Exposition of Classic and Vintage Cameras of the late Dr. M. van Veldhoven

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mvanveldhoven@gmail.com

View Camera: With a view Camera light comes directly from the subject through the main lens and is viewed via a focusing screen (ground glass) at the back of the camera. The lens reverses the image so it appears upside down and backwards. The photographer focuses and composes using this projected image. In order to see the image better a dark cloth is used to block out light. Before a picture is taken the ground glass (focusing screen) is replaced by a plate/sheet film holder.

1.

Manufacturer: E. & H. T. Anthony
Model: Climax Imperial
8 x 10" plate
Built: c. 1873 New York, USA
Lens: E. Suter Basel Aplanat A. No.5

The Studio Camera was a heavily built camera. They were large wooden bellows view cameras, that stood on a sturdy tripods used in studios only, for still life and portrait photography from mid to late 1800's.
At that time in photography Carte de Visite and Cabinet size photos were popular and the studio photographer became very prosperous making portrait photos.

1 A. Carte de Visite:

In 1854 Disdéri invented the making of several exposures on one light sensitive glass plate. Eight exposures could be made on one plate and 8 images at once could be printed on one large sheet of albumen photo paper. After developing and drying, the sheets were cut into 8 pictures and each picture was glued upon a 2 ½ x 4 inch piece of cardboard. This became the Carte de Visite (CDV) and became very popular all over the world.

Families and friends who were spread out over the globe because of colonization could exchange photos which were kept in family CDV albums.
The CDV cards were an important step towards standardization in the photography business.

1 B. Cabinet Cards:

By the 1870's the popular portrait image format Carte de Visite were slowly being replaced by the larger Cabinet Card. The Cabinet card measured 4½ x 6 ½ inches.
Photos taken at Atelier Photographique de R. Soublette Curaçao 1874-1894. Unknown persons.

1 C. Family Album:

A typical family Carte de Visite and Cabinet card album. Seen are photos taken by the ***Pearsall Brothers from New York*** traveling photographers to Curaçao 1863-1864. Unknown persons.

1 D. Waterhouse Stops:

These were thin sheets of metal/brass with a hole punched in the middle. The accompanying lens had a slot cut into the side of its barrel through which one of these thin sheets of metal could be inserted. By using sheets with different hole-diameters it was possible to vary amount of light that was transmitted (aperture control). This in turn allowed the photographer to achieve the correct exposure conditions.

1 E. Lens Hood or Lens Shade:

A device used on the end of a lens to block the sun or other light source to prevent glare.

2.

Manufacturer: Unknown
Model: Reisekamera
18 x 24cm plate
Built: c. 1920 in Germany ?
Lens: Trousse with interchangeable lens elements
This Reisekamera belonged to my grandfather M. van Veldhoven sr.

Reisekamera or Chambre de Voyage were a popular wooden bellows plate cameras, a sub group of the view cameras. They were manufactured in large quantities in specialised cabinetmaker's work shops in particular Eastern Germany and the Alsace France from 1860 and reached their peak of popularity between 1895-1914.
These cameras would be distributed through well-known manufacturers but also would emerge sometimes nameless and sometimes with the store, retailer or distributor names attached, causing confusion with regard to origin. The Reisekamera are large format, unlike the much lighter field cameras, but not so cumbersome as the studio camera and can be folded up for easy transport.

2 A. Photographic Plate:

Negative on glass plate.

2 B. Plate holder Cassette:

A wooden cassette that housed the photographic plate and inserted in the back of the camera when a photo was to be taken.

2 C. Lens:

Trousse with interchangeable lens elements which can be combined to form many different focal length lenses (see chart in display).

2 D. Focusing Loup:

Einstell-Lupe Express-Patent
Used to focus on focusing screen at the back of the camera.

Making a photo:
After the picture is composed and focused, sometimes with the aid of a loupe the focusing screen is replaced by the plate holder. The lens is covered with its cap, and the dark slide removed from the plate holder. When all is clear, the lens cap is removed for the required exposure time and replaced

2 E. Sepia photo in bottom shelf Family M. van Veldhoven sr.; Opa Mies, Oma Til and my father Michel van Veldhoven c. 1923.

2 F. Black & white print from negative glass plate; my great grandfather Peer van Veldhoven with his daughter Cis and her family. Photo taken by M. van Veldhoven sr c. 1920.

3.

Manufacturer: Unknown
Model: Reisekamera C.A.P. Ivens & Co
Retailer; Het Nederlandsch Foto Technische Bureau
13 x 18cm plate
Built: c. 1919 in Germany ?

4.

Manufacturer: Unknown
Model: Reisekamera
13 x 18cm plate
Built: c. 1920 in Germany ?

3 & 4 A. Assortment plate cassettes

Tropen Cameras or Tropical Cameras are wooden bellows view cameras. They were a sub group of the field camera. The wood used was often teak. Teak wood is climate and termite resistant, it withstood moisture and insect invasions. Before synthetic glues, traditional horse hoof glues were popular but certain tropical insects thrived on this glue, therefore instead camera body parts were screwed together and the joints reinforced with inset brass or high nickel content steel angle straps.

5.

Manufacturer: Emil Busch A.G.
Model: Field Camera Tropen model
9 x 12cm plate
Built: c. 1905 Rathenow, Germany
This camera was donated in 1960 by Hans van Draanen, artist and curator of the Curaçao Museum circa late 50's - 1963.
Body is made of teak with black and nickel fittings and black bellows.

6.

Manufacturer: Orionwerk A.G.
Model: Tropen Rio 5C
9 x 12cm plate
Built: c. 1905 Hannover, Germany
This camera was donated in 1962 by Pater P.H.F. Brenneker, who lived on Curaçao from 1946-1996.
It has a teak body, with brass binding and fittings, brown leather bellows and focusing hood. The Rio was a very well made and finished tropical camera, typical of German construction of the time.

Field cameras are view cameras that were originally made of wood and had a bellows. These cameras can be folded in a compact size and are light and portable.
The "modern" field camera can be made of metal and sometimes their bellows are substituted to be even more compact .
Some field cameras had controls such as tilt, shift and swing which allowed the lens and film to be shifted and tilted with respect to each other and with respect to the subject.
Certain press cameras fall under this group of cameras.

7.

Manufacturer: Linhof Präzisions-Kamera-Werke
Model: Technika III
10 x 12cm plate
Built: 1950 Munich, Germany

This camera was donated by Jos Dumoulin, press photographer of the Amigoe late 50's to mid 60's.
The Linhof was the first all metal field camera and often referred to as "Press Camera".

8.

Manufacturer: Heinrich Ernemann A.G.
Model: Ernemann Klapp 9x12
9 x 12cm plate
Built: 1910 Dresden, Germany

These cameras were made from 1901-1924. Strut folding plate camera with focal plane shutter, focusable lens and collapsible Newton finder. They were available in several sizes. Used for several occasions including press photography.

9.

Manufacturer: Mamiya Camera Co.
Model: Mamiya 23 Standard
6 x 7cm , 6 x 9cm plates/sheets/film
Built: 1965 Tokyo, Japan

The standard 23 is a medium format rangefinder camera, designed to accept interchangeable backs (plates, sheets and film roll pack). It had a left handgrip mount and known as the "Mamiya Press Camera".

9 A. Interchangeable Backs

The interchangeable backs could be fitted to both sizes 6 x 7cm or 6 x 9cm.

The Stereo camera is a type of camera with two or more lenses. This allows the camera to simulate human binocular vision and therefore gives it the ability to capture three dimensional images a process known as stereo photography.

Stereoscopy is a technique for creating or enhancing the illusion of depth in an image by presenting two offset images separately to the left eye and right eye of the viewer. These two dimensional images are then combined in the brain to give perception of 3D depth.

Stereoscopy or 3D which is fashionable today is not a new invention, back in 1851 Queen Victoria of England was captivated by stereo photography and quickly the new rage became popular all over the world. In 1859, Oliver Holmes invented a compact hand held viewer (see 13 B) and a new form of entertainment was created. By the 1860's stereoscopes (viewers) could be found in almost every American parlor of the middle class and up. In 1901 one of the three major stereographic companies of this period Underwood & Underwood published 25,000 stereographs a day ! Overall an estimated three hundred million stereographs were issued between 1854 and 1920.

The first wave of stereo photography 1850's - 1890's was dominated by professional photographers. A new period of stereo photography began early 20th century when commercial stereo cameras were available see cameras 10, 11, 12, 13 & 14. A third period started in the 50's see camera 15 and a small resurrection occurred in the 80's and 90's when cameras became available with lenticular printing, a technology in which an image is produced with an illusion of depth, see camera 16. Today, 3D films and TV monitors have again brought new awareness to 3D.

10.

Manufacturer: Thornton Pickard Manufacturing Co.
Model: Stereo Puck
Eight exposures 2 ¼ x 1 ½" on 120 roll film
Built: c. 1932 Altrincham, England

11.

Manufacturer: Jules Richard
Model: Verascope
Two exposures on 45 x 107mm plates held in a changing box, push-pull mechanism
Built: 1930 Paris, France

11 A. Sterelief Stereo viewer: c. 1930

12.

Manufacturer: Blair Camera Co.
Model: Weno Stereo
Two exposures, 3 ¼ x 3 ¼" on 101 roll film
Built: c. 1900 in Rochester, New York
Blair Camera Co. was acquired by Eastman in 1899 but was run independently until c.1908 when it was absorbed into Eastman as the Blair Camera Division.

13.

Manufacturer: Unknown
Model: Ivens & Co. Stereo Field Camera
8 x 16cm plate
Built: c. 1919 Germany /Netherlands ?

13 A. **Plate cassettes**

13 B. **Underwood & Underwood Stereo Viewer** c. 1902

13 C. **Assortment of Stereo photographs** 1890-1910

14.

Manufacturer: Voigtländer & Sohn
Model: Stereflectoskop
Two exposures, 6 x 6cm on a 6 x 13cm plate held in a push-pull changing box for 12 plates
Built: 1925-1928 Braunschweig, Germany

15.

Manufacturer: Witt (Iloca Werk, Wilhelm Witt)
Model: Iloca
35mm film
Build: 1956 Hamburg, Germany

15 A. **Stereo Graphic Viewer 3D Graflex** c. 1960
15 B. **Assortment 35 mm stereo slides**

16.

Manufacturer: Image Tech
Model: 3D Magic Disposable Camera
35mm film
Built: 1995 in the USA
Camera donated by Ben Smit, Curaçao.
A 3D disposable camera, with 3 lenses that can produce auto stereoscopic prints, three dimensional images that do not require any glasses or special equipment to view. To produce the 3D prints the film must be sent to a lenticular printer for processing.

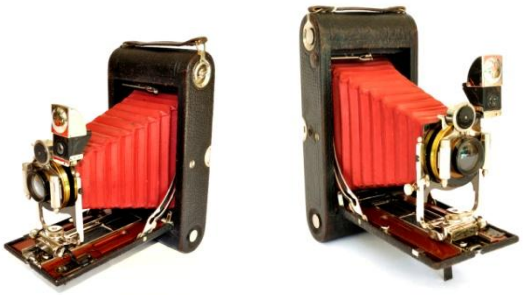
Folding Camera is a camera with bellows that can be folded so that the camera takes up less space when not in use. Many folding cameras allow variations of their bellows length, this making the bellows also the means for focusing.

17.

Manufacturer: Ansco
Model: No. 3A Folding Ansco
12 exposures, 3 ¼ x 4¼" on 118 roll film
Built: 1914-1932 Bringhamton, New York

18.

Manufacturer: Eastman Kodak Co.
Model: No. 3A Folding Pocket Kodak
Model B4
12 exposures, 3 ¼ x 4¼" on 118 roll film
Built: 1903-1912 Toronto, Canada



19.

Manufacturer: Eastman Kodak Co.
Model: No. 3 Folding Pocket Kodak
Model E3
12 exposures, 3 ¼ x 4¼" on 118 roll film
Built: 1907 Rochester, New York

20.

Manufacturer: Eastman Kodak Co.
Model: No. 3A Folding Brownie
Camera
Model A
3¼ x 5½" exposures on 122 roll film
Built: 1909-1915 Toronto, Canada

21.

Manufacturer: Eastman Kodak Co.
Model: No. 2 Folding Pocket Brownie
Model B
6 exposures, 2 ¼ x 3 ¼" on 120 roll film
Built: 1907 Toronto, Canada

22.

Manufacturer: Eastman Kodak Co.
Model : No. 3 Folding Brownie
Model B
3 ¼ x 4¼" exposures on 124 roll film
Built: c. 1906 Rochester, New York

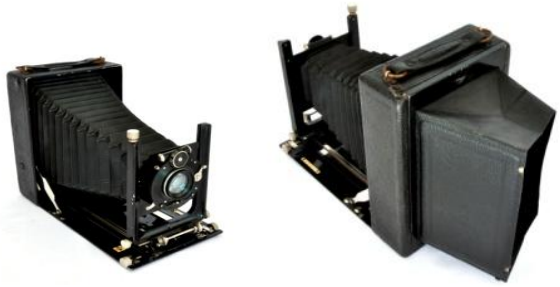
23.

Manufacturer: Eastman
Kodak Co.
Model: Screen Focus No.4
4 x 5" exposures
on roll film or plates
Built: 1904-1910
Rochester, New York

The No. 4 Screen Focus was one of the first rollfilm cameras to feature a ground glass focusing screen. The unique rollfilm holder was held by hinge pins to the top of the camera back, allowing it to be swung up so that a ground glass focusing screen could be attached for accurate framing and focusing. A dark slide would cover the film opening on the back so that the film would not be exposed when the back is up in this position. When not mounted to the back of the camrea the screen focusing is stored in a slot on the right side of the back of the camera.

24.

Manufacturer: Voigtländer & Sohn
Model: Bergheil 9 x 12
9 x 12cm plates
Built: 1914-1920 Braunschweig, Germany

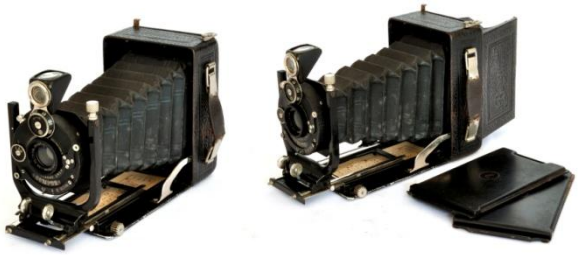


25.

Manufacturer: ICA A.G.
Model: Ideal 6½ x 9
6½ x 9cm plates
Built: 1909-1920 Dresden, Germany

26.

Manufacturer: Voigtländer & Sohn
Model: Bergheil 4½ x 6
4½ x 6cm plates
Built: 1919-1927 Braunschweig, Germany



24-26 A Assorted cassetes:
Cameras 24, 25 and 26 were plate cameras, they took either glass plates or a sheet film. Sheet films were individual sheets of acetate or polyester film base rather than rolls and were placed in cassettes. They were initially supplied as an alternative to glass plates.

Box Cameras became very popular from 1900 onwards when Kodak introduced a $1.00 camera with roll film, making photography available for everyone.
Box cameras were simple to use and provided the convenience of making a whole series of photos without reloading. Companies like Kodak and Agfa produced cameras below production price and gained millions of customers who they sold film to and regained the lost money from production by film sales. The lasting success of the box camera is best represented by the many snapshots in family albums, from the earliest cheap box's manufactured since 1896, to the instamatics from the 60's and 70's.

27.

Manufacturer: Eastman Kodak Co.
Model: No. 2 Plico Kodak
12 exposures, 3 ½ x 3½" on 101 roll film
Built: c. 1900 London, England
This camera has a plaque on the front that reads Mij v/h Guy de Coral & Co. Hof Fotohandel Amsterdam-Den Haag. Guy was a Dutch photographer who also had a chain of photo stores.

28.

Manufacturer: Eastman Kodak Co.
Model: No. 2 Brownie Model B
2¼ x 3¼" exposures on 120 roll film
Built: c. 1904 Rochester, New York

29.

Manufacturer: Eastman Kodak Co.
Model: No. 2A Brownie
2½ x 4¼" exposures on 116 roll film
Built: c. 1929 Rochester , New York

30.

Manufacturer: Heinrich Ernemann A.G.
Model: Film K
4 x 6½cm exposures on roll film
Built: c. 1924 Dresden, Germany

31.

Manufacturer: Eastman Kodak Co.
Model: No. 2 Brownie Model C
2¼ x 3¼" exposures on 120 roll film
Built: c. 1925 Toronto, Canada

32.

Manufacturer: Heinrich Ernemann A.G.
Model: Box
6 x 9cm plates or Sheet film
Built: c. 1920 Dresden, Germany

33. **Manufacturer:** Eastman Kodak Co.
Model: No. 2 Hawk-Eye Model C Anniversary Kodak Camera
2¼ x 3¼" exposures on 120 roll film
Built: 1930 Rochester , New York
To celebrate the 50th anniversary of Kodak, these special cameras were made to be distributed free in North America to children who had their 12th birthday in 1930. There were 557,000 units made.

34. **Manufacturer**: Coronet Camera Co.
Model: Conway Camera Synchronized Model
Built: c. 1930 Birmingham, England
In the 1930's, during the art deco era of linear symmetry, cameras were decorated as such, as you will notice in the decorations of the boxes from this time period.

35. **Manufacturer:** Herbert George
Model: Herco Official Girl Scout 620
Built: 1945 Chicago, IL, USA

36. **Manufacturer:** Eastman Kodak Co.
Model: Six 20 Brownie Junior
Built: 1934-1942 Toronto, Canada

37. **Manufacturer:** Eastman Kodak Co.
Model: Baby Brownie
Built: 1934-1941 Rochester, New York

38. **Manufacturer:** Eastman Kodak Co.
Model: Brownie Target Six-16
Built: 1946-1951 Toronto, Canada

39. **Manufacturer:** Dacora-Kamerawerk
Model: Daci Royal
Built: 1950 Reutlingen, Germany

40. **Manufacturer:** Eastman Kodak Co.
Model: Brownie Hawkeye Flash Model
Built: 1950-1961 Toronto, Canada

41. **Manufacturer:** Spartus Corp.
Model: Spartus 120 with Flash
Built: 1953 Chicago, IL, USA

42. **Manufacturer:** Kodak Ltd London
Model: Brownie Six-20 Model F
Built: 1955-1957 London, England. Owned by Joon van Veldhoven-Soesan

Interesting camera designs

43. **Manufacturer:** Universal Camera Corp.
Model: Mercury II Model CX
Built: 1945 New York City, USA
Half moon housing on top of camera housed the circular rotary shutter which had speeds of up to 1000th of sec.

44. **Manufacturer:** Argus
Model: Argus C 3
Built: 1939-1957 Ann Arbor, Michigan, USA
The C3 was a low priced mass produced rangefinder camera, that became the best selling 35mm camera in the world for nearly three decades. Due to its shape and size it was known as "The Brick".

45. **Manufacturer:** Eastman Kodak Co.
Model: Kodak 35 RF (Rangefinder)
Built: 1940-1948 Rochester, NY, USA
The Kodak 35 was consistently outsold in the marketplace by the Argus C series. Kodak introduced this rangefinder which featured an akward appearing but functional coupled rangefinder. Despite their efforts Kodak could never challenge the Argus market domination.

Leica and copies of Leica's

To imitate is the highest form of flatery and this is certainly true with the Leica cameras. Several companies world wide copied the Leica rangefinder design.
The Leica III cameras 46 and 47 are rangefinder camera introduced in 1933 and produced parallel to the Leica II series.

46. **Manufacturer:** Ernst Leitz GmbH
Model: Leica IIIC converted to IIIFBD ST
Built: 1950 Wetzlar, Germany

47. **Manufacturer:** Ernst Leitz GmbH
Model: Leica IIIF
Built: 1951 Wetzlar, Germany

48. **Manufacturer:** Felix Edmundovich Dzerzhinsky (F.E.D)
Model: FED NKVD Type 1 D
Built: 1939 Dzerzhinsky Comunne, Kharkov, Ukraine
After the introduction of the Leica II in 1932, Soviet leaders stoped the import of photographic equipment and set the FED factory to its task of creating a Leica of their own. Eighteen months later, in 1934 they began churning out its first clone of the Leica II rangefinder.

Single Lens Reflex Cameras (SLR) : with a SLR you are looking through the lens via a miror. These next vintage SLR's cameras 49, 50, 51 & 52 the image on the ground glass is seen directly from above (waist level finder), the image is upright but reversed (left and right). In most modern SLR's the groundglass image is seen through a prism that resides on top of the ground glass screen. The view through the prism gives you an upright, unreversed viewfinder image (eye level finder).

49.

Manufacturer: Ihagee Kamerwerk
Model: Exa Version 1
Built: 1951 Dresden, Germany

50.

Manufacturer: Ihagee Kamerwerk
Model: Exakta Varex Version 2
Built: 1954 Dresden, Germany

51.

Manufacturer: Ihagee Kamerwerk
Model: Exa Version 5
Built: 1957 Dresden, Germany

52.

Manufacturer: Ihagee Kamerwerk,
Steenbergen & Co.
Model: Patent Klapp Reflex
9 x 12 cm plate or sheet film
Built: 1920 Dresden, Germany
This camera was once described as an unfolding enigma. The Patent is a very sophisticated camera.

53.

Manufacturer: Zeiss-Ikon
Model: Contina III Microscope Camera
Built: 1955 Germany

54.

Manufacturer: Polaroid
Model: Microscope Camera
Built: 1970 Cambridge, MA
USA

Microscope Zeiss Ikon

Twin Lens Reflex (TLR): These cameras use two equal lenses, one for viewing and one for taking photos. The Reflex refers to the mirror used behind the viewing lens, to make focusing possible. The focusing of both lenses are synchronised. The top lens projects the incoming image via mirror up to reflex finders ground glass. The image will appear reversed on the screen (left and right). The bottom lens projects the image into the cameras dark chamber, onto the film plane.

55. **Manufacturer:** Minolta (Chiyoda Kogaku Seiko, K.K.)
Model: Minolta Autocord LMX
Built: 1957 Tokyo, Japan
This camera was owned and often used by my father, Michel van Veldhoven.

Polarizing filter

56. **Manufacturer:**Yashica
Model: 44 LM
Built: 1959 Tokyo, Japan

57. **Manufacturer:**Riken
Model: Ricohflex New Dia
Built: 1956 Tokyo, Japan

58. **Manufacturer:** Riken
Model: Super Ricohflex
Built: c. 1955 Tokyo, Japan

59. **Manufacturer:** Rollei-Weke Franck & Heidecke
Model: Rolleiflex "Old Standard"
Built: 1933 Braunschweig, Germany

60. **Manufacturer:** Hans Volker
Model: Rolleiflex-Goliath-Eigen-Maak
Built: 1946 Bloemendaal, Netherlands
Hans Volker was a medical doctor on Curaçao from the 1950's till early 70's. He was and still is at age 93 an enthousiastic photographer and in 1946 he designed and helped build this unique TLR with a cabinet maker in Bloemendaal. Hans wanted to have a larger format negative than the 6x6 cm that his Rolleiflex offered. Unfortunatly when he donated this camera to my father he took the bottom lens (which takes the photo) with him to Holland and is using it on another camera.

60 A. Assorted cassetes

Pseudo TLR is a simple box camera with a fancy outer appearance. These cameras imitated the shape of a TLR and were vogue around the 1950's and 60's when Rolleiflex was a typical pro camera.

61. **Manufacturer:** Argus
Model: Argus Seventy Five
Built: 1949-1958 Ann Arbor, Michigan, USA

62. **Manufacturer:** Metropolitan Industries
Model: Clix-O-Flex
Built: 1947 Chicago, IL, US

63. **Manufacturer:** United States Camera Corp.
Model: Reflex III with Flash
Built: 1960 Chicago, IL, USA

64. **Manufacturer:** Herbert George
Model: Insta Flash
Built: 1950-1960 Chicago, IL, USA

65. **Manufacturer:** Eastman Kodak Co.
Model: Brownie Starflex
Built: 1957-1964 Rochester, NY, USA

66. **Manufacturer:** Eastman Kodak Co.
Model: Brownie Reflex Synchro Model
Built: 1941-1952 Toronto, Canada

67. **Manufacturer:** Eastman Kodak Co.
Model: Kodak Duaflex
Built: 1947-1950 Rochester, NY, USA

68. **Manufacturer:** Eastman Kodak Co.
Model: Kodak Duaflex III
Built: 1954-1957 Rochester, NY, USA

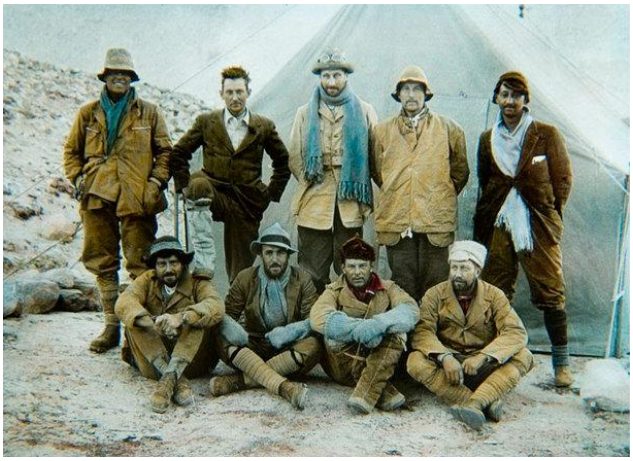
Vest Pockets Kodak (VPK)

The Vest Pockets were a best selling folding camera series made by Eastman Kodak Co. from 1912-1926. When folded, they were small compact cameras, not bigger than most modern compact cameras of today and could easily fit into the photographers pocket. Because of their small size these cameras went on many journeys and helped document history.

The Vest Pockets also came with the autographic feature which allowed the photographer to enter his own notes onto the negative. Comments are scratched into paper on the back of the film with a stylus and then exposed to the sun and burned onto the negative.

Frank Hurley, photographer Shakelton expedition

As official photographer, between 1914 and 1916 Hurley was marooned in the polar ice with Shackleton on his ill-fated ship Endurance. Hurley took a variety of cameras with him including a motion-picture camera , plate camera, and a Vest Pocket Kodak (VPK). On abandoning ship Shackleton ordered that only possessions not exceeding 2 pounds weight could be taken. Hurley could keep only 120 glass photographic plates of the voyage and recorded the remainder of the odyssey with his VPK and three rolls of film.



Everest, George Mallory 1924

On June 8th, 1924 mountaineers Andrew Irving and George Mallory were seen approaching the summit of the as yet un-climbed Mount Everest. Suddenly the weather deteriorated and they were never seen again. Mallory's body was found in 1999 with his goggles, altimeter and penknife. His VPK camera however was missing and with it proof perhaps that he and Irving may have made the first ascent of the mountain.

First World War (1914 - 1918)

It was forbidden for soldiers to take cameras to the front. Many disobeyed this order and took their VPK cameras into the trenches. Knowing this the VPK was sold as "The Soldier's Camera" and many of the photographs the disobeying soldiers took have survived.

Charles Lindbergh

Lindberg, the American aviator who made the first solo non-stop flight across the Atlantic Ocean on May 20-21 1927 often carried a Vest Pocket Kodak Camera on his flights and once lost one in a dramatic circumstance! He made four emergency parachute jumps prior to his epic trans-Atlantic flight. On the first of these, a parachute escape from a mid-air collision which left him uninjured but "during my descent I lost my goggles, Vest Pocket camera and rip cord of the parachute."

69. **Manufacturer:** Eastman Kodak Co.
Model: Vest Pocket Kodak Autographic
Built: 1915-1926 Rochester, NY, USA

70. **Manufacturer:** Eastman Kodak Co.
Model: Vest Pocket Kodak Autographic
Built: 1917-1926 Rochester, NY, USA

71. **Manufacturer:** Eastman Kodak Co.
Model: Vest Pocket Kodak Model B Autographic
Built: 1925-1930 Rochester, NY, USA

72. **Manufacturer:** Eastman Kodak Co.
Model: Vest Pocket Kodak Special Autographic
Built: 1926 Rochester, NY, USA

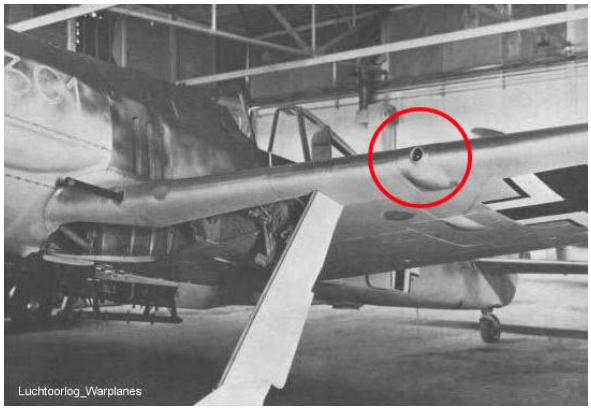
Aircraft Cameras

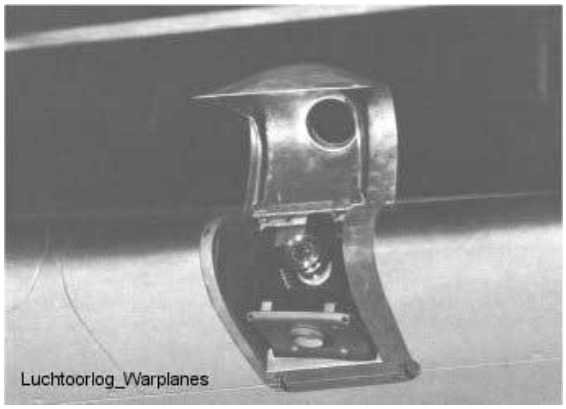
During World War II Camera's were an important tool to winning the war.

Gun Camera

Gun cameras are used in aircraft to help measure tactical effectiveness. These cameras were triggered by firing of a weapon. The Robot II Luftwaffe camera was used as a gun camera.
The German Luftwaffe had contracted Otto Berning & Co. for their Robot camera. This camera had a unique feature, it was the first motorized still camera that worked on a clockwork spring. This camera could shoot 24 frames at 4 fps in one wind. The big knob on top of the camera wound up the spring motor. The Robot cameras were also able to handle the cold environment that came with high altitude and they were vibration-proof.

The Robot II Luftwaffe camera was used in several German fighter planes such as the Messerschmitt and the Focke Wulf. The camera could also be handheld by the crew.





The German Focke Wulf FW 190 fighter plane with a Robot II Luftwaffe camera placed in the leading edge of the left wing.

73.

Manufacturer: Otto Berning & Co.
Model: Robot II Luftwaffe
Built: 1940-1945 Schwelm, Westphalia Germany

74.

Manufacturer: Otto Berning & Co.
Model: Robot II A
Built: 1951-1954 Germany
The design of the Robot camera had not changed after the war except the big knob (spring motor) became smaller again.

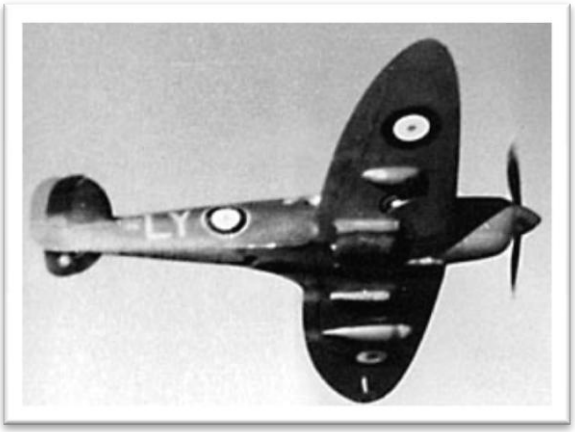
Air Reconnaissance Camera

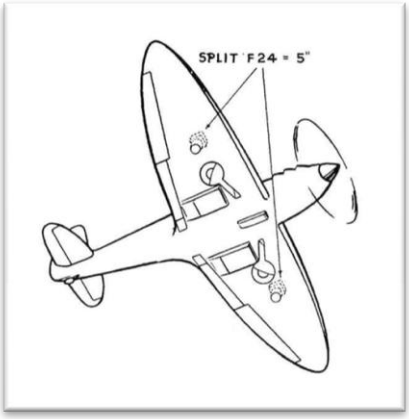
During World War II, aerial reconnaissance was one of the key methods of obtaining intelligence about the enemy and their activities. Photographs provided concrete evidence. Within hours of a reconnaissance sortie, the film could be developed, printed and interpreted. Photographic reconnaissance and intelligence work played a tremendous role in helping the Allies to victory in WWII.

Images had to be taken with maximum clarity and with a scale that the interpreters could identify the required details. The longer the focal length of the lens, the larger the image; the larger the image the more detail could be extracted. The bigger the size of the film negative the larger the camera, but fewer exposures on a roll of film. The longer the focal length of the lens also meant the smaller area covered by the image negative. The lower the reconnaissance aircraft flew to obtain larger scaled imagery the more dangerous it became for the pilot who flew without weapons in order to carry the cameras.

To overcome all these problems and obtain the best possible photographs of the target, they used various types of cameras fitted with various lenses of different focal lengths. One such camera was the Williamson F 24.

The Williamson F 24 camera was the main air reconnaissance camera at the start of WW II. It could be mounted in the wings of a Spitfire for low level vertical imagery and also mounted in the rear fuselage for vertical and oblique imagery. The camera with 8 inch lens weighed 21 lbs.





75. **Manufacturer:** Williamson
Model: F 24
8" focal length
5 x 5" exposures
Built:. 1939-1945 England

75 A. Film Canister: The film is 5½" wide and came in several lengths 50, 75 and 100ft. Forty seven feet of film equalled 100 photographs.