

GRAFLEX Journal

SHARING INFORMATION ABOUT GRAFLEX AND THEIR CAMERAS

ISSUE 3, 2018



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PHOTO COURTESY NICK BRANDRETH

THE PRESS CONNECTION BY JEFF YOST

"I have (Great) Grandpa's typewriter and camera," my cousin, Rick Davis revealed. Rick's thrilling disclosure unveiled significant artifacts of our family's history had survived both time and fate. As my brother, John and I were still processing Rick's words, he continued,

"Since you are both stopping by, I believe that you are the ones who should take them with you to preserve the Yosts' family history." ...However, before I get too far ahead of this incredible story, the stage must be set.

During the spring of 2016, my late cousin, Bill Swanson, kindly lent me several dozen old family photographs dating from the mid-1800s to early 1900s to archive digitally. It was a labor of love to be able to share the digitized archive with our family and their future generations. Among the stacks of old photos, several were professionally taken by my Great Grandfather, John F. Yost (Feb. 1858 - Nov. 1951) during the late 1800s through the 1920s. (I'll respectfully refer to him going forward as "JF.")

JF was a man whom I had never known, but heard lots of interesting anecdotal stories about his alleged adventures, etc. One true story remained in the forefront. JF was the undisputed oldest graduate of Purdue University in 1951, the year I was born. He died within six months of my birth, so I never got to know him, except through the family's stories. Among the heap of photos were a few soiled and cracked glass plate negatives ranging in size from 4x5 to 5x7.

Gelatin Dry Plates evolved from the Collodion Wet/Dry Plate historical processes and were introduced during the early 1880s. Because of a Dry Plate's inherent perfect film plane, Eastman Kodak's T-Max was available on plates for the scientific world until the early 2000s. Dry plate popularity peaked during the late 1800s/ early 1900s when George Eastman changed the world of photography with his innovative, easy to use, "Kodak" nitrocellulose roll and sheet film. Kodak's 1888 advertisement "You press the button, we do the rest." put the simple into photography. The masses could now take pictures, lots of pictures, altering the way we see our world today.



An interesting 5x7 glass plate captivated my attention. Its digitally converted positive revealed an early belt-driven, single cylinder motorcycle parked in front of a clapboarded country store. Standing next to the machine was my grandfather Victor H. Yost, smiling,

his left-hand gently steadying the bike as his younger sister Ruth, my great aunt, beamed proudly, sitting squarely on the driver's seat, grasping both handlebars like this two-wheeled creation was her very own. I had never seen this family photo before! The resolution was astounding. It looked like it was recently taken with a high-end, modern camera. A second motorcycle sat in the background next to the store's front entrance. A digital zoom into the scene revealed the unbelievable details of caked mud sticking to the front tire. The unique single-cylinder engine incorporated the bike's front downtube as an exhaust manifold/exhaust pipe. Grandfather's frayed and rumpled overcoat looked way too small. Two barely visible signs flanked the upper store's entrance proclaiming "Old Dutch Cleanser" was available inside. Among the advertising signs that hung inside, a half dozen new brooms could be seen appearing through the reflection of the store's large windows.

Subsequent research on the two motorcycles' marques and production years, along with the estimation of my grandfather's and great aunt's ages, helped me to guesstimate that the year this plate was taken ranged between 1908 and 1910. ...What kind of camera is capable of producing an incredible high-resolution image over one hundred years ago?

While sifting through the stacks of photos, a faded blue ink stamp was on the back of one of the photos,

"For High Class Landscapes Panoramic Views of your Residence and Surroundings WRITE TO 92 EAST 38th ST. JOHN F. YOST, Traveling View Photographer CHICAGO"

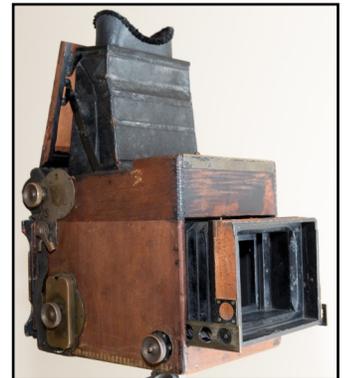
Each Piece of the Puzzle Comes Together

"As we move through life, the force of fate creates events that we only appreciate when we reflect on our existence." Richard Bach

My brother, John, acquired JF's typewritten directions to an obscure crossroad cemetery sitting silently in the middle of nowhere USA on the NW corner of Pyrmont, Indiana. Buried within these sacred grounds are JF's parents, grandparents and family from the early 1800s. JF purposely left his detailed directions back in the 1940s, encouraging his descendants to occasionally make a pilgrimage to pay their respects, as well as to not forget their roots.

As fate would have it, everything distilled together during the summer of 2017. The subsequent acquisition of the old photos and the directions to the old cemetery inspired John and me to embark upon a grand "Tour of Discovery," finding our roots. We traveled over 3,000 miles through 9 states. JF's detailed, turn-by-turn directions via old dusty country farm roads lead us right to the family plots. It was amazing! After visiting the old cemetery, we continued our pilgrimage north to our hometown village of Berrien Springs, MI, where we visited our cousin, Rick Davis, JF's grandson, who revealed to us that he had JF's camera. It was a eureka moment that leads us back to the beginning of my story.

It was a beast of a wooden box wearing a delicate coat of dirt and dust from decades of sitting inside a southeast Michigan garage. A peculiar leather bag, stained by age, hard use and neglect, sat beside it. Its contents held six large wooden plate/film holders, along with what turned out to be the camera's removable spring back. Someone thought enough of the beast to make a label for future generations to read, appreciate and treasure, *"GRANDPA JOHN YOST CAMERA USED LATE 1800S"*, affixing it to the top of the camera's upper back so everyone could see.



The beast was made of some sort of fine-grained hardwood, each corner meticulously box-jointed, becoming a fortress against time. It looked ancient, dirty, and in want of attention. A copious amount of crusty black tape outlined the back, covering what appeared to be some sort of homegrown repair. Its original purpose, I assumed, was to block unwanted light from ruining its future photos. The top front upper latch released an expanding, musty, leather viewing hood. A right front, tarnished bronze knob turned clockwise, expanding the leather front bellows, sans lens. A complex array of bronze knobs and levers perched upon the rear's upper and lower right-side plates appeared to control a rear shutter curtain of some type. This derelict beast looked like a professional SLR/view camera which I've never seen the likes of before. It was a significant piece of the Yost family's history and perhaps beyond.

The stamped letters on the rear upper right top's bronze plate said, **"PRESS GRAFLEX PATENTED FOLMER & SCHWING Co. FEBY 5, 1907 ROCHESTER, N. Y."**

"Press Graflex"? Never heard of such a camera. As we stood there gawking at this enchanting beast of a camera, we had zero clue what we were looking at, yet, I was mysteriously drawn to it. My immediate compulsion was to restore it, whatever it was, and get this camera back to working order, and, if possible, continue to carry on JF's tradition, using it again to make one-of-a-kind images. ...It would take some research, lots of research, to learn more about it in order to determine the next best steps.

What Is It? – Discovery

An Internet search for "Press Graflex" led me to the graflex.org extensive website and the [Graflex Journal](#) publication. I downloaded them all. It became my primary resource for learning the history of each Graflex camera, as well understanding that the Graflex was THE media's choice of most professional photographers.

Publisher/Editor, Ken Metcalf immediately responded to my email inquiry about the Press. Ken identified that JF's Press, serial number "21091," was an early vintage, estimated to be made between 1909-1910, soon after George Eastman's huge empire purchased the Folmer & Schwing company in 1905, to expand their market share into the professional camera line. (Ken's dates also helped me narrow down the dates of JF's plates.) The Press Graflex was specifically made for the nation's print media. Since the 5x7 glass plates captured incredible detail, it also was the standard format to make full-size contact prints, meeting the last-minute demanding schedules of our nation's daily newspapers. Capable of freezing a baseball midflight, its unprecedented, ultra-fast, 1/1500-second shutter speed, the Press Graflex was the go-to camera to be used at major sporting events.

JF's Press no longer wears its fine coat of pebble grained, fine Moroccan leather. Nor is it a *"LATE 1800S"* camera as labeled. Sometime during its life, it sustained significant damage to its rear. As a result of the extensive repair, JF's Press lost its fine Moroccan leather coat and became a "woodie." ...This also helps to explain the black tape. (Graflex used fine mahogany on the Press.)

The Next Steps - Commitment

As the new custodian of JF's Press, rather than opt to let this amazing piece of history sit collecting dust inside a closet, or on top of a display shelf, I've chosen to resurrect this gem and carry on JF's tradition by creating unique images which will last beyond my lifetime. Research and several testimonials put the spotlight on John Minnick as one of the best resources for Graflex SLR restoration. Earlier this year, I asked John to bring JF's Press back to life. (See my article, "Making A Focal Plane Shutter," about John's work in the [Graflex Journal](#), Issue 1, 2018.)

The Press originally used 5x7 Gelatin Dry Plates. Since I am so impressed with the incredible details in the 5x7 plate featuring my grandfather and his belt-driven motorcycle, I resolved to learn how to shoot JF's Press using glass plates. Most of my photog friends had never heard of Dry Plates. A friend who is into Wet Plate Collodion informed me that Gelatin Dry Plates are a "lost art." "Besides, no one knows how to make them anymore." Polyester-based film appeared to be my only option. However, since I am not one to give up so easily, I dug deeper.

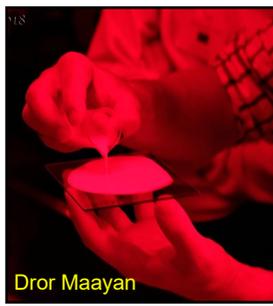
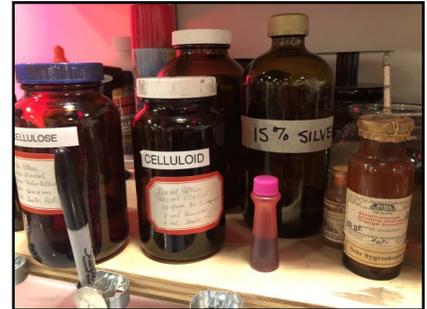


Late last year, I discovered the following link to the George Eastman Museum's "Photographic Process Video Series": <https://www.eastman.org/photographic-processes-video-series>.

Twelve 8+ minute videos detail the evolution of photography. While watching video number ten, "The Gelatin Silver Process," Mark Osterman, Eastman's Photographic Process Historian, revealed that the George Eastman Museum conducts **Gelatin Dry Glass Plate** workshops! ...What? This is supposed to be a "lost art!" ...Guess what I did next? I called Mark Osterman and left him voicemails, emails, bugged the hell out of him to make sure that I was signed up for two Eastman workshops. The poor man must have thought I was a loon!

The Eastman Workshops

During Christmas last year, my dear wife, Donna, gave me both the **Gelatin Emulsion Dry-Plate Negatives** and **Intermediate Gelatin Emulsion Dry-Plate Negatives** workshops. It would be a Dry Plate feast in July, incorporating two, four-day workshops taught by Nick Brandreth, with Mark Osterman participating.



GELATIN EMULSION DRY-PLATE NEGATIVES WORKSHOP

Attending Eastman's four-day workshop exceeded all expectations. During our comprehensive training, we learned the following workflow: How to formulate a forgotten historical photo process from circa 1900, a monochromatic (sensitive to blue and ultraviolet light) Silver Bromide Gelatin emulsion, with a sensitivity range from ISO of 0.75 - 1.75 (this was the typical speed back then); hand-cut and prepare 4x5 glass plates; hand-pour the emulsion onto the plates (an acquired talent); dry and load each plate into individual Graflex plate holders; and compose and shoot a scene of our choice within George Eastman's beautiful gardens, using a Graflex Crown Graphic 4x5 Pace-maker. Once shot, return to the darkroom to stop, fix, wash, and dry our glass negatives. (Red safelights are used during the entire darkroom process flow.)

Using the Graflex Crown Graphic and seeing the results helped reinforce my decision to restore and shoot with JF's Press. After all, if a Graflex 4x5 can look this good, what will the Press's 5x7 look like using Gelatin Dry Glass Plates? It was my first experience using a large format camera. Immediately, interest waned in using my full-frame digital.

INTERMEDIATE GELATIN EMULSION DRY-PLATE NEGATIVES WORKSHOP

The Intermediate Workshop continued to expand upon the first workshop's base by expanding our knowledge on how to increase our base monochromatic formulation's sensitivity from ISO of 0.75 - 1.75 to 12 ISO, with addi-

tional potential as high as 25 ISO, and possibly higher speeds. In addition, we were shown how to convert the original monochromatic (sensitive to blue and ultraviolet light) emulsion to orthochromatic (with increase visible wavelengths of green and bright yellow). Future work may include learning to make panchromatic emulsions that are sensitive to all wavelengths of visible light.

During our sessions, we did the same as the first workshop, making plates and shooting outdoors. We used the workshop Graflex Crown Graphic 4x5 Pacemaker. Nick brought his post WWII military KE-12(1) Graflex Speed Graphic 4x5 Pacemaker with an Aero Ektar f/2.5 178mm 5x5 aerial reconnaissance lens. I arranged to have a dry plate portrait made with it.



At the end of each workshop, our band of six received a special treat by spending part of an afternoon inside Eastman's photo archives viewing original Gelatin Dry Plate negatives and photographs from some of the world's greatest photographers, Eugène Atget, Alfred Stieglitz, Anne Brigman and Lewis Hine. Viewing each master's work up close was an unforgettable experience. The Eastman photo archive is one of the finest in the world, comprising of over 400,000 objects dating back to 1839.

The final cherry on top, especially arranged by Ken Metcalf, was for me to enjoy a special one-on-one meeting with Todd Gustavson, curator of the Eastman Museum technology collection. Todd was kind enough to prepare a viewing of two, very early production, Press Graflex cameras, along with an experimental 5x7 Graflex Stereo SLR, sans leather covering. (Todd shared that Graflex did not cover their experimental cameras in leather. They remained a woodie.) During our meeting, Todd was kind enough to give me a brief bonus tour into the inner sanctum of Eastman's Technology Vault. As we entered inside the massive temperature-controlled vault to retrieve a Graflex Stereo, I was overwhelmed that we were standing among one of the finest photographic and cinematographic collections in the world. It is the home for the cameras of Ansel Adams, Joe Rosenthal, Alfred Stieglitz, etc.



Completing Eastman's Silver Gelatin workshops presented me with a high honor of joining about two dozen other souls in the world who know how to make Gelatin Dry Plates. Each workshop left us with a wealth of knowledge and resources to apply at home. It's up to each of us how far and deep we want to go. As I gain the time and experience to master the new emulsions, I will eventually experiment and tweak each formulation to expand the light wave lengths and ISO speed. Next year I plan to build both an emulsion lab and darkroom at home and use JF's newly restored Press like it was once used back in 1910.

JF's Journal – Post Discoveries

During my mother's funeral in 2009, I was given JF's journal from Debbie Paul, a cousin in Michigan. JF's journal lay dormant until I became the trustee of JF's Press. Within its several hundred handwritten 11x15 stained and tattered pages, JF meticulously detailed his daily life and events spanning from 1920 to 1927. The following are interesting references to his Press:

On June 3, 1925, he wrote:

"I have paid in \$20 or more of photo supplies. Have had my 11x14 camera repaired by John Brandt and having him make me a combined Portable-dark-room and packing case for my photo equipment.

I hope to do considerable View and Group work in this season. This work appeals to me for it is a continual change of scene and people and I feel freer than at any other business I have tried. I shall make a specialty of 5x7 groups.

Prices:

4 - 5x7 in slip in folder \$2.00; 4 remounted 5x7 - \$1.50; Postcards - 12 - \$1.50 12 in slip in folders \$2.00; 1 - 11X14 enlargement \$1.50 - 4 for \$5.00; These prices subject to change should I think best. Groups extra price."

On July 6, 1925, JF purchased a new 1925 Ford Model TT truck chassis for \$409 cash. Mr. Brant was commissioned again to turn his new TT into an RV camper/mobile photo studio/darkroom which he christened "ROVER." His plan was to take the new portable darkroom and take photographs with his 5x7 and 11x14 cameras along the way and sell them. The 5x7 was his work-horse.



Sun Oct. 12th, 1925 *"Traded 2 pairs of pants with John Staggs for 8x10 13-in focus Plantagraph Lense. It will be good for long focus groups on account of Perspective & I Think I can use it in my Press Graflex."*

Tue. Oct 14, 1925 *"...fitted my B&L Plantagraph Lense 13 focus to my Graflex, this I did by extending the front considerably. Tried it out in cloudy weather making a good negative in 1/10 the second stop U.S. 8 with focal Plane Shutter and Eastman Par Speed films.*

I am much pleased with this long focus lense as it gives better perspective and more pleasing effects than the shorter focus for both View and Portrait Work."

WEEGEE THE FAMOUS

Review by George Dunbar

While reading JF's notes, I discovered that he once owned a Bausch and Lomb 5x8 Series C Tessar lens, Serial No. 2631424. It appears he sold it in Chicago. (If any of our readers have this lens, please contact me at jefflyost@comcast.net.) I believe this is the missing lens to JF's Press.

It took the accumulated information above to fully realize that JF was an aspiring professional photographer during the late 1800s through the 1920s.

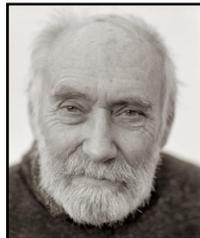
There is a lot left to read within JF's journal. His hand-written words have introduced me to a man whom I've never met, until recently, along with his camera. This story shares an incredible history of a Graflex camera that has acquired a new soul from the person and his images he left behind. It is simply profound how an old dusty box can change one's perspective, while opening the doors to an unbelievable journey that will last for the remainder of my life. ... to be continued.

Special Thanks to

Rick Davis, for the trust and the gift of JF's Press. My dear cousin, the late **William "Bill" Swanson**, for allowing me to archive the family photos. My dear brother, **John Lyle Yost**, for letting me have JF's Press, **John Franklin Yost**, for passing down his love of photography and his Press Graflex. **Todd Gustavson**, for sharing his time and extensive knowledge. **Mark Osterman** and **Nick Brandreth**, for their infectious passion, knowledge and inspiration to all who wish to learn about the historic photo processes. **George Eastman Museum**, for their foresight to preserve the history of photography and cinematography.

John Minnicks, for resurrecting JF's Press. (johnminnicks@gmail.com)

Vegar Moen (Sweden), for his encouragement to pursue JF's Press restoration. Vegar's favorite camera is a Press. He owns several, including a Home Portrait. His Press photos are stunning! (See Vegar's portrait of famous Swedish photographer, Gerry Johanson, at right.)



Ken Metcalf, for his unfettered passion and willingness to share his rich resources which fueled an unquenchable desire to start collecting several Graflex cameras and accessories in various formats. I'm sure my dear wife appreciates seeing the many packages appearing from eBay! We'll blame this all on Ken!

The collections at GEM are available to the public for research by appointment – times and contact information are listed on the GEM web site. Although with the current HVAC upgrade in progress, they are not taking appointments likely until mid-March, upon the completion of the project.

<https://www.eastman.org/research-appointments>



FLASH, The Making of Weegee The Famous by Christopher Bonanos, Henry Hold and Company, 2018.

I've just finished the new book, FLASH, The Making of Weegee The Famous by Christopher Bonanos and think it's a wonderful telling of the life and times of that famous NY photographer. As most will know, Weegee was well-known as a Speed Graphic user during his press photography days.

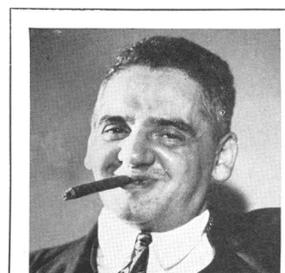
The author takes us to his beginnings in Ukraine, early life in the Jewish ghettos of NY, and, after his well-known adventures as a news hound, we're exposed to Weegee's relatively unknown career in Hollywood, his marriage, moviemaking, teaching/lecturing and writing/traveling. I was surprised to learn of his trip to Russia, for example, and his association with the Photo League and other publishers and galleries.

Many of us are familiar with Weegee's books, particularly the first in 1945, Naked City - an absolutely wonderful collection of his dark, subversive and humorous NY photos. Author Bonanos goes into great detail regarding many of the famous photos. Much is based on Weegee's own writings which are admittedly exaggerated, glorified and somewhat unbelievable. Bonanos, however, has included new research and interviews that tell more useful stories.



Although Weegee was mostly seen with a Speed Graphic in hand, the book mentions a few of his product promotions for other photographic equipment manufacturers. Personally, I remember Weegee in an ad for Burke & James cameras, so I found this line from the book quite amusing: "When an acquaintance once asked Weegee about the camera he carried that day instead of a Speed Graphic, he shrugged saying, 'Whoever pays me the most to use their camera, that's the one I use'."

FLASH is certainly a fine (and well-illustrated) biography of Weegee, but also a useful insight into the graphic, shocking, artful and mundane photographs for which he became "The Famous."



ARTHUR "WEEGEE" FELLIG

is an untidy, roly-poly little man with an amazing knack for turning up at fires, accidents and crimes almost before they happen. His dramatic ability to capture basic human emotions, his fascination with the seamy sides of New York life, and his ego, make him one of photography's famous characters.

From Graphic Graflex News, May 1947.

THE GRAFLEX SINGLE-LENS-REFLEX SUPER D

The last Graflex, an important milestone in camera history.

By Ken Metcalf

The single-lens-reflex Super D was the last in a long line of Graflex reflex cameras, starting with the original Graflex ca. 1902. As a testament to this camera, it is still a favorite of many fine arts photographers, as well as collectors and hobbyists. Also, the body has been repurposed with more modern lenses and modifications, as shown at right, courtesy John Minnick's.



The article draws on a previous article by Jim Chasse in the [GHQ](#) in 2001, where Jim tells about acquiring a very interesting Graflex 4x5 Super D. It was overhauled in 1967 with made-to-order extension tubes, allowing 1:1 images, with a 15-inch Tele-Optar lens mounted in a shutter.

Jim also wrote that "The Super D is an excellent picture-taker, and many of them were used in professional portrait studios, where the flash synchronization came in handy. I have used mine shooting landscapes, where it serves admirably." Among a large collection of Graflex and Graphic cameras, he has 9 Super Ds. As a collector and retired professional photographer, he has been invaluable in my research. Pictures of his cameras are used throughout this article.

THE CAMERAS*

3¼x4¼ and 4x5

Graflex sold two Super D models, 3¼x4¼" and 4x5". Although significant features were added to make it "super," the body of both cameras was the same as their predecessor, the Series D. Both came standard with a revolving Graflok back (and a revolving Graflok back was available for the 4x5), and the pre-war 3x4 focal plane shutter was the traditional shutter of 1/10-1/1,000. Accessories for the Series D could be used on the Super D, and with its smaller sibling, and both post-war cameras had a simplified shutter with only two tensions; "L" and "H," and a speed selection ranged from 1/30 to 1/1,000.¹

Automatic Diaphragm and open flash

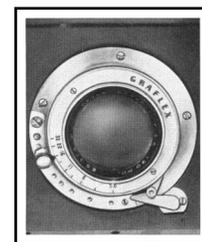
Auto Diaphragming (patent 2,269,401) and flash synchronization were ground-breaking features of the Super D, possibly first available in this camera. The advantages of the Automatic Diaphragm were set out in the 7th edition of [Graphic Graflex Photography](#) by Torkel Korling. "The automatic diaphragm control permits viewing and focusing with the lens wide open, closing it down automatically to a pre-selected aperture, while the mirror rises just before exposure. This is a highly desirable arrangement because it is most convenient to view and to focus with the camera lens at its largest aperture. The image of the photographed subject appears on the ground glass at its brightest, and, since at its largest aperture, the lens has the least depth of field, focusing is bound to be more critical and rapid. However, photographs are rarely taken with the camera lens wide open. When the picture is properly focused and composed on the ground glass, it is then necessary to stop down the lens. This is a simple enough operation, except that it takes your mind and your eyes off the ground glass at the very moment when both are needed there."

The open flash at 1/5-sec was also revolutionary and saved the photographer from the clumsy three-action of open shutter, activate flash, close shutter. The 1/5 exposure, though long by our current standards, permitted much less double or ghost exposure than the then existing methods where the shutter might be open for 1-2 seconds. And it allowed exposures determined by the flash time, including high speed exposures.

How Automatic Diaphragming works

The features of the camera are best described in the 1944 7th edition of [Graphic Graflex Photography](#): "The Automatic Diaphragm Control is the name given to an ingenious arrangement incorporated into the lens mount and linked with the release lever of the camera. It permits focusing with the lens wide open, and automatically stops the lens down to a pre-selected aperture as the exposure release lever is pressed. The synchronizing contacts, at drop-curtain setting of 'Slit 0' and 'Tension 1' may be used for open-flash photography with ordinary flash-lamps for 'still' subjects, with SM lamp for action subjects, and with the Kodatron Speedlite for ultra-speed photography.

The automatic diaphragm control is built around a special lens mount containing a coil spring mechanism to activate the diaphragm, and a collapsible rocker arm within the camera body [lazy tongs] controlled by the mirror release lever to activate the diaphragm at any extension of the bellows. The lens illustration shows the automatic diaphragm at full aperture, pre-set to closed down to f/16. The stop-pin (appearing at the left in the photograph) is set to the desired setting, and dropping the handle, moving it to the desired setting, and dropping the handle into the proper hole at that point. As may be seen from the illustration, it may be set to all standard stops from f/4.5 to f/32, and intermediate half-stops.



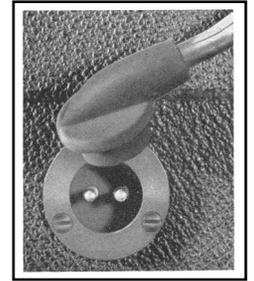
The diaphragm lever is then moved to the right until it is caught and held by the catch. Movement of the release lever on the camera is transmitted to the catch, which frees the diaphragm lever, permitting the diaphragm to close to the point pre-determined by the setting of the stop-pin.

The diaphragm release linkage operates only on lenses equipped with the automatic diaphragm control mount but does not interfere with the use of telephoto and other accessory lenses.



How open flash synchronization works

The circuit of the built-in focal-plane, open-flash synchronizing feature is closed by a silver spring contact on the mirror. In use, the curtain is set to 'O' and the tension at '1,' and the mirror is dropped into its viewing position. As the mirror rises, its contact closes the circuit, igniting the lamp just before the curtain begins to close, thus giving an 'open flash' exposure, the duration of which is determined by the flash lamp employed. Effectively, in the case of an SM lamp, this produces an instantaneous exposure of 1/200 second. The 2-cell Graflex battery case is used in connection with the 5-inch reflector, clamped to an attaching bracket on the right side of the camera. The connecting cord is inserted in the plug on the left side of the camera in the pre-war 3x4 camera, and its other end in the 'series' outlet at the rear of the battery case."



Lenses

LENS	BOARD	COMMENTS
6 $\frac{3}{8}$ " (162mm) Cooke f/2.9	A	Barrel mount. Early & short lived.
6 $\frac{3}{8}$ " (162mm) No. 32 Kodak Anastigmat f/4.5	A	Barrel, then Automatic Shutter, ca. 1942. Probably soft coated. ²
152mm (6") Kodak Ektar in Automatic Shutter f/4.5	A	Coated. Not replaced by an Optar lens.
190mm (7 $\frac{1}{2}$ ") Kodak Ektar in Automatic Shutter f/4.5	A B	Coated. Replaced by an Optar lens ca. 1952.
25cm (10") Graflex Tele-Optar f/5.6	A	Barrel mount. By at least 1948.
38cm (15") Graflex Tele-Optar f/5.6	B	Barrel mount. By at least 1948

A (3 $\frac{1}{4}$ " square for 3 $\frac{1}{4}$ x4 $\frac{1}{4}$), B (3 $\frac{3}{4}$ " square for 4x5).

Note: In the 1942 catalog, you could also order a B&L Tessar, Cooke Aviar or Dallmeyer Serrac in a barrel mount. According to Tim Holden, the minimum distance for the 25cm lens was 4.5 feet + ("okay for head & shoulder shots") and 8-10 feet for the 38cm lens.

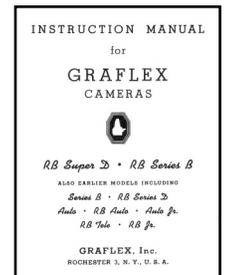
Although there was a series of sales brochures for the camera, starting in 1948, I have not found operating instructions, except for one issued in 1954 for several Graflex-style cameras.



In 1941 Graflex introduced its own flashing unit, and the 2-cell version was advertised for the Super D. In 1948 the Graflite Flash Unit was introduced. Literature suggests 2-cell battery cases were recommended for both 3 $\frac{1}{4}$ x4 $\frac{1}{4}$ and 4x5 as follows: Graflex Flashing Unit - 25FA with 5-inch reflector for bayonet base bulbs, and 27FA with a 7-inch reflector for medium base bulbs. Graflite Unit - 25 and 27 with the same specifications. According to Jim Chasse (photo at left), a one-cell extension may be necessary to fire some flash bulbs, and Thomas Evans learned they were recommended for extension flashes.

Since the "knob-winding" roll holder was not introduced for the Super D until 1950, either the leather-covered No. 51 or No. 53 regular or Model C (ca. 1934) holders were appropriate for earlier cameras.

"The Ektalite Field Lens, located under the ground glass, became available for the 4x5 and 3 $\frac{1}{4}$ x4 $\frac{1}{4}$ in August 1949. The Ektalite Field Lens provided a more brilliant image, corner to corner of the ground glass."³



3 $\frac{1}{4}$ x4 $\frac{1}{4}$

1941-1945**

According to the serial number book, a first batch of 200 cameras was scheduled for production in April 1941 (serial numbers 284433-284632), and a second and final batch of 300 in June 1941 (serial numbers 291759-292058); therefore, 500 of the pre-WWII versions were scheduled for production. The lensboard was 3 $\frac{1}{4}$ " square (labeled "A"), and the focal plane shutter was the traditional shutter of 1/10-1/1,000. Accessories for the Series D could be used on the Super D.

Although made-up examples have been found, Tim Holden, Graflex employee and historian, wrote: "The Graflok back was never offered [by Graflex] for the 3 $\frac{1}{4}$ x4 $\frac{1}{4}$ model, due to mirror problems."

As set out in the Graflex publication, Trade Notes:

September/October 1941. "Deliveries of the Super D Graflex with lens and automatic diaphragm delayed because of the unavailability of the automatic diaphragm with 6 $\frac{3}{8}$ " Kodak Anastigmat f/4.5 lens. The camera is expected to be

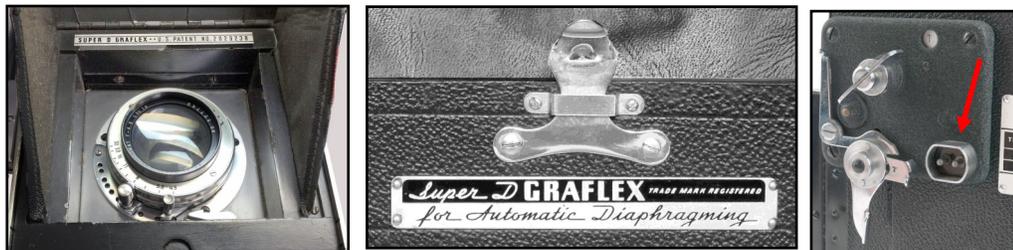
available with the lens in barrel only at first." [According to Graflex historian Tim Holden, the first lot was shipped with an f/2.9 Cooke 6 $\frac{3}{8}$ ", but the mirror must be down to close.]

February/March 1942 "Suggestion that the Super D Graflex cameras be ordered with the 6 $\frac{3}{8}$ " Kodak Anastigmat f/4.5 lens in barrel mount, or customer's lens sent in since lenses in automatic diaphragm mount appear to be unavailable for the future." According to Tim Holden, his notations are a little different...the first 17 were shipped in a standard barrel mount on December 5 and 6, and the first cameras shipped with an automatic diaphragm, January 8, 1942, were fitted with a 6 $\frac{3}{8}$ " No. 32 Kodak Anastigmat lens.

This pre-war model used a focusing and shutter release system, described in patent speak as "This invention relates to mirror and diaphragm release means for cameras of the reflex or reflecting type," namely "lazy tongs" (1936 Korling patent 2,029,238 and 1940 and 1942 Oscar Steiner patents 2,236,925 and 2,273,386, assigned to Graflex). As pictured, the "Automatic Diaphragm" is included in these patents.

The bellows capacity was 8 $\frac{1}{4}$ ", with a minimum focus of 6", with the closest working distance for the standard lens of 20".

An identification decal was placed above the lensboard under the lens door (left). Identification of this model is made more difficult because of the identification plate (center), which, while always found on the post-war version, was not always present on the pre-war version. It is missing from photos in Mr. Paine's book and Graphic Graflex Photography, but present on a sample camera, and removed from another sample. The best evidence is the flash sync outlet (right) which is always found on the curtain/mirror plate of the post-war model in both formats.



It appears the 190mm telephoto lens in automatic shutter was not available for this model.

Lacking pictures of use, or other information, our Graflex military camera expert Bruce Thomas (<http://graflex.coffsbiz.com/>) does not believe the 3 $\frac{1}{4}$ x4 $\frac{1}{4}$ camera was used by the military, possibly because the film size was not the widely used 4x5.

The first catalog listing was October 1942:

Model D GRAFLEX • Revolving Back

Including Film Pack Adapter and Indicated Lens in Barrel Mount				Super D 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$		Series D 4 x 5	
				Focal Length	Price	Focal Length	Price
With	Kodak	Anastigmat	f/4.5	6 $\frac{3}{8}$ "	\$160.00	7 $\frac{1}{2}$ "	\$178.15
With	B&L	Tessar	f/4.5	6 $\frac{7}{16}$ "	161.10	7 $\frac{1}{2}$ "	179.25
With	Cooke	Aviar	f/4.5	6"	193.25		
With	Dallmeyer	Serrac	f/4.5			7 $\frac{1}{2}$ "	**
With	Goerz	Dogmar	f/4.5	6 $\frac{1}{2}$ "	\$187.75		
With	Ross	Xpres	f/4.5	6"	191.00	7 $\frac{1}{4}$ "	**
With	Schneider	Xenar	f/4.5			7 $\frac{5}{8}$ "	\$194.25
With	Cooke	Pressic	f/3.5	6 $\frac{1}{4}$ "	234.25	7 $\frac{1}{2}$ "	273.25
With	Dallmeyer	Dalmac	f/3.5	6"	**	7 $\frac{1}{2}$ "	**
With	Ross	Xpres	f/3.5	6 $\frac{1}{2}$ "	241.25		
With	Schneider	Xenar	f/3.5	7 $\frac{1}{16}$ "	207.00	8 $\frac{1}{4}$ "	237.00#
With	Carl Zeiss	Tessar	f/3.5	6 $\frac{1}{2}$ "	257.75#		
With	Cooke	Anastigmat	f/2.9	6 $\frac{3}{8}$ "	216.75#		

Carrying Case, Black Grain-Leather	13.25	16.50
Carrying Case, De Luxe Tan Cowhide, for Camera, Holders, Flash Equipment and Accessories	26.00	26.00
Extra Lensboard	1.05	1.20

**Prices upon request.



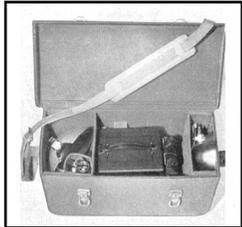
1947-1963

Approximately 4,000 of the updated post-war version were made from 1947 through 1948. According to Tim Holden, the new model was shipped November and December 1947 with flash speeds of 1/400 and 1/1,000 "horizontal and vertical." In February 1948, flash speeds were 1/200, 1/400, and 1/1,000. An Ektar lens was available late December 1947, with an Ektalite Field lens available in August 1949.

From Tim Holden's summary of Graflex Trade Notes: September/October 1947, "Announcement of availability of 3x4 RB Super D Graflex again. Outlined the changes made from the 1941 version, most important of which is the new simplified focal plane shutter with 8 speeds and flash synchronization at 1/1,000 and 1/800th [patent 2,304,035]. Additional (drop-curtain or 'O' at 'H' tension) speed of approximately 1/5 second could be used with electronic flash. The improved

shutter would permit high-speed synchronization with long-peak bulbs at 1/200, 1/400 and 1/1,000 second. The sync outlet was moved to the curtain aperture plate. Revolving back with new style slide lock moving inward at an angle (assuring correct fitting of all Graflex film and plate attachments of early or current design) and the use of a spline shaft instead of the lazy tongs device to trip the automatic diaphragm (This spline shaft was the type of mechanism in Folmer's original 1902 patent)." According to Jim Chasse, the Automatic Diaphragms for the pre-war and post-war models are not interchangeable, due to the difference in the trigger linkage. As a Graflok back was not made for this camera, Series D accessories continued to be used. "An identification nameplate in black and chrome was placed on the front of the camera. About 1948 the camera was further refined to include a choice of two Ektar lenses."¹

Because Graflex never made a Grafmatic film holder in the 3¼x4¼ size, accessories from the earlier Series D were compatible with this size Super D. Accessories should, however, show the Graflex, Inc. name to be authentic to the camera.



From the first catalog listing in 1942, a black grain-leather, and "De Luxe Top Grain Tan Cowhide Leather Carrying Case" were available,^{***} and from Trade Notes in December 1953: "Starting early in February, delivery will be made on a new Vulcanoid Carrying Case, which will accept the 4x5 R.B. Super D Graflex. This case has adequate storage space for complete Grafmate Flash equipment with 2- or 3-cell battery case, Grafmatic film holders, plus additional reflectors and flash lamps. All compartments to hold the camera, telephoto lens and other accessories, are well-lined to give adequate equipment protection. The case shell is made of the same durable heavy-duty Vulcanoid fiber used in the Graphic cases and is completely equipped with handles, lock, snaps, and shoulder strap."

The first two orders for the post-war Graflex Super D were entered in the serial number book on February 6, 1947: 1,500 for the 3¼x4¼, starting with serial number 414785, and 1,000 for the 4x5, starting with the serial number 416341.

4x5

1947-1957****

According to the serial number book, the first batch of 1,000 cameras was ordered in February 6, 1947 (serial numbers 416341-417339), and the last batch was ordered January 20, 1956, for a total scheduled for production of about 4,600 cameras.

The camera was first introduced to dealers in Trade Notes in April 1948. According to Bruce Thomas: "I have a 'Navy Training Courses, Photography Vol 1 1947' manual which mentions the Navy using 4x5 Series D and Super D cameras. The 4x5 Super D wasn't released until April '48, so maybe the Navy had some trial ones."

The bellows capacity was 12", with a minimum focus of 7", with the closest working distance with the standard lens of 19½". Like the smaller sibling, it had the same simplified shutter. An identification nameplate in black and chrome was placed on the front of the camera.

The simplified shutter for this format was the same as the 3x4, but "Because of the larger film area and larger curtain opening of the 4x5 model, in relation to the duration of peak of flash of the lamps, only the 1/1,000 instantaneous setting is synchronized on the 4x5 model. If the shutter is set at the 'drop curtain opening,' proper synchronization is afforded with short peak flashlamps and high-speed electronic flash units in the case of both sizes of the Super D."⁴

Backs

This size could be ordered with a Graflex- or one of two Graflok-style backs. Lacking any company pictures of the Graflok back on a Super D camera, in my opinion, samples suggest that an earlier version Graflok back was replaced by a version first used on the Pacemaker Speed Graphic, but later used (without holes for the peep sight or six mounting screw holes) on the Super D, possibly as the supply of the original model was depleted. This later back is present on a camera from the last batch of 60 cameras ordered in 1956. If readers have additional information, or theories on this or any other part of this article, please let me know.



COURTESY JIM CHASSE



COURTESY JIM CHASSE

Left to right, Graflex-style back, early Graflok-style, and late Graflok-style back.

4x5 Graflok back fitted to a 3¼x4¼ Super D, probably by Fred Lustig. Back protrudes on both sides.



Samples suggest there were many more Graflex-style backs than Graflok.

A special order Graflok back was available in late 1951 for \$45.45.⁴ From Trade Notes in February 1954: "Graflex can supply on a special-order basis a Revolving Graflok Back fitted to a new or customer's R. B. Super D Graflex Camera. The cost, \$34.09 net, \$45.45 list, is based on the salvaging of some of the parts of the original Revolving Graflok Back. The price, therefore, applies to a new camera or a customer's camera modified at one of our Service Departments. The Revolving Graflok Back would then allow the owner to use all of his Graphic attachments (except Polaroid Back) on the Super D Graflex as well as on his Graphic Cameras. This Revolving Back is *not* usable with the Graphic Cameras."

In 1955 the camera could be ordered with the Graflok back (LK-432, \$365, \$3,400 in present dollars), fitted with an Ektalite Field lens, a Graphic Film Pack Adapter and fitted with a 190mm Graflex Optar f/5.6 in an automatic diaphragm mount. By the last listing in 1957, the back was available as a special conversion only. "The conversion of a [revolving Graflex back] 4x5 Super D camera to a Graflok back required a precision manufactured spacer plate for the revolving back, for the back to be fitted, and to insure a sharp image on the Graflok focusing panel, as well as a sharp reflex image."³ Since there are no Service Departments left to do conversions, if the lens-to-film plane, and the lens-to-ground-glass are the same, there is no reason it could not be done by anyone.

"The 2¼" square imports had achieved sufficient popularity to impress any market analyst. Graflex designers responded with the versatile Graflok back, permitting the quick interchange of all types of film holders, including a 120-roll holder in either square or rectangular format. Graphics and Graflexes had now hopefully achieved the versatility to compete with the ever-increasing deluge from abroad. In retrospect, it would appear that the most significant historical contribution of Graflex, Inc was not a particular camera but rather the introduction of the Graflok back. This versatile design was not only applied to their own products but was made available as an option on cameras of both domestic and foreign origin."⁵ Notwithstanding Paine's views, as most Super Ds were made prior to the availability of the Graflok back, and the relatively high cost of conversion, it is hard to know how many were ordered or converted. Given the reduced production, thus interest, it is hard to know why the company engineered and marketed the back.

Accessories

From dealers and customers, the use of accessories for the Graflok back on a Super D caused confusion. Here is one explained from Trade Notes, September 1950 "For Graflok Backs...Graphic **Not** Graflex Film Accessories. Although Graflex film accessories can be physically attached to a Graflok back, there is no provision whatsoever for a light break at the right side of the attachment and, therefore, light can leak in. Furthermore, when the dark slide is withdrawn, there is the possibility of pulling the entire film receptacle out to the right. Graflok Backs accept only Graphic film accessories. Remember to check the film accessory being supplied." June-July 1952: "Graphic, Graflex Accessories Not Interchangeable, Our correspondence indicates there is still a lack of familiarity with the Graflok back, which accommodates Graphic film holders and other Graphic film accessories. It will not accept Graflex-back accessories, which may be used only on Graflex cameras or other models fitted with the Graflex back." Per Jim Chasse: For Grafmatic film holders, #1168 (Graflex back) for 4x5 Super D "4x5 Graflex," on the holder, and #1268 for the Graflok back "4x5 Graphic" on the holder. A #1234 Film Pack Adapter was used with the Graflok back, and #1284 Riteway holder for the Graflok back.



From Jim Chasse's collection, left to right: custom shutter mounted 15" Tele-Optar lens and custom extension tube; 4x5 Super D with 15" f/5.6 Tele-Optar, 15" f/5.6 Dallmeyer, and Tele-Optar as shown on left; catalog number 1168 "45" Graflex Grafmatic film holder on Graflex-style back and catalog number 1268 "45" Graphic-style Grafmatic film holder on Graflok-style back.

Conclusions

"END OF LINE JUNE 1957"⁵

What was their target market? In 1948 it was advertised as an "...unusually fine all-purpose camera for both professional and amateur use. Industrial and commercial photographers, explorers, scientists, police departments, hospitals, government bureaus, schools and colleges. In the press field, it is unsurpassed for sports and feature pictures." In 1950 the 4x5 was the "first choice for professionals," and the 3x4 was for "professionals and serious amateurs. It means a negative of adequate size and professional quality yet economy of film cost."

The Graflex Super D, the last Graflex from Rochester, in its two formats, brought the auto diaphragm to a production single-lens-reflex camera, saving the photographer from the challenges of reflex focusing with a stopped-down lens. The innovations in flash synchronization and open flash allowed a previously unavailable photographic flexibility, and the range of available lenses and introduction of the 4x5 format placed the camera squarely in the professional sphere.

The Super D was the state of the art for the time, at least as large format, reflecting (SLR) cameras are concerned. It was the last of the great (SLR's) Graflexes produced and something never to be seen again.

*As with other Graflex-sold products, the Super D was, according to the company in their book, Graphic Graflex Photography (7th edition), based on ideas given to them by Torkel Korling. "It was the superb excellence of Torkel Korling's striking photographs of children and pets, coupled with the interesting working model of his device, which fired the producers of Graflex cameras with enthusiasm to put their development and production facilities to work upon a final version of it. The automatic diaphragm available for the Super D Graflex is the result of this enthusiasm. While the new camera was being developed, Korling suggested that a flash-synchronizing circuit be incorporated as part of the Super D Graflex. To this end a socket and an electrical circuit with safety switches have been built into the camera."

**1945 was the last date this model was shown in a Graflex catalog, although sales by dealers of in-stock cameras may have continued.

*** "In addition to the foregoing it is well to note that the no. 4138 and No. 4148 Deluxe Tan Cowhide carrying cases for the Super D Graflex cameras accept the two-cell battery cases and 7-inch reflector, but that the three-cell battery cases are too long to be fitted into the carrying case compartment without being disassembled. Therefore, unless we receive specific instructions to the contrary, our Order Department will include the no. 2406, 27FA flashing units when flash equipment is ordered for Super D Graflex cameras."



Thomas Evans' cowhide and Vulcanoid cases.

**** In an odd 1945 memo, the 4x5 Super D name plate was mistakenly put on Series D cameras. As the first batch was not recorded until 1947, it is hard to believe there were also Super D cameras, but it is Graflex!

¹ Payne, Richard P., The All-American Cameras, A Review of Graflex; First printing 1981, Second printing 1985, A Photographer's Place, pp. 68, 77.

² http://www.bnphoto.org/bnphoto/KodakID_db.htm,

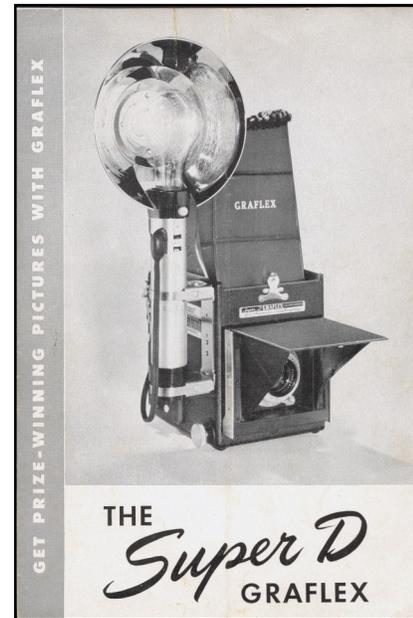
³ Inman, Bill, "The Graflex Graflok Back 1949-1973," Graflex Historic Quarterly, Volume 18 Issue 1 First Quarter 2013.

⁴ Graflex Inc., The New Super D Graflex, May 1948.

⁵ Notebooks made by Graflex employee Tim Holden.



Jim compares his Hasselblad to his 4x5 (at nearly 10lbs.) and 3 1/4 x 4 1/4 Super D cameras.



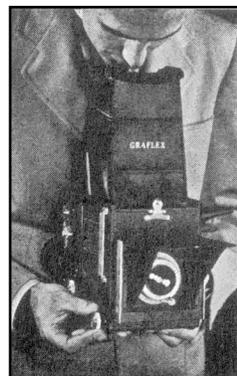
1948 sales brochure.

Having Fun?
YOU'LL HAVE MORE WITH A
GRAFLEX CAMERA!

There's a whole line of the finest cameras from which you can choose the one camera for you! Any one of the cameras in the great Graflex line will give you more picture-taking pleasure. They're so exact... have so many exclusive features that you're bound to get the kind of pictures you've always wanted! Ask your local dealer... or write Graflex, Inc., Room 25, Rochester 8, N. Y.

TIME'S SHORT!
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BIG NEW 1948
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62 PRIZES
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GRAFLEX
Prize-Winning Cameras.
Western Division, 3045 Wilshire Boulevard, Los Angeles, California



HOLDING THE GRAFLEX—
All Models

The shape of the Graflex and the position of its controls permit it to be held and operated comfortably and without strain.

Rest the camera in both hands, with the fingers under the front corners of the body. The thumb of the left hand falls naturally on the release lever, while the right thumb and the forefinger are in position to grasp the focusing knob. To steady the camera, hold it firmly against the chest.

Ted Mishima



The first image of the face-covered woman...

The 1942 Graflex RB Series D was purchased 4 years ago at a photography swap meet. I was drawn to the box-shaped camera, as I knew nothing about it. I was frankly more interested in the B&L lens that was attached to it. I had a friend who was a bit more knowledgeable look the camera over, and it was apparent to him the shutter was not operational. There was no movement in winding of the curtain. Asking price was \$35, and I was still on the fence. After about an hour, I finally decided to get it. Since it did not work, I was happy having it on display on a shelf.

Fast forward to the end of 2017, when I noticed a friend was posting images he had taken with his 1903 4x5 Graflex. I asked him how to operate the camera and showed him mine. I suddenly had great interest in getting mine going and started scouring online, finding as much information about these beasts as I could. I found the Graflex Group on Facebook and lurked and asked a few questions. John Minnicks saw my posts and gave me his number to talk about my camera. I told him what was going on with the camera. He suggested not to force anything, but just to work the spring and shutter. His thought was one of the openings on the curtain had gotten hung up. A few minutes later, the curtain adjuster turned. What was stuck became unstuck!

This is one of the first photos I took with the now working camera. (image with the face-covered woman)

Sadly, a week later, the curtain let loose at one of the openings. John Minnicks said he could possibly repair the torn curtain, but I opted to have a new one made. A long 3 weeks, and I have the camera back in my hands. New curtain and CLA. Everything moves like butter.

At the back end of a photo shoot I had, I wanted to do a quick test of the returned camera. I was able to take only 4 sheets, but made the best of it. (Botanical Angels)

I love the look of the 4x5 film and the B&L lens wide open. The ability to see up to exposure at this format seems surreal. I shoot digital as well, but true satisfaction comes when shooting analogue processes. I develop my own film and either make platinum palladium prints or scan and print on an Epson printer.



Randy Sweatt

All my pictures were shot on a 4x5 Graflex Series D, with a Kodak Anastigmat f/7.5 lens or a 190mm meniscus lens.

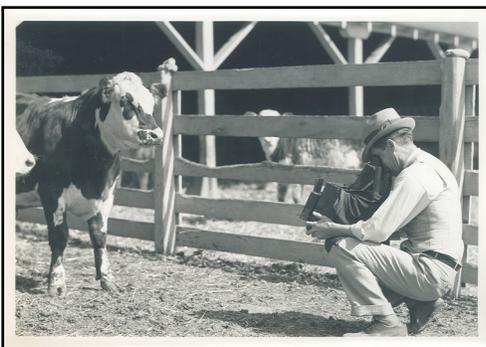
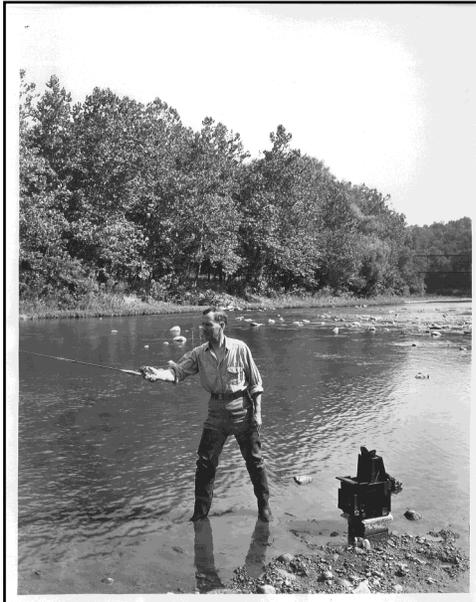


Graflex Journal

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Masthead from contributor George Dunbar. Two Canadian women war photographers at a medal ceremony at Buckingham Palace, London, taken by Esten for the Daily Herald newspaper on 13 February, 1945. The photographers are Leading Wren Jenny Whitehead of Winnipeg and Corporal Irene Lockwood of Saskatchewan. From web site

<https://collection.sciencemuseum.org.uk/objects/co8223716/two-women-war-photographers-with-graflex-cameras-gelatin-silver-print-photograph>



Above are pictures of photographer John Calvin (J.C.) Allen, with his Press Graflex. An article, "Rural Life Photographer," by his grandson Al Behnam was published in the first issue of the 2017 Graflex Journal. A soon to be published Purdue University Press book by Fred Whitford and Neal Harmeyer, which uses and references the Journal, states that J.C. was a spokesperson for Graflex.

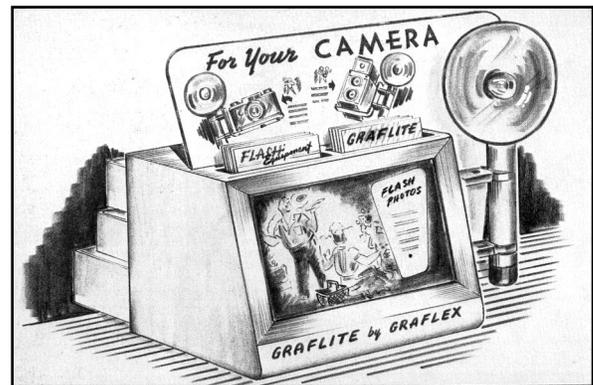
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Black and white by regular mail, \$3.50 per issue, billed annually, and payable to Ken Metcalf



In 1949 Graflex introduced a 13x13½" counter space Supply Cabinet, free to dealers. "To make the handling of these accessories [flash brackets] convenient and profitable to you, we have designed an attractive supply cabinet. This display illustrated above will be richly finished in limed oak and equipped with drawers containing a carefully proportioned assortment of cords, solenoids, and brackets. A handy chart on the back...tells at a glance the parts required to fit a Graflite unit to one of these cameras. A Graflite mounting plate attached to the side of the cabinet offers a convenient way to attractively display a Graflite flash unit. Containers at the top of this display make Graflite literature, telling the complete story, available to your customers. In order that the Supply Cabinet will always be 'in season,' you will be supplied throughout the year with new pictures to insert in the frame on the face of the display." A "free" fully-supplied cabinet was available for a minimum order of \$142.22.



Jim Maxon is selling the above cabinet (less flash). If interested, please get in touch with Jim at ccsmith@bresnan.net.