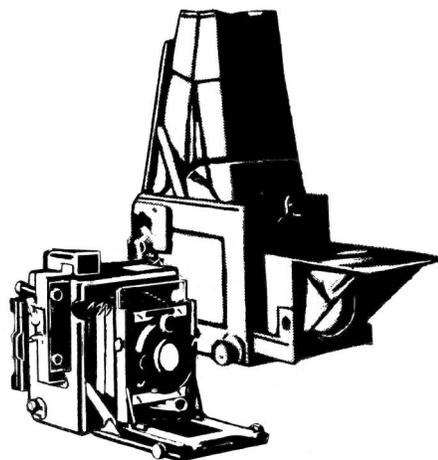


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FEATURES

My "Traveler" Revisited by Jim Chasse.....	1
Camera Restoration: A Curator's View by Todd Gustavson.....	3
The Graflex-Made Strobomite by Ken Metcalf.....	4
Made in France for the Folmer & Schwing Mfg. Co.....	5
The Century Camera Company's Influence on Folmer & Schwing by Thomas Evans.....	6

259,573) and cut off the focal plane shutter.¹

The Crown Graphic might have been introduced earlier, but 1941-1945 were WWII years. The Traveler prototype is pictured below, between my early 2¼ x 3¼ Miniature Speed Graphic (1940, serial number 272,789) and a very early 2¼ x 3¼ Crown Graphic (1947, number 441,465).

The Traveler measurements, when closed, are 2½" thick, 5" wide and 5½" high. The Miniature has the same dimensions, except the thickness is ½" thinner. From information that came with the camera, it was from the abandoned J. Hungerford warehouse at Goodman & Main, in Rochester.



My "Traveler" Revisited

By Jim Chasse

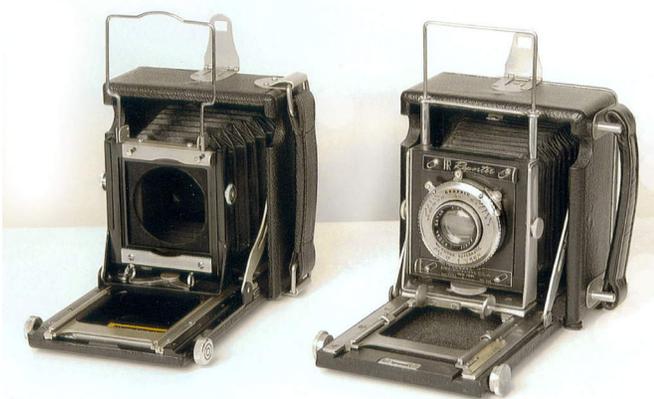
The 2¼ x 3¼ prototype Traveler was discussed in the GHO in 1999, but not in depth.

For a prototype that was to become the 1946 2¼ x 3¼ Crown Graphic, Graflex simply used a Miniature Speed Graphic body taken from the May 9, 1940, production run (serial number



The camera is well-finished, suggesting that it was nearly complete when taken off the assembly line. It is pre-drilled for a side-mounted rangefinder, but the holes on the body are covered with leather, and it lacks a name on the lens locking slide bar. Also, it did not come with a lens or infinity stops on the rails. There is a vernier-type focusing scale on the focusing rack, but no scale on the bed. It has a sports finder, but no optical or tubular finder. It has an indentation on the left rear for the focal plane shutter plug flash cord, but no plug. The indentation is neatly leather-covered. What does set it apart from the Miniature, other than the lack of a focal plane shutter, is the yellow and black decal in the well and the plastic pieces attaching the focusing rails.

As an interesting side note, on the back cover of the October 1942 issue of Popular Photography, Fink-Roselieve Co. introduced the FR Reporter, in the middle of WWII no less! It had the very same dimensions as the prototype, and it had many similar features, i.e. sliding lensboard locks, sports finder, spring back, lensboard and focusing tracks. Interestingly, it had a sliding front standard, not available until the Pacemaker, and the front sports finder bears a striking resemblance to the one used on the Anniversary Speed Graphic. My FR Reporter is pictured with the prototype. By October 1943, the Reporter was shown in an ad in Popular Photography as the "Busch." The Busch was advertised at \$99, with an f/4.5 Wollensak lens in a Rapax shutter. A year earlier, Graflex was selling their Miniature (with a focal plane shutter) with an f/4.5 Optar in a Graphex shutter for \$122.75. According to Graflex employee and historian Tim Holden, FR was never authorized or licensed to make the Reporter. Also, when he had lunch with the Chief Engineer of Busch, he told Tim they were having a lot of problems with their press camera, so Tim told his management not to worry about Busch as a serious competitor. Records do not indicate that Graflex pursued either company in court.²



Traveler and FR Reporter.

Years later, I started collecting other 2¼ x 3¼ press-type cameras to include Burke & James and the FR Reporter, which was bought by Busch and renamed the Busch Pressman. Busch made a 2¼ x 3¼ for Sears Roebuck and Co. I was lucky enough to find one marked "Tower Press Camera." I should also mention my 2¼ x 3¼ Plaubel Makina, complete with a Plaubel flash with all the lenses, a back and accessories, which with ingenious add-ons, was updated through the years to compete with the other 2¼ x 3¼ press-type cameras on the postwar market.

I also have a 2¼ x 3¼ Linhof Technica III in a case with a cammed three-lens set and flash (Well, that's another story, as I chased that one for over six years.). I mention Linhof, because the 2¼ x 3¼ Speed, Crown and Century used the same lenses.

I now have over forty 2¼ x 3¼'s, but have only seen and

acquired two 2¼ x 3¼ Crown Graphics. I guess photographers preferred to have a focal plane shutter when purchasing 2¼ x 3¼ Graphics. My two 2¼ x 3¼ Crowns have 1947 f/3.7 105mm Kodak Ektars in Supermatic shutters.

I enjoyed using the 2¼ x 3¼ Speed, as it was my first professional-level camera that I used all through my high school years, using an "Adapt-A-Roll 620" for roll film.

It has been very interesting and fun to observe the slight improvements and upgrades through the years on the many 2¼ x 3¼'s made. In August 1950, the Grafloc back was introduced. This allowed the use of the Graflarger, Grafmatic and roll film holders, to keep the 2¼ x 3¼ Graflex line ahead of the competition.

¹ An alternative theory holds that the Traveler was intended to be part of the Miniature line, not the Pacemaker line. This theory is based on the 1940 serial number, which suggests that the camera may have been made in the early years of the Miniature's production cycle, that its features were more in line with the Miniature than the Pacemaker, and, based on a well-developed name tag, was close to a production level for market testing or introduction. That said, it actually has many of the characteristics, light weight, and affordability, of the 1949 Century Graphic. See GHQ Volume 16, Issue 1. Regardless of Graflex's original intentions, the Traveler may have been set aside during the war, because of production pressures and sales restrictions. As there are no company records yet found about this camera, both theories are, unfortunately, speculative.



Miniature and Traveler.

² If you like wild speculation, this camera is ideal. Why was the Reporter based on the Traveler....a stolen prototype? Why was it introduced in the early days of the war...were they not given the same sales restrictions as Graflex? Did Busch abandon their attempt at a press camera and buy the FR camera? Why didn't Graflex sue somebody....a lack of patents? Readers are encouraged to submit their wild ideas.



Camera Restoration: A Curator's View

By Todd Gustavson
Curator, Technology Collection
George Eastman House

To restore or not to restore photographic equipment—it's a question frequently asked of a technology curator. With today's migration to digital photographic equipment and photographic repair services and parts hard to find, both collectors and photographers seek advice on what to do with their slightly tatty classic cameras. It is difficult and possibly presumptuous of me to give advice regarding an object without actually seeing it, like a physician diagnosing a condition over the phone. As a museum professional and someone who prepares older cameras for display, I can ethically discuss here how I might treat a camera or photographic equipment as found in the Museum's technology collection and as prescribed by accredited museum practices.

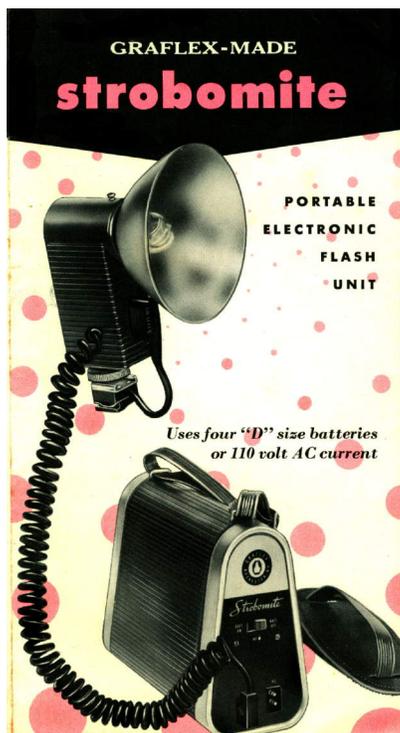
In the 1950s, George Eastman House established the world's first laboratory specifically dedicated to photographic conservation. However, this laboratory was designed to treat photographic images, not the machines that made them. Object preservation was subcontracted to a qualified conservator, hired by the curator of the technology collection. Overall, the condition of the Eastman House's collection, with its 20,000 objects, is superb, and for several reasons, little in the way of restoration or repair is required. First, the Museum acquired many collection items as soon as they left a company's production line. This is true of a majority of objects received from corporate entities, such as Eastman Kodak Company and Graflex. Industry giants like Kodak also collected competitors' new equipment for research. The original Deardorff and Nikon 1 came to the Museum's collection via Kodak's earlier acquisition of these outstanding objects. Second, the majority of the technology collection's unparalleled 19th-century camera holdings was acquired from high quality private collections, such as those carefully assembled by Alden Scott Boyer (1887-1953) and Gabriel Cromer (1873-1934). Like various corporate acquisitions, these collected historical items are in remarkably good condition for their advanced age. Only a small percentage of the technology collection is

regarded as in below-average condition. With these objects, I follow the dictate of "do no harm." It is better to have them appreciated and studied for what they are—artifacts of immense historical value.

Unlike private collectors, George Eastman House is a public institution with fiduciary responsibility for the preservation, care, and maintenance of all collection materials. The Museum follows the American Association of Museums' best practices guidelines. These include storing collections in a clean, climatically stable, and secure environment. Object handling is kept to a minimum with all movement planned well in advance and accomplished by trained museum professionals. Objects are moved by grasping and lifting from the bottom. Objects with handles, such as Graflex cameras, are never lifted or carried by them in order to prevent breakage or deterioration.

If a situation does arise when an object needs restoration, a qualified conservation professional evaluates the object. In some cases, it might be more cost effective to acquire a similar example in better condition. Today, various online auctions have made this a much easier proposition. If restoration is the only possible route to follow, the first step is to thoroughly research the object, especially its provenance. While most cameras were production items manufactured in large quantity lots, there may exist variations in physical detail in any company's production run. Well-intended but poorly researched restorations can lead to significant damage of a historically valuable object. Any restoration process should be thoroughly documented from start to finish in picture and written reports. And whatever work is done should be realized in such a way that it can be reversed at a later date.

[Ed. Mr. Gustavson, who began working in the technology collection at George Eastman House in 1988, has been collection curator since 1998. He has curated or co-curated ten exhibits at the museum, including the critically acclaimed traveling exhibition, "The Brownie at 100." He is the author of the authoritative book, Camera, on the history of photography, with emphasis on the cameras (including Graflex) that were integral to that story. Mr. Gustavson will be presenting a talk on his new book, 500 Cameras, at the Photo History Symposium next month.]



The Graflex-Made Strobomite 1957-1962

By Ken Metcalf

Resembling a “ladies’ petite handbag”¹ more than an electronic flash, this unit did not sell well, even though it was extensively advertised by Graflex. In the words of a Graflex salesman: “I didn’t like it. I didn’t sell it. It was Mickey Mouse.” This product review is backed up by the fact that only 2,400² units were produced. My source also

relates that Heiland/Honeywell sold their models 61A, 62A, and 71A about the same time, that they were a much better product, and that the guide numbers and prices were about the same.

Specifications:

Energy storage 50 watt-seconds

Flash duration 1/1,100 seconds

Recycle time 6 seconds with AC and 10 seconds with battery

Guide numbers ASA 25 – 20-36; ASA 200 - 78-105³

Why was the product not successful? Here was Graflex’s strategy: “A new Graflex product specifically designed and priced for the large volume amateur market in electronic flash. This new unit offers several new exclusive features plus all of the advantages now available on low priced electronic flash units.” It was given catalog number 2201.

Initially priced at \$64.50, it was powered by 4 D-cell batteries, producing 200 flashes (soon downgraded to 100), or it could be converted to 120-volts with using a switch. Exclusive features included an adjustable reflector and a wire-shoe adapter for hot-shoe cameras. It accepted Graflite shutter cords for many types of synchronized shutters. Weighing less than 3 pounds, it had a gray plastic covering and aluminum trim. Its weakest point was the cord between the power pack and the lamp head. As the advertising campaign



(mainly in Graflex’s Trade Notes) continued, it was increasingly advertised as a “fill-in” flash. Several months later the price was reduced to \$59.95,⁴ and they tried a counter display using an “attractively boxed” unit. As odd as it sounds today, they advertised that: “Strobomite can be sold for only \$6.00 down, when you use the Graflex Easy Payment Plan.” Contradicting their earlier research, the unit price went back to \$64.50 the following year. In 1960 Idaho Camera was selling the Graphic 35 and the Strobomite as a “Special Factory Purchase” (often used to get rid of excess inventory), although it was still being shown, but not touted, in Trade Notes. According to Graflex historian, Tim Holden, the unit was listed in Graflex catalogs through August 28, 1962.

Graflex obviously wanted the product to succeed, as evidenced by the changes they made in its marketing. With their purchase by General Precision in 1956, the company, it seems, was being asked to change its focus (sorry) from large format professional cameras to amateur photo equipment and audio visual products, even though Graflex had several very good cameras yet to be introduced. It is possible that the Graflex division was not ready for, or up to, the change.

¹From their own advertising.

²The Graflex production book (aka serial number book) had the following notation about production of the Strobomite: “1000 nos. skipped in Schmit’s stamping operation.” Ouch!

³In the following month’s Trade Notes: “...the laboratory tests of production units indicate a more generous rating than that originally stated in the Strobomite folder.” ASA 25 was now 45-50 and ASA 200 was now 140-160. As the old photo joke goes, this was done by moving the test to a white-tiled bathroom.

⁴They really were trying. “The introduction of Strobomite proves once again that the magic of prices is important to all of us. The result of this dealer survey [at a trade show] indicated that while the \$64.50 price was right, and satisfactory volume could be obtained, it was generally believed by the dealer panel we interviewed, that an ‘under \$60’ price would increase individual volume very considerably – possibly by 100!”





Made in France
For
The Folmer & Schwing Mfg. Co.
New - York

So says this interesting lens from the Bart Nadeau collection. This is one of the earliest photographic items to bear the Folmer & Schwing name. It weighs in at a hefty 4½ pounds and is 6½ inches long.

What type of lens and who made it are very much in doubt. From a layman's examination of the elements, it is composed of a cemented front doublet and an air spaced rear doublet. After reading Rudolph Kingslake's A History of the Photographic Lens, it may be a Petzval portrait lens, which was made in France by several manufacturers, including Jamin & Darlot, and the lack of a name was not uncommon for this class of lens. If it is of slightly later manufacture, it may be a Dallmeyer.

UNIFORM SYSTEM OF STOPS.

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																		
Ratios	1.8	2.0	2.2	2.5	2.8	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.3	12.6	14.1	15.8	17.7	19.9	22.4	25.1	28.1	31.4	35.0	38.9	43.3	48.0	53.1	58.6	64.6	71.1	78.1	85.6	93.6	102.1	111.1	120.6	130.6	141.1	152.1	163.6	175.6	188.1	201.1	214.6	228.6	243.1	258.1	273.6	289.6	306.1	323.1	340.6	358.6	377.1	396.1	415.6	435.6	456.1	477.1	498.6	520.6	543.1	566.1	589.6	613.6	638.1	663.1	688.6	714.6	741.1	768.1	795.6	823.6	852.1	881.1	910.6	940.6	971.1	1002.1	1033.6	1065.6	1098.1	1131.1	1164.6	1198.6	1233.1	1268.1	1303.6	1339.6	1376.1	1413.1	1450.6	1488.6	1527.1	1566.1	1605.6	1645.6	1686.1	1727.1	1768.6	1810.6	1853.1	1896.1	1939.6	1983.6	2028.1	2073.1	2118.6	2164.6	2211.1	2258.1	2305.6	2353.6	2402.1	2451.1	2500.6	2550.6	2601.1	2652.1	2703.6	2755.6	2808.1	2861.1	2914.6	2968.6	3023.1	3078.1	3133.6	3189.6	3246.1	3303.6	3361.6	3420.1	3479.1	3539.6	3599.6	3660.1	3721.6	3783.6	3846.1	3909.6	3973.6	4038.1	4103.6	4169.6	4236.1	4303.6	4371.6	4440.1	4509.6	4579.6	4650.1	4721.6	4793.6	4866.1	4939.6	5013.6	5088.1	5163.6	5239.6	5316.1	5393.6	5471.6	5550.1	5629.6	5709.6	5790.1	5871.6	5953.6	6036.1	6119.6	6203.6	6288.1	6373.6	6459.6	6546.1	6633.6	6721.6	6810.1	6900.6	6991.6	7083.6	7176.1	7269.6	7363.6	7458.6	7554.6	7651.6	7749.6	7848.6	7948.6	8049.6	8151.6	8254.6	8358.6	8463.6	8569.6	8676.6	8784.6	8893.6	9003.6	9114.6	9226.6	9339.6	9453.6	9568.6	9684.6	9801.6	9919.6	10038.6

Diaphragms of 3-4 Lens—actual size.

The Stops or Diaphragms furnished with these Lenses are made and numbered in accordance with the recommendations of the Photographic Society of Great Britain, whereby each number is double that of the preceding one, and requires twice the exposure. The ratio is the same throughout the entire series, so that, for instance, No. 32 of the No. 10 lens will require the same exposure as the corresponding stop of No. 1, although its actual size is much greater. Each diaphragm has the number and f. engraved upon it, as shown in the illustrations, and the initial one (No. 4 or f. 8) is the full aperture of the lens.

price of \$4.00 and was equipped with the more desirable rotating diaphragm. By at least 1899, Folmer & Schwing sold only

iris diaphragm fitted lenses, thus the lens could be earlier than 1894.

Reader comments are welcome on this early Folmer & Schwing sold item.

KM



To show relative size, the lens on the left is a 7-inch f/4.5 Series II Cooke Anastigmat.



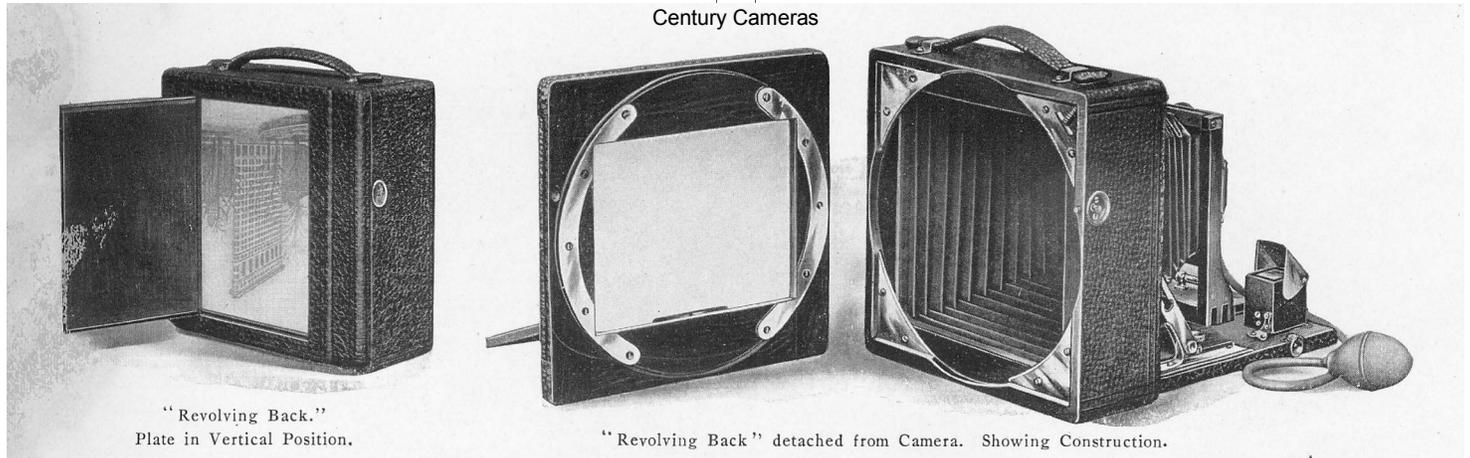
1956 autographed picture given to Bill Inman from Bob Cummings, Hollywood and television actor, posed with new 4x5 Pacemaker Speed Graphic and Strobflash I. Graflex supplied the equipment as a prop for Mr. Cummings. Picture courtesy Mr. Inman.

The Century Camera Company's Influence on Folmer & Schwing

By Thomas Evans

According to Rudolf Kingslake's history of the camera and lens companies of Rochester, N.Y., "In 1903 the Century Camera Company was bought by George Eastman, who moved the factory to a large, solid building at 12 Caledonia Avenue [in Rochester, N.Y.]. In 1905 the Century Camera Company acquired the Rochester Panoramic Camera Company, maker of the Cirkut rotating panorama cameras," which had been patented in 1904 by Johnston, Reavill, and Brehm. In 1907 they became the Century Division of Eastman Kodak, and, "In April 1905 the Folmer and Schwing Manufacturing Company was purchased by George Eastman and brought to Rochester, where it was installed in the building at 12-14 [sic] Caledonia Avenue. This building had been previously occupied by the Rochester Camera Company, in 1898, and by the Century Camera Company since 1903. In 1907 the company became the Folmer and Schwing Division of Eastman Kodak Company, and in 1917 the Folmer-Century Division. Mr. W. F. Folmer continued as general manager until 1926."

The Eastman Kodak Company acquired a number of camera and



optical companies during the early years of the 20th Century, moving them into their operations in Rochester. Not only did this reduce their competition, but it brought together under one company a number of important patents, cameras and technical men, which allowed the various divisions of EKC to freely use the best ideas among them.

The Folmer and Schwing Division of EKC took up the manufacture of the large format Century Studio Camera line, as evidenced by the small copper plaques seen on many of these cameras. But how else might F&S have been influenced by Century designs?

One important example of the sharing of patents is the revolving back. In May of 1904, Harvey W. Locke, assignor to the Century Camera Company, applied for a patent for his revolving back design.

The 1904 Century Camera Company catalog shows the new revolving back as used on their self-casing cameras. The catalog describes this "entirely new feature for hand cameras" thus: "Photographic plates are usually longer one way than the other, and it has been the general custom for manufacturers to build cameras so that the long side of the plate will be horizontal with the view. When photographing high buildings, however, or when making portraits, or, in fact, any perpendicular subject, the length of the picture should be up and down, --- the short side acting as the base."

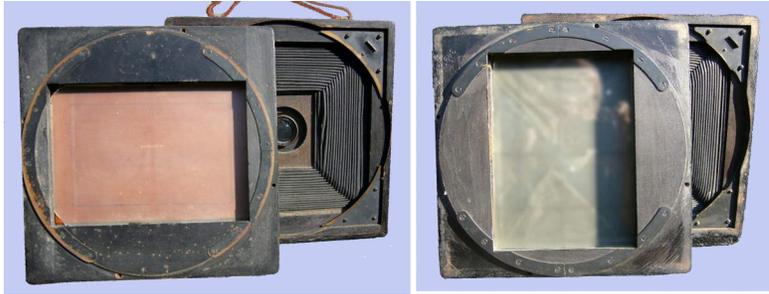
"To make an upright picture with an ordinary camera, by which we mean one without a reversible back, the entire instrument must be turned over on its side, and it is obvious that in such a position the adjustments are not readily manipulated. The new Revolving Back enables the photographer to decide instantly, just how he wishes to make the picture, as the reflected image can be viewed with the ground glass focusing screen in either a vertical or horizontal position, without detaching the back. Without question this is the most important and useful adjustment applied to Hand Cameras in recent years."

Until The Folmer & Schwing Manufacturing Company became a part of Eastman Kodak, it made no revolving back cameras, al-

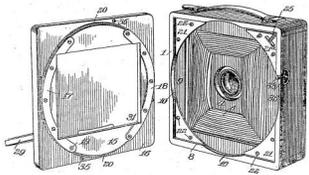
though some models had reversible backs.

In the first catalog of 1906, The Auto Graflex, their new reflex camera was introduced with a 4x5 reversible back model (see GHQ, Volume 10, Issue 3), followed by a revolving back version in their general catalog in the same year. The reversible back had to be removed from the camera in order to turn it 90 degrees. According to Richard Paine, in A Review of Graflex, the first version of the Revolving Back Auto Graflex was based on the earlier Reversible Back Graflex. This camera was replaced in 1909 by the more familiar RB Auto Graflex design. In 1907 the newly formed Folmer and Schwing Division of Eastman Kodak introduced the Revolving Back Cycle Graphic in 4 sizes, but only the 4x5 and 5x7 sizes sported the new back. In 1908 the 6½ x 8½ size was also fitted with the new back. The Cycle Graphic continued in their line through 1922.

I compared a 5x7 Century Model 46 (serial number 51192) with the patent dates of September 9, 1902, and March 1, 1904, with a 5x7 RB Cycle Graphic (serial number 34918) made about ten years after the Century, and found that the revolving backs were so much alike that they could have been made on the same machinery. The design of both backs seems true to Mr. Locke's



Left: 5x7 Century Model 46, serial number 51192, ca. 1904-1905; right: 5x7 Cycle Graphic, serial number 34918, ca. 1913-1914.



patent, including a provision to detach the back by turning it 45 degrees and pressing a spring-loaded catch. The similarity even includes the small, circular catch that is used on both cameras to fix the back in place. This catch originated on Century cameras to latch the board that

protects the ground glass focusing screen, was adapted in Mr. Locke's patent to fix the revolving back, and was clearly carried over to the Cycle Graphic. This same small catch shows up on other F&S cameras, such as on the ground glass panel of an early Press Graflex.



From left, Locke patent drawing, Century, Cycle and Press Graflexes.

There is no doubt that there are many more examples of the influences that Century Camera Company designs, and those of other lens and camera companies acquired by the Eastman Kodak Company in the early 1900s, had on Folmer & Schwing. When the F&S Department left Kodak in 1926 and formed the Folmer Graflex Corporation, they took the Century name with them and later used it with their Century Graphic Cameras.

The specific design of the previously noted revolving back on the Graflex is less certain. In Graflex's 1907 catalog, when introducing the Cycle back, they make the statement, "The Revolving Back is the same in general construction as that on the Revolving Back Graflex." As the Cycle/Century back was designed to be removed for attachment of a focal plane shutter or the Cirkut back, the Locke design was necessary, as the Graflex back was not removable.

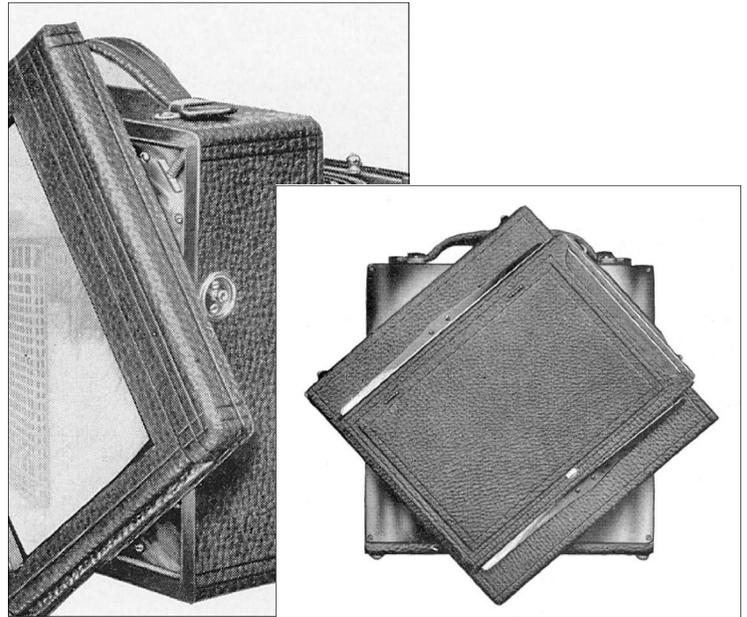
Several other revolving back models, based on the Graflex design, followed, including in 1937, a Revolving Back Speed Graphic in a 2¼ x 3¼ format.

References:

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Paine, Richard. 1981 The All American Camera, A review of Graflex. Alpha Publishing Co., Houston, TX

Walmsley, J. M. 1904. Century Cameras. Century Camera Company, Rochester, NY



Left: Century back showing release catch; right: Cycle Graphic back, with latch mechanism possibly removed by retouching.

CENTURY CAMERAS



Graflex Historic Quarterly

The Quarterly is dedicated to enriching the study of the Graflex company, its history, and products. It is published by and for hobbyists/users, and is not a for-profit publication. Other photographic groups may reprint uncopyrighted material provided credit is given GHQ and the author. We would appreciate a copy of the reprint.

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Contact:

Ken Metcalf
94 White Thorn Dr.
Alexander, NC 28701-9792
E-mail: metcalf537@aol.com



Folmer & Schwing Mfg. building at 271 Canal Street, New York City, from the back cover of their 1894 catalog.



CORRECTION

In the fourth quarter 2010 issue of the Quarterly, I wrote that the Grafmatic Film Holder had a catalog number and "Graphic" as part of the labeling on the back, while, in fact, it does not have a catalog number, and does not say "graphic," but simply "grafmatic film holder," along with "GRAFLEX GENERAL PRECISION," all in red. Also, a white memo tab was attached to the holder, starting in 1956.

Also, starting with the fourth quarter 2002 issue of the Quarterly (and repeated in the fourth quarter issue of 2010), it was stated that the 2¼ x 3¼ Graphic Grafmatic was discontinued in 1973, while new catalog information suggests that 1971 was its last year.

KM



This illustration should have been included with the following text from Jim Chasse's article: "What does set it apart from the Miniature, other than the lack of a focal plane shutter, is the yellow and black decal in the well and the plastic pieces attaching the focusing rails."

This omission was brought to my attention by Nick Graver.

KM