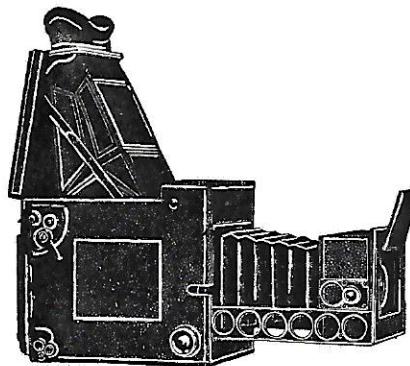


GRAFLEX HISTORIC QUARTERLY



VOLUME 9 ISSUE 1

FIRST QUARTER 2004

FEATURES

Lens Usage with Graflexes by J.C. Welch.....	1
Graflex and Graphic Cut Film Holders by William E. Inman, Sr.....	4
Periscope Adapter by Jim Chasse.....	6
Ask Tim Holden.....	7

Goerz Double Anastigmat

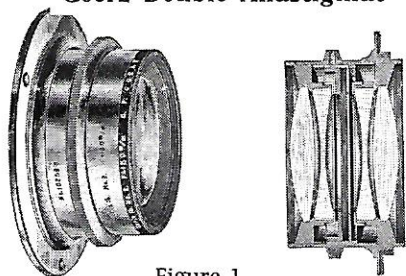


Figure 1.

Lens Usage with Graflexes

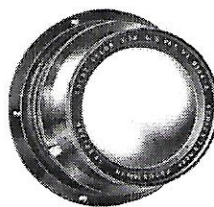
By J.C. Welch

Part 3

Few Graflex owners have exposed film with their pre-Kodak models. I regret not having tested an Unar or early Planar, but I never had one of the pre-1906 SLR models with a working shutter! However, one highly regarded lens was often used on the oldest Graflex SLRs: the Goerz Dagor (since the lens appeared before 1900). It was used long after that period.

Since I still expose negatives through two of these fine optics, I can vouch for their being some of the top lenses ever offered by Graflex. I had a 5x7 Auto Graflex of early 1920s vintage that didn't originally come with

a Dagor. I installed an 8¼" brass version of the Dagor that was labeled with the earliest name for the lens: Double Anastigmat (Figure 1.). This, at least, approximated an early use of that lens. Although Dagors are near the top of my "favorites" list for view cameras, I found their use in an SLR less than great. From the start, it was hard to focus in dim light with an f6.8 lens, and I found stopping the lens down to be a real nuisance. No Dagor that I ever saw had a click-stop iris, and the lens just doesn't perform well at wide apertures. It wants f16 or less. I don't mind focusing with a loupe at that opening on a view camera, but it won't work well in a hand-held SLR. I found it was much easier to use when I added a Fresnel on the viewing glass.



Goerz Celor F:4.5—F:5.5

Figure 2.

Goerz also made a faster lens called the Celor (Figure 2.). Largely ignored today, it actually cost more than a Dagor in some early catalogs. At f5 or so, it was designed to be used wide open, so probably did well on a Graflex SLR. I

have not tried this application but have used Celors in view cameras, where they are good performers. Rudolf Kingslake, in his book *Lenses in Photography*, advises that the Celor was not well-corrected wide open. I found it quite nice stopped down, even if only to f8 or f11. I'm still going to suggest it was a good choice for the oldest Graflexes. A later, mostly overlooked, Goerz lens is even better, and we'll get to it in the next installment about after-market lenses.

For the collector who has a pre-1906 Graflex, a good lens to have is one of the more expensive

or rarely chosen options, among those listed in the catalogs. This advice holds true with later models, too.

A very common lens for post-1906 Graflex SLRs is the Bausch and Lomb f4.5 Tessar. This four-element lens formula was the property of Zeiss, and in the 1920s and 1930s, a photographer could hardly do better than have a genuine Zeiss Tessar on his camera. Postwar versions were still very highly regarded, as evidenced by Graflex's selection of them to head the xl line of the 1960s. However, from early days, Zeiss licensed several companies to manufacture this lens and others of their line. In the USA, B&L was so entrusted, while Ross, Krauss, and even Voightlander (for a short time) earned the privilege in Europe. Since Zeiss had to give their OK, it's fair to assume they approved of the quality of lenses the foreign makers produced. Nonetheless, lens users have often debated the merits of genuine Zeiss lenses over those produced by its licensees. For my part, I have not found I can slight the B&L versions in terms of their optical performance.

But let's return to the Graflex-mounted B&L Tessars. Indications are that they were well thought of in their day, but despite my comments above, I have not used one that I liked. This is not related to their design or resolving power, but to how they have aged. In my experience, I have found that one of the few calamities that will really doom a lens is cloudiness or haze. I have found B&L Tessars to easily fall victim to this malady. Now, lenses of that design can be cleaned on the inner cell surface by simply unscrewing them from the barrel, and the front cell can be opened for cleaning, as it is air-spaced. Nonetheless, whether it's the glass itself or the lubricant B&L used (which, after so many years, one invariably finds as a film on the glass surface), I have not had a crystal clear example of that model. Undoubtedly, a reader will come forward to defend his example, and I'll be glad to hear of it. But I think it will be uncommon.

I can't, however, lodge the same claim against the successor to the B&Ls: the various Kodak Anastigmats. Used as barrel lenses in the SLRs (and early Speed Graphics - Figure 3.) and also as shuttered lenses in Speeds, they are very common on Graflexes. I once had a 5x7 R.B. Series B that sported a "KA," as this Kodak lens might be labeled. It was not marked as to focal length, but simply "No. 34." It was, like most of its brethren, an f4.5 lens. Performance was excellent, the

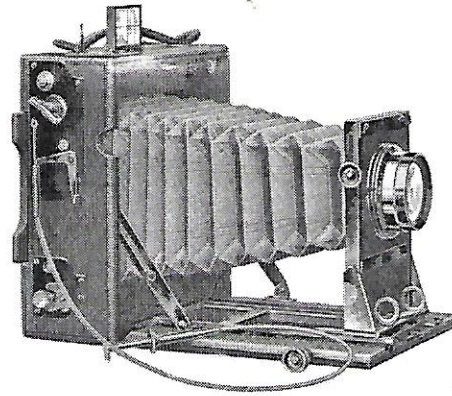


Figure 3.

lens was clear, and I did not think to change it. Unlike the word "Tessar" that indicated an exact glass formula, Kodak did not follow such a practice with their KAs. They simply indicated that they were top quality professional lenses but could have varied formulas. Later, close to the time that their glass began to be coated, this name was changed to Ektar.

Before WWII, as the Miniature Speed Graphic was introduced, a new lens began to appear: the Wollensak Optar. Made specifically for Graflex, the Optar design was not weak, and post-war coated versions are top notch. The 135mm Optar, standard on 4x5 Pacemaker Graphics, compares quite well to the Ektar that costs more. However, I have found pre-war Optars to be inconsistent in quality and sometimes pretty weak. Wollensak seems to have made a major effort after WWII to upgrade its quality control.

Later versions of the Miniature, and certainly the 2x3 Pacemakers and Centurys, are often found with 101mm f4.5 Ektars. Like all Ektars, this is a fine lens. However, a top option on these cameras was the 105mm f3.7 Ektar. This five-element design, as the 100mm f3.5 version used on the Kodak Medalist, is one of my choices for the best optic ever made. I kept a rangefinder Medalist around for years, despite its unwieldiness, just for the lens. Lowest on the list for 2x3 cameras was the Trioptar, a three-element bargain lens. It's actually not bad for a triplet but isn't in a league with the Ektars.

For 4x5 Anniversary Speed Graphics, one commonly finds a 127mm Ektar. This slightly wide-angle lens appealed to reporters, but other users opted for the 152mm Ektar. Both are excellent. The 127mm is quite common, so sometimes doesn't garner respect nor a high price, but I have not found a bad example. One may occasionally find the earlier uncoated Anastigmat versions of these lenses with the same focal length, and they're also excellent.

Wollensak did produce some uniformly nice lenses for Graflex (Figure 4.), and those include the Tele-Optars. Offered in 200mm, 250mm, and 15-inch versions, I have seen only coated examples that performed well. They were offered both in barrel and shutter. Occasionally one finds versions marked "Tele-Raptor" for the non-Graflex market, but they appear to be identical. In fact, Wollensak marketed the 135mm Optar (post-war version) under the name "Raptar," and like all their Raptars that I have examined, it is an excellent lens.

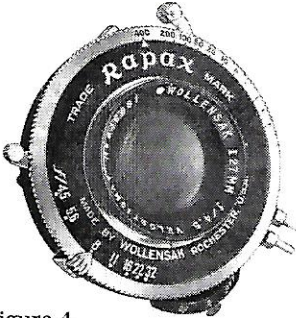


Figure 4.

Another lens that one finds on 4x5 Pacemakers is the 135mm f4.5 Schneider Xenar. German lens manufacturers were not very productive during

WWII, and at any rate, their lenses were not available in the U.S. So for Graflex to be able to offer a top-name German optic on their cameras in the early 1950s was a real coup. The Xenar has often been called Schneider's version of the Tessar, and f4.5 professional versions that I have tested have been good. However, the 135mm that Graflex offered does not rank with them. Whether it was a special contract for a good price, poor quality control, or an attitude problem, I have not found them to stand up to Ektars of the same period. Tessars are not at their best at full aperture, and neither are Xenars, but I found the 135mm Graphics versions especially poor wide open. Actually, Schneider designed a lens that was very well corrected for wide apertures, the Xenotar, and this lens is highly recommended for after-market applications - but we're getting into the next chapter already.

The last major lines of lenses that Graflex introduced were for their versatile xl system of the 1960s. There were rangefinder models and those which used only ground glass for focusing, but all utilized several series of lenses (Figure 5.). One was made by Zeiss, at that point recovered from wartime trauma and moving day. The series included Tessars, Planars, and Sonnars. All were top notch. For "normal" focal lengths, Planars cost more than the standard Tessars, and were much better corrected for wide apertures. Another line of lenses was offered by Rodenstock, including Grandagon, Heligon, Ysarexes, and Rotelars. These lenses are also excellent. A potential user should watch out for element

separation in Rodenstock lenses of this vintage, especially the 58mm Grandagon wide angle, as it would appear that the company took the lowest bid for its lens cement. But, at the time, they were highly respected and are so today, if intact. The widest angle lens that Graflex offered in its xl line (with a special camera body) was a 47mm f8 Schneider Super Angulon, and this, too, is a fine lens. Borrowing from the next chapter again, I might add that some users have swapped a later f5.6 version of that Super Angulon for the earlier one and have found they were happy with this change.

In all, Graflex offered a nice crop of glass over the years, and today's user will not likely go astray with factory lenses. But the next installment looks at some alternatives.

Figure 5.



100mm Zeiss Tessar

180mm Zeiss Sonnar

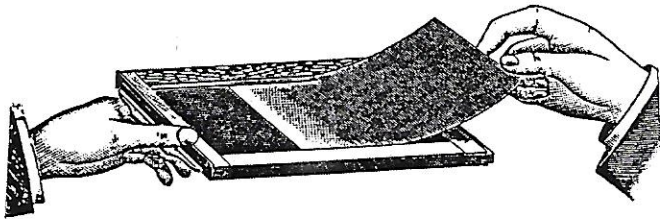
58mm Rodenstock Grandagon

47mm Schneider Super Angulon

Graflex and Graphic Cut Film Holders

By William E. Inman, Sr.

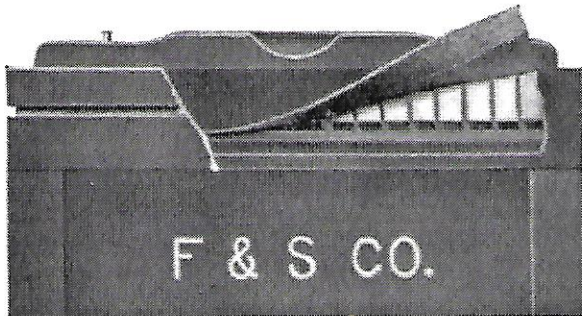
In 1887 George Eastman began manufacturing his orthochromatic emulsion, and by 1899 Eastman introduced the first commercial sheet film. Graphic Cut Film Holders were listed in Folmer & Schwing's 1899 catalog, with sizes ranging from 3¼x4¼ to 8x10.



Graphic Cut Film Holder 1898 Model

F & S chose to promote their cameras with the Graphic Magazine Plate Holders, Graflex Magazine Cut Film Holders, Eastman/Premo Film Pack Adapters, Eastman/Walker Roll Holders, as well as Graflex and Graphic Plate Holders. There was no further mention of the cut film holders in their price lists and catalogs until much later. In those early days, photographers were slow to change, and glass plates were reliable and favored over sheet film, as it was still in the testing stages.

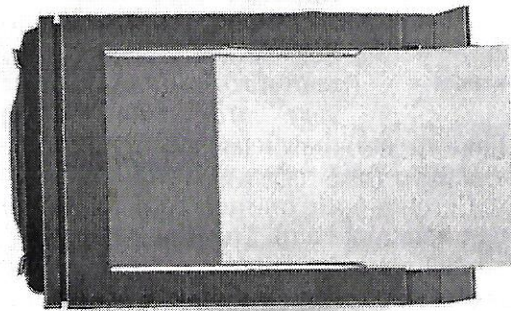
The main feature of all the Graphic and Graflex holders was the "spring finger cut-off" light trap used when drawing or replacing the dark slide, which dates to Folmer's patent of Oct. 25, 1904.



1908 saw the introduction of Eastman's first com-

mercial safety film (cellulose acetate). Eastman, as well as other manufacturers, I'm sure, provided cut film holders for this film.

It wasn't until 1919 that the F & S Division of Eastman Kodak introduced the Graflex 4x5 and 5x7 Cut Film Holders, as well as the Graphic Cut Film Holders in four sizes: 4x5, 5x7, 6½x8½, and 8x10. F & S added the 3¼x4¼ and the 3¼x5½ sizes in 1920. The holders were made of "well-seasoned selected cherry" wood. Graflex holders were "handsomely finished" in black, while Graphic holders were finished in the natural wood color.



Graflex Cut Film Holder as listed beginning in 1919.

The F & S Division introduced two metric size Graflex holders: 9x12cm and 13x18cm. In 1922 they introduced the 2¼x3¼ Graflex Cut Film Holder along with Kodak Cut Film Sheaths for the Graflex Plate Holders.

In 1935 The Folmer Graflex Corp. (formerly the F & S Division of Eastman Kodak) introduced a new and improved holder: the 4x5 Graphic Press Cut Film Holder. It was painted black and had a metal cover over the light trap instead of wood. The 3¼x4¼ Graphic Press Cut Film Holder followed in 1937. See Figure 1.

The 2¼x3¼ Graphic Press Cut Film Holder was introduced in 1938, but the holder did not have a metal cover over the light trap.

After WWII, in 1945, The Folmer Graflex Corp. changed its name to Graflex Inc. and introduced the 4x5 Type 5 Graphic Sheet Film Holder (Cat.

#1214). The new holder was ½-inch longer, making it easier to grasp when removing it from the camera (Figure 2.).

In 1949 Graflex added the 2¼x3¼ and 3¼x4¼ Type 5 Graphic Cut Film Holders (Cat. #s 1212 and 1213).



As 1952 rolled around, Graflex surprised the professional photographic industry by introducing a revolutionary holder, the 4x5 Graphic Riteway Cut Film Holder. The working press hailed the new holder as “the best holder anyone has manufactured” (Figure 3.).

The new holder was made of a plastic material, a first in the industry. It was extremely rugged, surviving a drop test from 6 feet to a concrete floor with no damage, and surviving a 140-degree steam heat test for ten days without warping. Also, it was guaranteed for two years!

The new Riteway holder was:

- | SIXTEEN WAYS BETTER! |
|--|
| 1. It's thinner, easier to store, easier to slip in and out of the camera. |
| 2. Erasable tabs outside; provision for negative tabs inside. |
| 3. Finger recess facilitates inserting and removing film. |
| 4. Flap folds completely for easier loading life. |
| 5. Anti-slip flap prevents film from changing position. |
| 6. Non-static dark slides, with visual and touch signals. |
| 7. Rigid aluminum core gives film registration well within ASA standards. |
| 8. Film sheaths are bonded to core for maximum accuracy and rigidity. |
| 9. Formed septum rails hold film perfectly flat. |
| 10. Tough outer material retains tolerances indefinitely. |
| 11. Shock-resistant. Less vulnerable than wood or metal. |
| 12. Welded in one piece. No rivets, joints or seams. |
| 13. Multiple step flap. . . positive light lock at hinged end. |
| 14. Spring-fingered light trap. . . pioneered by Graflex. |
| 15. External serrations prevent leakage of stray light. |
| 16. Solid color. |

Graflex continued to manufacture the Type 5 2¼x3¼ and 3¼x4¼ Graphic Cut Film Holders.

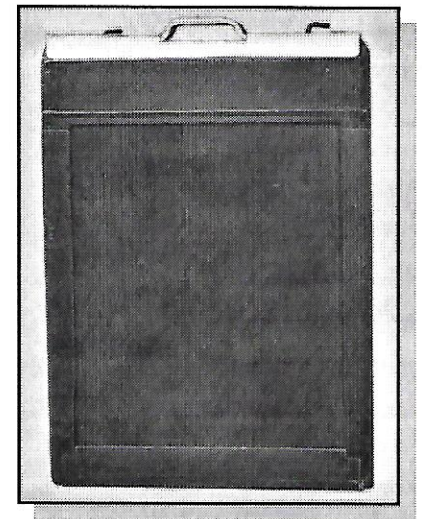


Figure 1.
Graphic Press holder.
Introduced in 1935.

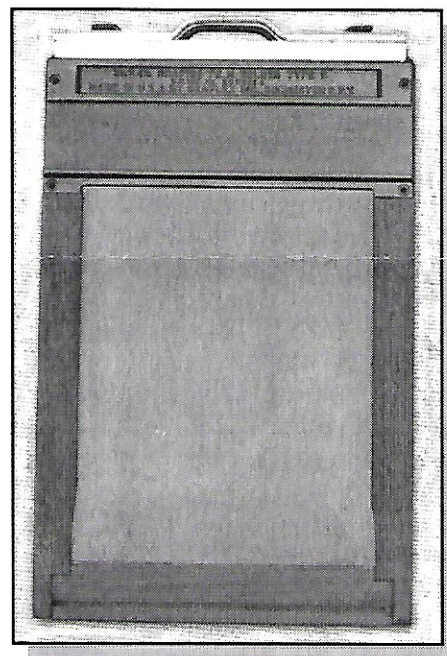


Figure 2.
Graphic Type 5 holder.
Introduced in 1945.

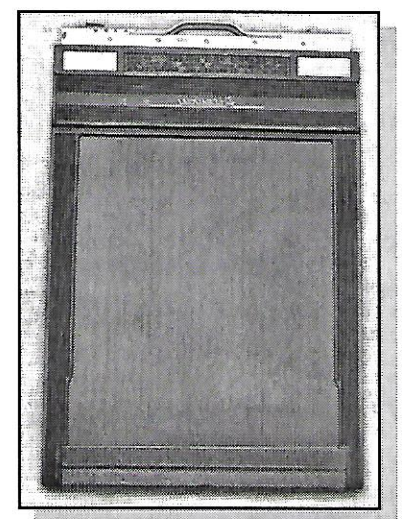
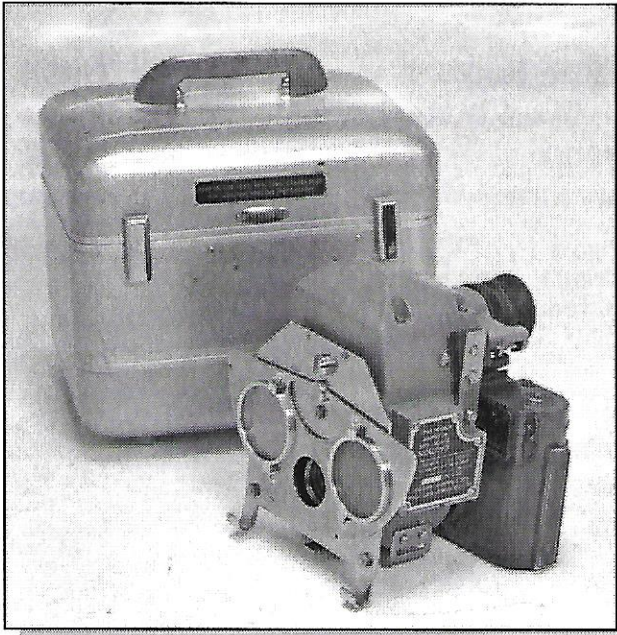


Figure 3.
Graphic Riteway holder.
Introduced in 1952.



Adapter, Type KG4(1) with 70mm Camera Body
For Submarine Periscope Photography

By Jim Chasse

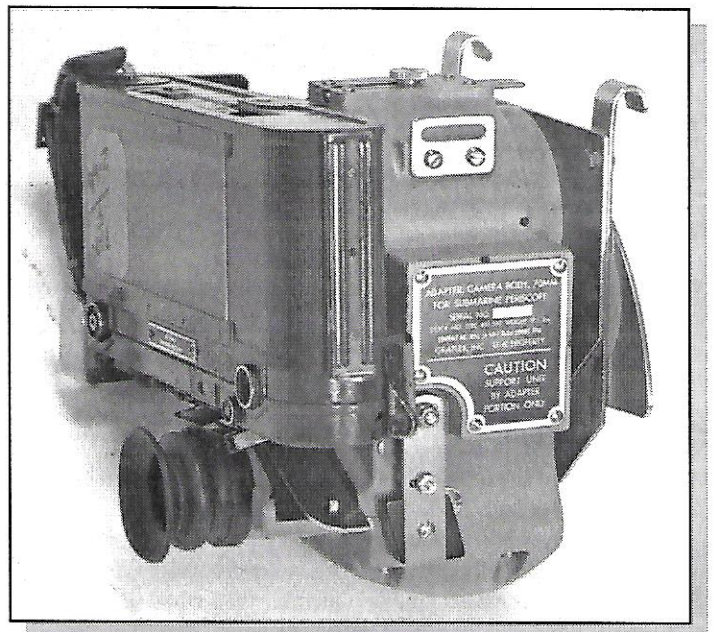
Pictured is one of my most interesting Graflex accessories. I acquired it from Graflex collector Jerry Spiegel, who had purchased the attachment at a New Jersey camera show sometime around 1985, from a dealer whose specialty was buying at government auctions that dispose of surplus property -- some as new, which was a reasonable description of this adapter.

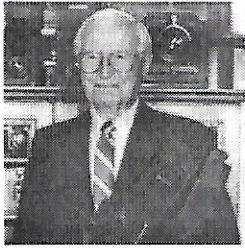
It was packed in a fitted Halliburton case with the two filters in place. The correct orientation is with the eyepiece at the bottom. In that position, the two hooks at the front mount on a bracket on the periscope. Because it didn't come with a camera attached, it took some time to figure out that it was intended for use with the 70mm Combat Graphic (as described in the Quarterly, Volume 8, Issue 1), and that the camera had to be mounted upside down. In use, the adapter converts the 70mm Graphic to an SLR with built-in f4.7 127mm Ektar lens (circa 1956), moving mirror and prism. Although there were two Series 8 black & white filters already mounted in the pivoting filter holder, color filters, or most any other type could have been substituted. Also provided were two slotted mounts obviously intended for a

neck strap, but how anyone short of a gorilla could have hand held and operated this unit was not explained. The attachment, with the case, but without the camera, weighs a whopping 17.5 pounds, and the case measures approximately 14"x10"x8"!

Construction is of the highest quality. The body is a polished cast aluminum or magnesium finished in light gray enamel, and all fittings are stainless steel - in and out. It is my guess that it was a success, but was discontinued when the Combat Graphic was discontinued. In other words, it had a short lifespan, which is why the serial number (no. 7) was so low. Although the dealer Jerry Spiegel purchased it from had two of them, in the following 20 plus or minus years, we have never seen another.

Other than technical details I received from Jerry Spiegel, I have not been able to learn very much about this interesting item and welcome any information readers can provide.





Ask Tim Holden....

Could you tell us how Graflex used supplements in their catalogs?

First, let me say that while I was working at Graflex, I do not recall our issuing a supplement because of an error; though, on a few occasions, we corrected an error when we issued a supplement. Because we took the accuracy of catalogs very seriously, we proofread aloud all catalogs and supplements, believing that the ear would catch what the eye would miss.

Graflex had several reasons for issuing supplemental information. First, the primary purpose was to give updated information on the availability and prices of equipment ... primarily lenses. Second, it was much cheaper to use an updated supplement than to print an entirely new catalog. I believe the first such supplement was used in the 1933 catalog. The same catalog was used for 1933, 1934 and 1935, with only the supplement changed. After that, we continued to use this system until the 1950s, when the number of cameras and options was reduced.

Interestingly, one of the first uses of a supplement was an "Advances in Prices, Effective January 15th, 1918," found in a 1917 catalog. Because there was also a regular catalog for 1918, it is not entirely clear why this supplement was required. Because, on average, prices were to increase by 15%, Graflex may have wanted to get the bad news out in advance of the new catalog or encourage people to buy before prices were increased. Also, the supplements have been issued in response to a war related tax. Also, for two years (at least 1917 and 1918), a small supplemental catalog (3½" x 6½") was issued in addition to the regular catalog. The 1918 catalog stated that "This little booklet does not include the entire line..."

In 1940 there were at least five supplements, and in 1941, at least three. Most changes during these years were related to the availability and price changes of lenses and shutters, although the Heiland Sol flash gun was added in 1940 and the Hugo Meyer rangefinder in 1941.

Third, Graflex used a supplement to introduce new cameras. An insert was used in some 1923 catalogs stating that the Series B camera was replacing the Auto Graflex, R. B. Graflex Jr. and the

R. B. Tele Graflex. This was again done in 1927 to introduce the Revolving Back Series D. A single sheet was added to the catalog, "Graflex Catalog Supplement," in which the camera was pictured, described and priced. As no example has yet been found of a 1928 catalog, it appears this supplement may have been used in lieu of printing a catalog for that year.

Fourth, in a specialized application, Graflex, for the years 1930 through 1933, included a "Supplement Graflex Catalog - Lenses," that listed prices for lenses that were in addition to those listed in the body of the catalog. The same catalog was used for all four years, though a new copyright date was used on each. Interestingly, in 1931, the price of the Model C was changed from \$260.00 to \$195.00 by using a rubber stamp in the catalog, but not changed in the lens supplement. Also, in the 1931 catalog, a revision was pasted over a section of the Graflex Cut Film Magazine section to introduce a design change "...so as to prevent abrasions during manipulation."

While looking at catalogs, it was noticed that some Graflex-style cameras (1940 and 1941) were sold with lenses in shutters. Also, some lenses were sold with metal lens boards. Could you explain why these items were offered?

Regarding shutters for Graflex-style cameras such as the Revolving Back Auto Graflex with long bellows draws, photographers who did copy work needed accurate slow speeds, which were not available with the focal plane shutter. Thus we offered Kodak Anastigmat lenses in Compound and Compur and, finally, Supermatic shutters for Kodak Anastigmat lenses. We discontinued this option due to lack of interest.

Regarding metal lens boards, we were concerned that large diameter lenses might crack the wooden lens boards if the hole for the lens was so large that the remaining wood around the edges was small. We made the metal boards and stamped them with the same letters as were used on comparable wood boards.

One final comment on catalog photographs. Graflex, especially during the '30s, included credited pictures by professional photographers, which were used to show that well-known professional photographers used and preferred our cameras. From time-to-time, we would change these pictures. The dropped photographers would let us know they were not pleased, as they used the catalogs for self-promotion.

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, and is not a for-profit publication. Other photographic groups may reprint material provided credit is given GHQ and the author. We would appreciate a copy of the reprint.

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HINTS AND AIDS FROM SERVICE SALES

The GHQ is restarting Hints and Aids from Service Sales, once a part of Graflex's Trade Notes publication. Based on responses from our subscriber surveys, we are offering this service to provide accurate answers to technical, restoration and collecting questions that are not covered in full-length articles.

Those volunteering to help include former Graflex employees Tim Holden (a former writer of this column) and Bill Inman, collectors and users Mike Hanemann and J.C. Welch, and Graflex author Richard Paine.

Please send your questions to Mike, J.C. or Ken, and we will forward them to the subscriber best qualified to give you the answer. With permission, we will publish some of the questions and answers. Also, from time-to-time, we will include hints published in Trade Notes. No questions will be forwarded to India!

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