

## THE FAMILY AND FRIENDS OF VOJTA NÁPRSTEK A RARE PORTRAIT COLLECTION FROM THE FUNDS OF THE NÁPRSTEK MUSEUM<sup>1</sup>

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ABSTRACT: The article introduces a collection of thirty three images, predominantly daguerreotypes, deposited in the collection department of the Náprstek Museum. They were made during the period from the end of the 1840s to the 1860s, partly in Europe and partly in the United States of America, as the private collection of Vojta Náprstek and his family. The earliest one originates probably from 1848 and displays Vojta Náprstek wearing a redingote of the revolutionary Student Legion. With two exceptions, the portraits present the family and friends of the collection owner. What makes the collection very interesting and frequently used by experts and the media is the fact that it includes, among other things, two portraits of Božena Němcová.

The first part of the article deals with the history of the collection and the persons portrayed. The second, technical part presents the history of the origin and development of the photographic techniques employed and the identification and specification of the degradation effects.

KEY WORDS: daguerreotype – ambrotype – Vojta Náprstek – Božena Němcová – Náprstek Museum

The Náprstek Museum, which expresses in its subtitle (Museum of Asian, African and American Cultures) the characteristic of the collected exhibits, frequently hides in its depositories objects which do not correspond much at first glance to its official focus.

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These are most often remnants of the original museum collections, which went unnoticed by curators who sorted the collections and passed them on to other institutions. Vojta Náprstek established his private museum as an industrial museum with the objective of presenting to visitors the latest inventions, procedures and techniques, and only collected ethnographical objects or objects of arts and crafts on the side, purely to document technical development. Eventually, however, these objects outweighed the technical objects, which were then transferred during the first half of the 20<sup>th</sup> century, according to their nature, to the appropriate museums. On the other hand, the picture collections, which did not present only non-European cultures from outside Europe – quite the contrary – remained in the library. These collections consist of a graphic, stereoscopic pictures and photographs, and a large part of them consists of portraits of famous and unknown persons.

The daguerreotype and other similar processes that produce a single, absolutely unique image (in contrast with photography), form part of a special group of imaging techniques. In the museum they constitute a small but very interesting collection that during classification was included in the "Náprstek inventory", which includes items that formerly belonged to the museum's founder and his family, as well as some "forgotten" exhibits from the original Czech Industrial Museum. Along with clothing, jewellery, kitchenware, furniture, and various souvenirs, it contains one photo album<sup>3</sup> and, above all, 32 of these unique portraits. As a result of the incomprehensible and unusual whim of a librarian from the beginning of the 20th century, one daguerreotype was included, quite extraordinarily and illogically, in the collection of historical photographs. Hence, the Náprstek Museum currently holds a total of 33 portraits created without the use of paper.

The collection began to form at the end of the 1840s, apparently as the private collection of Vojta Náprstek, which he handed over in the 1870s to the museum's exhibition of display techniques. In the 1950s, two daguerreotypes were incorporated into this collection as gifts. Apart from these two, the collection shows Vojta Náprstek, his family and friends.

The earliest portrait dates probably back to 1848 and displays Vojta Náprstek as a member of the Student Legion. It must have been made by 12 June, the date of the Slavic Assembly meeting where Náprstek was an active participant. He also participated in the subseuent uprising, which escalated in 15 June to the bombardment of Prague. In cases where the portrayed person is known to us, we may guess the date; however, fourteen portraits show unknown persons and the dating is therefore difficult. In any case, it can be said that most daguerreotypes were made in the 1850s, mainly in the United States of America, i.e. during Náprstek's exile. These include above all his three portraits, documenting a considerable transformation from a slender boy into a sturdy and confident man. Two portraits show his partner, Kateřina Krákorová (1827– after 1888), with whom he fled to America and who married Dr. Aigner in New York, subsequently returning to Prague in 1857. Her second portrait is apparently from this period, when she was persuaded by friends of Náprstek to relocate to Vienna and later to Germany. It was not appropriate for the former lovers to meet in Prague, and Kateřina

<sup>&</sup>lt;sup>3</sup> The album consists of thirteen portraits of members of the dining society, so-called "Pondělní Jour Fix u Gebauerů" (Monday Jour Fix at the Gebauer's), who bought a fin whale skeleton for the National Museum. The album itself is primarily an excellent result of bookbinding work, where the cover is a worthy representation of the contents.

would then have had an opportunity to request financial support. By comparing it with the photographs, it is also possible to identify a double portrait of the Engelmann spouses among the American daguerreotypes. Josefa Náprstková wrote a precise characteristic on the back of the photographs: Vojta Náprstek often noted that during his worst times in Milwaukee,<sup>4</sup> he had always found shelter and hospitality at the Engelmanns. Náprstek kept diary records on a daily basis almost throughout his whole life, but a lot of them have been lost or destroyed. Unfortunately, only very little information about his American stay has been preserved. Nevertheless, two damaged records also refer to the daguerreotypes. In 1854, Náprstek wrote in his diary: November 17. Albína /Dremlová/ gave me a daguerreotype. /.../ Al. gave his daguerreotype in the theatre.<sup>5</sup> Based on this record, we may assume that not only Albína Demlová but also other female admirers of Náprstek can be found among the remaining portraits. In the list of the contents of boxes which Vojta left in America before he returned to Prague<sup>6</sup>, he mentions a daguerreotype of Marie Šátková from Kutná [?], Johanna Günthrová, Heinich Kurtzová.<sup>7</sup> From a remark in his diary where he wrote: With the Günter family (Mrs. and 3 daughters), who arrived yesterday at Landa's. I like Johanna, the 14 years old; I wish I had someone like that, but she must be of Slavic origin!, we may identify the youngest lady on the daguerreotype as Johanna Günthrová. During his stay in America, Náprstek visited the Dakota Indians in Minnesota as a member of the escort of the government delegation in 1856.8 His social feeling meant he always sided with the oppressed and overlooked and was thus naturally interested in the status of the Indians. He was also interested in the life of African Americans and mainly of the African American slaves. He even gave lectures on the life of Indians in America; it is thus no wonder that a portrait of two Indian women may be found among the daguerreotypes. Moreover, his diary from 1857 contains a record about the author, probably from St. Louis: The daguerreotype-maker *Vogel gave me a portrait of an Indian.*<sup>9</sup> This is undoubtedly one of the few daguerreotypes of Indians to exist in this country.

Another group of portraits consists of Vojta's family members and his lifelong friends. Three portraits show his brother Ferdinand Fingerhut (1824–1887), while two of them originate apparently from his travels to France in search of experience, and on one of them he is even captured with his daguerreotype-maker Jean Batista Sabatier (1801–1881). Only five portraits of the entire collection are authorized, the first ones belonging to Vojta's mother Anna Fingerhutová (1788–1873). These are two daguerreotypes with opera glasses (in a stereoscope mode), which were made by a Prague company "Maloch a Zilliger", apparently around 1855. Professor Jan Evangelista Purkyně (1787–1869), a renowned and world-famous physiologist, was among Náprstek's lifelong friends. They had already known each other during Vojta's

<sup>&</sup>lt;sup>4</sup> A photograph of Peter Engelmann from Milwaukee in 1863. Collection Department of the Náprstek Museum, Collection of historical photographs, sg. 4.0358.

<sup>&</sup>lt;sup>5</sup> Diary of Vojta Náprstek from 1854. Archives of the Náprstek Museum, Náprstek Vojta Collection, safe.

<sup>&</sup>lt;sup>6</sup> This concerned personal documents and mainly literature which he expected to be confiscated by the police. His friend Engelmann, with whom he left the boxes, did not send them until 1862.

<sup>&</sup>lt;sup>7</sup> A list of boxes deposited before departure from Milwaukee, p. 42. Archives of the Náprstek Museum, Náprstek Vojta Collection, file section 2, no. 3.

<sup>&</sup>lt;sup>8</sup> The delegation arranged a meeting between Indians and new settlers to set borders between Indian hunting grounds and lands for new colonists.

<sup>&</sup>lt;sup>9</sup> The diary of Vojta Náprstek from 1857. Archives of the Náprstek Museum, collection of Náprstek Vojta, safe.

high school studies. They met within a week after Náprstek returned to Prague on 25 February 1858 and Purkyně offered Náprstek a microscope for sale. His two daguerreotypes with opera glasses also resemble stereoscope images. Professor Purkyně was among Vojta's regular guests, whom Vojta was to tell shortly thereafter that they should not visit him so often. This was a request from his mother who was not happy about her son's daily visits from former classmates and friends. Finally, she gave way and permitted the organisation of a social salon, a meeting place for prominent Czech politicians, scientists and literati, including, among others, Božena Němcová (1820– 1862), who had known the Fingerhut brothers<sup>10</sup> from their high school years. Náprstek met her again three days after his return from America and Božena Němcová used to visit him and his library whenever she was in Prague. Náprstek and his brother frequently helped her financially. They gave her alcoholic drinks<sup>11</sup> and also used clothing for her sons. Náprstek obtained her daguerreotypes and ambrotypes only after her death. In 1869, Náprstek helped members of the American Ladies' Club<sup>12</sup> build a decent tombstone for Božena Němcová at the Vyšehrad cemetery. A commemorative medal was coined, the novel Babička was published and also two photos of a younger and older Němcová were printed for this event. They were made by the company of Jindřich Eckert on the basis of a daguerreotype and ambrotype provided to the American Ladies' Club by Theodora Němcová. The portrait of the "younger" Němcová was made by Jan Maloch, apparently in 1854. It displayed the head of a beautiful woman with a lace scarf on her head. On the other portrait is a half figure of a standing woman in a dark blouse over a dotted dress, whose face mirrors grief and also shows premature signs of old age. This last portrait of the writer was made in 1859 in the atelier of Wilhelm Rupp. On 19 December 1859, Němcová wrote to her son Karel about it: After New Year, I will obtain several prints of my picture; I was very well photographed at Rupp's, it will be carved in steel in Leipzig. The format of my files will be very elegant and large, like Shakespeare's and Goethe's publications, and my portrait will be in the first volume. Other than that, it will be also for sale.<sup>13</sup> In the end, the reality was different. The format of files published by Augusta was neither elegant nor large and there was no portrait of the author in any volume. The surviving ambrotype in the Náprstek Museum was altered in a visibly insensitive way in later years and poorly complemented by an additionally painted pillar with a decorative head and a blue drapery. The pillar bears the date B. Němcová 1885. A glass stereoscopic plate, which represents Vojta Náprstek sitting at a table with books and a pillar with a white bust, was also included in the unique collection of portraits. The portrait was created by Carl Anton Schwestka in 1858 in his Prague atelier at Malá Strana and thus concludes logically the portraits of Náprstek, which were only photographic after this picture. The stereoscope was donated to the

<sup>&</sup>lt;sup>10</sup> For patriotic reasons, Vojta Náprstek translated his name and started using it when still in high school, although his official name was Fingerhut. After his return from the US, he applied for an official name change, which was not approved until 1880.

<sup>&</sup>lt;sup>11</sup> Ferdinand Fingerhut owned the Černý pivovar (Black Brewery) at Karlovo náměstí and supplied the writer with beer, while Vojta supplied her with rum and punch from the distillery U Halánků.

<sup>&</sup>lt;sup>12</sup> The American Ladies' Club was formed under Vojta Náprstek's auspices in 1865. It is the oldest Czech women's association focusing predominantly on education and charity.

<sup>&</sup>lt;sup>13</sup> Correspondence of Božena Němcová IV, 1859-1862. Publisher Lidové noviny 2007, p. 135.

Náprstek Museum in 1898 by Anna Holinová, a long-term friend of Josefa Náprstková.<sup>14</sup>

As noted above, fourteen portraits have not yet been identified. We assume that by professionally examining the casing of the daguerreotypes, studying the preserved correspondence and by comparing them with other visual material, we will succeed in identifying other portraits or at least in determining the place and studio where they were produced.

## Excursus

The described collection of portraits is unique, because it consists of the earliest positive photographic techniques. The daguerreotype technique is most commonly represented, followed by ambrotype.

Most photographic technologies were, and to this day still are, based on the effects of light on photosensitive metal salts. The most frequently-used salts are silver halides. The first scientific study of silver salts was published as early as 1777 by Carl Wilhelm Scheele<sup>15</sup>, who tested the effects of sunlight on silver chloride<sup>16</sup>. During this test, he showed that after a certain dose of sunlight, this substance is transformed into silver metal. During the search for the most suitable photosensitive salts, it was determined that silver salts or a silver amalgam, as well as iron, platinum, and palladium salts, can all capture a photographic image. From surviving historical records we can deduce that silver salts were used most often. On the other hand, silver amalgam was used to create an image only in the daguerreotype process (Hendriks 1991: 46-52).

Early photographic techniques, which were produced from around 1840 until the 1860s, were mostly deposited in cases, which are considered, due to their perfect crafting, to be small works of art. It should be remembered that these are pictorial documents which are over 150 years old and which we appreciate for their intrinsic, personal and heritage value. Specifically, daguerreotypes, ambrotypes and the first ferrotypes were deposited in those containers. All these techniques are prone to damage; hence, these cases had not only a decorative but also a protective nature (Clark 2014: 1).

The earliest of these photographic techniques is the daguerreotype, named after its creator, Louis Jacques Mandé Daguerre (1787–1851). Daguerre was a French painter and scientist, who, together with Nicéphor Niépce<sup>17</sup> (1765–1833), was a pioneer and father of photography. Daguerre cooperated with Niépce and according to Niépce>s son Isidore, they were also partners in the first photographic process – the heliography. Niépce died in 1833 and two years later, Daguerre discovered the new revolutionary method of silver iodide plate, which requires a fraction of exposure time as opposed to the previous technique. The image cannot be seen after exposure, because it is generated as an invisible reaction to light - a latent image. The visible image is developed with the

<sup>&</sup>lt;sup>14</sup> Anna Holinová (1834-1917) as a founding member of the American Ladies' club donated to the museum a significant number of archives relating to both the activities of the club and other Náprstek's activities.

<sup>&</sup>lt;sup>15</sup> Carl Wilhelm Scheele, a Swedish chemist of German origin, was born on 9 December 1742 and died prematurely on 21 May 1786, probably due to mercury poisoning – he had a bad habit of tasting chemicals..

<sup>&</sup>lt;sup>16</sup> Silver chloride has the chemical formula AgCl. This chemical compound was the most used photosensitive substance. It emerged directly in the image layer as a result of the reaction of silver nitrate with a chloride. Originally, sodium chloride was used.

<sup>&</sup>lt;sup>17</sup> Niépce was the author of the earliest surviving photograph, dating back to approx. 1826, named "Window View in Le Gras".

use of mercury fumes, and then stabilised in a sodium chloride bath. Depending on illumination, the resulting image can be observed as positive or negative. Daguerre obtained a fully practical photographic system only after using sodium thiosulfate, which had been discovered by Sir John Herschel<sup>18</sup> (1792-1871), for stabilisation. Daguerre had his first public presentation of his invention on 7 January 1839 at the Academy of Science in Paris. A certain competitor in the development of a reliable photographic technique was William Talbot<sup>19</sup> (1800–1877). Talbot began experimenting with silver chloride in 1834. His procedure required a long exposure which lasted up to several hours. Despite his contacts with Herschel, he did not use the stabiliser Hypo, which was already known at that time. At the time of the publication of the invention of daguerreotype, Talbot's technique was slower and very primitive as regards sensitivity and photographic drawing. After seeing daguerreotypes in May 1839, Sir John Herschel declared: It is a miracle. In comparison with them, Talbot's photogenic drawings seem childish.<sup>20</sup> Daguerre's success in the field of photography was crowned not only by an award of the Academy of Science but also by the granting of a government pension in 1839, which was also granted to his collaborator Isidore Niépce. The daguerreotype technique was systematically described and published in the Academy of Science and in the Academy of Fine Arts in Paris. At the same time, a complete set for production of daguerreotype, including a camera and process description, was offered for sale. The complete set was manufactured by the company Giroux, founded by Daguerre's brother-in-law Alphonse Giroux. Daguerre's original process of 1839 was slow, and portrait-taking was not too comfortable. The typical exposure time was 20 minutes or more. The photo camera, equipped with optics corresponding to the period and the short width, was limited spatially to the width of a still life image. As early as in 1840, the technique was improved by several experiments. The photosensitivity of the plate was increased by the gradual effect of vaporised iodine, followed by bromine and then again by iodine. The whole procedure then became common practice, resulting in a shortening of the exposition, which is now measured in mere seconds. Another improvement was the use of an lens with a larger aperture than the previous construction. The lens was calculated and constructed by Max Petzval<sup>21</sup> (1807–1891) with the lens aperture of 1:3.5. Petzvald's lens was indispensable for taking portraits, and in the following 70 years became the basic lens for all studio photo cameras. Another significant improvement of the daguerreotype process was the gold tint, which was first introduced by Hippolyte Fizeau<sup>22</sup> (1819–1896). Gilding expanded the range of tints and the plate surface was less prone to abrasions (Peres 2007: 28-31).

<sup>&</sup>lt;sup>18</sup> Full name John Frederick William Herschel, an English astronomer, mathematician, chemist and inventor of photography. His discoveries using sodium thiosulfate still constitute the basis of the stabilisation method of most photography techniques.

<sup>&</sup>lt;sup>19</sup> Full name William Henry Fox Talbot, an English scholar focusing on historical character script, an important photographer and the inventor of the calotype photographic technique, sometimes also called talbotype.

<sup>&</sup>lt;sup>20</sup> This appreciation was expressed by Herschel to the secretary of the French Academy of Science Francois Jean Dominique Arago (1786-1853). PERES, Michael R (ed.). *The Focal encyclopedia of photography: digital imaging, theory and applications, history, and science*. 4th ed. Amsterdam: Elsevier, 2007, p. 28.

<sup>&</sup>lt;sup>21</sup> Max Petzval, the official name Joseph Maxmilian Petzval, was a physicist, mathematician and inventor. He was born in a German teacher's family and grew up in Spiš in Slovakia. He was a member of the Austrian Academy of Science.

<sup>&</sup>lt;sup>22</sup> Full name Armand Hippolyte Louis Fizeau, a French physician.

The peak period of the use of the daguerreotype technology was the period between 1840 and 1865. The second technique, the ambrotype, was developed approximately in 1854 to 1865. For a certain period of time, both techniques were used simultaneously and the cases used were very frequently similar. Lack of knowledge of the characteristic signs of each of these methods may lead to the wrong identification of the technique. It is thus useful to briefly present both these techniques. The daguerreotype is mostly a desk made of silver-covered copper sheet. The silver cover is on the image side, while the copper base, which can be seen on the rear side, is sometimes covered by a tape or by a surface finish, e.g. by wax. If put in a case, the rear part of the daguerreotype cannot be seen. The basic property of a daguerreotype image is the surface, resembling a mirror. A simple identification procedure is to observe the image under ordinary light by the slow turning of the desk. The change of the light reflection means the observed image appears either negative or positive. In comparison with the daguerreotype, an ambrotype is an image on a glass base. It is a collodion emulsion layer, similar to wet negatives, but based on a dark or a black foundation. The image is positive when observed from any angle. The ambrotype may be also mistaken for the ferrotype<sup>23</sup>, if covered with glass. The ferrotype is a photographic technique using an iron sheet with the same collodion emulsion layer (Clark 2014: 14-15).

Another useful identification instrument is the knowledge of the specific degradation manifestations of each of these techniques. The ambrotype and daguerreotype have different manifestations of aging. For a better overview of those issues, these aspects are summarised in the following table:

Technique	Imperfection	Potential causes
Ambrotype	<ul> <li>cracks and peeling of the layer</li> <li>separation or detachment of the underlayer</li> <li>worse image quality</li> <li>discolouration of the image</li> </ul>	<ul> <li>wrongly processed conochor enhusion</li> <li>insufficiently cleaned glass foundation</li> <li>poor quality glass</li> <li>air pollution</li> <li>chemical contaminants</li> <li>degradation of varnish layers due to chemical reactions</li> <li>mechanical and chemical degradation of black foundation components- particu- larly asphalt</li> <li>chemical degradation of silver salts</li> <li>broken glass shards</li> </ul>
	<ul> <li>red and green tint</li> <li>detachment of cover layers on the rear part</li> <li>broken glass, scratches</li> </ul>	

<sup>&</sup>lt;sup>23</sup> The English name of this technique used in Europe is "ferrotype", while the same technique is known as "tintype" in the United States.

Daguerreotype	<ul> <li>tarnish of the image</li> <li>iridescence tint of the image</li> <li>green or blue spots</li> <li>small black spots and particles</li> <li>mould growth on surface</li> <li>cover glass degradation</li> <li>light transparent yellowing, purple</li> </ul>	<ul> <li>surface corrosion - oxidation</li> <li>sulphides with colours</li> <li>crystalline silver sulphide of silver sulphides from photographic process and keeping</li> <li>the effects of silver sulphides worsened by degradation impacts from the case</li> <li>old cover glass can exude hamful chemicals and should be replaced</li> <li>products of the copper desk corrosion leak to the surface in a perforated place of the silver layer</li> </ul>
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## (Anderson 1999: 59)

Both these described techniques were used almost in all parts of the world. Their various types differ by the place of origin, by the casing method and minor details of the production process. The most widespread are two types: the European and the Anglo-American type. Daguerreotypes and ambrotypes that do not fit either of these groups are rare. The Anglo-American type of technique may be considered the most common with regard to the quantity and period of use. On the contrary, the European type of casing is more variable and more interesting for collectors. As indicated by its name, the first-mentioned type spread in the United Kingdom and in the United States. It began to be used apparently after 1846. The parts were put together in the following order: the daguerreotype desk, the metal passe-partout, the cover glass. The whole set was covered by a brass frame called "preserver" or "protector"; the frame margins or flaps were bound and closed the entire package. The whole set was then inserted in the case. The tightness of the process kept the set in the correct place. The daguerreotype cases had mostly a wooden foundation and were covered by buff leather or linen with various scope of decoration. They consist of a lid and a bottom and were closed by different metal mechanisms. The scheme of the set is shown in the following figure.

This image casing process was not new. Similar cases had been used for painted miniatures, which had been protected, like photographs, by insertion in cases. Although the primary purpose of the cases was protection, their decorative purpose began prevailing later. Decorative cases became a fashion accessory. They were sufficiently small, could be carried in pockets or handbags and could be shown at any time to friends or the family.

From the historical development perspective, the popular wooden cases were later replaced by other technologies. Thermoplastic boxes, generally called "Union cases"<sup>24</sup> became common after 1856. The basic production procedure of this plastic substance is the heating of wood chips and sawdust with shellac until it becomes easily moulded.

<sup>&</sup>lt;sup>24</sup> The patent for this new technology was approved on 3 October 1854 to Samuel Peck under the name "Manufacture of Daguerreotype-Cases", US Patent 11,758. HANNAVY, John (ed.). *Encyclopedia of nineteenth-century photography*. New York: Routledge, 2008, p. 1057.



The assembly scheme of the Anglo-American casing of a daguerreotype<sup>25</sup> (Clark 2014).

Union cases were more attractive than wooden cases covered by buff leather because they imitated the style of works of art. It cannot be judged whether the production of thermoplastic cases was more expensive than the production of the classical wooden cases. Despite their significantly more decorative nature, the thermoplastic cases were less in demand due to their bad reputation among customers, being fragile and easily broken. It was found that thermoplastic cases constituted a mere 10% of the total production after 1855. In the case of thermoplastic beautiful – Union case is stored ambrotype with the No. N.01.730, which depicts a woman with children. On the surface of the cap and the bottom of the casing is a beautiful sculpture of Scottish hunters. The thermoplastic cases can be easily identified; they have a smooth surface, deep embossed decoration, absence of seams (links) in corners and are significantly heavier than the wooden cases.

Another production technology of these cases, known as "papier maché", was used from the end of the 1850s – a paper mass produced from various materials and by various methods. The materials were paper, ground wooden chips, sawdust or various blends, all mixed with glue or shellac. The papier maché method was applied only to the embossed space, and the sides of the case continued to be produced from wood. The mixture was pressed in a press and allowed the creation of complex embossed patterns.

After drying, these newly produced cases had the properties of wood, but deeper embossing in comparison with wood and rich artistic patterns. Papier maché may be recognised through the negative embossing of the upper decoration, which appears where the internal stick-on cover of the lid has become detached. Moreover, where the case is broken or cut, a visible structure similar to a chipboard tablet can be seen (Clark

<sup>&</sup>lt;sup>25</sup> The modified casing scheme is taken from the chapter The Case and Its Contents. CLARK, Gary W. Cased Images & Tintypes KwikGuide: A Guide to Identifying and Dating Daguerreotpes, Ambrotypes and Tintypes. San Bernardino. CA: Photo Tree, 2014, p. 2.

2014:2-22). Housing decorated plastic relief "papier maché "is at daguerreotype the No. N.01.729 depisting two Indian women.

The use of these Anglo-American casing types was rather limited in the United Kingdom. This was due to the small number of daguerreotype licence holders. The process was patented in the United Kingdom and the agent of the purchased licence was Miles Berry<sup>26</sup>. His competitor was another English businessman Richard Beard <sup>27</sup>(1801–1885), who purchased the patent directly from Daguerre. This led to business conflict, and the dissemination of the daguerreotype technique was almost prohibitive. The patent expired in 1853, and the number of licences did not increase even after this (Daguerreobase 2014: 23). In the collection are represented daguerreotype made in London two specimens. One is labeled No. N.01.709 (old. No. 1142), which depicts a man with a beard and another No. N.01.726 with a portrait of Kateřina Krákorová.

The invention of daguerreotype spread very quickly in the United States. This was due mainly to the efforts of Samuel Morse<sup>28</sup> (1791–1872), who met Louis Daguerre during his visit to Paris in 1839 and learned the manufacturing process for daguerreotypes from him. His description of this procedure was then published in the New York Observer magazine, thanks to which it became known throughout the territory of the United States of America. The expansion of daguerreotypists was so large that in New York alone there were 85 daguerreotype studios in 1853 (Clark 2014:6). American daguerreotypes are in the collection represented the most. Examples such as the daguerreotype and ambrotype: No. N.01.718 – Vojta Náprstek with binders, No. N.01.717 – Lady in the tasting, No. N.01.729 – Indian women and No. N.01.722 – Lady in shell.

As opposed to the Anglo-American daguerreotypes, the European daguerreotypes are mostly lodged in an open casing in the form of a standing or hanging picture. Such a set is usually composed of the following:

- cover glass clear or coloured on the rear side
- passe-partout made of paper, cardboard or from various combined materials
- daguerreotype desk with various types of clasps
- cardboard or paper at the rear covering the daguerreotype desk
- coating paper or the back part of the frame made of various materials
- closing paper or linen tape
- frame wooden or wooden with a buff leather cover; sometimes replaced by a linen strip

The European method of casing the daguerreotype is not only protective but is also characterised by high-quality aesthetic workmanship. The use of glass-painted back on the rear with golden lines is very attractive. Paper with decorative print is sometimes used for coating. The decorative motives include geometric shapes, schematic flowers and other plant motives. In the collection are some very nice daguerreotypes and ambrotypes made in Europe. The oldest of the daguerreotype image Vojta Náprstek

<sup>&</sup>lt;sup>26</sup> The number of Miles Berry's British Patent was 8194. It was registered in August 1839 in Daguerre's name and Miles Berry became his company's agent in the United Kingdom.

<sup>&</sup>lt;sup>27</sup> Richard Beard was a rich coal merchant and saw a great commercial potential in the photographic industry. For more information about him see: HANNAVY, John (ed.). *Encyclopaedia of nineteenthcentury photography*. New York: Routledge, 2008, p. 126.

<sup>&</sup>lt;sup>28</sup> Full name Samuel Finley Breese Morse. An American sculptor, painter and inventor. His most famous invention is the electric telegraph.

No. N.01.725 from 1846 (1848). Very nice daguerreotype is a passe stored even in a case. The author is a French photographer Sabatier Blot, who is also with Ferdinand Fingerhut pictured. Daguerreotypes of the European type exist in a large scale of colour variants. The usual colour is emerald green, wine red, nut brown and ultramarine blue. Most photographic studios elected their own shape, which was sometimes changed upon request of an important customer (Daguerreobase 2014: 32-33). The following figure shows the usual structure of the European daguerreotype. The structure shown corresponds to the daguerreotype from the collection numbered N. 01. 712.



Structure of the European daguerreotype casing

The above-described types of casing allow the determination of the location where the daguerreotype was made; however, it is often necessary to known more, particularly the date of manufacture and the photo studio. To find such information, it is appropriate to compare the daguerreotype with existing objects in accordance with their characteristic features. Such attributes can be found either by direct observation of the outside appearance, or after dismantling the casing structure. The following properties are compared for the purpose of outside assessment:

- casing type a case or a frame
- casing size and used material
- the type and shape of the passe-partout at the daguerreotype desk
- the type, shape and method of production of the decorative elements textile, metal and other materials
- the studio hallmark
- the legends, owner's notes

More detailed information about the nature of individual parts can be obtained after dismantling the casing, in particular:

- the size and shape of the daguerreotype desk
- the manufacturer's or studio's hallmark on the daguerreotype desk
- information on the rear side of the desk
- the polishing or surface finish method from the side of the image
- the captions and photographer's notes (Kwikguide 3-38)

It is of course inappropriate to dismantle daguerreotype casing without any specific purpose; however, such information is a pleasant bonus in cases where the daguerreotype



The figure shows decorative metal passe-partouts of the Anglo-American casing types, according to their development in time (Clark 2014).



Samples of the labelling of daguerreotype desks. The first mark from the right is the hallmark of the studio, followed by the photograph mark and by a linear accentuation of the hallmark to increase legibility (Clark 2014).

casing must be disassembled, e.g. if restored. The most frequent cause of an urgent restoring intervention is the condition of the cover glass, primarily its corrosion or mechanical damage by breaking, or its absence. Glass corrosion is a degradation process, which is manifested at the beginning by slight iridescence on the glass surface; thereafter, the glass becomes white and the maximum intensity of corrosion gives rise to an alkaline condensate on the inside surface of the glass. During remediation of this problem, a drop of the condensate may fall on the daguerreotype. At first, colour spots appear at the place of contact. Later on, this can lead to the perforation of the silver layer and the release of the copper substrate, which immediately reacts with the alkaline glass corrosion products, giving rise to copper compounds. These new degradation products can be seen by naked eye as green round shapes (Barger 1989).

The foregoing information indicates that plenty of interesting information can be found from thorough examination of individual parts of the Náprstek's Collection. Gradual examination of their physical condition is currently taking place. It has been found to date that the collection contains twenty daguerreotypes, twelve ambrotypes and one slide. The major part of the collection originates from the United States, which is also indicated by the casing form. At the same time, the collection also includes several European type daguerreotypes and ambrotypes with a very interesting form of casing. Following the examination, the identified values should assist further study of this most attractive collection.

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Casing of the Anglo-American ambrotype – No. N.01.722



Casing of the Anglo-American daguerreotype – No. N.01.727



European casing of the daguerreotype – No. N.01.712



European casing of the ambrotype – No. N.01.714