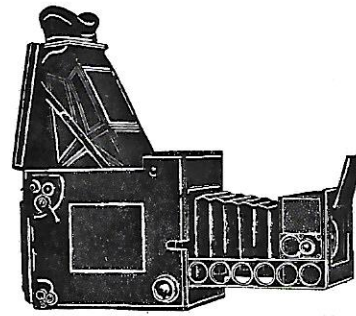


GRAFLEX HISTORIC QUARTERLY



VOLUME 8 ISSUE 3

THIRD QUARTER 2003

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Lens Usage with Graflexes

By J.C. Welch

Part 1

From the earliest days of the company, Graflex supplied one or more stock lenses with its cameras. Although standard practice of the day, some of these optics did not meet users' needs and/or preferences. Thus it is likely that on the day after the first Graflex was sold, someone was changing the lens. The practice was so widespread that the factory itself offered to fit a user's lens to one of its cameras (assuming compatibility, of course). I once had a nice example of this in the form of a post-WWI RB Tele Graflex sporting a factory-fitted 165mm Heliar lens, an option not offered in any Graflex catalog, but desirable, quality glass.

With some exceptions, both Graphics and Graflex SLRs had a number of optional lenses, although that selection decreased in number as the years went by. For example, in the 1906 catalog, they listed seven lens options for the Auto Graflex (Figure 1. and 1a.): B&L Zeiss Unar f4.5, B&L Zeiss Tessar f6.3, B&L Zeiss [Protar] f6.3, B&L Plastigmat

f6.8, Cooke f6.5, Goerz [Dagor] f6.8 or Goerz (Celor) f4.8. Note that the parentheses are mine, as the catalog did not name the optics nor express the focal length. This is quite a range and represents varying costs. An important factor for an SLR was the speed of the lens, as f6.3 and f6.8 lenses made viewing dimmer through the hood. Since with slow plates and film most shooting was done with the lens wide open, performance at that setting was important, too.

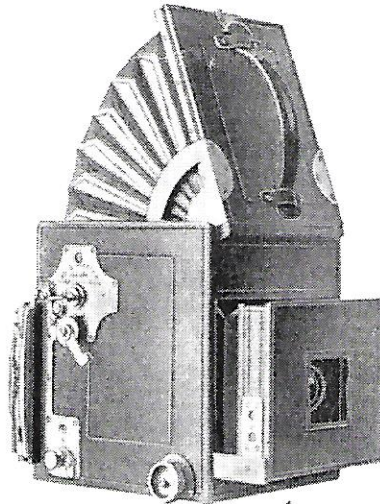


Figure 1. 1906 Auto Graflex.

Even with early models, Graflex constructed cameras so that it was not difficult to use more than one lens. An alternate lens would probably have to have been mounted on its own board, but change in the field was possible. However, most users relied on one main lens. Dealerships tended in time to feature a given model with one standard optic, while offering alternatives from the catalog. This brings us to the usual response by camera collectors, when asked what lens their Graflex SLR bears: a B&L Tessar or Kodak Anas-

Price List of Auto Graflex Cameras

	3¼ x 4¼	4 x 5	5 x 7	4 x 5 Revolving Back	5 x 7 Stereo Graflex
Auto Graflex, without Lens	\$ 75.00	\$ 85.00	\$100.00	\$125.00	\$200.00
With B. & L. Zeiss Unar Lens, Series I B, f 4.5	No. 4 113.50	No. 5 127.00	No. 6 163.00	No. 6 188.00	
With B. & L. Zeiss Tessar Lens, Series II B, f 6.3	No. 4 108.50	No. 5 125.00	No. 6 159.50	No. 6 184.50	
With B. & L. Zeiss, Series VII A, f 6.3	No. 4 133.00	No. 7 153.00	No. 10 182.00	No. 10 207.00	
With B. & L. Plastigmat Lens, f 6.8	No. 1 109.00	No. 2 125.00	No. 4 155.00	No. 4 180.00	
With Cooke Lens, Series III, f 6.5	No. 4 110.55	No. 5 128.65	No. 6 147.70	No. 6 172.70	
With Goerz Lens, Series III, f 6.8	No. 1 115.50	No. 2 131.35	No. 3 156.25	No. 3 181.25	
With Goerz Lens, Type B, f 4.8	No. 1 117.30	No. 2 134.00	No. 3 160.30	No. 3 185.30	

Figure 1a. Price list from 1906 Graflex catalog.

tigmat (Figure 2.). These were the "standard" lenses offered between the World Wars, when the largest number of those cameras was made. Likewise with Speed Graphics, certain standard lenses tend to be found on most examples. These would include the Kodak Anastigmat on pre-Anniversaries; Optars on Anniversary models and Pacemakers (along with Xenars on the latter).

It's interesting that Graflex almost never offered "cheap" or low-grade lenses nor shutters on its cameras. Apart from some 35mm offerings in the 1950s, most cameras built by the company were intended for professional use. A few roll film cameras such as the National SLR and the Model 22 twin-lens were marketed to advanced amateurs, but even these came with respected optics. It's also worth remarking that Graflex never made any lenses itself, but relied on Bausch & Lomb, Kodak, Wollensak, and others to contract with Graflex for this task.

In this series of articles, we are going to look at the performance of lenses used by Graflex, plus other optional offerings and even some commonly fitted after-market models. We'll view the various optics in terms of usability (primarily) and collectibility.

Next time: what is a GOOD lens?



THE REVOLVING BACK GRAFLEX JUNIOR

THE PRICE

Revolving Back Graflex Junior, without lens, including one double 2¼ x 3¼ plate holder	\$ 65.00
With Zeiss Kodak Anastigmat Lens, f.6.3, No. 3	88.25
With B. & L.-Zeiss Tessar Lens, Series Ic, f.4.5, No. 15	105.50
With Cooke Lens, Series II, f.4.5, No. 21	106.00

Figure 2. The Revolving Back Graflex Junior from 1915 Graflex catalog.

Letters to the Editor...

Naming Graflex Cameras

In addition to the cameras named in the last issue of the Quarterly, according to Henry Lester in Graphic Graflex Photography, "The name 'Graflex' - [was] a combination of the words 'graphic' and 'reflex'...".



Also, when introduced in 1940, the popular Anniversary model Speed Graphic was named in honor of the 50th anniversary of Graflex.

Gene Miller

WANTED

95mm f3.5 Rodenstock Ysarex lens for Graflex xl.

Contact Jim at (614) 855-7371.

Thank You.

A NEW BOOK ON GRAFLEX The Super D Graflex

Written by Ed Romney and GHQ subscriber Cliff Scofield. USE, REPAIR, RESTORATION, including back changeover. 33 pages, many photos and drawings. \$19 plus \$5 shipping.

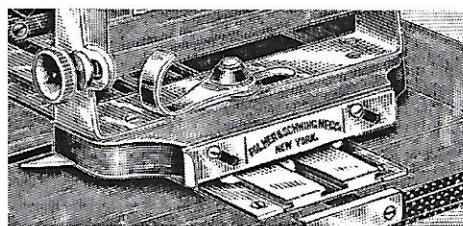
From: Sarah Romney, Box 487, Drayton, SC, 29333, on the web at edromney.com or call (864) 597-1882.

Go Figure! The Slide Lock

The purpose of Go Figure! is to highlight the adaptive (or simply goofy) nature of Graflex design, to encourage readers to tell fellow subscribers about their favorite items, and to give their opinions of items discussed in the Quarterly.

Throughout the history of the Graflex camera, the company introduced various features, then used them in different ways and in different places on their cameras. Several examples are the speed plate, the reverse winding focal plane shutter and the slide lock, which is featured here.

The first item is the simply designed slide lock, which was probably first used on "The Graphic" camera as early as 1898, and is well illustrated on page 29 of the often reprinted 1904 Graflex catalog. See illustration below. From examination of the camera, it appears that the slide lock was used to keep the swing adjustment at the "zero" position.

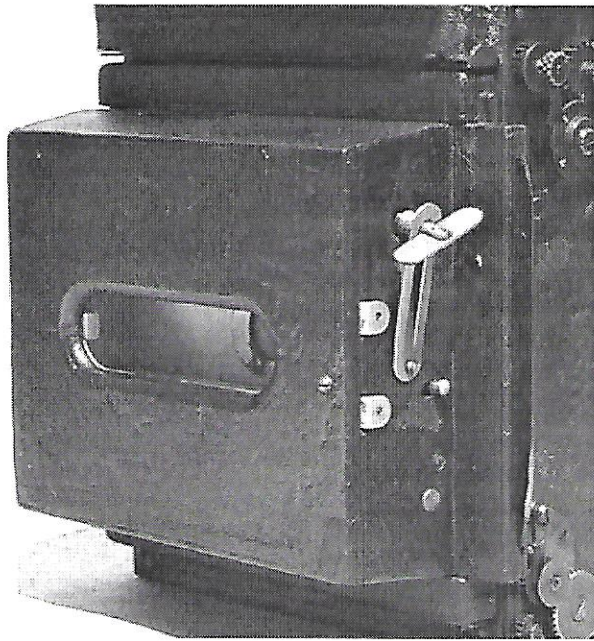


The slide lock was then used to secure lens boards on the Stereoscopic Graphic and the Telescopic Stereo Graphic, possibly as early as 1902. On the Stereoscopic model, it was used on the long bottom side of the lens board and opened by moving down and to the left, while on the Telescopic Graphic it was placed to the short right side of the lens board, and opened to the right.

In 1905 it was used on the accordion (or pleated) hood Auto Graflex to secure plate holders, film pack adapters and roll holders. This time it was located at the top and opened by moving up and to the right. This system became the standard on Graflex-style cameras (and, as an option on Graphic-style cameras) until the Graflok back was introduced in 1949. When used on Graphic-style cameras to secure the lens board, the direction of the slide movement does not appear to be related to film size, etc., and in one case, the 3 1/4 x 4 1/4 Anniversary, two slide locks were used!

The slide lock was also used to secure lens boards on Graphic-style cameras, starting with the top handle Speed Graphic of 1912, and continuing through the Pacemaker model. Starting with the pre-Anniversary model, the camera name was added to the slide lock.

KM



The Eastman-Walker Roll Film Holder

By William E. Inman, Sr.

Shortly after the Eastman Dry Plate Company was formed in 1881, George Eastman contracted the Frank A. Brownell Photographic Apparatus Company in 1884 to produce a roll film holder, called the Eastman-Walker Roll Film Holder. It was patented May 5, 1885.

The first model used Eastman paper-negative film (which had to be loaded and unloaded in a darkroom), and later his strippable ("American film") and flexible transparent film. The Roll Holder came in four sizes: $3\frac{1}{2} \times 4\frac{1}{4}$, 4×5 and 5×7 . The fourth size was $3\frac{1}{2} \times 3\frac{1}{2}$ to accommodate use on the early Box Cameras. In Folmer & Schwing Manufacturing Co. price lists and catalogs, beginning in 1898, the holder was described as The Cartridge Roll Holder without the Eastman-Walker name.

Early examples of the roll holder had a natural wood finish with brass trimmings, while at least as early as 1904 when "fitted" to a Graflex, they were available covered in Morocco leather. Shown above is a 4×5 Morocco leather-covered roll holder fitted to a 4×5 Reversible Back Graflex (serial no. 6685).

In 1888 Eastman's chemist experimented with nitrocellulose in search of a transparent celluloid film. A patent was filed in April 1889, and by July 1889, transparent roll film was being marketed.

In 1902 Eastman purchased the Brownell Company, and Kodak became the manufacturer of the roll holder, though in Brownell's former building, which was renamed the Camera Works Division of Eastman Kodak.

Folmer & Schwing continued to list it as the Cartridge Roll Holder without the Eastman-Walker name until 1906, after which it was referred to as The Graflex Cartridge Roll Holder. The Graflex name was later dropped from the catalog listing.

The roll holder was rather bulky, the size of a Graphic Plate Magazine or slightly larger. As most of the early Graphic and Graflex cameras were equipped with Graphic-style backs, the roll holder, as well as the early 1899 Graphic Magazine Plate holder, had to be adapted ("fitted") to the cameras. In 1905 Folmer & Schwing Manufacturing introduced the Auto Graflex, which used a slide lock to secure holders and other attachments. Thus the long-lived Graflex-style back was launched, and the need for custom fitting eliminated.

In 1915 the F & S Division of Eastman Kodak introduced a redesigned roll holder. It was smaller, more compact, carried the Graflex name, and had "Model 1915" stamped inside the cover. The roll holder fit only the Graflex-style back and came in five sizes: $2\frac{1}{4} \times 3\frac{1}{4}$, $3\frac{1}{4} \times 4\frac{1}{4}$, $3\frac{1}{4} \times 5\frac{1}{2}$, 4×5 , and 5×7 .

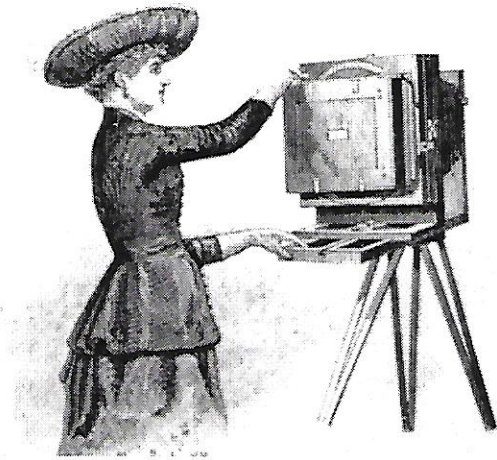
When the 1915 Graflex Roll Holder was updated in 1922, they stated that it was "...an improved model in which the spools stay parallel and friction is avoided." A visual comparison of the two models shows that rollers were set in the edges of the insert and that the spool pins, once held by a spring loaded end piece, were held with a sliding mechanism. It was noted in the 1924 catalog that this holder could not be attached to the 1A or 3A Autographic models. "Model 1922" was now stamped inside the cover.

Because Kodak introduced a Super-Sensitive

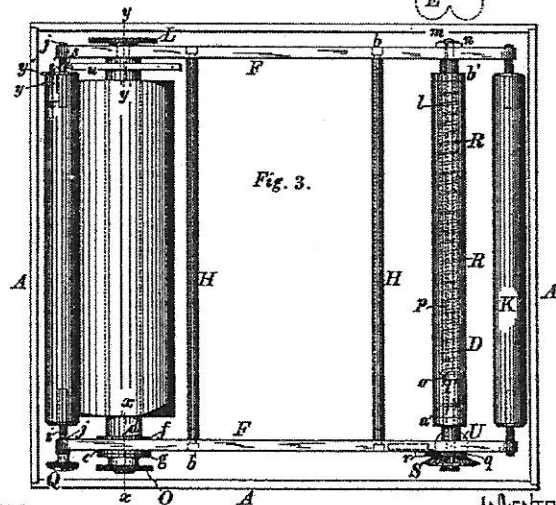
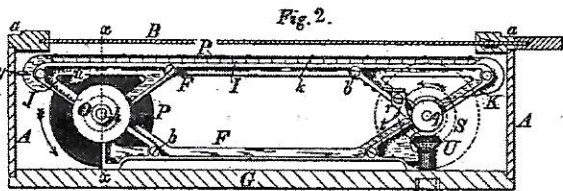
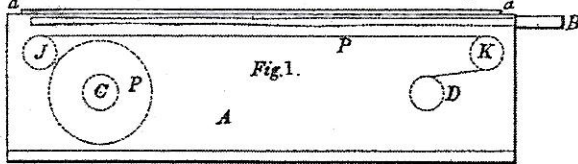
Panchromatic film in 1931, Graflex added a spring-actuated window cover to prevent fogging of the new film (designated as "Model C").

By 1946 the earlier roll holders were replaced by a newer type, which is detailed in the Third Quarter 2002 issue of the GHQ.

For those who want more information on the Eastman-Walker Roll Holder and George Eastman's flexible film, see The Photographic Manufacturing Companies of Rochester, NY by Dr. Rudolf Kingslake, and Images and Enterprise by Reese Jenkins.

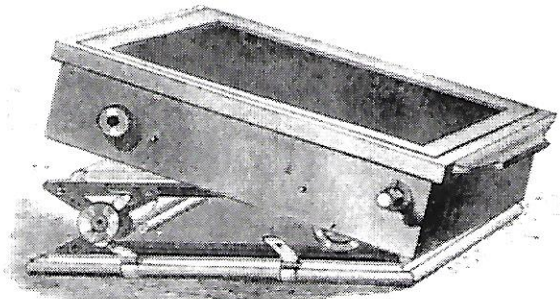


W. H. WALKER & G. EASTMAN.
 ROLLER HOLDER FOR PHOTOGRAPHIC FILMS.
 No. 317,049. Patented May 5, 1885.



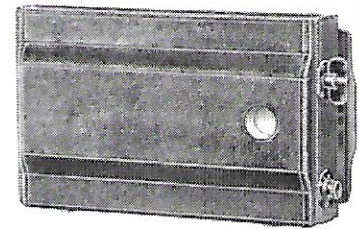
WITNESSES -
 H. G. Phillips.
 Geo. C. Cherry

INVENTORS -
 Wm. H. Walker, and
 George Eastman
 by Geo. B. Selden.
 atty -

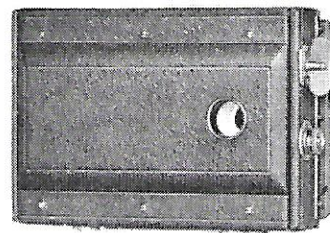


1886 advertisement for Eastman-Walker Roll Holder, from Photography and the American Scene by Robert Taft.

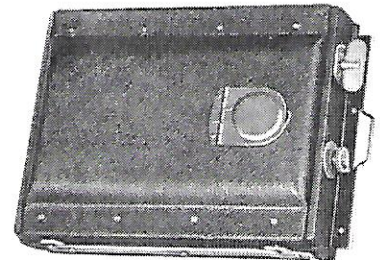
Model 1915 Graflex Roll Holder.



Model 1922 Graflex Roll Holder.



Model C Graflex Roll Holder.



Patent drawings for the first Eastman-Walker Roll Holder. Though shown with bevel gears and a back-positioned winding key, available examples do not have these features.

Film Packs & Film Pack Adapters

By William E. Inman, Sr.

After George Eastman's success with flexible film for his Cartridge Roll Holder, came another successful product, the Film Pack with a Film Pack Adapter. Both the Roll Holder and the Film Pack Adapter were valuable accessories that helped make the Graflex and Graphic cameras successful, along with the sheet film holder, which replaced the glass plate holder.

The first 12-exposure Premo (Kodak) Film Pack and Film Pack Adapter was introduced in 1903 in the 3¼x4¼ size. The 4x5 and 3¼x5½ were introduced in 1904, the 5x7 in 1905, and the 2¼x3¼ in 1906. A number of other sizes were later introduced.

Both the Film Pack and Film Pack Adapter carried the name Premo until 1922, when the name was changed to Kodak Film Pack and Kodak Film Pack Adapter. The Premo/Kodak Film Pack Adapter was designed for only Graphic-style backs.

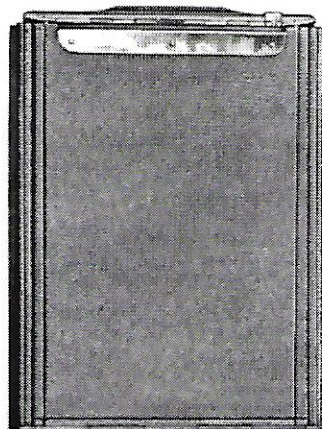
In 1911 the Folmer & Schwing Division of Eastman Kodak introduced their own leather-covered Film Pack Adapter for only Graflex-style backs, and they were available in 3¼x4¼, 4x5 and 5x7 sizes. The 2¼x3¼ size was introduced in 1914. In 1914 only, the initial three sizes were shown in two models: A, with a slide, and B, without a slide.

The independent Folmer Graflex Corp. introduced their first Graphic-style Film Pack Adapter in 1938, along with the 2¼x3¼ Miniature Speed Graphic.

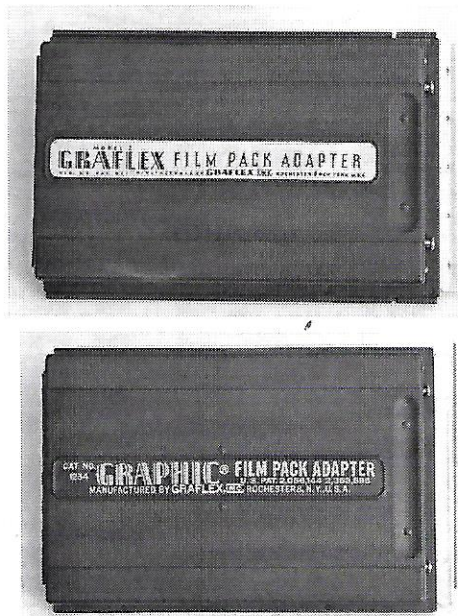
Kodak continued to supply the Kodak Film Pack Adapter for Graphic cameras through World War II. After the war, in 1945, Graflex Inc. introduced an all-metal Model 2 4x5 Film Pack Adapter for Graphic-style backs. The 2¼x3¼ and 3¼x4¼ Graphic-style Film Pack Adapters were added in 1946, as well as the

2¼x3¼, 3¼x4¼, and 4x5 Graflex-style Film Pack Adapters. The Graflex Film Pack Adapters were discontinued in 1960, along with the 3¼x4¼ Graphic Film Pack Adapter. The 2¼x3¼ and 4x5 Graphic Film Pack Adapters remained in the line until 1973 when Graflex closed their doors.

Kodak introduced a 16-exposure (Estar Base) Film Pack, replacing the 12-exposure pack in 1960. Kodak Film Packs were discontinued in 1976.



Leather-covered Graflex Film Pack Adapter made only for Graflex-style backs. 1911- 1945.



All-metal Film Pack Adapters were made for Graphic- or Graflex-style backs. 1945 - 1973



Ask Tim Holden.... something which would be more acceptable.

It has been said that Victor Hasselblad came to Graflex to have them make his camera, but they passed because they did not have good enough machining capabilities. Is this true?

Yes, Victor Hasselblad came after the war to Graflex and Kodak to have someone make his camera. It was a beautiful thing and, of course, still is. We had a thorough review of it, and I was present when most of us came to the conclusion that that camera required much more precise machining and manufacture than Graflex had the ability to do. We had attempted a small camera with the National Graflex, but that was comparatively simple and, incidentally, not too convenient to use. So Graflex passed it up, and, eventually, Kodak did too at the time, although they agreed to make the lenses. They made the first lenses for Hasselblad before Zeiss came alive again after the war.

Is it true that Graflex supplied cotton cloth to Leitz for their focal plane shutters?

Graflex did supply the focal plane shutter cloth to Leitz. As a matter of fact, as I recall, it was \$7.50 a bolt. I think that might have been a hundred feet long, but I don't remember. They used two curtains, however, so they had a little trouble with it every now and then, but we had a single curtain.

[ED:Also of interest is this note from Hy Becker of E. Leitz dated March 15, 1956. "Since our electronic flash units accept the same AC plug at the head of the flash gun, just as yours does, the only difference in the cord is the tip which fits the socket of either our M3 or IIIf cameras. From experience, I can safely state that your Strobflash II and our camera go together like ham and eggs.

With some slight modification, your #2758 (and #2070, 2068 and 2771) were adapted by myself for several people in the newspaper field, to work with the M3 camera. Since our system of holding the flash head did not meet with whole-hearted approval from the professional ranks, it was necessary to dream up

When answering queries from Leica owners, advise them that the Leica IIIf camera can be used with strob perfectly at 1/50sec. shutter speed and #20 on the synchro-dial. The M3 Leica camera can also be used at 1/50sec. but the synchronization is completely automatic and there is no dial to contend with."]

Is it true that the K-20 and K-25 military cameras were designed by Fairchild, but produced primarily by Graflex, because they had greater production capacity?

The K-20 and K-25 aerial cameras were designed by Fairchild. They got the original contract, but, as was true with many items the government used during the war, in order to have as many suppliers as possible, they required the originator of the camera or device to license other firms to make it, and Graflex was far better equipped to produce cameras of that type in quantity than was Fairchild. However, we did not have rights to make any of the cameras for sale by ourselves, and after the war, all drawings, tools, and everything else were returned to Fairchild, so Graflex could not even supply spare parts.

To your knowledge, was there ever a Graflex connection to Bessler?

Bessler people were good friends of ours, and, as a matter of fact, one of the guys who evaluated the Graphic "70" eventually went to Bessler. They thought they could produce a 4x5 focal plane shutter camera which would compete satisfactorily with the Speed Graphic. They used a two-curtain type focal plane shutter. We spent a lot of time and made many experimental models of two-curtain shutters for the Graflex line but were never able to get anything we were satisfied with and would be simple and easy to make and would be as dependable. Consequently, Bessler bid on a bunch of cameras which we bid on, and they found out that that type of curtain shutter was more difficult to make than they had expected. I believe that they supplied a few of the cameras but finally defaulted on the contract. Graflex finally finished up supplying the Speed Graphics.

Graflex Historic Quarterly

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Backstage at the Bob Hope Show at the University of Denver in 1953. Bob with Marilyn Maxwell. Photographed by Bill Inman using a 4x5 Pacemaker Speed Graphic.