

ZEISS HISTORICA

Journal of the Zeiss Historica Society • Volume 19 • Number 1 • Spring 1997



The Zeiss Historica Society of America is an educational, non-profit organization dedicated to the exchange of information on the history of the Carl Zeiss optical company and its affiliates, people and products from 1846 to the present.

Officers

Founder	Thomas Schreiner
President	Charles Barringer, Jr.
Vice President	Marc James Small
Secretary	Maurice Zubatkin
Treasurer	Maurice Zubatkin
Archivist	Lawrence Gubas
Editor	Marion Husid

Material for the journal should go to the editor (see above) at 222 East 80 St. (6E), New York, NY 10021, USA. Please send all other correspondence to Zeiss Historica Society, 300 Waxwing Drive, Cranbury, NJ 08512, USA. Annual membership dues: \$27 (USA), \$35 (Canada), \$38 (Europe and Asia). Dues include subscription to Zeiss Historica, airmail postage overseas.

© Zeiss Historica Society, 1997. All rights reserved under Pan American and Universal Copyright Conventions by Zeiss Historica Society. Reproduction without permission is prohibited. Trademarks and names that are the property of Carl Zeiss are used with permission. Typesetting and printing by MacNab Print, 42 Borden Ave., Dartmouth, Nova Scotia, B3B 1C8.

On The Covers

Front Cover: Zeiss Opton Model W and Carl Zeiss Standard GF.

Back Cover: Nettar 515, post WWII era, 1940s-1950s.

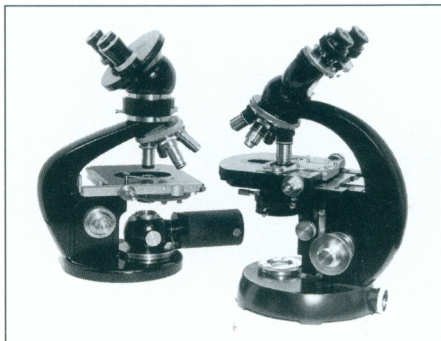


Illustration Sources

Early Postwar Zeiss Microscopes and front cover, Charles Gellis.

Optical Gear Tooth and CGCM Camera, Nicholas Grossman.

Pre and Postwar Finders, Charles M. Barringer, Jr.

Christie's Surprises, Larry Gubas.

Nettar Nattering and back cover, Joseph K. Brown.

Dear Mr. Gubas, Ronald K. Gratz.

Zeiss Ikon Safelight, Lawrie Morton.

PRESIDENT'S LETTER

Recently, the Central Archives of Carl Zeiss Jena received a complete set of Zeiss Historica. Our gift to this office coincided with the transition of their esteemed director, Frau Edith Hellmuth to her successor Dr. Wolfgang Wimmer. This vast collection in Jena will be available to all interested persons, thanks to Jena and to Zeiss.

Thomas Schreiner, founder, editor, and archivist of the Zeiss Historica Society in 1979, bequeathed this set to the Society's archives when he died two years ago. His dream to go to Jena was denied primarily by political circumstances. Politics also prevented our discourse with Carl Zeiss Jena, resulting in their being unaware of our organization. Now scholars, collectors, and historians will find access to materials they've longed to include in their writings and research.

Another subject arose while I was in Jena. Several times, Zeiss officials asked my help through Zeiss Historica to locate and restore to Jena the famous Zeiss lens collection removed from Jena in 1945 by the US Army. I explained that the lenses, having been studied and tested for several years, were auctioned in the 1960s as surplus to a firm, and then sold on the open market. By now these valued lenses have most certainly been widely dispersed and now reside throughout the lens collecting populace.

Because of the availability of the Carl Zeiss Jena archives, these lenses ought to return to their place of origin for all to study. I pledged the Society's resources to this end which I believe to be just and timely. It would be a major triumph, and a huge boost to our credibility with Zeiss, for us to contribute to the search and re-establishment of these lenses to the archives at Jena. Your suggestions of procedure and methods are most welcome. Please contact me.

Charlie Barringer

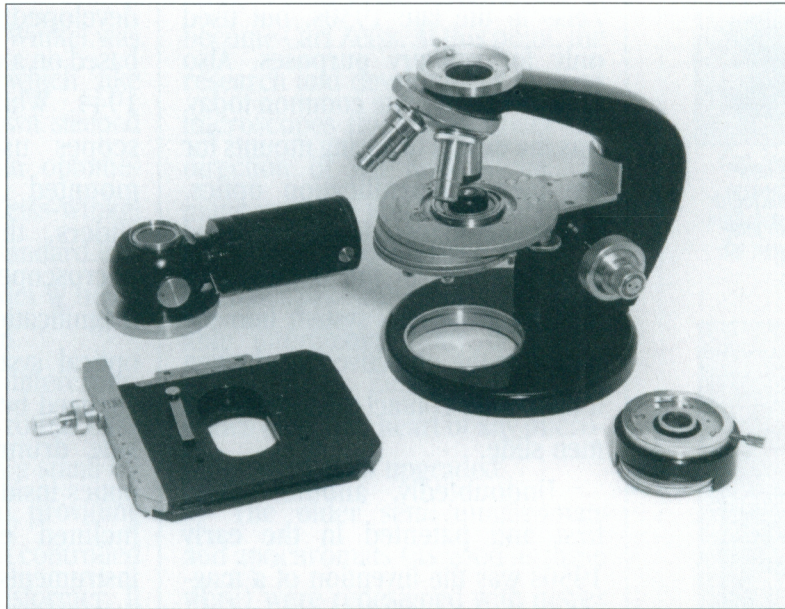
The Early Postwar Development of Zeiss Microscopes

Charles Gellis, Roslyn Heights, New York

It is 50 years since Zeiss began to establish a new home, a suitable time to look back and evaluate the many great achievements made by Zeiss in the design and production of their microscopes. Despite many difficulties after WWII due to lack of raw materials, machinery, and skilled workers, a new base of operations in Oberkochen began. A completely new line of microscopes evolved that proved to be as good or better than anything produced before the war.

To begin, these new instruments carried a new logo. The well-known trademark became Opton GmbH, later changed to Zeiss Opton. Having the Zeiss name appear again reminded former world markets that the new Zeiss was alive and well and would again lead the production of optical equipment.

The earliest microscopes produced by Zeiss Opton used ideas developed in the late 1930s, but



Zeiss Opton Model W with removable components.



Zeiss Opton Model W with newly developed optics.

which had lain dormant during the war years. Now, these ideas could be applied to the commercial production of microscopes, such as in the newly designed Model W microscope: easy interchangeability of components and low focusing controls, placed like those of the prewar

Stand L, but now co-axial rather than separate.

In the Model W, the old horseshoe-type base, a design more than 75 years old, was replaced with a round base that made an excellent support for a new built-on illuminating system. The old time mirror was not neglected as this could be substituted for the new illuminator if special forms of lighting had to be used. Now, the mirror, a long time essential part of the microscope, became an accessory.

The Zeiss Opton Model W was fitted with newly computed and parfocal objectives produced in the new 45mm length. The 45mm



Carl Zeiss Model GF, a new trinocular tube for photomicrography, newly designed with interchangeable backs.



Zeiss Standard Junior, a less expensive routine microscope.



Zeiss Opton objectives in chrome finish. Zeiss-Winkel and Carl Zeiss objectives in black and chrome finish.

length became the standard for all future objectives, and eventually led other microscope makers to follow the footsteps of Zeiss. These new Zeiss objectives used anti-reflection coatings developed by Zeiss in the late 1930s, but used only for military purposes. Also new, although quite common today, was the design of spring mounts for the higher magnification optics. The spring-loaded device protected the front lens of the objective by retracting the lens system into the barrel of the objective if and when it came into contact with the specimen slide.

Undoubtedly, another Zeiss first and patented in the early 1950s was the invention of a magnification changer called the Optivar. This device greatly increased the magnification range of a microscope without the user having to change the objectives or

the eyepieces. It was an important accessory that Zeiss continued to produce well into their current microscope program.

The production program at Oberkochen also included newly developed Stereomicroscopes, based on a prototype model built in 1944. While the prewar stereoscopes used paired objectives mounted on interchangeable sliders, the new Zeiss Stereomicroscopes achieved changes in magnification through an internal optical system. Magnification was changed by merely turning an outside drumwheel to change the optics inside the microscope. With inclined eyepiece tubes, these instruments were more convenient and comfortable to use.

Also, the newly designed Stereomicroscope had another advantage. The binocular tube head could be removed easily and quickly and replaced with a monocular photo tube for photomicrography. This monocular tube was designed to be used with a sliding device so that left and right side photos could be produced for stereo viewing or projection. Many useful accessories produced for this microscope were added later. Among the accessories one might find various miniature illuminators, polarizing equipment, mechanical stages, and various types of clamp devices to look

at industrial metal surfaces and geological rocks.

In the western zone at the time, a very famous partner of the original Carl Zeiss, Jena firm, Winkel-Zeiss (then changed to Zeiss-Winkel) was busily producing their new line of microscope equipment. Winkel was situated in Göttingen, which like Jena was a University town steeped in the experience of an optomechanical industry. The Zeiss-Winkel microscopes were the Standard line and looked like the Model W being produced by Zeiss Opton.

There were certain differences, however. Built into the round base of the standard line was a small 6V 15W illuminating system, providing a brilliant source of light controlled by a small outside transformer. It was such an efficient illuminating system that it was also used later with the Standard Model WL, Universal, and Photomicroscope.

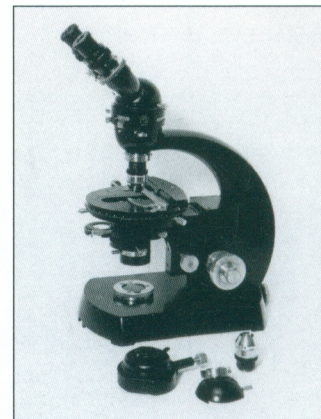
The Standard line of microscopes were given letter designations such as GF or GFL, and a much less costly model named the Junior was also produced. All the instruments in the Standard line were designed to accept several different accessories so that the microscopes could be used for brightfield, darkfield, and even the newest technique of phase contrast.

A very important and useful accessory was their new line of photomicrographic cameras. The basic component was a device con-

taining a shutter, plus an eye-level focusing viewer, and could take a 35mm camera back, a Contax body with adapter, or a camera with a larger format film size.

By the late 1950s Zeiss-Winkel merged with Zeiss Oberkochen to become Carl Zeiss. At this point, the research and development of Zeiss microscopes flourished under the direction of Dr. Kurt Michel. In many ways he was responsible for developing a formidable range of microscopes with their considerable interchangeability of accessories. The Zeiss microscope optics being the heart of any microscope were also upgraded.

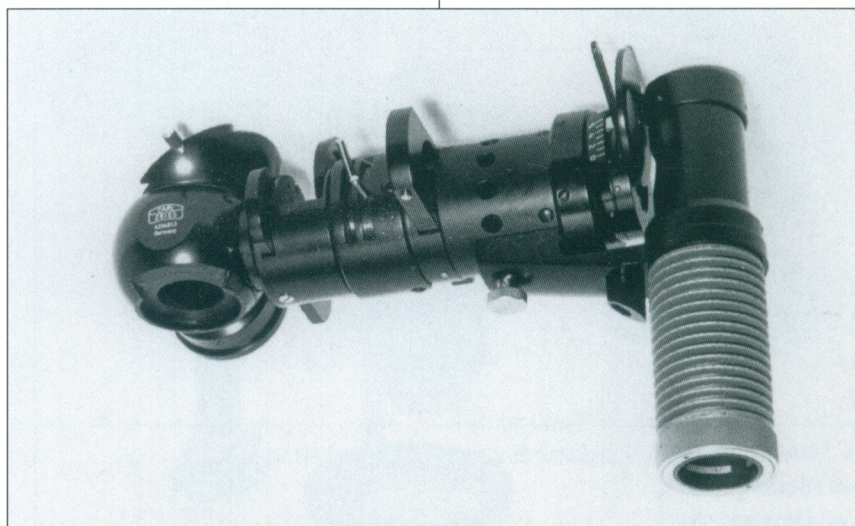
The older semi-apochromats and apochromats (as good as these were) were redesigned with newer glasses, whereas the prewar planachromats were vastly improved. Zeiss produced the first planachromatic objective in 1939. Always ahead of the other micro-



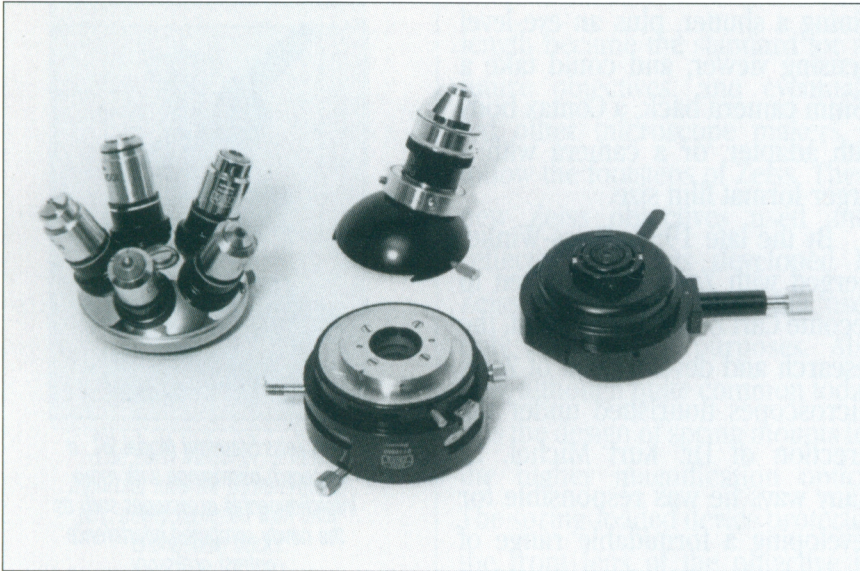
Carl Zeiss Standard Model WL, a research microscope with more interchangeable accessories such as the newly computed interference contrast accessory.



Carl Zeiss Standard Model WL with illuminator for reflected light. This special nosepiece is developed for studying opaque objects.



Carl Zeiss reflected light illuminator, an accessory nosepiece designed for single objectives.



Interference contrast accessories for Zeiss microscopes with interchangeable nosepieces.



*Photomicroscope
Model I.*



*New Stereo microscope
with interchangeable
tubes. Monocular tube
for photomacrography.*

scope makers, they went one step further and produced the new Neofluars (semi-apochromats) and the planapochromats.

Doubtlessly, the most daring innovation came to the market in 1955 when Zeiss produced the first automatic camera microscope called the Photomicroscope. This was a marvel of microscope technology, with a fully automatic camera built into the arm of the microscope. An automatic device connected to the instrument determined the correct exposure, and after each exposure advanced the 35mm film automatically. The Photomicroscope was a large microscope in which most of its components could be interchanged by the user.

This instrument served every possible microscope technique known at the time, having accessories for reflected light, fluorescence, interference contrast (a system developed by the French optical genius Nomarski and licensed by Zeiss), as well as optics for photomacrography, such as the Luminars (developed from the pre-war Zeiss Micro-Tessars). The Photomicroscope continually improved and became so successful a design that for nearly 30 years production carried on.

Not to be outdone by other makers of microscope equipment, Zeiss introduced a micro-flash component, easily fitted to any of

their microscopes. The flash unit was designed so that sharp photomicrographs could be made of living and often lively specimens such as protozoa and bacteria. The Zeiss micro-flash unit recycled quickly (within a few seconds) so that serial photomicrographs could be taken. Another advantage of the micro-flash unit was its color temperature, which allowed ordinary daylight color film to be used without filters.

By the late 1970s Carl Zeiss was hard at work developing their new line of microscopes. These new models, when finally put into production, were larger and even better, and shaped differently, using the concept of the building block. The classic black and chrome image of the microscope became a fond memory.

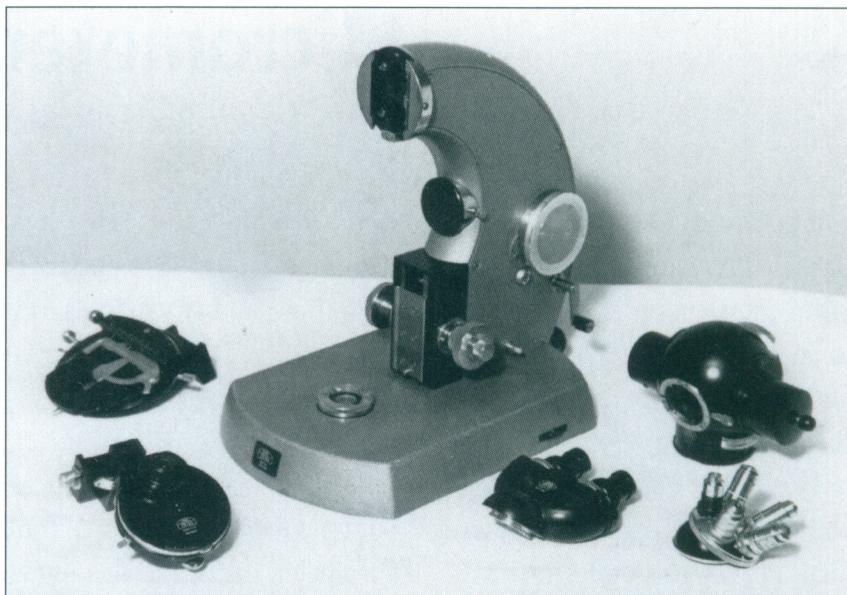
Further Reading on Microscopes

Gellis, C., A New Concept: the Stand L, Zeiss Historica, spring 1991.

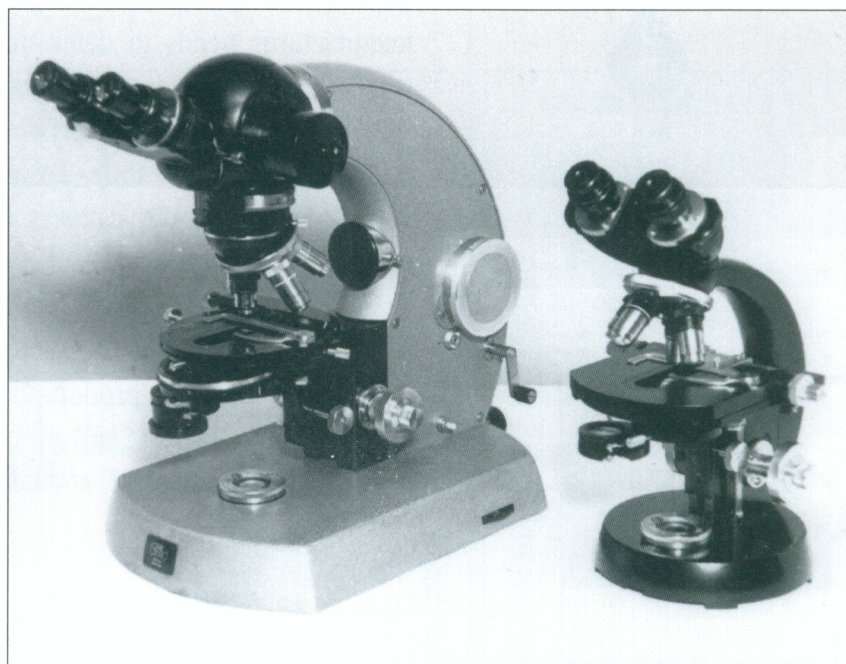
Gellis, C., Hensoldt's Baby Microscopes, Zeiss Historica, fall 1983.

Grossman, N., Unusual Zeiss Microscope Objectives, Zeiss Historica, spring 1985 and Carl Zeiss Microscope Catalogs, fall 1984.

Kuc, Hans-Juergen, Zeiss Microscope Adorns Bank Note, fall, 1993.



Basic components removed from Photomicroscope Model 1, from L to R, a revolving mechanical stage, universal type condenser with condenser carrier, binocular head, large tube head with Optivar and interchangeable nosepiece. (Camera control unit not shown.)



Photomicroscope Model 1 compared with Standard GF Model.

An Optical Gear Tooth Micrometer

Nicholas Grossman, Rockville, Maryland

Prior to World War II Carl Zeiss, Jena's Precision Measuring Instrument Department produced gear testing devices. The Optical Gear Tooth Micrometer is described in Catalog Fe 200, dated October 1934. The Fe designation stood for the Department mentioned. For a Zeiss collector, finding industrial products is rather challenging, compared to con-

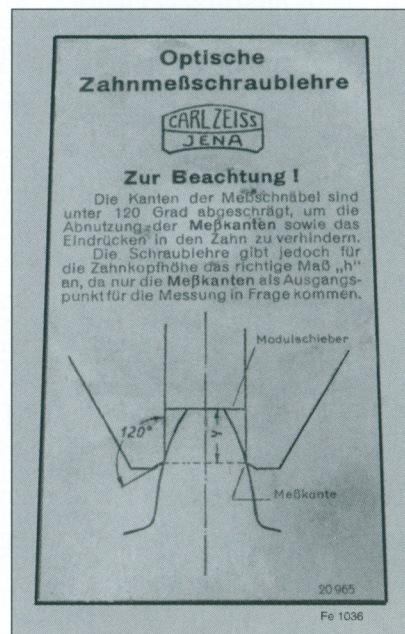
sumer products. (See Zeiss Historica, spring 1987, pp. 12-13, for a brief history of Technische Feinmessgeräte.)

Measuring Gear Teeth

The Optical Gear Tooth Micrometer measures the dimensions of gear teeth. It is described and illustrated on page 68 of the catalog. While it is outside the scope of this article to cover gear fabrication and measuring techniques, it is logical that the gear manufacturer needs to determine whether the product - among other requirements - meets the specified dimensions. Most shops used mechanical gear-tooth calipers to measure the dimensions of the teeth. A mechanical gear caliper is illustrated. The goal of Carl Zeiss, Jena was to market a product that exceeded the accuracy and precision of the mechanical counterpart.

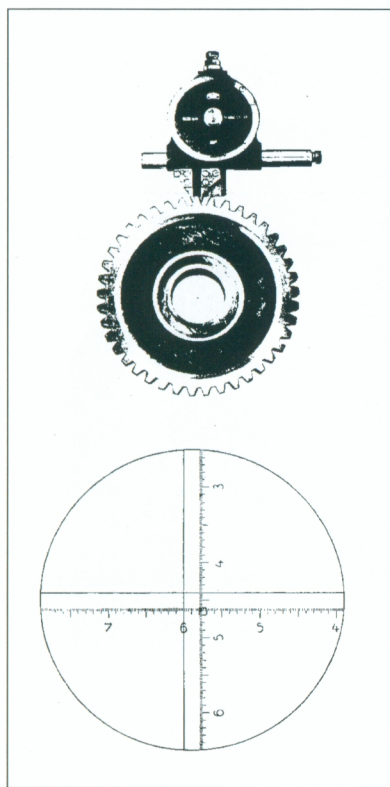
Using a Tooth Micrometer

The micrometer came in a fitted wooden case, measuring 15 cm



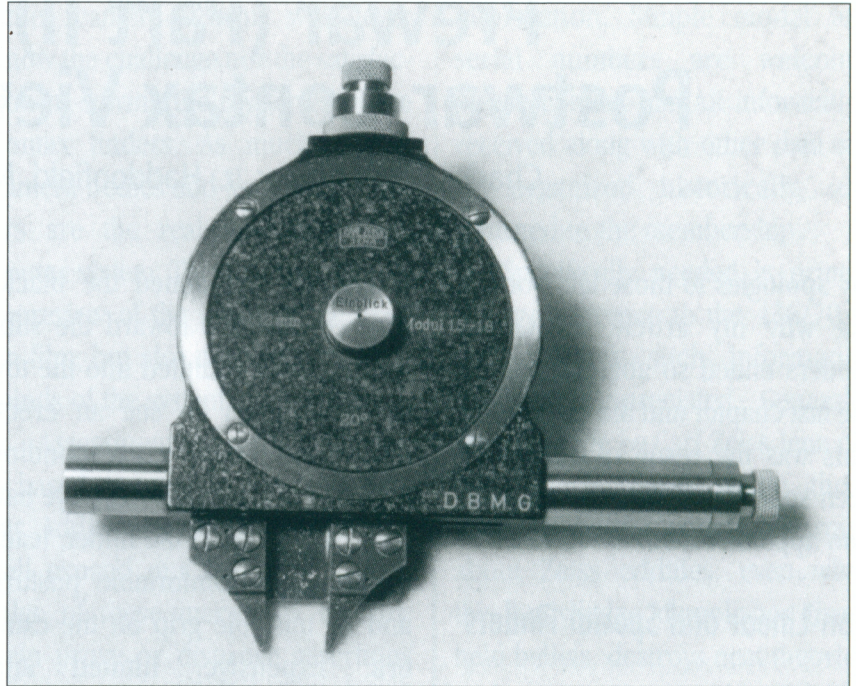
Instructions

by 14 cm, 3.5 cm high. The micrometer is also shown. The outfit obtained by the author came with a brief instruction, in German. The craftsman measures the height and the width of the gear tooth. The micrometer is set by two adjustable prongs. To measure the width, a sliding prong is set to the specified dimension by turning the knob located to the right of the D. B. M. G. marking. The height measure is set with the other knurled knob at 12 o'clock. These knobs move the contact prongs and two calibrated

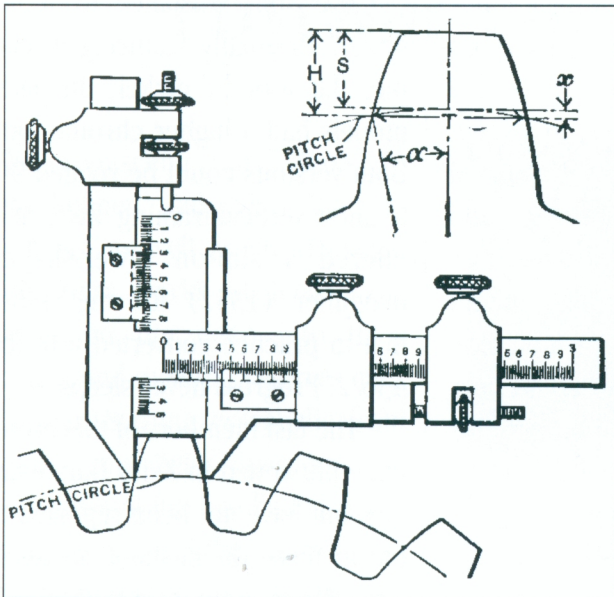


View of Measuring Scales

precision glass plates located inside the micrometer housing. The housing also contains a compact 34x magnification microscope focused on two fixed hairlines and on the two movable calibrated glass scales. The craftsman looks through the small opening located in the center of the instrument marked Einblick and reads the values on the glass scales. The micrometer can provide measurements with 0.02 millimeter accuracy. The set-up and the view of the scales through the microscope is from page 68 of the subject catalog.



Gear Tooth Micrometer.



Mechanical Gear Caliper.



Fitted Wooden Case

Prewar (Part II) and Postwar Contax Viewfinders

Charles M. Barringer Jr., Haddonfield, New Jersey

My apologies to those left wondering why my article on Contax Finders ended so abruptly without the last chapter and the conclusion. This was the result of an unforeseen space limitation. The completion appears below.

Non-Linear and Special Finders

These marvels of ingenuity are last in the list by virtue of their rarity. Their catalog numbers show that both the right-angle 5cm Prismatic finder (436/2) and the Oblique finder (436/3), illustrated in the August 1933 "The Connoisseur and the Contax" were early elements in the Contax system. Their rarity on the collector market suggests that, just as we do, the photographers of the '30s had trouble understanding why Carl Zeiss Jena had developed these beauties and kept their money in their pockets.

The 436/2 Chimney or Lighthouse finder measured only 16x18mm at its base, but projected 45mm high. A black cylinder rose from a machined nickel-plated base with milled grooves into which fitted the accessory shoe

flanges. Having aimed the black-rimmed porthole toward the subject, the user squinted into the top of the cylinder to see an erect, unreversed image corresponding to that of the 5cm lens. The eye had to be very close to the finder, leading to an uncomfortable posture and an unstable grip on the camera. Expensive, limited and unwieldy, few Chimney finders were sold. I have never heard of a chrome version, but...

The 436/2 provided a clumsy answer to a real problem, but the 432/3 Oblique finder (and corresponding 436/6 for Super Nettel/Nettax) provided an elegant answer to a problem few people outside of Zeiss had yet imagined. Here, two portholes in a 30° angled surface correspond to the view and rangefinder windows of the Contax I. Instead of bringing the camera up to eye level and taking a picture, the timid photographer could peer at an angle into the windows of his 436/3, pretending to inspect the film counter of his Contax I, while actually taking a picture. The zeiss Ikon catalog suggested that the 436/3 could be used for low-level shots and for sports or aerial pho-

tography, but this idea forgot that the user's eye was glued to the finder, even if at a more comfortable angle, to see the unreversed, right-side-up image. It was made only in nickel and black enamel. Suggestions about the true function of this beautiful accessory are welcome.

The 436/2 from Carl Zeiss Jena was replaced by the less elegant but more utilitarian 436/5 Brilliant waist level finder from Zeiss Ikon. The larger prism and improved optics of the 436/5 meant that a usable image could be seen with the eye some distance from the finder. Originally featuring a simple, flat foot in nickel, the later models had a higher chrome foot. Both versions could be rotated 90° to allow vertical framing. Zeiss also offered a slip-on tower-shaped magnifier (1352) for the 436/5 that in practice converted it to the 436/2. Progress never sleeps.

The last members of this group were illustrated in Zeiss Ikon catalogs but have not been reported to me in three dimensions, so questions linger about their existence. If the defects in eyesight had not been corrected by an accessory lens

(536/41 for Contax I, 540/41 for Super Nettel/Nettax), one needed the 540/12 or 536/12 (ditto) lens holder. This piece slipped into the accessory shoe from behind and covered the finder/viewer windows. Users then added their own prescription lenses. Single correction lenses for the Contax II/III were designated 540/44. Presumably, Zeiss Ikon wanted assurance that all Contax buyers were satisfied because the purchasers of these devices appear to have taken them to their graves.

Conclusion

The collectors and users of

reflex camera systems will never know the challenge nor the satisfaction of solving the mysteries of the Contax finders. As much as the camera bodies and lenses, the finders are the real essence of the Contax system. They give us not only a preview of the image to be fixed on film, but also a glimpse into the minds of the system's creators.

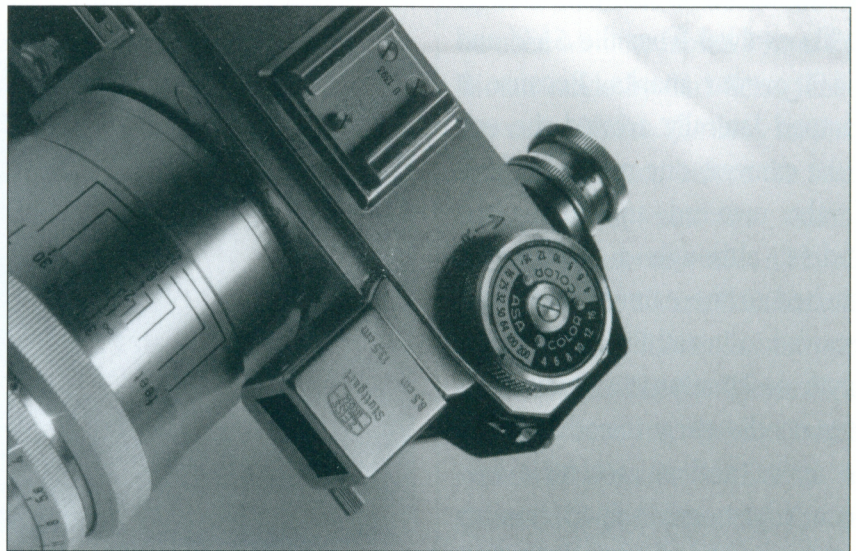
Assessments of rarity are strictly based on experience as a collector. Additional, however, input that will expand our collective knowledge of these marvelous devices, help prove or disprove assertions or suppositions, and help to define the quantities actually made of the various types depends upon further

information. Simple model and serial numbers are welcome, please contact me. All information received along with other data will be organized historically, and returned to the membership.

Specifically needed is printed factory reference to the 436/70. A copy of any such information would be appreciated. Generally, finders made by Carl Zeiss Jena are serially numbered, while those from Zeiss Ikon are not. Learning about Zeiss oddities, even when this knowledge demolishes firmly held beliefs, destroys neat theories, and contradicts bold assertions proves interesting and exciting for all members of ZHS.

Postwar Contax Viewfinders

The reascent Carl Zeiss in Oberkochen and Zeiss Ikon in Stuttgart, as well as the damaged Carl Zeiss works in Jena, were forced to dig deep into their human and material reserves after the war. Starting essentially from scratch, the Zeiss operations on both sides of the line had to maximize resources, take advantage of ingenuity, and keep a weather eye on costs. Far removed from prewar practice, where an idea could be



563/03 mask on Contax Ila with famed 85mm f:2 Sonnar.

developed and brought to market more or less on a whim, each piece now had to carry its own weight. For the devastated German precision industries, restoration of the image of prestige and precision was paramount in the attempt to recapture the custom and the currency of the USA market, sole remaining major source of discretionary funds.

One result considerably simplified the lineup of finders for the Contax system. The Albeda finders, so popular before the war, were not revived in the postwar lineup, nor were the complex, expensive, and slow-moving non-linear and special finders that had never been big sellers.

The mask for the longer focal lengths survived, thanks to its simplicity, efficacy, and unique ability to maintain direct focusing for use with auxiliary lenses. The postwar 563/03 mask for the new Contax IIa/IIIa evolved from the 543/ and 544/7 prewar masks. Because it clamped laterally around the end of the camera, one model sufficed for the metered and un-metered models, although a neck strap attached to the camera had to be removed to install the mask. Focal length designations in centimeters attest to the early introduction of the mask, and an eccentric eyepiece adjustment helped framing accuracy at close distances.

Judging by its commonness on the collector market, the 563/03 appealed to most Contax users.

Of the single focal length optical finders, only the 432/5 finder for 3.5cm survived. The black crackle-finished, tapered aluminum body of the postwar finder is longer, the satin chrome bezel narrower than the prewar unit, yet the overall

dimensions, weight and magnification are identical. There is no parallax correction mechanism. Examples so far bear $f=3.5\text{cm}$ and the Zeiss Ikon logo. Stuttgart is not mentioned. All examples seen were marked in centimeters, rather than millimeters.

Sharing the optical makeup of the 432/5 is the model 420 for



Prewar (rear) and postwar (front) versions of 432/5 finder for 35mm.



(L to R) 423 for 75mm; 420 for Stereo (with parallax correction foot); 432/5 for 35mm.

35mm Stereotar-C, now rangefinder coupled. The 420 features a vertical frame, of course, and a higher stance, the result of a cam and lever mechanism for parallax correction. Typical of the postwar finders, it is considerably simplified over the prewar 543/70. The Zeiss Ikon logo and Stuttgart appear on the top of the chrome bezel; the marks

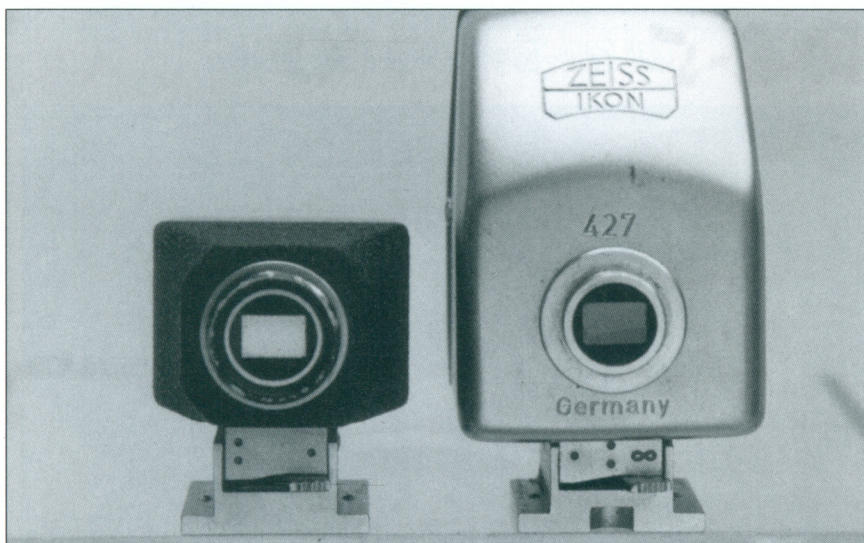
Stereo, 420, and Made in Germany appear underneath.

Gone are the 2.8cm and 4cm finders, these focal lengths having been consigned to history. In their place one finds the exquisite 435 finder for the groundbreaking 21mm f:4.5 Biogon, introduced in 1954. The marks $f=21\text{mm}$ and 435 appear underneath the bezel. The

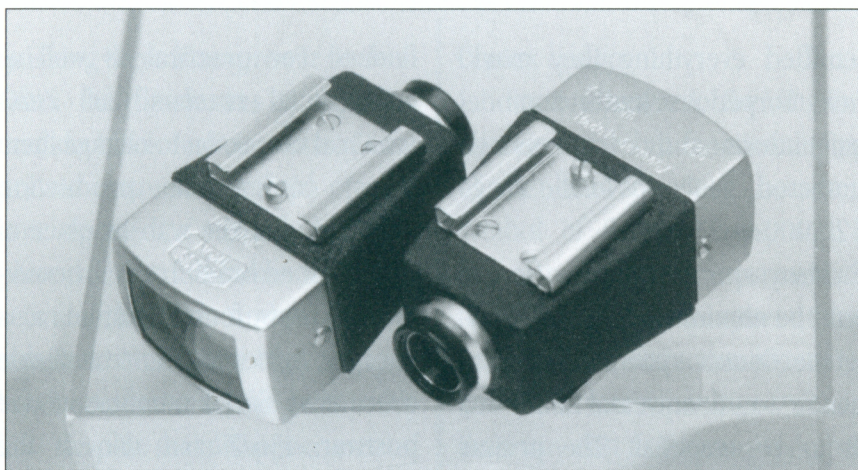
top of the body is dominated by a second accessory shoe, presumably to accept a bubble level (which Zeiss did not offer postwar) to align the camera and lens for precise architectural work. The foot is fixed, and a small engraved circle marks the center of the field. The 435 is substantially larger and heavier than the other finders, due to its complex multi-element optical construction.

(This finder stayed in the catalogue into the Contarex era for use with the remounted 21mm Biogon. A small batch of these marked with their new order number, 20.1500, has been reported. If confirmed to exist, these would be extremely rare.)

Other Zeiss Ikon optical finders were sold, the model 422 for 30mm and model 423 for 75mm. Some collectors feel that the 423 (in reality a simple mask dressed up as a finder) is a Contax finder to be used with the fabled 75mm f:1.5 Biotar, made by Carl Zeiss Jena in the early fifties. The lens made its brief appearance before the finder was offered, and its number belongs to a series - 421, 422, 423, 425 and 426. All are Contina related. Because there is no other Contax finder for the 75mm Biotar (a rare lens in Contax mount, somewhat less so in Exakta and Contax SLR configuration) the 423 finder becomes a necessity, should



Rear view 420 (L) and 427 (R), both set for infinity, showing divergent ideas of which symbols should represent close vs. distant views. Vertical front mask of 420 does not show up due to angle of view.



Front and rear 3/4 view of 435 finder for 21 mm Biogon.

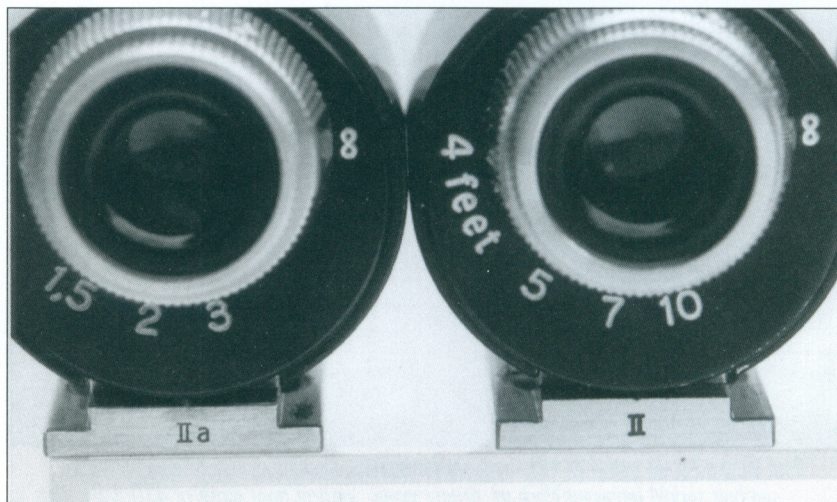
a Biotar become available.

The functions of the various Albada finders and the elegant 436/1 and /10, were performed after the war by the 438 Tele or Torpedo finder, to use its more common designation. This finder had the distinction of being the only one made to identical specifications in both Jena and Stuttgart. The 438 introduced a peculiarity of postwar Jena-made finders - the mark II or IIa engraved in tiny characters on the vertical rear surface of the foot. This smacked of the old Carl Zeiss Jena thinking, where different units were marked (and presumably calibrated) to compensate for a microscopic difference in parallax, probably less than manufacturing tolerances. But the marks are there. Why then, has the corresponding mark, which might actually be significant, not been reported? Perhaps there is another, more arcane explanation. Can anyone help?

In the early Stuttgart version of the 438 finder, the fields of view were marked in centimeters, whereas millimeters belonged to the Jena models and the later Stuttgart models. On the back surface, feet or meters appeared on early examples; both units, on later ones. The foot of the early Stuttgart issue was marked 438: later ones simply indicated Germany. In keeping with Jena's practice, numbers



438 Tele- or "Torpedo" finder for 85 and 135 mm.



Closeup of "IIa" and "II" marks on Jena 438's.

identified everything they mark. Their Torpedoes had no model designations and came serially numbered, generally in the range of 20,000 to 27,000.

Many special purpose finders could be eliminated without affecting the Contax system's flexibility, but a first-rank universal finder was felt to be essential. The prewar 436/7 and 436/70 were excellent

finders. For practical as well as commercial reasons Carl Zeiss Jena had no reason to change them when commercial production resumed after the war. In place of the chromed brass fixtures, however, one now found aluminum, a cheaper, lighter and more available alternative. Serial numbers of the postwar 436/7 are also in the 20,000s, one method of distin-



Marks under feet of three versions of 438 finder: Jena (L), early (Ctr) and late (R) Stuttgart versions, without and with order number mark.



Postwar 436/7 from Jena (L, Ctr) and Krasnogorsk mirror image (R).

guishing them from prewar finders. Often the finish was a modified crackle black in lieu of the glossy, prewar enamel. The field of view now sported a central circle in place of the full-frame crosshair reticle, but the finder's virtues remained intact, and early Stuttgart brochures featured the Jena product, despite the disappearance of the 28mm focal length from the

Contax lineup.

Soon afterward, the ungainly, asymmetrical, but functional shape of the beloved 436/7 became a symbol of the old days, and its proud reign as the most versatile finder for the Contax system terminated as the production machinery and other war reparations wended their way east to Krasnogorsk, near Moscow. This explains the closing

sentence of Part I, proclaiming that this finder, in reversed form, has until quite recently been in production in Russia, and may still be.

In its place emerged, from both Jena and Stuttgart, quite similarly styled finders of cylindrical form with a centered ocular on the rear surface. The Stuttgart version was baptized 440, while its Jena cousin never officially received an order number, at least in the available US and western European catalogues. Both versions came out first with 25mm fields of view to accommodate the Jena Topogon. When Oberkochen introduced the 21mm Biogon, the 440 finder reflected the change with new optics. The Jena 440 relatively uncommon to begin with, disappeared altogether. In a bizarre twist, one of these has been reported with 21mm field, confirming close collaboration between the two firms well into the 1950s.

Beyond its slightly larger diameter and CZJ logo, the Jena 440 carried the focal length designations in the fields of view, along with parallax marks. Both Jena and Stuttgart types had adjustable diopter eyepieces. To adjust the angle between body and foot for close distances, the Stuttgart 440 had a cam arrangement, actuated by turning a knurled bezel around the eyepiece. Export-market Stuttgart 440s were marked in feet.

Perhaps in answer to the popularity of the groundbreaking Leica M-3, Zeiss Ikon also marketed a cute, multi-frame auxiliary viewer for Contax baptized the 427, with frame lines for 35 // 50// 85// 135mm lenses. Parallax correction was done by a cam and lever setup like the one on the 420, but no diopter adjustment was offered. Breaks in the 35mm frame line denoted the edges of the 35mm stereo field. The otherwise identical model 426, with unmarked frame lines for stereo, 30, 45, and 75mm fields, is for the Contina III. Although handy and readily available, both finders were flawed by a rather dim view.

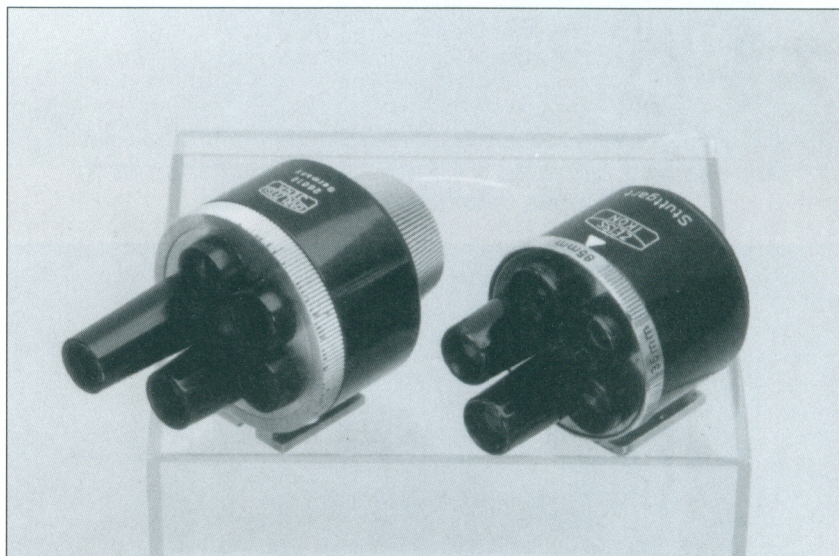
The Contax system, once Zeiss Ikon's proud answer to virtually any photographic challenge, withered and died in the early sixties as the high-end, scientific market changed over to single lens reflex cameras, from Zeiss Ikon and elsewhere. The amateur market responded to the siren song of market-oriented competition, whether German made or, increasingly, from other origins.

Zeiss Ikon was never happy nor successful at meeting arbitrary camera standards determined by the market. They believed that the name Zeiss denoted nothing less than the best, a response to an absolute standard. Finders sold for the Contax between 1932 and 1962

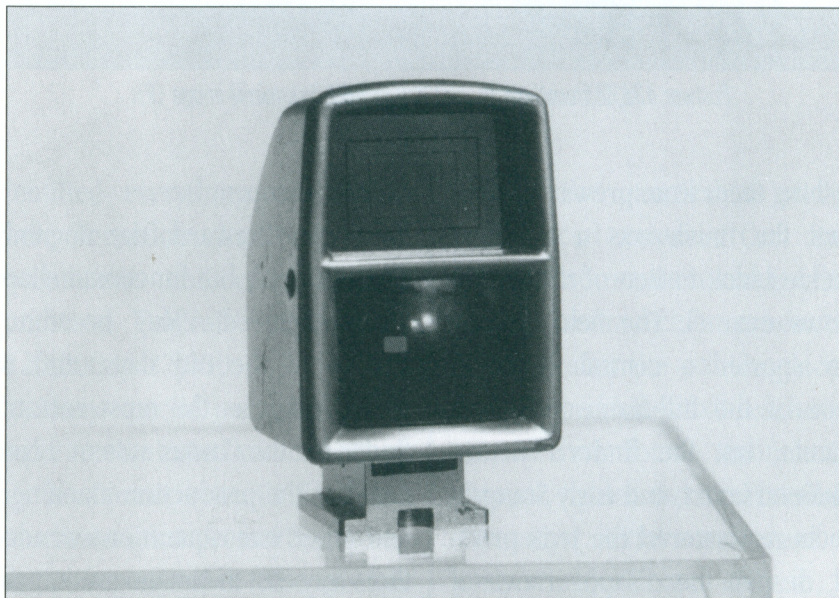
reflected that approach, ranging from the ridiculous to the sublime. Many are usable still, as their rising prices suggest. Today's users realize that nothing this good should likely come again. But most of those that survived to decorate col-

lectors' shelves are proud testaments to the ingenuity and passion that drove Zeiss Ikon and Carl Zeiss Jena, in their Golden Age.

Further reading on Zeiss Ikon's Golden Age see, Zeiss Historica, fall 1994 and spring 1995.



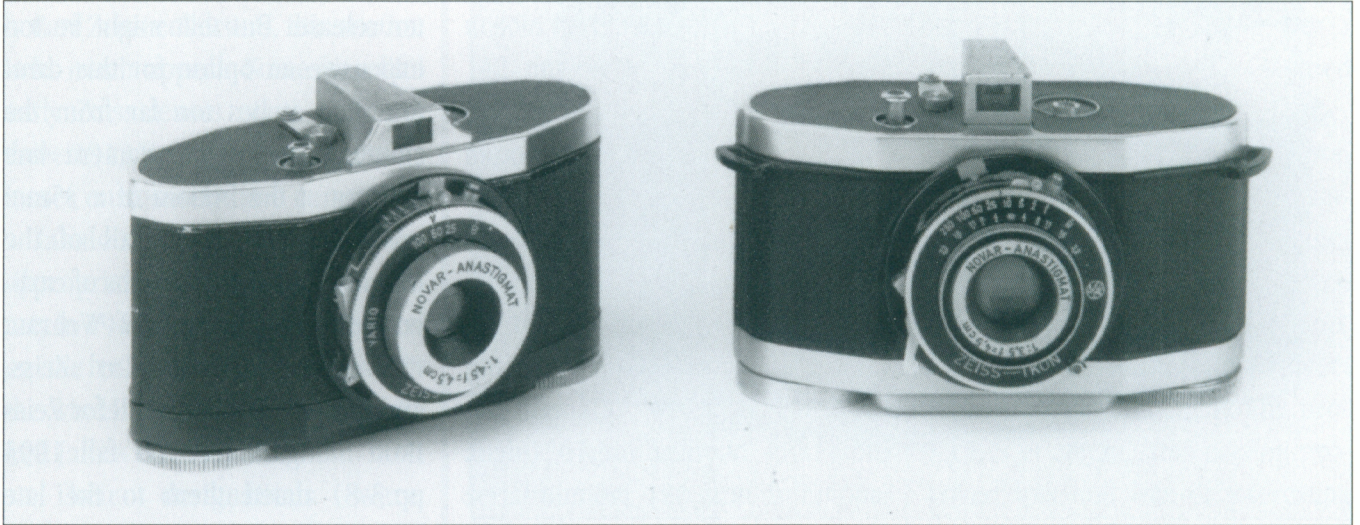
Jena (L) and Stuttgart (R) 440 universal finders. Note absence of focal length marks on chrome ring of Jena finder.



Front view of 427. Top window has semi-silvered plate with engraved frame lines.

Christie's Catalog Surprises

Larry Gubas, Randolph, New Jersey



The two Ikonta35/Contina based prototypes differed from earlier designs. The VK 11 on the left and the VK 12 had the cheapest lens and shutter combinations of the era. On the back plate VK designations are printed. In retrospect they seem quite handsome.

Longtime Zeiss collectors enjoy photographic shows of all sorts: flea markets, yard sales, antique shows and the like. How many have discovered those more tantalizing and interesting items that come from auction houses? Indeed, many of them are more reasonably priced for sale under the hammer compared with photographica and optical instruments which professional dealers offer. December 1996, for example, Christie's London auctioned several known but never seen surprises, well, hardly ever.

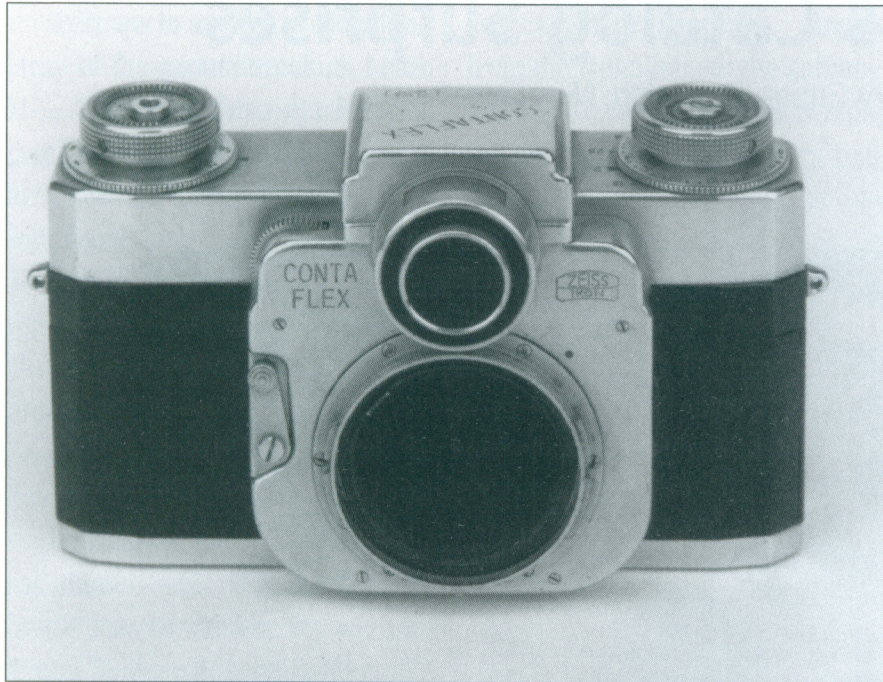
Many objects of glass, brass and chrome from the nineteenth century to the mid-'70s covered page after page in their stunning

catalog. For the Zeiss collector, treasures included three different Zeiss Ikon prototypes from the late 1950s. One of these, the early version of the Contarex camera was brought to our attention by Hans-Juergen Kuc in Zeiss Historica, spring 1983. Kuc wrote that only three prototypes were made in the years when the camera's name was fluctuating from Contax IV to Contaflex to Contarex. In any case, this was a certifiably rare collector's item since only three existed. The anticipated hammer price was pretty rare as well at £14-18,000 (\$8,500-\$11,000). Still, an auction house like a museum exhibition brings rarities to the viewer, and after the sale provides a momentary

monetary value.

Two other Zeiss Ikon prototypes at the auction were totally new. Their lineage, clearly traceable to the Ikonta 35/Contina cameras of the late 1940s, began as a Hubert Nerwin design. The bold oval, however, given an hexagonal shape is unlike anything by Zeiss Ikon or by anyone. Marked VK 11 and VK12, both cameras carried fairly low end Gauthier shutters of the 1950s and Novar Anastigmat lenses of 4.5cm focal length. The VK11 was F/4.5 and the other F/3.4.

The cameras were almost identical except for their chrome trim, neck strap holders, and slightly different optical finders. Their recessed release buttons are like



This front view of the Contaflex/Contarex prototype shows the basic design. Records indicate that only three of these were made. The catalog says the interior is marked V3 A3.



This Voigtlander Vitomatic II prototype has an interesting engraving on the rear of the top plate V/Beli Zi. Presumably the V is for Voigtlander or Vitomatic and the Zi is for Zeiss Ikon. Since Beli includes an upper case beginning letter and lower case following letters as in an individual's name, perhaps it's the designer's name.

no other in the Zeiss family and each has a recessed small counter as well. Behind the release button the lever looks like a delayed shutter release. But that might be too expensive an option for this camera. Also it lies too far from the shutter. Clearly, this camera line belongs at the bottom of a 35mm group which carries all of the advance and rewind knobs of earlier Nerwin models. Wolf Wehran, PR representative for Carl Zeiss, and former Director of PR for Zeiss Ikon Stuttgart (see ZH fall 1993 pp.3-8) dated them to the late 1950s. This new interesting body style was expensive to produce. Instead, Zeiss Ikon decided to use the same basic look-alike body on the forthcoming Symbolica, Contessa, Contessamat, and Tenax cameras. They proved unsuccessful in the new SLR era.

Several Voigtlander items for auction originated from the Voigtlander Museum. Many of these also were prototypes, such as the lovely Vitessa models and some Vito, Vitomatic, Flexomatic, Dynamatic and Phokina models. But these prototypes didn't sell. Apparently, the largely European marketplace rejected the high minimum bids established by the seller. The Voigtlander enthusiasts and collectors declined. Another aspect of pouring through the catalog was noticing the marked differences between camera design teams and

management at Zeiss Ikon in a period when the company could no longer sustain profits.

For lens devotees, and especially Carl Zeiss collectors, this auction held much appeal. Some beautiful early Zeiss lenses come to mind: three 1913 Versuch (Experimental) lenses must surely have come from a fabulous Zeiss lens collection appropriated by the American military in 1945. Since that time however, the collection was scattered to the winds via the mail order Burke and James Lens Vault.

Their designations were: V19131, a 7.5cm F/3, an unnamed lens No. 208473; V1913 VI, a 19.6mm F/12 Protar No. 233394; and V1913 XVIII 30cm F/6.3, another unnamed lens No. 249350. All of these lenses have interesting specifications for 1913. Also among the lenses was a later V lens

1920 NR2 that was marked 25cm Triplet F/8, possibly for a projector or early aerial camera lens.

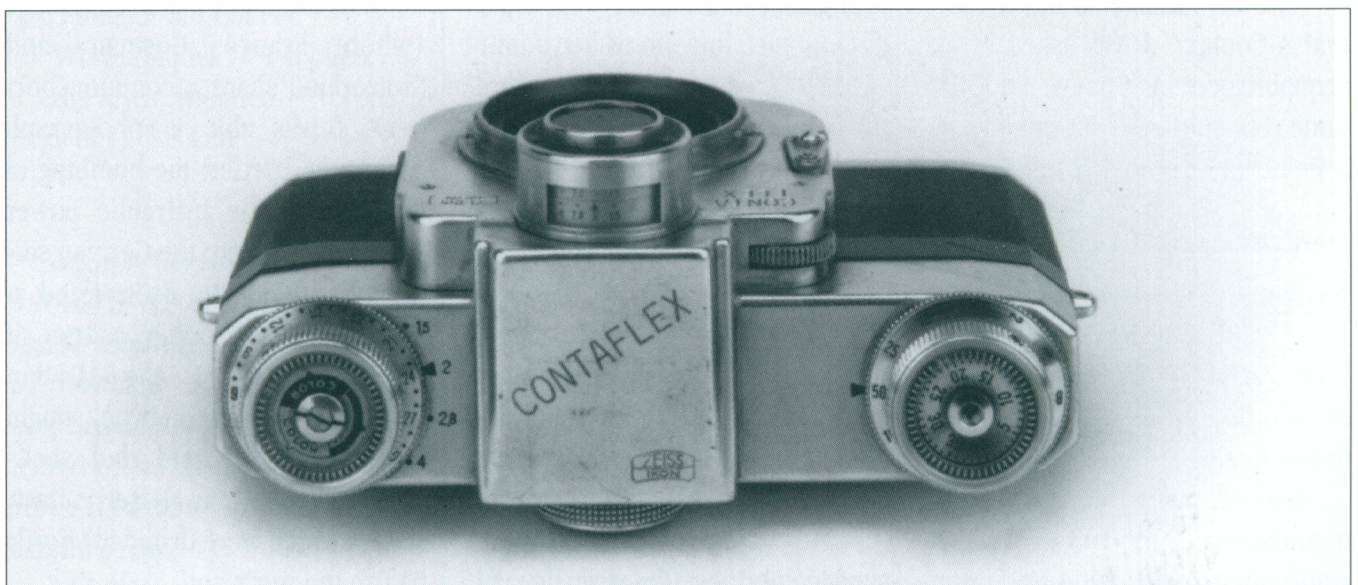
Another prototype and likely unsold lens, the Protar Apochromat 142 mm F6.3 No. 73329, a high color correction lens, is historically important because its pre-1900 serial number indicates its historical importance and its being more than 25 years ahead of the industry.

In addition, two unheard-of lenses (to this reader): an Anastigmatic Weitwinkel (wide-angle) 61mm with an incredible serial number 186, and an Epiotar 80cm F/5 No. 322769, circa 1919-1920, belonged with a group of rare lenses: Amatar, Magnar, Unar and others.

One of the two Magnars (45cm, F/10) had a late and unusual serial number 530995a (circa 1923). The lower case "a" after a Carl Zeiss

photographic serial number was another one of those mysteries, as well as an engraving on the lens mount VK-77. This indicates that originally this lens coupled with a prototype camera #77 seemed probable.

Well, another happy afternoon with this interesting Christie's catalog. Lots of significant and noteworthy goodies for ZH members. Other exotica included Flektoskop, Flecktometer, 180mm direct Contax mount Sonnar, Ikolux projectors et cetera. This catalog provoked lots and lots of interesting new questions. Your comments are always welcome, and many thanks to Michael Pritchard, Associate Director, specialist in Cameras and Optical Toys for Christie's, 85 Old Brompton Road, London SW7 3LD. He has nine auctions scheduled for 1997.



The prototype had a dummy meter, a helical focusing rear finder lens, a working self-timer and an interim lens mount for which there are no known lenses.

Hymn to a Small Camera

Hanns U. Christen, Basel, Switzerland

The camera had already been through a lot before it reached me. Its owner had lived in concealment for a year. He was hiding from people he had not known earlier: Hiding from authorities who would have sent him to the gas chambers of Auschwitz.

He arrived, equipped with false papers, at the Swiss border. At night, in fog, he crossed it. If it hadn't been for a Swiss Army patrol which valued humanity more than the law, he would have been turned over to the police, then deported and sent to his death in the gas chambers.

So he remained in Switzerland. But the little camera that traveled with him had to be sold. He needed money.

"Would you like to buy a camera? A Contax?" I was asked by an acquaintance. A Contax had the same reputation among cameras as a Bentley did among automobiles. "Indeed I would. But how much is it," I replied. Two hundred francs was the price...a lot of money for a young journalist. Said my friend, "You can pay it off in installments." He said no more. Nothing about its owner nor his destiny.

And so I acquired a Contax I, manufactured in 1934. With it came the world famous 50mm

Tessar f3.5, codeword "idiky", and a brown leather Everready case with a deep scratch on it. Only years later did I find out what had scratched it. In his flight, its owner had crawled through a barbed wire entanglement. He still carried its marks, as did the case.

For two years, I paid off the installments. The first time I proudly hung the Contax around my neck, one of my colleagues said to me, "So - you have a Contax. Respectable people have Leicas." But I remained among the unrespectable, and my little Contax rewarded me. It did its duty faithfully and uncomplainingly. And it saw a great deal that other cameras did not.

The first thing it saw was a young lady in a bathtub who wanted a picture for one of her admirers . . . of whom she had several. One of them later killed her out of jealousy.

A while later, the Contax made a group picture. It was of refugees who had finally gotten visas to come to the USA. They wanted to give the picture to friends in Basel as a souvenir. But they never reached America. Their plane crashed at sea, leaving no survivors.

The Contax photographed many celebrities: film stars, literati,

painters, military dignitaries and so on. (Swiss) General Guisan was one of its favorite models. One particularly attractive shot taken in the Jura mountains showed him addressing his regiment. I photographed him through a group of officers, all mounted on horses. The General was framed by an oval ring of horses' legs, like a Biedermeier portrait.

I had to show the photo to the censor. He looked at me as if I were a criminal (he was a lawyer) and said, "You're crazy. Something like that can't be published. It would reflect on the dignity of the General." I sent the photo to the General. It pleased him a great deal, since he was very fond of horses.

As the war neared Basel (where France, Germany and Switzerland share a common border), I was able to photograph across the border: the bombing of the dam at the hydraulic power plant near Maerkt; the German soldiers who fled into Switzerland at Lysbüchel (the frontier quarter of Basel to France); the Alsatian women and children who sought refuge in Basel; and dud shells strewn around the Basel railway station which were dropped shortly before the war's end.

Contax CGCM Camera

Nicholas Grossman, Rockville, Maryland

The Contax also photographed the French army entering Stetten am kalten Markt in Germany. (Stetten lies approximately 135km/84 miles NE of Basel and 100km/62 miles SSW of Stuttgart.) As this historic event took place on German soil, a woman lay on her roof terrace reading the National Zeitung, a newspaper from Basel having a slight socialist touch. Just a day earlier that would have been a crime serious enough to land her in jail, if not worse.

When I could travel again, the little Contax accompanied me to three continents. It saw a lot, and recorded it all faithfully. Its leather case became a little shabby. Some of the glow of its black enamel disappeared. But it kept on working. And it still does.

Recently, I took it out of the cupboard, hung it around my neck, and went into town. A complete stranger saw it and said to me, "Isn't that an old Contax?"

"Yes, a Model I," I replied.

His eyes widened. "You're a lucky one," he said.

Hanns Christen is a Swiss journalist whose column in the Baseler Zeitung carried his story on November 19, 1994. Member Siegfried Schaub of Basel sent the article to us. In 1995, Bill Stone translated the story with Mr. Schaub's help.

A new generation of camera bearing the Contax name was introduced at the 1974 Photokina in Cologne, Germany. Designated RTS, an acronym for Real Time System, it reflected the sophisticated electronics of the day. The camera resulted from the cooperation of Zeiss, West Germany, Yashica, Japan and Porsche Design Group of Germany. Since the first Contax RTS, many new models-all bearing the proud name of Contax-reached international markets. All except one. Its designation is CGCM.

What is a CGCM?

Good question, because no catalog or literature about this model

exist. What follows results from detective work, and perhaps some one reading this may help to unravel a mystery.

This camera, designed to photograph a computer video screen for photogrammetric work, has a modified Contax 137 MD body and a fixed single shutter speed. A light meter, self-timer, diaphragm step-down preview button, and provisions for flash photography of the standard Contax 137 MD were omitted. Also eliminated was a built in battery compartment of the 137 MD.

For shutter operation and film advance, a separate external power source was required. Since this camera was intended to be used in a



Contax 137 MD's rear view has ASA and DIN readings.

laboratory in conjunction with computers, a special power supply was provided that converted the 115 volt AC line voltage to low voltage DC. A DIN type 5-prong plug was built into the base of the CGCM and connected to a low voltage DC power supply. This was a logical approach to a perfect union!

So what does the acronym CGCM mean? Even that is lost in history. According to the best sources: Computer Graphics Camera Mechanism.

The CGCM in Use

The CGCM is placed in front of a video screen displaying black and white images taken with surveying cameras. Any Zeiss or Yashica lens with the RTS bayonet mount that

can focus on a video screen is suitable. Three rotating color filters are placed in front of the camera lens as part of the CGCM set-up. The technician then takes three consecutive pictures of the same subject, one through each color filter to obtain three color separation negatives. The three images are then processed and adjusted in the photo-lab, producing desirable pictures for the photogrammetric requirements. A dictionary defines photogrammetry as "the science or art of obtaining surveys by means of photography."

Who Specified and Serviced these Cameras

According to some sources the cameras were built by Yashica in

Japan to meet USA design specifications. Shipped to the USA for marketing, Yashica USA also provided special accessories, including power supplies, and serviced the camera as needed. Two distributors, one in North Carolina and one on the West Coast, serviced their respective territories. The best estimate is that 2000 CGCM bodies were made, and cost about twice as much as a standard Contax 137 MD.

Is This a Collectible Item?

A small home-made battery-operated power supply demonstrated how the camera functions. Most likely this model will be a collectors' item.



A modified Contax 137 MD shows a DIN type 5 prong plug built into the base of the camera.

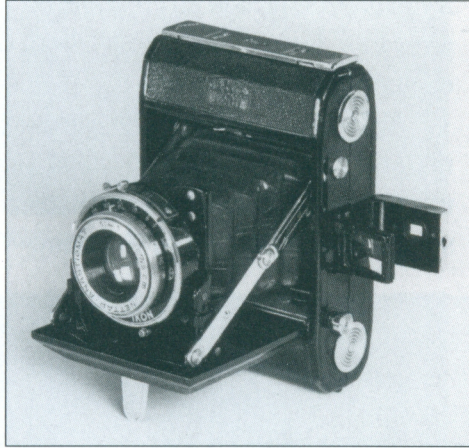
Further Nettar Nattering

Joseph K. Brown, San Antonio, Texas

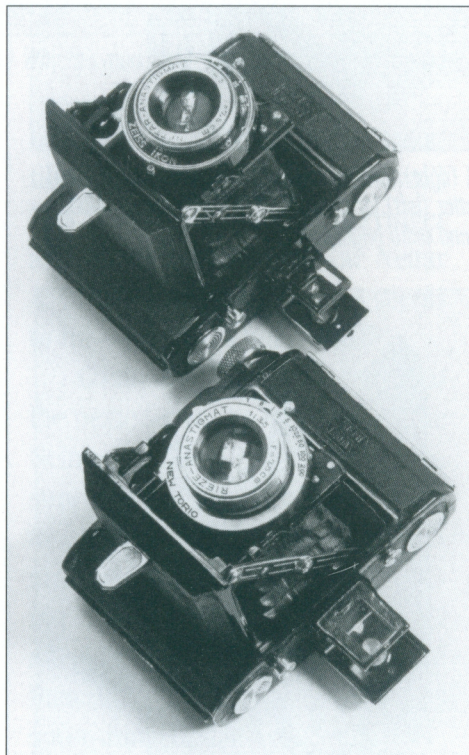
What is the mysterious attraction that Zeiss Ikon Nettars radiate, even in the 1990s? At a recent photographica show in Austin, Texas, the camera buying public gravitated to this rather proletarian camera, the Nettar 518/16. On a table filled with a distinguished company of some two dozen European cameras dating from the 1920s to the 1960s, easily the Nettar outshone them all. It was the most handled and looked at piece.

Clearly the uncommon Nettar 516, introduced to Zeiss Ikonophiles in fall 1996 Zeiss Historica, had - and has - an attraction all its own. Its more common sibling, the Nettar 515, is much better known, being listed in the newly reprinted Zeiss Ikon 1938 Hauptkatalog, and is also well illustrated in an often used standard reference source, the British Journal of Photography Annual of 1939. It is a veritable gold mine of information on cameras of the interwar period. The BJP also shows a problematical Nettar B, a 6x6cm format Nettar also discussed by Maurice Zubatkin in ZH, spring 1986.

Speculating on the Nettar 516's unusual status prompts the observation that its known wartime dates of late summer 1940 to autumn 1942 (as revealed by the printed codes on the literature that illustrate the journal's article) place it



The smallest model in the Nettar series, 4.5 x 6 cm, with a Nettar Anastigmat lens (Nettar 515) stood midway between the Box Tengor and the Super Ikonta. Zeiss Ikon's 1938 catalog touts the Nettar series as resembling the Ikonta.



The Nettar 515 and one of the many clones it inspired, the Semi Leotax of the Showa Optical Company, dated to the 1950s according to the Collector's Guide to Japanese Cameras, page 82.

at the time of diminishing production of non-essential civilian goods in Germany. The journal shows a Nettar brochure aimed at the Finnish market, dated October 1942, a time when the Germans had reached their last great effort at Stalingrad on the Russian front. This was a time when the manufacture of virtually all German amateur photographic goods halted. Logically it follows that relatively few 516 Nettars were produced and, being an extra-cost item, that even fewer were sold.

The small Nettar's midmarket equivalent, the 4.5x6cm Ikonta 532, came regularly equipped with the double exposure prevention device that made the Nettar 516 more costly. The Ikonta carried a better optical front end in terms of its lens and shutter options (see Hauptkatalog) and it had a more robust strut suspension system. Of course the Super Ikonta 521 with its coupled rangefinder surpassed in specification both the Nettar and the Ikonta - a typically stairstep gradation of price points and quality features characteristic of Zeiss Ikon's marketing strategy.

It appears that the Nettar 516 with its double exposure prevention capability anticipated such better Nettars of the postwar period as the Signal Nettar, an inspired name given to a still rather pedestrian

model that showed the photographer a red dot (the signal) when the camera was ready for another exposure. In the USA photo press, this model was sometimes designated the Nettar IIB.

Features such as the above, though commonplace, engage the Zeiss Ikon collector as does Nettar's position as metaphorical footman on the elegant coach of

Ikonta. Its affordability, its somewhat enigmatic qualities, its proximity to upmarket models with which it shares a basic design, and its magic Zeiss name all combine to give this Everyman's Zeiss Ikon camera a loyal following.

Nettars re-entered the photo market after World War II only in the 6x6cm and 6x9cm sizes as shown in *Cameras From Germany*,

a 1950 publication of the German-American Trade Promotion Company.

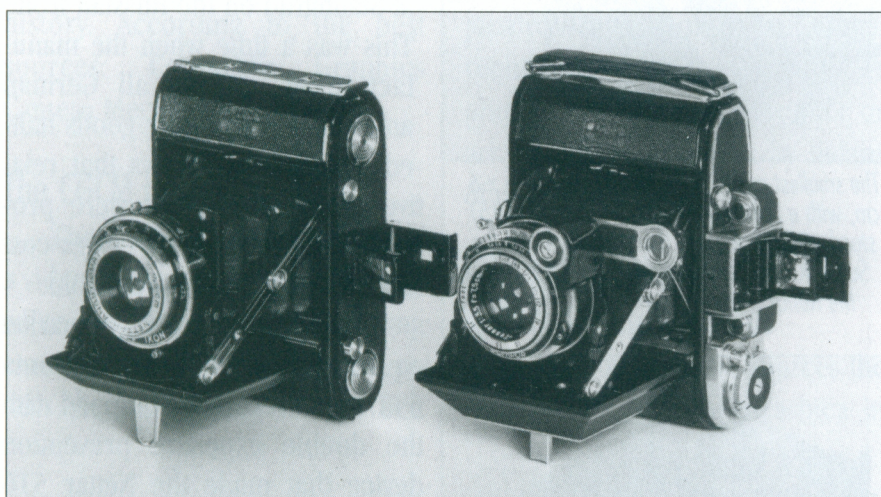
Thanks to members Larry Gubas and Clarence Havlin and to Nemo Antiques of San Antonio for help with this article.

Dear Mr. Gubas,

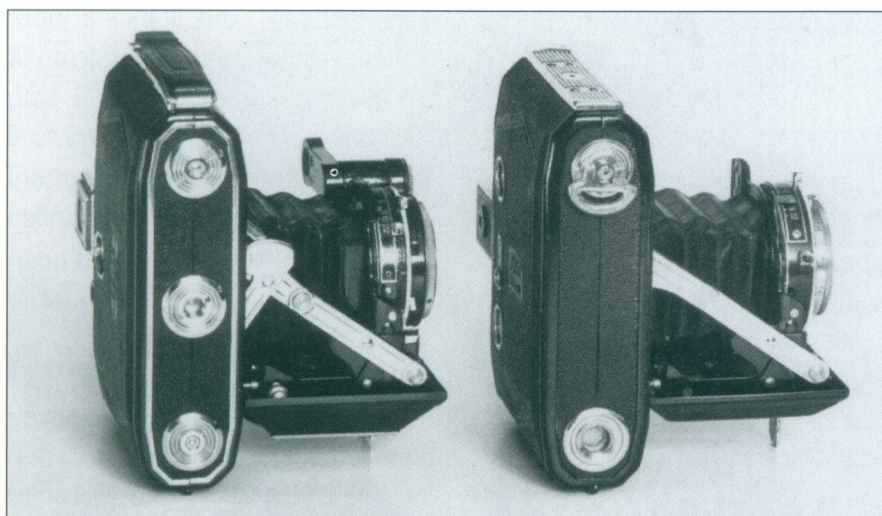
I believe I may shed some light - or perhaps add to the confusion about the Zeiss Nettar 516 (ZH fall 1996).

I have a camera identical to those described and pictured in the article. Mine is marked an Ikonta 521 instead of Nettar 516. The struts belong to the Nettar, not the Ikonta, as pictured in the 1936 catalog (Ikonta 520) or 1953 catalog (Ikonta 521).

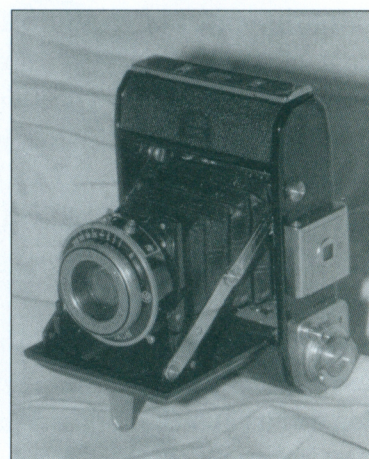
Like the Nettar 516 described in the article, my viewfinder is unautomated as well, and as one



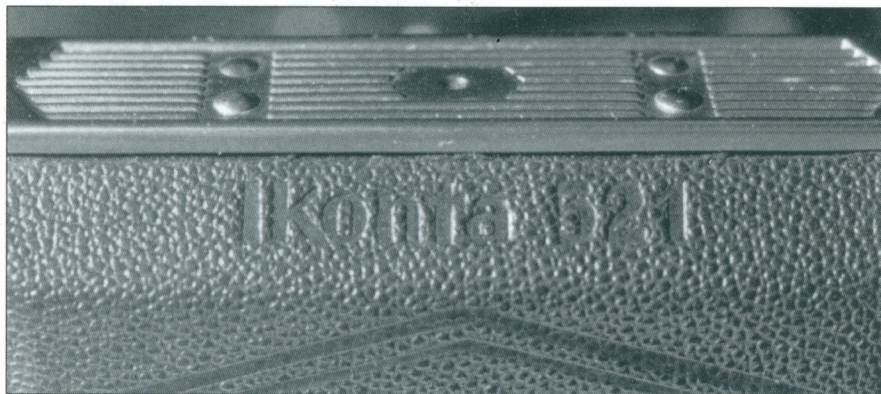
More cash - more flash. Zeiss Ikon Super Ikonta A (right) carried the top line Tessar lens in a Rapid 00 shutter timed from 1 sec to 1/500th. The Nettar (left) lacks the Super A's rangefinder, Albada viewfinder, fast lens, and extra brightwork.



Postwar Super Ikonta A (left) shows evolutionary styling changes mainly chrome trim that differentiate the Ikonta from its humbler relative the Nettar. Note that the film metering mechanism of the later Super A eliminated the dual film windows still in the Nettar.



Nettar 516 characteristics one strut, unautomated viewfinder, back latch instead of a strap, carries a double exposure prevention device, wears a novar Anastigmat lens, and probably a Klio shutter.



Ikonta 521 stamped where Nettar 516 should appear. Note the Nettar's back latch.



Serial number 55505 (asterisk) Why this marking is a mystery.*

can see from the photograph the back latch is not the strap of the Ikonta. The lens is a Novar anastigmat and while the shutter is not marked, it appears to be a Klio. My serial number N55505 followed by an asterisk is unexplainable. So far, I've found no references or mention about this asterisk.

Simon Worsley's article in ZH fall 1993 dates the serial number to 1940, and since the distance scale is marked in feet, I believe it was made for the American or British market. I purchased the camera in the USA.

The literature I have is limited and I've been unable to find definitive dates for the Nettar A. Tubbs

lists 1934 to 1938 for the production of the Nettar 515; McKeown's lists it as 1937 - 1941; Barringer and Small have no postwar Nettar A. Production of the Nettar A seems to have stopped about 1940.

Could the Nettar 516 have been the next step in the evolution of the Nettar A, adding the double exposure prevention? Had the decision to halt production of the Nettar A around 1940 influenced the renaming of the Nettar A to Ikonta 521? After the Nettar A's were sold out then only the Ikonta A remained as a non-rangefinder 4x6 camera.

*Sincerely,
Ronald K. Gratz*

Zeiss Ikon British Catalog Forward 1938

"Right at the other end of the scale a new series of Nettars has been produced, the prices of which are considerably lower than hitherto, and we are now in a position to claim that cameras of Zeiss Ikon quality are now within the range of every amateur photographer. This extension of the Nettar series may appear to experienced photographers to be overshadowed by other and more spectacular Zeiss Ikon introductions, but after all comparatively few of us are experienced experts, and there are still a large number of amateurs who are not interested in owning a camera that will do everything under the sun but stand up and talk. The holiday snapshot shooter is in many cases perfectly satisfied with a camera that has a limited range of service, provided that within this range it is as efficient as it can possibly be, and it is on this account that we recommend the new Nettar series to the attention of the reader."

Along with his letter, Ronald Gratz sent the entire foreword from the 1938 Zeiss Ikon British Catalog from which the above originated.

Response from Larry Gubas

Still more on the Saga of the Nettar 516. I, too, have at least one camera with an asterisk at the end of the serial number but have no clue to why it appeared there. Still another mystery. Someone must know. Perhaps that person will enlighten us.

LICHTSTRAHLEN

Light Rays: Notes of Interest to those Interested in Zeiss and its History

Book Reviews - By Larry Gubas

A resurgence of information in wonderful detail and pictures about the history of Zeiss personalities and products is now coming out of former East Germany. The archives of the firm Carl Zeiss and the Optical Museum were well preserved during the communist years, and now many German authors are accessing their information for books and articles of considerable depth. In a fortunate visit to Jena, I was able to find two major examples which I pass on to you. All are available in German only.

Carl Zeiss und Ernst Abbe - Leben - Wirken - Bedeutung (Carl Zeiss and Ernst Abbe - Their Lives, Accomplishments and Significance) by Rüdiger Stoltz and Joachim Wittig, 566 pages, 1993 by the Jena University Press via Druckhaus Meyer in Erlangen, Germany. This charming book holds many novel illustrations and pictures. It is a collection of essays and articles on both Carl Zeiss and Ernst Abbe by many different authors. A most charming section is the collection of the many times that Carl Zeiss's name appeared in Jena's newspapers. Weddings, births, founding of the firm, special appointments and anniversaries, as well as an advertisement for a pair of gloves lost by Mrs. Zeiss, are mixed with advertisements for apprentices, new products and notices of the firm moving to new locations.

Carl Zeiss - Die Geschichte eines Unternehmens 1846 - 1905 (Carl Zeiss - The History of an Enterprise 1846-1905) by Edith Hellmuth and Wolfgang Muhlfriedel, 343 pages, 1996 published by Böhlau Verlag, Puschinstr. 1, D-99423 in Weimar, Germany. This is a history of the firm during the lives of Zeiss and Abbe and is Part I with two more volumes to come in 1999. The second volume, covering 1905-1945, is by Rolf Walter, while the third covering 1945 - 1990 is another by Hellmuth and Muhlfriedel.

Hellmuth has been the archivist for Carl Zeiss, Jena since 1978 after a long technical career, whereas Muhlfriedel taught at the Friedrich Schiller University in Jena until his retirement in 1995. Their history details the growth and personality of the firm from its founding as a one person operation that counted nearly 300 employees under Carl Zeiss. Under Abbe's product expansion it began to grow into an operation with 1,100 persons. Many charming pictures fill the books, including one of the Zeiss optical scientists meeting with German artillery procurers in 1905, and another of Abbe's first group of physicists who would help him revolutionize optics. A copy of the trademark approval for the now famous Carl Zeiss Jena logo in the achromat lens doublet appears in the four color illustrations at the end of the book.

If you want additional information on these books, please contact me. I'm on the membership list.

Two Treasuries of Binoculars - Especially Zeiss Binoculars

Some years ago, I wrote a small but detailed overview of Zeiss binoculars for this publication, (Zeiss Historica, S '90, pp.5-14) because I could find little detail anywhere except in those few product catalogs I'd been able to find. Anywhere else has now come, twice. Thanks to Hans Seeger who published the first definitive book on binoculars in 1989.

The title of the first work is Feldstecher-Ferngläser in Wandel der Zeit. Published in German, its 150 pages of pictorial history document the commercial binoculars and some military items as well. Illustrations and tables are revelations of detail put together for the first time. Now, one can see the developmental history of Zeiss binoculars organized in a table, laid out clearly and understandably, and totally useful. A chronological history of Zeiss and Hensoldt binoculars, with their trademarks, model names and numbers are also included. Even serial numbers began to make sense, nevertheless, to purchase the book in 1989 was an adventure. I had to rely on a German friend to locate and to purchase it for me.

Since 1994, Hans has been a member of ZHS and has given a presentation at one of our European meetings. The great news however, is his new book, *Militärische Ferngläser und Fernrohre in Heer, Luftwaffe und Marine* (Military Binoculars and Telescopes for Land, Air and Sea Service). The depth, detail and illustrations are exceptional. First, it's the size of a college textbook having 480 pages with 800+ illustrations. The pictures show military optical products manufactured by the Zeiss firm for the Prussian military in the mid-1980s.

Additionally, Hans was able to work with other outstanding collectors and experts for this latest book featuring captions of all 800 illustrations in both English and German. Two chapters are totally in English. Explanations of cold weather markings on binoculars, manufacturing data, exceptional references for further reading, a dictionary of German binocular and military terms, and a thorough index make the volume extremely useable.

The assemblage of expertise and illustrations exceeds my highest expectations. I highly recommend this new book and the earlier volume as well. Hans has made each book a valuable asset for your library because there's little duplication of information. While Zeiss products feature most prominently, the major products of other firms and other countries are clearly and deservedly presented. German firms such as Busch, Goerz, Leitz, Schneider,

among many others, as well as non-German major firms such as Bausch & Lomb, Ross, Barr & Stroud, Huet, and many more are given their due. This is a work of scholarship unlikely to be seen again.

Luckily, both publications are now much easier to find. In the USA, both books are distributed by member Mike Rivkin's SCM Corporation

(PO Box 7518, San Diego, CA 92167). The cost for the new volume is \$120 plus about \$5 for shipping. For European and other members, contact Hans Seeger directly at Mainzer Str 25, D-65185 Wiesbaden, Germany. If you have any interest in binoculars, these books are a must for you. Check your membership list for telephone and fax.

Zeiss Ikon Safelight

Lawrie Morton, Foxton, New Zealand

Sometime ago I helped a friend clear rubbish from the back of his garage, and LOOK WHAT I FOUND!

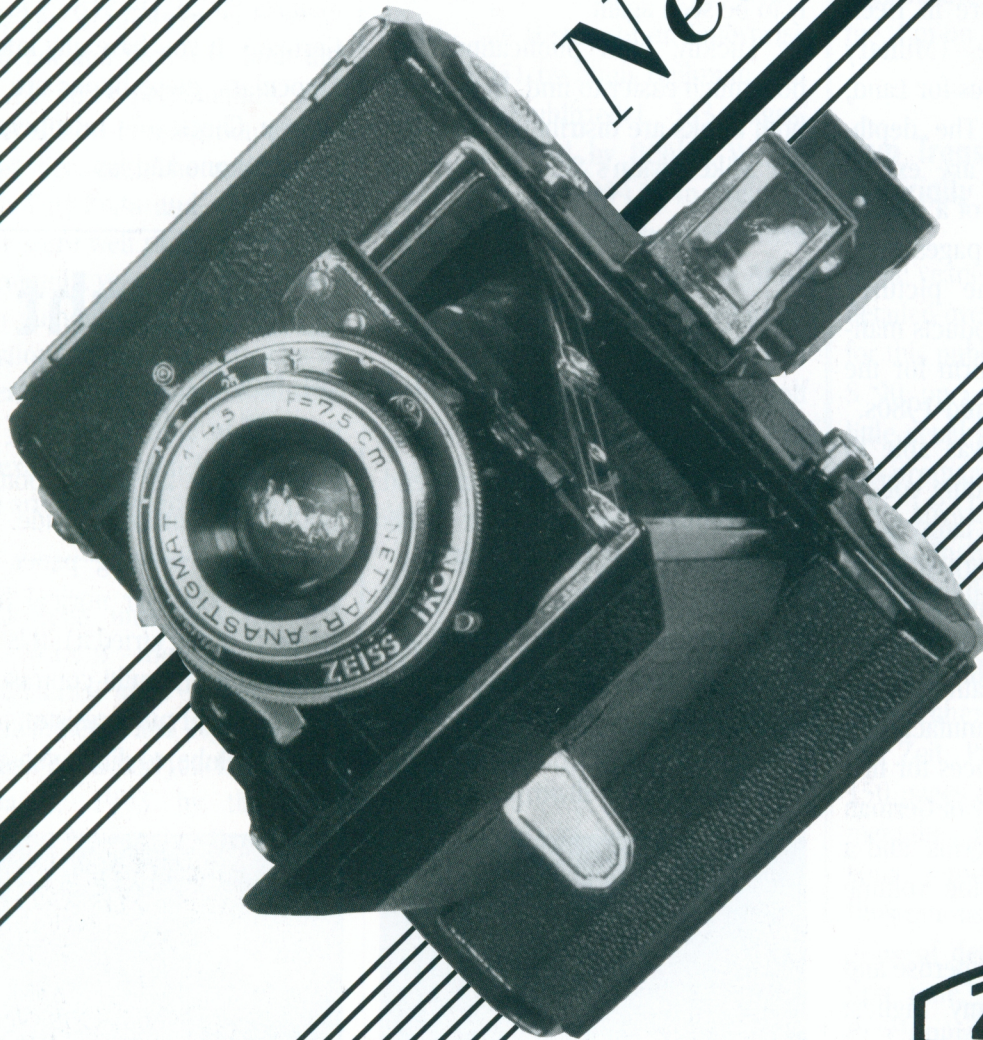
Based on the article by Larry Gubas, *Zeiss Historica*, fall 1996, pp. 23-25, this safelight would have been made between 1926 and 1935.

The glass is brown, about the

same colour as a beer bottle, and holds a 15 watt bulb inside. It's fine for contact printing paper, and it might be O.K. for normal bromide paper (I haven't tried it). It is not safe with modern, multi-contrast paper, but is O.K. if I put a resistor, in series with the globe, to dim it substantially.



Nettar



ZEISS IKON AG. DRESDEN

*The Nettar 515, 4.5 x 6cm, the smallest model of the Nettar series resembles the Ikonta as to variety of lenses and shutters available.
Photograph and cover design by Joseph K. Brown.*