

The Lumiere Brothers: Auguste and Louis

The Lumière brothers, Auguste and Louis, were both technically minded and excelled in science subjects, being sent to Technical School.

Auguste and Louis became interested in their father, Antoine's, business in photography. As the business grew, Antoine was invited to a demonstration of Edison's Peephole Kinetoscope in Paris. He was excited by what he saw and returned to Lyons. He presented his son Louis with a piece of Kinetoscope film, given to him by one of Edison's concessionaires and said, "This is what you have to make, because Edison sells this at crazy prices and the concessionaires are trying to make films here in France to have them cheaper".

The brothers worked through the Winter of 1894, Auguste making the first experiments. Their aim was to overcome the limitations and problems, as they saw them, of Edison's peephole Kinetoscope. They identified two main problems with Edison's device: firstly its bulk - the Kinetograph - the camera, was a colossal piece of machinery and its weight and size resigned it to the studio. Secondly - the nature of the kinetoscope - the viewer, meant that only one person could experience the films at a time.

By early 1895, the brothers had invented their own device combining camera with printer and projector and called it the Cinématographe. Patenting it on February 13th 1895, the Cinématographe was much smaller than Edison's Kinetograph, was lightweight (around five kilograms), and was hand cranked. The Lumières used a film speed of 16 frames per second, much slower compared with Edison's 48 fps - this meant that less film was used and also the clatter and grinding associated with Edison's device was reduced.

Perhaps most important was Louis's decision to incorporate the principle of intermittent movement using a device similar to that found in sewing machines. This was something Edison had rejected as he struggled to perfect projection using continuous movement. The brothers kept their new invention a closely guarded secret with Auguste organising private screenings to invited guest only.

Louis photographed the world around him and some of his first films were 'actuality' films, like the workers leaving the factory. The brothers began to open theatres to show their films (which became known as cinemas). In the first four months of 1896 they had opened Cinématographe theatres in London, Brussels, Belgium and New York.