

THE THREE LUMIÈRE CINÉMATOGRAPHE CAMERAS

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Fig. 1: The Lumière Cinématographe Camera No. 1 (Musée des Arts et Metiers, Paris)



Fig. 2: The Lumière Cinématographe Camera No. 2, manufactured by Jules Carpentier, Paris (courtesy Uwe Breker, Köln)



Fig. 4: Lumière's Cinématographe Camera No. 3 for wide film (4.5 x 6.0cm frame) (courtesy of Laurant Mannoni, Cinémathèque Française)

HAVING WITNESSED EDISON'S KINETOSCOPE in a shop on a Paris boulevard in 1894, the Lumière brothers were inspired to develop the idea and soon succeeded in their aim.

Their father Claude Antoine Lumière (1840–1911) had founded a photographic business in about 1861, which expanded to become one of the largest manufacturers of photographic materials in France. So the brothers had the advantage of having a large organisation to help them.

The first outfit was made in 1894 in the Lumière factory in Lyon by their chief mechanic M. Charles Moisson, with the images recorded on photographic paper manufactured there at that time. This was substituted later by base film from the New York Celluloid Co., which was coated with sensitive emulsion in the Lumières' own machines and made into rolls 17 or 18 metres in length with two circular holes per frame. This first Lumière camera (No. 1) (Fig. 1) was first demonstrated in February 1895 and again during the course of a lecture at the Société d'Encouragement pour l'Industrie Nationale in Paris in March, showing the only Lumière film that had been taken at that time of employees leaving the Lumière factory. There Louis Lumière met Jules Carpentier, member of the Scientific Academy and a well-known manufacturer of precision instruments, who immediately proposed to undertake the manufacture of a series of Lumière Cinématographes. This offer was accepted and the Carpentier factory forthwith made much of the apparatus, which could be used as a camera, projector and printer.

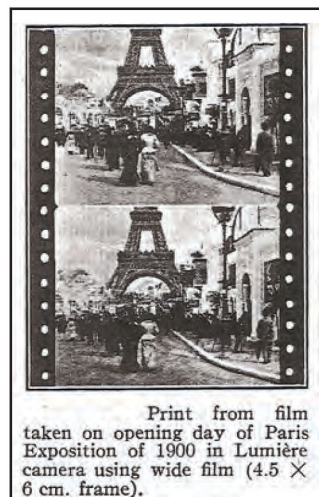
This second camera No. 2 (Fig. 2) was first publicly shown to a paying audience on 28 December 1895 in the Salon Indien, in the basement of the Grand Café, Boulevard des Capucines, Paris.

The Lumières made one other camera, No. 3, specially designed to accommodate a large film, 4.5 x 6.0cm frame, thought necessary for presentation on an enormous screen to be erected at the Paris Exposition of 1900.

The camera was constructed by Jules Carpentier, under the personal supervision of Louis Lumière. From evidence provided by the publication of an illustration of a couple of frames from a film taken with this camera it employed a unique pin-wheel sprocket (Fig. 3). This must have been thought necessary to reduce tension on such a large-format film by the claw movement used to advance the frame, thus reducing the risk of torn sprocket holes.

Laurent Mannoni of the Cinémathèque française in Paris informs me that this camera is now in their archives and has kindly sent me an illustration (Fig. 4).

The Lumière Brothers, who had sent their own trained operators to film and exhibit their films in numerous countries around the world using the Lumière Cinématographe, ceased all film production in 1905. Their patents were sold off to Charles Pathé (1863–1957), who further developed the Lumière camera, retaining certain features of the original, becoming one of the most successful movie cameras during the early years of film production, being employed in all the leading film studios throughout the world, including Hollywood itself.



Print from film taken on opening day of Paris Exposition of 1900 in Lumière camera using wide film (4.5 x 6 cm. frame).

Fig. 3: The large-format film used in the Lumière Cinématographe Camera No. 3. Note the numerous pinhole perforations for use with a pin-wheel unique to this model. (From the article by Louis Lumière for the Journal of the SMPE, December 1936)

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