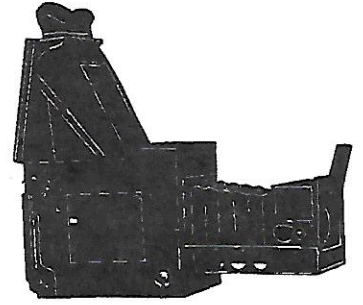


GRAFLEX HISTORIC QUARTERLY



VOLUME 5 ISSUE 1

FIRST QUARTER 2000

FEATURES

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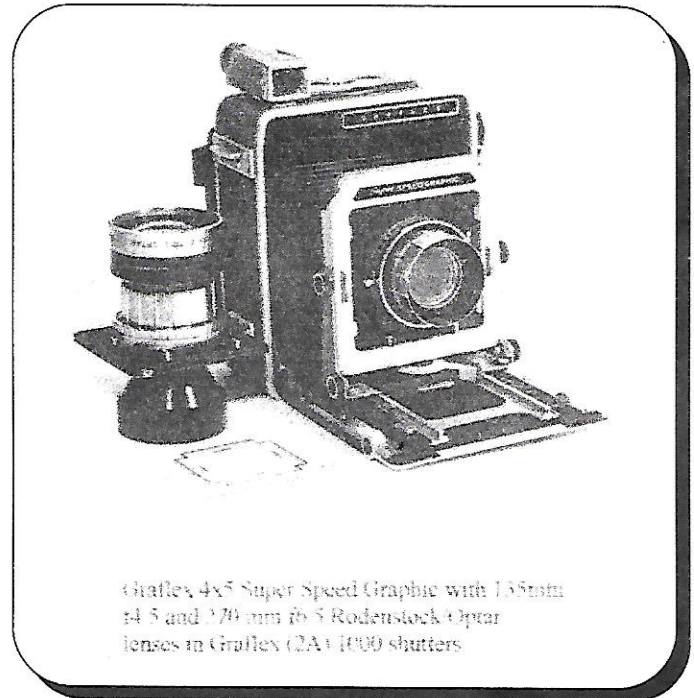
even consistent at their top speeds. Their action stopping power left something to be desired. The Graflex 1000 shutter was a remarkable step forward in achievement of accuracy and consistency especially at its top speed of 1000 sec. To achieve the accuracy and consistency, a very close tolerance of the eccentric, which drives the shutter blades, was required. A well-known plastic molder who could hold to the high tolerance was engaged to manufacture this very important part.

THE DREAM SHUTTER - GRAFLEX'S 1000 LEAF SHUTTER

By William E. Inman Sr.

For years the only high-speed shutter available for the large and medium format cameras was the focal plane shutter on the Graflex and Graphic cameras. The early models were not suitable for sync with flashbulbs or electronic flash, and the focal plane shutter had a way of distorting the image depending on which way the action was going. It either compressed or lengthened the image. For all practical purposes, the flash sync was limited to 1/1000 sec on the later models of the 4x5 with the GE31 or the Sylvania 2A long peak flashbulbs.

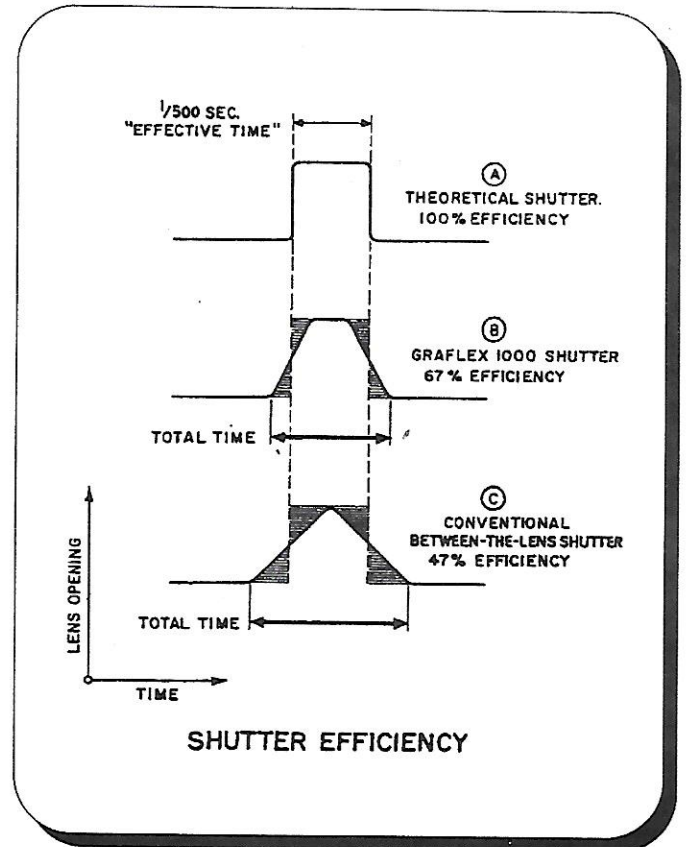
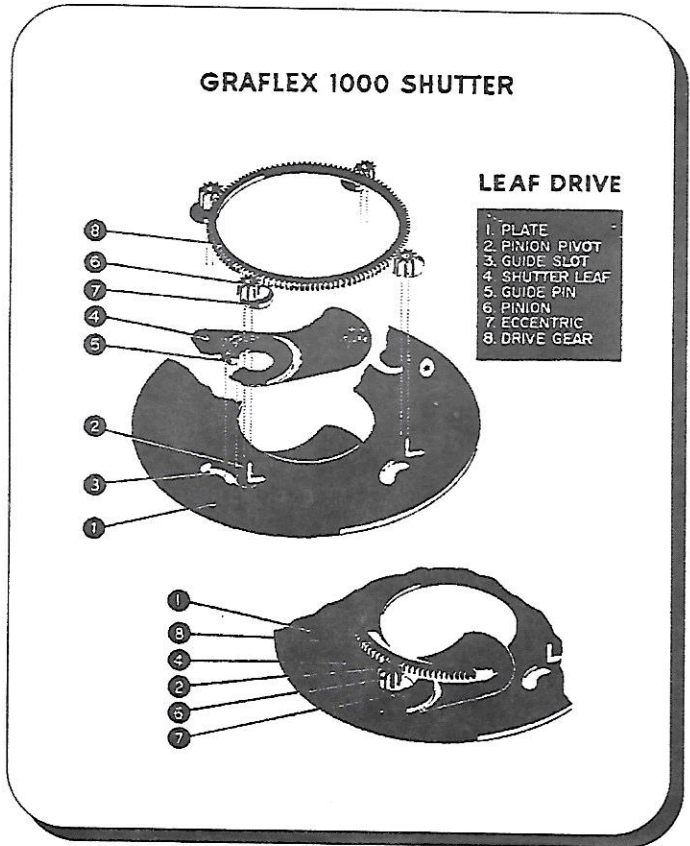
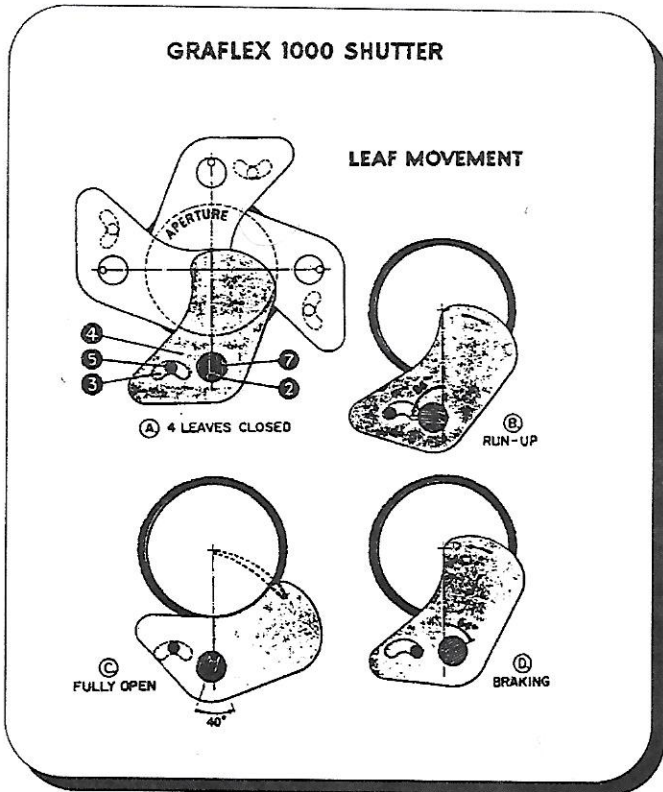
In 1959, after 15 years of research, Graflex introduced the Graflex 1000 between-the-lens leaf shutter. The shutter design was a radical departure from the conventional leaf shutters being used at the time which had an indicated top speed 1/400 sec with the exception of an unusual high speed shutter made before WWII in St. Louis. This shutter was available only to news photographers on a special order basis. The Wollensak, Kodak, Ilex, and Compur shutters of that day were not really accurate or



Graflex 4x5 Super Speed Graphic with 135mm f4.5 and f7.0 mm f5 Rodenstock Optar lenses in Graflex (2A) 1000 shutters.

Next, the shutter blade material had to be light, tough, and resistant to flutter and flap at high speeds. The rolling mills met the challenge by producing blades made of

.0035 thick magnesium. (About as thick as a human hair.) The 1000 shutter has a "unique Orbital Action," a totally new concept of shutter design. Each of the four shutter leaves is separately mounted and guided by an eccentric and stud operating slot. The resulting blade motion is elliptical. This elliptical movement allows the shutter mechanism to accelerate to top speed before the shutter blades open and following the controlled open time, they close, yet continue to move in a final gentle braking action thereby minimizing shutter vibration and subsequent damage to the components. Shock, vibration and shutter bounce is eliminated giving prolonged shutter life and less maintenance. Not so with conventional mechanical shutters, which stop abruptly and reverse direction during exposure causing more wear and tear on the internal components.



With this new shutter design, the Graflex engineering dept. achieved its requirement of 1/1000 sec at it full one inch aperture in a between -the -lens shutter that was accurate and efficient at all ten speeds as well. In short, the superior motion stopping ability throughout the full shutter range produces negatives and transparencies with greater sharpness and accurate exposure.

But that's not all the Graflex 1000 shutter has to offer. For instance, optimum sync at all shutter speeds, through

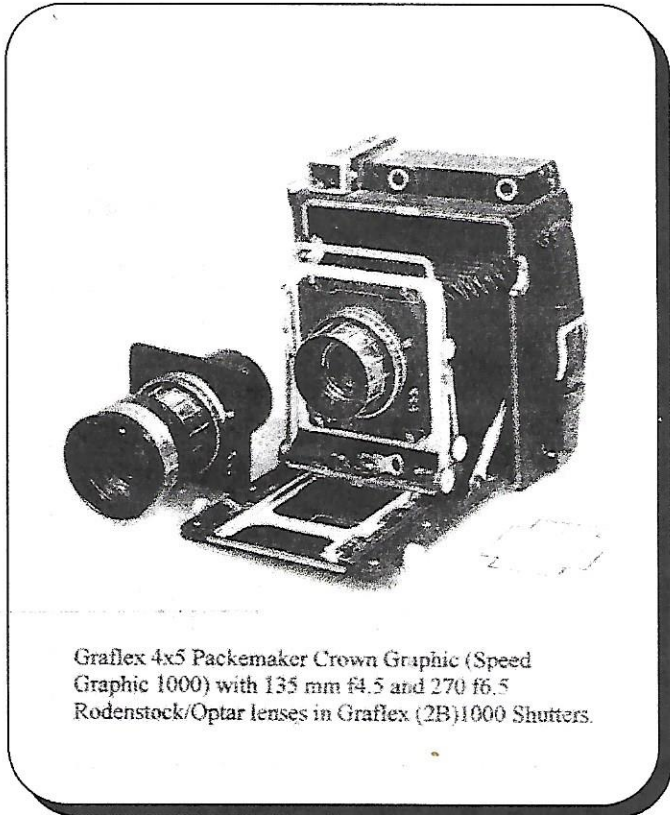
1/750 sec for M-type flashbulbs and at all speeds through 1/1000 sec with electronic flash is very advantageous for flash fill with strong sunlight. All the controls are large sized and easily accessible for operation under the most trying conditions such as cold weather or night operations. Incidentally, the shutter was tested from -60 degrees to +140 degrees F and at 90 percent relative humidity through 26,000 test runs. The test equipment failed but not the shutter.

The shutter speeds and diaphragm controls are definite click stops. This makes it easy to set the shutter controls in dim light or at night by counting the clicks. To cock the shutter, simply twist the lensshade (with or without gloves). You can change shutter speeds before or after the shutter is cocked. The shutter accepts a series 6 filter. Just twist the lensshade counter clockwise to remove, and drop the filter in. The lensshade acts as a retaining ring.

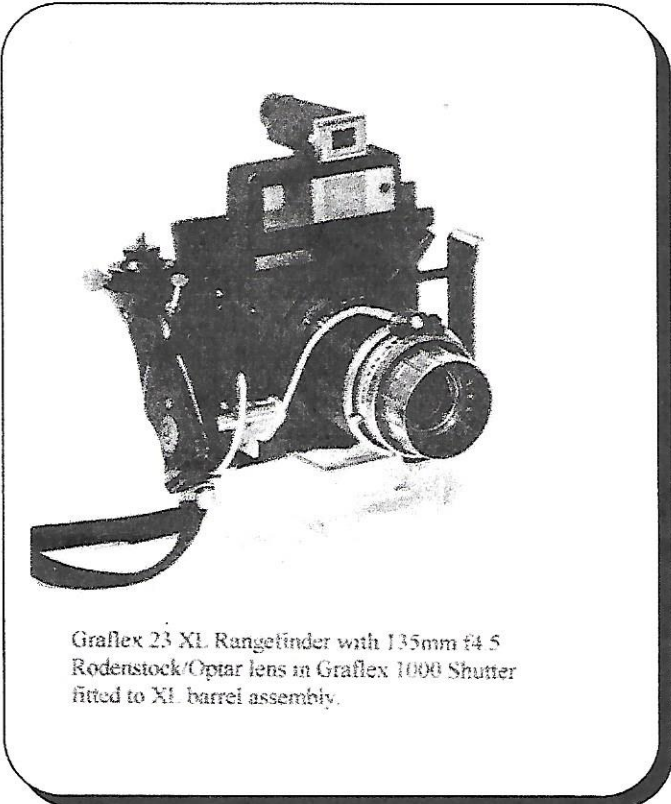
The optics for the 1000 shutter are of a very high quality. They were manufactured by Rodenstock in Germany. There were three models of the shutter and two focal lengths. The 2A shutter was for the 4x5 Speed Graphic. It had its own permanent lensboard with contacts on the back of the lensboard. These contacts are for flash sync and electrical tripping of the shutter via a built in solenoid in the lens standard with wires through the bellows to the

body release on the left side of the camera above the handle.

The 2B shutter was similar to the 2A with its own permanent lensboard but has external flash contacts on the lensboard. The M-X contacts are a unique 3-post contact with the center post as a common. This eliminates the need for a switch. This model was made for the 4x5 Pacemaker Crown Graphic which was designated as the "Speed Graphic 1000." This lens and shutter could be fitted to any 4x5 Pacemaker Graphic as well. Both the 2A



Graflex 4x5 Pacemaker Crown Graphic (Speed Graphic 1000) with 135 mm f4.5 and 270 f6.5 Rodenstock/Optar lenses in Graflex (2B)1000 Shutter.



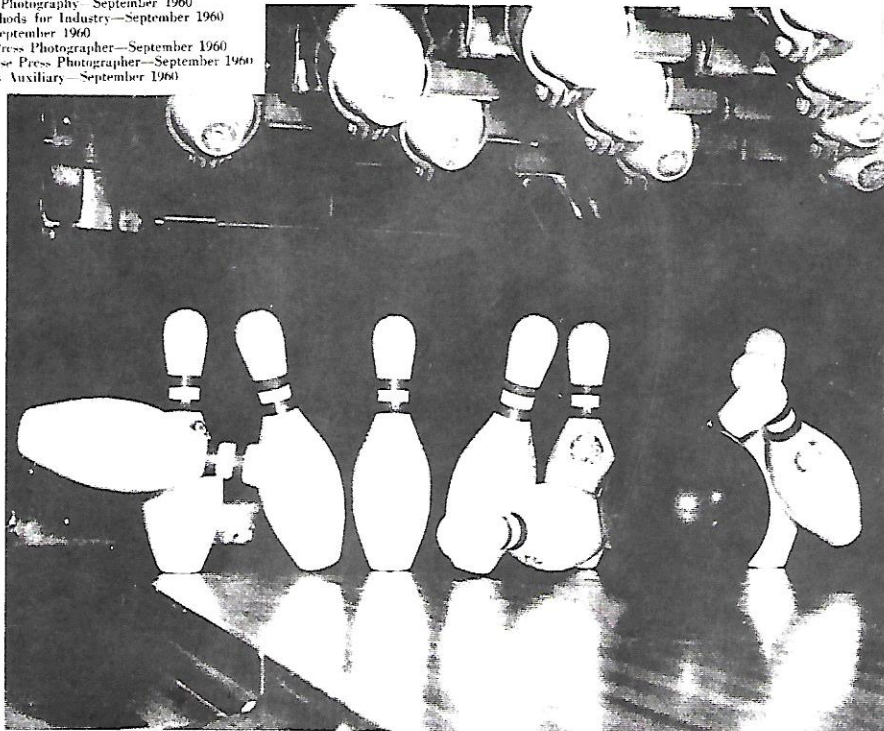
Graflex 23 XL Rangefinder with 135mm f4.5 Rodenstock/Optar lens in Graflex 1000 Shutter fitted to XL barrel assembly.

and 2B shutters were fitted with 135mm f4.5 Rodenstock Optar lens or a 270mm f6.5 Rodenstock Optar lens.

Graflex also produced a 3rd model 1000 shutter with the 135mm f4.5 Rodenstock Optar lens mounted in a barrel mount for the Graflex XL medium format camera. This shutter had no lensboard and the 3 post flash contacts were mounted on the shutter housing. This shutter could also be fitted to a 23 Century Graphic or small Pacemaker Crown or Speed Graphic. A 4th model was being considered for the XL with a 80mm f2.8 Rodenstock lens but was never produced. Only the test model exists today.

In its heyday, the 4x5 Super speed Graphic with the 1000 shutter was widely used by press, police and fire departments, as well as the military and the government. The most notable was the Sandia Lab government facility

This advertisement (GX-1601) appears in:
 National Photographer—September 1960
 Professional Photographer—September 1960
 P.S.A. Journal—September 1960
 Industrial Photography—September 1960
 Photo Methods for Industry—September 1960
 Infinity—September 1960
 National Press Photographer—September 1960
 Publisher's Auxiliary—September 1960



Unretouched Super Speed Graphic photo taken by Jim Robbins. Taken at 1/750 second with # 5 flash lamps, using Grafite flash unit on camera, two teleflash units, right and left.

A Super Speed Graphic photo taken at 1/750 second with FLASH LAMPS

This photo marks a new milestone in flash photography. Now, for the first time, Graflex makes available to you a shutter that takes fully synchronized pictures at a true 1/750 second with "M" type lamps. It's the Super Speed Graphic's new Graflex 1000 Shutter.

Completely different from conventional shutters, the Graflex 1000 has a unique "orbital" shutter leaf action that admits more light in less time for extraordinary action-stopping ability.

Its ability to cut more accurate, sharper "slices of light" and produce crisp, ghost-free images, makes it ideal for use with the new fast black and white, color and Polaroid films. With electronic flash the Graflex

1000 is accurately synchronized at all speeds up to and including a true 1/1000 second. Super Speed Graphic, complete with 135mm Optar lens in Graflex 1000 shutter, lists for \$449.50*. Grafite flash unit, \$27.95.

To fully appreciate this greatest camera and shutter advance in years, ask your Graflex dealer for a demonstration. Or, for folder giving the complete story on the Super Speed Graphic, write Dept. PP-90, Graflex, Inc., Rochester 3, N. Y. A subsidiary of General Precision Equipment Corporation.

GRAFLEX 

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*Price subject to change without notice.

in Albuquerque, NM. They relied on the 4x5 Super Speed Graphic with the 1000 shutter to record their high-speed tests. These high-speed tests required "stop action" photos. The answer was the Graflex 1000 shutter. Both the 135 mm and the 270 mm lens were used.

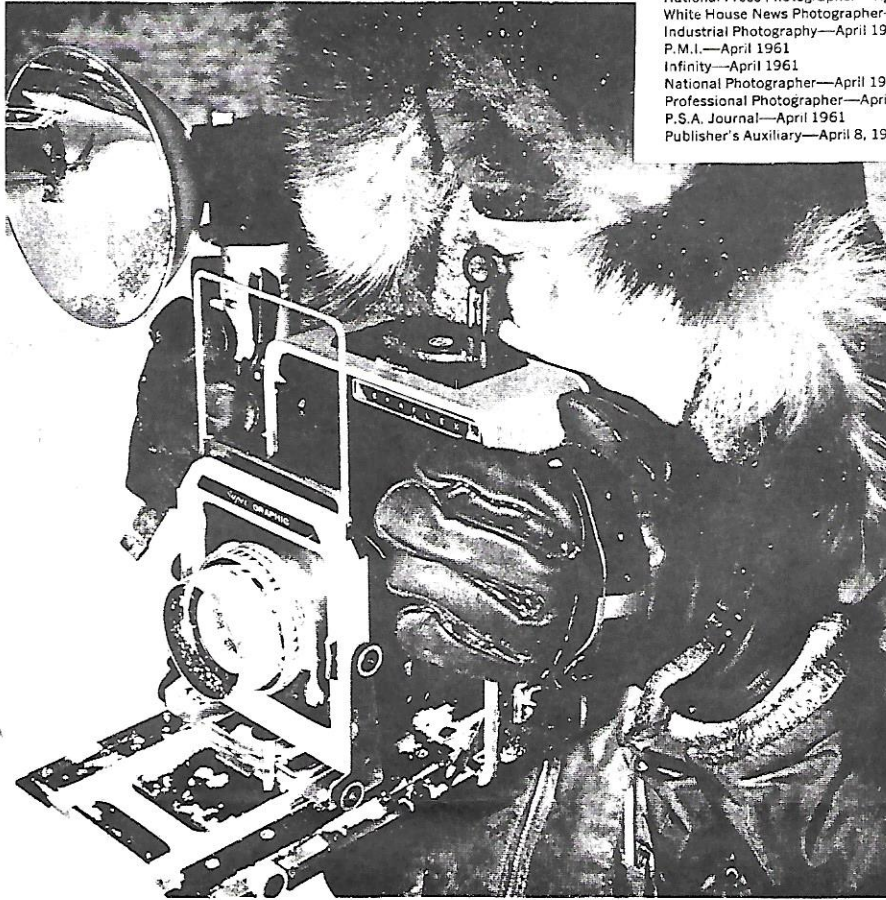
Sadly of course, in 1969 after 10 years of manufacture, the production of the shutter was discontinued. Since that time

no other mechanical between -the -lens shutter has achieved such accuracy and efficiency.

Note: All the equipment mentioned in this article is in the author's personal Graflex camera collection, and are all fully functional. The author has been in photography for over 50 years. 16 of those years were with Graflex in sales and service from 1953 to 1969.

For questions my E-mail address is: graflex3@aol.com
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 White House News Photographer—April 1961
 Industrial Photography—April 1961
 P.M.I.—April 1961
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Official U. S. Navy Photograph

Even Antarctic Weather Can't Stop SUPER SPEED GRAPHIC* and GRAFLITE*


Super Speed Graphics have been performing dependable photographic service for Operation Deepfreeze in Antarctica. In the photo above, for instance, Ensign C. J. Haggerty is shown photographing operations of the Navy's C-130 ski-equipped, 4-engine, turbo-prop, heavy duty transports. The photo illustrates the difficulties encountered in subzero photography . . . and why camera, shutter and flash must operate consistently and conveniently in spite of cold, blizzards and heavy, cold weather clothing.

The Graflex* 1000 Shutter is made-to-order for cold weather service. Its orbital-acting blades which eliminate damaging bounce or shock, have fewer parts for trouble-free, dependable operation. All adjusting levers are widely spaced, easy to actuate even with gloves on. So is the big, easy-to-grasp combination lensshade and shutter winding ring. These features have made Super Speed Graphic cameras equally dependable in antarctic cold, tropic heat, fire, flood or hurricane . . . wherever or whenever there are pictures to be taken.

*TRADE MARK

For full information on the Super Speed Graphic with Graflex 1000 Shutter and other Graflex-made equipment, see your Graflex dealer. Or, write Dept. PP-90, Graflex, Inc., Rochester 3, N. Y. In Canada: Graflex of Canada Limited, 47 Simcoe Street, Toronto 1, Ontario.

GRAFLEX®

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TIP: Regular 4x5 ground glass is a little large to fit Speed Graphics. This can be downsized without too much trouble by using 220 Wet-or-Dry sandpaper [wet!] and a sanding block or hard surface.



Publisher Mike Hanemann with Graflex #10 Cirkut

**GHQ Staff field-tests Graflexes
by J.C. Welch**

Taking advantage of nice summer weather last year, Graflex Historic Quarterly publisher Mike Hanemann was caught trying to coax a nice exposure out of an unusual Graflex: a #10 Cirkut. The example he brought along was a late one,

produced just before the second World War, and designed to hold ten inch or smaller rollfilm in its magazine. The large camera rotates on its special tripod to produce panoramics up to 360 degrees, resulting in a negative many feet long! A Turner-Reich triple convertible lens is mounted on the camera. Mike's first attempt at photographing the compact visage of Depoe Bay on the Oregon coast



Editor with 3x4 RB Auto

did not work well, and he returned several weeks later to try again. Accompanying him with a more conventional 3x4 RB Auto was editor J. Welch shown above]. His camera, nicknamed "Little Bertha," because of the 22" Busch tele lens it sometimes carries, also uses a 7-1/2" f4.5 Goerz Dogmar. In addition, he has fitted a 280mm f6 Busch Portrait lens to this camera, producing the formal shot of Mike printed on page 8. The Graflex SLR is great for this use, and nice old portrait lenses abound. Try a Wollensak Versar - they're fairly common.

On another expedition, this time to photograph Victorian-era houses in historic Albany, Oregon, Mike was trying out his own "Little Bertha," a 36" f6.3 Cooke with a 3x4 RB Tele mounted on it. Did those ducks hold still for that one, Mike? The picture



Publisher with Big Bertha

of Mike trying for the elusive waterfowl was taken with the RB Auto mentioned above.

Later that summer, while both Mike and John were photographing covered bridges in rural Oregon, they came upon some youths jumping from such a bridge into a swimming hole in the shade, and attempted to get a shot of someone in mid-jump, using the 3x4 SLR. No pictures were print-worthy, however, pointing out that Graflex's famous high speed 1/1000 focal plane shutter is best suited to pictures in bright sun if high speeds are used. This was using ASA 100 film, and not the much slower film of the '30s when the camera was new. At least the covered bridges pictures looked good.

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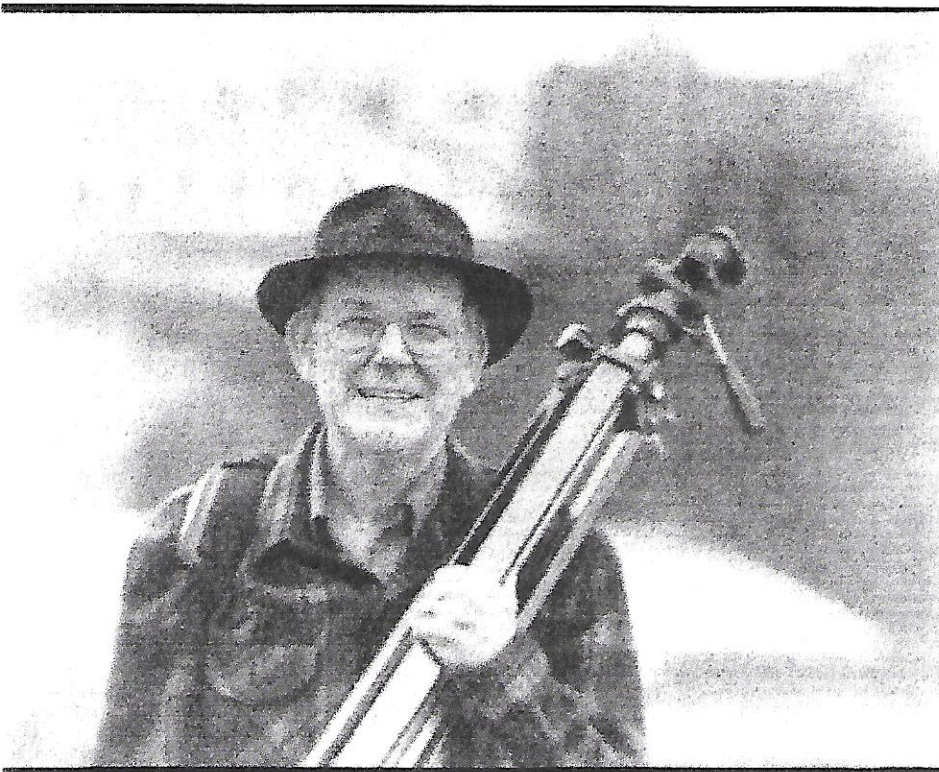
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WANTED: Pre-Anniversary Speeds 5x7 & 4x5.
Also appropriate orig. lens w/o shutter for c.1914
Speed 4x5 [e.g. B&L Zeiss Tessar Ic #15 (6")];
also 65mm Optar WA or WA Raptar for
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*At left - publisher
Mike Hanemann.
Photo taken with 3x4
RB Auto and 280mm
Busch lens.*