

The van Veldhoven Photographic Equipment Collection

The Magic Lantern Exhibit

From magic lantern to the slide projector



CURAÇAO
INTERNATIONAL
FILM FESTIVAL
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© Michèle van Veldhoven
mvanveldhoven@gmail.com

A short history of the magic lantern

The history of the magic lantern can be traced as far back to 1420 to a drawing by Giovanni de Fontana a Venetian physician and engineer who drew a woman holding something that looks like a lantern. A devilish character seen inside the lantern is being projected. This demonic theme sets the tone that was associated with magic lanterns a device that displayed diabolic or ghostly images on objects to instill fear to its viewers.

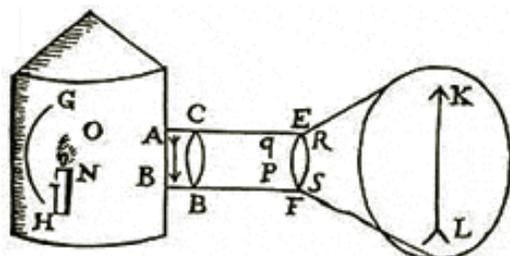


Drawing of a magic lantern held by a woman projecting a devilish creature. Giovanni de Fontana 1420 from his book *Belliarum instrumentorum liber cum figuris*

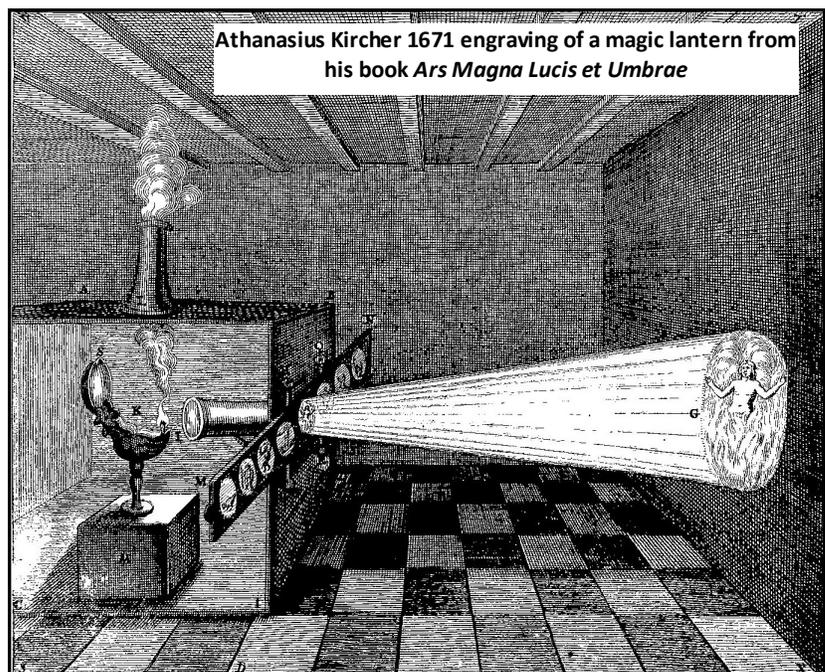
There is an ongoing discussion about who actually built the first magic lantern. Even though many scientific minds worked on the problem of projecting an image, it was not until well into the 1600's that there is proof that a working device was actually built. Giovanni della Porta describes such a device in his book of 1558. He writes "That by night an image may be seen in a chamber". Athanasius Kircher a German Jesuit scholar in Rome took della Porta's idea and improved upon it. He is believed to have projected a slide show with his device around 1642. However in his book of 1671 there is an engraving of a magic lantern that appears to be technically incorrect. The transparent slide is on the wrong side of the lens. Due to this flaw there is considerable doubt if he really was the first to build a magic lantern. In the meantime scholars like Christiaan Huygens a Dutch physicist and a Danish mathematician Thomas Rasmussen Walgensten started developing magic lanterns of their own. The most widely accepted theory is that Huygens developed the original device in the late 1650s. From correspondence between Christiaan Huygens and his father, we learn that his father had asked Christiaan to send him a lantern so that he could frighten his friends. Christiaan wrote to his brother imploring him to please remove the lens he didn't want his father to belittle his lantern.

It was Thomas Walgensten who gave the lantern its name *Laterna Magica*. Walgensten also realized the artistic and economical value of the magic lantern. He traveled around Europe demonstrating and selling his lanterns.

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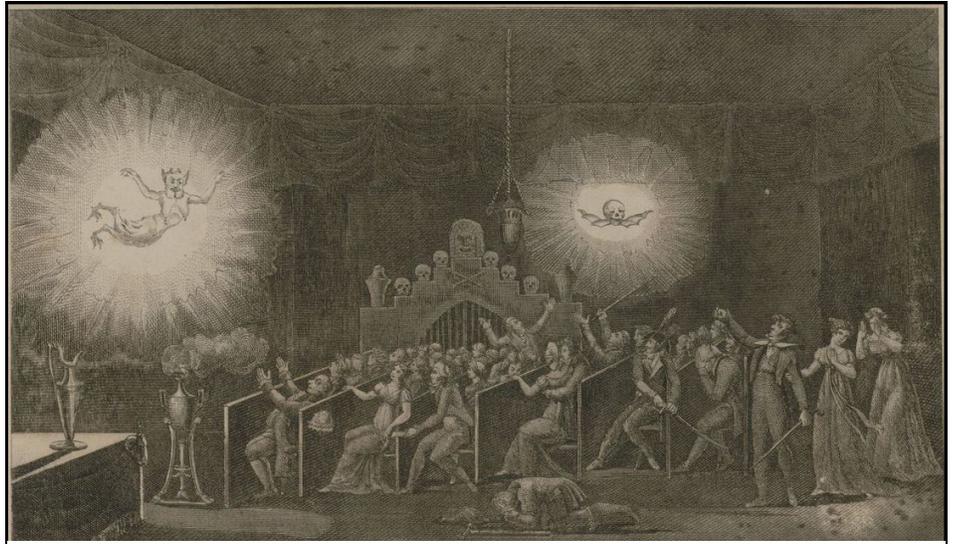
Walgensten's *Laterna Magica* 1665 illustrated in De Charles 1674 *Cursus Mathematicus*. One candle provides light needed along with a reflecting mirror for added brilliance.



Athanasius Kircher 1671 engraving of a magic lantern from his book *Ars Magna Lucis et Umbrae*

From the 18th century onwards hundreds of people were involved in the development of the lantern and its accessories. Lenses, mirrors and especially light sources improved and projectionist could provide shows to larger audiences.

By the late 18th century the magic lantern was used by magicians and charlatans conjuring up images of spirits on smoke. The audiences of that time were obsessed with the bizarre and the supernatural. The illusionists used the magic lantern to trick people into thinking that they had summoned up spirits. Some of these shows were closed by authorities due to the paranoia they incited.



Robertson's Phantasmagoria projected on smoke from coal burning in braziers Title page from the *Memoirs an impression of a phantasmagoric séance Paris 1797*

These horror shows were known as phantasmagoria shows and were refined by Etienne-Gaspard Robert (Robertson), he began experimenting in the 1780's with conjuring up spirits, phantoms, skeleton and such, projecting these figures onto gauze screen. The images seemed to float in air and frighten the audience. Robertson had created a spectacle that caused his customers to faint. He advertised that doctors were on hand at all his performances

During the 18th and 19th centuries traveling showman with lanterns traveled around the countryside from town to town giving shows with small tin lanterns. For a few pennies these lanternist delighted both children and adults with the magic of projection.



Traveling showman with magic lantern on his back

With the onset of brighter light sources magic lantern production swelled to a very large industry both in Europe and North America. The British produced beautifully crafted and optically sophisticated magic lanterns and very few toy lanterns. Germany was best known for producing a wonderful variety of children's toy magic lanterns. Most of these toy lanterns were manufactured in Nuremburg by one of several makers. The most commonly known: Ernst Planck (E.P), Johannes Falk (J.F.) Max Dannhorn (M.D.), Jean Schoenner (J.S.) and Gebruder Bing (GBN). The Americans were better known for their professional large format lanterns. Of these the Balopticons of Bausch & Lomb were very popular.

The larger more complex magic lanterns produced largely mid to late 1800's were used by professional showman, universities, churches, science societies and lecturers.

Some magic lanterns were equipped with more than one projection lens, two and sometimes three lenses. Two or three lenses arranged either vertical or horizontal simply allowed the projectionist to "dissolve" from one image to another without going to total darkness or flash of light between slides.

With the 20st century approaching and the new technical innovations added to lanterns, Toy magic lanterns remained popular, but by the late 1920s most toy companies dropped them from their catalogues because of declining sales. Professional lantern projectors using glass slides remained popular into the 1940s when the smaller, more compact 35mm slide format replaced them.

The slide projector and its slide shows were a cultural product of the mid 20th century. Get-togethers with family, friends and neighbors to watch photos of family vacations, reunions and parties were a social event.

The slide projector was also the presentation method of choice when visual media needed to be presented to a large group for business and educational presentations. Slides were a perfect presentation tool, as long as one remembered to insert the slide correctly so that images were not inverted or reversed and dropping a carousel tray was disastrous.

With the onset of the computer and digital images, visual presentations became easier and cheaper, the slide projector and the slide show presentations were replaced by PowerPoint presentation shown on a beamer, a projector designed to link to a computer.

Illumination

The earliest magic lanterns used a candle as the light source, but candlelight could provide only enough illumination for the faintest shows. Oil lamps of various types soon replaced candle light. Animal and vegetable oils were the primary light source for optical projection. The use of a chimney also created brighter light. It created an updraft of air which in turn increased oxygen, and thus producing a brighter flame and reduced flickering from drafts.

During the second half of the 19th century with the introduction of the kerosene lamp, the magic lantern had a huge surge in popularity. The magic lantern became familiar in households as a means of entertainment and to the public as an instruction tool. Single wick burners were common in the inexpensive home projectors but there soon developed a demand for brighter light, especially for classrooms, churches and lecture halls. Two wick burners lead to three, four and five wick burners in response to this demand.



For large lecture halls even the five wick burners could not provide enough light. This is when the limelight entered as a light source for the magic lantern. Limelight is an intense light source created when an oxyhydrogen flame is directed at a cylinder of calcium oxide. The term “in the limelight” originated from the use of these lights to illuminate solo performers on theater stages. Lanternists had to manufacture their own oxygen and hydrogen reservoirs, which originally were rubber bags which were placed on the floor under the lantern. Small boys were hired to sit on these bags to provide pressure but this was a hazardous procedure and bags did explode sending the poor boy flying.

Once electricity came into general use the carbon arc light became the preferred method of projecting in large auditoriums. Due to extreme brightness of the arc lamp it remained in use well into 70s for motion picture projectors in cinemas. For the smaller projectors the incandescent light bulb such as Mazda lamps was preferred for their safety and ease of use. With the introduction of the smaller, brighter and more efficient halogen lamps in the 1960s these quickly became the favorite light source for the smaller projectors.

Slides

The first slides were made of glass with hand painted images. These were expensive and time consuming to produce. With new technology of putting lithographic pictures on glass the slides were easier and cheaper to produce in large quantities. By the end of the 19th century when photographic process became reliable, photographic slides became available these were first on glass and later film mounted in a frame.



Toy Magic Lanterns

The major supplier of toy magic lanterns from the mid nineteenth century through the turn of the century was Germany. Due to German economical attitudes towards her manufacturing firms, the companies were able to supply consumers with quality products at an inexpensive price even at a lower cost than the local companies could produce. Nuremberg flooded the market with inexpensive magic lanterns and chromolithographic slides. These companies also profited from the high quality of German optics.

Jean Schoenner

The Jean Schoenner firm started in 1875 with three skilled assistants and a painter for glass slides. Although model steam engines were the major seller of the Jean Schoenner toy company, they also had a good assortment of magic lanterns and slides. The logo of Jean Schoenner was a star, a wing attached to a wheel and the initials J.S. inside an oval.

Label from Jean Schoenner magic lantern box, showing characteristic trademark and award medals from various world's fairs and trade fairs



1. Magic Lantern Horizontal Barrel 10 in

Manufacturer: Jean Schoenner

Nationality: German

Place Manufactured: Nuremberg, Germany

Introduction/Production date: ca. 1890

Function: Toy magic lantern

Slide size: 4 x 15 cm

Light Source: Kerosene lamp

Notes: Black horizontal cylindrical drum lantern, lens is separate on its own decorative stand. Decorative stamped metal decoration depicts a devils head. The kerosene lamp was built into the lantern. This lantern came in its own wooden box.



Kerosene lamp incorporated into magic lantern design

Ernst Plank

Despite the competition in the magic lantern market, the firm of Ernst Plank was the commercial leader in the industry. Active from 1866 to 1930s, Plank assembled 150,000 magic lanterns in 1899 with a staff of 120 employees. Like many of the other manufacturers Plank diversified production by offering such items as model steam engines, locomotives and ships. Plank's factory stamp was a winged wheel, stars and the initials E.P.



2. Magic Lantern E.P. Standard No. 3000

Manufacturer: Ernst Plank

Nationality: German

Place Manufactured: Nuremberg, Germany

Introduction/Production date: ca. 1900

Function: Toy magic lantern

Measurements: 25.5 H x 7 W x 19.5 cm L

Slide size: 3.5 x 13 cm

Light Source: Kerosene lamp with glass chimney and reflecting mirror

Notes: Blue sheet metal box toy lantern with ornate feet, has a side door for access to kerosene lantern lamp. On the door is a stamped elliptical emblem with initials E.P and two wings and tree stars. The optics consists of three self contained optical lenses.



Emblem on lantern door;
winged wheel, 3 stars and initials E.P.

Johannes Falk

The firm of Johannes Falk prospered in Nuremberg from 1898 to 1935. They carried a regular line of lanterns and slides. In their 1913 catalog his projection department was overshadowed by his mechanical toys, a foreshadowing of the future sales of the magic lantern. His logo was a castle tower flanked by his initials J.F.

3. Box Magic Lantern J.F.

Manufacturer: Johannes Falk

Nationality: German

Place Manufactured: Nuremberg, Germany

Introduction/Production date: ca. 1900

Function: Toy magic lantern

Measurements: 18 H x 8.5 W x 20 cm L (without chimney)

Slide size: 3 x 11 cm

Light Source: Kerosene lamp (missing)

Notes: Black sheet metal box toy lantern with ornate feet. Lantern is missing its chimney, access to lamp via a rear half door. Initials J.F. pressed into sheet metal above lens. Made in Germany stamped into the bottom of lantern.



4. Box Magic Lantern J.F.

Manufacturer: Johannes Falk

Nationality: German

Place Manufactured: Nuremberg, Germany

Introduction/Production date: ca. 1900

Function: Toy magic lantern

Measurements: 16 H x 9 W x 18 cm L (without chimney)

Slide size: 3 x 11 cm

Light Source: Kerosene lamp (missing)

Notes: Cracked black sheet metal box toy lantern is missing its chimney, access to lamp via a rear half door with porcelain knob. Initials J.F. stamped into sheet metal above lens. Made in Germany stamped into the sheet metal on the bottom of lantern.



5. Box Magic Lantern

Manufacturer: Unknown

Nationality: Unknown (presumably German)

Place Manufactured: Unknown

Introduction/Production date: ca. 1900

Function: Toy magic lantern

Measurements: 28.5 H x 20 W x 8.5 cm L

Slide size: 3 x 11 cm

Light Source: Kerosene lamp (missing)

Notes: Blue sheet metal box toy magic lantern with bent elbow chimney and ornate feet.



Slides used in toy magic lantern

Glass slides used in children's toy magic lanterns came in various sizes and shapes depending on size and type of toy magic lantern. The width of a panorama slide determines the size of the toy magic lantern. The most common slides were the rectangular slides, a few lantern types used round discs.

The panorama slides which were typically rectangular in size were slowly passed through the lantern behind the lens from one side to the other, they revealed either individual images or continuous scene.



Gebrüder Bing (GB) Toy magic lantern glass slide box set of 12 slides 3 x 11 cm



A bicycle trip through the countryside. A group of six cyclists who ride their bicycles on a country road, waved to by people along the way and in the background a number of riders on horseback. Slide size 3 x 11cm.



A young man lying in a hammock tries to catch a butterfly and falls out of his hammock. Slide size 3 x 11 cm



How to exit from a hot air balloon. Slide size 3.5 x 13 cm

Glass slides were framed with tape to protect fingers from the sharp edges. Tape around toy magic lantern slides came in various colors.



Toy slide with salmon colored tape. Animal get together. Slide size 4 x 15 cm

Balopticon and large format slide lanterns

Bausch & Lomb

The Bausch & Lomb Optical Co. of Rochester N.Y. called their magic lantern projectors “Balopticons”. The prefix “Bal” is from the Greek verb “ballein” meaning throw or project. The “bal” prefix is also the initials in the company name; they coined the name Balopticon for their own projectors and therefore to only rightfully be used by them.

6. Balopticon Model C

Manufacturer: Bausch & Lomb

Nationality: American

Place Manufactured: Rochester NY

Function: Professional large format lantern (8 x 8 cm)

Light Source: Arc light converted to incandescent light bulb 300 W and reflecting mirror

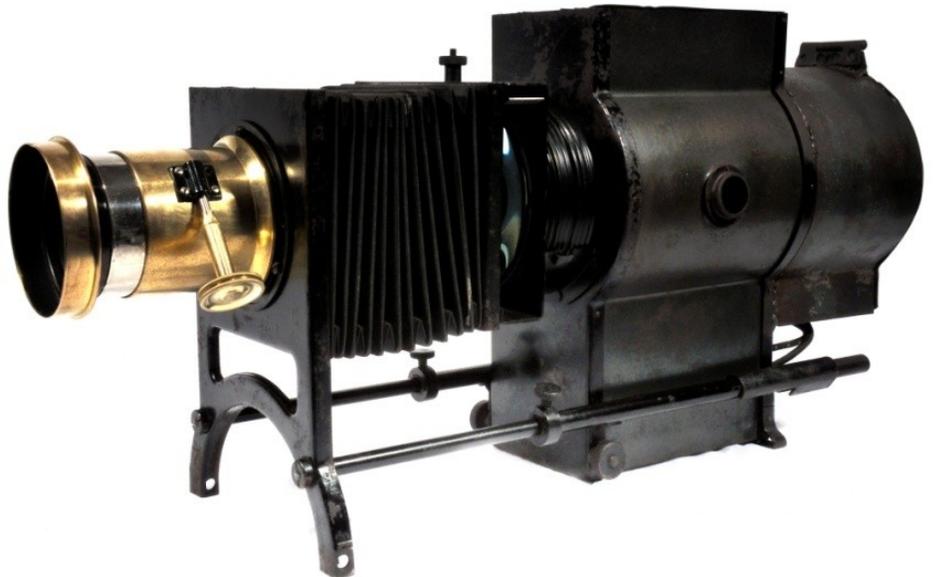
Introduction date: ca. 1910

Notes: This lantern was made for the Arthur H. Thomas Company a manufacturing firm of scientific instruments. The lens has a built in aperture control or an iris diaphragm feature for dissolving effects between slides.

This lantern was originally fitted for an arc lamp and was later remodeled for an incandescent lamp. In the original lamp socket was a Mazda light bulb.

Mazda light bulb: Tungsten filament light bulb made by General Electric from 1909-1945.

Arc Lamp: The little blue glassed viewing window on the side of the lantern was needed to keep an eye on the arc light. The arc lamp also known as a carbon arc lamp is made up of two electrodes (carbon rods) with an electrical current. The two rods are touched together allowing a low voltage to strike the arc. The rods are then slowly drawn apart, and an electrical current heats and maintains an arc across the gap. The tips of the carbon rods are heated to incandescence, creating a bright light. The rods are slowly burnt away and the distance between the two rods need to be regularly adjusted in order to maintain the arc.



Balopticon was refitted with a projection Mazda light bulb and reflecting mirror ca. 1930



7. Balopticon

Manufacturer: Bausch & Lomb

Nationality: American

Place Manufactured: Rochester NY

Function: Large format lantern (8 x 8 cm)

Measurements:

Light Source: incandescent (light fixture missing)

Introduction date: ca 1920

Notes: This lantern type was used in school, colleges, churches, lecture halls and in the home. B&L advertised the ease and need of use for their Balopticons. From an advertisement ca 1915; with pictures occupying the place they do in our present day life no argument is required to set forth the advantages of optical projection as a means of instruction and entertainment.



8. Unknown large format magic lantern

Manufacturer: Unknown

Nationality: Unknown (presumably American)

Place Manufactured: Unknown

Function: Large format lantern (8 x 8 cm)

Light Source: incandescent light bulb 300 W

Introduction date: ca 1920

Notes: The light bulb is at the rear of the projector. There is a blue viewing window which suggests that this lantern originally had an arc light.



Incandescent light bulb at rear of projector and a blue viewing window for an arc lamp.



Large format (8 x 8cm) glass slide for magic lanterns

Single slides were the most common types of slides, originally mounted in a wooden frame and later after the 1850s slides were bound by cloth and gum tape with sometimes a protective cover glass.



With the invention of chromolithography and this technique applied on glass slide these type of slides became very popular and were easier and cheaper to mass produce. Many thousands of slides were produced over a period from 1850's to the 1920's and these slides were shipped all over the world. Chromolithographic slides provided a sharper colored image.

Chromolithographic 8 x 8 cm lantern slide No. 5 from *Snow White* ca.

Photographic glass lantern slides were mainly produced in America. These slides were projected by showmen and lecturers who traveled regional circuits presenting travelogues of geographic wonders, foreign cities and countries never before seen by the enthusiastic audiences. To the 19th century audiences magic lantern shows were as entertaining as our modern day movies are.

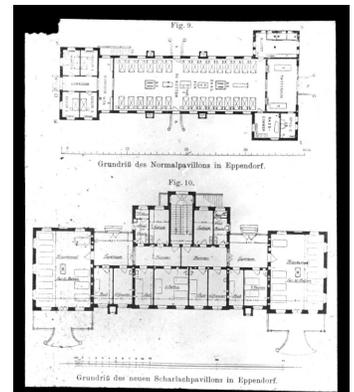
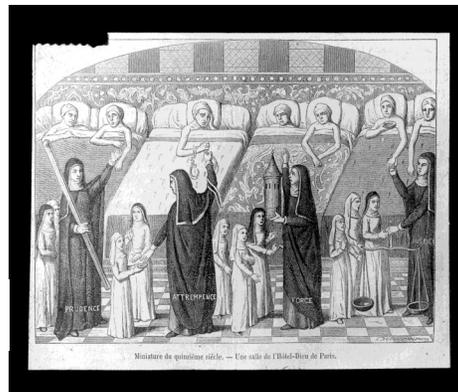


Left: Arc du triomphe ca 1880

Right: Northern Africa ca 1890

Slides were used in lectures. The two lantern slides on the right are from a set of 95 slides from a lecture on the construction of hospitals from the time of the Greeks to the modern day European hospitals (circa 1930).

Slide no. 24 Hotel Dieu Paris view of the ward



Below slide no. 24 floor plan Pavilions Eppendorf



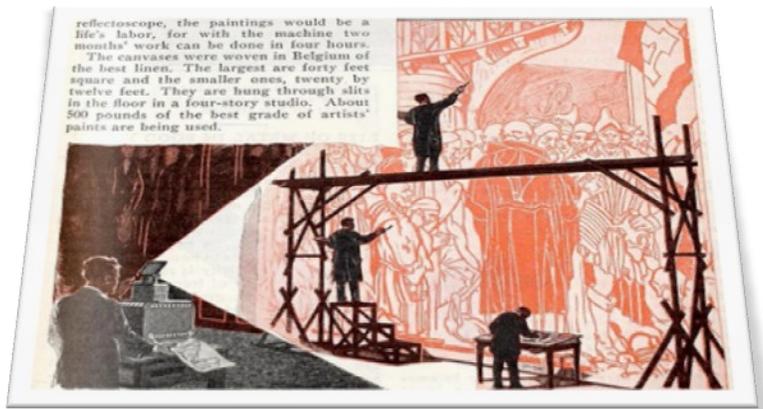
The popularity of missionary work coincided with the popularity of the magic lantern slides. Churches used the slides to project words of hymns for the congregation and clergyman frequently used lantern slides to show the wages of sin to congregations who were always eager to watch a magic lantern slide show.

Wooden box with 50, 8 x 8 cm glass lantern slide.



Episcope and Epidiascope

An **episcope** is a projector which displayed opaque materials by shining a bright lamp onto the object from above. The light reflected off the image is focused with mirrors and lenses to project the image onto a screen or wall. These projectors were often used to project images from books, photos or post cards. Artists used episcope to transfer images to canvas such as Dean Cornwell a well known American illustrator seen here projecting a painting on a wall for a large mural one of the largest murals at that time in the world, 1936. The title of this article was *Paintings Four Stories High Made with Magic Lantern*.



9. Dux Episkop

Manufacturer: Dux Kino

Nationality: German

Place Manufactured: Markes & Co, Lüdenscheid

Function: Toy episcope

Light Source: incandescent light bulb 40W and reflecting mirror

Introduction/Production date: ca 1950

Note: Made of Bakelite this episcope was popular in the 50s and 60s. You could place it on a magazine, postcard or photograph and the image below would be projected by a simple light and mirror on a wall.

This projector was made by a toy company Dux Kino who specialized in optical toys and was geared to film oriented toys. The Dux episkop was the only non film devices they manufactured.



Epidiascope

An epidiascope is the better of two worlds. It not only projects opaque material but also transparent slides via another lens.

10. Bing Brothers epidiascope lantern

Manufacturer: Bing-Werke AG

Nationality: German

Place Manufactured: Nuremberg

Function: Toy epidiascope

Light Source: incandescent light bulb and reflecting mirror

Introduction/Production date: ca. 1925

Note: This is a combined magic lantern and episcope. Inside is a maneuverable mirror, adjustable from the top by a knob. The mirror turned one way reflects the light out the smaller lens for lantern slides or turned to reflect light via the larger lens for opaque picture.

The Bing Brothers were a large toy manufacturer in Nuremberg in 1908 they claim they were the largest toy factory in the world and employed 3,000 workers. By 1934 the company was in trouble and Johannes Falk purchased some of the Bing's mechanical toy inventory.



11. Beseler Epidiascope Model OA-2

Manufacturer: Charles Beseler Co.

Nationality: American

Place manufactured: New York

Function: Epidiascope

Light source: incandescent light bulb 500 W and reflecting mirror

Introduction/Production date: ca. 1940

Note: This particular epidiascope could project 8 x 8 cm glass slides as well as 35mm slides, it had an add-on for filmstrips and it could project pages from a book or magazine or a photo via the rear horizontal panel and the larger lens.



With filmstrip attachment installed Lens projectors both filmstrip and 35mm



Lens for large format (8 x 8 cm) slides attached.



Inside view postcard placed on the back tray and tray is raised up against the glass. To project postcard lamp assembly is rotated and the top lens used to project to screen.



Filmstrip canisters



Filmstrip was a common form of still images placed on a 35 mm positive film. A filmstrip is a spooled roll of approximately 30-50 images arranged in sequential order inserted vertically down in front of a projector, rather than horizontally as in a slide projector. This type of projection was commonly used by schools for educational purposes and was popular from the 1940s to 1980s..

Slide Projectors

The early projectors had a frame mechanism which could hold two slides side by side and was moved from left, to right, to left in between the lens and light source, while a new slide was inserted into the alternate frame from left or right side of the projector. It is obvious where the name “slide” came from; the motion of this moving back and forth.

Slide projectors from the 1940s to 1960s also might have had an add-on extension for filmstrips.

12. Viewflex Projector V-2C

Manufacturer: Viewflex Inc

Nationality: American

Place Manufactured: New York

Function: 35 mm single slide & filmstrip projector

Light source: 150 W projector light bulb

Introduction/Production date: 1940s

Note: Art deco design with red knobs. This model could project either 35 mm slides and with a 90 degree twist of the lens you could add the filmstrip mechanism and view filmstrips.



Slide attachment



Filmstrip attachment



13. Filmosto

Manufacturer: Filmosto

Nationality: German

Place Manufactured:

Function: 6 x 6 cm large format single slide projector

Light source: 150 W projector light bulb

Introduction/Production date: 1950s

Note: quality made slide projector.

14. Naren Polarama

Manufacturer: Naren Industries Inc.

Nationality: American

Place Manufactured: Chicago, Illinois

Function: 35 mm single slide projector

Light source: 150 W slide projector lamp

Introduction/Production date: 1950s



15. Aldis 300 Projector

Manufacturer: Aldis Bros LTD

Nationality: British

Place Manufactured: Birmingham, England

Function: 35 mm single slide projector

Light source: 300 W projector light bulb

Introduction/Production date: 1952-1955

Note: Industrial looking slide projector, beautifully thought out and designed with a metal egg shaped carrying case.



17. Bell & Howell TDC Robomatic 765-A

Manufacturer: Bell & Howell

Nationality: American

Place Manufactured: Chicago, Illinois

Function: 35 mm magazine tray (straight) slide projector

Light source: 500 W Slide projector light bulb

Introduction/Production date: 1960s

Note: Comes in a carry case. This model had a straight slide tray that held 40 slides which made viewing easier for the projectionist.



18. Arrow

Manufacturer:

Nationality:

Place Manufactured:

Function: 35mm single slide projector

Light source:

Introduction/Production date: 1960s

Note: When folded this little projector is very compact and easy to transports



19. Cabin

Manufacturer:

Nationality: Japanese

Place Manufactured:

Function: 35mm single slide projector

Light source: 100 W projector bulb

Introduction/Production date: 1960s

Note: Aluminum die cast body. When folded this little projector is very compact and easy to transports. Comes with its own carrying case.



20. Zoom Cabin

Manufacturer:

Nationality: Japanese

Place Manufactured:

Function: 35 mm single slide projector

Light source: 200 W

Introduction/Production date: 1960s

Note:



21. Argus A 538

Manufacturer: Argus cameras of Canada LTD.

Nationality: Canadian

Place Manufactured: Newmarket, Ont.

Function: 35 mm tray slide projector

Light source: 500 W slide projector light bulb

Introduction/Production date: 1965-1971

Note: Advertised in 1965 newspaper as Color slide projector, 60 slide tray 500 watt brilliance forward still and reverse fully guaranteed 61.95 US\$ value



22. Paximat International 2850 Electric

Manufacturer: Carl Braun

Nationality: German

Place Manufactured: Nuremberg

Function: 35 mm tray slide projector

Light source: 250 W slide projector light bulb

Introduction/Production date: 1976

Note: Enclosed slide projector with handle. Once enclosure cover lifted slide tray access revealed. Remote control on cord built into side of projector. Slides are feed via a slide magazine tray



23. Kodak Carousel 5600 Projector

Manufacturer: Kodak Canada Inc.

Nationality: Canadian

Place Manufactured: Toronto

Function: 35 mm carousel slide projector

Light source: 300 W halogen slide projector light bulb

Introduction/Production date: 1981-2004

Note: The invention of the carousel trays brought more slides to a presentation either 80 or 140 slide could continually project in a loop. This slide projector also has a built in viewing screen and reading light.



24. Telex Caramate 3270

Manufacturer: Telex Communications, Inc.

Nationality: American

Place Manufactured: Minneapolis, Minnesota

Function: Professional 35 mm carousel sound slide projector

Light Source: 300 W halogen slide projector lamp

Introduction/Production date: 1983-2002

Note: This slide projector was donated by Cor Dammers from The Cinemas and The Movies theaters. The slide projector was used in the movie theater to project advertisements. A two in one professional slide projector features a built in cassette player that senses 1000HZ forward cue pulses (also responds to 150 HZ pause cues) for complete automation of synchronized sound/slide presentations. Includes also a 5 watt amplifier/speaker system.



Slide Viewers

Slide viewer is a small usually hand held or table top device with a slot in which a slide can be inserted to see a magnified view of it. This device is for individual viewing. Some devices come with automatic feeders for a stack of slides which are fed one by one. These viewers can use different light sources, natural light or small incandescent light bulbs powered by either batteries or electrical.

25. Panorama Illuminated Viewer

Manufacturer: W & G Electrical Product

Nationality: British

Place Manufacturer: England

Function: hand held 35mm and 4 x 4 cm slide viewer

Light source: 2.5 volt bulb and two U.11 (C size) batteries

Introduction /Production date: 1950s

Note: One of its feature written on box; picture electrically illuminated by gentle finger pressure.



26. Hanorama

Manufacturer: Hanimex (IRL) LTD.

Nationality: Irish

Place Manufacturer: Ireland

Function: hand held 35 mm and super slide (4 x 4 cm) slide viewer

Light source: Natural light and a reflecting mirror

Introduction /Production date: 1960s

Note: This slide viewer gave the viewer the sense of a 3 dimensional. Image is first projected on curved mirror



27. Zadiix Jr.

Manufacturer: J & M. Products Co.

Nationality: American

Place Manufacturer: Brooklyn New York

Function: hand held 35 mm slide viewer and slide strip viewer.

Light source: natural light

Introduction /Production date: 1950s

Note: Slide film strips could be viewed with this hand held viewer.



28. Mico Tele Vué 35 mm Bantam Focusing Slide Viewer

Manufacturer: Mico Photo Products Company

Nationality: American

Place Manufacturer: Chicago Illinois

Function: table top 35 mm slide viewer

Light source: 2.46 volt bulb electrical or battery operated

Introduction /Production date: 1960s

Note: "Zooms your picture right into focus". Top part of viewer can slide up and down focusing the picture



29. Agfascop

Manufacturer: Agfa

Nationality: German

Place Manufacturer:

Function: Table top 35 mm slide viewer

Light source: 15 W light bulb

Introduction /Production date: 1960s

Note: Viewer comes with slide stacker for easier viewing



30. Cenei H Scoper Automatic

Manufacturer:

Nationality: German

Place Manufacturer:

Function: Table top 35 mm slide viewer

Light source: 15 W light bulb

Introduction /Production date: 1960s

Note: Slide stacker held 20 slides. Slides were pushed with lever in front.



31. Sawyer's Projector/Viewer

Manufacturer: Gaf Corporation

Nationality: American

Place Manufacturer: Portland, Oregon

Function: Table top 35 mm slide and projection viewer.

Light source: 100 W slide projector lamp

Introduction /Production date: 1970s

Note: Viewer doubled as a projector, with a flick of a switch viewer could project on a screen.



32. Sawyer's Model G View-Master

Manufacturer: Sawyer's Inc.

Nationality: American

Place Manufacturer: Portland, Oregon

Function: Stereoscopic 3D slide viewer

Light source: Natural light

Introduction /Production date: 1959-1984

Note: Originally made as a souvenir for the New York World's Fair 1939.

Viewer uses reels which are thin cardboard disc containing seven stereoscopic 3D pairs of small slides.



33. Foto Reel

Manufacturer: Allied Products Co.

Nationality: American

Place Manufacturer: Chicago, Illinois

Function: Filmstrip viewer

Light source: Natural light

Introduction /Production date: 1933

Note: This filmstrip viewer with the original filmstrip was a souvenir from the Century of Progress Exhibit from Chicago World's Fair 1933-1934





Michel van Veldhoven 1921-2009
Founder of the van Veldhoven Photographic
Equipment Collection