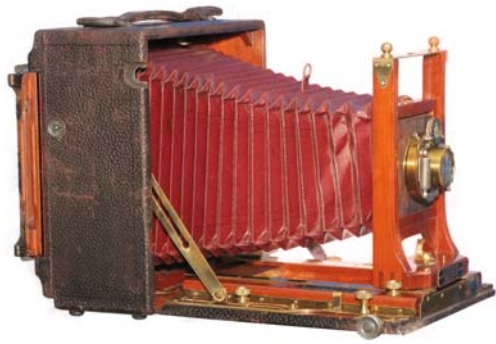


Revolving Back Cycle Graphic Camera



This is a **Revolving Back Cycle Graphic** camera, 5"×7 format size, made c. 1915 by the Folmer & Schwing Division of Eastman Kodak Company.

The product line dates back to 1900, this particular model to 1907. It was made through 1922.

The term "cycle" in its name was meant to exploit the association, in the early part of the 20th century, between bicycling and photography.

"Revolving back" means that the film may be oriented in either the familiar "landscape" or "portrait" orientation or any orientation in between.

The camera is classified as a view camera, meaning that composition and focusing were ordinarily done on a ground glass screen at the rear.

It is a folding ("self casing") camera—it folds into a compact, closed package for transport.

Additional information about this camera model is given in the Appendix.

THIS SPECIMEN

We see here a Rotating Back Cycle Graphic camera, serial number 51770, made by the Folmer & Schwing Division of Eastman Kodak Company, probably in 1915 (based on the serial number and various design details).

Lens and shutter

The camera is equipped with a Rochester Optical and Camera Company "Symmetrical" lens (8" focal length, maximum aperture f/9) mounted in a Rauber and Wollensak "Automatic" shutter. The lens and shutter are believed to date from the period 1901-1903. The lens aperture setting is marked in the "Uniform System" scale, not in terms of f/number.¹

This lens is likely based on the "Rapid Rectilinear" lens design, developed by J. H. Dallmeyer in 1866.

The shutter offers instantaneous speeds from 1 sec to 1/100 sec, with the slower speeds timed by a pneumatic cylinder (to the right of the lens, as

¹ This system, no longer used, had the advantage that the exposure implication of an aperture was in inverse proportion to the number, rather than the square of the number (as with the f/number system). US 16 = f/16, US 8 = f/11.3, etc.

seen facing the shutter). It also offers the classical *bulb* and *time* modes for longer exposures.

The shutter can be tripped with a lever on the lens, or by a rubber bulb connected by tubing to a pneumatic cylinder on the left side of the lens. What looks like a hose connection on the bottom of the right-hand (timing) cylinder is a dummy, included for visual symmetry.

As the name suggests, the shutter is "automatic": it is not necessary to cock it before operating it.

The viewfinder originally provided on this model is missing on this specimen.

Accessories

The camera is exhibited on a Crown No. 2 tripod made by the Folmer & Schwing Division of Eastman Kodak Company. It is presumably contemporaneous with the camera.

The camera is exhibited with a wood plateholder (5" × 7" format size) that has been adapted to accept 5" × 7" sheet film. The manufacturer of the plateholder is not known; it bears only a patent date: April 23, 1907. It is suspected that the holder was made by Conley Camera Company, Rochester, Minnesota.² The sheet film adapter sheaths are made by Eastman Kodak Company, and bear the patent date May 11, 1915.

Provenance

The camera was purchased, complete, at auction in March, 2007 from Kristin Smith of Long Branch, New Jersey.

Accession code name

During accession, the camera was identified here as "Biker Chic".

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² The patent date is for U.S. Patent No. 851,281, issued to James Charles Drake. Drake was at the time with Conley, and became general manager shortly thereafter.

APPENDIX

Revolving Back Cycle Graphic Camera Additional Information

Introduction

The Revolving Back Cycle Graphic (often called “R.B. Cycle Graphic”) is a folding (or “self-casing”) view camera. *Self casing* implies that it will fold into a closed package for transport. *View camera* implies that the normal way of composing and focusing is by way of a ground glass screen located at the place where the film will later be. *Revolving back* means that the camera back (which holds the plate or film holder) can be rotated not only to the familiar “landscape” and “portrait” orientations but to intermediate orientations as well.

The term “cycle” was meant to exploit the association, in the early part of the 20th century, between bicycling and photography. The Cycle Graphic, although bulky by today’s standards, was nevertheless convenient enough that a cyclist could take it along on a ride in order to capture nature scenes and the like encountered along the way.

“Graphic” was a widely-used product trademark of the manufacturer (as in “Speed Graphic”).

History

The direct predecessor of this camera was the Reversible Back Cycle Graphic³, originally introduced in 1900 by Folmer & Schwing Manufacturing Company (the first manifestation of the dynasty we call today “the Graflex organization”). In 1904, it was joined by the Reversible Back Cycle Graphic Special, an improved and elaborated model.

In 1907, about the time Folmer & Schwing was absorbed into Eastman Kodak Company (as its Folmer & Schwing Division), both those forms of the Cycle Graphic were superseded by the Revolving Back Cycle Graphic, the model we see here. This camera was made until 1922.⁴

³ In *reversible back* cameras, the back can only be oriented in “landscape” and “portrait” orientations.

⁴ In 1916, the Folmer & Schwing **Division** of Eastman Kodak became the Folmer & Schwing **Department**, a seemingly trivial distinction, but one that is of great significance to camera archaeologists.

Format sizes

During its life, the Cycle Graphic camera was made in format sizes of 3¼" × 4¼", 4" × 5", 5" × 7" (as we see here), 6½" × 8½" ("full plate" size), and 8" × 10". The 3¼" × 4¼" size was discontinued by 1904, and the 4" × 5" and 8" × 10" sizes were discontinued in 1920.

The bed

The camera has a "triple extension" bed, a three layer telescoping track arrangement that allows the front standard to be moved a great distance forward (about 22" from the film plane for the 5" × 7" size) as required for the use of long focal length lenses, especially in closeup work.

Fine adjustment for focusing moves the second layer of the pile, using a rack-and-pinion mechanism operated by a knob located near the end of the first layer. A focusing scale is provided for focusing by distance. An "infinity mark" is provided to allow the front standard to be set to the proper position for the focusing scale markings to be correct.

Closing the camera

To close the camera, the front standard is moved off the back of the bed proper into a "parking bed" in the housing, the bed layers are closed up into their non-extended positions, and the bed is folded to a vertical position, the bottom layer of the bed serving as the door that closes the front of the case. The door is held closed by a latch. The latch is released by a button on the top of the case, hidden beneath the leather covering. An embossed circle in the leather gives a clue as to its location.

The back

The back is of the "spring" (or "Graphic") type, in which the frame holding the ground glass focusing screen moves back on its supporting springs to accommodate the insertion of the plate or film holder. It takes standard "Graphic" style plate or film holders. These normally hold two plates or sheets of film, and have a removable "dark slide" on each face to prevent premature exposure of the medium.

The back has an integral pop-up focusing hood, with cloth side panels.

Movements

The basic camera offers two of the view camera "image control movements":

- Lens *rise* (but not *fall*). This is useful in such situations as photography of building façades, where we may wish to avoid in the image the convergence of vertical edges of the building (a manifestation of *perspective*) that otherwise would occur.
- Back *tilt*, by way of "bed drop/rise". This is useful when we wish to have the plane of best object focus not be parallel to the film plane, as for example in a closely-aimed shot of a decorative stone path.

The Special also offers front *fall* and *shift*, back *swing* and *tilt*, and both front and rear focusing.

A focal plane shutter is integral on the Special, and was available as an accessory for the first and third generation models.

All models have replaceable lens boards, allowing convenient interchange of lenses. The lens board goes in like a modern window screen; no retainer latch is required.

Viewfinder

The third-generation version ("revolving back") has a "brilliant" viewfinder mounted on the front standard, to allow composition without recourse to the ground glass. Focusing in that case is done with the focusing scale, based on estimated distance to the subject.

Materials and finish

The camera housing is made of mahogany, covered with pebbled black leather. The front standard is of cherry wood. The bed is made of cherry and brass. Except in the Special model (second generation), the exposed wood is finished in a reddish-brown varnish, and the brass has a polished finish, and the bellows is a deep burgundy color.

Relationship to other Graflex cameras

Many of the design features of the R.B. Cycle camera (particularly the Special) foretold the design of the Speed Graphic press camera (introduced in 1912).

The design of this camera was closely paralleled by various cameras of other manufacturers during the same era.

The R.B. Cycle Graphic was the actual camera at the heart of the Cirkut Camera, a specialized camera which took panoramic photographs of almost unlimited angular span on roll film that passed before a slit aperture as the camera rotated on its tripod. A special back, mounted in place of the normal back, included the roll film transport mechanism and a governed, spring-wound motor that moved the film and rotated the camera.

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