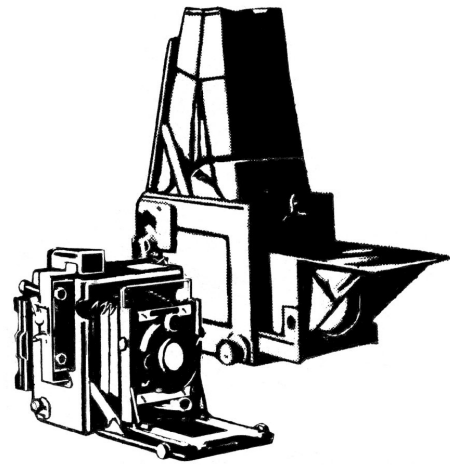


GRAFLEX HISTORIC QUARTERLY

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FEATURES

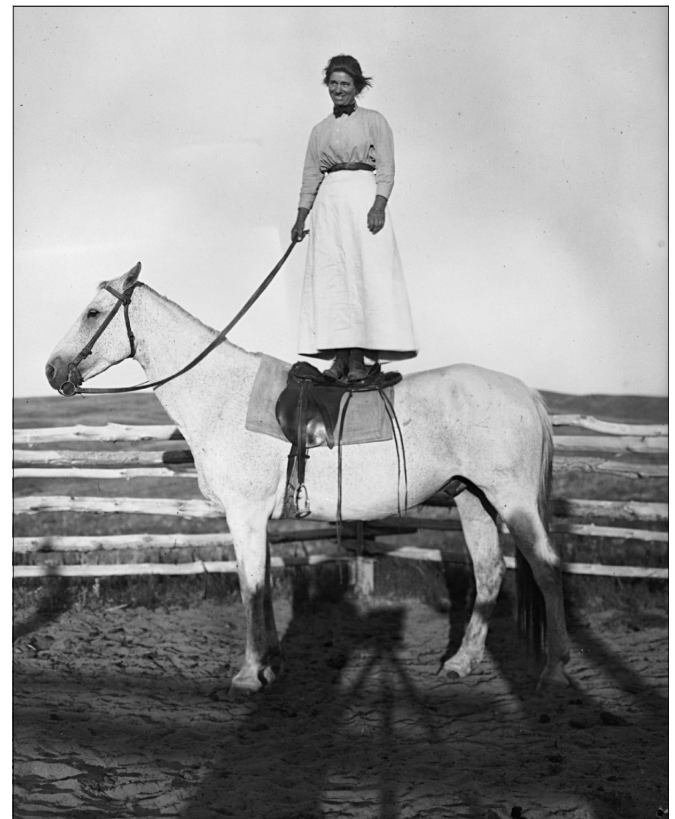
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**Evelyn Cameron
Montana Pioneer Photographer**

Based on a lead from Bob Lansdale, editor of the PHSC's Photographic Canadiana, and valuable help from filmmaker and author James Benton Kelly¹, along with substantial help from Lory Morrow, Photograph Archives Manager, and Kendra Derrer, Assistant Registrar, both of the Montana Historical Society², presented here are the story and images of a remarkable pioneer of eastern Montana....Evelyn Cameron.

Living in England, Evelyn and Ewen Cameron were married in the fall of 1889 and spent their honeymoon in Montana. Both were avid hunters and were lured to Montana by British magazines that boasted of the abundant wildlife, the ease of living on the plains, and the fiscal rewards of polo pony raising. The Camerons moved to Montana in 1893 and established the Eve Ranch near Terry to breed and train polo ponies. The horse breeding venture proved disastrous, however, as the ponies were difficult to transport--many dying on the boat to England. The animals that survived the trip were too wild for English riders who were not accustomed to "breaking" horses. Although Evelyn's family provided her with a modest annual allowance, the Camerons were unable to make a profit, and by 1897 were forced to abandon polo pony raising and find other sources of income. They took in wealthy boarders, whom they tried to convince to invest in the ranch, and Evelyn sold her garden produce and photographs.



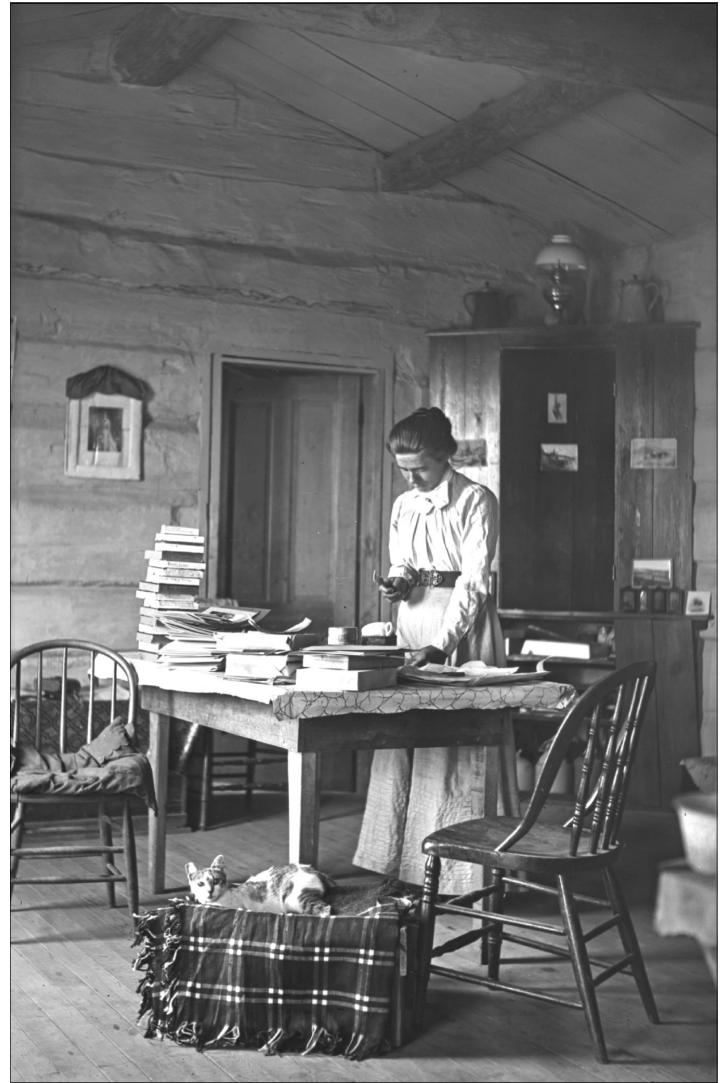
Mrs. Cameron holding reins and standing on Jim, a white horse, undated.



Ewen Cameron with goshawk perched on his glove, undated.

Evelyn Cameron, in addition to her work on the ranch, took a keen interest in photography. In 1894 she purchased her first camera³ and learned basic photographic techniques from one of her boarders. Photography served many purposes for Evelyn. It relieved some of the loneliness of living on the plains, provided much needed income, allowed her to work with Ewen on his wildlife studies, and provided an avenue for meeting and learning about her neighbors. Her photographs captured the experiences of men and women on the plains of Eastern Montana in starkly vivid and candid terms. Cowboys, women, ranchers, farmers, children, itinerant workers, sheep herders, and the stark landscape all found their way into her photos. Her work was carried in magazines throughout the country. She developed close friendships with their neighbors, the Williams family. Janet Williams became her dearest lifelong friend, to whom she bequeathed all her diaries, photos and belongings after her death.

In an early attempt to sell her prints, she posted a price list in the local post office, offering prints for \$3.00 per dozen, \$1.75 per half-dozen, and 25-cents each (but not to exceed four). Lacking a studio, Evelyn often traveled to the subject's home or ranch, sometimes staying overnight. She made contact prints on "printing-out-paper," which she gave to the subjects, soliciting finished prints. In *Photographing Montana 1894-1928*, Donna M. Lucy described Mrs. Cameron's process for making a print: "Evelyn did not have the equipment necessary to enlarge photographs, so she made contact prints....by laying the glass-plate negative over a sheet of sensitized 'printing-out-paper' in a wooden frame of her own construction that ensured tight, even contact. Having developed the print by leaving it in the sunlight until the image formed on the paper, she washed and 'toned' it in gold chloride, which protected it from fading and gave it a beautiful hue, ranging from a warm sepia to a maroon color. She then fixed the print in a chemical solution that made the image insensitive to further exposure by light, washed it thoroughly in water, and let it dry. As a finishing touch, she burnished her prints to a high gloss and pasted them onto cardboard mounts."⁴



Evelyn Cameron working on photographs in her living room, circa 1906. Cat "sleeping" nearby.

Following her husband's death in 1915, Evelyn, contrary to the requests of her family, returned to Fallon, Montana to run the ranch by herself. She continued her photography for the remainder of her life. She died in 1928 following an operation for appendicitis. She was buried in Terry, Montana.

Tourist Graflex

After using and repairing her Kodet for ten years, Evelyn decided to purchase one of the newly introduced single-lens reflex cameras. "By late summer of 1905 when she finally bought her new camera, she opted for the Graflex, manufactured by Folmer & Schwing. The most advanced single-lens reflex camera of its day, it was the camera of choice for photojournalists. Evelyn's Graflex....was designated for 5"x7" plates or film and had a focal-plane shutter speed as fast as 1/1000th of a second. Its lens was a German-made Goerz. Simple and versatile, the Graflex suited her needs perfectly, and it was her primary camera during the rest of her photographic career."⁵

Her choice of the Tourist model is interesting, as she was able to get most of the features of the standard Graflex at a reduced price. The Tourist's list price was \$167.50, while the standard-back Graflex sold for \$240.50. As no catalog has so far been found for 1905, and neither camera is shown in 1906, Mrs. Cameron may have been able to purchase her camera at a good discount. Several pictures have been taken of this camera by the museum. The catalog record shows the camera with the front lens housing cover and a Volute shutter. The photograph taken recently shows the camera without the front shutter and without the front lens housing cover. A second catalog number led to a picture of the front shutter cover and the Volute shutter. Given Mrs. Cameron's penchant for updating her equipment, it is reasonable to think that at some point, she left the focal plane shutter open and used the Volute shutter. Because of the bulk of the shutter, she probably removed the front cover for better access to the lens.

References:

¹ A former Helena, Montana, resident, Kelly's great-grandmother, Florence Van Voast, was one of Montana's earliest female professional photographers, a contemporary of Evelyn Cameron, whose studio on Main Street in Townsend flourished from 1900 until her death in 1915. Years later her son destroyed all of her glass plates, negatives and most of her remaining prints because they were taking up too much room in his basement. Some of her DNA, Kelly would like to think, still remains with him.

² The Montana Historical Society (<http://mhs.mt.gov>) provides a rich source of online and written material about the history of Montana. Here is a link to get you started. <http://mhs.mt.gov/research/library/onlinecatalogs.asp>. Further searches in this catalog for the Cameron papers are identified as: Author: Cameron, Evelyn, 1868-1928. Title: Evelyn J. Cameron and Ewen S. Cameron papers, 1893-1929. MT-HIST CALL NUMBER - MC 226. Also, in this catalog is an abbreviated biography of Mrs. Cameron.

³ There is no record of her first camera, but in 1895 she purchased a Kodak No. 5 Kodet, which was similar to the Cycle Graphic F Folmer & Schwing was soon to manufacture. Although the Kodet was sold with a roll holder, Evelyn opted for 5x7 glass plates, which she preferred and used until she purchased a roll film 3.A. Graflex in 1913. The Kodet was priced between \$30 to \$48, depending on the model and lens choice.

⁴ Photographing Montana 1894-1928 by Donna M. Lucey, 1991, Alfred Knopf, p. 177. This book presents a comprehensive review of pioneer days in Montana and the life and work of Mrs. Cameron. It is especially good at describing the process of taking, printing and selling her prints. An attempt to tell the Cameron story is limited by this article and the number of pages and the size of the images. This can be overcome by viewing images at the Montana Historical Society website and by purchase of Ms. Lucey's large format book.

⁵ *Ibid*, p. 179.

Insert:

All photographs in the article and insert are provided by the Montana Historical Society Research Center Photograph Archives, Helena, Montana, and photos may not be re-used without written permission of the MHS Photograph Archives.

Due to the page size of the Quarterly, photographs are presented in a size that does not adequately represent the quality of the 5x7-inch glass plates. This can be somewhat helped by viewing the photos in an enlarged size on the computer screen.

In order to allow for the largest print size, captions are presented here.

Page 1, from top:

Buckley [sisters] roping in corral, April 9, 1914.

Montana sheep owner Nels Udem with his flock of sheep at Curious Butte, February 1905.

Italian railroad workers preparing the Milwaukee line, 1910.

Claude McCracken with XIT chuck wagon [also] Cedar Creek, September 1910.

Page 2, from top:

At the sheep camp of State Senator Kenneth McLean; boxing match within hand-held rope fighting ring. Summer 1905.

Fourth of July near Fallon, Montana. July 4, 1908.

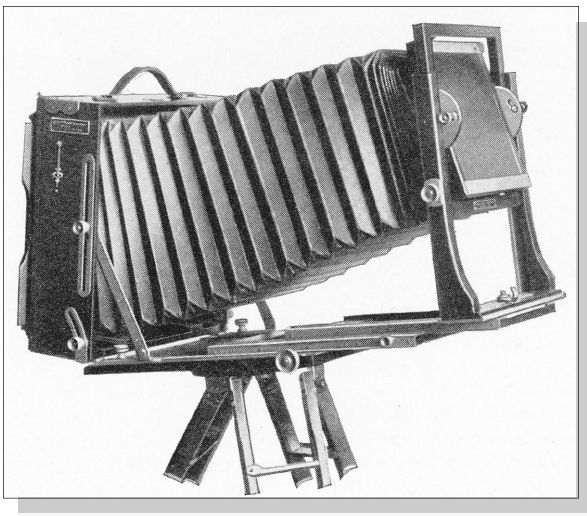
A Wigtonshire shepherd, Terry, Montana. Andy McMillon's wool, circa 1906.



The Cameron Gallery beautifully presents a wide selection of over 90 of Evelyn's photographs and personal belongings. It is located in eastern Montana along the Yellowstone River in a town named for General Alfred H. Terry, a man deeply involved with the U.S. military campaign against the Indians. Terry, with others, failed to force the Sioux to sell the Black Hills, setting off a terrible chain of events: loss of freedom for the Northern Plains Indians and the worst defeat ever suffered by the U.S. Army in the Battle of the Little Big Horn . . . Terry arrived at the battlefield just after the fighting ended and was the first to discover the bodies of Custer and his men. Later he would negotiate the Treaty of Fort Laramie with Red Cloud but would be unsuccessful in getting Sitting Bull to leave Canada and return to the reservation. During the Nez Percé War, he sent reinforcements to intercept Chief Joseph, as he and his people, after a struggle of thirteen hundred miles, were about to cross into Canada. West of Terry, one hundred and eighty miles, is the Custer Battlefield; thirty-five miles north is the location of the battle between General Miles and Sitting Bull.

People from around the world visit the Cameron Gallery. Next door the Prairie County Museum has thousands of old photographs and a number of impressive rooms richly filled with artifacts used on the Western Frontier.

By JBK



The Century Universal

By Thomas Evans

The 8x10-inch Century Universal camera was an exceptionally light and versatile view camera in what was the predominantly standard format of the time.

Charles H. Roth, assignor to the Folmer Graflex Corporation, applied for a patent on the day the camera went into production, February 5, 1929, and U.S. Patent 1,804,061 was granted two years later, on May 5, 1931. In the application, Mr. Roth wrote: "A camera to be of maximum usefulness in commercial photography must be capable of being adjusted to a great variety of different positions so that it may be properly focused to make photographs of objects having peculiar shapes or placed in unusual positions. It is sometimes necessary to tilt either the camera body or camera front or both, or to turn the body or front sideways, in addition, of course, to moving the body and front back and forth relative to each other for focusing of the more usual type. According to the present invention, novel connections are provided between the body and the base so that the body is capable of the necessary great variety of movements. In fact, the connection between the body and the base is of such a flexible character that the body may be said to have a universal movement relative to the base." This statement suggests why the camera was named the Century Universal.

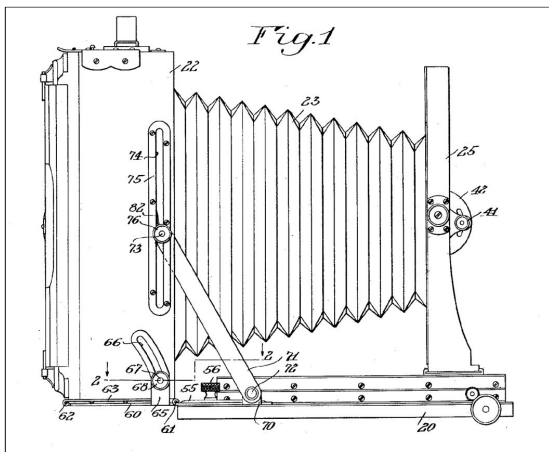


Figure 1 is a side elevation constructed in accordance with a preferred embodiment of the invention, shown in what might be termed its normal or usual open position. From patent.

According to the Folmer & Schwing-Graflex serial number book, 1,005 Century Universal cameras were manufactured between 1929 and sometime in 1940. Besides having view camera movements useful for perspective control, the Century Universal could be very useful for architectural photography by accepting wide-angle lenses without the need of special bellows. The bellows were constructed to "nest" and fold down to a 2¼-inch distance from ground glass to lensboard. The long bellows extension allowed the use of very long telephoto lenses, as well as allowing macro photography and document copying with normal lenses.

The 1932 Folmer Graflex Professional and Commercial Photographic Apparatus catalog described it as "...a thoroughly practical unit...equipped with every conceivable adjustment to satisfy the most exacting demands in the commercial, industrial and scientific fields." The catalog goes on to state: "The Century Universal combines the widest latitude of adjustments (making it the most flexible and most readily adaptable camera now available) with substantial construction. Yet, withal, it is readily portable, weighing but 9¾ pounds and measuring but 4½ x 11½ x 11¾ inches when folded. It is constructed from selected cherry, stained a deep rich tone. Metal parts are of duraluminum and brass in gray Duco finish." In 1932 the camera with one film holder sold for \$85.00.

By comparison, the 8x10 Eastman Kodak view camera 2D weighed 11¼ pounds and measured 14-7/8 x 13 x 15¾ inches. The 8x10 V8 Deardorff view camera weighed 12¾ pounds and was mid-sized between the Universal and the 2D at 12¼ x 14 x 4¾ inches. Incidentally, Laban F. Deardorff worked as a camera designer and repairman for the Rochester Camera Company from the 1890s until about 1920, when he moved to Chicago. He and his two sons began to make their own cameras in 1923. By the time the Century Universal was offered in 1929, there were 175 Deardorff cameras in the world.

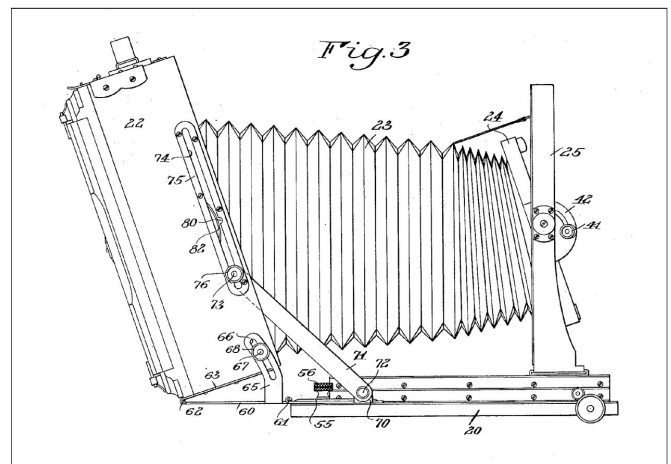


Figure 3 is a view similar to Figure 1, but illustrating the parts of the camera adjusted to a different position.

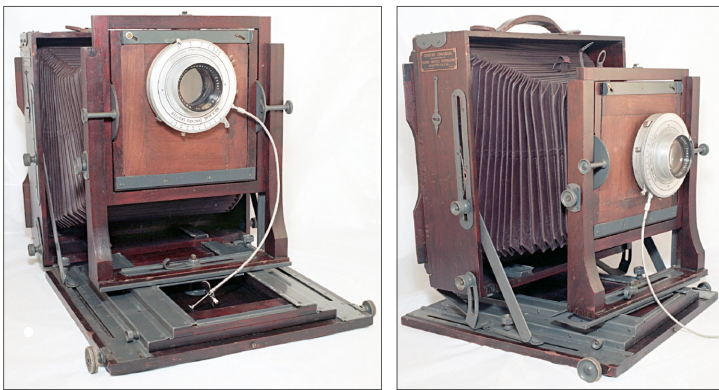
The design of the triple-extension bed, with a bellows draw of 30 inches, seems to have been derived from the early Century Camera Company field cameras. The bed was made up of three "sections bound with duraluminum, closely fitted to assure rigidity and to minimize wear." The body could be tilted at any angle to the camera bed and secured in place with knurled knobs that

locked the struts to the bed, reminiscent of the Cycle Graphic. The front standard, also reinforced with closely-fitted duraluminum, had the usual rise (a generous 3¼", controlled by rack and pinion) but could also be shifted 2 inches laterally left or right. The front could be swung horizontally through an arc of 80 degrees by loosening the front standard lock, adjusting and locking in place, not unlike the movements of the Graphic View that would appear in 1946. The lens panel could be tilted through an arc of 60 degrees on the lens axis.



The lens could be tilted through an arc of 60 degrees.

The lens panel accepted the common 6x6 lensboard, which could easily accommodate large-aperture lenses. The lensboard could be installed in any orientation and was available with an offset hole, to facilitate additional rise or shift.



A reversible, offset lensboard facilitated the use of additional movements.

Perhaps the most interesting design innovation was how the Century Universal achieved its rear tilts and swings. The body of the camera is attached to the bed by two long, double-jointed hinges, articulated at the bed and at the rear of the body. This allows the body to be lifted up from the bed (rear rise) and tilted forward up to 30 degrees. This tilt is in addition to being able to tilt back up to 60 degrees and forward up to 90 degrees (as in closing the camera) by a different adjustment. These two long hinges are attached to the bed by two knurled knobs that also serve as pivot points, allowing the body to swing horizontally in relation to the bed. Front and rear swings could be combined to increase horizontal shift.

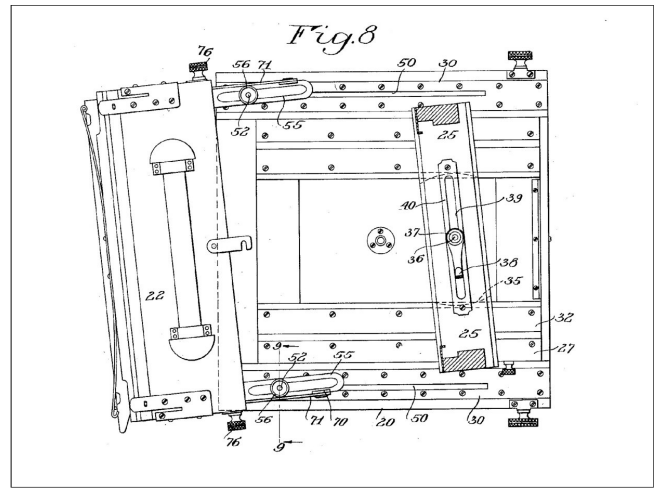


Figure 8 is a patent illustration of the camera, with parts omitted and parts in horizontal section.

The body of the camera could be raised and slid forward (8½ inches) over the bed, in effect shortening the bed so that a wide-angle lens would not include the bed's front edge in the view.

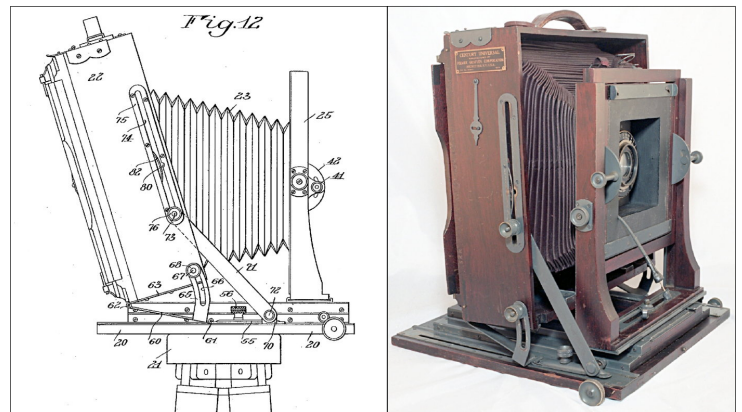


Figure 12 is a side elevation similar to Figures 1 and 3, adjusted to another position.

These design elements resulted in extremely versatile movements that could be securely locked down. The bed was equipped with three tripod sockets to facilitate balancing the camera on the tripod according to how the camera was configured. The 8x10 and 5x7 backs were made to be reversible, and in fact were interchangeable with the backs on Century Studio cameras.

During the 1930s, the Century Universal won acclaim from many notable photographers. In his *Daybooks*, Edward Weston said that it was the finest camera ever made. In his April 14, 1932, entry, he wrote: "My 8x10 camera has gone on to Chandler; it served me well for ten years, all through Mexico, my finest period here in Carmel, --- a friend, through which I have seen and recorded many a fine negative. But I did not feel sentimental over the parting, --- like saying farewell to an old love, one knows that a new one will come to compensate. And I have already ordered a new camera, the finest made, a Century Universal, Folmer-Schwing. I think I have deserved it." This was the camera Weston used for his 1937 Guggenheim Fellowship that allowed him to travel around California and the West for several years creating photographs. From April 1937 to April 1938, he made 1,200 8x10 negatives with his Century Universal in conditions ranging from the searing heat of Death Valley to the foggy coasts.

Much has been said about the differing advantages of using a view camera versus a single-lens reflex. Usually contrasted are the portability and quickness of use of the smaller cameras and the ability to correct apparent distortion, adjust focal planes and the slowing-down of the photographic process that allows careful consideration of the image when using a view camera. Interestingly, Weston noted another difference between such cameras in his Daybooks (October 6, 1924). He had underexposed some portraits taken with his 3¼ x 4¼ Graflex because he had not noticed that the light had diminished. This caused him to realize that when he used a stand camera with a squeeze-bulb operated shutter, he unconsciously compensated for changes in the light by squeezing the bulb a little more or less, while the Graflex had a mechanically timed shutter that required conscious adjustment for changes in light.

The Century Universal was Ansel Adams' first 8x10 camera, which he used to make many of his wonderful images during the 1930s, such as his iconic photographs of the High Sierra and the famous image of the San Francisco Golden Gate before there was a Golden Gate Bridge. In Examples, The Making of 40 Photographs, discussing the 1932 photograph of the Golden Gate, he wrote, "I had recently acquired my first 8x10 view camera, which replaced my 6½ x 8½-inch Korona View. The handsome smaller format is now of the past, although, as a logical size between 4x5 and 8x10 formats, it had a particular appeal. But 8x10 was 'in,' and I could not exist without one (so I thought), especially for professional work." His autobiography contains, on page 223, a 1936 self-portrait in which he appears to be gazing affectionately at his Century Universal, and, on pages 244 and 245, are photographs of Edward Weston setting up his own Universal, taken during a trip they made together to Lake Tenaya in 1937.

Berenice Abbott made many of her most memorable images with her Century Universal, including the images of New York City in the 1930s. After her return from Paris, where she was instrumental in bringing Eugene Atget's photographs of that city to public awareness, she conceived the idea of photographing New York City, and, with the support of the Museum of the City of New York, she made hundreds of photographs, "Amid traffic, haste, vibration, crowds, confusion, she set up her 8x10 camera, composed the image on the ground glass, focused it, calculated exposure, and [took] the picture.... they are the work of a master artist who is a master craftsman as well." In her 1941 book, A Guide to Better Photography, she addressed the view camera versus SLR question by recommending beginning photography with a ground glass camera, preferably a view camera because it has features not found in other ground glass cameras, such as swings and the rising and falling front, that make it possible to correct distortion and preserve depth-of-field. She advised the beginner against starting with a miniature camera, because: "The perfect negatives needed to produce gratifying pictures from miniature films require that the photographer thoroughly understand lenses, exposure, problems of focusing, processing. This basic knowledge he will acquire more easily and better on a larger camera." For Berenice Abbott, the adjustments that a camera was capable of were the true measure of its usefulness.

With all of this going for it, why was the production run just eleven short years? The V8 Deardorff mentioned above remained in production until 1988, and Deardorff has recently started making a limited number of the V8 again. The Great De-

pression may have had something to do with the low numbers made and sold. One accessory that was made available for the camera was a pair of telescoping braces that could be fastened between the body and the front standard, which indicated that there must have been a problem with instability. It seems likely that in the attempt to minimize weight and bulk, the designers made a camera that lacked sufficient stability, or at least sufficient inertia. Edward Weston noted in a Camera Craft Magazine article (February 1939) that the Universal was not rigid at long extensions in the windy conditions of Death Valley. He wrote (or perhaps, Charis Weston wrote): "The problem of camera rigidity was not so easily solved. I have yet to find a view camera with a really ridged front, and mine, on windy days with bellows fully extended (32 inches), performed as though afflicted with St. Vitus dance.... Finally I solved this problem by having a brace made which fits on the camera above the bellows, one end attached at the back of the camera, and the other at the top of the front board. It is a telescoping rod which can be loosened when focusing and tightened at the desired bellows extension. This makes the front perfectly ridged and also provides a handy support for sagging bellows."

Along these lines, Ansel Adams wrote (again from Examples) "... the monorail cameras of the present are far more precise and sturdy than the wooden assemblies of my youth. Unless properly supported, the elderly bellows would sag and vignette the image. The bellows would also develop pinholes; with old cameras constant checking was important.... the ground glass panel might develop weakened springs, and it was very important that the film holders were securely seated..."

The designs of cameras change in response to the needs of photographers.

The camera that I looked at, which dates from about 1935, does have some wobble in the front standard, but a Deardorff V8 of the same age has about the same amount of wobble. The Deardorff bellows is made of a somewhat stiffer material than the Universal bellows, and this could contribute some additional resistance to wind, but not much. It is likely that the Deardorff bellows is somewhat more resistant to development of pinholes. After 77 years, the Century Universal I looked at is complete, and the wooden and duraluminum joints are sound and operating as designed, the bellows are quite good, and the camera is still eminently useable. The range of view camera movements far exceeds the covering power of my old lenses. Mr. Roth designed an elegant and highly capable camera, and the Folmer Graflex Corporation employed great craftsmanship in producing it. The dark finish and gray hardware make a handsome camera, without any hint of flashiness or "bling"—it was clearly designed to be a serious, professional workhorse.

I suspect that it was the low number of sales during the Great Depression (less than 100 cameras per year on average), combined with the need to concentrate production on Speed Graphics and aero-cameras and other specialized cameras for the military during World War Two, that caused the Century Universal to be discontinued, along with several other models.

References:

Abbott, Berenice, 1939, Changing New York, E. P. Dutton & Company, Inc., New York, Republished in 1973 as New York in the Thirties, Dover Publications, Inc. N.Y., N.Y.

Abbott, Berenice, 1941, [A Guide to Better Photography](#), Crown Publishers, N.Y., N.Y.

Adams, Ansel, 1935, [Making a Photograph](#), The Studio Publications Inc., N.Y., N.Y.

Adams, Ansel, 1983, [Examples: The Making of 40 Photographs](#), Little, Brown and Company, N.Y., N.Y.

Adams, Ansel, with Mary Street Alinder, 1985, [Ansel Adams An Autobiography](#), Little, Brown and Company, Boston.

Eastman Kodak Company, 1930, [Eastman Professional Photographic Apparatus](#), Eastman Kodak Company, Rochester, N.Y.

Folmer Graflex Corporation, 1932, [Folmer Graflex Professional and Commercial Photographic Apparatus and Sundries](#), Folmer Graflex Corporation, Rochester, N.Y. pp. 22-25.

Roth, Charles H., U.S. patent 1,804,061, May 5, 1931. http://www.google.com/patents?id=OPtIAAAAEBAJ&printsec=frontcover&dq=1804061&hl=en&sa=X&ei=ngq5T_XRE9HZiALwmlHIBg&sqi=2&ved=0CDQQ6AEwAA.

Weston, Edward, 1939, "Photographing California," [Camera Craft Magazine](#), Vol. XLVI, No. 2 (February), Camera Craft Publishing Company, San Francisco. pp 56-64.

Weston, Edward, Nancy Newhall, ed. 1961. [The Daybooks of Edward Weston](#): Vol. 2, California, Horizon Press, New York, in collaboration with The George Eastman House, Rochester, N.Y.

Yates, Sean, Accessed 2012, Century Universal: A Review, Large Format Photography. http://www.largeformatphotography.info/century/century_universal_8x10.html.

Speed Graphic Cameras in the U.S. Marine Corps During WWII, Revisited

Part III

Copyrighted by Theo Servetas

In Parts I and II, I covered the Marine Corps Photographic Services and equipment likely encountered by Marine photographers. Many of these cameras will be featured in my upcoming book, tentatively titled - [War Paint: A Pictorial History of the 4th Marine Division During WWII](#). Most of the images shown in the book were taken with Speed Graphic cameras, and the book focuses on those combat photographers and artists who made it happen.

In the preceding article, I featured the Marines of the Photographic Section of the 20th Engineer Battalion, 4th Marine Division while on the Marshall Islands, and specifically how they toiled to build a darkroom, which later served as an air raid shelter during a horrific air raid. Subsequently, the 4th Division returned to Maui Island and soon headed for the Mariana Islands and invaded Saipan. Once again, the 20th Engineer's own Photo Section, armed with their rifles and Speed Graphic cameras, were on hand to record the action and devastation.

I will never forget a story that Bill Gallo of the [New York Daily News](#) told me in the summer of 2010. (Bill Gallo served in the Marine Corps with Theo Hios in all the campaigns with the 4th Marine Division.) While on Saipan, Bill Gallo recalled his company of Engineers coming under fire from a Japanese sniper. While other Marines were taking cover and returning fire, Bill Gallo was taking sight of the enemy with his rifle and saw Theo Hios sticking his own head out in harm's way with his Anniversary Speed Graphic --- trying to get a "shot" of the enemy. At age 88, Bill Gallo laughed out loud at the thought: "Imagine, most Marines were shooting with their rifles, but Theo Hios was shooting with his camera!"

Theo Hios had recounted to me another tale: He arrived on the scene of some Sherman tanks firing their 75mm cannons at a Japanese block house. Hios settled in behind a low lying fieldstone wall and began to take photographs of the block house barely fifty feet in front of him, when all of a sudden, the block house exploded. Concrete debris the size of automobiles flew everywhere. Many Marines were dodging the falling debris. The blast plume rose more than a thousand feet and was photographed by Marines offshore. One of the Sherman tanks was flipped upside down. Theo Hios' helmet saved his life, although a piece of debris left a good size dent in it. When the blast settled, about forty Marines were found dead or seriously wounded. Sgt. Hios' commander did not believe he could have survived the blast being so close, but Hios did prove he was there – his Speed Graphic yielded the last photograph of the blockhouse taken seconds before the stockpile of Japanese munitions had exploded.

Combat photographer Sgt. Theo Hios was awarded the Bronze Star for his service on Saipan and Tinian in the Mariana Islands, in 1944, shooting with an Anniversary Speed Graphic. Here is the official writup of his award:

“UNITED STATES MARINE CORPS HEADQUARTERS
FLEET MARINE FORCE, PACIFIC
c/o FLEET POST OFFICE, SAN FRANCISCO

In the name of the President of the United States, the Commanding General, Fleet Marine Force, Pacific, takes pleasure in awarding the
BRONZE STAR MEDAL to
SERGEANT THEODORE P. HIOS
UNITED STATES MARINE CORPS RESERVE

For service as set forth in the following CITATION:

“For meritorious and heroic achievement in action against the enemy on SAIPAN and TINIAN, MARIANAS ISLANDS, from 15 June to 1 August, 1944 as a combat photographer with an engineer regiment. With complete disregard for his own safety, Sergeant HIOS was continually in the front lines photographing combat engineer missions. On numerous occasions he accompanied demolitions and flame thrower teams to the objectives they were attacking in order to get close-up action photographs. During the reduction of one enemy strong-point, Sergeant HIOS fearlessly ran into the area just as engineers set off a heavy demolition charge and while the infantry and tanks were in readiness to destroy the remnants of the garrison of about sixty (60) enemy. Through this fearless action he obtained valuable photographs showing in detail the panic and destruction created by a well-coordinated assault. His unusual ability, initiative, tireless energy and courage were in keeping with the highest traditions of the United States Naval Service.

H.M. SMITH,

Lieutenant General,

U.S. Marine Corps.”

(From the Marine Corps Service Record of Theo Hios)



Figure 1: "Sgt Theo Hios awarded the Bronze Star, Camp Maui, fall, 1944. Kodachrome image (Marine Corps photograph).



Figure 2: A recreation of Sgt. Theo Hios' Speed Graphic camera. Based on evidence presented in my previous article, I was able to reconstruct this facsimile of the Anniversary Speed Graphic issued to Sgt. Hios, ca. 1943. The camera has all the correct features – 4x5 Format, 127mm Ektar lens in a Kodak No. 3 Supermatic shutter on a wood “C” lensboard. Wartime manufactured cameras also made less use of chrome plated parts, as this one is mostly black, except for the lens/shutter and Kalart rangefinder. A Graflex solenoid is mounted to the left of the shutter. Although obscured by the 5" reflector on the Graflex flash, the data plate on this camera is located to the left side bottom, near the rear shutter cocking knob. Just to the right of the camera is a Weston Master Model 715 Universal Exposure Meter. The tan canvas musette bag is actually an original piece of equipment issued to Theo Hios (His name, rank and unit number are all stenciled on it.). This was the carryall bag that he took in all the invasions with the 4th Marines in the Pacific (Roi-Namur, Saipan-Tinian and Iwo Jima). In addition to hauling his Speed Graphic, he also carried his artist sketch pads, brushes, pens, paints, etc. To the extreme left is his original steel pot helmet, and the knife near the center is his “Ka-Bar” USMC issue combat knife. (Author's Collection)

Figure 3: A closeup of my reconstruction of Theo Hios' camera, based on photos of him with his camera: Graflex 3 cell flash mounting a 5" reflector which mounts on the exterior of the Kalart Synchronized Rangefinder. The camera is an all-black wartime model, serial number 337346, probably made around 1943-1944. The lensboard slide bar does not bear the “Speed Graphic” logo. The black wood “C” board is fitted with a No. 2 Supermatic shutter with a Kodak Ektar lens, serial number EA4061. “EA” is the Kodak code for 1942. The solenoid mounted to the left of the lens is a Graflex #3. The back is the 4x5 spring-loaded Graphic back which can take the 12 shot film packs or 2 sided plates. (Author's Collection)



Figure 4: Army Air Corp Contract camera set – While taking his Photo Lithography Course at the Engineer School at Camp Lejeune, North Carolina, Theo Hios trained with a Folmer Graflex Anniversary camera similar to this 1941 Army Air Force contract camera, serial number 275337. The camera is believed to be authentic because of a dated Army AAC data/contract plate with a 1941 date. Telltale of the early pre-war cameras was chrome trim, generally not seen in wartime production cameras. Displayed here is a Graflex Anniversary 1941 Contract Camera with Graflex 7" flash attached, various manuals, wood tripod legs,

Weston #715 Meter, assorted Kodak filters, lens hoods, a spare lens-board mounting a 127mm Ektar lens on a Kodak Supermatic No. 3 shutter, flash cord, and a purple velvet bag for the flash reflector, which matches the purple velvet interior of the black leather case which contains this fine camera set. (Author's Collection)

Figure 5: Army Air Force contract camera viewed from the right side. Overall a nice pre-war example of a black leather-covered body and lots of the classic chrome trim. This Speed Graphic is fitted with a Kodak Ektar 127mm lens. The lens has a Kodak Series VI lens shade affixed, and the lens is mounted in a Kodak No. 2 Supermatic shutter, tripped by a No. 2 Kodak solenoid attached by electric cable direct to the Graflex flash mounting a 7" reflector. There is a Graphic back, and the rear viewing door is visible in the open position – set up for ground glass focusing. (Author's Collection)



Figure 6: Army Air Force Contract Camera - Close up of the lensboard shows a Wollensak-made Alphax shutter (Made in Rochester, N.Y., U.S.A.) and a No. 32 Kodak Anastigmat 6 5/8" lens, with a serial number prefix “EC” (1941). Mounted on the left side of the camera body is a Hugo Meyer rangefinder and encircling flash mounting bracket. (Author's Collection)

Conclusion

The Army Air Force contract camera in my collection is a great example of a complete Speed Graphic set procured by the armed forces – and probably how the U.S. Marine Photographic Services and Engineering Units would have received theirs direct from the Folmer Graflex Co. It is likely that Theo Hios' 1943 issue camera, sans all the bright chrome, came neatly packed inside a hard fiber transit case with similar accessories. It was ultimately Theo Hios' decision to determine what was needed to be carried in the field, hence the necessity for carrying the camera and film packs in a more portable U.S. Marine Corps musette bag, thus increasing his chances for a successful mission and survival.

Norm Hatch said that the military had to purchase their cameras from commercial sources in N.Y. and L.A. as “off-the-shelf press cameras,” until later in the war. Theo claims that the Combat was the only Marine contract camera.

