



Discovery

Photography Leaps into the Late 19th Century: Sept. 4, 1888

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General Note



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1. HISTORY & PHOTOGRAPHY

George Eastman (July 12, 1854 – March 14, 1932) was an American innovator and entrepreneur who founded the Eastman Kodak Company and invented roll film, helping to bring photography to the mainstream. Eastman became interested in photography in his early 20s when, working as a bank clerk; he bought some photographic equipment for a vacation he ended up not taking. While instantly enamored of the medium, he was less enthusiastic about the cumbersome and limiting nature of wet-plate technology. He decided to simplify things. Eastman built on another existing photographic technology, gelatin emulsion, which caused coated plates to remain light-sensitive even after they were dry, meaning they could be exposed at the photographer's leisure. Eastman continued working at the bank while devoting his evenings to experimentation. By 1880 he had devised his own dry-plate formula and went into the photographic business full time. As he ran a young company struggling to survive, Eastman began looking for new exposure methods that would render glass plates obsolete and bring photography to the masses. The first result was a light-sensitive, gelatin-coated paper that could be rolled onto a holder. Eastman kept experimenting until he hit on the solution: cellulose. It produced a cleaner image than paper and was easily spooled onto a film roller, making it compact. It proved to be the birth of modern camera film. By 1888, he was ready to patent the first camera using that film.

3. KODAK

As for the word Kodak, which has become one of the most recognizable brand names ever, there is no special meaning attached to it. Eastman explained its origin: "I devised the name myself. The letter 'K' had been a favorite with me -- it seems a strong, incisive sort of letter. It became a question of trying out a great number of combinations of letters that made words starting and ending with 'K'. The word 'Kodak' is the result". He and his mother devised the name Kodak with an Anagrams set. Eastman said that there were three principal concepts he used in creating the name: it should be short; one cannot mispronounce it, and it could not resemble anything or be associated with anything but Kodak.

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4. GEORGE EASTMAN'S CONTRIBUTION AND INVENTIONS

In 1880 George Eastman (1854-1932) perfected a process for making gelatin dry plates (invented in 1871 by Richard Maddox) for photography that were manufactured by The Eastman Dry Plate and Film Company. George Eastman founded the Eastman Kodak Co. (1881) and invented the roll paper film (1885) and celluloid film in 1889 which brought photography to everybody. He was an avid photographer and became the founder of the Eastman Kodak company.

4.1. George Eastman and the Kodak Camera

"You press the button, we do the rest" promised George Eastman in 1888 with this advertising slogan for his Kodak camera. He wanted to simplify photography and make it available to everyone, not just trained photographers. In 1883, Eastman announced the invention of photographic film in rolls. Kodak the company was born in 1888 when the first Kodak camera entered the market. Pre-loaded with enough film for 100 exposures, the Kodak camera could easily be carried and handheld during its operation. After the film was exposed (all the shots taken), the whole camera was returned to the Kodak company in Rochester, New York, where the film was developed, prints were made, new photographic film was inserted, and then the camera and prints were returned to the customer.

4.2. Patent Suits

On April 26, 1976, one of the largest patent suits involving photography was filed in the U.S. District Court of Massachusetts. Polaroid Corporation, the assignee of numerous patents relating to instant photography, brought an action against Kodak Corporation for infringement of 12 Polaroid patents relating to instant photography. On October 11, 1985, after five years of vigorous pretrial activity and 75 days of trial, seven Polaroid patents were found to be valid and infringed. Kodak was out of the instant picture market leaving customers with useless cameras and no film.

4.3. Patent

In September 4, 1884, Eastman registered the trademark *Kodak*, and received a patent (388850) for the first film in roll form to prove practicable. He had been tinkering at home to develop it. In 1888 he perfected the Kodak camera, the first camera designed specifically for roll film. In 1892, he established the Eastman Kodak Company, in Rochester, New York. It was one of the first firms to mass-produce standardized photography equipment. The company also manufactured the flexible transparent film, devised by Eastman in 1889, which proved vital to the subsequent development of the motion picture industry. In 1936, Kodachrome was developed by Eastman Kodak, the first color multi-layered color film.

4.4. Eastman Kodak Company

Commonly known as Kodak, is an American multinational imaging and photographic equipment, materials and services company headquartered in Rochester, New York, United States and incorporated in New Jersey. It was founded by George Eastman in 1889. Kodak is best known for photographic film products. During most of the 20th century Kodak held a dominant position in photographic film, and in 1976 had a 90% market share of photographic film sales in the United States. The company's ubiquity was such that its tagline "Kodak moment" entered common lexicon as a personal event that demanded to be recorded for posterity. Kodak began to struggle financially in the late-1990s as a result of the decline in sales of photographic film and its slowness in transitioning to digital photography, despite having invented the core technology used in current digital cameras. 2007 was the most recent year in which the company made a profit. As part of a turnaround strategy, Kodak focused on digital photography and digital printing and attempted to generate revenues through aggressive patent litigation. In January 2012, Kodak filed for bankruptcy protection. In February 2012, Kodak announced that it would cease making digital cameras, pocket video cameras and digital picture frames and focus on the corporate digital imaging market. In August 2012, Kodak announced it is planning to sell film, commercial scanners and kiosk divisions. Motion Picture Film will remain Kodak owned.

4.5. Rivalry with Fujifilm

Japanese competitor Fujifilm entered the U.S. market (via Fuji Photo Film U.S.A.) with lower-priced film and supplies, but Kodak refused to believe that American consumers would ever desert its sacred brand. Kodak passed on the opportunity to become the official film of the 1984 Los Angeles Olympics; Fuji won these sponsorship rights that gave them a permanent foothold in the marketplace. Fuji opened up a film plant in the U.S. and its aggressive marketing and price cutting began taking market share from Kodak. Fuji went from a 10% share in the early 1990s and from 1993-1997 that grew to 17%. Meanwhile, Kodak made little headway in Japan, the second-largest market for photo film and paper after the United States. In May 1995, Kodak filed a petition with the US Commerce Department under section 301 of the Commerce Act arguing that its poor performance in the Japanese market was a direct result of unfair practices adopted by Fuji. The complaint was lodged by the United States with the World Trade Organization. On January 30, 1998, the WTO announced a "sweeping rejection of Kodak's complaints" about the film market in Japan. Kodak's financial results for the year ending December 1997 showed that company's revenues dropped from \$15.97 billion in 1996 to \$14.36 billion in 1997, a fall of more than 10%; their net earnings went from \$1.29 billion to just \$5 million for the same period. Kodak's market share plunged from 80.1% to 74.7% in the United States, a one year drop of five percentage points that had observers suggesting that Kodak was slow to react to changes and underestimated its rivals. Although from the 1970s both Fuji and Kodak recognized the upcoming threat of digital, and although both sought diversification as a mitigation strategy, Fuji was more successful at diversification.

4.6. New strategy of Kodak

Kodak then began a strategy shift. Previously Kodak had done everything in-house, but CEO Antonio Perez shut down film factories and eliminated 27,000 jobs as it outsourced its manufacturing. Perez invested heavily in digital technologies and new services that capitalized on its technology innovation to boost profit margins. He also spent hundreds of millions of dollars to build up a high-margin printer ink business to replace shriveling film sales. Kodak's ink strategy rejects the razor and blades business model used by the dominant market leader Hewlett Packard in that Kodak's printers are expensive but the ink is cheaper. As of 2011, these new lines of inkjet printers are said to be on verge of turning a profit, although some analysts are skeptical as printouts have been replaced gradually by electronic copies on computers, tablets, and smart phones. Home photo printers, high-speed commercial inkjet presses, workflow software and packaging are viewed as the company's new core businesses, with sales from those four businesses projected to double to nearly \$2 billion in revenue in 2013 and account for 25 percent of all sales. Kodak has also turned to aggressive patent litigation in order to generate revenue. In 2010, it received \$838 million from patent licensing that included a settlement with LG. In 2011, despite the turnaround progress, Kodak rapidly used up its cash reserves, stoking fears of bankruptcy; it had \$957 million in cash in June 2011, down from \$1.6 billion in January 2001. In 2011, Kodak reportedly explored selling off or licensing its vast portfolio of patents in order to stave off bankruptcy. By January 2012, analysts suggested that the company could enter bankruptcy followed by an auction of its patents, as it was reported to be in talks with Citigroup to provide debtor-in-possession financing. This was confirmed on January 19, 2012, when the company filed for bankruptcy protection and obtained a \$950 million, 18-month credit facility from Citigroup to enable it to continue operations. Under the terms of its bankruptcy protection, Kodak currently has a deadline of February 15, 2013 to produce a reorganization plan.

5. INFIRMITY AND DEATH

On March 14, 1932, Eastman died by suicide with a single gunshot to the heart, leaving a note which read, "To my friends: my work is done. Why wait?" His funeral was held at St. Paul's Episcopal Church in Rochester; he was buried on the grounds of the company he founded at Kodak Park in Rochester.

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