Introduction

At the end of the 19th century, the Free Royal City of Novi Sad was facing extensive development and influx of population and there was a need to improve the water supply for the growing urban population. Therefore, in order to find an additional source of drinking water in the area of the former Calvary, on December 22, 1897, well drilling started, to the total depth of 193.42 meters, which ended on March 18, 1898 [1] or, according to other sources, in April of the same year [2, 3]. That was when 24.6 °C water gushed from the well, with an output of 300 liters per minute [1, 2], or 306 liters from a pipe that was 4.85 meters high [4]. In order to protect the territory around the newly found well and confirm the healing properties of the water, intensive correspondence of the City Council was required, to obtain expert opinions and approval from a number of experts in different fields and officials of the Ministries of Agriculture, Interior Affairs and others that were based in Budapest. The mayor sent a letter to the University Institute of Public Health in Budapest on October 16, 1898, in order to get the necessary answers from several university professors of internal medicine and hygiene (Dr. W. Vincze, Dr. K. Karoly, Dr. Fodor Jozsef, and others) regarding the water quality from the artesian well near Calvary [4]. In response, dated November 8, 1898, University Professor F. Jozsef referred to the legislation of that time, where “under paragraph 100 XLV of the Public Health Law of 1876, a medicinal
spa is a mineral spa for which in its own right, by the composition of minerals, can be said with certainty that its use is effective against major diseases” [4]. The response stated that the water was cold, slightly alkaline, hydrochloric, and mostly similar to the water of Palić Lake. According to experts, this artesian water could be effective in treating similar diseases as the water of Palić Lake, but the question was whether it would have the same effects in the city of Novi Sad, having in mind that the effect of lake water was combined with nature and fresh air, that is, the favorable influence of microclimatic factors in treatment [4]. Particularly interesting was the opinion of experts from Budapest: “If this artesian water fell into the hands of a capable manager, Novi Sad would in a short time become a famous spa center. A particular advantage of this well may also be the fact that it is located in a booming city with many residents who would benefit from regular bathing in iodine water, not to mention those who would visit the spa for personal hygiene” [4]. In the same report, based on the chemical analysis of the water from 195 meters below the surface under pressure, it was concluded that the water was pure, suitable for drinking and household purposes, without the risk of pollution [1, 4].

Iodine Spa Novi Sad

The analysis of water samples taken from several different depths was performed in 1898 by Albert Grittner, a chemist in Budapest, and again in 1914 by Dr. Wilmos Hanko. The water was found to be similar to that of Lipik, in terms of iodine and table salt content, and it was acceptable for spa use. Further tests were done in Belgrade in 1930 (analysis by Dr. A. M. Leko) and in 1948 (performed at the Federal Institute of Hygiene) [1–4]. Possibilities of application of the natural gas, present along with medicinal water, were also analyzed [5]. Chemical analysis confirmed that the water was good for drinking and contained many other mineral constituents in addition to iodine [1–5]. The idea and initiative of the Novi Sad physician Wilhelm Vilt, about the need to build an iodine bath, was supported. The project and the construction itself were entrusted to the famous Hungarian architect Imre Francsek from Budapest [2–4, 6, 7]. On December 9, 1909, the City Council unanimously approved to raise the artesian bath to the rank of a medicinal bath (spa), since the conditions presently required were met [8]. By the decision of the Hungarian Royal Ministry of the Interior Affairs, on April 26, 1911, the Novi Sad Iodine Bath was established [2, 3].

In 1909, the city authorities issued a notice to procure the necessary furniture and equipment [9]. The budget (in Austro-Hungarian crowns) for the equipment of the artesian spa of the Free Royal city of Novi Sad was planned and clearly defined. The extensive list, with the type and quality of furnishing and equipment, and resources identified, indicates that the furnishing of this facility was approached very seriously and with great responsibility (Figure 1) [9, 10].

![Figure 1. The list of equipment needed for furnishing the city artesian bath](image)

The doctor's office: a light maple desk with a fabric cover (estimated price 115.00 crowns), chairs with backrest made of the same pliable wood, sofa with two plush armchairs, a table, carpet, 10 meters of carpet path, tin spittoon with water, as well as one wall coat hanger. The lobby of the doctor's office: five chairs made of light pliable wood, a small table, a wall coat hanger and a spittoon [9, 10]. Choosing the above inventory indicates the need to provide future customers with great comfort and a sense of luxury. The cashier's desk: one lacquered pine table, two chairs, a wall-mounted coat hanger and a spittoon. Four luxury baths: four fabric-upholstered sofas with spring cushions and the same number of carpets, mirrors with matching side tables, including marble plates, wall coat hangers, light pliable wood chairs, first-class Japanese mats and a spittoon [9, 10]. It may be assumed that these luxurious bathrooms were the meeting place for the most prominent people of Novi Sad of that time. That is why a lot of attention was also paid to the time between healing baths by staying in rooms that were in the ranks of the famous European spas. 14 first class bathrooms: 14 upholstered ottomans with spring pillows, console half tables of light wood with a mirror, wall-mounted coat hangers, chairs, spittoons and second-class Japanese mats. Common first class bathroom (with 2 baths), an ottoman, a wall-mounted console with a mirror, 2 wall-mounted coat hangers, chairs, Japanese mats and spittoons [9, 10]. The inventory intended for the lobby was selected with great care and attention was paid to the smallest details. The lobby furnishings: one octagonal spring-cushion plush sofa, 4 spittoons, 2 umbrella/parasol bowls with metal stands, 8 chairs and 4 small tables. The upper and lower corridors, the lobby, all the stairs, the locker room corridors, the corridor and the stairs leading to the steam room, the drying and rest rooms had about 290 red carpet paths. The upper corridor and waiting room: 6 leather armchairs, 8 spittoons, one leather set (sofa) with two leather arm-
The list of equipment needed for furnishing the city artesian bath (continued)

1. Kukin A, Milojčić N. Geološke i hidrogeološke prilike Novog Sada sa naročitim osvrtom na arteske bunare jednog kupača. Rad vojvodanskih muzeja. 1954;3:166-72.
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4. Magistrat slobodnog kraljevskog grada Novog Sada (1748-1918). F.I. Located at: Istorizki arhiv grada Novog Sada, Novi Sad; kig 30938/1909.

Figure 2. The list of equipment needed for furnishing the city artesian bath (continued)

Slika 2. Spisak potrebne opreme za opremanje varoškog arteskog kupatila (nastavak)

chairs and a small table. The hallway with locker rooms: a large lightwood wall mirror, two light wood console half tables, 2 seats with plush upholstery and 12 spittoons. The lower lobby: one circular seating set with four light wood seats and a twisted reed, 4 small tables, 6 chairs, 4 spittoons and 2 low seats for pedicure. The professional help under its auspices.

The second-class bathroom with two bathtubs: a spring-free ottoman with, fabric coated pillows, wall-mounted console with a mirror, 2 wall-mounted coat hangers, chairs, mats and spittoons. Thirty-second-class bathrooms: 16 ottomans (notes 8, 9, 10 and 20: baths without ottomans), 20 wall-mounted coat hangers, and as many chairs, mats, wall-mounted console tables with a mirror and spittoons. The lower corridor and waiting room: 7 wall fabric-coated seats with springs and 8 spittoons [9, 10]. The spa baths were also planned to provide services in the field of body and pedicure care, tailored to the users, within the steam baths. For the steam bath resting rooms, the City Council has proposed the acquisition of 5 ottomans with spring cushions, one wall mirror, 2 plush-covered seats, 2 spittoons, and 2 low seats for pedicure. The drying room after the steam bath: 3 ottomans and 2 spittoons. Beige canvas window shutters were also planned. The total budget for the equipment and furnishings was estimated to be 11.235.80 crowns [9, 10].

The invitation for procurement of the necessary equipment was officially announced and publicly released on July 12, 1909, while anonymous bids (like public procurement today) that arrived at the City Council of the Royal City of Novi Sad for the furnishing of bathrooms were considered on July 31, 1909 [9, 10].

The Art Nouveau building of Jodna Banja was completed and furnished in 1910. The exploitation of mineral drinking water began in 1911, when bottle water production started [2, 3]. With the decision of the city authorities from 1907 to build a new city hospital in Novi Sad, the foundations of future prosperous development of the health system in Novi Sad were laid [11, 12]. The increased needs for drinking water have been solved by new excavations. A new well was drilled in 1924, at a depth of 223.30 meters and initially yielded about 250 liters per minute, which subsequently also decreased. The third well was drilled in 1953, and after that several new wells as well [1]. Due to the growing interest of the population in spa facilities, the City Council decided to build a hotel next to the bath building. The hotel, designed by Djordje Tabaković, was completed in 1931. At that time, the bath building had 43 cabins, with first and second class bathtubs, three swimming pools, as well as other therapy units (electro, photo, cryo, helio, fango and physical therapy) [2, 13, 14]. The Spa water, alkaline-muriatic, hypothermic (24 degrees Celsius), has quickly gained loyal fans. There were numerous indications for its use: chronic, rheumatic and infectious inflammations of the musculature, bone and muscle diseases, fracture consequences, nervous system diseases, neuralgia, sciatica, lumbago, women’s diseases, rickets and “hardening veins”. It has also been recommended in chronic stomach diseases and intestinal catarrh, bile diseases, chronic constipation, urinary, as well as kidney and bladder diseases [2, 3, 13, 14].

In the turbulent years that followed, the city’s iodine healing bath changed its name, external and internal appearance, equipment, furniture, but kept the mark of the institution tailored to the needs of every person who have been seeking and find professional help under its auspices.

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