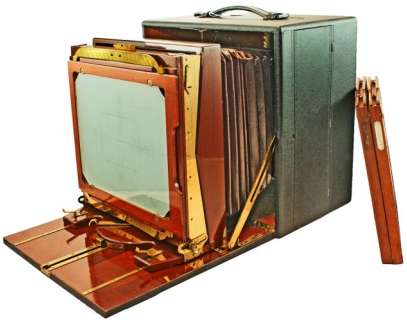
GRAFLEX Journal

SHARING INFORMATION ABOUT GRAFLEX AND THEIR CAMERAS

ISSUE 2025

FEATURED



1898-1905 FOLMER & SCHWING REVERSIBLE BACK GRAPHIC

By Thomas Evans

The Folmer & Schwing Manufacturing Company of New York City produced the Reversible Back Graphic camera from at least 1898 to 1905. The camera design was of the long-focus type, having in addition to a front that folded down to form a bed, a back that also folded down, providing a triple-extension focusing bed. To facilitate inserting and removing film and plate holders without the back standard being extended, this type of camera usually had side and top doors to provide access. This design gave the photographer a view camera that could handle wide-angle, normal, and very long focus lenses with relative ease, and still fold up into a compact, self-contained box.

The Folmer & Schwing catalog of 1898 described the camera: "The Reversible Back Graphic is designed to meet all the requirements for both professional and amateur work, possessing all of the good points of a first class View and Hand Camera, with practically the compactness of the latter."

During the 1890s and early years of the 1900s, the compactness of the camera would have appealed to traveling photographers, especially to members of camera clubs, who would often travel from their cities out into the countryside by train or bicycle for a weekend day of photography.

The catalog continues: "In the Reversible Back Graphic we have embodied all of the following advantages, vis: Double center swinging back; rising and sliding front; removable lens board; reversible back; rack and pinion focusing device; view finder and tripod plate."

The view camera movements would be considered as moderate by today's standard, but they are there, handy, solid, and easy to use.

"The Reversible Back Graphics are far superior to the ordinary View Camera for long focus or Tele-Photo Lens Work, as it has a much longer length of bellows when extended and is much more compact when closed up: yet having space for three extra double Plate Holders, lens and shutter."

The design of tele-photo lenses in the 1890s and early 1900s was different than what we are used to today. In 1891, Thomas A. Dallmeyer developed a tele-photo lens that combined an ordinary taking lens on the front of a variable-length tube, and a negative, magnifying lens on the back. This design is similar to that used in telescopes. The photographer could set up the tele-photo with different focal lengths of negative component, and with different lengths of the tube, to achieve different magnifications of the image. In theory, there is no limit to the magnification one could produce, but in practical terms, this was limited to about 10 or 20 times magnification. The chief limit was in the rapid loss in the strength of the light reaching the emulsion, but also important, it is very difficult to correct the optical aberrations of the lens for variable focal lengths, and the increase in magnification also increased the visible optical distortions. Large magnification of the image required a long bellows extension. The extra-long bellows extension also made it possible to make 1:1, macro photographs with ordinary lenses.

Rapid Rectilinear lens in F&S Graphic shutter.

The F&S Reversible Back Graphic cameras were normally sold with a Rapid Rectilinear lens, in a Folmer & Schwing Graphic Shutter. Both the lens and shutter were made for F&S by the Bausch & Lomb Optical Co. The lens components of the normal Rectilinear could be swapped out with the components of a wide angle lens, both using the same shutter. To use the wide-angle lens, the front bed could be dropped out of the way. Also offered were several faster or better-corrected lenses, including the Bausch & Lomb Zeiss Convertible lens, Series VIIa (early Protar VIIa), the Voightlaender Collinear Lens,

Series III, and the Double Anastigmat Lens, Series III (early Goerz Dagor).

Having a convertible lens was a convenient way to have a choice of focal-lengths without carrying multiple lenses and shutters. For example, the 8x10" RB Graphic could be fitted with the Number 17 B&L Zeiss Convertible lens, which was made up of a 23 1/8-inch component and an 18 7/8-inch component, to make combined an 11 7/8-inch lens. The components could be used singly or combined, giving the photographer the choice of three different focal lengths. The 8x10-inch RB Graphic had a bellows extension of 38 inches, so it could easily handle a 23 1/8-inch lens.

These lenses were offered in the Bausch & Lomb Iris Diaphragm shutter. This shutter did not have a separate iris aperture, but could be set so that the shutter blades opened up to the selected aperture.

B&L Iris Diaphragm Shutter.

The 1898 F&S catalog listed the Reversible Back Graphic in three formats: 5x7", 6½ x 8½", and 8x10". In 1899, the catalog added the 4x5" format. These four formats continued until 1904, and by 1906 this model of camera was no longer listed.

Sometime early in the 20th Century, the film holders and plate holders became standardized. For example, The Rochester Optical Company used an 8x10-inch plate holder that was 9 7/8 inches wide. In the 1890s and early 1900s, both Folmer & Schwing and, beginning in 1900, the Century Camera Company used 8x10-inch plate holders that were 9 3/8 inches wide, while for the last hundred years or so, the universal standard has been 9 ¼ inches. The additional 1/8 inch makes the standard plate or film holder fit loosely on the old cameras and could be a source of a light leak. And the 9 3/8-inch wide holders simply do not fit later cameras, and no doubt many were disposed of or trimmed down to fit newer cameras, making the 9 3/8-inch holders difficult to find now.

It was in 1905 that the Eastman Kodak Company purchased Folmer & Schwing and moved them from New York City to Rochester. Kodak had bought the Century Camera Company in 1903 and moved them into the factory in Rochester, and CCC also made a very capable version of the Long Focus camera, the Long Focus Century Grand, which was continued after 1905, suggesting that the decision was made to drop the F&S model in favor of the CCC model.

Folmer and Schwing also produced similar cameras: the Long Focus Graphic in 4x5" and 5x7" formats, without the reversible back; the Reversible Back Graphic Special, which had slightly longer bellows extensions; and the Graphic Naturalists', only available in 6 ½ x 8 ½", which had black ebonized wood, and gray 'gunmetal' finished hardware. The Graphic Naturalists' had a fixed back, a shorter bellows, no top or side doors, and was fitted with hooks in each corner for hanging the camera for close-up work, and brackets inside the front of the camera for fastening tripod legs. It appeared in only the 1904 catalogue. These all appear to have also been discontinued after the merger with Eastman Kodak.

The Folmer and Schwing Reversible Back Graphic is a beautifully designed and made camera, sporting richly finished mahogany, set off by polished brass hardware, and covered with high quality Moroccan leather. It still qualifies as a capable and versatile camera, with useful view camera movements, and it can be folded up into a relatively compact, self-casing box.

Sources

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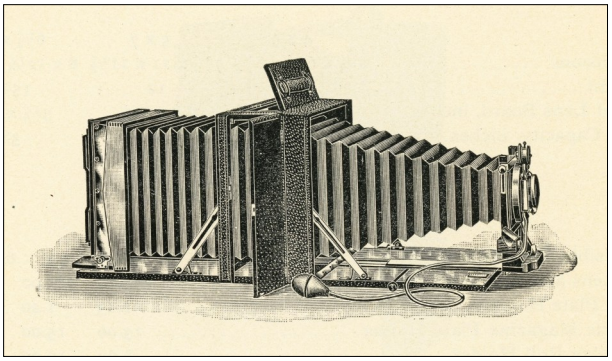
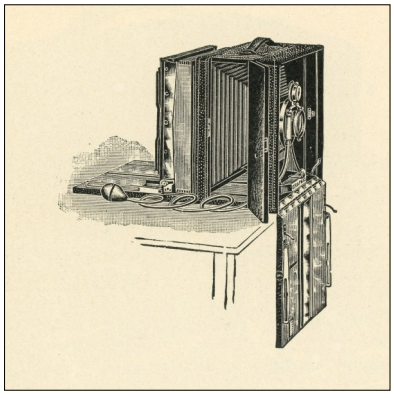




GIANT BLACK BOX

By Robert Goldman

In the mid 1940s, my father was a high school photographer, using a 3¼ x 4¼ Speed Graphic camera. When I began shooting photos in my own high school years, the camera of choice was a 35mm SLR. After deciding I liked photography, I scrimped and saved to buy a Nikon. It was the pinnacle camera for me at the time.

Taken by my father in 1940s in Los Angeles with his Speed Graphic.

All the while, at every turn, my father extolled the virtues of medium format. Although he hadn't taken a photo in decades, as soon as I had my Nikon, he went out and bought a new Bronica camera. Sure enough, it took great photos. It was also in a higher expense category than acknowledged by my budget of the day.


Me in 1986.

Somewhere down the road, at a camera fair, I picked up a Graflex RB Series B in 3¼ x 4¼. It was equipped with a Kodak Anastigmat f4.5 lens. The camera was well used, but the exterior looked great, and the shutter had been recently serviced. As a newly minted SLR enthusiast, and with my father's words in mind, I couldn't resist trying a giant SLR.

I'll never forget my conversation with the seller. Upon noting an air bubble in the glass (my Nikkor lenses didn't have any bubbles), I received an education on glass making then vs now. He assured me I could return the camera for a full refund if dissatisfied with its results. I still have the camera.

Everyone thought I was mad, but the Series B served well, even in a 35mm world. I used it to experiment with time and flash exposures, shot product photography (most of our printing was black and white in those days), and even took it on a cross country MG car rally.

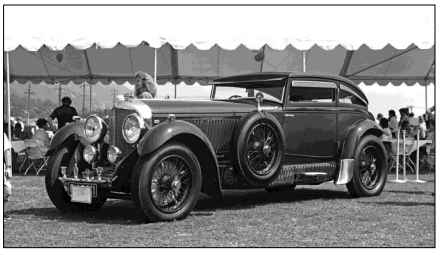
My last real outing with the Series B came in 1986, with an MG sports car trip from New York to California, and back to Toronto, Canada. 47 MG T-Series cars, to commemorate the 50th anniversary of the type, drove 7,000 miles each on the rally. My mom and I were the parts and trailer support team. As it happened, I didn't get much chance to use the camera on that trip.

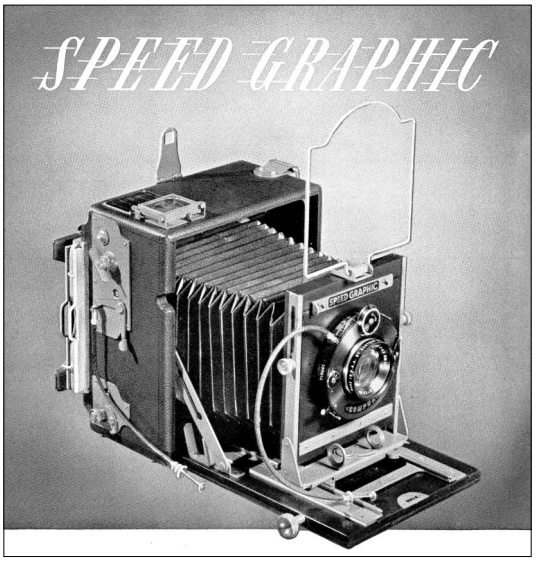
Shortly after the Ocean to Ocean trip, I was introduced to stereo photography, which has become my primary photographic interest. However, my love of giant black boxes has never faded. Today I count several additional Graflex cameras in my collection, from a No. 0 Graphic to a Naturalists'. Of course, there are a few stereo Graflex pieces in there as well.

When I started, 3¼ x 4¼ film was readily available. Although my father dabbled in color with his Bronica, I stuck with black and white. My darkroom technique was never stellar, and b/w fit the budget. With the demise of the smaller film format, I bought a Series D in 4 x 5 and continued. The Series D has a Graflex Optar f5.6 lens.

My knowledge of lenses is little to none. I don't know who made the Graflex Optar, but 4 x 5 negatives from that camera comfortably hold their own alongside the output from the Canon 5D series cameras I use in the age of digital.

To prove I really used Graflex SLRs in the field, I'll divulge one of their secrets. If you're shooting by hand, brace the camera firmly against your body. When that heavy mirror swings up, the camera rotates down, whether you want it to or not. Those darn physics.


1980s concourse picture I took with my 4x5 RB Super D Graflex.



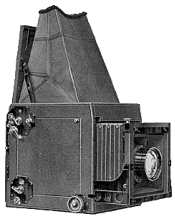
"HOME" PORTRAIT CAMERAS

By Ken Metcalf

The purpose of this article is to describe the Home Portrait Graflex and compare it to home portrait cameras they made for their parent, Eastman Kodak, and those made separately by Eastman Kodak.

To explain the above quote marks. "Its name implies that it might be for amateur use, but, then again, no Folmer-Schwing camera is for amateurs; this camera is meant to be used by a professional photographer to lug around to people's homes to take their portraits. It has a typically Folmer-Schwing robustness that is unrivaled in strength and weight."[1] "This [professional] catalog is published for the convenience of the profession and of dealers handling our goods, and includes only such products of the Eastman Kodak Company and its divisions as are used by the professional photographer. EASTMAN KODAK COMPANY" [2]

5x7" Home Portrait Graflex



The camera (left) was first shown in the Eastman Kodak professional catalog of 1911, then the 1912 Graflex retail catalog. At the time, and for many years, Graflex was a division of Eastman Kodak.[3] The camera was last shown in their in 1936-37 catalogs (same cover, with Pricing Supplements for each year) and listed in a 1942 Pricing Supplement, but not listed in 1944. It was finally listed in a 1945 Supplement. According to Graflex production records, a batch of 60 cameras was ordered in 1937, then in 1950, 62 cameras (without bellows) were ordered.

Pricing & Production

	1912	1915	1920	1925	1929	1939	1945
Focal capacity	18"	18"	15"	15"	15"	13¾"	
Cost w/o lens	$150	$130	$200	$184	$225	$240	$249
Minimum focus	9½"	10½"	9 -7/8"	10"	10"	10"	
Weight lbs.	9½	13¾	11½	10¾	16¾ /lens	NA	
Lensboard(s)	5x5" 6½x6½"	5x5" 6½x6½"	5x5" one board in 1916	5x5"	5x5"	5x5"	5x5"
Shutter – rubberizes - cloth	Focal plane to 1/500, with feature to expand range.	Ditto	Ditto	Ditto	Ditto	8/1/38 plus Special Press Model.	Ditto
Front movement	Rises, lowers & tilts.	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto
Back	Revolving.	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto

In 1912 the camera, without a lens, weighed 9½ pounds and cost $150, or an absurd $4,000 in 2025 dollars! In 1915 their catalog showed the price, with their cheapest lens $197, and a weight of 12½ pounds. The last time the camera was shown (1937), without a lens, it was listed for $240 or $350 with their cheapest lens. About 1,300 were produced.

Lensboards

In the 1912 catalog, "The construction of the camera front is such that short, as well as long, focus lenses may be used. One lens board is flush with the front of the camera for use with medium or long focus lenses. Another smaller board fitted to the depressed front permits the use of lenses having shorter focal lengths." The Home Portrait was the only Graflex camera with this feature, but it was abandoned in 1916. "Minimum focus of lens accommodated 10-inch in recessed lens board and 12-inch in normal flat lens board."[4]

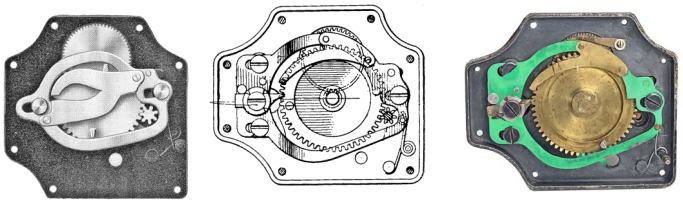
Shutters

Only three patent numbers were stamped or printed on the upper plate on some, but not all cameras or any catalog illustrations. One is a 1907 (843,140) patent for a camera that introduced a "plurality of slits" shutter. The second patent from 1908 (885,236) is for shutter improvements.

In 1912, the year the Home Portrait (HP) was introduced, most Graflex SLR cameras were fitted with an integral roller-blind focal plane shutter giving "automatic" exposures from 1/10 to 1/1000, while the Press Graflex's top speed was 1/1500.

The HP was fitted with a four- rather than five-slit "special Focal Plane Shutter which will give automatic exposures as long as 1/2 second, or instantaneous exposures of a duration up to 1/500 of a second."[4]

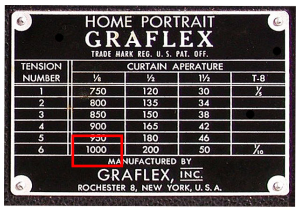
"Although this camera is primarily intended for portrait work, it is equally efficient in all other branches of photography where excessive shutter speed is not essential. The Home Portrait Graflex is fitted with a special Focal Plane Shutter which will give automatic exposures as long as ½ second, or instantaneous exposures of any duration up to 1/500 of a second. By a unique adjustment, increased illumination may be secured with automatic exposures, by adding one or more of the exposing apertures to the full curtain opening. This adjustment consists of an escapement, which permits the curtain to travel its full length, utilizing all apertures. As an example, the curtain may be set for the full 7-inch and the next smaller, 2-inch opening, this would give the effect of a 9-inch curtain aperture, or the curtain may be adjusted to give the 7-inch, 2-inch and the 1-inch opening. The shutter is adjusted to give time exposures of any duration." "The shutter is arranged to give time exposures of any duration, and by setting the curtain at O (open) and allowing the rising mirror to commence, and the dropping curtain to terminate the exposure, automatic exposures of approximately a second may be made."[5]



Left to right, standard shutter control, HP escapement patent (1,060,331), and escapement highlighted.

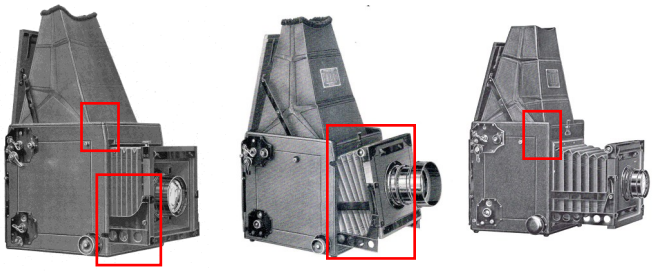
The final shutter change came as a notation in the 1939 retail catalog and given in detail in the 1940 Folmer Graflex Dealer Price List. "The newspapers and the news photo syndicates of the nation have depended through the years on cameras manufactured by Graflex. Thus, it is but natural that they have turned to GRAFLEX for such custom built as would serve their specialized needs. To meet those needs, GRAFLEX has refined the so-called Big Bertha cameras and the Ringside camera so that they are acknowledged as the finest available."

Details follow: The 5x7 Big Bertha Cameras. Basically, most of the so-called Big Bertha cameras consisted of an especially altered 5x7 Home Portrait Graflex into which there is installed a long focus lens. In many quarters, though, the 5x7 Portrait Graflex regularly equipped with any of the regular lenses offered for it well serves the news field, but without exception it is necessary that such cameras be especially equipped with the standard high-speed Graflex focal plane shutter rather than the special shutter which is standard on the Home Portrait Graflex. The 5x7 Home Portrait Graflex, when especially equipped with the standard high-speed Graflex focal plane shutter, is normally referred to as the "special press model."

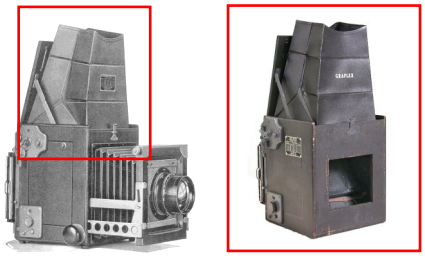


Prices for it are as follows: "Special Press Model 5x7 R.B. Home Portrait Graflex without lens. $245 list, $163.33 net."

Camera body



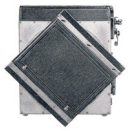
1912 1913 1916



1929 1950

1912 As originally shown, with rearward body bevel and front standard not as shown in the patent.
1913 Front standard as shown in patent 1,134,522.
1916 Straight body, and only one lensboard.
1929 Almost pyramid hood was enlarged for easier viewing.
1950 Body with front removed.

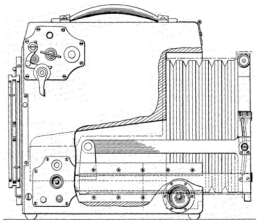
Back



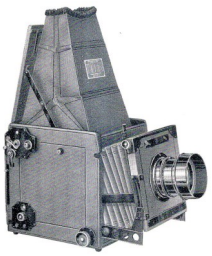
"And like higher-end Graflex models, the camera had a revolving back, a necessity for framing horizontal or vertical images on large rectangular-format reflex cameras." [6]

Camera front

According to the third patent stamped on the upper patent (1,134,522), "The main purpose of this construction is to obtain a mode of operation whereby the lens in its movements of vertical adjustment will swing about a center, the position of which is as near as is practicable to the focal plane and to the center point of the sensitized surface in that plane so that the axial rays of the lens will strike substantially in the center of the plate just as they do when the front is in normal position. In other words, the optical axis of the lens will at all times approximate alignment with the geometrical axis of the sensitized surface, and the image as a whole will hence be properly centered thereon. The broad purpose of a rising and falling front is too well known in the art to merit explanation here. It will also be observed that the bellows yields from the same center which is in rear of its rear end during the movements of the front and hence is subjected to greatly reduced distortion."

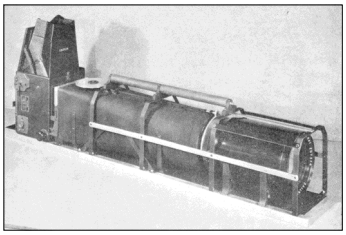


"What made this instrument unique is that, unlike all other Graflex models, the lens could pivot vertically off-axis, allowing the photographer to alter depth of field without adjusting the lens opening. This effect, known as Theodor Scheimpflug's Rule—when the extended lines from the lens plane, the object plane, and the film plane intersect at the same point, the entire subject plane is in focus—is useful in portraiture, when a decrease in depth of field may be desirable to soften the focus of the background. Conversely, an extended depth of field is useful in table-top photography. Either way, while common to most view cameras, this capability is generally not found on reflex cameras." [7]



Big Bertha

The elephant in the room, literally, was the so-called "Big Bertha" camera, which we have covered in several articles.[6] In an interesting 1939 Graflex memo (see Attachments), "...we built the only 60" Big Bertha job in existence so far as we know — the Associated Press now having it in use." (Left.) Preparing the camera was listed at $897 plus the cost of a 60" f.8 Dallmeyer telephoto lens for $1,650, for a total list price of $2,547, plus a six-month wait on the lens!



According to Graflex

According to various Graflex publications, the HP was:

Especially designed for commercial and professional photographer specializing in producing fine portraits in the homes of his clients.

It was used for superior child portraiture.

Known for compactness and dignified appearance.

It is much more rugged than a view camera.

Mirror focusing permits the operator to view the subject right up to the moment of exposure.

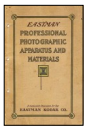
A large camera, but much more convenient to carry around and to operate than a view camera.

An excellent camera for making large size portraits with-

out the necessity of approaching the subject too closely—an important advantage in home portrait work.

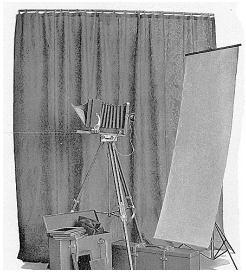
Graflex advertising suggested that their SLR was superior to home portrait-style view cameras. However, Eastman Kodak sold view cameras made by Graflex under the names "F & S (Folmer & Schwing)" and "Eastman." The following section will show some of these cameras and outfits.

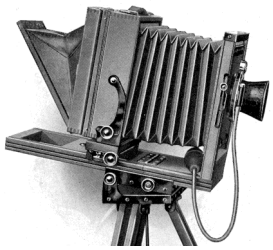
F & S and Eastman home portrait view cameras

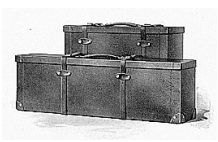


1909 In what I believe is Kodak's first professional catalog, numerous Folmer & Schwing and Graflex cameras are shown, but no home portrait cameras/outfit for either EKC or Graflex.

1911-1914 In Kodak's 1911 catalog, the Eastman Home Portrait Outfit was introduced, along with the Graflex HP camera. "The new Eastman Home Portrait Outfit has been specially designed by practical men and meets every requirement in efficiency and compactness. The Eastman Home Portrait Outfit includes every essential, including 5x7 camera, lens, shutter, special tripod, background and carrier, reflector, plate holders, etc., arranged as to pack compactly in two cases. The bed of the camera is tilted by means of a quick acting rack and pinion; the back is reversible and provided with a focusing mirror. This focusing mirror, right, will be found peculiarly advantageous in home portrait work, as it reflects the entire image right side up, and one may view the image through the opening in the leather hood, without stooping and without the use of the head cloth. The lens supplied with the outfit is the No. 6 Eastman Zeiss Anastigmat, f 6.3, ten-inch focus. The optical equipment is all the names Eastman and Zeiss imply. The tripod is of special construction, having an aluminum top, and sliding adjustable legs; rubber tipped. The background is made of a special imported willow cloth, 7 feet long and 8 feet wide. The background rod is made in three sections and attached to an Eastman Background Carrier. The reflector is made of white opaque Holland shade cloth and will reflect the maximum amount of light; mounted and hung on a stand similar to the background carrier. An adjustable rod is provided for holding the reflector at any angle. The carrying cases, left, are exceedingly light for their strength, and covered with waterproof brown Spanish Rutan, which closely resembles alligator hide.



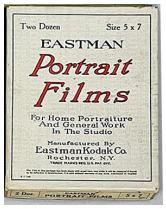




Eastman Home Portrait Outfit costs $140.00"[2]
The Graflex HP cost $204 with a comparable lens.

Having both cameras in the catalog certainly gave buyers something to ponder.

1913 Tangential to the introduction of portrait cameras was the introduction of Eastman Portrait Film in various sizes.



Below left is a 1913 magazine ad for the film, and attached is a scan of a 1913 Trade Circular describing the numerous features of the new film along with the first reference to using the film for studio use. In fact, a number of studio cameras were made by the Folmer & Schwin Division of Eastman Kodak.

The greatest advance since the advent of the dry plate—

Eastman Portrait Films

Every desirable quality that is to be found in the best portrait plates—speed, gradation, fineness of grain, and in addition they are light, unbreakable and non-halation.

The weight of his plates and the halation caused by harsh lightings have been the greatest drawback to the work of the Home Portraitist.

Eastman Portrait Films overcome them both. They can be readily mailed to the studio for development—may be developed several at one time as you would handle prints, and may be retouched on the face or back, or both.

Now listed in 5 x 7, 6½ x 8½, 8 x 10 and 11 x 14.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.
At Your Dealers.

Below is a 1914 price list for the film with a reference to "Safety Envelopes" which are detailed in the attachment.

54 EASTMAN KODAK COMPANY

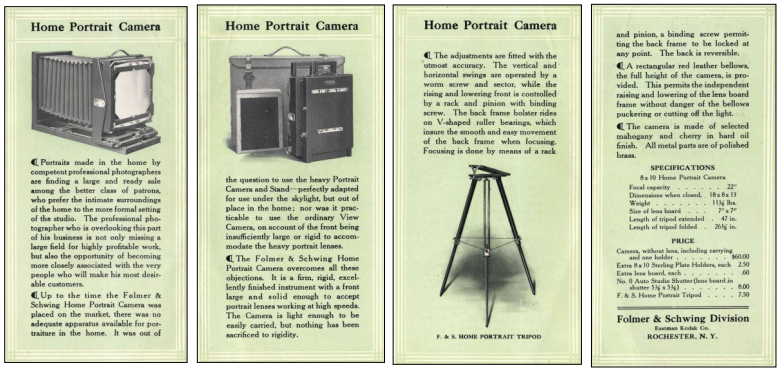
EASTMAN PORTRAIT FILM

(Including three Eastman Safety Envelopes for storing.)

4¼ x 6½	$ .90	7 x 10	$2.10
5 x 7	1.10	8 x 10	2.40
5 x 8	1.25	10 x 12	4.20
6½ x 8½	1.65	11 x 14	6.00

NOTE—Special sizes of Eastman Portrait Film will be furnished at approximately proportionate prices to the next larger size.

When furnished in quantities of less than regularly listed packages, the price will be furnished per sheet, at proportionately the rate per dozen sheet package, plus additional charge for packing—about 10%.

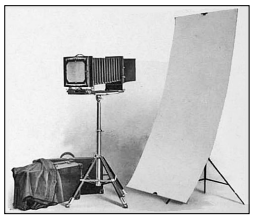


Undated

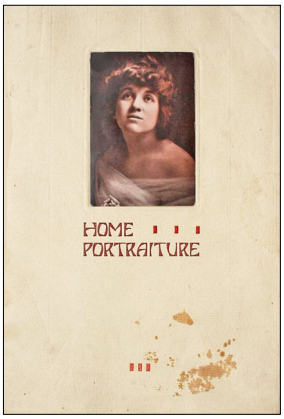
Above, is an early brochure for an 8x10" Home Portrait Camera (actually a semi-outfit because of the tripod), made by the Folmer & Schwing Division of parent Eastman Kodak. "Up to the time the Folmer & Schwing Home Portrait Camera was placed on the market, there was no adequate apparatus available for portraiture in the home. It was out of the question to use the heavy Portrait Camera [the Graflex Home Portrait camera?] and Stand—perfectly adapted for use under the skylight, but out of place in the home; nor was it practicable to use the ordinary View Camera, on account of the front being insufficiently large or rigid to accommodate the heavy portrait lenses. The Folmer & Schwing Home Portrait Camera overcomes all these objections. It is a firm, rigid, excellently finished instrument with a front large and solid enough to accept portrait lenses working at high speeds."

If authentic, and I believe it is, as noted in the 1915 section, this camera was introduced as the F.S. Home Portrait Camera No. 1, but without the put down of their other home portrait camera.

1915 This year EKC added an 8x10" home portrait outfit, and an 8x10" portrait camera, both made by their Folmer & Schwing Division.



F. & S. Home Portrait Outfit No. 2.



Cover of undated F&S HP No. 2 Outfit.

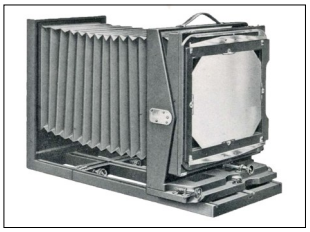
"The F. & S. Home Portrait Outfit No. 2 is complete, thoroughly efficient, and entirely in keeping with the furnishings of the most luxurious home.

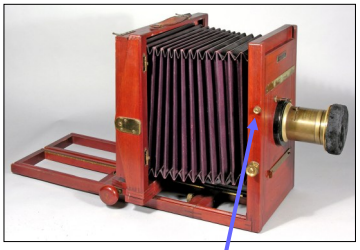
A spring actuated lens hood effectually shades the lens when working towards the light, and the back frame of the camera is provided with four clips for holding the focusing cloth in position.

The Home Portrait Stand is remarkably rigid and occupies but little space when folded. The top is a finely finished aluminum casting, can be quickly removed, and may be tilted in either direction. The telescopic upright is made of heavy brass tubing, finely nickeled; the platform may be lowered to within 30 inches of the floor or raised to 4½ feet. The legs are of mahogany, finished to harmonize with the woodwork of the camera. The Stand is equipped with silent casters fitted to heavily nickeled caps that fit over the ends of the legs and are each adjustable to take up any unevenness of the floor."[2]

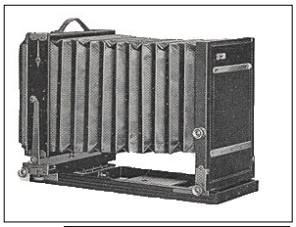
The Graflex serial number order book starts around 1915, so no entries for earlier cameras are available. Two entries are recorded around 1915 and 1920-22 for 60, then for 72 F&S Home Portrait cameras, for a total of 132 cameras. Graflex roughly made 485 5x7 HP cameras during this time.

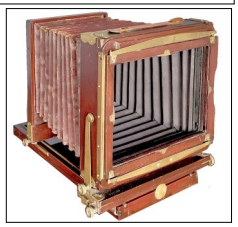
F. & S. Home Portrait Camera No. 1.





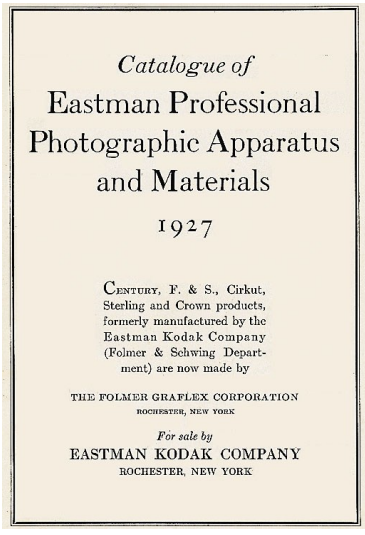
19 pages later, at right, is the catalog illustration and below it, the actual camera.[1] "The Folmer & Schwing Home Portrait Camera is a firm, rigid, excellently finished instrument with a front large and solid enough to accept portrait lenses working at high speeds. The camera is light enough to be easily carried, but nothing has been sacrificed to rigidity. The adjustments are fitted with the utmost accuracy. The vertical and horizontal swings are operated by a worm screw and sector, while the rising and lowering front is controlled by a rack and pinion with binding screw. The back frame bolster rides on V-shaped roller bearings, which insure the smooth and easy movement of the back frame when focusing. Focusing is done by means of a rack and pinion, a binding screw permitting the back frame to be locked at any point. The back is reversible. A rectangular red leather bellows, the full height of the camera, is provided. This permits the independent raising and lowering of the lens board frame without danger of the bellows puckering or cutting off the light. The camera is made of selected mahogany and cherry in hard oil finish. All metal parts are of polished brass."





1923 The latest and last home portrait camera introduced was the Eastman Home Portrait Camera No. 3. "This is a decidedly practical 8 x 10 camera for home portraiture, the special features that adapt it to this work being its extra-large bellows and a 7 x 7-inch front board; large enough to accommodate as large a portrait lens as would be used for such work. The entire front of the camera racks up and down and locks at any point, the movement being entirely independent of the bellows. Ample double swings are provided with quick acting adjustments and locks. There are two tripod blocks, the second one being located in the center of the hinged bed. The bed folds against the front of the camera and is held by a sliding catch. When the camera is set up the bed is locked to the base of the camera by a quarter turn of the bed bolt. The back is reversible, the bellows is leather, the draw is 22 inches and the camera is finished in dark mahogany with brass parts in sand blast finish."[2]

Again, from the serial number book, there were five entries in 1923-1925, and 1928 for 650 No. 3 Eastman Home Portrait Cameras totaling 650 cameras made by Graflex. From 1923 through 1927 287 5x7 Graflex HPs were ordered. It is important to note that both cameras could have been used for non-home portrait work, especially with the Graflex camera used for long-focus (Big Bertha) photography.



Catalogue of
Eastman Professional Photographic Apparatus and Materials
1927

CENTURY, F. & S., Cirkut, Sterling and Crown products, formerly manufactured by the Eastman Kodak Company (Folmer & Schwing Department) are now made by

THE FOLMER GRAFLEX CORPORATION
ROCHESTER, NEW YORK

For sale by
EASTMAN KODAK COMPANY
ROCHESTER, NEW YORK

1925 Prototype courtesy George Eastman Museum. This 8x10 camera, according to GEM Technology Curator "looks to me like they were experimenting with a new front rise/lock system. Also, the folding bed on the Home Portrait view is quite a bit longer than that used on the Eastman 2D view, which match the height of the camera body." In addition, they were experimenting with adding a removable focal plane shutter.

As noted on the 1927 catalog cover, it may have been abandoned due to the looming antitrust divestiture.

Here is a chart of features for each camera.

	Eastman HP Outfit 1911	F.&S. HP Camera No. 1 1915	F.& S. HP Outfit No. 2 1915	Eastman HP Camera No. 3 1923
				
Format	5x7	8x10	8x10	8x10
Focal capacity. Weight.	NA.	22" 11½ pounds	22" NA	22"
Back	Reversible with special focusing mirror.	Reversible.	"Rack and pinion attachment"	Reversible.
Swing & tilt.	None on camera.	Back. Swings-worm screw & sector	Back "Adjustments for vertical and horizontal swings"	Double locking swings.
Focusing.	Back rack & pinion.	Back. Rack & pinion w/binding screw. Roller bearings.	Back & front focusing w/ rack & pinion.	Back & front focusing w/ rack & pinion.
Front frame	Non-adjustable & rising.	Rack & pinion w/ binding screw.	"Raising & lowering front is independent of the bellows, has a move-ment of 3", more than ample for the most exacting work." Spring actuated lens hood.	"The entire front of the camera racks up and downward locks at any point, the movement being entirely independ-ent of the bellows." Large bellows.
Tripod	Special head w/ tilt, rack & pinion adjustment. Tripod brace. 	"F & S Home Portrait"	Home Portrait Stand No. 2 $30. 	F&S Collapsibl Stand $13.75 & $18.75 
Accessory			Sliding Ground Glass Carriage. *	Sliding Ground Glass Carriage.2 5x8" nega-tives. $18.
Base	2 part. Front stand-ard rigid.	2 part. Front standard rigid.	1 part.	2 part. Base locked to camera with bed bolt.
Metal parts finish	Oxidized copper.	Polished brass.	Nickle.	Sand blasted brass.
Front board	"unusually large"	7x7"	7x7"	7x7"
Plate-film holder				
Production	NA		Ca. 132+	650
Cost	$140 w/lens in shutter. $30 alone.	$48 w/o lens. $8.00 No.0 Auto Studio Shutter.	$60 w/o lens. $139 B&L Tessar No.18.	$50 w/o lens. $200 No.36.Ka in Compound shutter.

* 

"Sliding Ground Glass Carriage for Double Plate Holders The Sliding Ground Glass Carriage is constructed to fit 8x10 and 11x14 Century Studio Cameras. The carriage is so constructed that the receding ground glass back can be shifted to either side, permitting the operator to make negatives the full size of the plate, or two 5x8 exposures on the same plate with the 8 x10 back and two 7x11 exposures on the same plate with the 11 x 14 back. When Sliding Ground Glass Carriages are supplied for cameras other than those mentioned above, an extra charge is made for the special fitting. 8x10 Carriage with one 8x10 Century View Plate Holder $18.00." Folmer patented two carriages (1,045,539 & 1,061,736) in 1912 & 1913, however this one, made by the Century Division, may not be Folmer's.

Unknown camera

Although not quite "entirely in keeping with the furnishings of the most luxurious home," my brother and I were professionally photographed on our front lawn.

Conclusion

With Eastman's expansion into professional photographic equipment, with the purchase of the Century Camera Co. in 1903 and Folmer & Schwing in 1905, product overlap was inevitable. There is little evidence that rivalries remained at the advertising level. While the Graflex camera was little changed, the market changes its use, while Eastman changed their cameras, probably due to changes in the market.

Possibly to not offend any customer, they offered essentially the same $8 reflector made by Eastman and Graflex!

Attachments

Big Bertha letter

C.H.H.
G.C.W.
E.P.H.
T.T.H.
L.W.J.
J.D.H.
R.P.
A.R.B.
J.W.M.
C.H.R.
K.M.
H.C.M.
W.F.C.
R.G.W.
R.G.C.
J.L.C.
J.A.S.
H.A.S.

August 8, 1939

MEMORANDUM

Subject: Establishment of Price
Line: Custom
Item: 60" Big Bertha Conversion

Gentlemen:

As you know, we built the only 60" Big Bertha job that is in existence so far as we know -- the Associated Press now having it in use. The purpose of this memorandum is to establish prices for similar conversion jobs. Details follow:

	Net	List
5x7 Home Portrait Graflex (which is the basis of the unit)	160.00	240.00
Alteration of the above camera, and con-version to house the 60" f.8 Dall-meyer telephoto lens	505.80	562.00
Special sunshade for above lens	31.50	35.00
2-wheeled transport carrying case	54.00	60.00
Total, less above lens	751.80	897.00

At last reports the 60" f.8 Dallmeyer telephoto lens was avail-able at a price of $1650.00 list, with delivery indicated to be approximately six months following placement of order. This information we gave you only for yardstick purposes -- since we would want to make a specific price and delivery quotation prior to accepting another order.

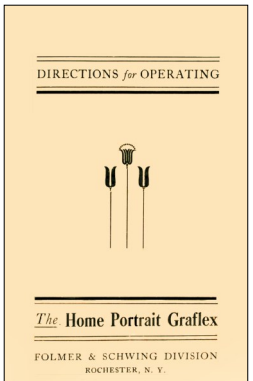
Very truly yours,

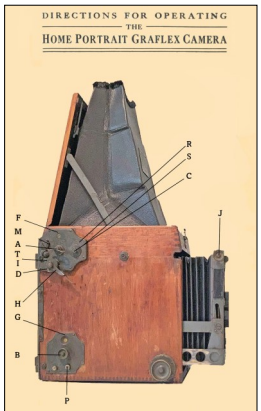
H A Schumacher

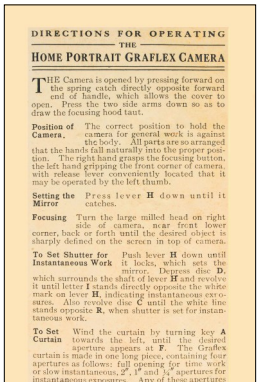
H. A. Schumacher
Sales

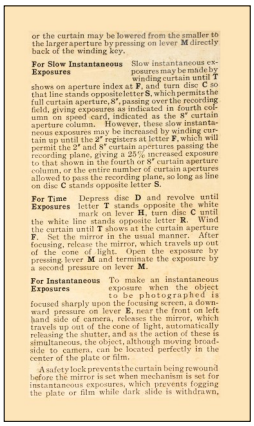
HAS:MP

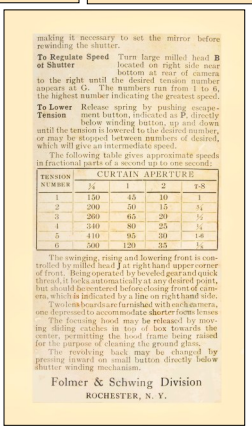
Directions for Operating the Home Portrait Graflex











1913 Trade Circulars

4 KODAK TRADE CIRCULAR.

Eastman Portrait Film.

A Revolutionary Contribution to Professional Photography.

The introduction of Eastman Portrait Film marks one of those great advances in convenience for the professional photographer, comparable in importance and far-reaching effect, with the introduction of dry plates and developing-out paper.

When the dry plate superceded the old wet plate process, and when developing-out paper came into such general use, their success was due to the fact that each offered a quicker, easier, simpler way of getting the same or even better results than did the older mediums.

For the same reasons, Eastman Portrait Film is sure of like success.

Our film and emulsion experts have been working for many years upon the proposition of a film for studio and professional home portrait work. An idea so big in possibilities as this, meant to us the expenditure of unlimited time and care to bring it to absolute perfection. So when our experts announced that the problem was solved and gave us the finished article, before placing it on sale, we subjected it for months to the most acid tests. We tried it out, with excellent results, under every possible condition of professional photography.

But not content with testing it ourselves, we sent it to some of the largest professional studios in the country, and in each case it has been used with the greatest success and enthusiasm. One firm which makes a specialty of high grade home portraiture, and which operates in various cities, has adopted portrait film exclusively, because of the quality negatives they get and the ease of transporting and shipping.

Eastman Portrait Film has just been exhibited at the recent National Photographic Convention at Kansas City, where its enthusiastic reception exceeded even our expectations.

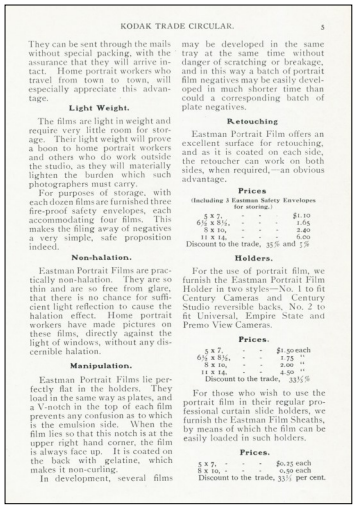
A moment's consideration of the advantages of Eastman Portrait Film will disclose the tremendous possibilities of big business for those dealers who push it.

Quality and Speed.

Eastman Portrait Film will produce studio or home portrait negatives of surpassingly fine quality and most unusual gradation. One man of long experience in studio work, said: "The portrait film negatives are the finest negatives I ever saw." The emulsion is of extremely fine grain, making the negatives particularly fine for enlarging. It is fast enough for the most exacting, having about the same speed as the Seed 30 plate.

Unbreakable.

The film of course is unbreakable—an advantage that will appeal strongly to every photographer. In filing away or continual handling, the danger of breakage, through accidental dropping or otherwise, is entirely obviated.



KODAK TRADE CIRCULAR. 5

They can be sent through the mails without special packing, with the assurance that they will arrive intact. Home portrait workers who travel from town to town, will especially appreciate this advantage.

Light Weight.

The films are light in weight and require very little room for storage. Their light weight will prove a boon to home portrait workers and others who do work outside the studio, as they will materially lighten the burden which such photographers must carry.

For purposes of storage, with each dozen films are furnished three fire-proof safety envelopes, each accommodating four films. This makes the filing away of negatives a very simple, safe proposition indeed.

Non-halation.

Eastman Portrait Films are practically non-halation. They are so thin and are so free from glare, that there is no chance for sufficient light reflection to cause the halation effect. Home portrait workers have made pictures on these films, directly against the light of windows, without any discernible halation.

Manipulation.

Eastman Portrait Films lie perfectly flat in the holders. They load in the same way as plates, and a V-notch in the top of each film prevents any confusion as to which is the emulsion side. When the film lies so that this notch is at the upper right hand corner, the film is always face up. It is coated on the back with gelatine, which makes it non-curling.

In development, several films may be developed in the same tray at the same time without danger of scratching or breakage, and in this way a batch of portrait film negatives may be easily developed in much shorter time than could a corresponding batch of plate negatives.

Retouching

Eastman Portrait Film offers an excellent surface for retouching, and as it is coated on each side, the retoucher can work on both sides, when required,—an obvious advantage.

Prices

(Including 3 Eastman Safety Envelopes for storing.)

5 x 7,	$1.10
6½ x 8½,	1.65
8 x 10,	2.40
11 x 14,	4.00

Discount to the trade, 35% and 7%

Holders.

For the use of portrait film, we furnish the Eastman Portrait Film Holder in two styles—No. 1 to fit Century Cameras and Century Studio reversible backs, No. 2 to fit Universal, Empire State and Premo View Cameras.

Prices.

5 x 7,	$1.50 each
6½ x 8½,	1.75 "
8 x 10,	2.00 "
11 x 14,	4.00 "

Discount to the trade, 33⅓%

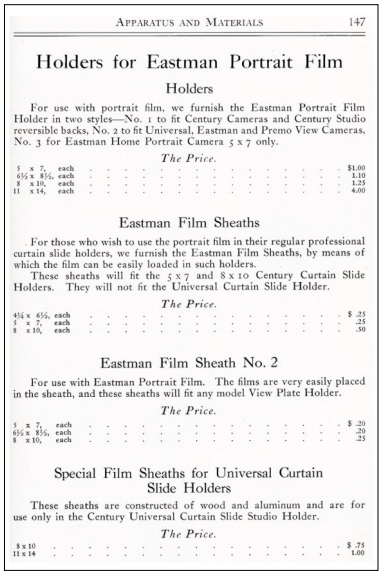
For those who wish to use the portrait film in their regular professional curtain slide holders, we furnish the Eastman Film Sheaths, by means of which the film can be easily loaded in such holders.

Prices.

5 x 7,	$0.35 each
8 x 10,	0.50 each

Discount to the trade, 33⅓ per cent.

1915 Holders for Eastman Portrait film



APPARATUS AND MATERIALS 147

Holders for Eastman Portrait Film

Holders

For use with portrait film, we furnish the Eastman Portrait Film Holder in two styles—No. 1 to fit Century Cameras and Century Studio reversible backs, No. 2 to fit Universal, Eastman and Premo View Cameras, No. 3 for Eastman Home Portrait Camera 5 x 7 only.

The Price.

5 x 7, each	$1.00
6½ x 8½, each	1.10
8 x 10, each	1.25
11 x 14, each	4.00

Eastman Film Sheaths

For those who wish to use the portrait film in their regular professional curtain slide holders, we furnish the Eastman Film Sheaths, by means of which the film can be easily loaded in such holders.

These sheaths will fit the 5 x 7 and 8 x 10 Century Curtain Slide Holders. They will not fit the Universal Curtain Slide Holder.

The Price.

4¼ x 6½, each	$ .25
5 x 7, each	.25
8 x 10, each	.50

Eastman Film Sheath No. 2

For use with Eastman Portrait Film. The films are very easily placed in the sheath, and these sheaths will fit any model View Plate Holder.

The Price.

5 x 7, each	$ .20
6½ x 8½, each	.20
8 x 10, each	.25

Special Film Sheaths for Universal Curtain Slide Holders

These sheaths are constructed of wood and aluminum and are for use only in the Century Universal Curtain Slide Studio Holder.

The Price.

8 x 10	$ .75
11 x 14	1.00

References

[1] Pierce, Larry S, Wooden Field View Cameras of the United States: An Identification Guide https://www.piercevaubel.com/cam/index.htm

[2] From Eastman Kodak Professional catalogs.

[3] Folmer & Schwing Mfg. (generically Graflex) was purchased by George Eastman in 1905, becoming a Company, Division and Department of Eastman Kodak until approximately 1926, when it became The Folmer Graflex Corp.

[4] According to Joe Lommen (Jo Lommen Classic Cameras), "This is a small but interesting and very usable feature, because increased illumination may be secured with automatic exposures, by adding one or more of the exposures apertures to the full curtain opening."

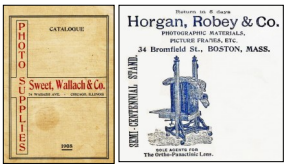
[5] Folmer & Schwing Division. 1912 retail catalog.

[6] Gustavson, Todd; 500 Cameras; Sterling Publishing, 2011.

[7] GHG 1,3; 3,4; 17,2; 18,3; 19,1 GJ2,16; GJ2, 20.

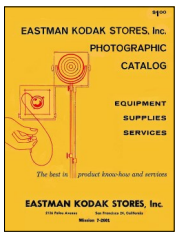
SELLING CAMERAS

In the previous article, it was shown that Folmer & Schwing made equipment (F&S) for sale in their parents catalogs. Also, at various times, they made Century, Premo, Eastman, and Crown branded products for Eastman Kodak. Integral to making products, Kodak continually changed marketing strategies to meet market changes, for sale of their products.



Supply houses Sweet, Wallach and Horgan, Robey, both in Boston. Two of twenty.

"As Eastman Kodak also committed itself to professional markets, a different sales tactic was required. While small supply houses and merchants who carried photographic products as a sideline agreed in general to confine themselves to Eastman Kodak products, the large supply houses, located in major cities and catering to professional photographers, were much less inclined to accept the Eastman Kodak terms of sale. Although they handled the company's products, they did not promote them very vigorously because of the small profit margin that remained after loss of the special discount. Eastman open its own stores in Chicago, as it had in New York. The plan initiated a two-year period of company acquisition of supply houses, particularly houses in the upper Middle West: Wisconsin, Minnesota, Iowa, Nebraska, and Illinois, [Boston, and other large cities]."[1] These houses became the Eastman Kodak Stores, selling Kodak, Graflex and numerous other companies products. There were also Dealers, but I have been unable to discover their sales agreement with Kodak."[1]



"In 1926 Graflex had no outlets or distribution capability whatsoever. Therefore, Graflex came to an agreement with Kodak which would involve wholesaling the cameras for five years to the Kodak dealers. In addition, the cameras were advertised in several photographic magazines, and these ads (which were paid for by Kodak) appeared over the address of the Eastman Kodak Stores. Over the years, Graflex decided to build up a distribution setup with some traveling salesmen and working with the major dealers in the major cities, we developed quite a list of worthwhile outlets. The agreement with Kodak was renewed every five years until 1946, when the break was made with Kodak. However, it took people a long time to realize that Graflex was not part of Kodak. Because the cameras were being advertised over the Eastman Kodak Stores' name, it promoted the belief on the part of most of the customers that Graflex was still part of Kodak. Also, the Service Department handling correspondence at Kodak continued to answer letters about Graflex equipment, although if they got too "sticky" or too involved, they sent them to me, and I handled them directly. This was particularly true during the last few years of the contract, since the Speed Graphics were so popular, and we offered so many different types of rangefinders and flash equipment, the poor guys at Kodak just could not keep it straight. In 1945 Graflex established its own export department, and in 1946 the fourth five-year contract dealing with the wholesaling of Graflex cameras to Kodak was not renewed. Graflex had a very fine group of photographic dealers and salesmen covering the entire country."[2]

[1] Jenkins, Reese; Images and Enterprise; John Hopkins Press, 1975; pp. 236-239, 322.

[2] GHQ issue 8, 1.

Graflex Journal

The Graflex Journal is dedicated to enriching the study of the Graflex company, its history, and products. It is published by and for hobbyists/users and is a not-for-profit publication. As such, we believe we qualify as a 501(c)(3) educational publication.

Ca. 1969 print of Paul Strand taken by his wife, Hazel, with a Graflex Home Portrait camera. From a screenshot in the George Eastman online digital photography collection.

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Advertisement on Kodak print order envelope. “Let us show you samples of enlargements in various sizes and styles at our Amateur Finishing Counter.”

Kodak Silhouettes

“Trot, trot to Boston”
A Kodak Silhouette

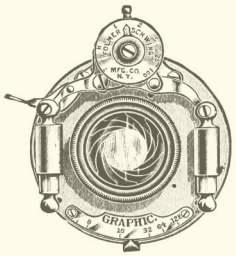
The picture story of your home life is not complete without a few silhouettes in the album. The making of photographic silhouettes is surprisingly simple.

Numbers of ideas for story-telling silhouettes, like the one on the left, readily present themselves with just a little thought.

A free booklet, Silhouette Making the Kodak Way, tells all about this fascinating fun. Get a copy from your dealer or write us direct.

At Home with the Kodak 1924

The Graphic Rapid Rectilinear Lens and Graphic Shutter.



The Graphic Rapid Rectilinear Lens and Shutter is manufactured specially for hand camera work, and will be found admirably adapted for general photography, portraits, groups, architectural subjects, landscapes, copying, etc. Possessives great speed for instantaneous work, a flat field, marvelous depth of focus, good covering power and free from distortion.

The Graphic Wide-Angle Lenses are interchangeable with the Graphic Rapid Rectilinear and therefore may be used in the Graphic Shutter when so desired.

The Graphic Shutter is a marvel of ingenuity, with all of the latest and most approved adjustments, including the Iris Diaphragm added, making it complete in every detail. The Shutter is practically noiseless and perfectly free from vibration. Both Pneumatic and Finger release are fitted. The manipulation of the Shutter is very simple. The Shutter is set by moving the lever to the left until it clicks; exposure is made by a gentle pressure on finger or bulb release.

The Graphic Shutter works automatically, from one one-hundredth part of a second to one second, and the speed may be varied by simply revolving the numbered metal disc at the top to the right or left until the index is opposite the speed desired. When the pointer is at the letter B the Shutter will remain open so long as pressure is exerted on the bulb and will close when pressure is removed.

The Graphic Rapid Rectilinear Lens, Graphic Wide-Angle Lens and the Graphic Shutters are manufactured for us under a special agreement with the Bausch & Lomb Optical Co., whose reputation as high grade lens and Shutter manufacturers is well and favorably known.

PRICES.

	4 x 5	5 x 7	6½ x 8½
Graphic R. R. Lens and Shutter -	$14.00	$17.00	$24.00
Wide Angle Lens - - - - -	10.00	12.00	15.00

1898