Charles (Krot) Rabeneck

Born 18 July 1888

This account of the Ludwig Rabeneck cotton factories was written in the 1920s by Charles (1888-1967), seen here with his wife Olga Trapp (1893-1987). Charles worked as a director in the factory until his family's escape to Finland from the Bolsheviks in 1919. He and Olga later had careers with the British War Office, notably in the post-war administration of Austria, when their perfect Russian, English, German and French were valuable. Although Charles' memoir is similar that of Edouard, his father, it contains more technical detail about the cotton works.

The foundation and development of the factory from 1831-1861under the management of Ludwig Rabeneck

Ludwig Rabeneck (Ludwig Andreivich) was born 1791 in Engers (Westphalia, Germany). He came to Moscow in 1831 and founded Turkish – red dye – works for yarn under the name of "Ludwig Rabeneck, Moscow".[1] The firm was situated on the Klyasma River, on

[1] Turkish-red refers to dye obtained from the root of the madder plant *Rubia tinctorum*, a distinctive carmine red, known as *rouge d'Andrinople* in France. See Sarah Lowengard, "Turkey Red" at: www.gutenberg-e.org/lowengard

the advice of his friend Könemann. His elder brother Franz, who had moved to Russia before him, had already established a Turkish – red dye – works for yarn, "Franz Rabeneck" at Bolshevo, north east of Moscow. That factory was also situated on the River Klyasma, because the water of this river was excellent for the Turkish – red dye – work, lacking any ferrous component. Some years later Ludwig Rabeneck enlarged his dye-works for yarn, with a factory for spinning and weaving Turkish-red yarn and for hand printing finished fabric.

Klyazma River at Shchelkovo from an early postcard

He was one of the first to start this type of production in Russia, laying the foundations for an industry which later became very important for the Russian economy. At the end of the last (19th) century, the production of Turkish-red pieces reached 4,000,000 pieces of 45 metres each, produced mainly by seven Russian firms. Later, as demand for the Turkish-red cotton declined, it was replaced by more modern fabrics and synthetics.

Before the war[2] the production of Turkish-red cotton was only approximately 2,000,000 pieces yearly, which were brought to the market by three firms (Baranov, Pavlov and Rabeneck). At the end of the 1840s Ludwig Rabeneck acquired a peat-bog next to his factory and was the first in Russia to produce peat in industrial quantity, in order to be independent of wood suppliers. At that time wood was the only fuel in Russia.

[2] Nicholas 1's Turkish War of 1828-29.

Ludwig Rabeneck, the founder of the firm, died in 1861 after 30 years of strenuous work, leaving his growing business to his 3 sons, Louis born in 1831 in Elberfeld (Germany), Arthur born in 1836 in Moscow, and Edmund born 1841 in Moscow. At the time of Ludwig Rabeneck's death the firm had participated at 3 trade exhibitions, 1835 and 1839 in Moscow and 1861 in St Petersburg, receiving prizes and gold medals each time.

Bale label with exhibition medals shown on a sample of Turkey-red cotton

The next development from, 1861-1881, under the management of Louis and Arthur Rabeneck

The two older sons had already been working in their father's business from the middle of the 1850s. Louis had a commercial education, and Arthur a technical one. Arthur, a brilliant engineer, studied at the Zurich Polytechnic. But he didn't outlive his father for long, dying in 1864 at the age of twenty-eight and leaving a widow with 2 sons and 3 daughters.[3]

After Arthur's death Louis Rabeneck became the sole managing director of the firm until 1918. When his technically skilled brother died, it was a great challenge to run both the office and the factory. Furthermore, Edmund, the younger brother had left the firm a year after the death of his brother.

[3] Arthur committed suicide, overworked and depressed by setbacks at the factory, something Charles was too delicate to mention in his memoir.

Nevertheless, under Louis' management the business developed steadily and during the following years many new production systems were put in place. A gas factory was built in 1842, which produced gas for the factory from naphtha mixed with peat. The first central boiler installation was built in 1873, and that allowed steam powering of weaving and even printing machinery. It was the beginning of true industrial processes, for both dyeing and weaving. At the same time the Turkey-red dye produced from madder root had been replaced by the artificial alizarine discovered recently.

In 1872 Louis Rabeneck had met two Swiss chemists in Moscow, Binder and Böhme, who were experimenting with a chemical process to produce alizarine. A memorandum of understanding of 1872, made with these gentlemen led to construction of an alizarine factory at the Rabeneck factory, producing alizarin oil for their own use and for sale to other cotton producers.[4]

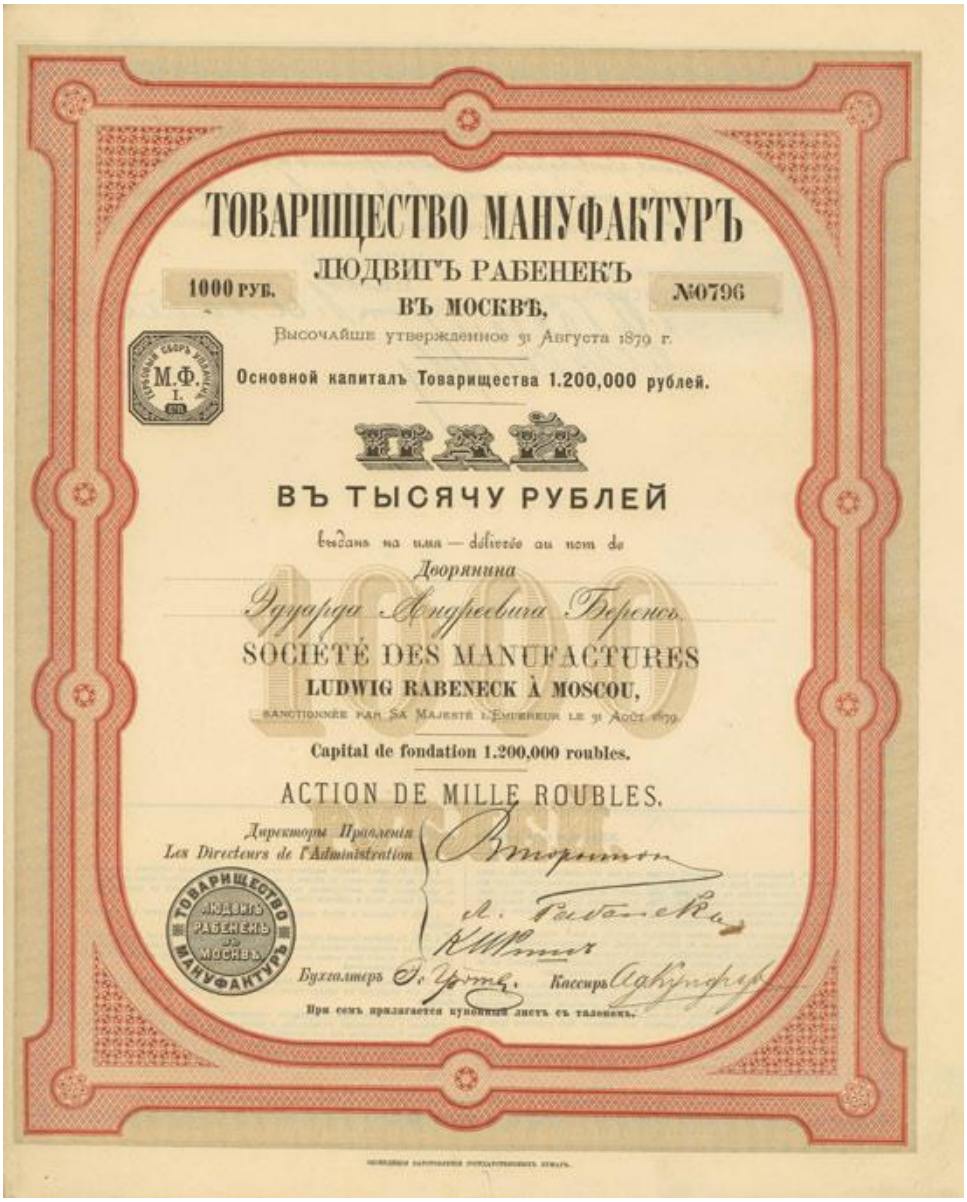
Workers had started to cook their own meals in 1878, but in the same year a fire broke out in the dye-works for fabric and the most of it burned down. Fortunately, at the same time Arthur Rabeneck's eldest son Ludwig started work in the business; he was energetic and helpful. The fire would have shut the dye-works for a whole season, had they not been successful with the synthetic alizarin process, made using castor oil. It halved the time taken to dye yarn and fabric, compared with the *Tirnant* oil method used before. It was simpler and faster. The new technology made it possible to start production on machines located in temporary buildings, with sufficient output of enough goods to send to the fair in Nihzni-Novgorod that year.

Once the factory was rebuilt it allowed annual production of cloth to increase from 60,000 to 240,000 pieces, even in the first year. In the same year handwork at the peat-bog was replaced by German machines from Dolberg, 12 complete installations of diggers and presses.

Arthur Rabeneck's second son, Edward, began his career in his grandparents' factory in 1879. In that year a great transformation took place at the firm Ludwig Rabeneck. It became a joint-stock company issuing share-certificates for the manufacturing company of "Ludwig Rabeneck, Moscow", with a share capital of 1,200,000 roubles. The first administration consisted of 3 managing directors: Louis Rabeneck,

[4] The Rabeneck factory was the first in Russia to produce synthetic alizarin

William Thornton and Karl Risch and two other directors: Konrad Bauserand Ludwig Rabeneck.


ТОВАРИЩЕСТВО МАНУФАКТУРЪ

ЛЮДВИГЪ РАБЕНЕКЪ

1000 РУБ. №0796

ВЪ МОСКВѢ,

Высочайше утвержденное 31 Августа 1879 г.

Основной капиталъ Товарищества 1.200,000 рублей.

ВЪ ТЫСЯЧУ РУБЛЕЙ

выдана на имя — délivrée au nom de

Дворянина

Эдуарда Андреевича Беренса.

SOCIÉTÉ DES MANUFACTURES

LUDWIG RABENECK À MOSCOU,

SANCTIONNÉE PAR SA MAJESTÉ L'EMPEREUR LE 31 AOÛT 1879.

Capital de fondation 1.200,000 roubles.

ACTION DE MILLE ROUBLES.

Директоры Правленія
Les Directeurs de l'Administration

Бухгалтеръ Кассиръ

При семъ прилагается купонный листъ съ талонами.

Share certificate for the joint-stock company set up in 1879

The quicker dye-method with synthetic alizarin was also used to dye yarn from 1880. We began to produce the alizarin in greater quantity, eventually supplying all our competitors. We were producing 40,000 Pud yearly.[5] At that time we also began to use our first roller printing machines

Louis Rabeneck retired from the active work in the company, moving abroad for good in 1881.

[5] 655,000 kg

From 1861 the firm participated at 5 exhibitions: 1865 At St Petersburg, 1867 in Paris, 1872 in Moscow at the polytechnical exhibition, 1873 in Odessa and 1878 in Paris. At these exhibitions we obtained the highest decorations, consisting of big golden medals and at the exhibition of St Petersburg we got a warrant to display the royal Russian eagle.

Bale label featuring the imperial eagle warrant

The development of the Ludwig Rabeneck firm from 1881 to 1917, under the management of Ludwig and Edward Rabeneck

Ludwig Rabeneck born 1856 and Edward Rabeneck born 1858, both in Moscow, started work at the factory in 1878 and 1879, when they'd finished their studies at the polytechnic university in Dresden. After Louis' retirement they became managing directors of the factory. Karl Risch managed the commercial side of the business.

The first two year's results for the new company made it possible to issue shareholders with a free share for each old share they held, so the share capital increased to 2,400,000 roubles. With more capital we were able to improve the factory, replacing wooden buildings with stone-built ones. We also built the first of many brick housing blocks for the factory workers and their families.

Early brick housing block from the 1880s in a recent photo. Source: J.Solovjeva

After the sad experience of the lack of fire-fighting equipment during the fire of 1878, the management ordered a complete fire extinguishing system from the firm Bromley Brothers in 1882, seen at a Moscow exhibition, consisting of a tall iron water-tower with the necessary pumps, hydrants and pipelines. The installation made it impossible for fire to spread in future, and our fire insurance premiums came down a lot.

General view of the factory courtyard with the new water tower around 1890

By this time, we were operating 22 Dolberg peat machines to meet our energy needs. Although the factory was only 30 km. from Moscow, it

was completely cut off in spring and autumn when the roads were impassable during the thaw. But in 1884 the management succeeded in arranging with the local council to build a highway to the factory, which we paid for in part. With this improvement the cost of transportation reduced. And in the same year we employed a permanent doctor at the factory hospital.

Between 1886 and 1890 we gradually constructed several new multi-storey stone buildings for the cloth dye-works and for the print-shop; production rose accordingly. We stopped the protein-printing and hand-printing, replacing both by roller-printing machines powered by steam and other sorts of engine. The first experimental plant for electric light was built. A major transformation in Turkish-red printing took place around this time when we started using the Schmidlin process with alkali colours, a licence for which we had acquired.

To make it easier for the children of the working population to go to school we built a school and engaged the necessary teachers. Before, the children used to walk many kilometres to the Shchelkovo village school in all weathers. The next social institution was a children's crèche for those under the age of 3. Here, the children of working mothers could stay for the day and were taken care of.

The brick-built school building at the Sobolevo estate

The boiler installations for the steam-cauldrons and the drying rooms went through several different phases during the next few years. The old boilers were replaced by a peat burners, which produced dirty tar

wastewater. To make the water useable we made ammonia from it using a chemical process installation. In 1890 we also replaced inefficient gas heating with peat-heating, that was much more cost effective. In what had been the old ammonia factory we started to make smoking sulphuric acid using the Grillo method. The manufacture of alizarin had become cheaper, too, which was another reason to start the sulphuric acid business. Before that the acid had been imported, and we'd only recently been able to get it from a factory near St Petersburg.

Ludwig Rabeneck moved from the factory to Moscow in 1893, taking over the commercial part of the firm from Karl Risch. Meanwhile Edward Rabeneck remained as managing director at the factory.

The year 1894 was the most prosperous for the firm. Ludwig Rabeneck was successful in negotiations with the president of the Jaroslav-railway, Savva Mamontov, and the factory got an extension laid from Mytishtski connecting to the main line. This more than anything else changed the fuel problem fundamentally. The factory, which until then had used only our own peat and bought in wood (33,000 tonnes yearly) could now buy other fuels. Peat production was now confined to residences, while in the factory we burned by-products from naphtha production, that was much cheaper.

1894 German tank engine built by Krauss, 1524mm gauge, bought by the Rabenecks in 1896.
Source: https://trojza.blogspot.com/

Production went up and we needed to increase sales. Previously, we our sales took place in Moscow and at the fair in Nihzny Novgorod.

Customers came not only from Russia but also from Turkestan and Persia. Sales to those two countries rose yearly and we installed our own warehouses there, first in Turkestan, then in Bukhara, Samarkand and Kokand to be nearer to our customers and to test their creditworthiness. The same thing happened in Persia, where we opened an agency in Teheran and Tabriz.

The alizarine factory closed in 1896 because it could no longer compete with big German factories. Duty had increased for our exported semi-finished products, and that made our alizarin uneconomic. In place of the alizarine-factory, we installed a yarn dye-works. The sulphuric acid needed to produce smoking acid was replaced by sulphuric gravel, a product imported from Spain, and later from the Urals, which was better quality than the Spanish one.

Our first electric power-station was constructed in 1895 with 360KW, and in 1908 it was enlarged to 750KW. Our railway siding solved more than just the fuel problem. At first, our factory dyed or printed cotton and yarn that we used to buy from nearby weaving and spinning mills. But to avoid dependence on others we planned to build our own spinning and weaving- mills, and that would not have been possible without the railway connection. We decided to complete that plan in 1897, and to that end we bought an estate which belonged to our neighbours, the heirs of the Könemann family, raising our share-capital from 2,400,000 roubles to 3,600,000 roubles by issuing 12,000 shares. We started to build the new spinning and weaving-mills in 1898 and the spinning mill with 35,000 spindles and the weaving-mill with 840 looms started work in February 1900.

*Advertising for the "Ludwig Rabeneck" factory and the Reutovo factory from the book by L.K. Ezioransky, 1909, Factory enterprises of the Russian Empire, St. Petersburg, **1909**.*

At the same time more flats had been constructed for the employees and workers, and a new factory hospital had been built, with 60 beds, all sorts of clinics and 2 permanent doctors.

In 1905 the Rabeneck company bought up all the shares of Masurin's manufacturing company at Reutovo with a capital of 1,350,000 roubles, 60,000 spindles and other equipment, a peat bog and woods. This was very important for the business because Masurin was the main supplier of raw yarn, which the "Ludwig Rabeneck" company then dyed and wove. Immediately after the acquisition we tried to upgrade the factory. It hadn't worked very profitably in recent years and the machines were very old. So, we put in new machines, electric lighting and a mechanical ventilation system. Over the next few years we enlarged the factory to 92,000 spindles, driven by a new 1500KW power station and a steam turbine driving a 1200HP steam engine. At the same time the share capital was doubled using reserves that we discovered after the purchase. It now amounted to 2,700,000 roubles. Due to the upheaval of the economic system during the revolution of 1905, the price for naphtha residues rose sharply, so it became too dear to use for heating. We had to go back to peat-production. At Reutovo we acquired a huge peat-bog of

800 dessjatina (875 hectares) of extremely good quality. The peat-bog was 16 versts (17.6 km) from the factory, connected by a railway branch. At the Ludwig Rabeneck factory, we used anthracite and mineral coal in addition to the peat.

In the years 1908-1914 many young men of the Rabeneck family started work at the company.

Lev, Ludwig Rabeneck's eldest son, born in 1883 in Moscow, began work in 1908 at the factory having finished his education partly at the royal technical school in Moscow and partly at the polytechnic university at Dresden.[6]

Arthur (Artemy), Ludwig Rabeneck's second son born in 1884 at Sobolewo started his law studies at the university in Moscow and finished them at the royal lyceum in Moscow. He took a job in the factory administration in 1909.

Charles (Krot), the eldest son of Edward Rabeneck born in 1888 at Sobolevo began work at the factory in Ruetowo in 1910 after having finished his education at the technical university in Moscow and at the spinning and weaving school in Reutlingen (Germany).

Andrew, Ludwig Rabeneck' third son, born in 1886 in Sobolevo started work in 1914. He'd studied at the technical university in Moscow and completed his studies at the polytechnic university in Dresden and at the dye-works in Mühlhausen (Alsace). He later worked at a dye-works for cloth and at print shops in France. At the factory he was a supervisor of dye-works.

During the next few years demand for Turkish-red cloth declined. More modern cottons began to appear, and the company had to broaden its offering of materials. The dye-works for cloth had to be rebuilt partly for this purpose and new buildings were constructed. The weaving-mill, built for cotton only, had to produce patterned materials, and therefore other looms were needed. Production remained high so shortly before the war began the company bought an anthracite mine in 1913, to have enough fuel for the factory.

[6] See memoir of Lev Rabeneck at LivesRetold.co.uk

During the war the textile industry worked mostly for the military administration. At the Ludwig Rabeneck factory we made different kinds of material for army uniforms, and output of smoking sulphuric acid for the administration of the artillery had to be doubled.[7]

Workers at the Ludwig Rabeneck factory during heating improvements, about 1890

The administration of the company consisted at that time of the following:

<u>The manufacturing company of Ludwig Rabeneck</u>
3 manging directors: Ludwig, Edouard and Leo
2 directors: Artemy and Andrew

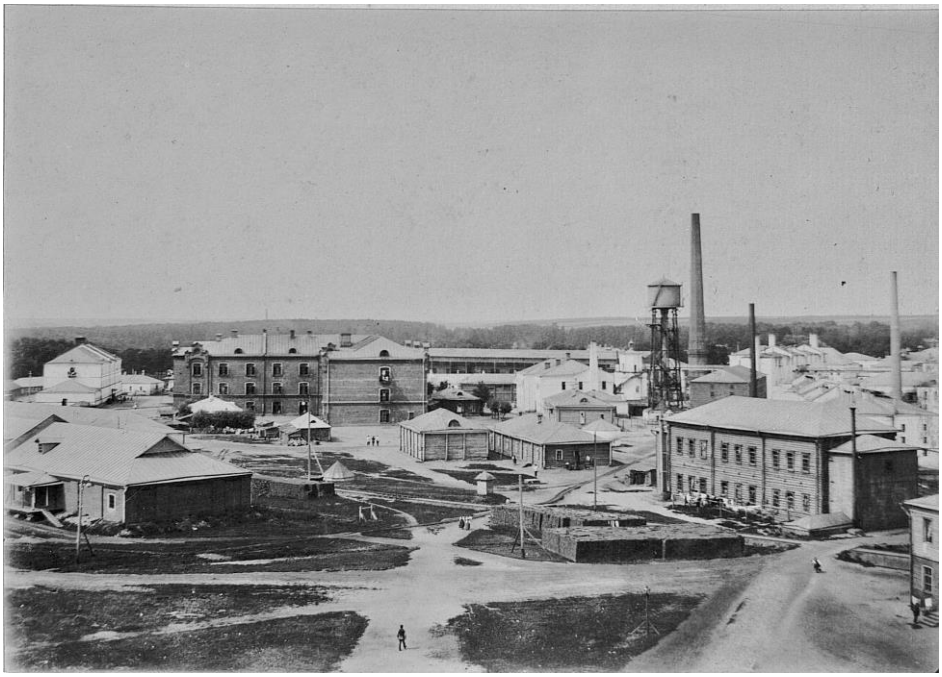
<u>The manufacturing company of Reutowo</u>
3 managing directors: Ludwig, Edouard and Artemy
2 directors: Charles and L.Larionov

Ludwig Rabeneck remained not only the president of both companies, he was also a temporary member of the Stock Exchange Committee in Moscow, a member and founder of the Cotton Committee in Moscow, member of the board of directors of the Russian Mutual Insurance Company. He was also a member of the Commercial Bank in Moscow, with the title of "Manufacturrat". Edouard was also the industrial deputy for the county of Bogrodsk.

[7] See "The Suffocating Secret of the Rabeneck Dynasty" at LivesRetold.co.uk

When the war began there was a plan to enlarge the spinning-mill of the factory to 20,000 spindles, new machinery was needed and a turbogenerator (1500KW) had been ordered. We had already started on the new buildings when the revolution and nationalisation began (1917).

Up until the last moment the administration remained at their posts and only in 1919 were they forced to hand over the management to persons nominated by the Bolsheviks. An enterprise which had been created with love over several generations now lay in ruins.



General view of the Ludwig Rabeneck factories around 1890

Some statistics from the year 1914

	Units	Sobolevo	Reutovo
Spinning – mill	pud yarn	125,600	350,000
Weaving – mill	45M pieces	416,000	150,000
Turkish-red	45M pieces	660,000	
Other	45M pieces	340,000	
Turkish-red In hanks	pud	58,000	
Othercolours In hanks	pud	38,000	
Yarn in Cops	pud	20,000	
Smoking sulph. Acid	pud	360,000	
Alizarin oil	pud	50,000	
Share-capital	Roubles	4,500,000	2,700,000
Reserve capital	Roubles	1,169,048	1,350,000
Other capital	Roubles	387,621	614,876
Charitable gifts	Roubles	139,912	34,498
Total	**Roubles**	**6,196,583**	**4,699,975**
Workers		3,800	2,600