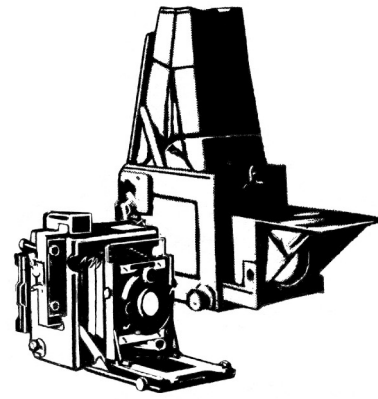


GRAFLEX HISTORIC QUARTERLY

Since 1996



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THIRD QUARTER 2014

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FLASHBULBS IN THE DARK Part II

By Les Newcomer

Last quarter I introduced you to the workings of the Graflex Synchronizer tester. This quarter I show some of Graflex's competition.



The business end of the tester. The slit on the left is open to record the entire flash. The slit on the right will be restricted by the shutter.

Wilcox Flash-O-Graph

On January 28, 1946, John Edward Wilcox Jr. applied for a patent for his Flash-O-Graph synchronizing tester. His model used the same two-hole concept of the Graflex tester but used a spinning drum in a box, instead of photographic paper in a falling film holder. The drum was covered with phosphorescent paint, so the flash traces glowed in the dark for about a minute. It was "small enough to carry in your pocket or bag," said the ad for "The New Wilcox Flash-O-Graph" that appeared in the May 1946 edition of Popular Photography.

Interestingly, in the February edition of the same magazine, Hod Lewis Associates placed an ad for the Sync-Check, a nearly identical device, made by Al Norris Manufacturing for \$15.50. June was an interesting month for Pop Photo, as both companies had ads in the same issue, and for the same price of \$12.50. How

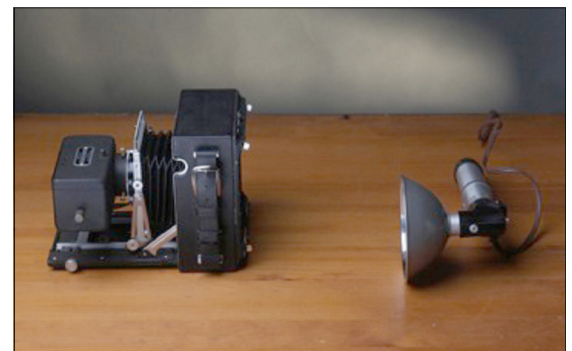
they battled it out is not known. Al Norris' last ad was in January of 1947, while Mr. Wilcox's Flash-O-Graph was still selling in April of 1949, just two months after his patent was approved, but at the deep discounted price of \$4.95. Functionally they are identical.

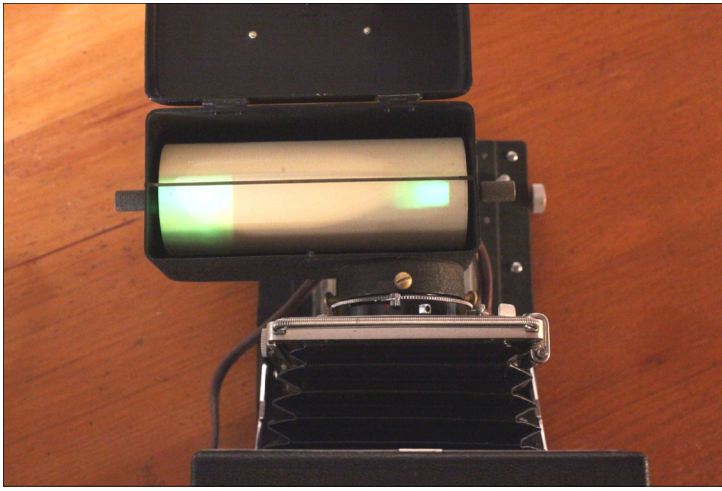


"Position the flash so that the Flash-O-Graph and the back of the camera get an even amount of light." Easier said than done.

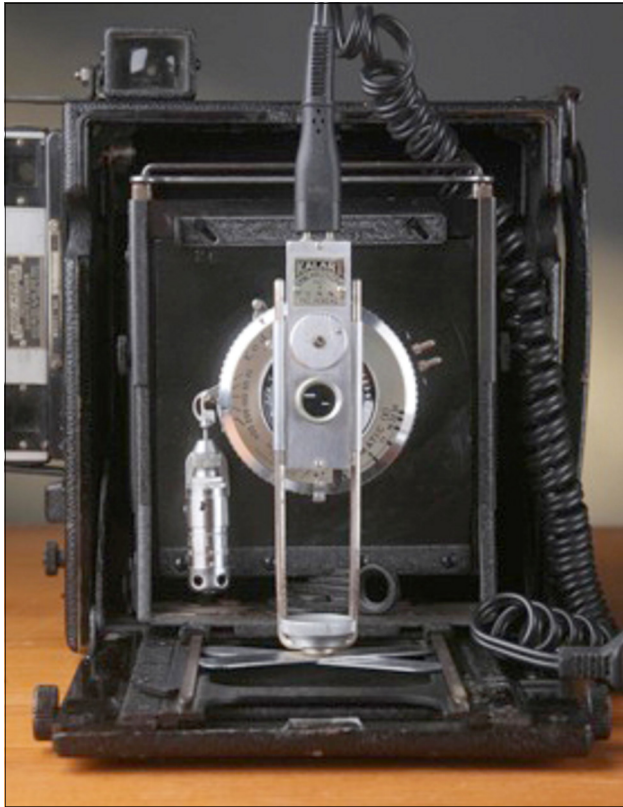
The advantages of these two testers over the Graflex tester are several. There's no expense of photographic paper or chemicals, you aren't tied to a darkroom so you can test your camera in the field between assignments, and the tester is small and light enough to fit in your pocket. *But the Graflex tester has one major advantage: precision.*

While using the Flash-O-Graph for this article, I found I had to get the flash in just the right place for it to work. A bit too far to the right or left, and I would lose one of the traces. I also had to remove the ground glass and cover in order to get enough light to the lens, though that may be due to the lower output of the M3Bs I was using.





The bulb trace is on the left, shutter trace is on the right. Since the brightest part of the bulb trace aligns with the shutter trace, this solenoid is in sync. This needs to be done in a darkened room. Close and cover your eyes for the flash, or you'll be as blind as Raymond Burr in "Rear Window" and not be able to see the traces.

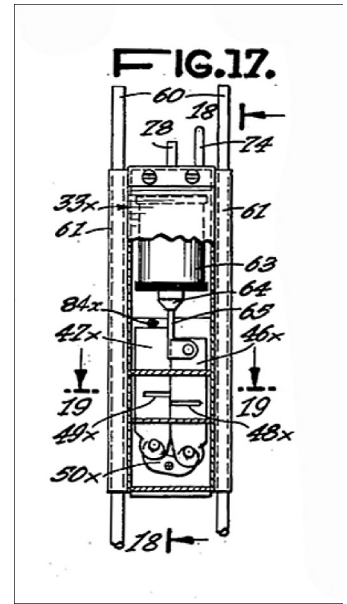


Kalart Synchronoscope

The Kalart Synchronoscope probably pre-dates both the Graflex and the drum testers and is only preceded by the elusive General Electric Synchrograph, which I have yet to see in the real world. Mr. Morris Schwartz filed his patent in March of 1939 and was granted patent number 2,286,512 in June of 1942. While more complicated than either the drum testers or the Graflex tester, using it is simplicity defined: Put it in front of the lens with any light source behind the camera, hook up a cord to the solenoid and the tester and fire. If two small slits are in line or part of the slits are, the camera is in sync. No flash bulbs. No paper. No muss, fuss or expense.

So what's going on in that little aluminum box that looks suspiciously like an early Kalart rangefinder body? Two small

This patent drawing shows what's going on. In production lever 78 actually comes in at the bottom and "dot" 84x is the lever attached to the sync delay dial on the front of the unit. Turn the dial and that rod moves the starting position closer to or away from even.



slits on two narrow pieces of sheet metal are lying in there side by side. They are linked at the bottom by a pivot lever, so when one slit moves up, the other is brought down. Add a solenoid to one side so the flash trips the slits and the shutter at the same time. If all goes well, the shutter opens the moment when the two slits are side by side. The flash delay is adjusted by changing the distance the two slits are apart at the start.

The early sales of the Synchronoscope used a cord with an Edison plug at one end, and this plugged into the flash socket of the Kalart Micromatic Speed Flash. Once flashlight-style battery cases became popular, the Synchronoscope was sold with a standard household plug that would fit most flash units.

While the play in the mechanical links may induce some loss of accuracy, I don't think these testers were used enough to wear out. The weakest link for the Kalart system may be the solenoid. I don't know if this is a common problem or not, but the unit I have has a burned out coil. Then there is the petrified-cord problem plaguing any bulb flash system. Luckily, Paramount Cords sells cords that fit the Graflex port and the Graflex solenoid. For synchronized shutters that use bi-post and the Kalart Synchronoscope, a household to bi-post cord can be found at the end of most electric shavers sold in the US. The cord in the photo is from a Braun shaver.

Adjusting the Solenoid

After three months and three different ways of finding out your camera is out of sync, I'm finally going to tell you what to do about it.

Graflex Solenoids

There were three different solenoids by Graflex; a No. 2 used for 2-cell battery cases, a No. 3 used for 3-cell battery cases. In pre-war literature, Graflex suggested that for larger shutters or high shutter speeds that needed more torque, you could use a No. 2 solenoid on a 3-cell system, but you shouldn't use a No. 3 solenoid on a 2-cell system. After the war, the designations were changed to reflect their new use of shutter tripper, and the No. 3 was



Left to right, #2 and #3 solenoids.

suggested for larger shutters, the No. 2 for most shutters, and the No. 0 for high torque applications (Yes, they skipped No. 1. No, I don't know why. It's a Graflex thing.).

Adjusting the solenoid is simple enough. Open the locking collar so the solenoid slides in its mount with some drag. Start with it up high, then with fresh batteries in the flash unit, trip and hold the shutter button down so the solenoid is engaged while slowly pulling the solenoid down until the shutter just trips. Lock down the collar, and test the shutter/solenoid several times. If it consistently works, then use a synchronizer tester to tweak the adjustment.

Heiland solenoids

Like Graflex, Heiland made a myriad of different solenoids and mounts for different situations. Unlike Graflex, the variations are not well documented, but from what I've discovered from research in both the library and the work bench, adjust the linkage first to achieve that "just trip" position, then adjust the rear screw for a final tweak.

Mendelsohn solenoids

Mendelsohn solenoids are removable and adjust laterally to the shutter. Adjust the stop on the back of the solenoid when consistent tripping is achieved so the position is repeatable. Fine adjustment is with the screw in the bottom, labeled "slow and fast."

Conclusion:

Less than five years. That was the market window for these testers. If you got in before the war, you might have squeaked out seven or nine if you got a war contract. But if you started after the war: less than five years.

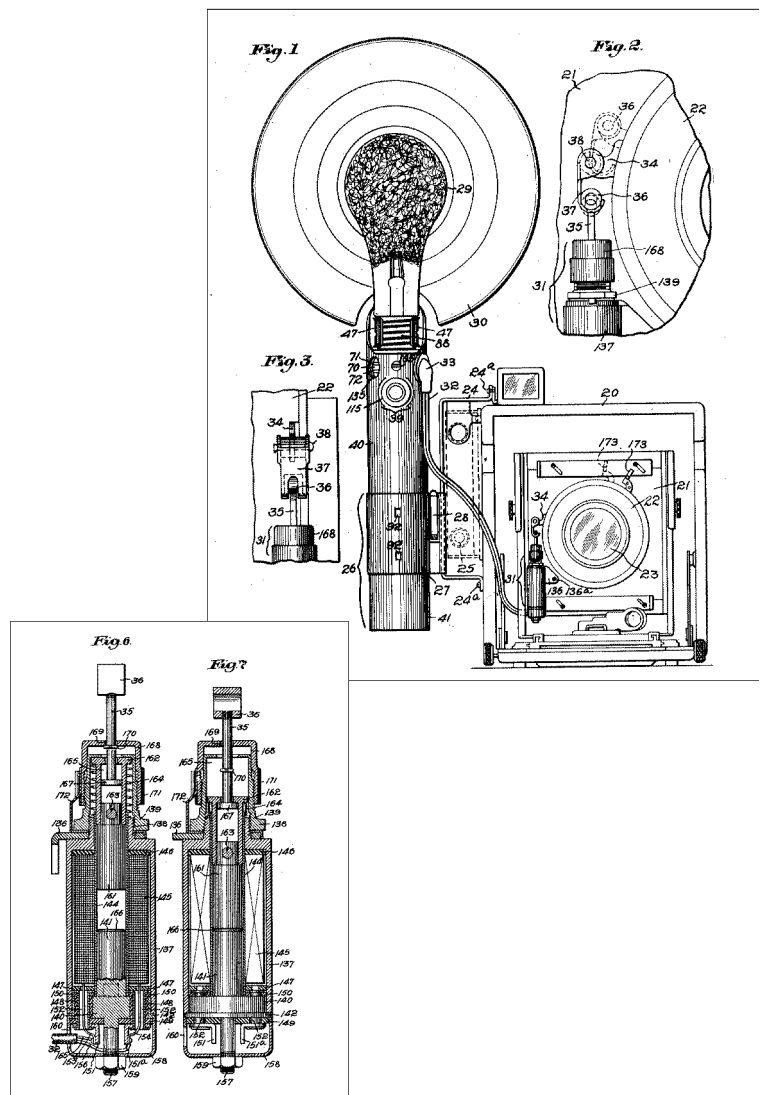
The real need for them was the 1930s when a flood of different companies, or just guys posing as companies, were hawking their new and better way to synchronize flash with the shutter, and many of them were in reality neither new, nor better, nor even reliable.

Kalart's Synchronoscope came out in 1939; the Graflex tester was born during the war. But the truly better way to synchronize flash and shutter also came out of the war: Internally synchronized shutters. They were reliable, and the added cost was only slightly more than the cost of the testers themselves. By November of 1946, you couldn't buy a new Graphic camera with an unsynchronized shutter, and electronically synchronized shutters were pushing out fully synchronized shutters. With this in mind, it's easy to see why, in 1949, the Wilcox was relegated to the bargain bin, and the Sync-Check had disappeared already.

While there are quite a number of us who still shoot our Speeds and Crowns, a diminishing number use flash, and most of those use electronic flash. Flash bulbs today are expensive, and if you do use them, use them with an internally synchronized shutter. I assure you, your subject won't know the difference.



I'd like to thank Maurice Greeson who generously sacrificed at least part of his bulb collection for this article.



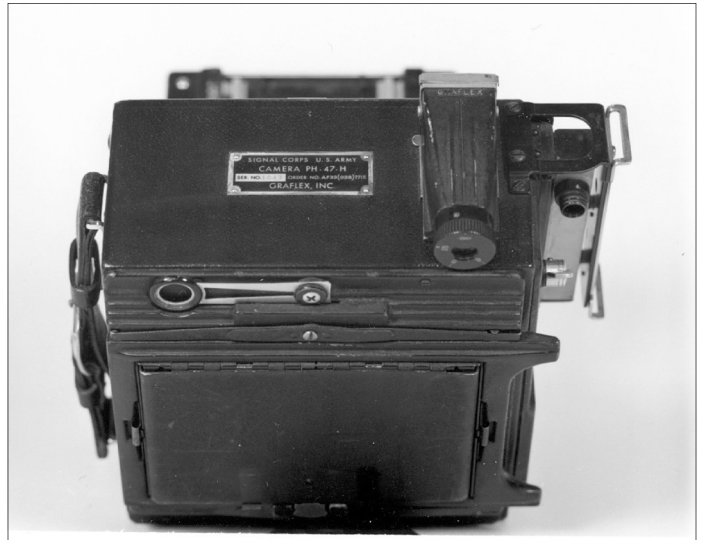
Patent 2,293,477, granted to Oscar Steiner and assigned to the Folmer Graflex Corporation, August 18, 1942.



CAMERA COLLECTING

By Ronn Tuttle

I recently had a pretty good day adding to my Graflex collection, but the day actually started over 13 years ago. In 2001 while attending a workshop in Montana, a fellow student told me of a piano store in downtown Missoula that had some old cameras for sale in a back room. I went to the store and bought a Graflex 3 1/4 x 4 1/4 Super D in superb condition. The Super D is the most modern of the Graflex SLR's, featuring flash synch, an automatic stop down diaphragm, and the excellent (in my humble opinion) Kodak Ektar lens. I have had the desire to acquire a Super D in the 4x5 size ever since.



Last fall I learned that a friend I have dealt with many times over the years had two of them, one with a lens and one without. After some phone negotiations, my wife and I made the 2-hour trip to visit Rick with the intent of buying one of the cameras. During the drive, I told my wife that he was going to try to sell me two cameras. After Rick and I concluded our business transaction, I announced to my wife that I had not bought two cameras. She responded “no, you probably bought three.” She knows me well. I bought the really nice 4x5 Super D that I went for, and while Rick and I were talking in his garage, I discovered he had a 4x5 Pacemaker Speed Graphic (serial number 835157...ca:1950) with a tag proclaiming it to be a SIGNAL CORPS U.S. ARMY CAMERA PH-47-H. The Speed had no lens...this was perfect for me to mount my 90mm Wollensak Raptar that is marked SIGNAL CORPS LENS LE-6 (1) on the camera. This camera is pretty much a standard black body with the normal Pacemaker chrome trim, but does have a Hugo Meyer rangefinder rather than the more common Kalart rangefinder, and has a spring back instead of a Grafloc back. It is in nice working order.

The 4x5 Super D is serial number 417934, which would indicate a manufacture date of 1947, among the first batch produced for that size. My 3 1/4 x 4 1/4 Super D number 457823 was made in 1948.

The third camera I bought was a 4x5 Anniversary Speed Graphic number 330598 (1943) that had been stripped of its rangefinder, viewfinder and lens. The bellows and shutter were both in nice working condition and made a nice user camera to which I have added a B&L 4.5/5x7 Tessar 1c barrel lens. I was intrigued by the amount of brass covered by the WWII era black paint. Hearing stories of the shortages of nearly everything during that time period, I thought most of the brass would have been used to produce ammunition. Graflex cameras must have had a rather high priority during the war years. They sure were used to record a lot of history.

I am happy to have added these three Graflex cameras to my collection. It was, indeed, a pretty good day.



A COLLECTION, DEFINED

By Ken Metcalf
with Jim Chasse

It is all Richard Paine's fault. In his book, The All-American Cameras a Review of Graflex, Mr. Paine writes that "It is the considered opinion of most photographers and collectors that the Anniversary models represent the climax of Speed Graphic workmanship...the pride that produced this quality was never again equaled." At the time, that was enough for me. Given space and cost restraints, I defined my collecting goal as cameras and accessories made through the Anniversary Speed Graphic. Although I made several purchases of later cameras, I further narrowed the definition to the 3 1/4 x 4 1/4 size where possible and excluded large studio, aerial, and Inspectograph cameras (what I call the Hernia Division of Graflex), although these cameras all show a high degree of craftsmanship and quality.

Readers are encouraged to share their collecting stories with other Quarterly readers.

I have adhered admirably to my collecting definition...until recently. In issue 16, 3 of the GHQ, Jim Chasse wrote about his prototype 2 1/4 x 3 1/4 Graflex camera, the Traveler, and compared it to the Miniature Speed Graphic, the Fink-Roselieve FR Reporter (ca: 1942), and the early Busch Press-Man (ca: 1943). As noted by Jim in his 2005 article in CameraShopper,

The FR Reporter's dimensions were 5 1/2 x 4-7/8 x 3 1/2. Exactly the same as the 1938 Miniature Speed Graphic (except that it was narrower by one inch, because it did not have a focal plane shutter). It seemed to be a very close copy, as several parts were similar, including: a sliding lock for lensboards, 2 1/2 x 2 1/2 lensboards, focusing tracks, rising front standard, sports finder, spring back, focusing scales, and leather covering. The front wire finder is very similar to the one on the 1940 Anniversary Speed Graphic. It did offer a lateral shift

and lens swing which the Miniature Speed Graphic did not have, but which was a feature of the Anniversary. Apparently offered only for a very short time at \$56.00 without a lens, the shown camera has a serial number of 15,123.

The Reporter resurfaced in a Popular Photography magazine ad for Penn Camera Exchange (NYC) in October 1943. It was featured in a 1/8th page ad as the Busch 2 1/4 x 3 1/4 cut film and film pack camera at \$99 which included a Wollensak f/4.5 101mm [Velostigmat] lens in Rapax shutter speeds 1/2 – 1/400, but the ad pictured is actually an FR Reporter with a Kodak Ektar in a Supermatic shutter. This first Busch, located for my collection, has serial number 16,067. It would appear that the serial number sequence was simply continued on as the two cameras are only 900 numbers apart.

Around 1948 Busch introduced their 2 1/4 x 3 1/4 camera as a Model C, with features not copied from Graflex cameras.



Top row, left to right, Jim's FR Reporter and Busch Press-Man. Bottom, Miniature Speed Graphic (courtesy George Eastman House).

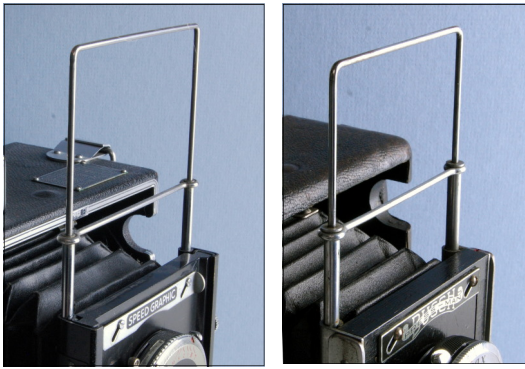
Although the Reporter slide lock says "Pats. Pend.," no camera patents have yet been found. According to Graflex employee and historian Tim

Holden, FR was never authorized or licensed to make the Reporter. Also, when he had lunch with the Chief Engineer of Busch, he told Tim they were having a lot of problems with their press camera, so Tim told his management not to worry about Busch as a serious competitor. Records do not indicate that Graflex pursued either company in court.

Although the parts look very similar, they are different enough in size to suggest that they copied Graflex ideas, but probably made the parts themselves. Also, where Graflex used Bakelite-like parts, FR and Busch used wood. Finally, time has shown that the metal parts were not given the quality finish of the Graflex camera.

Miniature on left and Busch Press-Man on right.





31/4 x 41/4 Speed Graphic on left, and 21/4 x 31/4 Press-Man on right.

Having said how close the Reporter and the early Busch cameras are to the Miniature, and how FR may have made close copies of the Miniature, does this justify my changing my definition and adding this camera to my collection? Well, no. Still.....

* In this issue, the width difference was listed as 1/2", where in fact, it was 1".



MY FIRST SPEED GRAPHIC

By Thomas Evans

I, too, was intrigued by Richard Paine's statement about craftsmanship and the Anniversary Speed Graphic, and that may well have sparked my interest in the history of Graflex and its cameras.

I came of age in the 1960s, and during that time I had no idea that there was any camera other than the 35mm single lens reflex that would be used by serious photographers. I was not introduced to the Speed Graphic until 1975, when I took a summer job in a darkroom for the U.S. Bureau of Reclamation. A dam was being built, and they were recording the construction. My job was to go through the file of some 10,000 4x5" B&W negatives and make contact prints. This opened up my eyes to the delicious quality that the 4x5 negative can deliver.



film holders, Polaroid roll-film type back, and two Beatie 70mm backs, and a case to hold it all.

This became my primary camera for the next dozen years. I carried it up to Alaska where I worked fighting forest fires, and hitchhiked with it across Canada and down the East Coast, and

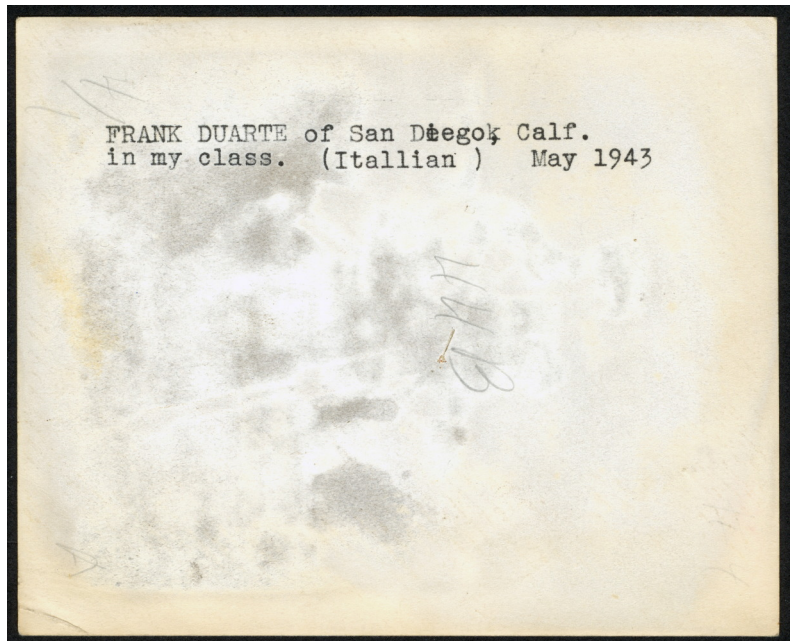
A couple of years later, I saw a Speed Graphic outfit offered in the local paper's classifieds, and for \$70.00, got a Pace-maker, cut

west back to California. In New York City, I visited a seller of used photographic equipment; eight floors up a freight elevator into a vast room stacked full of apparatus of every kind and era. Walking into this room opened up many possibilities in my mind, and I came away with a fast, f/3.5 Xenotar lens for the Speed Graphic, a 4x5 Series B Graflex, and an 8x10 Kodak 2D. Mostly, I came away with a new thirst for knowing about these many and assorted cameras. I was on my way...

I carried the Speed Graphic back-packing, with a film pack adapter rather than cut film holders. I took it to Paris, and with me bicycling along the Mediterranean from Nice and Marseilles. I bicycled and hitchhiked with it around California. During all this, the quality that I knew that I could get with the 4x5 negative more than counter-balanced the bulk and heft of the camera. What this taught me was that 35mm cameras and 4x5 cameras (and really, every kind of camera) all have capabilities and limitations, and it taught me what they are.

My experience with a Speed Graphic, and the realization that there is a long history of experimentation and development in camera design as well as in photographic processes, made me curious about the evolution of design of cameras. As the apparatus developed to better meet the needs of photographers, the skill and ambitions of the photographers evolved, and they demanded more of the equipment. You can see this plainly as you hold a 100-year-old Speed Graphic (and yes, the Speed Graphic has been around that long) and compare it to the Pre-Anniversary, the Anniversary, the early and late Pacemakers and the Super Graphic. You can *feel* it in your hands as you use these different cameras, and it is this that has directed my "collection." My curiosity about the evolving design and use of these cameras could not be satisfied by reading about them or looking at pictures. I have needed to use the cameras in order to understand them. Incidentally, since I rarely pick up a camera in working condition, I have also had to learn how to fix the cameras, to take them apart and learn why each was not working and how it should work, and this has enhanced my understanding.

I never intended to have a collection, but my curiosity has led me there, expanding the scope of what to try out next as I learned about what I had in hand. I have, and have used, some cameras from the earliest years of Folmer & Schwing - Cycle Graphics, a Long Focus Graphic, and pre-Eastman Tourist and Revolving Back Graflex cameras. I've also been curious about the pre-Eastman Century Camera Company cameras. I worked through the decades trying various models of Graflex, including the '0', '1A' and '3A' roll-film cameras, and successive Speed Graphics, and through the Twin Lens and 35mm cameras, and on into the Super Graphics and graflex xl cameras. I would still like to try my hand at a Naturalists' Graflex and a Big Bertha, but these have proven to be elusive. I have been charmed by the excellent craftsmanship with which these cameras were made. As Dorothy Parker has said: "The only cure for boredom is curiosity. There is no cure for curiosity."



WHAT HAVE WE HERE?

Here are scans of a recent \$7.50 eBay purchase. A few things are known, a few things are guesses, and most things are unknown. The purpose of this piece is to have readers help add to the “known” heading.

KNOWN

The print is 4x5.

The person pictured (Frank Duarte) was in a “class” with the caption writer.

The camera is a 4x5 Speed Graphic, which was made from 1928 through 1939, and the camera is mounted on a Graflex tripod.

The camera is fitted with a Mendelsohn Speedgun bracket, without the tripper or flash gun.

Mr. Duarte is holding an unidentified object, with a strap, in his right hand.

From 1923 through 1997, there was a Naval Training Center San Diego.

His camera was fitted with a dial-set Compur shutter.

The typist can't spell and can't type.

GUESSES

The writing on the negative is “(G-448-4-3-3338-SDP).”

Because of the size and sharpness, it is contact printed.

Mr. Duarte was a student at the Naval Training Center in San Diego.

The notation on the back was done with a typewriter on thin paper and glued to the back of the print. As there are no indentations left by the typewriter, the notation may have been originally typed someplace else.

UNKNOWN

If any of the guesses are correct.

Why is he pictured with a pre-anniversary camera in 1943?

If the photograph was made in a photo school, why was the personal comment “in my class” used?

Who is (or was) Mr. Duarte?

What is the meaning of the writing on the face of the print?

If you would like to help with this project, please email or write Les or Ken. We will pass along any information to other members of the group. If anyone has access to ancestry.com or other search means, this would be important to develop a history for Mr. Duarte.

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Again, Bob Lansdale, Editor of Photographic Canadiana (<http://www.phsc.ca>), found an interesting photograph of news photographers. The picture's caption reads: "Hand-held photography - 1936. Illustration of a Daily Mirror photographer having a steady hand and not needing a tripod for his camera. Picture on the left is staff photographer George Greenwell resting the camera on his arm, a man confident enough to work without a tripod. George was one of the Mirror's best known photographers and has a wide range of talents."

I believe the camera, second from the right (and its tripod), is a Graflex. Please let me know if you agree, and, if so, what is the model? If not, what is it?

KM