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TRAVELLING BY RAILWAY IN AUSTRIAN POLAND
IN THE SECOND HALF OF THE 19th C.

Introduction

The first railway lines in the Austrian partition of Poland (the so-called Galicia), as the majority of its economic enterprises, were built due to foreign capital investment. The earliest of them, the Mysłowice — Cracow section (Cracow–Upper Silesian Line) was built in 1847 by Prussian investors¹. After opening the Szczakowa–Maczki branch line and the frontier railway passage in 1848, the Austrian partition gained a direct, and as it later turned out, the only railway connection with Congress Poland. About 1850 the idea of constructing some of the country lines appeared: Cracow — Lwów (Lviv) — Brody, and Lwów — Czerniowce (Tschernowitz), which were to be financed by the State. However, shortages in the budget as well as a crisis in the monetary market made the government look for private investors.

At the same time, due to the endeavours of Emperor Ferdinand's Northern Railway², a new line was being constructed stage

¹ This historical outline of the construction of railways in Galicia is based on the following works: J. B u n d, *Rozwój kolejnictwa małopolskiego w okrestie 80-letcia (1850–1930) działalności krakowskiej Izby Przemysłowo–Handlowej (The Development of the Railway Network in Little Poland Throughout the 80 Years [1850–1930] of the Work of the Cracow Chamber of Industry and Commerce)*, Kraków [1930]; J. D e m e l, *Stosunki gospodarcze i społeczne Krakowa w latach 1846–1853 (Social and Economic Relations in Cracow in 1846–1853)*, Kraków 1951; M. P i s a r s k i, *Koleje polskie 1842–1972 (Polish Railways 1842–1972)*, Warszawa 1974; J. S k w a r c z y Ń s k i, *Rozwój steci kolejowej pod zaborem austriackim (The Development of the Railway Network in the Austrian Partition)*, "Inżynier Kolejowy", 1926, Nos. 8–9, pp. 215–219; L. W i e r z b i c k i, *Rozwój steci kolei żelaznych w Galicji od roku 1847 włącznie do roku 1890 (The Development of the Railway Network in Galicia from 1847 up till 1890 Inclusive)*, Lwów 1907.

² According to the custom predominant in the Austro–Hungarian monarchy, railway lines were named after members of the Habsburg dynasty.

by stage, leading from Vienna to Galicia; in 1838 a line to Wagram was opened, in 1839 the line reached Brno, and in 1842 Lipnik, thus crossing the main vehicular road leading from Galicia. In 1855–1856 the Northern Railway opened the sections: Dziedzice — Bielsko as well as Trzebinia — Oświęcim — Dziedzice — Bogumin, for public use, so that a direct connection was gained with the remaining part of the monarchy.

While promising concessions to private investors, the government also offered for sale the railway lines it possessed (i.e. the Cracow — Mysłówice section together with its branch leading to Maczki, purchased by the State from private hands in 1850, and the line Cracow — Dębica, financed by the state and rendered for public use in 1856). Those who applied for purchase were the Northern Railway Line and a group of Polish nobles with Leon Sapieha as the leader who also applied for licences to construct the lines to Brody and Czerniowce. Finally, on January 1, 1858, the State property was divided: the Cracow — Mysłówice line with its branch to Maczki was taken over by the Northern Line, while the Cracow — Dębica line, with its branch to Wieliczka (opened in 1857) and Niepołomice (opened 1858), and Dębica — Rzeszów line (under construction), together with their rolling-stock and equipment were taken over by the newly-created Charles Louis' Society of Privileged Galician Railway. The next few years were spent on the redevelopment of parallel latitude lines. Stage by stage, in the years 1858–1861, Charles Louis' Railway opened the line Dębica — Lwów.

After the period of development there came a standstill due to a crisis in the capital market and the considerable lowering of the remunerability of Austrian railways. Therefore the initiative of Prince Sapieha and Count Włodzimierz Borkowski was greatly appreciated. Having enlisted British capital, in 1864 they received a licence to construct the Lwów — Czerniowce line, opened with much ceremony in 1866. The redevelopment of the railway network continued eastwards, towards the Russian border. In the years 1869–1871 the line reached Podwołoczyska, and connected Krasne with Brody; in 1873 a second railway frontier passage (the first was at Podwołoczyska) was opened at Radziwiłłów — all the mentioned lines being part of Charles Louis' Railway.

In the 1870s there was undertaken the construction of the lines deviating from the Cracow — Lwów — Podwołoczyska trunk-line towards the Hungarian border. In 1872 the line Lwów — Łupków (The First Hungarian-Galician Railway) was opened, in 1873 traffic started on the line Lwów — Stryj, and two years later on the parallel line Stryj — Kałusz — Stanisławów (both sections belonged to Archduke Albert's Railway). Government policy also changed towards private railway initiatives. The view was more and more firmly put forward that the State should take over the existing lines, especially those of primary strategic significance. Private investors were initially meant to be entrusted with the construction of sections of secondary importance, far from densely populated and industrially developed areas. These tendencies coincided with an acute economic crisis that affected the Habsburg monarchy in the middle 1870s, thus discouraging private investors even more. The policy of State intervention soon produced results: in 1876 the State took over the property of the Dniester Railway (the line: Chyrów — Drohobycz — Stryj together with the branch Drohobycz — Borysław), constructed at the end of 1872, in 1880 the unprofitable Archduke Albert's Railway was also subordinated to state management.

State funds covered the construction of the line Tarnów — Leluchów (1876), i.e. a second connection with Hungary, as well as a second line leading along the country, the so-called Transversal Railway, connecting Zwardoń with Zagórz, as well as the former Dniester Railway and Archduke Albert's Railway with Husiatyń. The Transversal Railway, crossing small unprofitable lines running from the trunk-line Cracow — Lwów — Podwołoczyska towards the border with Hungary, was meant to enliven the economy of Galicia, which was in crisis. Since the Berlin Congress (1878) the already strained relations between Austria and Russia still deteriorated. Most railway lines were since then constructed with the intention to be of strategic use, near the border with Russia and in the direction of the border with Hungary. For financial and economic reasons the decision was made to start the construction of local railway lines. The State became increasingly independent of private carriers, hence since the end of the 1870s only a few private railway sections were built, among which of major economic and strategic significance were the lines belonging to Charles Louis' Railway: Jarosław — Sokal (1884),

and Dębica — Rozwadów (1887); the lines: Lwów — Bełzec (1887), belonging to the Lwów — Czerniowce Railway, as well as Bielsko — Kalwaria (1886), making up part of the Northern Railway network.

The nationalization of private railway companies continued; in 1889 the state took over The First Hungarian–Galician Railway as well as the Lwów — Czerniowce Railway, three years later nationalization embraced Charles Louis' Railway, and in 1906 the Northern Railway — the last private railway company in Galicia. Among the state lines built in 1890–1914, of essential economic and strategic significance were the so-called Eastern–Galician Local Railway Lines opened between 1896–1898.

Polish literature on the subject to which I devote the present article is very scanty. It consists of a few contributory notes in popular–scientific railway periodicals as well as a discussion by Zbigniew Osenkowski³, where he merely signals the question. To explain this small interest of Polish researchers in the subject one may cite the lack of archival materials dating back earlier than the year 1896⁴ as well as very unrepresentative expositions in Polish railway Skansen museums and the Warsaw Railway Museum. The studies of Austrian historians are much more advanced. Among their numerous works worthy of note are the fragments of an extensive 19th c. monograph of Austro–Hungarian railways⁵, Victor Röhl's⁶ railway encyclopedia as well as the work of Maximilian Rabl and Johann Stockklausner⁷. I also owe much valuable information to the 19th c. local and technical press.

³ Z. Osenkowski, *Od kotłów po pojazdy szynowe Fabryki Sanockiej (From Boilers to Rail Carriages in the Sanok Factory)*, "Rocznik Sanocki", Y. 7, 1995, pp. 85–164.

⁴ Archival materials of the earlier period were destroyed during World War II. See J. Bugajski, "Galicyjskie" akta c.k. Ministerstwa Kolei i ich opracowanie ("Galician" Records of the Royal Imperial Ministry of the Railway and Their Elaboration), "Archeion", vol. 60, 1974, pp. 181–183.

⁵ J. von Ow, *Wagenbau* [in:] *Geschichte der Eisenbahnen der Oesterreichisch–Ungarischen Monarchie*, vol. 2, Wien–Teschen–Leipzig 1898, pp. 493–548; E. Keelenyi, *Wagenbau* [in:] *Geschichte*, vol. 3, 1898, pp. 484–496.

⁶ V. Röhl, *Encyklopädie des gesamten Eisenbahnwesen in alphabetischer Anordnung*, vol. 1–7, Wien 1890–1895.

⁷ M. Rabl, J. Stockklausner, *Österreichische Personenwaggons. Entwicklung, Konstruktion und Betrieb seit 1832*, Wien 1982.

Standard Carriages

I do not intend to present all types of passenger carriages used on Galician railway lines, but only the most characteristic, chosen models.

The constructors of passenger carriages modelled them on road coaches, furnished with upholstered seats and their backs, side-doors as well as lowered windows and curtains. In 1838, that is the moment the regular service started, the Northern Railway had at its disposal 66 passenger carriages. 1st class carriages with three compartments, 18 seats all together, resembled road coaches by the construction of compartments and their furnishings. Only one detail was different — railway carriages had glass windows. More modest were 2nd class carriages, with 24 seats, no compartments, and leather or canvas curtains instead of glass panes. 3rd class carriages, in contrast to 2nd class, were not closed at the front and back, but only had a roof supported by columns and side tin walls. Inside there were 32 simple wooden seats. There were also 4th class⁸ carriages on the Northern Railway Lines, deprived of compartments and roofs, however because of their small profitability⁹, lack of comfort and high accident rate, their production was gradually reduced and finally in 1858 they were definitely withdrawn from use. When it was realised that open or only partly closed carriages did not meet safety requirements and did not protect the passengers against unfavourable atmospheric conditions, the decision was made to

⁸ In Galicia the 4th passenger class was especially popular with the Jewish poor; it was also used by craftsmen, labourers and peasants. According to Roman Gostkowski this type of carriages was very well suited for army transport. See R. Gostkowski, *Teoria ruchu kolejowego zastosowana do praktyki (The Theory of Railway Traffic Applied in Practice)*, vol. 2, Lwów 1883, p. 9.

⁹ According to the findings by S. Szuro, *Informator statystyczny do dziejów społeczno-gospodarczych Galicji. Koleje żelazne w Galicji w latach 1847–1914 (Statistical Guide to the Socio-economic History of Galicia. The Railways in Galicia in 1847–1914)*, ed. H. Madurowicz-Urbańska, Kraków 1997, not all the railway companies operating in the territory of the Austrian partition ran 4th passenger class transport. Despite the lack of complete data we know that this transport was offered by: the Northern, Lwów–Czerniowce, Hungarian–Galician, Lwów–Tomaszów and Archduke Albert's Railways. The 4th class was most popular with the users of Archduke Albert's Railway (depending on the period, the 4th class passengers constituted from about 49 to 76% of the total), Hungarian–Galician (e.g. in 1872, i.e. the first year of its operation, over 58.5% of the total), and Lwów–Tomaszów (in the years 1898–1902 and 1905–1907, from 42 to over 48% of the totality of passengers). On this account, most companies scored great financial losses, therefore later on the number of passenger classes was reduced to three.

install permanent sliding windows in the side-walls of 2nd and 3rd class carriages¹⁰.

The earliest carriages of Austrian railway, although bigger than street coaches, were very cramped. In 1838 a 1st class compartment was on average 1.60 m. high, 1.75 m. wide and 1.60 m. long. Thus the small space of the compartment did not allow a person even of middle-height to stand erect. The narrow seats were not very comfortable, either, and the back reached only to the passengers' shoulders. The clients of lower railway classes complained of even greater discomfort (in the 2nd class there was only 0.56 m³ of space per passenger)¹¹.

The rolling-stock of railway companies set up in 1850–1860 consisted exclusively of two-axle compartment carriages. Moreover, the production of 1st class carriages was reduced in favour of mixed 1st and 2nd class ones. Constant endeavour was made to improve the comfort of travelling. In the 1st class a half-compartment was introduced, where after unfolding a stool attached to the front wall, in combination with the seat, a comfortable resting place, resembling a bed, was obtained. In full 1st class compartments only in some carriages was there a possibility to convert a seat into a place to sleep. Most frequently, however, the arm-rests were removed in order to gain, at best, one place to sleep, not very comfortable at that, out of three seats in a row. A place for lying down was also obtained by lowering the wall mattress to the seat opposite, or by pushing the two opposite seats to the middle of the compartment and simultaneously shifting the moving back-supports, which acted as pillows. Since all the proposals I presented only partly resembled a real bed, this model of carriages was mainly used in local traffic¹². A breakthrough came in 1858, with a construction that comprised comfortable places for lying down, to be discussed below.

Because of the growing popularity of long-distance services, appropriate conditions had to be ensured for night travelling, i.e. carriages furnished with comfortable places to sleep, modern heating systems, ventilation and toilets. In fact still in the middle 1860s there was no permanent heating in carriages. The reasons

¹⁰ J. von Ow, *op. cit.*, pp. 516–517; R. Heinersdorff, *Die K.u.K. Privilegierten Eisenbahnen 1828–1918 der Österreichisch-Ungarischen Monarchie, Wien–München–Zürich* (undated), p. 41.

¹¹ J. von Ow, *op. cit.*, p. 517.

¹² *Ibid.*, p. 518.

were of a technical and economic nature. The compartments were usually heated by under-floor stoves fuelled by coal or briquettes, or by containers with hot sand, or hot-water bottles placed in front of or under the seats¹³. The ventilation of compartments was provided by shutters, usually fixed over the entrance door, while lighting was first provided by candles, and later by under-ceiling oil lamps. The inside walls of 1st and 2nd class carriages were covered with wall-paper, and wooden floors — with a linen material. The seats, mostly with immobile backs and arm-rests, were covered with plush (in 1st class) or leather (2nd class). No action was taken to stop the noise¹⁴. Up till the end of the 1860s the lack of toilets in carriages was not considered to be a major discomfort. The passengers could relieve themselves during longer stops at the stations as well as in modestly equipped closets in luggage and mail vans. These toilets were initially designed for the personnel, who in line with the then rules could not leave their work stations under any circumstances. These solutions were not sufficient in newly established long-distance services, where the number of stops and their length were reduced to a minimum. The first attempts, not very successful, to introduce permanent toilets in carriages were made on the Northern Railway in 1869.

Construction work initiated by the Northern Railway was continued by other railway companies. In 1871 Empress Elizabeth's Railway issued 1st and 2nd class carriages with toilets fixed to the front wall, divided into two parts; on the right hand side there was a vestibule, on the left — a cubicle with a toilet bowl. The previous proposals were soon replaced by more practical solutions. The model issue was a two-axle 1st class carriage constructed in 1873 by Ringhoffer's factory, commissioned by Charles Louis' Railway. The interior was divided into three compartments, comprising 14 seats for day use. One of the compartments for five people with a separate toilet was designed for ladies, the other two (for four and five people), also with a separate toilet, were connected by a midway passage. The compartments could be reached by six side-doors, three on each side of the carriage.

¹³ This question has been discussed in detail by R. Gostowski, *op. cit.*, pp. 175–195, as well as R. Schramm, *Ogrzewaniu wagonów (On Railway Carriage Heating)*, "Przegląd Techniczny", vol. 7, 1878, pp. 136–162.

¹⁴ E. Kelenyi, *op. cit.*, p. 485.

They were heated by steam produced not by the locomotive, but a boiler placed together with containers for fuel and water in a special two-axle carriage. In the front part of the boiler carriage a place for luggage was arranged, and at the other end there were two toilets reached through an open platform¹⁵. However, only by connecting the front and back compartments by a narrow side corridor, and by arranging a place for a toilet in the middle part of the carriage, was a relatively functional and comfortable model achieved for the first time in this class of carriages. This solution was first introduced on German railways, and later became popular in Austria. A mixed 1st and 2nd class carriage constructed according to such a plan in 1882 had three 2nd class compartments with thirteen seats and a front 1st class compartment designed for five people. This compartment, 2.46 m. wide and 2.27 m. long was relatively spacious, with comfortable, 70 cm long seats and two side-doors. The middle and front 2nd class compartments were of the same length (almost 2 m.) and had seats of a size 60 per 65 cm. They differed by width; the front compartment was 2.46 m. wide, while the middle one less than 1.8 m. wide. The toilet without a wash-basin, almost 1.8 m. long and 0.6 m. wide, was the simplest¹⁶.

The carriages with compartments used on the Lwów-Czeruiowce Railway had a special construction of the running gear. They differed from other models used on Austrian railways in that they had three axles¹⁷.

Since the models under discussion were relatively narrow, construction work started on broadening them so that the main doors would lead from the platforms placed at the front walls. The implementation of these designs was harder to achieve. Because of the small number of newly-opened railway services, the period from the middle 1880s onwards was spent on preparing plans and experimenting. The railways that were created in this period, such as e.g. Tarnów — Leluchów or the transversal one, used carriages of previously tested construction and did not decide to introduce new models¹⁸. Changes in construction were accelerated by the rise of Austrian state railways, as well as the passing

¹⁵ M. Rabl, J. Stockklausner, *op. cit.*, p. 22.

¹⁶ J. von Ow, *op. cit.*, pp. 521-522.

¹⁷ M. Rabl, J. Stockklausner, *op. cit.*, p.107.

¹⁸ *Ibid.*, p. 22.

of an act supporting the construction of local lines, and the intensified nationalization of private companies. Following some years of testing, a carriage with a passage in the middle was constructed, commissioned by Hungarian Railways. It stood out due to permanently fixed toilets and wash-basins as well as serious improvements in the heating, lighting and ventilation systems. Innovation consisted in the installation of ceiling ventilators, warm-air heating, and since 1885 central steam heating. The insides were lit by under-ceiling oil lamps and additionally by ceiling lights. To enable communication between carriages, a screened passage was installed near the front wall¹⁹. Later constructions were modelled on this solution. With a more extensive introduction of that type of carriage, compartment carriages with side doors went out of date, nevertheless they were still used and up till the last decade of the 19th c. they constituted an essential part of the passenger rolling-stock.

The problem of heating on Charles Louis' and Northern Railways was solved in a way similar to Hungarian railways. The heat produced in a separate carriage or locomotive was transported to the compartments through steam heating caliducts. However, this method was not completely satisfactory, since it did not stand the test of heating long drafts of cars and did not supply heat immediately after the train was marshalled²⁰. This system was continually modernized, so that several years later it ousted the previous inefficient solutions from the majority of railway lines. The heating system was started and disconnected depending on the weather; generally, the carriages were heated from November/December till April²¹. Following many complaints by the passengers who suffered because of overheated compartments or from cold, the managers of Charles Louis' Railway decided to install thermometers in all carriages from

¹⁹ E. Kelenyi, *op. cit.*, p. 487.

²⁰ J. Markowski, *Ogrzewanie wozów kolejowych parą (Steam Heating of Railway Carriages)*, "Czasopismo Techniczne" (henceforward "C.T.") of April 20, 1884, p. 45; of May 20, 1884, pp. 57-58. Other defects were: the lack of temperature regulation in the carriage, the danger of explosion, the lack of air circulation and frequent failures of the system.

²¹ "Przegląd Rzeszowski" (henceforward "P.Rz.") of December 9, 1883, p. 7; "Tygodnik Rzeszowski" (henceforward "T.Rz.") of April 18, 1886, p. 3; of November 3, 1888, p. 3; of November 10, 1888, p. 3; "Kurier Rzeszowski" (henceforward "K.Rz.") of April 24, 1887, p. 5; of November 4, 1888, p. 3; of November 11, 1888, p. 6.

January 1, 1884, and issued a regulation according to which the temperature in carriages should not exceed 14 degrees on Reaumur's scale (17.5°C). However, if there happened to be two passengers in a compartment, one of whom would complain of excessive heat, the other of cold, the conductor was obliged to comply with the request of the first²².

In the second half of the 1880s on the Lwów–Czerniowce and Lwów–Tomaszów lines, compartment carriages were also in use with a side passage along the whole car. A 1st-class carriage had four separate compartments, seating 14 people, while a 2nd-class carriage had three compartments envisaged for 26 people. 3rd-class carriages had two compartments, for 42 people. All the carriages were furnished with separate toilets with water taps. A 3rd-class carriage had even two toilets. Each compartment had two ventilators fixed in the roof as well as steam heating. There was also an emergency brake and an electric warning signal in the carriage, which served to inform the personnel of danger²³. Carriages with a similar construction, but connected by a movable passage, were used on Charles Louis' and Northern Railways²⁴.

From the turn of the 1870s intercommunication carriages were constructed for the long-distance traffic of the Northern and Charles Louis' Railways. Although inside such a carriage there was a "[...] balcony [what is meant is rather an open verandah — D.O.], an anteroom, several interconnected chambers which in case of necessity were converted into bedrooms; wash-basins, spittoons, ventilators, stoves fuelled with coke, gas lighting, even a cord leading from inside the carriages to the locomotive's whistle — as if it were leading to a bell in an anteroom", the passengers complained of the lack of safety and comfort²⁵.

Beginning with the 1870s, less frequently, and only on chosen local lines of the monarchy, double-deckers were used — (there is no certainty, however, that they were ever used in the

²² "P.Rz." of March 16, 1884, p. 6.

²³ "C.T." of December 20, 1887, p. 151. The Lwów–Czerniowce Railway purchased 37 carriages of that type: 18 served the line to Czerniowce, and 19 the newly-opened line Lwów–Tomaszów. This rolling-stock was of definitely higher standard than the previous, cramped carriages. The source does not provide any information on the producer.

²⁴ "T.Rz." of November 21, 1883, p. 3; "K.Rz." of June 12, 1885, p. 5.

²⁵ "San" of December 7, 1879, p. 2.

Austrian partition). These were capacious models (a 3rd-class carriage had 90 seats), nevertheless they had some defects. Their manoeuvrability and shock-resistance were not good enough. In this connection, in the 1870s their production was limited, to be definitely dropped at last²⁶.

For local use, also the so-called steam omnibus cars were constructed. They were divided into two parts; the first one held the engine, while the second was designed for passengers. They were mostly four-axle carriages with 3rd-class compartments²⁷. These omnibus cars served among others on the lines: Stróże — Nowy Sącz, Nowy Sącz — Mszana Dolna, Podgórze — Oświęcim as well as Cracow — Sucha²⁸.

The construction of mixed carriages, initiated in the first period of railway history, was continually developed. Up till the 1890s two-axle compartment carriages with side doors prevailed. The spread of three- and four-axle carriages, with two entrances through platforms placed near the front walls, came in the last decade of the 19th c. All these changes were favoured by the regulations issued at the beginning of the 1890s by the Austrian Bureau of Railway Supervision, which forbade the construction of carriages with side-doors to particular compartments or the inclusion of old carriages of that type in the express drafts of cars. The introduction of an additional axle influenced favourably the length, and therefore the spaciousness of carriages.

Mixed carriages of 1st and 2nd class on the Northern Railway, used in the last decade of the 19th c., had respectively 12 and 24 seats in six compartments. 3rd-class carriages consisted of seven compartments and were designed for 70 people. Towards the end of the 1890s 1st and 2nd-class carriages came into use with a new lay-out of their usable floor area, modelled on the earlier solutions. Initially a version with 9 1st-class seats and 28 2nd-class seats was produced as well as models with respectively 12 and 20 seats, and finally a plan was adopted: 9 seats in the 1st class and 24 seats in the 2nd. The Northern Railway used four-axle models sporadically, since the opinion was that this type of carriage did not fulfil technical requirements. Also the firms availing themselves of the infrastructure of the Northern

²⁶ J. von Ow, *op. cit.*, p. 533; cf. V. Röhl, *op. cit.*, vol. 3, 1891, p. 1485.

²⁷ J. von Ow, *op. cit.*, p. 533; cf. V. Röhl, *op. cit.*, vol. 2, 1890, pp. 942-944.

²⁸ "Kolejarz" of November 1, 1900, p. 2.

Railway, i.e. the International Society of Sleeping Cars and the Austrian Post, had to adjust themselves to this tendency²⁹.

The intensive development of local services, continuing incessantly from the last decade of the 19th c. up till the year 1914, seriously influenced the construction of carriages used on short lines. There were mostly short, two-axle 2nd and 3rd-class models (also mixed models) in use with entrances through platforms placed near the front walls. The carriages were furnished with vacuum- and hand-brakes, steam heating, gas lighting (2–3 lamps inside a car), although sometimes, as e.g. on the Tarnów–Szczucin Railway, oil-lamps were still used³⁰. Toilets were installed sporadically. The inner communication went along a passage in the middle. The carriages were divided into two compartments, usually one for non-smokers.

In the analogous period the passenger rolling-stock of the main lines consisted chiefly of two and three-axle carriages used in slow trains as well as four-axle ones used in express trains. Two-axle 3rd-class carriages were constructed in two basic versions: with a side corridor along the carriage, from which doors led to compartments, or with a passage along the middle, which connected particular compartments with a toilet situated in the central part. Depending on the model, the number of seats oscillated between 49 and 72. The carriages were furnished with steam-, and less frequently electric-heating, gas lighting, ventilators, emergency brakes and toilets with water installation³¹. The insides of two-axle 2nd class carriages were designed differently. The models with a side corridor had three eight-person compartments and one seven-person compartment, or one half-compartment for four people. Thus, respectively 31 or 28 seats were available. The toilet was separated in the end room placed near the front wall. For the sake of economy state railways used mixed 1st- and 2nd-class two-axle carriages. These carriages, depending on their type, had e.g. one full 1st class compartment as well as a half-compartment, 9 seats all together, as well as two full 2nd class compartments with 16 seats. The inner communi-

²⁹ M. Rabl, J. Stockklausner, *op. cit.*, p. 25.

³⁰ Central Archives of Historical Records in Warsaw, Eisenbahnministerium fasc. 156. In 1906 the line Tarnów–Szczucin was served by mixed 2nd and 3rd class carriages as well as three 3rd class carriages.

³¹ M. Rabl, J. Stockklausner, *op. cit.*, pp. 78–80, 89, 91, 95, 228, 234, 253, 255.

cation went along the side-corridor, from which doors led to particular compartments. The only noteworthy innovation was the electric, instead of gas or oil lighting.

There was a larger variety of mixed 2nd and 3rd class carriages. Their construction was based on the designs of full 2nd and 3rd class carriages.

Due to the lengthening of carriages as well as the strengthening of their running gear by the addition of a third axle, they became much more capacious and shock-resistant. From among the 3rd class models, essentially four types were in use, three of them furnished with a side-corridor, three closed compartments and maximally four open boxes. The number of seats oscillated between 59 and 69. The fourth type of a 3rd class carriage with a passage down the middle had no compartments and offered 66 seats.

Worthy of note is also the lay-out of usable floor area in three-axle mixed 1st, 2nd and 3rd class as well as in 1st class carriages. In mixed models there were seats for three persons in one 1st-class half-compartment, eight persons in a 2nd-class compartment, while in three 3rd class compartments and one half-compartment — 35 persons together. Inside there was a side-corridor with doors leading to particular compartments and half-compartments. 1st class carriages were designed for 18 persons, placed in two full compartments and two half-compartments. The passengers could avail themselves of two toilets with wash-basins. The elementary furnishings of three-axle models did not diverge from generally accepted standards³².

State railways also used four-axle models with a side-corridor along the carriage. Among many models worthy of note are mixed 1st and 2nd class carriages, produced in versions respectively with 12 and 27 seats. In mixed 1st, 2nd and 3rd class carriages the accepted design was: 6 seats in the 1st class, 12 seats in the 2nd class and 40 seats in the 3rd class, or respectively 9, 18 and 24 seats. 2nd class carriages were envisaged for 42, while 3rd class carriages for 75 passengers³³.

The instructions for the railway personnel of 1910 allow us to reconstruct the interior decoration of carriages. The floors were covered with fur or plush carpets, seats were upholstered with

³² *Ibid.*, pp. 241–247.

³³ *Ibid.*, pp. 247–254.

leather or cloth, and the windows were overshadowed by woolen curtains, net-curtains and roller blinds. Apart from this, the compartments were furnished with mirrors, night-lamps, carafes, glasses, thermometers, ash-trays, pictures, stools and tables; in corridors there were spittoons and folding seats; in toilets — basins, watering-cans, soap-holders as well as fixed and portable chamber-pots³⁴. The above picture certainly does not fit all types of carriages; 3rd class models were doubtless more modestly furnished.

Passenger carriages had frequently some additional equipment. On the Rzeszów — Lwów line in 3rd class carriages there were slot-machines, which after throwing 2 hellers into them, served the passenger 200 ml. of pure, cold water. Lacking a glass, a passenger could buy a paper mug for one heller³⁵.

We cannot assess the functionality of this rolling-stock unless we cite the opinions of the then passengers. Most objections were raised against the 3rd and 4th class carriages. They were frequently “[...] uncomfortable, stuffy, badly ventilated, dirty, cramped, over- or under-heated”³⁶ and above all overcrowded. The overcrowding became especially tiresome on holidays, market days, during pilgrimages as well as during vacations³⁷. No major objections were raised as to the comfort of travelling by the 1st and 2nd class. The carriages of the Northern Railway were described in superlatives: “[...] they are furnished with much elegance and run quietly”³⁸, just like those of the Lwów — Czerniowce³⁹ and Charles Louis’ Railways.

Luxury Carriages

Since a large number of passengers expected special comfort, a need arose to construct a luxury carriage with a separate sleeping compartment. The first model to fulfil these requirements was

³⁴ K. Maślanka, *Instrukcja Nr XXXIX/A dotycząca służby przy przewożeniu osób* (Instruction No. XXXIX/A concerning the service of transporting people), Nowy Sącz 1910, pp. 78–80.

³⁵ “Głos Rzeszowski” (henceforward “G.Rz.”) of August 24, 1902, p. 3.

³⁶ T. Stępnicki, *Hygiena podróży* (Travelling Hygiene), Warszawa 1898, p. 9.

³⁷ “K.Rz.” of September 13, 1885, p. 1; “C.T.” of December 20, 1887, p. 151; “G.Rz.” of June 2, 1901, p. 3; of August 18, 1901, p. 2.

³⁸ “Czasopismo Towarzystwa Technicznego Krakowskiego” of May 15, 1893, p. 116.

³⁹ “C.T.” of December 20, 1887, p. 151; “G.Rz.” of October 30, 1887, pp. 2–3.

issued in 1858. A 1st-class half-compartment for four persons was separated, next to which two rooms were made, each with two 2 m. long beds. Near the front walls there were full 2nd-class compartments designed for 16 passengers⁴⁰.

Because of the growing unprofitability of sleeping-cars and the lack of an organization that would co-ordinate their rational use, in 1872 an International Sleeping Car Society "Georges Nagelmackers & Company" was set up. Initially the firm controlled two-axle carriages, which were the most suitable for shorter lines. Towards the end of the 1870s three-axle and four-axle models came into use, with entrances through platforms and a side-corridor. In sleeping-cars, full compartments were designed for four persons, while half-compartment for two⁴¹.

The introduction of luxury carriages entailed a need for restaurant and kitchen cars. Inside a restaurant car there was a dining-room with 24 seats, a smoking-room, a coffee-room with 12 seats as well as a kitchen or waiters' room. In 1896 the sleeping-car society possessed 83 sleeping-cars, 43 restaurant-cars and 10 luggage vans. The inclusion of a restaurant-car in the draft of cars enforced the construction of direct and through passages between particular carriages⁴². In 1914, from May 15 to October 1, restaurant-cars ran in the Austrian partition on the lines: Cracow — Lwów — Podwołoczyska, Vienna — Lwów, Rzeszów — Lwów — Czerniowce, and Bogumin — Lwów — Podwołoczyska⁴³.

There was a type of luxury carriages called viewing-cars, which ran on very attractive scenic lines. Excellent opportunities for observation were created due to the introduction of an open verandah and half-open windows. Because of their poor protection against unfavourable atmospheric conditions these carriages were used on shorter lines⁴⁴. In use were also carriages

⁴⁰ J. von Ow, *op. cit.*, pp. 524–525.

⁴¹ *Ibid.*, pp. 524, 526; cf. V. Rößl, *op. cit.*, vol. 6, 1894, pp. 2898–2900.

⁴² J. von Ow, *op. cit.*, pp. 526–527; cf. V. Rößl, *op. cit.*, vol. 6, 1894, pp. 3049–3050.

⁴³ *Kurier Kolejowy. Rozkład jazdy pociągów osobowych i pocztowych w Galicji i Bukowinie. Ważny od 1 maja 1914 (Railway Daily. The Time-Table of Slow and Express Trains in Galicia and Bukovina. Valid from May 1, 1914)*, Lwów 1914, pp. 182–183.

⁴⁴ J. von Ow, *op. cit.*, p. 527; cf. V. Rößl, *op. cit.*, vol. 1, 1890, p. 187.

furnished with larger than usual windows; among other lines, from 1900 onwards, on the Zakopane — Chabówka line⁴⁵.

Apart from luxury restaurant-, sleeping- and viewing-cars, which ran according to a schedule, there were also saloon carriages, used on special occasions by VIPs. The first carriage of this type was built in 1845, commissioned by state railways. It was a four-axle model with two entrances through platforms. In 1863–1864 Lauenstein's firm from Hamburg produced two saloon-cars, one for the Northern Railway and one for Charles Louis' Railway. Unfortunately, I have no precise information on these carriages. Among this sort of carriages could also be ranked cars for hunting, owned by the Northern Railway. The earliest saloons, although with rich interior decoration (gilding, bright carpets and wall-paper) and the most recent technical solutions, such as lighting, toilets, heating etc., were not very functional. As time elapsed a tendency prevailed to produce less showy, but more functional constructions. The first carriages built according to new plans were those designed for Empress Elizabeth. Their functionality and perfection of workmanship can be confirmed by the fact that over the 23 years when they were in use, they underwent no serious alterations⁴⁶. Emperor Franz Joseph I travelled by special trains (one of them belonging to the Northern Railway). A complete royal train "was so arranged that no other of the similar type can match it by sumptuousness and perfection. At the head of this train there is a safety car (an official car especially constructed for this purpose), which apart from compartments for the officials who direct the car, includes also a little workshop with all the necessary tools and utensils that could be needed if anything went wrong on the way. Thus, minor accidents cannot cause a longer delay in the travel, even if the problem in question would be an exchange of a damaged pair of wheels. This workshop is invaluable, especially if the royal train runs along a foreign, less prosperous railway line. From the compartment of officials who direct the train, the engine-driver in the locomotive receives all instructions and directions through a speaking-tube. The Emperor's carriage itself is built on three axles, the middle of which, due to a special construction, can move slowly, so that even at the greatest curves of the track the carriage is exposed to

⁴⁵ "G.Rz." of June 17, 1900, p. 3.

⁴⁶ J. von Ow, *op. cit.*, pp. 528–530; V. Röhl, *op. cit.*, vol. 6, 1894, pp. 2851–2852.

no shock, or the slightest danger. Architecturally, this carriage is very sumptuous, executed in an exemplary style. On the outside it is painted green with golden edges and the emblems of The Imperial Couple. In the front of the carriage there is a compartment for a valet-guard, from which a door leads to the spacious Emperor's parlour. In the latter there is a sofa, a convertible armchair, three chairs and a desk; on the wall over the desk there is a mirror and a clock. There is also a little locked table near the wall, an oval table and a camp-stool; the walls are hung with little baskets, cigar-lighters, ash-trays, thermometers, barometers, etc. The walls are covered with heavy silk damask material, and the wooden parts are covered with rich sculpture. There are Persian carpets on the floor. Double plate-glass windows are overshadowed with jalousies. Both the parlour and other compartments of the royal train are lit by gas. A door leads from the Emperor's parlour to a well-furnished compartment for his aides, and another to the toilet. Both these compartments are covered with silk damask tapestries and thick carpets. All the compartments are heated by warm water. Particular carriages are connected to one another by covered bridges; all are interconnected by telegraph. Even with the highest speed the train moves so easily that one can comfortably write at every desk, and even stand glasses on them with liquid without fearing a drop would be shed. There is equal comfort and sumptuous furnishings in other carriages of the royal train, such as the dining-room, kitchen, etc. Needless to say, the royal train has also a superb engine, the choicest professional staff etc."⁴⁷

Since the Emperor's train was made up of carriages of various types, which did not reflect technical progress occurring in the meantime, the decision was made to construct a complete train for the head of the state. To prepare the programme and design of this enterprise, a special committee was called into being, made up of the members of the boards of particular railway companies. The Emperor's train constructed by Ringhoffer's factory in 1892 consisted of eight carriages, set together in the following order: a common carriage for the personnel, luggage and "lighting" (what

⁴⁷ A. Nowolecki, *Pamiętka podróży cesarza Franciszka Józefa I po Galicji i dwutygodniowego pobytu jego w tym kraju* (*The Remembrance of Emperor Franz Joseph I's Travel in Galicia and His Two-weeks' Stay in This Country*), Kraków 1881, pp. 23-24.

is meant are probably generators), a carriage for court servants, the Emperor's carriage, the first carriage for the Emperor's court, a restaurant-car, a kitchen-car, the second car for the court and a car for luggage and porters. Apart from the sumptuous Emperor's car, special appreciation deserves the restaurant-car, arranged with much taste. The complete train was used exclusively for the Emperor's travels, and particular carriages were let out only in case of necessity, e.g. for other royalty who travelled by Austro-Hungarian railways⁴⁸.

Conclusion

This presentation of the most characteristic models and general construction assumptions leads to certain conclusions. The railway companies which ran the transport economy in Galicia, one of the economically and socially most backward parts of the Austro-Hungarian monarchy, ensured the passengers quite decent conditions of travel. Their offer did not diverge from the standards accepted on other Austro-Hungarian railways. This fact should be appreciated all the more, because the railway network in Galicia, in comparison to other regions, was much less developed and the railway infrastructure itself was here of a much lower quality than elsewhere. For instance, in 1911 in Galicia there was 1 km. of railway line per 19.05 km², while in Bohemia there was 1 km. per 7.67 km² and in Lower Austria⁴⁹ per 8 km². Not all the carriages in use fulfilled the clients' expectations. The carriages of the lowest passenger class left much to be desired and ensured only the minimum of comfort, being deprived of apparently minor, but essential conveniences. This was all the more paradoxical, because it was precisely those travelling by the 3rd, and later also by the 4th class, who prevailed among the passengers. The policy of railway companies will become clear if we consider the modest financial profit coming from the lowest passenger class. However, this problem has not yet been examined adequately and it awaits a comprehensive study. One should speak in superlatives of the use value of sleeping-cars, restaurant-cars, saloon-cars as well as 1st and

⁴⁸ J. von Ow, *op. cit.*, pp. 530-532; cf. V. Röhl, *op. cit.*, vol. 4, 1892, pp. 2018-2019.

⁴⁹ *Podręcznik Statystyki Galicji (A Handbook of Galicia's Statistics)*, vol. IX, part II, Lwów 1913, p. 252.

2nd class carriages. The construction solutions applied ensured, by the then standards, the maximum of comfort and arouse the experts' appreciation to this day.

The division into passenger classes ran precisely along the social stratification. The access of worse-off travellers to higher passenger classes was limited by the high prices of tickets as well as the principles of *savoir-vivre* still current in every sphere of life. Nevertheless, the offer of railway companies was so diversified that it satisfied the passengers' expectations. The transformations taking place in the last quarter of the 19th c., i.e. the improvement in the comfort of travelling, and the construction of new luxury models, were due to the constructors as well as — which is worth stressing — well-to-do clients who for lavish sums expected extraordinary proposals. As time elapsed, this lobby was joined by people with an earlier moderate standard of living. The conditions of travelling, so enjoyed by 19th c. globe-trotters, improved considerably. Even a 3rd class carriage became an alternative to an elegant coach, needless to say, much slower, deprived of a toilet, and of modern heating and lighting systems. Of considerable significance was also the safety of travellers. Despite many accidents caused by mismanagement, the policy of cutting down expenses, the lack of discipline, and sometimes even technical defects of carriages, the railway ensured a better protection against robbers, heavy snowfalls, severe frost and packs of hungry wolves. The accessibility and superiority of the railway over horse-drawn coaches, or automobiles and airplanes, not yet well-known and accessible only to the few, seems to be beyond argument. Worthy of emphasis is also the way of using the floor area of carriages. The model imitated was taken from domestic life. This was especially visible in luxury carriages and higher passenger classes, where each detail was taken care of. The attempt to create domestic atmosphere could be seen not only in interior decoration but also in the behaviour and clothes of the passengers, e.g. the 1st class restaurant-cars could be used exclusively by those elegantly dressed. This is, however, a matter of custom and the subject for a separate paper.

(Translated by Agnieszka Kreczmar)