the two years amounted to over 8,000 metric tons, of which the United Kingdom supplied 726 metric tons in 1905 and 856 metric tons in 1906. The import of whisky for the years 1904, 1905, and 1906 was 5,957, 3,960 and 5,620 gallons respectively.

The motor business promises to increase considerably, judging by the number of motors about already and the orders in hand. Heavy machines are being more and more employed, but there still continues to be a good demand for the lighter type. German and Swedish makers practically control the market.

Timber forms the heaviest item in the export trade of Finland. In 1906 it reached the highest figure, amounting to no less than £5,616,960 in value, while for the preceding year it did not reach £5,000,000. There was a further increase in 1907. 1906 and 1907 were very prosperous years for the wood trade, both as to the amount exported and the steady, rising prices.

The total area of Government forests is 13,429,968 acres. The Government offers every year for sale by auction large quantities of logs from its forests. In 1906 there were offered for sale by auction in all 2,205,000 logs from the Government forests. For 1907 the amount was about 2,400,000 logs. The export of wood-pulp and paper in 1906 amounted to £1,539,600 in value, against £1,371,720 in 1905. Several extensive wood-pulp mills have lately been erected and planned in various parts of Finland to utilise the refuse from sawmills, and these, when they arrive at a producing stage, will materially augment the export of chemical wood-pulp.

Butter is another very important item in the export trade of Finland. The value of this product exported in 1906 was about £1,500,000—a trifle less than in 1905. Of this amount the United Kingdom bought over 75 per cent. This Finnish produce is becoming more and more known and appreciated, and there is every reason to expect its steady augmentation. The first co-operative butter export association was founded in 1905, owning only 17 dairies. By the end of the year the number increased to 44, and now it is over 70. In January, 1906, this association exported about 300 casks of butter per week, and during the summer of that year more than 2,000 casks per week were exported. This business, started only about three years ago, is already the largest in Finland, the total quantity of butter hitherto exported amounting to considerably over £300,000 in value.

The extension of the Government railway system is steadily continuing, and the construction of lines already commenced or decided upon will probably last for many years. The length of railways in 1905 was 1,828 miles, and the total value of the Government railways was, at the end of the same year, about £12,000,000. Within the next three or four years Finland will be in direct railroad communication with Sweden, as in April, 1907, the Swedish Government granted the necessary sum for the purpose of carrying out the long-projected railway to the Finnish frontier.

Negotiations have been entered into with the owners of some of the large waterfalls in the Grand Duchy for their purchase by the Government for the purpose of utilising them as a motive power for projected lines of electric railways. This is an opportunity for some energetic contractor or manufacturer.

The prosperity of 1906 could not fail to have a great influence on the shipping trade. Freights rose steadily, and the want of ships made itself felt more and more. Orders for several ships were placed during 1907 in the United Kingdom—another opportunity for Great Britain.

The Finnish Senate has proposed that a Government loan of about £2,000,000 should be raised during 1908. The interest will

exceed 4 per cent., and the annual payment on the same has been fixed at £90,000 during a period of 56 years.

The Bank of Finland is the only one in the Grand Duchy that issues notes ; those in circulation amounted to £3,692,632 in 1906. The capital fund of this bank is £1,000,000, and the reserve funds amount to over £800,000. The stock of gold, coined and uncoined, was over £1,000,000 in 1906, and the net profit for the year was £222,245.

There are nine other leading banks, with capitals ranging from £40,000 to £500,000, paying dividends from 5 per cent. to 17 per cent. per annum, and all are in a prosperous condition.

Large iron, copper, tin and silver works on the North-East coast of Finland have recently been sold to a British company, which was prompted to buy up the plant when the price of copper was high. The copper mines, &c., have been worked for nearly a century. The existence of copper in this district was known as far back as 1810, but it was then supposed that mining would not be profitable. In 1820 an attempt was made to work the mines, but the necessary capital could not be procured, and, although these properties have changed hands several times, nothing was done of any consequence, owing to the want of capital. The last owners were the Alexandrovski Company, of St. Petersburg, by whom the works had to be handed over to the Russian Government Bank for debt some years ago. This institution sold the property to a British company.

Finland—or, rather, Lapland—strange though it may appear, is not without gold. The River Ivalo, in the Far North, seems to be the centre of the auriferous region. Gold-dredging operations here have been partially successful, and it was expected that before long they would prove themselves far more so. The climatic difficulties are naturally great, although not insurmountable. One of the companies searching for gold was bought up in 1906 by an American company, which is going in for extensive works in order to find out whether the gold is worth the labour. The gold discovered in 1906 by this company was a little over 4 lbs., valued at about £240, the largest nuggets

weighing about 123·5 grs. There are now three companies engaged in these gold diggings.

Several attempts were made in 1906 by the workmen to show their power by causing strikes and labour disturbances. As a consequence of these attempts, the factory proprietors realised the absolute necessity of a strong organisation on their part, which resulted in the forming of an association between all factory-owners in the Grand Duchy. This strong stand taken by capital has somewhat cooled the ardour of the strikers, and, it is hoped, will prevent any very serious disturbances in the labour market.

The harvest of 1906 was an unusually early and good one. Industry, as a general rule, excepting some affected by labour conflicts, enjoyed a good and prosperous year. This was the case with the most important Finnish industry—the sawmill business—which profited by unusually high prices. The same was the case as regards the paper trade.

Taken as a whole, the outlook is bright, and although the Grand Duchy does not present a very large field of operations for the British manufacturer and importer, yet it is well worth looking after.

CHAPTER XIX.

IRRIGATING TRANSCASPIA.

A GREAT SCHEME TO RECLAIM A FORMERLY FERTILE PROVINCE.

—SCENE OF AN ANCIENT CIVILISATION.—CHANGING THE
COURSE OF A RIVER, THE AMOO-DARIA.—A GRAND CANAL.
—ESTIMATE OF COST.—COTTON CULTIVATION.

THIS chapter is intended to show in a practical manner how the formerly fertile oasis of Transcaspia can be reclaimed by irrigation works. On the ground thus reclaimed can be produced sufficient cotton to supply Russia's requirements, and to enable her to compete with America and Egypt. Wheat, tobacco, fruit, &c., can also be grown on the irrigated land. To irrigate 1,000,000 deciatins (say 4,220 square miles) would cost 273,000,000 roubles (say £27,300,000) and the gross profits of one year should suffice to wipe out the expenses of irrigation.

Glancing at the map of Russia in Asia, one sees the great Province of Transcaspia, bounded on the West by the Caspian Sea, on the East by the vassal State of Khiva and the River Amoo-Daria, on the South by the Persian frontier, and on the North by a chain of small lakes stretching from the Sea of Aral to Tsarevitch Bay on the Caspian Sea. The total area of Transcaspia is 214,237 square miles, or about equal to twice that of the British Isles, excluding Scotland. Yet the population at the last census was no more than 372,193, or less than two inhabitants

to the square mile. How to increase this population is one of the problems of modern Russia. The few towns now in existence lie along the route of the Transcaspian Railway, which traverses the southern portion of the Province. Of these the most important is Merv, lying at the junction of the Transcaspian Railway with the line which runs southward to the Persian frontier. The central part of the Province consists almost entirely of the Kara Kum, or Black Desert, and the northern part of the Ust-Urt Plateau.

Transcaspia was not always what it is to-day—a sparsely-populated wilderness. According to ancient tradition, these regions were at one time among the most cultivated spots in the world. Agriculture flourished, as also did manufactures and science, and the inhabitants in those olden times attained no slight degree of civilisation. Now the silence of death has fallen over what was once the cradle of vigorous life. What political changes have contributed to this state of affairs can only be surmised, for the past history of Transcaspia is lost in the mists of antiquity. But one thing is certain, life stilled because life's artery disappeared. The water supply that once gave to these trackless wastes luxuriant vegetation has long since failed. Can modern science bring it back?

Mr. J. P. Taburno, a Russian engineer, who 22 years ago planned the Transcaspian Railway and has made a special study of the prospects of irrigating the Transcaspian oasis, considers that it presents no insuperable difficulties. So far as any record exists, there is no reason to believe that the quantity of water has become less. It has only taken another course. If the ancients could make the rivers run in the direction they required, changing at will the topographical conditions, there is no doubt that in our times, when engineering science stands on a vastly higher plane than formerly, it should be possible to awaken this region to new life and fertility. It may be urged that in the olden times less account was taken of the labour and expense involved. Just as in Spain the entire wealth of a province was requisitioned to supply the capital with water, so the proceeds of many a successful war and the labour of the slaves captured

therein were squandered on these irrigation works. But any such scheme undertaken to-day will be based on sound commercial principles. The work must be made to pay for itself.

The potential source of water supply is the River Amoo-Daria, which, rising in the Hindu Khoosh Mountains, in Afghanistan, flows through Bokhara and close to the capital of Khiva, finally emptying itself into the inland Sea of Aral. The questions that arise in connection with the irrigation of Transcaspia are as follow :—

- (1) Can the Amoo-Daria give a sufficient supply of water ?
- (2) Is it technically possible to change the course of the river from its present bed ?
- (3) Could the river, once diverted, be made to resume its present course by a hostile Power constructing works beyond the Russian frontier ?
- (4) Is the soil of the region suitable for irrigation, and what area would it be possible to irrigate ?
- (5) Will there be a sufficient population to cultivate the newly-created oasis ?
- (6) What will be the expense of irrigation as compared with the profits arising therefrom, regarded simply as a commercial venture, and apart from the benefit that would accrue to the Russian Empire ?
- (7) The general benefits of the work to the Russian Government and the world's commerce.

Mr. Taburno attempts an answer to these questions, though he admits that only incomplete data are obtainable at present. His proposal is to irrigate the large oasis in the vicinity of Merv. Mr. Taburno uses the Russian measures throughout his report. It is therefore necessary to remember that one sagan equals 7 feet, and that one deciatin equals 2.669972 acres. Approximately, there are 237 deciatins to the square mile, which forms the most useful basis of comparison. One verst equals two-thirds of a mile.

- (1) With the object of ascertaining whether a sufficient supply of water can be obtained from the River Amoo-Daria, tables have been prepared by the Board of the Transcaspian Railway,

showing the average level of the water at the railway bridge, near the town of Tchardtooi, during the past 11 years. These indicate that during the period of irrigation—April to August—the run of water in the river attains from 150 to 550 cubic sagens per second (150 in April and 550 in July). From this it is concluded that after allowing for the requirements for irrigation purposes of Bokhara, the Samarcand district and Turkestan in general, there should be sufficient water to irrigate no less than 2,000,000 deciatins (8,438.86 square miles) during the most advantageous and the most disadvantageous periods of the year.

From the frontier of Afghanistan to Tchardtooi, for a distance of 250 versts ($166\frac{2}{3}$ miles), no tributary runs into the river, but part of its water is taken up for irrigation purposes by evaporation, and by being sucked into the bed. The distance from the beginning of the canal on the Amoo-Daria to the first important point of irrigation on the Merv oasis will also be about 250 versts.

(2) Below Kelifa, within Bokhara territory, the Amoo-Daria runs between low banks, the left bank being no more than $1-1\frac{1}{2}$ sagens (7 to $10\frac{1}{2}$ feet) above the river level. The valley of the river is so formed that there is no technical obstacle to the deviation of its waters in a westerly direction without the necessity of artificially elevating the water-level. The level-marks existing indicate that to the west of the Amoo-Daria and 400 versts parallel to it, reckoning from the Afghan frontier, the ground declines from the river, and then rises again in a westerly direction, making a sort of valley-way (thalweg). This valley-way, which is believed to have been the former bed of the river, deflects towards the west in the direction of the Caspian Sea, and then joins the so-called old bed of the Amoo-Daria "Oosboy." The artery which will irrigate a part of the Transcaspian oasis must start higher up the river—in fact, from the Afghan frontier, on the left bank of the Amoo-Daria, about 50 versts from Kelifa. This point is situated at about 137 sagens above the level of the Caspian Sea.

From the Amoo-Daria, for a distance of 200 versts, it is intended to construct one grand canal. At the end of this distance

will branch off the principal canal for the irrigation of the southern part of the oasis. The grand canal will pass about 25 versts south of the principal line of the Transcaspian Railway. Then a branch will be directed towards the Tadjentsky district, about 115 versts south of the railway-line, to the Persian frontier at Seraks. Thus, the great Tadjentsky district, which is well wooded and is free from sand, could be irrigated.

Then, from the Persian frontier this branch would go towards the north-west, crossing the railway line, and, turning round the hill situated between the Doushak and Kaushoot stations, will proceed to a point 162.4 sagens above the Caspian Sea-level. Between the stations of Artyk and Baba-Doormaze the branch again crosses the railway line, and, going south of it, is directed parallel to the railway up to Akh-Sou station, where it crosses once more, and goes to the north of the line. Here the branch of the canal passes alongside the railway up to Bezmen station, where it crosses the line towards the south. This branch ends at the south of Bakharden station, and its whole length will be about 600 versts.

The grand canal from the branching-point goes north-west, crosses the railway line between Koorban-Kala and Bairam-Ali stations, proceeds a short distance north, then turns back southward, and again crosses the line. Several times the canal goes backwards and forwards across the railway line, finally crossing it near the station Oosoon-Sou, whence it proceeds south, in order to irrigate the great plain, well wooded and free from sands, which is situated south of Kasandjik.

In marking the general route of the above-mentioned arteries, Mr. Taburno has made use of the contour map of the Transcaspian line. When more detailed data are obtainable it is possible that these plans will be somewhat modified, but in a general way the indicated direction of the principal irrigation canals will be as above. No technical drawbacks can be advanced to the realisation of these plans, and no great artificial works, or even smaller works, such as deep excavations, will be necessary. A little hardship will be experienced in the first 200 versts of the canal, in which it will be necessary to pierce through about 50 to 60

versts of sandy soil and moving sands, which look like continuous hills, some being 6 sagens high. However, under these sands—at no great depth, as a rule—hard ground is to be found. The rest of the district is of a different character. The sand is not moving and “saksoul” grows on it to a great height. It is therefore presumed that the sands are to some extent good for cultivation, and in any case it should be possible to rear a forest on this spot. A forest in these parts is a necessity. This part of the canal will be the most expensive to construct because it will have the greatest trench.

(3) Above Kelifa the Amoo-Daria runs between abrupt and sometimes very high banks. It would therefore be impossible to divert the water, and the future canal would be in no danger from that side.

(4) Opinions are divided as to the value of Transcaspia for cultivation. Some contend that all the sands in this oasis are good for cultivation with the help of moisture; others that only part of these sands are good for the purpose; others, again, consider that only the wooded part can be cultivated, the soil there being hard. But all agree that the southern side of the oasis has great possibilities, this district lying alongside the hills, whence moisture descends in the winter and spring, so that the wooded parts have kept their hard ground, and have not been overlaid with sands. Therefore, the principal question is, how to conduct the water to that part of the oasis where the fertility of the ground is undisputed. As indicated above, the waters of the Amoo-Daria can be turned in this direction. The wooded parts, free from sands, can be calculated at 1,700 to 2,300 deciatins.

There is no necessity to irrigate all at once, nor is there any need to construct all the canals at the same time. At first construction can be limited to a small area, and the works can be extended little by little, according as the ground already irrigated is got under cultivation. This will diminish the cost of the work, and will help the immigrants from European Russia to get accustomed to their new conditions.

(5) There can scarcely be any doubt as to the possibility of populating the newly-created district. In the Russian provinces,

where there is a lack of soil, there will always be people willing to go over to a land where the harvests and the situation of the cultivator are not dependent upon natural conditions, where moisture can be had at the exact period when it is needed, where for a large number of years no manure will be required, and where produce will fetch better prices, with a guaranteed sale. The Russian peasant quickly accustoms himself to new ground and new climates, and will easily master cultivation by means of irrigation. There will be more volunteers to this land from the Southern and Central Governments than will be required.

(6) I need not follow Mr. Taburno in his somewhat elaborate calculations as to the expenses of the enterprise, inasmuch as he admits that on present data only rough calculations can be made. The whole cost of labour for the digging of the principal canals would amount to 67,387,000 roubles. The building of an aqueduct over the River Moorgab and three bridges over the railway line would cost 2,500,000 roubles; strengthening the head of the canal, 7,000,000 roubles; building a narrow-gauge railway alongside the canal for about 300 versts, 6,000,000 roubles—in all, about 83,000,000 roubles. Adding the cost of digging secondary canals and trenches, and an allowance of 1,250,000 roubles for unforeseen expenses, we have an outlay of 92,000,000 roubles, without counting interest during building operations.

Mr. Taburno estimates that the first part of the program could be finished in five to six years. The whole of the earth-works would extend about 23,500,000 cubic sagens, starting from the head of the canal—*i.e.*, the Amoo-Daria—and the breadth of the canal would allow four excavating machines to work one behind the other. The power of each machine is 2,000 cubic sagens a day, so that the four machines could excavate 8,000 cubic sagens per day—say, 7,000 c.s., to be on the safe side. In a working year of 275 days the machines would dig out about 2,000,000 c.s. of earth per annum, or in five years 10,000,000 c.s. This leaves 13,500,000 sagens, or 2,700,000 cubic sagens per annum, to be excavated by other means. Supposing the whole of this work to be done manually, and taking manual work per man per

day at one-third c.s., and 275 working days in the year, it would be necessary to employ about 33,000 workmen. This number could be obtained among the natives.

Assuming a six years' period for the first part of the program, and the rate of interest on the capital utilised to be five per cent., the total amount of capital, with interest, would be 110,500,000 roubles.

The next part of the program would be the irrigation of 650,000 deciatins in the Tedjnesk region, together with the first 350,000, making 1,000,000 deciatins. For the irrigation of this area about 100 c.s. of water per second would be needed. The whole amount of earthwork would be 84,210,000 c.s. Deducting from this the amount done in the first part, 23,500,000 c.s., there would remain to be worked 60,700,000 c.s. Dividing this work over six years, each year would have to see 10,100,000 c.s. accomplished. All this work would have to be done by means of excavating machines, and 18 of such machines would be required for 800 versts of canal.

The cost of the complementary 60,700,000 c.s. of earthwork, together with the canals and trenches and other complementary works, would be in all 162,500,000 roubles, reckoning, as before, five per cent. interest on the capital for six years. The cost of the whole 1,000,000 deciatins would be 273,000,000 roubles (£27,300,000), or 273 roubles per deciatin.

There is no doubt that the irrigation of further grounds would cost a great deal less, but even if we take it at 250 roubles, the sum must be considered as very low compared with the benefit that will be derived from the work by the State. One irrigated deciatin of ground in the Transcaspian region, with its good climate and fertile soil, would be worth no less than 1,500 roubles. A deciatin of irrigated soil gives a gross profit of 250 roubles a year, so that the profits of one year only would suffice to wipe out the expenses of irrigation.

If we take the above estimate of the cost of irrigating the first 1,000,000 deciatins at 250,000,000 roubles, the interest and amortisation of this capital, taken at $6\frac{1}{2}$ per cent., will amount to about 16,000,000 roubles a year, or 16 roubles per deciatin.

Adding six roubles per deciatin for the payment of salaries of the Irrigation Commission and keeping the working material in good order, the fixed annual charges are brought up to 22 roubles per deciatin, a mere nothing as compared with the gross profit per deciatin of 250 roubles. Such an annual payment is made by the peasants in the Southern Governments of European Russia for land which brings in no more than 100 roubles gross profit per deciatin, sometimes with the risk of not getting any grain at all from it.

(7) The economical benefits arising from the irrigation of the Transcaspian oasis will be very great. Even the irrigation of 1,500,000 deciatins of land would provide good profits for 10,000 working people from the Central Governments. These people can take their families, and will remain as colonists when the irrigation works are completed. During the construction of the canal they will get accustomed to the climate and to the cultivation of irrigated land. But there are other potential sources of profit.

Russia at present imports foreign cotton to the amount of 100,000,000 roubles. The 1,500,000 deciatins of irrigated Transcaspian ground could not only supply this want, but it would be able to export from 10,000,000 to 15,000,000 poods to Europe. The Transcaspian cotton would be superior to the American, inasmuch as all kinds of Egyptian cotton could be cultivated there, perhaps with even greater success than in Egypt itself. The cost of cultivation in Transcaspia would not be greater than in America, so that it would be possible to successfully compete with that country. Other products that can be cultivated are fruit, wine, tobacco, sugar and tea. Cattle could be reared and nourished with cotton grain residue.

The value of goods exported from the new oasis should be extremely large. Ten million deciatins would yield about 500,000,000 roubles' worth of produce, the greater part of which would be available for export. If only 1,000,000 deciatins are irrigated, the interest and amortisation on the capital required would amount to not more than 16,000,000 roubles per annum, or less than one-fifth of the amount of the tax which Russia pays in buying foreign cotton.

Not only Russia, but the whole of Europe is interested in the realisation of this project, inasmuch as Europe finds herself in the hands of American monopolists as regards the import of cotton, and is far too dependent on the New World for her wheat supplies. In the irrigation of the Transcaspian oasis, Mr. Taburno sees the way to enable Russia to dispose of the money-lenders who profit by her weakness, her errors and her failures.

CHAPTER XX.

ANGLO-RUSSIAN FRIENDSHIP.

PEACE, GOODWILL AND MUTUAL RESPECT ARE BOUND TO HAVE
BENEFICENT RESULTS.

THE Anglo-Russian Agreement, when concluded less than a year ago, came as a surprise to the unthinking; but it is difficult to comprehend the misgiving created by this convention in quarters where a fairly intimate knowledge of Great Britain's twentieth century world-policy might have been expected. The Agreement, as is shown later, deals with certain points which had been at issue between the two Governments for at least a couple of decades in Asia, and it seemingly eliminates all risk of continued misunderstanding.

To discuss seriously the objections raised to the Agreement would be mere waste of time and space, and perhaps the best answer to these outpourings is the evidence provided by the already beneficent working of this convention between the two great European Powers most largely interested in Asia. But, to clearly understand the potentialities of the Agreement, it will be necessary to survey the events preceding the admission by both Governments that such a convention would be desirable in the interests of peace.

Prior to the Crimean War the friendship between Great Britain and Russia had almost become a tradition. In the Continental

combinations and alliances which were the outcome of the rise to temporary power in Europe (outside Great Britain and Russia) of Napoleon, the two countries occasionally found themselves opposed to each other. But these disputes and differences were always of short duration, representing as they did the results of political machinations rather than serious national antipathies. The resumption of friendly relations between the two nations, therefore, was never long delayed, and, indeed, even in war time the commercial relations which had been established in Elizabeth's time between England and Muscovy were rarely really interrupted.

During the eighteenth and the earlier part of the nineteenth century the trade between the two countries continued to steadily expand, and in the latter part of Queen Victoria's reign, despite the creation in this country of the Russian bogey for electoral uses, this expansion experienced no very serious check. It is to be feared, however, that the average Briton pays but little attention to the hard facts found in international trade statistics, but is ever ready to discover a new and fearful joy in some international political discursion or dispute. The aftermath of the Crimean War unquestionably supplied the statesmen and the politicians of both nations with plenty of material for the latter.

Our participation in the Crimean campaign, and our alliance with Turkey, for the furtherance of that enterprise which had, *inter alia*, the maintenance of the *status quo ante* in the Mediterranean and the conservation of our then Overland route to India and the Far East, was the commencement of a pin-prick policy on the part of Russian statesmen towards us in Asia. We had denied Russia access to the main waters of the Mediterranean, and we had, in consequence, to face fifty years of diplomatic and physical reprisals at the hands of that Power in Asia. The absorption of the barbaric States and almost no-man's lands brought her to the gates of India, and furnished our statesmen with many a thorny problem for at least a couple of decades. And, while working down on to and into Afghanistan, Russia also crept into Persia and burst into China, apparently all-conquering, whether these expansions were diplomatic triumphs or the outcome of an appeal to arms. That the

result of these developments might mean to us the actual loss of our Indian Empire no one was foolish enough to imagine as among the possibilities. But that we might have to fight, and fight hard, for the richest diadem in our Imperial crown, that the struggle would be long drawn out and costly, were facts which some Englishmen seldom allowed themselves to completely forget.

And as they gazed at the lowering clouds in the political sky, hoping almost against hope for the rift within their horizon which meant peace, light broke on them from an unexpected direction. To-day it is easy for all of us to be wise, to delude ourselves into believing that what was in reality, at the time of its occurrence, an expected and not an unlooked-for happening, had sequent results entirely in keeping with our anticipations. But it is safe to say that at the time of its consummation not half-a-dozen of the wisest and best-informed statesmen in the world could have foreseen the outcome of the Russo-Franchish Alliance.

The desire on the part of Russia for a warm-water port or ports for her navy and her commerce in the Pacific is perfectly intelligible, but there was no such justification for the aggressive tactics of other European Powers in China. Russian activity in Persia, as in China, was perfectly legitimate from her point of view, but it certainly tended to diminish British prestige there. That Russia did not press the advantages she had gained in Persia may be ascribed to the unexpectedly rapid march of events in the Far East.

The opportunity which Russia's occupation elsewhere afforded us was not lost by our Foreign Office to improve, if not actually to recover, our position in Persia and the Gulf. A beginning was then made to straighten out our amorphous Gulf policy, to arrive at some definite understanding as to what our minimum requirements in this region really were, and to see whether we could not without undue friction enforce the observance of our rights when clearly defined. We had gone, too, on an adventure into Tibet which supplied some of our publicists with an excellent opportunity for indulging in a vast amount of fine writing, and our relations

with Afghanistan round about this time could scarcely be described as excessively cordial.

The war between Russia and Japan, too, afforded an opportunity to the men in whose hands the destinies of France had been placed—an opportunity of reconsidering the position of the Republic. When it became clear to the peoples of the earth that Queen Victoria's successor was not only a revered monarch but a statesman of unequalled knowledge, superb tact and an earnest supporter of the world's peace, France's rulers set about discovering whether continual bickerings with Great Britain were to the real advantage of their country. The points at issue between the two Governments were many, but important only when considered in the aggregate. In no single instance could it be reasonably urged that agreement, provided both parties in the discussion were prepared to adopt a policy of give-and-take and to admit that what one side maintained was right was not necessarily to be considered wrong by the other, was out of the question. Then followed those famous *pour parlers* which ended in our King's triumphal visit to the French capital and the subsequent Agreement between the two Governments, which has already resolved itself into an understanding between the French and English peoples more enduring than any formal treaty could be.

The conclusion of the Anglo-French Agreement and the wholehearted acceptance of its terms by the statesmen of both countries allowed some of us to hope that the day might not be far distant when Great Britain and France's firm ally Russia could find a way to end many of their outstanding differences in a friendly fashion. At one time it appeared as though friendship with Russia could only be arrived at by denouncing our alliance with Japan, or at any rate by waiting until the second period of this agreement had come to a natural end, and then renewing it only on terms less likely to hurt Russia's *amour propre*. The retirement of the Tsar's ministers most directly responsible for the Russian policy of expansion in Eastern and South-Western Asia, the recognition on the part of Russia of the integrity of China, and the conclusion of a special agreement between Russia and Japan

(outside the Portsmouth (Maine) Treaty), afforded an opening of which the British Foreign Office was not slow to avail itself in order to bring about an understanding with regard to British and Russian interests in Asia.

Unfortunately, the wishes of King Edward and his responsible ministers in this matter have been hampered by the attitude certain publicists in this country have chosen to assume with regard to the political situation as it exists to-day in Russia-in-Europe. Outside one or two revolutionary centres (and they, be it remembered, are far apart from each other), there has been no uprising in Russia against constituted authority of a character it is legitimate to describe as more serious than our own Irish "rebellions" or the periodic troubles with crofters in the Outer Hebrides. The *fons et origo* of nine-tenths of agrarian crime in Russia has not been the oppression of the landowners or the refusal of the authorities to grant political freedom to men who have no particular desire for such a boon. The troubles have had their origin through the existence in Russia of an alien race, towards whom the ruder elements of the population show persistent hostility. The Russian people must work out their political salvation their own way, and the sooner the peoples of Great Britain and the United States recognise this point the better it will be for all concerned. We should bitterly resent any outside interference with our domestic politics, and it is well for us to remember that, while we regard our methods as nearly perfect, the outsider might view them in a perfectly different fashion. In addition, the people of Great Britain, when wallowing in spicily-written accounts of Russian incidents, would do well to remember that these "rebellions" have not shaken the central authority, that the Tsar to-day sits as firm on his throne as did any of his ancestors, that his army is loyal to his person and his family, and that to his service and that of the State his nobility are prepared to devote their fortunes and their lives.

But the average Englishman fails to comprehend the social structure as it exists to-day in Russia, for the simple reason that he persists in assuming the great mass of the Russian people are competent intellectually to use and enjoy liberties equivalent to

our own. The Russian peasant of to-day is on an intellectual plane with those in England in the time of the Tudors. It is within the memory of many living people when he was a serf. Tsar Alexander II. could, and did, give him his freedom, but a hundred Alexanders could not endow, by proclamation, the released bond-servant with intelligence to utilise his liberty to his own best advantage and the good of the State. On the other hand, Russia possesses an aristocracy lacking neither the culture nor the intelligence it is customary to find among their peers in civilised countries, and an upper-middle class in whose hands the commerce and industries of the Empire have steadily developed—from whose ranks are drawn many of the ablest servants of the Tsar and the State. The lower-upper and the upper-lower classes in Great Britain find no counterpart as yet in Russia, and thus a wide gap between the governing and money-making classes and the great mass of the populace exists, a gap which can only be lessened by the upgrading of the people themselves.

That the people are competent to bridge this gulf by their own unaided efforts is more than questionable, and that they must look for their true political emancipation to the governing classes is a fact which no one who has studied Russia can satisfactorily dispute. If it were possible for any unbiassed critic of the Russian body politic to assert that to-day the interest of the governing classes was as self-centred, and therefore as unsympathetic, as it may have been a century or more ago, then those who believe that a people's salvation can only be reached by means of revolution and its inevitable anarchy would be worthy of credence. But the Russian official world—which, let it be emphasised at this juncture, must not be judged by the ill-considered actions of a few of its members—is actuated with a genuine desire not only to see their country in the forefront of the nations, but the commonalty prosperous, happy and contented. Such an object cannot be achieved in half a decade; may not be achieved in half a century. But there is a new Russia in the making to-day, and the men who, at the command of their master the Tsar, are quietly but laboriously working at their huge and seemingly

endless task, working in the face of difficulties unbelievable to the untravelled Briton, will ultimately achieve their purpose, or, if they perish by the way, leave the triumph to their natural successors.

That Russia will observe not only the letter but the spirit of her Asian Agreements with Great Britain and Japan may be taken for granted by the world. Without exception, her statesmen responsible for the administration of her internal affairs are thorough believers in the wholesome policy of live and let live, while an advocate of foreign aggrandisement or perilous enterprises calculated to bring his country into conflict with any other Power would obtain the scantiest of support from his Imperial master. The Anglo-Russian Agreement of last September defines the rights and "spheres of influence" of the two Powers in Persia, in Afghanistan, and in Tibet. Persia, for the purpose of this Agreement, has been roughly divided, like ancient Gaul, into three parts. The northern section is admitted to be within the Russian sphere of influence, the southern within that of Great Britain, while the central portion is recognised by the two Powers as neutral territory which neither will attempt to dominate to the disadvantage of each other. This arrangement leaves Great Britain in control—virtual, if, perhaps, not actual—of the mouth of the Persian Gulf, thus, not only recognising the police work we have carried on for years in these waters for the benefit of the world's shipping, but tacitly prohibiting the establishment by Russia of a naval port at any point on the northern littoral. With regard to Afghanistan, Russia recognises our right to order the foreign policy of the Amir, in agreeing to refrain from conducting negotiations with that ruler except through us; and, with regard to Tibet, both Powers recognise the suzerainty of China.

The Agreement thus frees our Indian Empire from the alarums inevitable to any operations which might be undertaken by a hostile and a powerful neighbour. At the same time, however, it relieves Russian statesmen of the necessity of for ever considering what effect any movement, even within Russia's sphere of influence, might have upon British policy and national susceptibilities. That the real development of Russia-in-Asia's resources

has been unduly hampered by the ever-present fear in the minds of Russian statesmen of any forward movement on their part calling forth reprisals, open or covert, by Great Britain, has for years been perfectly clear to anyone who studied the situation in Asia with care and a knowledge of facts as they were. Sufficient is known, however, of Siberia as a whole, and Central and Southern Siberia's resources in particular, for any thoughtful man to recognise a source of immense potential wealth to the Russian Empire. These undeveloped and scarce-explored regions abound in mineral wealth. Coal-seams sufficient to supply a hemisphere with fuel exist beneath the surface, timber of great commercial value awaits exploitation in Central and Southern Siberia, while it is scarcely necessary to emphasise the existence of rich deposits of the precious metals throughout the length and the breadth of this enormous area. The climate is suited for all agricultural operations which may be carried on in the temperate zone, and, in certain sections, others which might fail in Central Europe might be successfully prosecuted here.

The settlement on civilised lines and the due development of these illimitable resources must, and will, be an important factor in Russia's new era as a world-Power. The problem of a settled and industrious population is among the first which the authorities will have to face, and while it may reasonably be anticipated that under the new order of things a certain proportion of the existing nomadic races will conform to the new, and to them possibly stringent, rules of existence which of necessity will come into force, the wasted areas, in a strictly economic sense, that will remain available as a result of the ultimate settlement of these wanderers will remain at the choice of newcomers, possibly from afar. Russian statesmanship is sufficiently alert to grasp the fact that, without an oversea emigration, places can be found for the superfluous population of European Russia, in a land which to the possible immigrant is, compared with the effete soil and adverse climatic conditions of his present resting place, one overflowing with milk and honey. Here, in a new land, but still under the Russian flag, it will be possible to commence the real regeneration of the erstwhile serf. Practical men who have studied

with care the problem of the regeneration of the Russian peasant, the making of him into a man in the better sense of the Anglo-Saxon meaning of the word, have always recognised the danger attached to such an effort so long as the old traditions of existence may fight for mastery with the new. But in Russian Asia the sullen, discontented peasant, whose sense is only sufficient to offer an obstinate resistance to methods he has been told are wrong and whose existence he unjustly (in the majority of instances) credits to the powers that be, will be afforded the opportunity of developing his sense of citizenship, of finding himself as a responsible political entity, of furnishing fresh-brained and ambitious recruits to the lower governing ranks, of, in short, materially helping to bridge the rungless section in the Russian social ladder which accident, rather than malice aforethought on the part of any section in the body politic, has created.

There will be room, too, for strangers within the gates once the primal settlement of Russia-in-Asia has been effected, but almost before the newcomer can be welcomed as a permanent settler on the soil or as an addition to the industrial communities which will rapidly spring into being as an earnest of the arrival of the new era, trade openings will be created for alien peoples. There is no reason why a fair share of such business should not fall to the British manufacturer and merchant, provided due respect is paid to the idiosyncrasies of the possible consumers. The day is long past when the Briton with goods manufactured on lines which suit his own or his colonial requirements can hope to successfully dump his surplus production upon such world markets as may be opened to him or his trading representatives. There are other Richmonds in the field—he has to fight the German, the Frenchman, the American, the Belgian, the Italian, and even his own race in the form of his own self-governing colonies. He cannot to-day claim any non-producing quarter of the world as an exclusive market for his manufactures, and it is satisfactory to know that a considerable percentage of the trade he retains in the face of strenuous competition is the result of adapting his wares to the requirements of his customers. That such adaptation is essential for success in Russia has been impressed upon our

manufacturers and traders in numerous official reports ; and it has been conclusively shown that business which might otherwise have come the way of the Briton has fallen into the hands of American, German and Belgian manufacturers, simply because these people studied and gratified the whims and predilections of their customers.

In the past it is possible that the aloofness, or, at any rate, the strictly correct diplomatic attitudes assumed by the two Governments, may have militated against the development of and expansion of British trade with Russia. No diplomatic reserve, it is true, has prevented us from obtaining from Russia such commodities as the Empire could best supply us with, and there are in Russia-in-Europe and Russia-in-Asia scores of British merchants whose conduct in all walks of life have earned them the respect of the various communities in which they reside. But, compared with the vast area the Russian Empire in the aggregate represents, the number of British traders having an intimate knowledge of the Russian consumer's actual requirements is woefully few. The better relations which have now been established between Great Britain and Russia—for which we have to thank the rulers of the two Empires as much, possibly more, than the statesmen actually engaged in arriving at the Asian Agreement—affords us an opportunity, not only of extending our trade, but of establishing on a firm and stable basis a community of commercial interests which might easily prove a closer bond between the two peoples than any link created by mere diplomatic action.

To what extent the existing Anglo-Russian Agreement will affect the European policy of the Tsar's ministers it is impossible to say with certainty. With the best intentions in the world towards a new friend no statesman worthy of the name would hastily proceed to materially interfere with agreements and arrangements entered into with others when the friend was, rightly or wrongly, regarded in the light of a potential opponent. But without any definite understanding, it is easy enough for us to show friendship towards Russian aspirations in Europe, the more so as we are assured that these aspirations are entirely

legitimate and in no way represent a policy of unjustifiable aggrandisement. The Russian Government is determined to pursue in the future a policy which can be best described as one of systematic internal development both in Europe and in Asia. In time, and possibly at no very distant date, the effects of such a policy will result in the achievement by Russia of an end which, with the resources of the Empire only partially exploited and developed, we have been bound to regard as a mere political aspiration. To a great manufacturing and trading country, in contradistinction to a filibustering Empire, we could not legitimately deny Russia—or, rather, consistently oppose Russia—the right to free access to the Mediterranean.

And as trade and industries expand the dangers of internal dissensions in Russia will decrease. Portions of the Empire must be held with a firm hand, from the nature of the races which inhabit them, races still governed but not amalgamated with the Russian people proper. But in regions which in mere area many Englands would not cover the beginning of the era of systematic development of the land's riches, the expansion of industries already created, has commenced. Into the work of further development and expansion Great Britain might well throw her lot, and now that friendship between the Governments and the two peoples has been established on a firm basis Great Britain can scarcely fail to do so.

RUSSIAN BANKS.

STATISTICAL RECORD OF ST. PETERSBURG, MOSCOW AND PROVINCIAL BANKS FOR 1906 and 1907.

RUSSIAN BANKS.

289

ASSETS (in thousand Roubles).

	Year of Foundation.	Cash.	Check Accounts.		Investments.		Discounts.	Advances on Government and Other Securities.	Advances in Current Securities, Bills, &c., "at call."	Current Accounts.	Branches.	Other Assets.	Total.
			In the Imperial Bank.	In different Joint Stock Banks.	In Government Securities.	In Private and Other Securities.							
ST. PETERSBURG BANKS.													
Azoff-Don Commercial Bank..	1871	2,952	4,298	794	5,797	4,046	42,281	6,746	27,354	22,708	13,340	20,755	151,071
Wolga-Kama Commercial Bank..	1870	4,616	8,518	54	8,811	1,693	62,862	8,230	53,411	19,540	7,712	23,830	199,277
Russian Bank for Foreign Trade..	1871	3,226	3,795	778	6,070	1,751	44,965	2,760	30,436	48,020	30,374	26,085	198,260
Russian Bank for Commerce and Industry..	1890	2,991	2,490	26	2,519	1,252	25,657	4,897	23,478	6,026	8,887	5,692	83,915
St. Petersburg International Commercial Bank..	1869	4,093	2,334	90	15,037	6,489	33,018	594	12,718	78,864	27,905	11,948	193,090
St. Petersburg Discount Bank..	1869	2,157	124	311	1,555	801	17,143	1,154	17,770	34,920	9,742	11,405	97,082
Private Stock Joint Bank..	1864	470	664	4	430	2,313	9,717	221	2,044	19,711	2,969	7,026	45,569
Siberian Commercial Bank..	1872	1,577	1,607	1,153	2,460	422	26,498	1,349	19,950	4,058	—	3,054	62,128
Northern Bank..	1902	2,584	1,980	13	1,300	657	44,201	5,099	29,946	16,736	32,124	8,980	144,620
Credit Lyonnais..	1863	768	3,532	2,066	30	28	5,030	185	13,261	4,853	—	9,941	39,694
Total of St. Petersburg Banks to January 1st, 1907	—	26,434	29,342	5,289	44,009	19,452	311,372	31,235	230,368	255,436	133,053	128,716	1,214,706
Total of St. Petersburg Banks to January 1st, 1906	—	29,326	26,226	4,317	40,918	21,297	317,213	35,018	217,682	252,901	176,432	113,610	1,234,940
Increase..	—	—	3,116	972	3,091	—	—	—	12,686	2,535	—	15,106	—
Decrease..	—	2,892	—	—	—	1,845	5,841	3,783	—	—	43,379	—	20,234
MOSCOW BANKS.													
Merchant Bank of Moscow (Banque de Commerce Privée de Moscow, Koupelschesky) ..	1866	2,627	527	8	10,839	1,180	77,013	6,424	39,674	3,701	788	4,650	147,431
International Bank of Moscow ..	1873	1,326	1,190	3	523	992	12,635	4,281	15,583	6,922	824	3,354	47,633
Moscow Bank for Trade ..	1871	917	191	6	2,804	328	16,549	3,613	13,659	2,039	—	2,051	42,157
Moscow Discount Bank ..	1870	1,510	440	17	1,097	189	15,660	1,877	13,404	2,947	5,722	2,082	44,945
South Russian Bank for Industry ..	1870	707	405	1	952	99	8,519	2,857	7,474	4,343	2,334	4,999	32,690
Total of Moscow Banks to January 1st, 1907	—	7,087	2,753	35	16,215	2,788	130,376	19,052	89,794	19,952	9,668	17,136	314,856
Total of Moscow Banks to January 1st, 1906	—	7,102	6,578	54	9,673	3,451	127,927	20,957	92,434	20,865	14,501	14,400	317,942
Increase..	—	—	—	—	6,542	—	2,449	—	—	—	—	2,736	—
Decrease..	—	15	3,825	19	—	663	—	1,905	2,640	913	4,833	—	3,086
PROVINCIAL BANKS.													
Total to January 1st, 1907	—	5,782	7,406	274	24,250	24,250	105,179	15,297	42,541	80,589	41,355	31,374	354,047
Total to January 1st, 1906	—	7,738	5,078	341	25,325	25,325	108,826	12,918	44,234	77,301	49,651	29,527	360,939
Increase..	—	—	2,328	—	—	—	—	2,379	—	3,288	—	1,847	—
Decrease..	—	1,956	—	67	1,075	—	3,647	—	1,693	—	8,296	—	6,892
Total to January 1st, 1907	—	39,303	39,501	5,598	106,714	106,714	546,927	65,584	362,703	355,977	184,076	177,226	1,883,609
Total to January 1st, 1906	—	44,166	37,882	4,712	100,664	100,664	553,966	68,893	354,350	351,067	240,584	157,537	1,913,821
Increase..	—	—	1,619	886	6,050	—	—	—	8,353	4,910	—	19,689	—
Decrease..	—	4,863	—	—	—	—	7,039	3,309	—	—	56,508	—	30,212

STATISTICAL RECORD OF ST. PETERSBURG, MOSCOW AND PROVINCIAL BANKS FOR 1906 and 1907—(continued).

LIABILITIES (in thousand Roubles.)

	Capital Fully Paid up.	Reserve Fund.	Special Reserve Fund.	Fund for Special Destination.	Deposits.	Bills Re-discounted.	Current Accounts.			Accounts between the Head Office and Branches.	Other Liabilities.	Total.
							Loro.		Nostri.			
							Sums dis-posable.	Bills for collec-tion.	Sums dis-posable.			
ST. PETERSBURG BANKS.												
Azoff-Don Commercial Bank	15,000	7,500	1,450	347	63,115	758	7,818	18,311	10,049	14,249	12,474	151,071
Volga-Kama Commercial Bank	12,000	6,000	—	3,871	119,389	—	14,185	19,414	259	11,809	12,350	199,277
Russian Bank for Foreign Trade	20,000	3,073	—	179	68,124	—	29,363	23,192	2,579	43,044	8,706	198,260
Russian Bank for Commerce and Industry	10,000	1,965	—	40	38,166	6,055	3,961	—	7,548	9,891	6,289	83,915
St. Petersburg International Commercial Bank	24,000	12,000	846	284	43,600	—	36,197	9,747	33,792	27,905	4,719	193,090
St. Petersburg Discount Bank	10,000	3,333	—	—	26,525	962	30,287	8,313	3,675	9,925	4,062	97,082
Private Joint Stock Bank	10,000	3,709	—	—	8,752	2,724	6,689	5,822	4,026	2,478	1,369	45,569
Siberian Commercial Bank	4,000	1,760	500	515	40,277	303	2,726	—	5,085	1,145	5,817	62,128
Northern Bank	25,000	934	174	—	44,863	1,899	20,640	—	10,065	32,293	8,752	144,620
Credit Lyonnais	—	—	—	—	11,995	—	6,763	5,367	2,887	5,532	7,150	39,694
Total of St. Petersburg Banks to January 1st, 1907	130,000	40,274	2,970	5,236	464,806	12,701	158,629	90,166	79,965	158,271	71,688	1,214,706
Total of St. Petersburg Banks to January 1st, 1906	112,500	36,909	2,200	5,306	411,708	62,386	224,044	—	108,787	205,701	65,399	1,234,940
Increase	17,500	3,365	770	—	53,098	—	24,751	—	—	—	6,289	—
Decrease	—	—	—	70	—	49,685	—	—	28,822	47,430	—	20,234
MOSCOW BANKS.												
Merchant Bank of Moscow (Banque de Commerce Privée de Moscow)	5,000	9,301	—	1,308	111,194	5,141	4,392	—	1,723	1,242	8,130	147,431
International Bank of Moscow	10,000	86	—	—	14,248	14,771	3,743	—	1,223	431	3,131	47,633
Moscow Bank for Trade	5,000	2,500	—	—	23,287	4,788	1,486	694	2,095	—	2,307	42,157
Moscow Discount Bank	4,000	1,073	—	187	17,938	2,812	2,284	848	7,845	5,609	2,349	44,945
South Russian Bank for Industry	5,000	1,073	470	200	9,477	6,978	645	3,699	535	2,829	1,784	32,690
Total of Moscow Banks to January 1st, 1907	29,000	14,033	470	1,695	176,144	34,490	12,550	5,241	13,421	10,111	17,701	314,856
Total of Moscow Banks to January 1st, 1906	29,000	13,925	420	907	156,863	62,733	11,578	3,377	10,104	14,596	14,439	317,942
Increase	—	108	50	788	19,281	—	972	1,864	3,317	—	3,262	—
Decrease	—	—	—	—	—	28,243	—	—	—	4,485	—	3,088
PROVINCIAL BANKS.												
Total to January 1st, 1907	52,100	17,499	864	1,754	120,011	20,892	62,603	—	11,567	42,823	23,934	354,047
Total to January 1st, 1906	52,100	17,252	1,082	1,084	102,869	36,734	59,580	—	17,717	49,754	22,767	360,939
Increase	—	247	—	670	17,142	—	3,023	—	—	—	1,167	—
Decrease	—	—	218	—	—	15,842	—	—	6,150	6,931	—	6,892
Total to January 1st, 1907	211,100	71,806	4,304	8,685	760,961	68,083	329,189	—	104,953	211,205	113,323	1,883,609
Total to January 1st, 1906	193,600	68,086	3,702	7,297	671,440	161,853	298,579	—	136,608	270,051	102,605	1,913,821
Increase	17,500	3,720	602	1,388	89,521	—	30,610	—	—	—	10,718	—
Decrease	—	—	—	—	—	93,770	—	—	31,655	58,846	—	30,212

APPENDIX No. 2.

RUSSIAN JOINT STOCK COMPANIES—TEN YEARS COMPARISON.

EXTRACTS FROM BALANCE SHEETS OF LIMITED COMPANIES—1898-1905.

Name of Group.		Profit and Loss Account.		Capital.	Reserves.	Dividends by Paying Companies.
		Profit Roubles.	Loss Roubles.			
Textiles	1905	491,595,152	438,244,594	433,615,628	80,506,090	22,869,826 = 6.3 %
	1898	398,109,787	342,095,545	295,487,705	70,232,221	29,309,759 = 8.74 %
Chemicals	1905	168,533,971	154,730,924	103,473,681	15,835,344	6,476,676 = 9.79 %
	1898	65,364,866	57,457,218	41,529,325	10,709,599	4,422,354 = 11.59 %
Paper Material	1905	36,422,069	34,275,418	32,118,761	4,158,574	986,775 = 5.44 %
	1898	33,842,818	31,399,254	27,258,650	4,122,404	1,338,552 = 8.36 %
Mining	1905	281,689,701	269,494,790	464,682,113	34,025,523	9,175,685 = 8.22 %
	1898	197,196,265	162,159,388	296,904,800	22,303,954	19,419,183 = 11.28 %
Metallurgy	1905	307,141,104	280,012,944	296,405,193	27,063,720	12,761,523 = 7.41 %
	1898	209,910,750	190,239,150	185,633,330	15,206,998	10,249,042 = 9.46 %
Porcelain and Glass	1905	20,943,545	21,428,490	63,324,120	4,330,957	1,163,763 = 3.61 %
	1898	18,021,110	14,017,981	37,390,016	2,910,844	2,265,670 = 7.61 %
Agriculture	1905	1,980,085	1,933,862	4,960,000	166,731	56,000 = 5.66 %
	1898	1,594,905	1,258,443	4,321,795	151,831	254,200 = 7.7 %

EXTRACTS FROM BALANCE SHEETS OF LIMITED COMPANIES—1898-1905—(continued).

Name of Group.		Profit and Loss Account.		Capital.	Reserves.	Dividends by Paying Companies.
		Profit Roubles.	Loss Roubles.			
Forests	{ 1905 1898	17,297,588 17,229,492	17,127,318 15,288,697	21,717,269 14,332,400	1,093,255 665,416	628,700 = 5.8 % 1,334,416 = 11.43 %
Foodstuffs, Drinks, Confectionery, Vegetable Oils, Breweries, Tobacco, &c. .. .	{ 1905 1898	172,836,172 195,800,696	149,953,675 174,477,306	163,302,589 124,375,350	24,916,664 20,132,189	14,181,050 = 9.28 % 14,146,474 = 14.67 %
Animal Products, Hides, Leather .. .	{ 1905 1898	21,933,834 30,912,222	19,236,250 18,765,762	22,061,990 12,050,000	5,033,305 5,325,243	1,725,875 = 9.69 % 1,122,000 = 11.27 %
Commercial	{ 1905 1898	64,013,535 42,163,629	55,339,527 36,253,728	91,445,584 55,435,100	8,055,396 4,064,836	5,885,997 = 8.01 % 4,161,334 = 10.09 %
Carriers	{ 1905 1898	262,183,209 27,009,557	191,483,989 22,050,356	189,048,817 40,158,870	21,482,970 10,626,204	3,405,444 = 6.21 % 1,979,267 = 7.29 %
Public Services, Tramways and the like .. .	{ 1905 1898	40,644,291 23,643,508	29,867,821 18,203,999	128,981,315 92,259,217	16,089,410 4,048,773	5,649,535 = 6.32 % 4,644,885 = 7.88 %
Not specified	{ 1905 1898	106,698,509 48,314,335	89,435,938 43,268,558	141,848,961 50,116,196	12,815,391 6,660,709	4,417,558 = 6.86 % 3,386,100 = 4.27 %
Total in 1905 for 1,411 companies..	..	1,997,912,765	1,752,565,540	2,156,986,021	255,573,330	89,284,407 = 7.04 %
" 1904 " 1,335	..	867,222,900	649,429,698	2,133,835,227	250,134,142	91,172,141 = 7.03 %
" 1903 " 1,455	..	1,999,934,617	1,782,988,252	2,015,595,082	253,415,953	89,300,681 = 7.84 %
" 1902 " 1,516	..	1,832,085,672	1,648,669,221	1,990,281,247	238,797,589	86,099,999 = 7.67 %
" 1901 " 1,393	..	1,672,350,049	1,539,996,639	1,898,846,622	226,316,277	80,892,684 = 7.6 %
" 1900 " 1,360	..	1,673,841,750	1,498,407,099	1,742,310,578	207,949,422	95,414,895 = 8.51 %
" 1899 " 1,129	..	1,500,631,687	1,309,977,910	1,600,095,879	195,240,848	110,987,468 = 8.27 %
" 1898 " 931	..	1,309,113,940	1,126,935,395	1,277,171,752	177,161,221	98,033,236 = 9.4 %
" 1897 " 869	..	545,259,808	475,478,634	1,136,885,889	188,981,107	78,862,011 —
" 1896 " 718	..	518,232,419	447,488,310	972,990,508	145,390,641	72,004,843 —

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R. J. BARRETT.

Financier and
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