



Swiss Camera Museum – Vevey  
Gustave Eiffel and photography

## Gustave Eiffel and photography

Exhibition open from 12 October 2023 to 28 April 2024

Press release

Downloadable at [www.cameramuseum.ch](http://www.cameramuseum.ch)



Anonymous. Claire Salles in the garden of Villa Claire, Vevey, 1910.  
Credit : Musée d'Orsay, Dist. RMN-Grand Palais/Patrice Schmidt



## Introduction

To mark the centenary of the death of Gustave Eiffel (1832-1923), the museum is presenting a new exhibition of photographs taken in Vevey by the engineer who became universally known for his 300 metres tower. From 1892 onwards, Gustave Eiffel regularly spent his summers in a villa he had acquired at the western end of the town. With his family, he devoted himself to his passion for photography, taking, among other things, magnificent autochromes, the first industrial process for colour photography.

A scientist motivated by technical progress, Gustave Eiffel became interested in photography in the early 1880s, at a time when it was flourishing and widely regarded as a scientific practice. He used it for his private and professional communications, his experiments, his travels and, above all, his family life. A skilled practitioner with training as a chemist at the *École Centrale de Paris*, he prepared his own plates, shot his own images in the darkroom, recorded the technical details of his shots and tested the innovations of the day. He belonged to a club of amateur photographers in France and had taken shares in a photographic company owned by Léon Gaumont.

In addition to the autochromes, the exhibition features black-and-white images of Lake Geneva, the *Fête des Vignerons*, Gustave Eiffel's steam yacht anchored in the harbour of his home in Vevey, and other subjects documented with a great sense of narrative. Gustave Eiffel himself appears in several of the photographs. Clearly, within the extended family, cameras were passed from hand to hand on the instructions of the *pater familias*. This practice makes it difficult to attribute the images with any certainty, and many of them are credited as "anonymous" or "Gustave Eiffel's entourage".

In parallel with the exhibition, the *Musée historique de Vevey* is presenting the results of its research into "Villa Claire", Gustave Eiffel's home in Vevey.



## **Gustave Eiffel (1832 – 1923)**

Engineer, entrepreneur, scientist, figure of the industrial revolution, champion of the notion of progress, "the iron magician" had an extraordinary destiny.

Gustave Eiffel was born on 15 December 1832 in Dijon. His father was a career military officer and his mother ran a timber and coal business. Of distant German origin, the family name was "Bönickhausen dit Eiffel", a surname that the future engineer simplified to "Eiffel" because of anti-German resentment in France at the time. After passing his baccalauréat in Dijon, Gustave Eiffel failed to gain entry to the École polytechnique before enrolling at the École centrale des arts et manufactures. He specialised in chemistry with the intention of taking over the dye factory of one of his uncles. A family quarrel put an end to his plans.

On his mother's advice, Gustave Eiffel turned to metal construction. The technique was booming thanks to the expansion of railway networks and new steel manufacturing methods. In 1855, the young man joined the company of Charles Nepveu, a specialist in compressed-air river foundations, and then went on to work for the Compagnie belge de matériels de chemin de fer. His talents as an engineer and organiser, his interpersonal skills and his great capacity for work earned him the job of managing the construction of the Saint-Jean railway bridge, which spans the Garonne River in Bordeaux by 500 metres. The work is a technical feat with many innovations.

In 1862, Gustave Eiffel married Marguerite Gaudalet in Dijon. The couple had five children, three girls and two boys. Marguerite died prematurely in 1877. Gustave Eiffel's eldest daughter, Claire, took on the role of housewife.

Following the success of the Saint-Jean bridge in Bordeaux, Gustave Eiffel went on to build a series of bridges, viaducts and footbridges, and soon steel-framed buildings. The engineer opened his own company in 1866, acquiring vast premises in Levallois-Perret on the outskirts of Paris. The company made a name for itself in France and abroad. Gustave Eiffel was a shrewd businessman. When tenders were invited, he was quicker and cheaper than his competitors, standardising the components of his projects as much as possible. Structures were prefabricated in Levallois, then shipped throughout France and the rest of the world. Deadlines are scrupulously respected. Thanks to his majestic arches, Gustave Eiffel built the Maria Pia railway bridge in Porto, Portugal, and the Gabarit viaduct in the Cantal region of France. With his team, he designed the metal framework of the Statue of Liberty in New York. The engineer knew how to surround himself with excellent collaborators, including the Franco-Swiss engineer Maurice Koechlin, who had trained at the Zurich Polytechnic.



In 1884, Maurice Koechlin signed the first sketch of "The 300 metres tower", then proposed the idea to Gustave Eiffel with his colleague Emile Nouguier. Initially reluctant, Eiffel changed his mind, modified the plans and promoted the project to the organisers of the Universal Exhibition in Paris in 1889. Built in two years and financed almost entirely by the engineer himself, the Eiffel Tower was a huge popular success, and even today remains the symbol of an entire city and country. Convicted before being exonerated in the Panama Canal scandal, to which he contributed with a system of locks, Gustave Eiffel retired from business in 1893. From then on, he devoted himself to scientific research, especially in aerodynamics and meteorology. He died in Paris on 28 December 1923 at the age of 91.

#### Gustave Eiffel and Switzerland

Gustave Eiffel loved Switzerland. In 1854, as a student, he set off on a tour of the country with friends. In 1862, he studied on site at the great suspension bridge over the Sarine in Fribourg. In 1874, he travelled along Lake Geneva with his wife Marguerite and daughter Claire. In the early 1880s, he stayed several times in Choëx, above Monthey, in the company of Frédéric-Auguste Bartholdi, sculptor of the Statue of Liberty in New York. No doubt influenced by his colleague Maurice Koechlin, a Franco-Swiss engineer who had married a woman from Vevey, Gustave Eiffel fell under the spell of Vevey. He bought a property at the western end of the town, now the headquarters of Nestlé. The deed of sale was signed at the beginning of 1893, just as Gustave Eiffel was preparing to hand over his company following the Panama Canal scandal. From then until his death in 1923, the engineer regularly spent his summers at "Villa Claire", named in honour of his eldest daughter. The house was extended with the addition of a hall and a veranda. A photo laboratory was also installed.

Far from being isolated, Gustave Eiffel took part in local life with his family. He attended the Fête des Vignerons in 1905 (he had also seen the previous edition in 1889). He was an honorary member of several local societies. Every year, he donated money to charities. Every 12 August, on Saint Clare's Day, the master of the house invites the population to a Venetian festival, with fireworks, aubades and lake jousts. A small harbour was built in front of the property. But it was in the larger harbour of the neighbouring Grand Hôtel that Gustave Eiffel anchored the Walkyrie, his 19-metre, 28-tonne steam yacht. After the engineer's death, the villa remained in his family for several decades. It was sold to Nestlé in 1978, then demolished the same year to make way for the extension of the multinational's headquarters. It occupied the current site of the food group's WellNess centre.



## Gustave Eiffel and photography

In the second half of the 19th century, photography was often practised by informed amateurs interested in optics and chemistry. It was an age of machinists and technophiles, driven by an enthusiastic faith in progress. Having trained as a chemist at the École Centrale de Paris, Gustave Eiffel found photography to be a technique that resonated with his personal and professional interests.

### An expert photographer

Gustave Eiffel began to take a personal interest in photography in his fifties, in the early 1880s. He practised it even more when he retired in 1893, setting up darkrooms at his various properties, keeping abreast of new developments, seeking the best advice and experimenting with the processes that appeared on the market. Like other techniques at the time, such as metallurgy, photography has evolved considerably in just a few decades. The advent of the shutter and the improved photosensitivity of emulsions made it possible to capture life and movement instantaneously. Cameras are more compact and lenses of better quality. Gustave Eiffel used his cameras extensively during his excursions, travels and leisure activities. As an expert photographer, as we would say today of a technically-savvy amateur, he recorded the location, date, state of the sky, type of lens, aperture, exposure time and the compounds used for developing alongside his photographs. He prepares his own plates, constantly striving to improve his results. For him, photography is an experiment in the scientific sense of the term.

It was also a passion that he shared with his family, and even a way of strengthening blood ties. Gustave Eiffel introduced his children and his son-in-law Adolphe Salles to the technique, bought them equipment and encouraged them to try out innovations such as autochrome - the first industrial colour photographic process - from 1910. The camera often passed from hand to hand within the family circle. As a result, it is impossible today to credit each photograph with any certainty, especially as Eiffel rarely signed his own images. The consensus is that the engineer was the author of most of the photographs preserved in his name, particularly at the Musée d'Orsay, whether he pressed the shutter himself or delegated the task to someone close to him. Where necessary, he called on professionals to document his social life and his properties, such as Charles Schramm in Vevey and Arnold Casimir Roessinger-Jeanneret in Montreux.

Gustave Eiffel was a good amateur photographer, nothing more, nothing less. He was constantly improving his skills, showed a definite sense of narrative, and occasionally took a series of images that gave the impression of being one of a kind. originality to his subjects. He made the most of autochrome by having his close friends and family pose next to bunches of flowers, incorporating colourful accessories and favouring warm light. He composed his family albums himself, with great graphic care, carefully selecting the best shots. He made numerous copies of his photos to share with others.



A man of circles and connections, Gustave Eiffel followed the same approach to photography. He joined forces with Léon Gaumont, who was also a cinema pioneer, to set up the Comptoir Général de Photographie, a company selling photographic equipment. He joined the Société d'excursion des amateurs de photographie, founded by his friends Albert Londe, a pioneer in medical photography, and Gaston Tissandier, editor-in-chief of the magazine La Nature, which published numerous articles on the rapid development of photographic technique.

### **A communication medium**

From the outset, Gustave-Eiffel had his works photographed to promote them in his professional environment and to the press. Attentive to his own image, and even more so to his reputation as an entrepreneur who succeeded in almost everything, he had many posing sessions with the best photographers of the time, including Nadar. The Musée d'Orsay holds around a hundred different portraits of Gustave Eiffel. In a new practice at the time, his business card was adorned with his photograph and used extensively by the person concerned. The Félix Potin shops included a portrait of Gustave Eiffel in their advertising albums of "Contemporary Celebrities", whose cards were offered with chocolate plates. Thanks to a medium in full expansion at the time, the engineer proved to be a skilful promoter of his figure as a "great man".

The medium also serves its achievements. And how: then as now, the Eiffel Tower remains by far the most photographed monument in the world. At the time, shots of the vertiginous bridges, lacework of iron spanning rivers and mountains, were popular successes. There was a deep kinship between two then-new techniques, photography and metal construction. They were fast, precise, simple, clear and cheaper than their direct competitors. In their early days, both were discredited by the elite, who preferred painting and stone respectively. Much better than drawing or engraving, black and white photography brought out the purity and elegance of the arches, criss-crossing, horizontal and vertical slopes. With its mathematical precision, photography is the perfect means of representing the engineer's art.

### **Photography and the sciences**

Astronomy, medicine, physics, meteorology and aerodynamics: Gustave Eiffel was well aware of the extent to which photography advanced scientific research in the second half of the 19th century. He observed the astrophotographic work of his friend Jules Janssen, who was able to determine the Earth's distance from the Sun or conclude that Venus had an atmosphere.

Another of his relatives, Albert Londe, was the pioneer of medical photography. On another level, this time strategic, Gustave Eiffel encouraged trials of telephotography from the top of his 300-metre tower. In 1896, Captain Bouttieux took good photos of the Paris conurbation using a telephoto lens with a focal length of 1 metre.



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When he retired in 1893, Gustave Eiffel became a full-fledged scientist and used photography in his own research. He developed a heliograph that used photographic paper rather than aniline-coloured sheet: the process greatly improved the accuracy of this sunlight-measuring device. He also had his experiments in aerodynamics photographed extensively, both his research into air resistance and his work on the nascent field of aviation. For educational purposes, his scientific works were generous with photographic images. Gustave Eiffel often depicted himself in these illustrations. This was clearly a way of demonstrating the seriousness and success of his scientific work, particularly after the public disgrace that followed the Panama Canal affair.



## Autochrome

Photography was born in black and white, due to a lack of technical capacity to reproduce colours. Throughout the 19th century, researchers tried to fill this gap by additive synthesis (adding coloured light) or subtractive methods (absorbing at least three colours to obtain a chromatic range). The French physicist Gabriel Lippmann won a Nobel Prize for his discovery of an interferential colour reproduction system. But his complex invention, with uneven results, remained confined to a very small circle of users.

It was up to the brothers Auguste and Louis Lumière, in Lyon, to come up with the first industrial colour photography process. Autochrome was patented in 1903 and marketed in 1907.

Although it was expensive and not always easy to use, particularly when it came to calculating exposure times, it enjoyed international success, which continued until the appearance of the first colour films from Kodak and Agfa in the 1930s. For more than two decades, the Lumière factories produced several million autochromes in different formats.

Based on the principle of the additive method, or trichrome synthesis, the autochrome technique takes advantage of an organic material: tiny grains of potato starch. These grains are coloured red-orange, green and blue-violet. They are deposited on a glass plate before receiving a layer of insulating varnish, followed by a layer of photosensitive emulsion.

Once printed in the camera, the plate is usually sent back to the Lumière laboratories to be developed. The positive image can then be projected onto a screen using a backlighting system.

The luminosity of autochrome slides, their subtle granulation and their sumptuous colours have often brought the process closer to painting, for example Impressionism and Pointillism. A century later, autochromes are still instantly recognisable.

### References:

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“Eiffel”, Michel Carmona, Fayard, 2002.

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### Press kit

Downloadable from [www.cameramuseum.ch](http://www.cameramuseum.ch)

### Captions for copyright-free photographs :

1. Anonymous. Claire Salles in the garden of Villa Claire, Vevey, 1910.  
Credit: Musée d'Orsay, Dist. RMN-Grand Palais/Patrice Schmidt.
2. Anonymous. The photographer photographed (G. Eiffel and his camera), 1890-1892.  
Credit: Musée d'Orsay, Dist. RMN-Grand Palais/Alexis Brandt.
3. Anonymous. Fête des Vignerons, Vevey, armaillis troupe, 1905.  
Credit: Musée d'Orsay, Dist. RMN-Grand Palais/Alexis Brandt.
4. Anonymous. Villa Claire, Vevey, 1910 (G. Eiffel on the left).  
Credit: Musée d'Orsay, Dist. RMN-Grand Palais/Patrice Schmidt.
5. Anonymous. Gustave Eiffel in front of the Villa Claire, Vevey, ca. 1910.  
Credit: Musée d'Orsay, Dist. RMN-Grand Palais/Patrice Schmidt.
6. Alain Gavillet. The Villa Claire photo laboratory, Vevey, 1971.  
Credit: Alain Gavillet/Archives Yves Debraine.

### Short text, approx. 750 characters

To mark the centenary of the death of Gustave Eiffel (1832-1923), the museum is staging a unique exhibition of photographs taken in Vevey by the engineer, universally renowned for his 330-metre tower. From 1892 onwards, Gustave Eiffel regularly spent his summers in a villa he had acquired at the western end of the town. With his family, he devoted himself to his passion for photography, taking, among other things, magnificent autochromes, the first industrial process for colour photography. A scientist motivated by technical progress, Gustave Eiffel became interested in photography in the early 1880s, at a time when it was flourishing. He used it for his private and professional communications, his experiments, his travels and, above all, his family life.

If you need more information, please contact us. Tel : + 41 21 925 34 80

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Open Tuesdays to Sundays from 11.00 to 17.30 and bank holidays.