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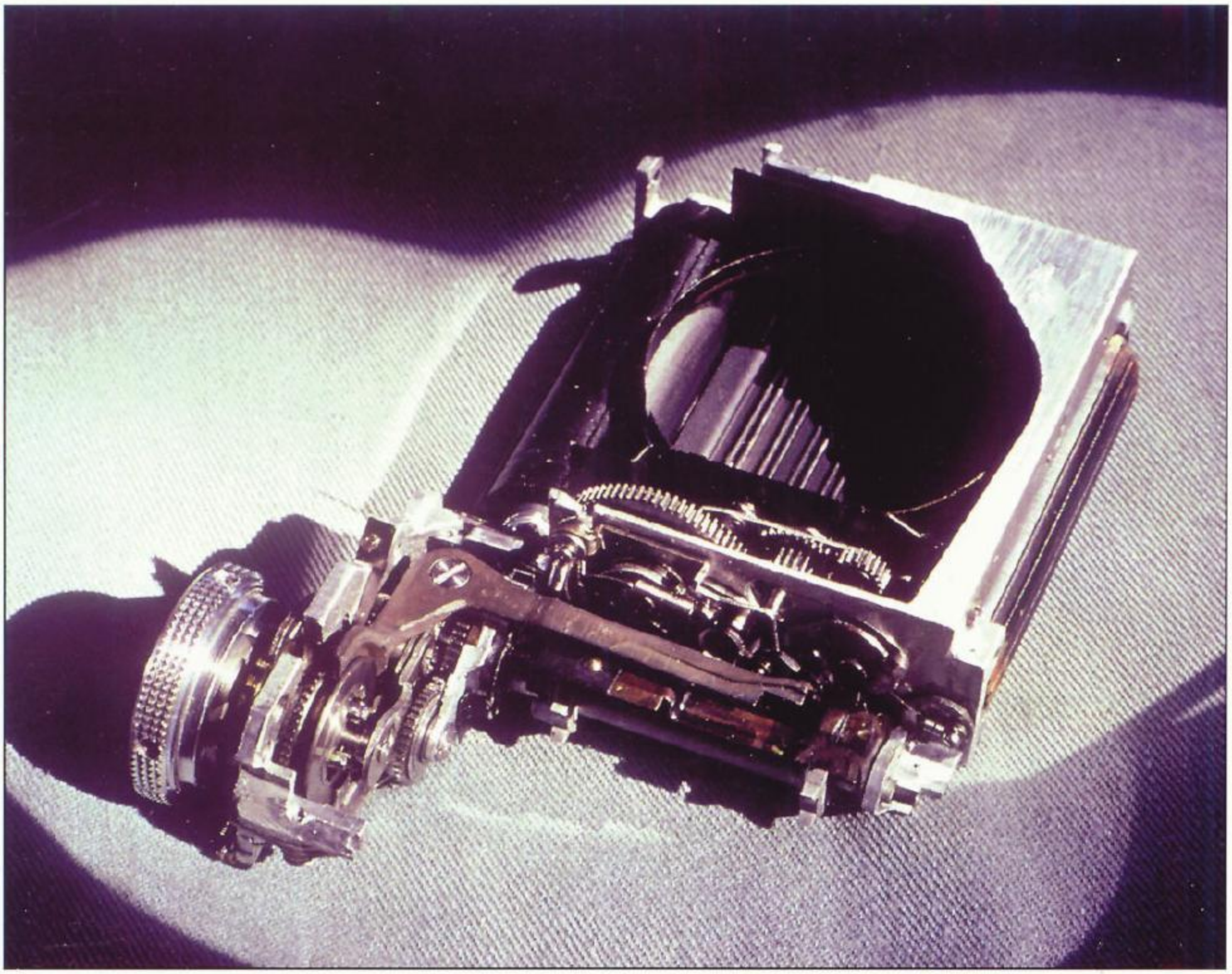

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The Zeiss Historica Society of America is an educational, non-profit organization dedicated to the exchange of information on the history of the Carl Zeiss optical company and its affiliates, people and products from 1846 to the present.

Material for the journal can be sent to the Editor at 73 Winsor Place, Glen Ridge, NJ 07028 (e-mail: jscott@viconet.com) or to any Officer. Please send all other correspondence to Zeiss Historica Society, 300 Waxwing Drive, Monroe Twp. NJ 08831, USA. Annual membership dues: $35 (USA), $45 elsewhere. Dues include subscription to Zeiss Historica, airmail postage overseas.

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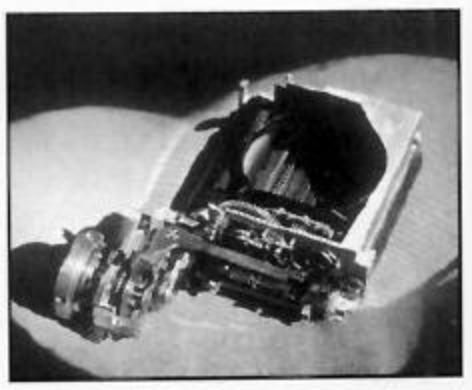
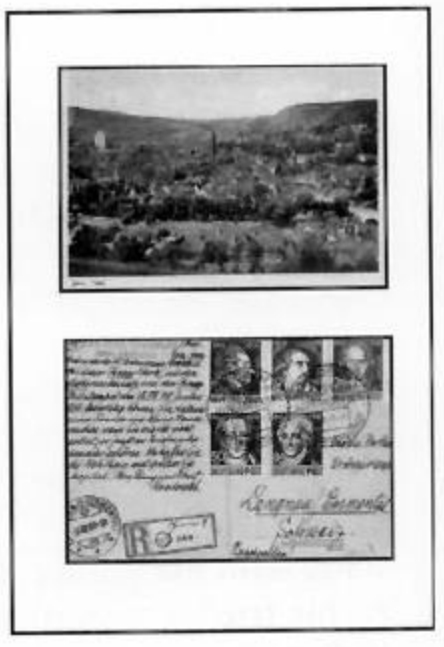
Front Cover: *To illustrate his article starting on page 8, Peter Hennig has photographed a shutter from a Contax II, probably built in 1938. This type of shutter was made from the first Contax in 1936 to the last Kiev in 1986.*



Back Cover: *A postcard sent from Jena by Ernst Wandersleb in 1949, on Goethe's 200th birthday, to a friend in Switzerland.*

(From the collection of Larry Gubas)



President's Letter

It has been an eventful few months. In this issue, our Journal has so many new perspectives that we were not able to fully document the events of our wonderful annual meeting except via pictures (see pages 20–23). We will, however, have a place for these discussions in a forthcoming issue.

I had the pleasure of visiting Jena and Dresden during the week immediately preceding the meeting, and brought back some new information on the Jena Contax. I met with the former head of the Carl Zeiss Astronomical department, Hans Beck, and a former constructor of the Jena Contax, Werner Widder. I spoke briefly at the 75th anniversary celebration and exhibition at the Technical Museum in Dresden commemorating the founding of Zeiss Ikon. I met several Zeiss celebrities there, including: Wolfgang Jacobi, who designed the Flektoskop and other scientific devices for the Contax in the 1930s; many very kind people who had worked at VEB Zeiss Ikon and Pentacon; Dr Helmut Lindner, the Director of the Museum; and Andrea Abend who prepared the exhibit and the meeting. Earlier, I met with Bernd Otto, who is the author of many treatises in German on rare and unusual Zeiss Ikon products and prototypes. In this issue, we are offering the first installment of his series of articles on rare Contarex prototype cameras. I met also with old friend and collector extraordinaire, Kurt Jüttner, to whom I still owe a dinner, and two new friends Alex Schulz and Herbert Blumtritt, with whom I also celebrated with tasty Dresden meals and toured the city. I toured the Technical University of Dresden classrooms where Professor Goldberg and Dr Küppenbender lectured thanks to Dr Klaus Mauersberger who also showed me the University's unique collection of Photographica.

I have corresponded with member Larry Tieger, who informs me that Hans Hensoldt (see Spring 2001) had formed a firm before the Second World War just outside of Wetzlar to manufacture binoculars. This was confirmed to me by folks at Hensoldt who gave me a copy of a new book by Karsten Porezag who is in the midst of a near epic-sized history of the firm. The first volume is now available in German and starts with the family history, his friendship with Karl Kellner who founded what would become Leitz and the firm's history until 1903. Thanks to Larry for the information; please question our material. It makes for better communication and information.

These contacts and travels have left with me with more projects than I can handle and so I have farmed out some of the materials that I have gathered to learned friends to have their input as we go forward. Two projects in which I would like to enlist some help are the following. I am collecting serial numbers of all Zeiss lenses for cameras to set up a database for future use. In this file, I am looking for all photographic lenses manufactured by Carl Zeiss Jena up to 4,000,000, all serial numbers of Opton and Zeiss Opton lenses and all Carl Zeiss (Oberkochen) lenses to 2,000,000. I am also seeking camera serial numbers for all Zeiss Ikon cameras before 1960. Once I have this reasonably completed, I will share with anyone seeking to do research. I have collected some 1900 records since January 1st from various sources, under the following headings: Lens Trademark, F-stop, Focal Length, firm, Serial Nr., Camera Name, Camera Nr., Comments.

Planning is underway for an international meeting of binocular collectors and others who are interested in the subject on 15–16 July 2002, at Herne, England. It appears likely that there will be participants from England, USA, France, Germany, Italy, Denmark, and elsewhere. Plans include papers, displays, tours of Dover and viewing the spectacular scenery, a swap meet including dealers and collectors, and planning future meetings (possibly involving a society or organization). If you have an interest in attending or the intention to do so, please let Peter Abrahams (telscope@europa.com) or Steve Rohan (binoptics@earthlink.net) know.

Now, we have to search for someone as interesting as this past meeting to address us in the Fall. Please let me have your suggestions. Note that I have changed my email address to Lngubas@optonline.net. Feel free to use it. The website (www.zeisshistorica.org/) has been updated by adding a new page, and updating the list on the articles. I will add to the site again in late June and would like suggestions for changes and additions.

Dr Erhard Glatzel
25 October 1925–4 February 2002
The greatest lens designer of the modern era

"Trauere nicht, dass das Leben voruber ist;
sondern freue dich, dass es ein gutes Leben war"

From draft to model:
The first steps toward the Contax S

Alexander Schulz, Eppelsheim, Germany

Drawings and photographs from Dresden reveal the original conception of the Contax S by Wilhelm Winzenburg and the development of the design in 1945 and 1946 before its public unveiling in 1948

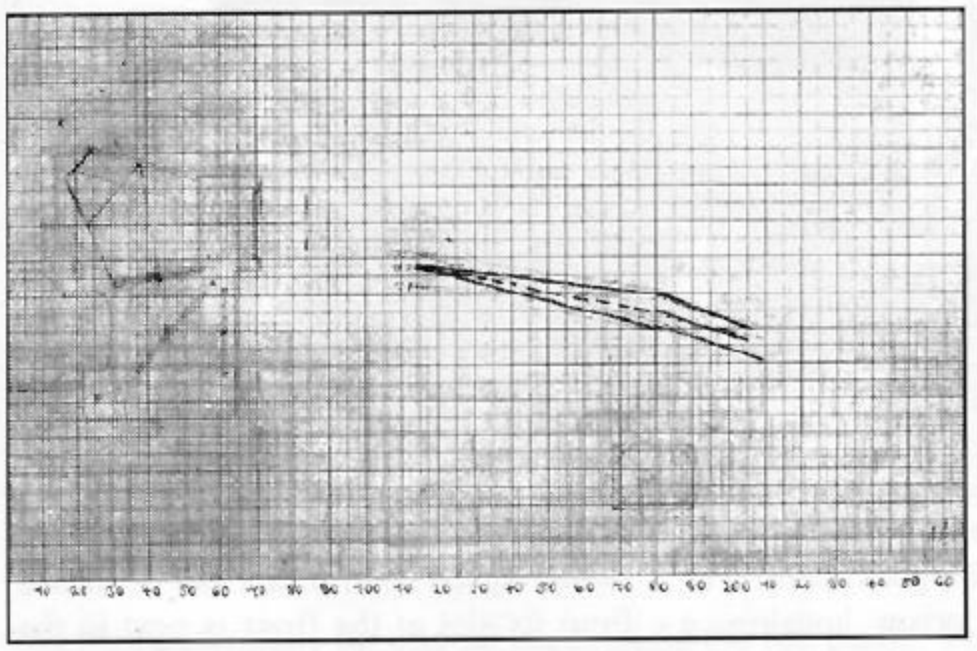
Times really were depressing in Germany during the summer of 1945. The Berlin Conference involving the three allied powers USSR, USA and UK, which had been in session for two weeks at Cecilienhof, Potsdam, terminated on 2 August. Although the Morgenthau Plan of September 1944—which would have turned Germany back to a potato field—had been rejected by President Roosevelt, the spirit that generated it continued to linger on. The Potsdam Treaty thus contained a series of unfriendly measures, among them the "orderly and humane displacement" of the people living in the furthest east German provinces to the central area of Germany and the far-reaching dismantling of the German industry.

The disassembly of manufacturing plants and their shipment to the Soviet Union, of course, affected the Zeiss Ikon Company in Dresden. However, despite greatly adverse circumstances, that ruined city eventually returned to business as usual; among the projects that started up around that time was the development work on the SLR Contax.

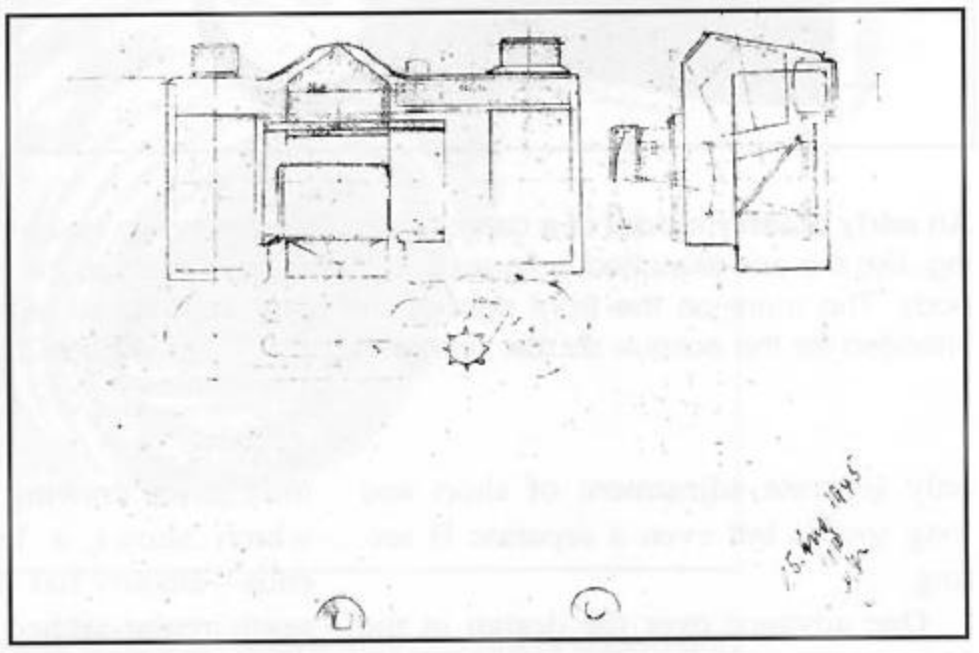
First draft, dated 11 August 1945

Among the first designs for this new camera was an A4-formatted piece of graph paper (that is, a sheet measuring 210 × 297 mm or 8.3 × 11.7 inches), reproduced in figure 1. Judging from the erasing marks this sheet had been used earlier for other purposes, as was common in that era of general shortages. It is marked with a number 4 in the left upper corner, allowing us to identify it as the fourth sheet of a design series. The right upper corner shows two smudged pencil notations. All that can be deciphered in the first one is the last word "Optik" (that is, optics). In the second annotation only the second word, "Modell" (model), can be read with confidence.

Look at the transverse section of a prism SLR on the left. Behind the obliquely lowered mirror you see a horizontally moving cloth shutter. A very fast lens—as you can tell from its size—extends into the lightly sketched front section of the camera body. A pentagonal prism protrudes from the front section of the camera, with the left upper side slanting up above the mirror. A multi-lens eyepiece is placed at the back of the camera. The passage of light rays is marked by lines (which may be hard to see on this reproduction) through the lens and on to the film plane, or reflected by the mirror to the prism and from there through the eyepiece. A sketch of the "unfolded" light beam diverted by the prism takes up the center of this sheet, showing how it diverges during its path through the camera until reaching the eyepiece, shown schematically in a frontal view at the bottom of the figure, where it is converged before entering the user's eye.



The first drawing of the Contax S. Dated 11 August 1945, this drawing shows a section of a prism SLR, on the left, and the "unfolded" light beam as it passes through the camera to the viewfinder, in the center of the sheet. Figure 1



The second drawing, dated 15 August 1945. It shows a longitudinal section of the camera, at top left, with a transverse section to the right and a top view, below. The notation at bottom right includes Wilhelm Winzenburg's signature. Figure 2

In the right lower corner there is a very clear date and signature, "11. Aug. 45 Winzenburg." The name is that of the designer of the camera, Wilhelm Winzenburg (1895–1972), who was shortly afterwards, on 16 November 1945, appointed head of the Photo Construction Department of the Dresden works of Zeiss Ikon AG.

It was thus likely that on 11 August 1945 this first sketch of a postwar Zeiss Ikon prism SLR camera was made. At that time the camera was called simply "Spiegel-Contax."[1] A horizontally moving focal-plane shutter, similar to the ones of Exakta and Praktiflex, was its most prominent feature, distinguishing it from Hubert Nerwin's "Syntax" developed during the war. It was only during the last two years of the second World War that Nerwin departed from the vertically moving metal focal-plane shutter of the Contax SLR, and ordered the work group of Siegfried Böhm to make a horizontally moving focal-plane shutter.

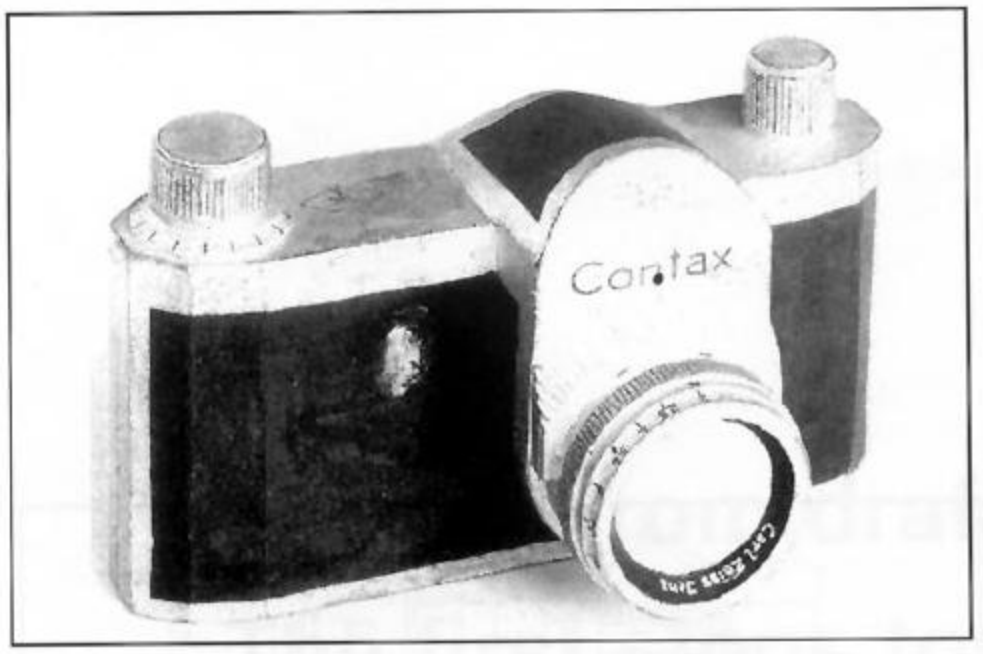
The draft dated 15 August 1945

Winzenburg did not wait long before making another drawing. Several days later he prepared another sheet of A4 paper, signed and dated in the right lower corner "15. Aug. 1945 Winzenburg," reproduced here as figure 2. It was the day of the Tenno's historic radio address declaring the capitulation of the Great Japanese Empire.

The new drawing shows a longitudinal section through an SLR camera, with a transverse section alongside and a top view shown below it.

The two ends of the camera body are rounded. At the left are the tension springs for the focal-plane shutter, and the film-transport mechanism is lightly sketched in on the right side. A circular rimmed disk sunk below the base plate protrudes slightly from the front of the camera; this is presumably a shutter-speed-setting device.

A second circle on the left side of the film transport seems to indicate the delay gear of the shutter, which can be either activated or deactivated by a small knob. The shutter-speed control of this camera has been sunk into the body right from the very beginning to avoid problems due to accidental touching, as had been the case with the Exakta and the Praktiflex. Moreover, and right from the start, the short and long shutter speeds now are combined in one place and no longer separated as they were in the Exakta and Praktiflex II (the prototype presented at the Leipzig Spring Fair of 1941). The example of the Finetta 99, made by the Sarabèr Company of Goslar, Germany, showed that this problem of shutter speeds on a single scale was indeed difficult to tackle, even in later years. The Finetta 99, introduced into the market in 1952, required not



An early plaster model of a camera with rounded prism housing, like the one sketched in figure 2, but polygonal ends to the body. The mark on the front right of the body appears to be intended for the oblique shutter release knob. Figure 3

A later plaster model of a camera with a sharp-edged prism housing bearing a Zeiss-Ikon logo. The idea of letting the shutter-speed control protrude through a slot at the front, to be turned by the right forefinger, was later rejected. Figure 4

only separate adjustment of short and long speeds but even a separate B setting.

One advance over the design in the 11 August drawing is revealed in the transverse view. The front part of the housing is shown more precisely and shows that the complete prism no longer protrudes in front of the camera body at its top. Again the drawing seems to suggest a very fast lens.

The rounded ends of the camera body have already been mentioned. The longitudinal section shows that the prism housing is designed with curved flowing lines, quite unlike the established Zeiss Ikon tradition, which preferred clear marked edges and polygonal finishing in the Bauhaus style.

Another good example of an esthetically satisfying design for an SLR camera with consistently applied rounded body shapes is the Zenit, made in the Soviet Union in the 1950s. This camera is a true successor to the Leica, not only with respect to design but also to technical details.

Model with round prism housing

In the case of the SLR Contax, however, those rounded surfaces did not produce esthetic satisfaction. This is proved by the picture of an early plaster model shown in figure 3. It is a technical hermaphrodite, because this model—contrary to the drawing of 11 August 1945, which shows a body with rounded ends—already has polygonal ends. The semicircular-arched prism housing, a residue of the 11 August drawing, marks a striking contrast. Quite unharmonious is the semicircular ridged transition to the lens, a Carl Zeiss Jena Biotar identifiable by its speed of f/2. The oblique protusion at the front of the camera bearing the shutter release knob, which is so typical of a SLR Contax, seems to have got lost—although there is a smudged light spot at its place in the housing. Just as on the drawing, this model has a film-transport knob, including a frame counter, that is larger than the rewinding knob. The scale for shutter speeds fans out dimly on the plaster surface on the right side of the film-transport knob, and a slit for the shutter-speed control is lightly drawn in on the front. The name "Contax," missing from the two drawings of 11 and 15 August, 1945, appears for the first time, below the "Zeiss Ikon" logo.

Sharp-edged prism housing

Another plaster model of the SLR Contax, which also survived only as a photograph, begins to show the outline of the camera as eventually manufactured, as we see in figure 4. The prism housing is sharp-edged, and the "Zeiss Ikon" logo is now placed on its trapezoidal sloping front face. The fan-shaped aperture revealing the knurled shutter-speed control that can be turned from its slot at the front is next to the film-transport knob. However, this idea of a shutter-speed control operated from the front was subsequently rejected. Because of the operation of the focal-plane shutter it would have to spin around upon release, and another movable part outside the housing was not what the designers wanted. The diameter of the rewinding knob is equal to that of the film-tranport knob. The selftimer is put below the oblique protusion for the release knob, a literal copy of the rangefinder Contax.

There is no solid evidence to determine the dates of these two plaster models. Since the first model is largely in keeping with the drawing of 15 August 1945, it may well have been generated during the second half of 1945.

The second model was probably made a little later, as suggested by the fan-shaped opening with the shutter-speed control protruding through a slit in the front, but it could still have been in 1945.

First functioning model

Development of the SLR Contax proceeded quickly, and within a year's time, by September 1946, two models of the new SLR camera were presented to the

The first potentially functional model. Like the two plaster models illustrated above, this camera is known only through this photograph. It may have been constructed in 1946 for presentation to the authorities in order to win funding. Note the two small knobs next to the film advance knob; they might have been speed-setting controls for slow and fast speeds. It was to be two more years before a model was ready to show at a trade fair. Figure 5

German Central Administration in order to get funding for its completion.[2] These models were not referred to as being technically sophisticated constructions, and the model of an SLR Contax—like the others, preserved only as a photograph—is no final construction either. However, we can see from figure 5 that, contrary to the two plaster models described earlier, it may have been functioning after all. It is equipped with a sunken, glazed janus-shaped housing over the speed-setting disk. The two small round knobs next to that housing look strange, though. They could be speed-setting knobs, for short and long speeds, one might think. Change of speeds via a switch at the back of the camera obviously continued to be a technical problem. The selftimer of the Contax rangefinder type had been abandoned again. Here it was released via a small press button.

The lens on this camera is not unfamiliar. The same Zeiss Ikon Dresden Sonnar f/2 5.7 cm, with serial number 33296, is installed in the famous Contax S, body number 1527, of the Technical Collections in Dresden.[3]

The camera shown in this photograph may have been a copy presented to the politically responsible elite in September 1946.

How much luck depends on the details was proven again by the development of the Contax S. Already established in outline by 1945, and shown as a model a year later, it was to be two more years before the Contax S could be unofficially presented at St. Erick's Fair in Stockholm in the fall of 1948. Another year and a half had to pass before it was ready for serial production and export to the United States.

The negatives of the drawings described herein are kept at the Technische Sammlungen, Dresden. For this information, I am indebted to Herbert Blumtritt, Dresden, who straightened out and systematized the abundant data and documents. Andrea Abend, Technische Sammlungen Dresden, kindly provided access to these documents.

References

1. The name "Spiegel-Kontax" was first mentioned in the meeting of October 22/23, 1945, with Soviet Major Turügin. Cf. Schulz, Alexander: *The early Contax of 1949.* Zeiss Historica Vol. 23, No. 2, Fall 2001, page 2.

2. Cf. Hummel, Richard: *SLR cameras from Dresden. Geschichte-Technik-Fakten (History, Technology, Facts)*, Leipzig 1994, page 109, and Blumtritt, Herbert: *Die Geschichte der Dresdner Fotoindustrie (History of the Dresden Photographical Industry),* Stuttgart 2000, page 116.

3. Cf. Schulz, op. cit. page 5. According to Kurt Jüttner, Frankfurt, these lenses have been probably made from remnants from the second World War. Another Sonnar 2.0/57 mm is shown in Otto, Bernd K.: *Die Contax S und ihre seltenen Varianten.* Photo Deal I/97, page 60. ❑

Zeiss personalities....

Hans Sauer and Harry Zöllner

Larry Gubas, Randolph, New Jersey

Hans Sauer (1904-1980)

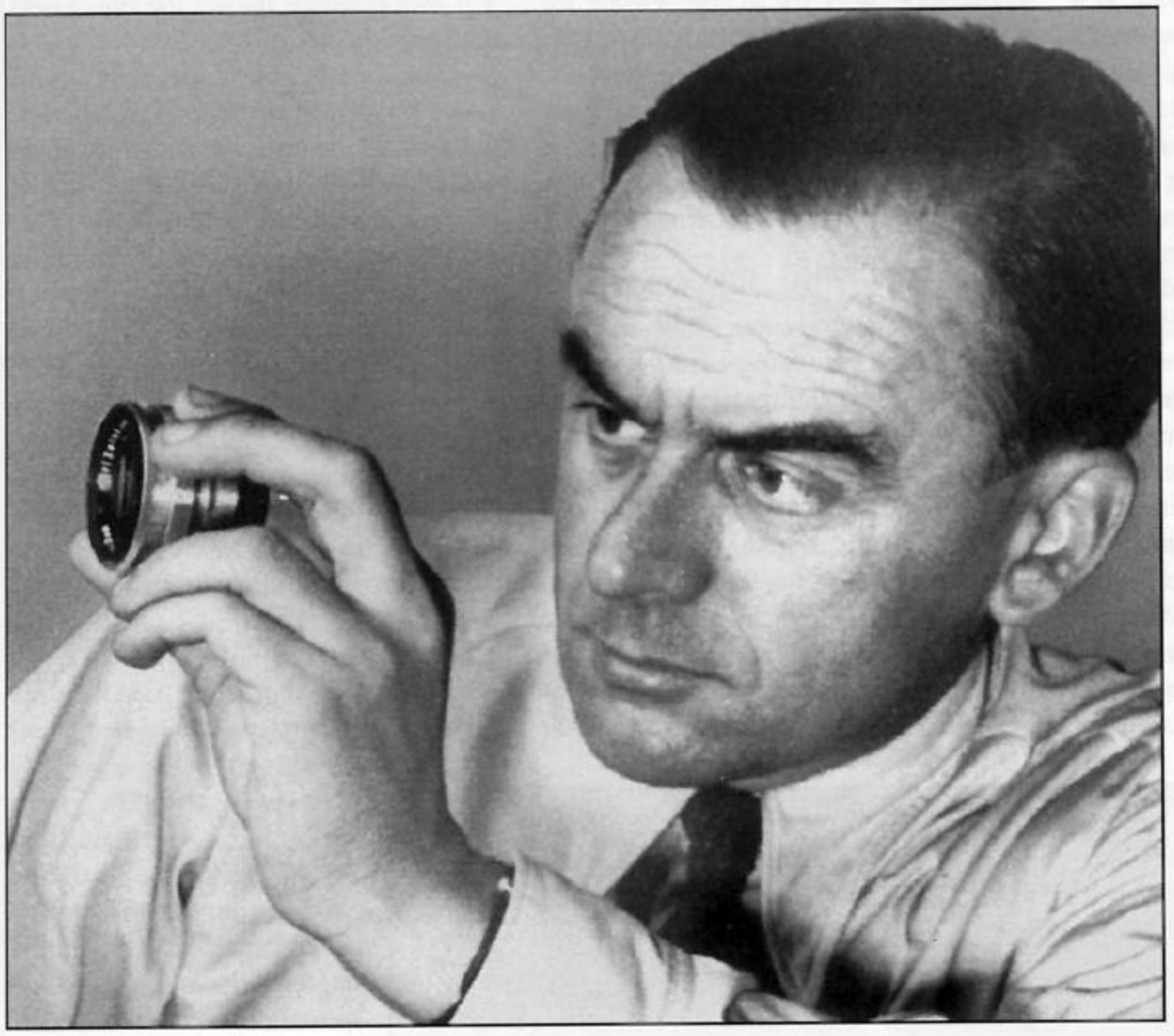
In 1928 Hans Sauer earned his doctorate from the University of Jena after receiving a good preparation in physics and mathematics. His career with Carl Zeiss began in the optical measuring-instrument department, but in 1936 he was sent to Dresden to be head of the laboratories at Zeiss Ikon. Many patents in the areas of photographic and projection devices, measurement systems and polarization can be traced to his pre-war work there. By 1941 he had become a "Prokurist," with power of attorney for Zeiss Ikon in Dresden, Stuttgart, and Berlin.

After the loss of the Dresden works of Zeiss Ikon he was taken back into the Carl Zeiss operation (then known as Opton GmbH) and given a new position as head of the Photographic Objective department in Oberkochen. At first he was hindered by the initial move of the photographic-objective work to the small town of Coberg, where a small Zeiss subsidiary, Kollmorgen, had been relocated after its Berlin plant was destroyed. (Kollmorgen made cystoscopes and other medical devices.)

In Oberkochen Sauer was soon able to begin making new lenses to the highest levels of quality and performance. In fact, his department was the first of all the reborn West German Zeiss components to produce a viable product for the market. He went on to lead the department in the consistent design and production of the most capable photographic lenses of the day for Contarex and Hasselblad cameras. Other new products from this department included the new Distagon high-speed wide-angle lenses—one with a 110° angle of view; an f/0.7 Planar, and a series of special lenses. He and his major designer, Erhardt Glatzel, promoted the designs for the US space program, working under NASA specifications for the Gemini and Apollo programs. Sauer was also responsible for the development of totally new optical products for ultra-precision photography, micro documentation, and for the preparation and inspection of microelectronics. He retired in 1971 at the age of 67.

In this issue we commemorate the reconstruction of the Zeiss Photographic Objective departments in West and East Germany under Hans Sauer and Harry Zöllner respectively.

After the Second World War all the famous Zeiss lens designers were either dispersed to new locations or were beyond retirement age. Ernst Wandersleb in Jena was nearly 65 years old and had been excluded from the plant since 1938. Willy Merte and five other leading designers were taken to the United States under military contracts, never to return. Robert Richter was primarily a designer of aerial camera lenses, and the genius, Ludwig Bertele, had left the firm in 1943 for Rodenstock; he later (1945) moved on to Wild in Switzerland. The Zeiss lens collection was, for the most part, taken to the United States and dispersed. Both new locations, Oberkochen in the West and Jena in the East, had to start from scratch.



Harry Zöllner (b. 1912)

Harry Zöllner first became acquainted with the Zeiss Works in Jena as a part-time worker while simultaneously preparing for his doctorate at the University there. Under the direction of the famous Zeiss scientists Otto Eppenstein and Albert König he earned the degree in 1938, and then went to work as a lens designer for Voigtländer in Braunschweig. He soon became the head of the mathematical department, and, in 1942, the research department.

Returning to Jena at the beginning of a very difficult fiscal year, in October 1946, he was placed in charge of the design office for optical components. At this time he also began to lecture at the university on geometric optics and other topics in optics.

With the new glasses developed by Schott Glass in 1943, and the coatings pioneered by Alexandar Smakula in 1934, many new optical designs should have been possible. But Zöllner was somewhat hindered in their development by the Russians' appropriation of his production facilities. He redesigned older lenses, such as the Sonnars, Biotars, and the Topagon, and he implemented some new designs such as the Biometar, a series of R-Biotar lenses, and his Flektogon. Zöllner also wrote many scholarly articles on these new products.

The East German firms later produced many unique cameras, some with many different mechanisms built into the lens housings. New research efforts produced some novel high-performance optical designs. But because most of Zöllner's output was destined for the Soviet markets his contributions are largely unknown in the West. Now 89 years old and long retired, he still lives in his beloved Jena and is a leader among its very active community of retired Zeiss scientists. ❑

The original Contax focal-plane shutter

Peter Hennig, Stockholm, Sweden

The shutter mechanism of the Contax I, II, III, Twin Lens Contaflex, Super Nettel, Nettax, and Kiev rangefinder cameras was a technical masterpiece, and this metal focal-plane shutter was the first to deal successfully with the problems that arise in this approach

The original Contax focal-plane shutter, first used in the Contax I of 1932, is a triumphant achievement from the minds of Professor Emanuel Goldberg and Dr Heinz Küppenbender, the men behind the Contax I. It was they, and their design team of Martin Nowicki, Arthur Mende and Mr Schiefer, who were also responsible for such other important innovations as the rotating-wedge and swinging-wedge rangefinders.

In the typical focal-plane shutter of the 1930´s the curtains run independently and their speeds increase considerably during the shutter movement. The situation is aggravated because the two curtains overlap when the shutter is in the starting position, and the two shutter curtains therefore develop diverging acceleration curves during their run. First you will get a small slit, then a bigger at the middle of the frame, then a much smaller one again.

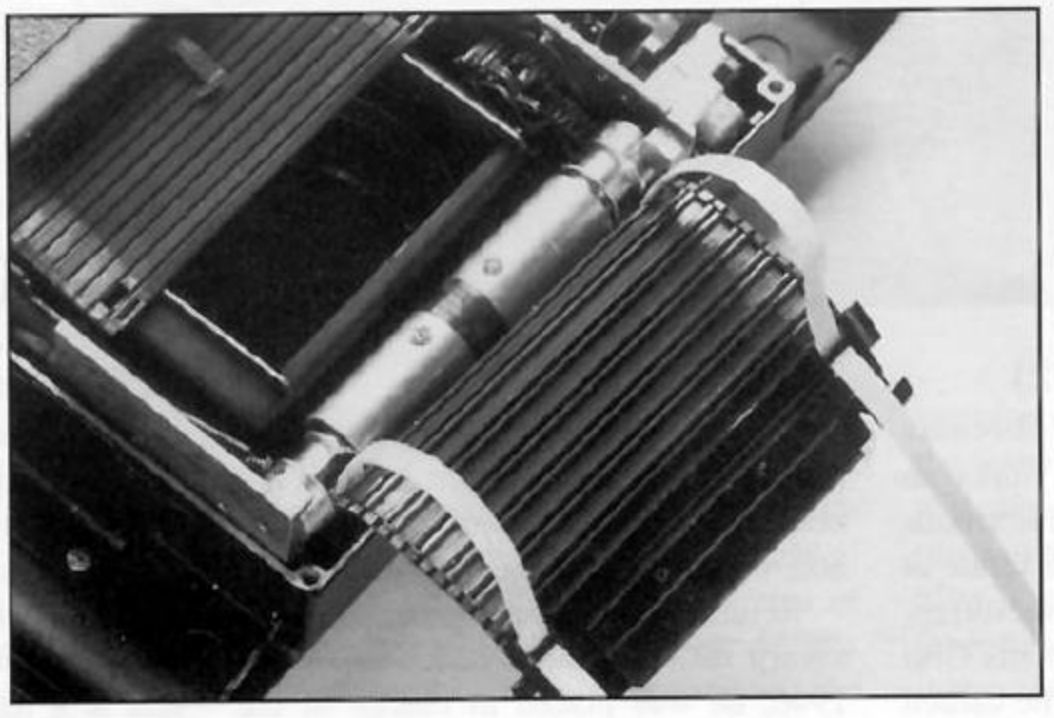
A shutter with such an error will already show problems at 1/250 s, and some well known cameras from the 1930´s are equipped with a 1/1000 s shutter speed more as some kind of ornament than as a useful feature. It is not an easy task to compensate for this error in a shutter where the curtains are running independently; Leica succeeded only with the Leica IIIf (red flash figures) in the early 1950´s.

The Contax designers probably asked themselves: Why try to compensate for errors after they have already occurred? Any attempt to use opposed springs and other technical arrangements will not stay stable for very long anyway. Instead, why not compensate for the errors from the very beginning?

A neat solution

In the Contax shutter, the distance between the two shutter curtains is pre-set on the upper shutter drum during the winding of the shutter. The two shutter curtains are mechanically connected to each other, and as a result the whole "package" runs together. The pre-set distance between the two shutter curtains is maintained during the run of the shutter by the friction in very special friction-loops on the shutter ribbons located on the top of the lower shutter curtain; even the smallest slit (1/1250 s) will stay constant during the run. These friction loops are also the key to the next decisive function of this shutter: On the lower shutter drum there is a device, a piece of stiff leather, for which I cannot find a satisfactory English word. I choose to call it a "lifting-heel." This heel forces the lower shutter curtain to overcome the friction that keeps the two curtains together, and the slit between the curtains opens slightly at the end of the run. This change compensates for the general acceleration of the shutter (which is quite small anyway, because the travel of the curtains is 24 mm in this vertically travelling shutter rather than the 36 mm of horizontally-moving shutters).

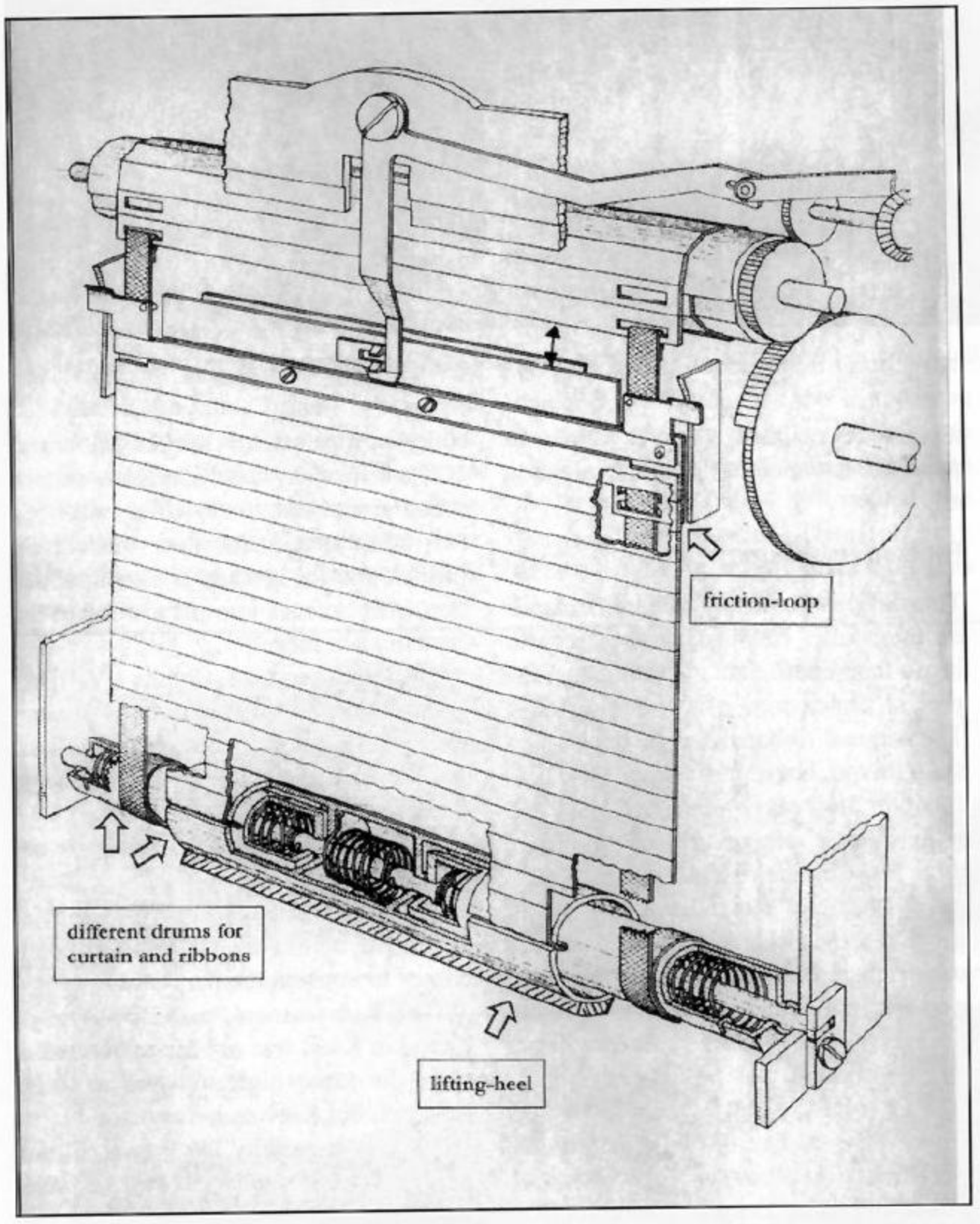
The final result will be that the two curtains have the same acceleration curves during approximately two thirds of the run, because they are fixed to each other by the friction in the friction-loops. During the final third of the run the lifting heel overcomes the friction, widens the slit, and compensates for the exposure loss caused by the acceleration.



The Contax shutter, partially disassembled. (Photo: Peter Hennig)

Slow-speed problems

This sound and reliable mechanical principle was superior to all other focal-plane shutters of the 1930´s and 1940´s. However, there is a major drawback. If you



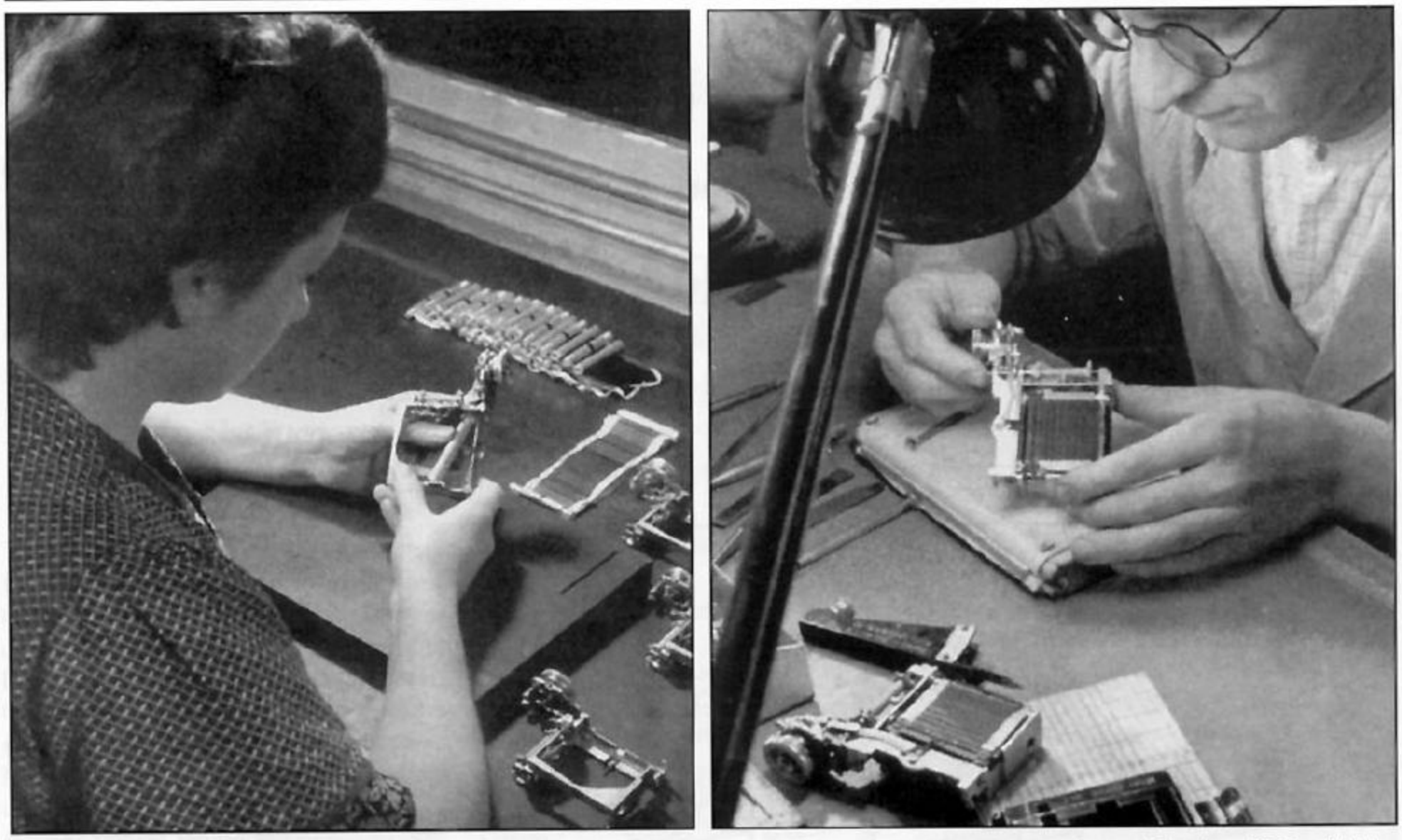
Schematic drawing of the Contax shutter, derived from the Carl Zeiss Jena archives, with the "lifting-heel" and English-language text added. For clarity the lifting heel is shown a little displaced from its true position, to avoid obscuring the main spring inside the lower drum. (Drawing adapted by Peter Hennig from the original.)

are solving a physical problem in a new way, however adequate and efficient it may be it is not uncommon that new problems, not present before, will occur. In this case, if you want to set the shutter slit on the upper shutter drum you can not make the slit wider than there is space on the drum. Therefore, at a single speed of the shutter curtains it is impossible to get longer shutter speeds than 1/25 s, as in the first Contax I. The later Contax I and the Contax II and III each have four different speeds of the shutter curtains, which makes it possible to reach 1/2 s. The Super Nettel and Nettax have three curtain speeds, and their shutter goes to 1/5 s. This solution is very complicated, from a mechanical point of view, and such a shutter needs frequent service.

Independently running shutters from the 1930's will work for a longer period without service, but incorrectly. While a shutter with independently running curtains does have the advantage of a single running speed, it was not until the 1950's that all the problems connected to such a shutter were solved—not in the 1930's.

The function of the early Contax shutter is best understood by observing it in physical reality; it is not so easy to catch the point just by reading about it, so let me put it in other words. The delicate and unappreciated functions of the friction-loops and the lifting-heel are in detail as follows:

For a short shutter speed, the pre-set shutter slit starts to move with the shutter curtains connected to each other by



The Contax shutter during assembly. (Illustrations from *Zeiss Ikon Brücke,* December 1940, left, and October 1939, right.)

the friction in the tightened shutter ribbons in the friction-loops. This situation continues for approximately two thirds of the run. At that time, the lower shutter curtain is two thirds wound up on the lower shutter drum, and the inside of the curtain comes into contact for the first time with the lifting-heel. The lifting-heel will force the curtain (but not the ribbon) out in an expanding direction as the drum and the curtain expand. This additional tension allows the lower curtain (where the friction-loops are placed) to overcome the friction in the tightened shutter ribbons, and make the curtain start sliding on the ribbons. The slit is no longer fixed, but will open up continuously during the last third of the run. The exposure loss that would otherwise have been caused by the acceleration is thus compensated for.

The desired result is thus achieved by simple but very intelligently applied means. It is also quite unappreciated by most camera enthusiasts. I have met skilled camera repairmen who believe that the stiff leather lifting-heel is meant to protect the lower curtain. That is why it must be claimed that this shutter is poorly understood, or not understood at all.

Ribbon problems

This device of course puts hard demands on the shutter ribbons, varying according to their coefficient of friction and the precise dimensions of the components. The original ribbons were made of hard spun Rayon, but unfortunately they malfunction after sixty years of work. The search for a proper replacement is a great problem in the repair of these shutters today; one that I have not solved satisfactorily. I do have ribbons that are usable for collectable cameras intended perhaps more for display than use, but the 1/500 s and 1/1250 s speeds will not work properly.

As we talk about the common versions of the shutter, the ones with multiple curtain speeds, we should also remember that, despite the complications, the complexity affects only the long and medium shutter speeds. In the range 1/125 s to 1/1250 s the shutter is running freely and is not affected by this complex mechanism (but for 1/50 s and 1/25 s a friction wheel slows the curtain speed somewhat, for 1/10 s and 1/5 s two additional gears slow the curtain further, and for ½ s and B a second friction wheel comes into play to retard the curtain even more.)

A newly serviced Contax II or III in good condition will work well enough for slide photography at these short shutter speeds, in a temperature range from +50° to –30° C (+122° to –22° F). This is not bad for a 60–65-year-old mechanism. As a matter of fact, it will beat many of today's electronic shutters, which can be like a fretful child when it comes to unusual temperatures.

The Kiev camera, made by Arsenal Zavod in Kiev, was not manufactured to meet the same high standard as Zeiss cameras, but Kiev cameras made before 1970 can generally be serviced and adjusted to nearly Contax-like standards. ❑

See also Fridolin Berthel's article in Zeiss Historica, Fall 2000, page 6, for some 40-year-old comments from Heinz Küppenbender.

Zeiss Tele Tessar 30 cm f/8

Pierpaolo Ghisetti, Modena, Italy

After so many years as a collector, sometimes it seems as if you have come to a dead end; the pieces you lack are impossible to find, or perhaps they have disappeared and are no longer available. But sooner or later you may have a pleasant surprise; you only need to be patient and a little lucky!

Now, for instance, I have in my hands a very rare lens: a Zeiss Tele Tessar K 30 cm f/8 for the rangefinder Contax, with its original accessories and in excellent condition.

In the fine rectangular leather box, 35 cm long with the Zeiss Ikon logo in a corner, we find the following items:

1) 30 cm f/8 lens no.1453697, marked "Carl Zeiss Jena," second type, made in 1935 with a shoe for its proper finder. The lens aperture closes to f/45, while the minimum working distance is 9 feet. Optical data: four lenses in three groups, weight 800 g, length 21cm, not rangefinder coupled; angle of view 8.2°.
2) Lens hood 8.5 cm long, marked "Made in Germany."
3) Front and back caps.
4) Green filter 46 mm diameter (marked as "Gelbfilter") with the CZJ logo.
5) A loupe with a matte focussing glass, marked "Zeiss Ikon," catalogue no. 5520/6.

Unfortunately I did not find in the box the rare finder for this 30 cm lens, catalogue no.436/12.

How is it used?

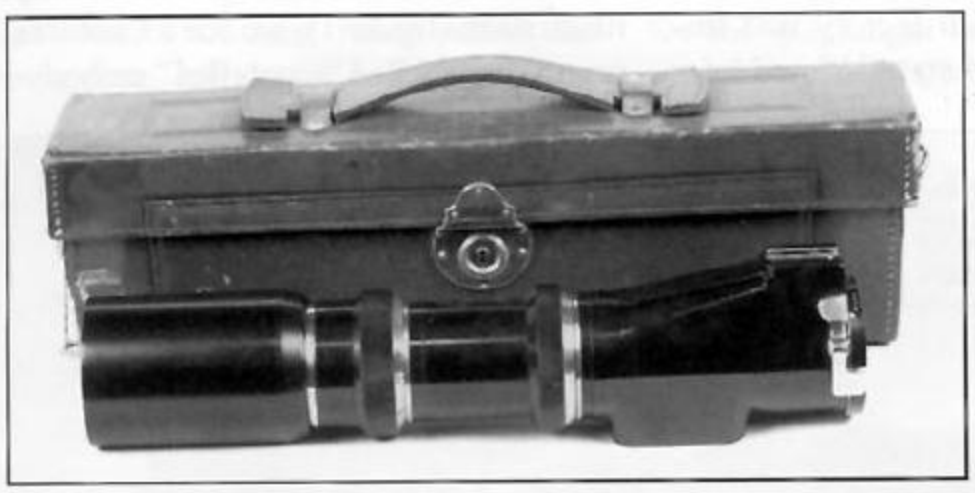
To use this lens is really difficult. After you mount the lens on the tripod, you must focus very carefully on the matte glass, and open the diaphragm ring to the maximum value. Of course the image will be inverted. Then you have to take off the loupe and mount the lens on a Contax II or a Contax III. After the exposure reading, you can close the diaphragm to the correct value, and finally you can shoot, preferably with a cable release. With this procedure the finder is unnecessary.

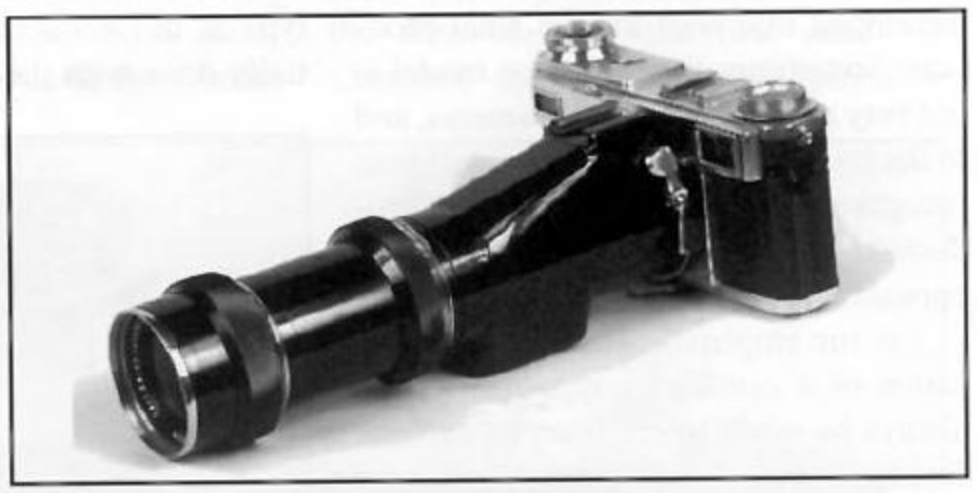
I think there are about 100 to 200 lenses of this kind, and some of them were changed by the factory in 1937, in order to be mounted on the Flektoscop box.

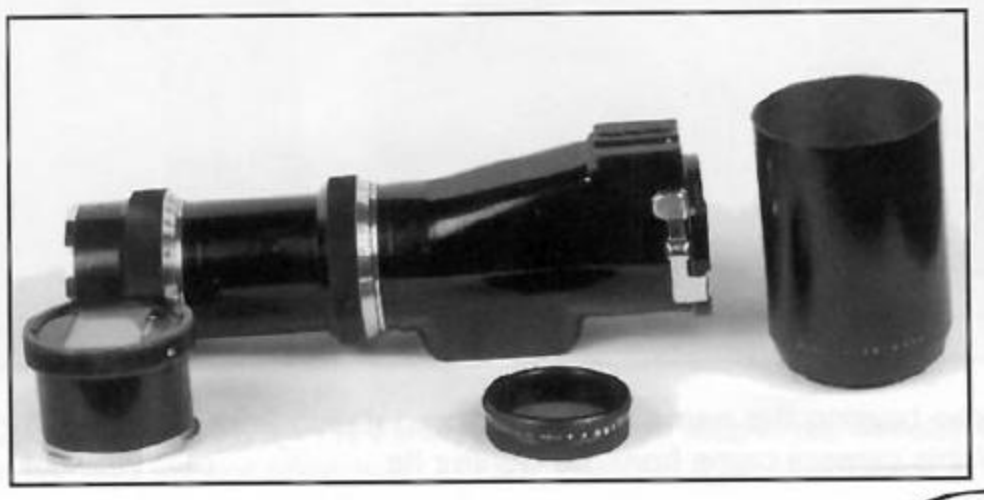
In 1939 the Tele Tessar was replaced by the Sonnar f/4, whose price was 900 RM (with the Flektoscop box), against 400 RM for the Tele Tessar.

The first version of the Tele Tessar built in 1934 had no shoe for the finder; the lens I have (second version) is made to be used on the Contax III, with the turret of the finder high enough not to obstruct the light meter window.

I hope my article will encourage all Zeiss fans to persist in their research: A nice surprise is always possible! ❑







The 30 cm Tele Tessar serial number 1453697 with its box (above left), with its accessories (far left), and mounted on a Contax II (above right). Note the letter "K" visible in the view from the front (near left).

Contarex prototypes

Bernd K. Otto, Frankfurt, Germany

Prototype models of the Contarex show the addition of various features to the original concept; some survived into the final production models while others were rejected

The most interesting cameras in collecting circles are without doubt the so-called "prototypes." During the preparation of my book *Zeiss Ikon Register 1945–1975*, which is quite well known in collectors' circles, I discovered many prototypes of these cameras, but because of the large number of models manufactured it was not always clear whether they represented a prototype or a series production model.

We do know that prototypes do not always lead to a mechanically successful and marketable production model. Many are rejected outright; others form an intermediate step that is ultimately developed into well known final products. Sometimes the prototype model is not very similar to the final cameras, and to the layman it is not always possible to recognize the prototype from the production model simply by its external appearance.

Let me emphasize here that classification of a camera by type should not always be made solely from its exterior features. Leica collectors know, for example, about the so-called "screw-counting mania" for the Leica's accessory shoe. But what collector today has the expertise to dismantle a present-day camera without damaging it? To discuss the camera types existing in a particular range, one should also consult the series number as well as the repair manual issued by the manufacturer. Here one can find decisive improvements to the design incorporated without much effort, and nearly always a change in the series numbers will show the subdivisions of the individual type of camera.

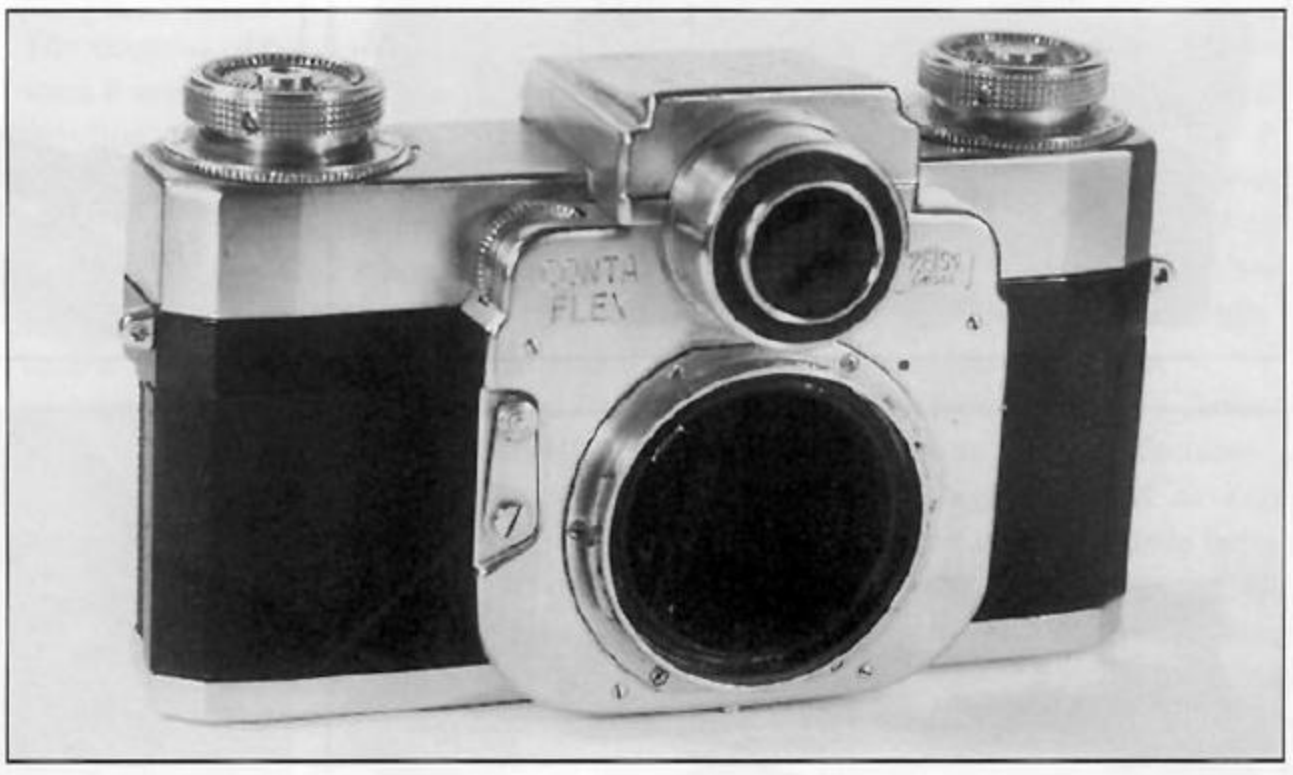
This is the first in a projected series of three articles by Bernd K. Otto on the development of the Contarex. Earlier versions appeared in *PhotoDeal* March and April 1995, and January 1996.

The internal classification of a prototype at the Zeiss Ikon factory was initially done with the letter "V," and later with the letters "VK." Both markings stand for the word "Versuchskamera" (that is, "experimental camera").

Development of the Contarex

In this first part of a projected series of articles I would like to introduce some cameras that are known in connection with the highly valued Zeiss Ikon Contarex.

In his well written and researched book *Contaflex/Contarex*, Hans-Jürgen Kuc shows an illustration of an early Contarex-type camera with the marking "Contaflex," although it showed many features of the later Contarex. In my illustration (figure 1), we see a Contarex prototype labelled "Contaflex" embody-



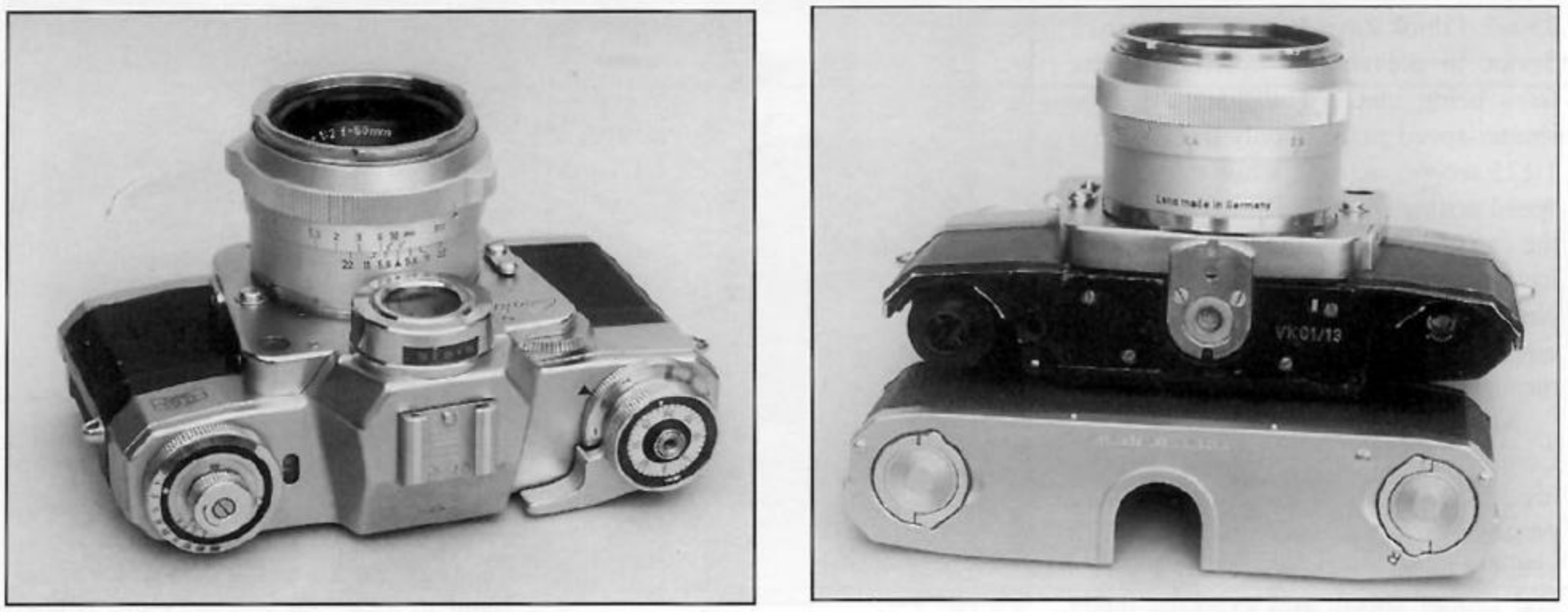
A Contarex prototype bearing the name "Contaflex" and dating from about 1956. Some of the parts of this camera came from the Contax IIa. Figure 1

ing some parts from the Contax IIa.

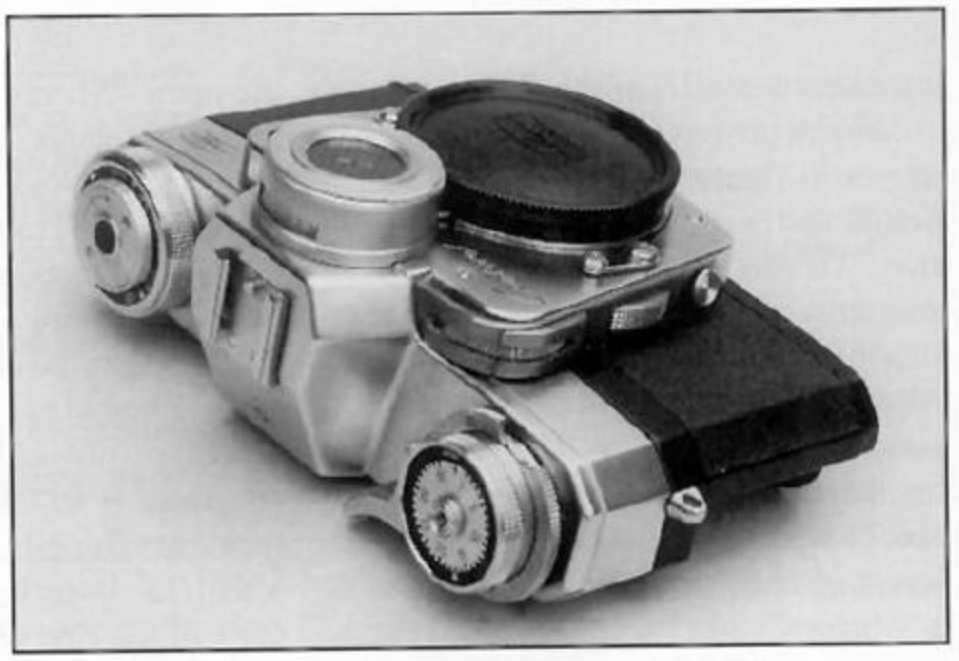
In the prototype number VK01/13, shown in figure 2, one can see many details that were used in the later cameras. We can assume from the number that this example represents the 13th step of development of the Contarex. Also interesting in this connection is the notation in the Zeiss Ikon Catalogue numbering system; under number 865/24 we find a Contarex body without lens, and under number 866/24 there is a "Mirror Contax" with a coupled exposure meter. When the numbering system was changed in November 1958, the Contarex was given number 10.2400. The "Mirror Contax" listed earlier did not appear. Thus we can assume that the name "Mirror Contax" was planned for the Contarex. We could also assume that the development of this prototype might be dated to the end of 1957, when Contax production had virtually stopped except for a few outstanding orders. In the brochure issued at the time of the 1958 Photokina, and in many other Zeiss Ikon publications of the same period, there is an illustration of the prototype developed in accordance with VK01/13—which was by no means a copy of the first series.

Basis for the series: VK01/13

The prototype VK01/13 has a scale ring for the diaphragm marked for a maximum aperture of f/1.5, as on the Contax cameras. The shutter speeds have the T position, the exposure meter is not yet coupled, and there is no instant-return mirror. There is a full ground-glass focussing screen. The index mark on the top plate, for setting shutter speeds, is near the setting wheel for the aperture (under the right-hand forefinger) and not, as in the later series, on the lever wind. This detail is also visible in the illustration that appears in the 1958 Photokina brochure. I also have a prototype with the same manufacturing number as the Contarex T 85005 pictured in the repair manual issued in March 1960 (see figure 3). This should have been the fifth copy of the first series of Contarex cameras, but was probably



Contarex prototype VK 01/13, the thirteenth step in the development of the Contarex. This camera has an uncoupled exposure meter and shutter speeds B, T, 1 to 1/1000 s. It is shown here with a Planar f/2 50 mm lens no. 2,369,614. Figure 2

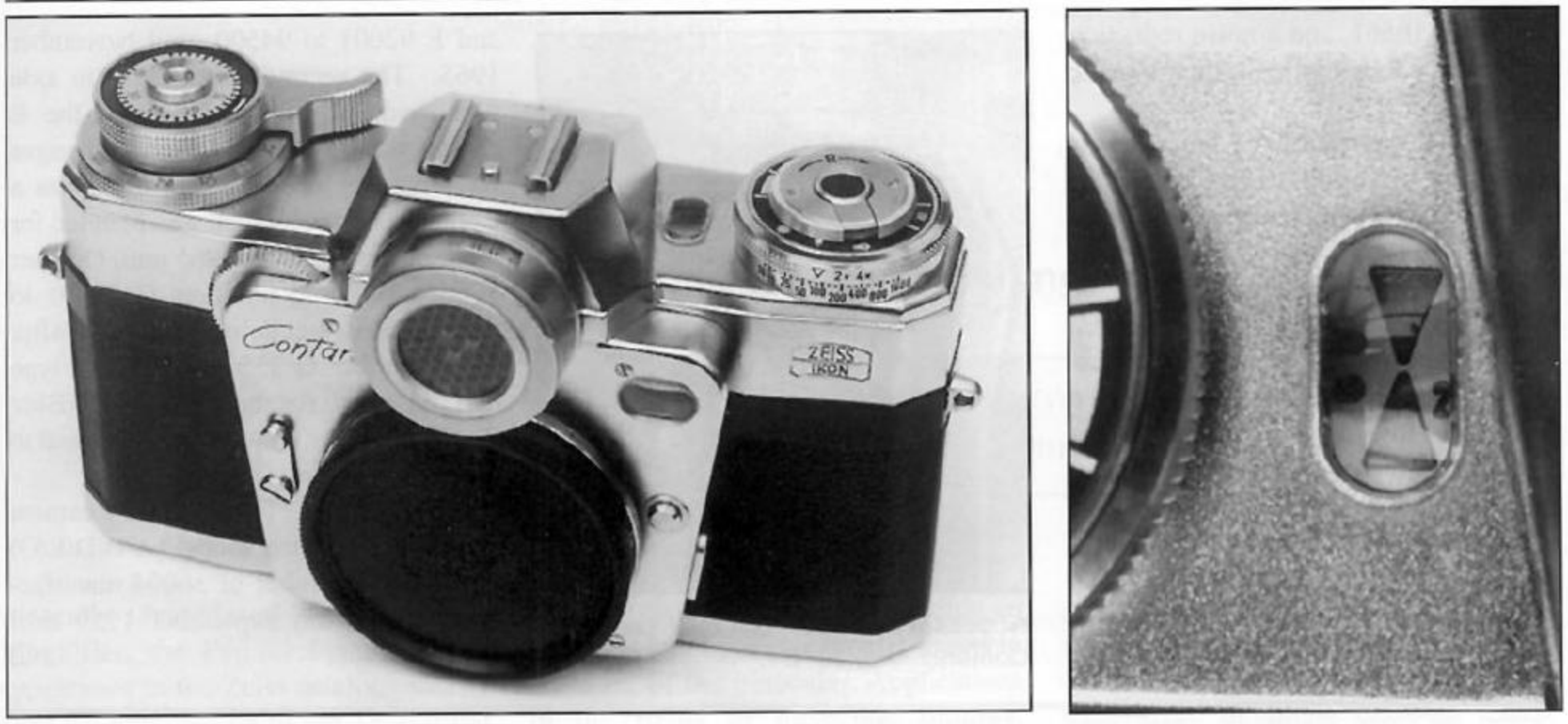


Prototype camera T 85005 (above and right). The experimental nature of this camera can be seen from its shutter speeds, which are limited to 1/125 and 1/60 s, and from the ground-glass focussing screen built into the back. There is also a prototype mechanism for setting the focussing distance. Figure 3

used by way of addition for modifications. For a better understanding I show (in figure 4) model T 85200 (the 200th example of the first series), which gives a clearer comparison. With Contarex T 85005 I think Zeiss Ikon incorporated a device to prevent the aperture setting from being changed accidentally. The shutter-speed ring has only the 1/60 and 1/125 second settings, while the shutter-speed setting index is located on top of the camera. Perhaps the limited settings have something to do with the flash synchronization. Built into the back is a circular ground glass that can be viewed through the open film window.

Another prototype of the "bull's-eye" Contarex is marked VK01-24. (See figure 5.) This camera has an information panel in the viewfinder that allows all settings to be checked—focus, aperture and shutter speed, and exposure-meter reading—with no impairment of subject framing and composition. The camera

Contarex T 85200, the 200th example of the first series of production cameras. Compare with the experimental camera T 85005 at the top of the page. Figure 4



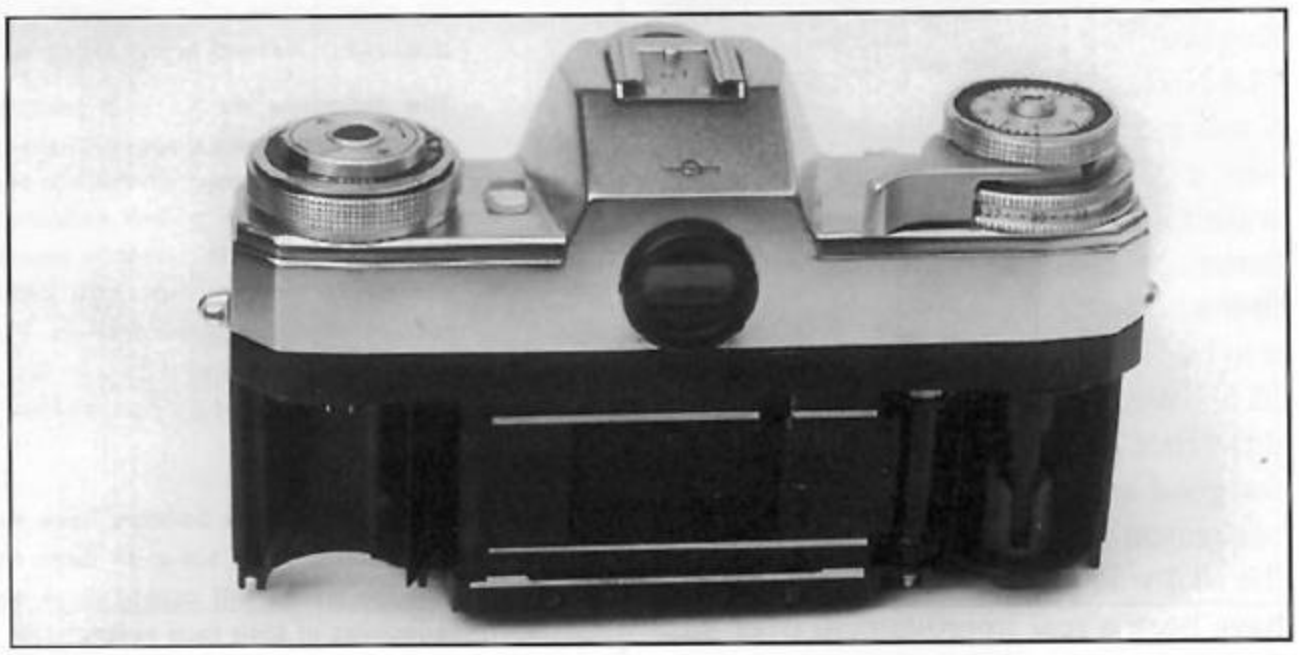
Contarex prototype VK 01-24. The viewfinder of this camera shows information on focus, aperture and shutter speed, and the exposure-meter reading. There is a film-type reminder dial below the rewind knob, and a small window in the top plate (visible in the close-up view, above right) that shows green and red dots for over- and under-exposure. Figure 5

also has a panel for the data-recording system and the possibility of interchangeable focussing screens. Below the rewind crank is a film-type reminder dial, and through a small window on the top plate you can see a green dot for overexposure and a red one for underexposure.

Another Contarex "bull's-eye" prototype carries a big "E1" in the accessory shoe (figures 6 and 7). This camera looks very much like a normal production model, the only difference being a simplified rapid film-loading system.

Series numbers from A to G

The first series of the Contarex was manufactured from September 1959 until November 1960 with a total of 10,000 units within the serial number range T 85001 to 95000 (the Contarex A). To bring some clarity into my descriptions of the Contarex family I would like to mention that in addition to the above-mentioned serial numbers a further 5000 units were manufactured from Y 6001 to 11000, 5000 units in the serial number range Z 16001 to 21000 and another 5000 units from Z 46001 to 50404 (the Contarex B). Also of interest to Zeiss enthusiasts is the introduction of a fixed rewind knob from serial



Prototype Contarex marked "E1," front view (top) and back view (bottom). This camera differs from production models only in the simplified rapid film-loading system visible in the back view. (See also figure 7, overleaf.) Figure 6

number Y 10661, and a noise reduction device and a light baffle for the exposure meter from Z 19101.

Later on three further Contarex versions were produced. The Contarex D was made from November 1963 until September 1964 with serial numbers ranging from D 20501 to 21096 and from D 21101 to 23604. With these serial numbers the frame for interchangeable focussing screens and a data-recording device (plastic strips pushed into a slot in front of the film) were introduced. The following model, the Contarex E, shows no difference in outside appearance from the Type D. Zeiss Ikon from July 1964 manufactured the serial numbers E 12001 to 15000

Accessory shoe of the prototype Contarex marked "E1." Figure 7

and E 92001 to 94500 until November 1965. The second shutter curtain axle was made adjustable. Within the E series some internal design changes were made. In conclusion there was a Contarex G type, which was planned for release from October 1965 until October 1966 with serial numbers G 30501 to 35000, but in fact deliveries ceased after serial number G 33500. This last type had the switch for the flash lenses (Blitz Planar/Distagon) but it was not linked to the exposure meter.

Thus we have five Contarex camera versions of the first model (A/B/D/E/G) with a total number of 36004 manufactured units from September 1959 until October 1966. ❑

Lichtstrahlen.....

The accompanying document, together with a version of the same text in German, was forwarded to the *Zeiss Historica* editorial office by Charles Barringer. The two documents were issued by Zeiss Opton in 1952.

From our perspective fifty years later we can assess how perceptive was the claim that "it is extremely unlikely that the public will accept these exaggerated claims...at their face value."

Robert J. Rotoloni wrote in the March 1990 issue of the Nikon Historical Society journal:

"... by May of 1950 [Nippon Kogaku] had designed its now famous f/1.4 Nikkor....[T]he 50mm f/1.5 Nikkor-S was available for only one year...Why was it replaced so quickly? Maybe it wasn't sharp enough and the f/1.4 was better...or maybe it was because the first ads for the f/1.4 Nikkor proclaimed it to be 'The first normal lens faster than f/1.5!' We all know there is really little difference between the two, but it made for good ad copy. However, the probable reason has to do with the fact that the f/1.4 was a different design and may have been a real improvement over the f/1.5. They do differ in optical and mechanical design and are distinct from one another...." ❑

ZEISS OPTON

Japanese Photographic Objectives

There have recently been appearing on the market certain photographic objectives made by the Japanese firm of **Nippon Kogaku** of Tokyo. The introduction of these objectives has been accompanied by considerable claims and propaganda which have been freely repeated in the Press without critical examination. Particularly prominent in this respect have been the Nikkor objectives of 5 cm. focal length with apertures of F/1.4, F/1.5 and F/2, which are also offered in mounts suitable for Contax and Leica cameras.

These objectives have been compared with the most reputable German products and declared to be equivalent or even superior to them. But an examination of a collection of these Japanese objectives in our possession has led to the following quite different conclusions:

The Japanese design and construction are in no way original. An attempt has been made to imitate the most celebrated German products, but even the attempt at imitation has failed and the Japanese objectives do not possess the perfect definition and brilliance of our Sonnars. They furthermore give the definite impression that the Japanese have been unable to achieve that high consistence in manufacture which is a feature of the original Sonnars. Finally it has been revealed that the 5 cm. F/1.4 Nikkor possesses in fact a relative aperture of only F/1.5, so that the claim that its performance is superior to that of the Sonnar is deceiving.

The genuine Zeiss Sonnars have therefore been in no way surpassed; indeed they have not even been equalled, and it is extremely unlikely that the public will accept these exaggerated claims for the Japanese objectives at their face value.

Zeiss-Opton

Fernrohrlupen

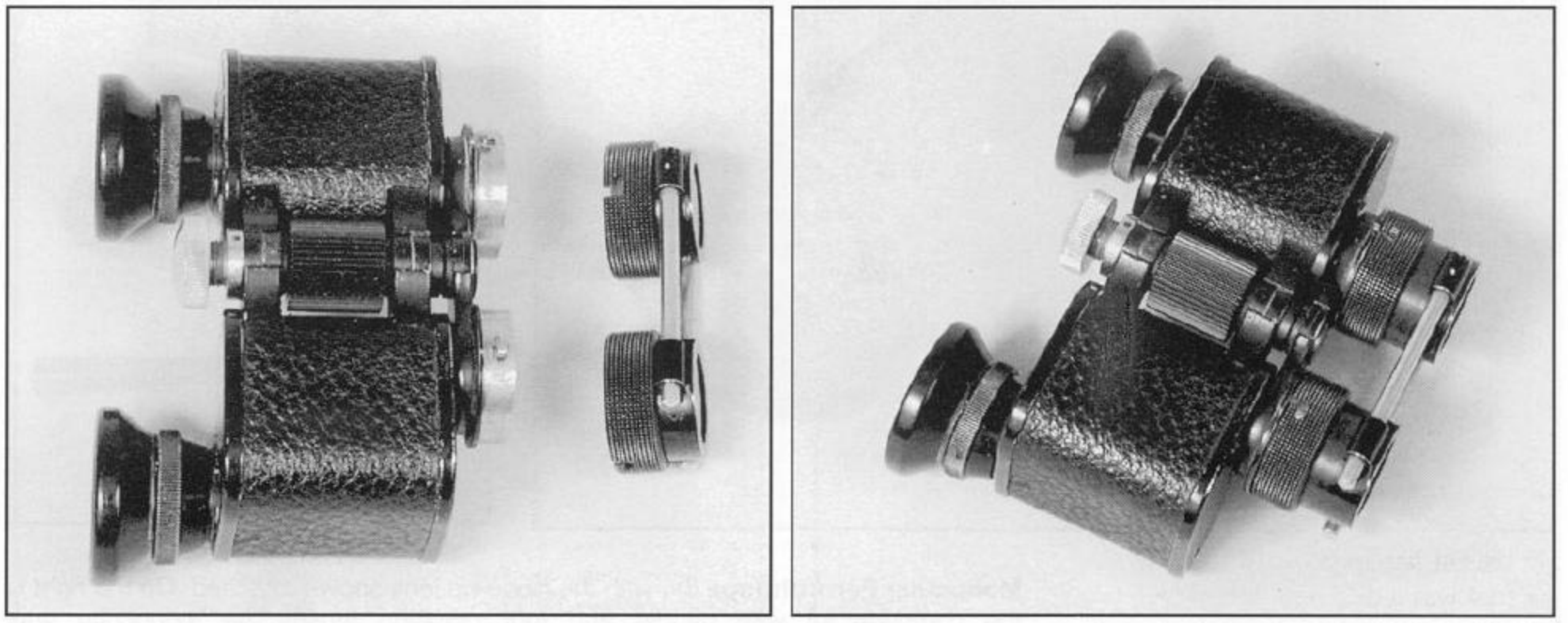
Jack Kelly, Brush Prairie, Washington

The combination of a binocular and a set of positive lenses to mount in front makes a very useful stereoscopic microscope

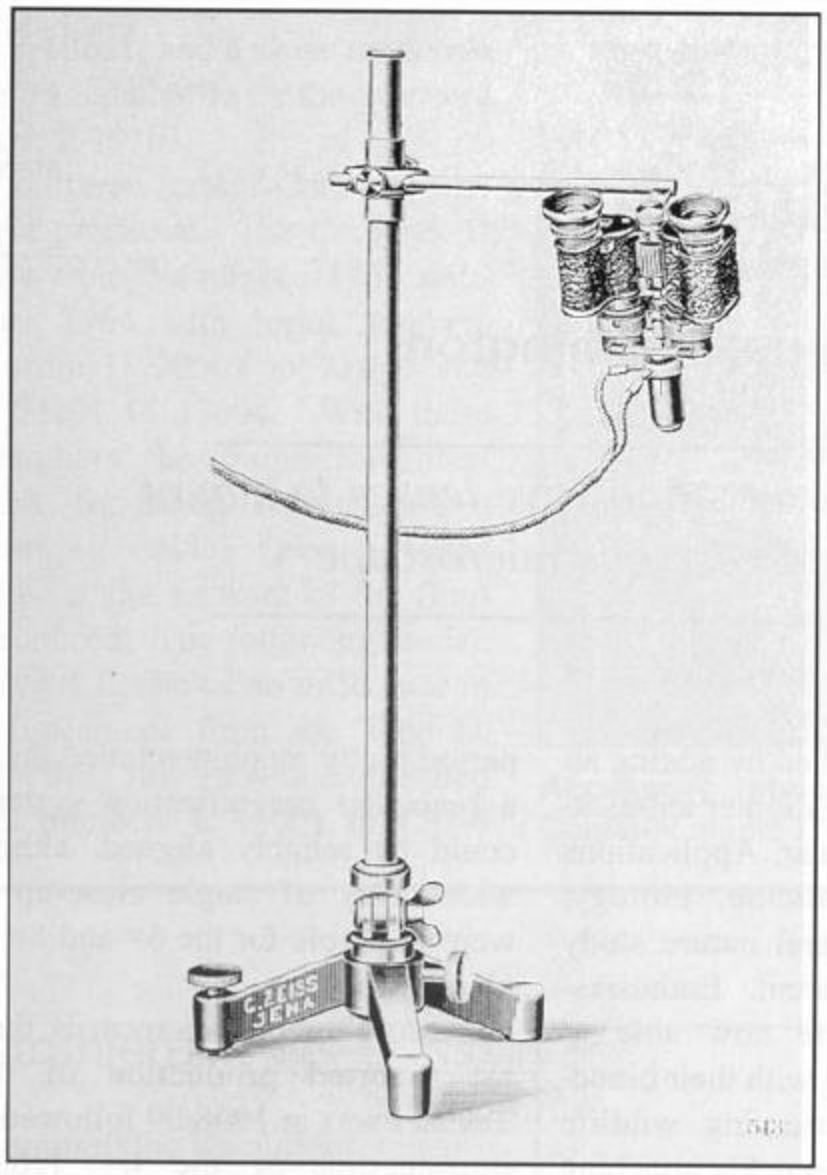
Literally translated as Telescope Magnifier, the Fernrohrlupe made its appearance in the Zeiss catalogs shortly after the introduction of the 3× Teleater binocular in 1908/09. The appeal of this device was twofold. Firstly it was a compact high-quality binocular that, in the Teletur version, offered 6× magnification. Secondly, the observer had the distinct advantage of being able to use the device as a low-power stereo microscope with a comfortable working distance from the subject being observed. Whereas a simple magnifier of 6 power would require the glass to be less than 1.7 inches (43 mm) from the subject, a Fernrohrlupe with the same 6 power magnification has a working distance of more than 12 inches (32 mm).

This was accomplished by adding an auxiliary set of positive diopter lenses to the front of the binocular. Applications in the fields of medicine, biology, anthropology and general nature study were immediately apparent. Enthusiastic nature lovers were now able to explore the local marsh with their binoculars, comfortably observing wildlife from a distance, or, by quickly attaching the auxiliary lens, closely observe a spider on his web, from a comfortable distance. The Teleater and Teletur binoculars were apparently chosen for this application because of the close placement of the objective lenses allowing the system to be properly collimated. The much wider spacing of the objective lenses on other Zeiss binoculars of this period pretty much precluded the use of a binocular magnification system that could be reliably aligned, although a wide array of single close-up lenses were available for the 6× and 8× binoculars of the time.

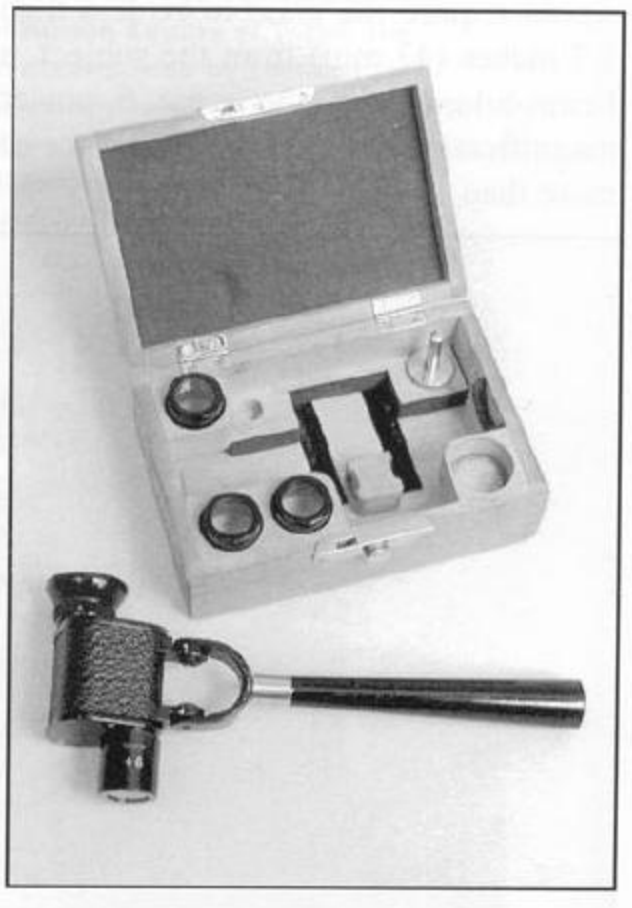
According to Zeiss records, the earliest reported production of the 3× Teleater was in 1908/09 followed by the introduction of the 6× Teletur in 1909/10. The sample Teletur-based Fernrohrlupe shown in figure 1 bears serial number 284581, which would indicate a production date of 1911/12. The earliest record I have in my literature file is a French-language catalog titled "Tele-Loupes" from 1912, distributed by the Zeiss Medical Department, and carrying the identifier "Med 3".



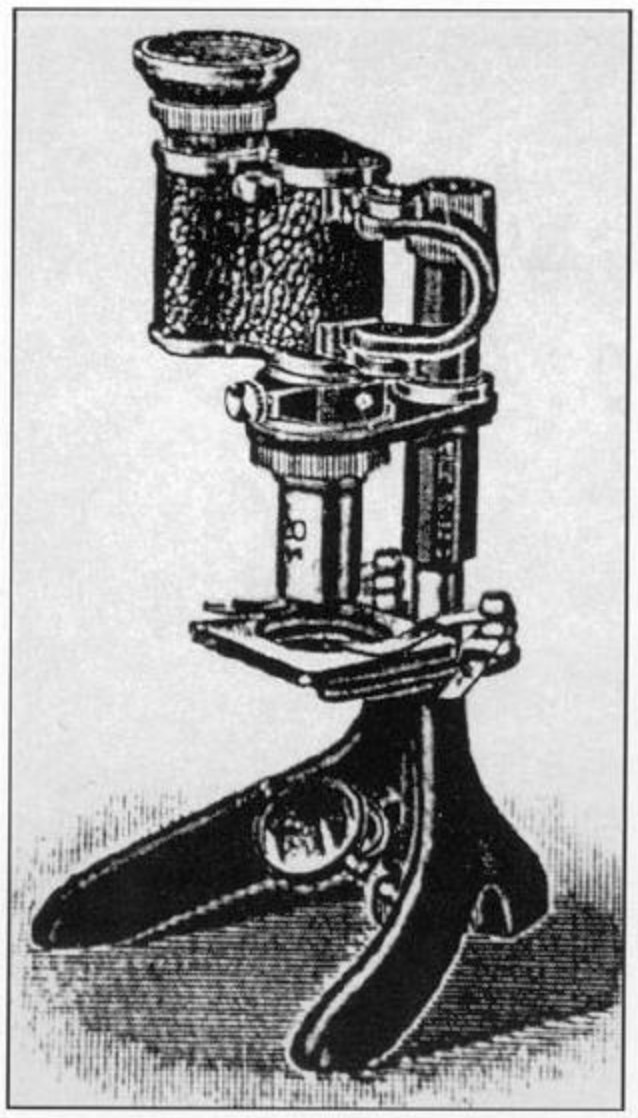
Binocular Fernrohrlupe 6x, serial number 284581 with close-up lens (detached, on the left; attached, on the right), manufactured in 1909. It has a special knob at the top of the center hinge to mount the device on a small stand or attach it to a headband. Each of the close-up lenses incorporates a prism so that the binocular can be collimated. Figure 1



Binocular Fernrohrlupe mounted on boom stand (left) and on a headband with light source (right). Copies of figures 3 and 4, Zeiss Fernrohrlupen Catalog, M3 1913. Figure 2



Monocular Fernrohrlupe 6×, with the close-up lens shown attached. On the right is the complete kit with handle and four close-up lenses.The monocular was manufactured in 1923. The handle allows the user to position the magnifier for best view, or to pass it to other users. Alternatively, the device could be worn like a ring by putting a finger through the loop without a handle in place. Figure 3



Monocular Fernrohrlupe mounted on a microscope stand with a high-power objective. Copy of figure 16, Zeiss Pamphlet Med 3/11, 1926. Figure 4

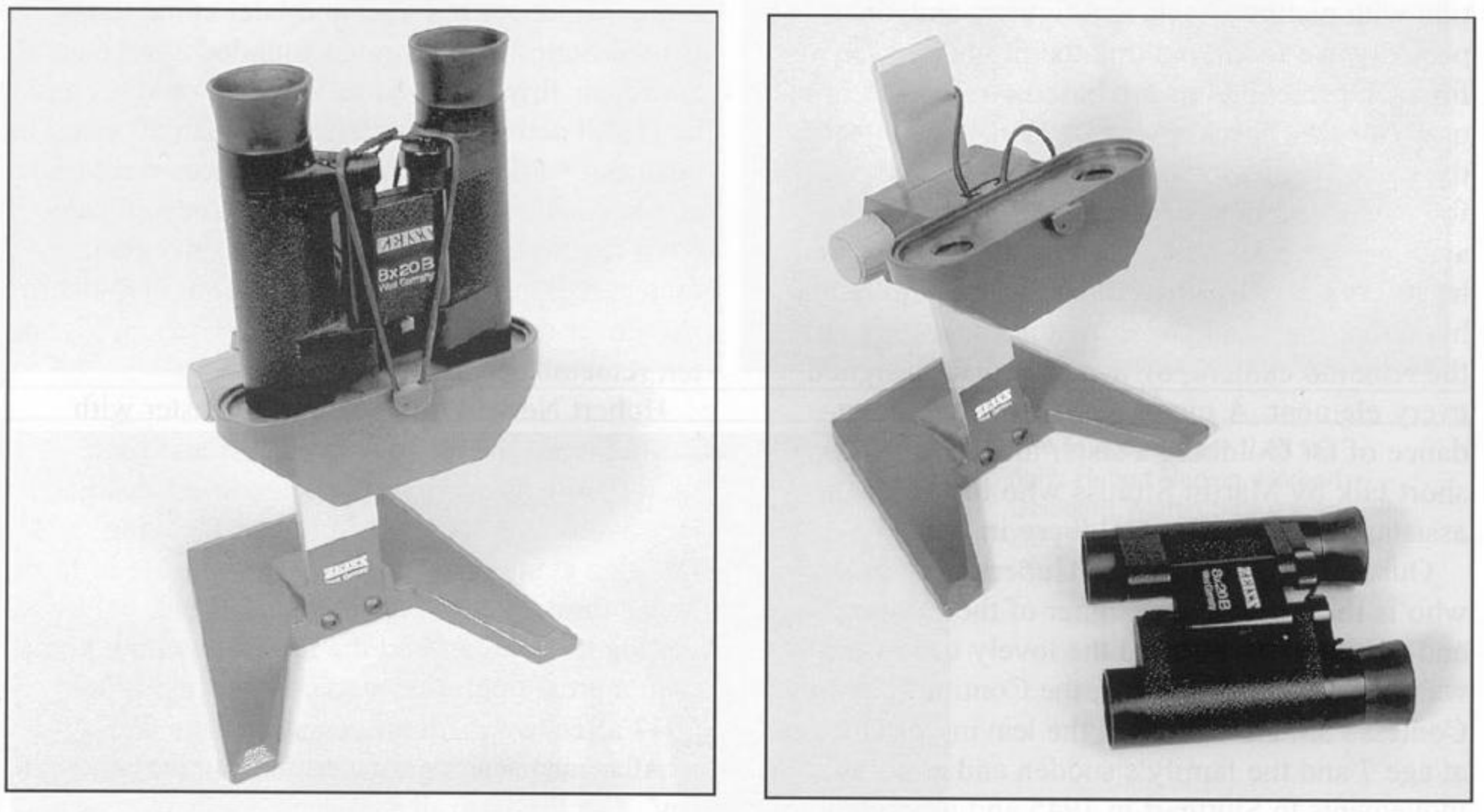
The catalog is quite extensive and includes binocular models of 3×, 6× and 8×, with auxiliary lenses of +1, +3, +5, and +10 diopters. Additionally the catalog includes monocular versions of 3 or 6 power with diopter lenses of +2, 3, 4, 5 and 6. A variety of specialty stands, headbands, lights and astigmatism correcting lenses for the ocular (see figure 2) are also listed.

By 1922 an English-language version of Med 3 refers to the benefits of the "Telescopic Magnifier" as "particularly useful in all those cases where it is either not practicable or desirable to bring the magnifying combination close up to the object which is to be viewed." It goes on to say that the devices have been in use "for years in scientific institutions very diverse in character, in schools, agricultural laboratories, public offices, libraries, museums, scientific instrument workshops, engraving offices and many other establishments, in weaving and spinning mills, by zoologists, botanists, medical men, collectors and connoisseurs."

Over the years, the number of accessories available for the system increased. The design and functionality of the binocular diopter adapter also changed with time. The early versions of the binocular were clearly intended as dual-purpose devices with a center focussing mechanism that worked effectively for the binocular as well as the binocular magnifier. By the early 1930's, the binocular was now a fixed focus system and the central focussing mechanism only focused the diopter lenses for close work.

Parallel with the production of the telescopic magnifiers, Zeiss offered close up lenses for other binoculars but only for use on one of the binocular tubes. The Turmon monocular was offered with a complete line of diopter lenses ranging from +2 to +10 diopters. In 1926 the Med 3/11 catalog included a very nice microscope base utilizing standard microscope objectives and the monocular Fernrohrlupe to provide magnifications up to 180× (figure 4).

Skipping ahead to the 1980's, Zeiss Oberkochen offered a stereo microscope base for the 6×20, 8×20 or 10×25 binocular and providing magnifications of 12×, 16× and 20× respectively (figure 5). ❑



Zeiss 8 × 20B binocular mounted on the Stereo Microscope base, left, and unmounted, right; circa 1980. The binocular is held in place with a rubber-band assembly and the base incorporates a focussing mechanism. Figure 5

Zeiss Historica Society Annual Meeting, 2001

The 2001 Annual Meeting of the Zeiss Historica Society took place on 1 December 2001, at the premises of Carl Zeiss Inc. in Thornwood, NY. I should like to thank Carl Zeiss, Inc. and CEO James Kelly for their hospitality. Specifically, I would like to recognize Irv Toplin and Michael Kersten for all of the work that went into the preparations and their warm hospitality.

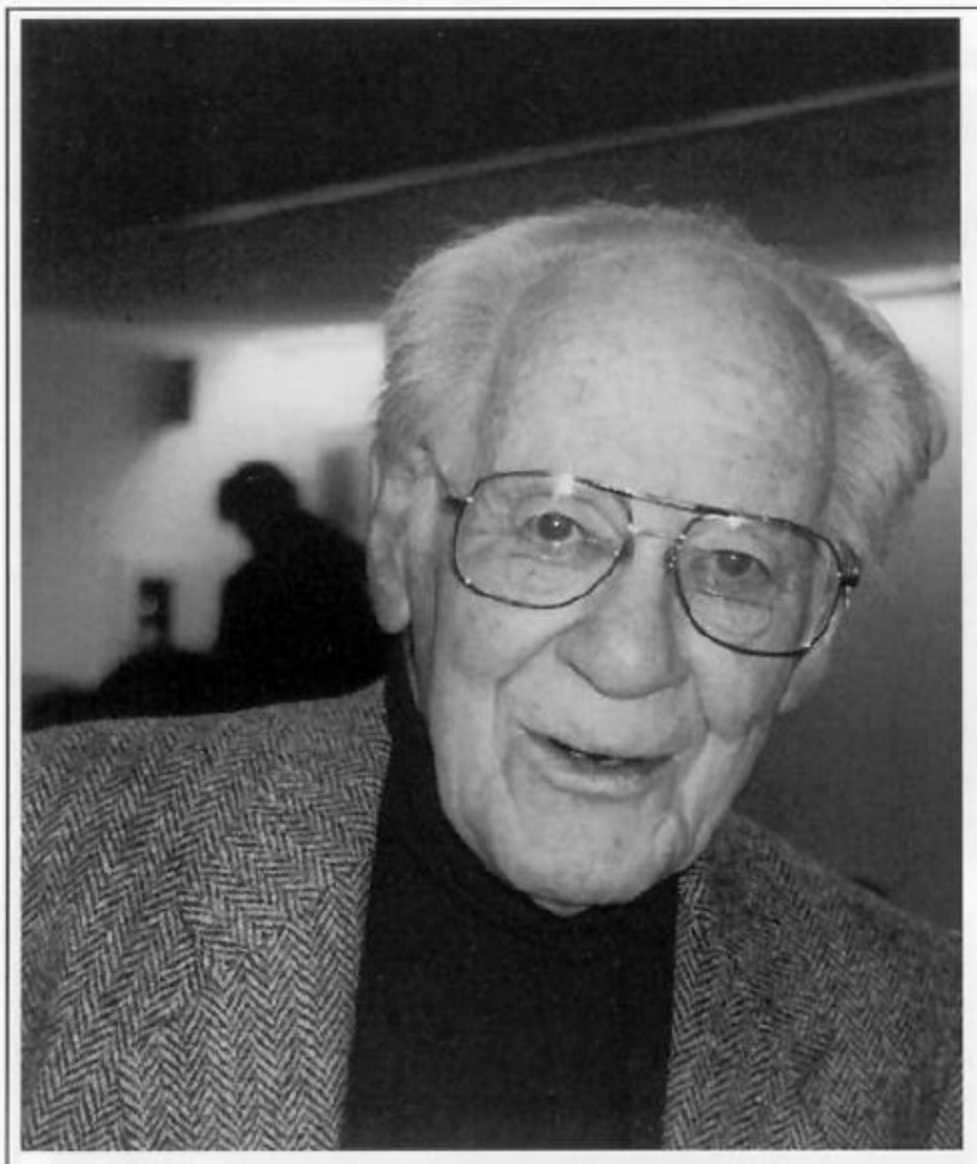
James Sharp, who is the President for Microscopy and former head of the Jena subsidiary, gave a full presentation of "Carl Zeiss—Today" while dressed in his Lederhosen. He did this via a computer-based PowerPoint presentation with pictures, facts and figures, and, unexpectedly, we found out that the projector systems for such presentations are based on Zeiss technology. Our first speaker was Dr Herbert Goldberg, the son of Professor Emanuel Goldberg who founded Zeiss Ikon in 1926. He entranced the audience with the story of his father's work, and he showed a 1923 silent movie of the family that his father had made to show the capabilities of the Kinamo camera, of which he had designed every element. A nice surprise was the attendance of Dr Goldberg's sister and a heartfelt short talk by Martin Strauss who had been the assistant to the senior Goldberg in Israel.

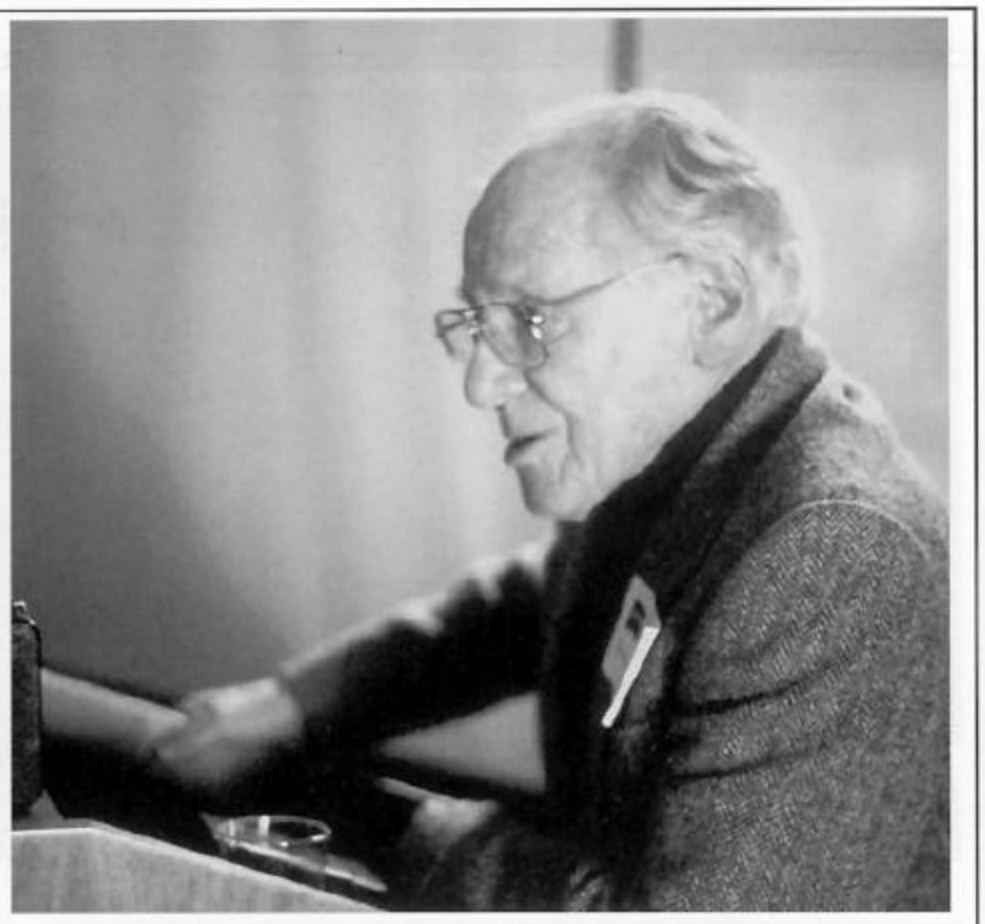
Our second speaker was Hubert Nerwin, Jr. who is the son of the designer of the Contax II and III, the Tenax II and the lovely trio of post-war cameras the Ikonta 35, the Contina II and the Contessa 35. He discussed the leaving of Dresden at age 7 and the family's sudden and circuitous movements to Stuttgart in 1945 and ultimately to Graflex and Kodak in Rochester. Then, I showed the remaining faithful a slide show of pre-Zeiss Ikon predecessor companies' early advertising.

These photographs gathered from those attending our annual meeting show some of the 75 people who attended and were enthralled with the memories of Dr Herbert Goldberg, who at 87 years of age was as alert as could be. His father guided Zeiss Ikon in its first days and made the best of a series of terrible situations at the hands of Nazi hooligans by leaving for Paris and then Israel, and he was scientifically active into his 90s. Herbert Goldberg brought pictures, as did Martin Strauss who worked as an assistant to the senior Goldberg in Israel and later came to the United States. Here Strauss founded a large camera repair firm centered in Washington, DC, and he is still active today after more than 50 years in business. Pictures and reminiscences were traded back and forth and Dr Eugene Loewen came from Rochester to meet Goldberg since their fathers had many friends in common. Goldberg had never met Strauss, but Chava Gichon, his sister, remembered him well.

Hubert Nerwin drove from Rochester with Rolfe Fricke for the meeting to discuss his father's life as an engineer and camera designer. He shared with us his memories of leaving Dresden at age 7, going from farm house to farm house through Austria and Switzerland, before getting to Stuttgart and the new Zeiss Ikon home with a great opportunity to come to the US in 1947 after two difficult years after the war.

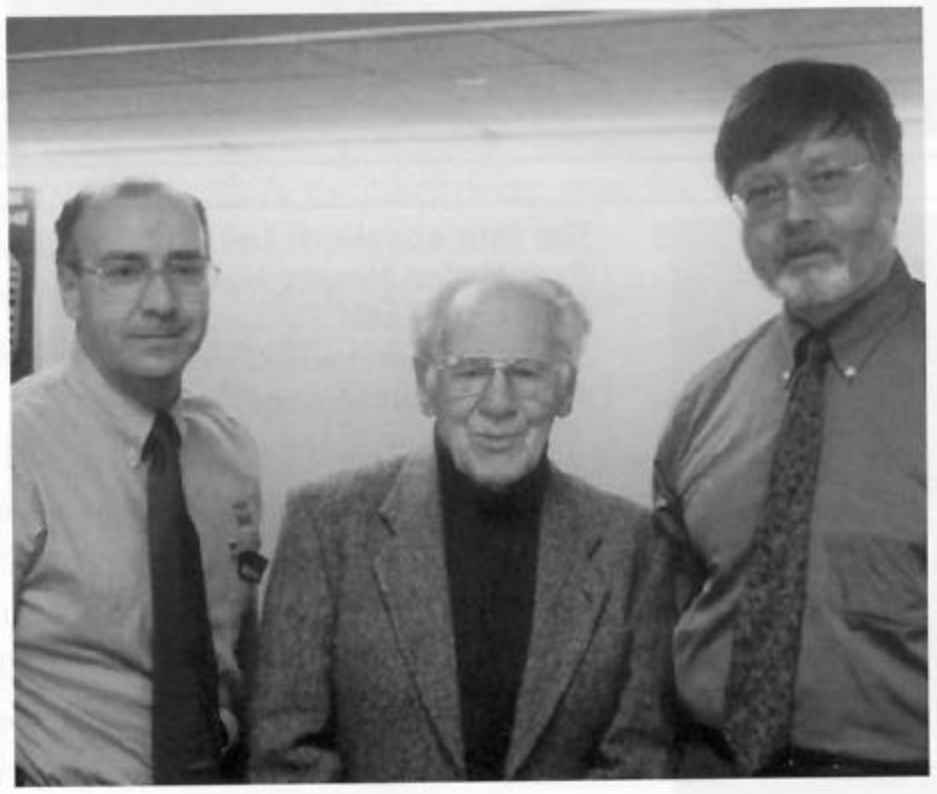
All in all, it was a great time and it was a rather full day. Our thanks to all present especially those who took these pictures. —*Larry Gubas*





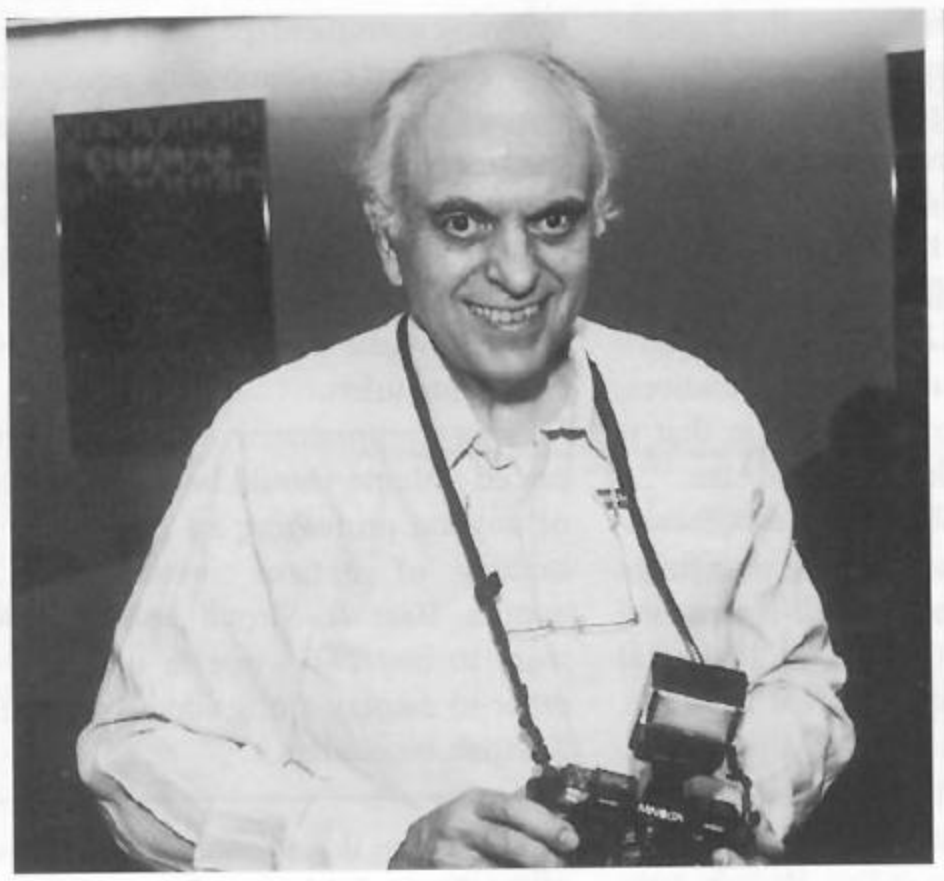
Dr Herbert Goldberg, in a variety of poses. Clockwise from top left: a portrait by Carl Schwartz (who used his Contarex); at the lectern during his talk, by Schwartz using his Contax Tix; explaining a tricky point to John Scott (by John Spicer), and with his sister Chava Gichon (also by Spicer).

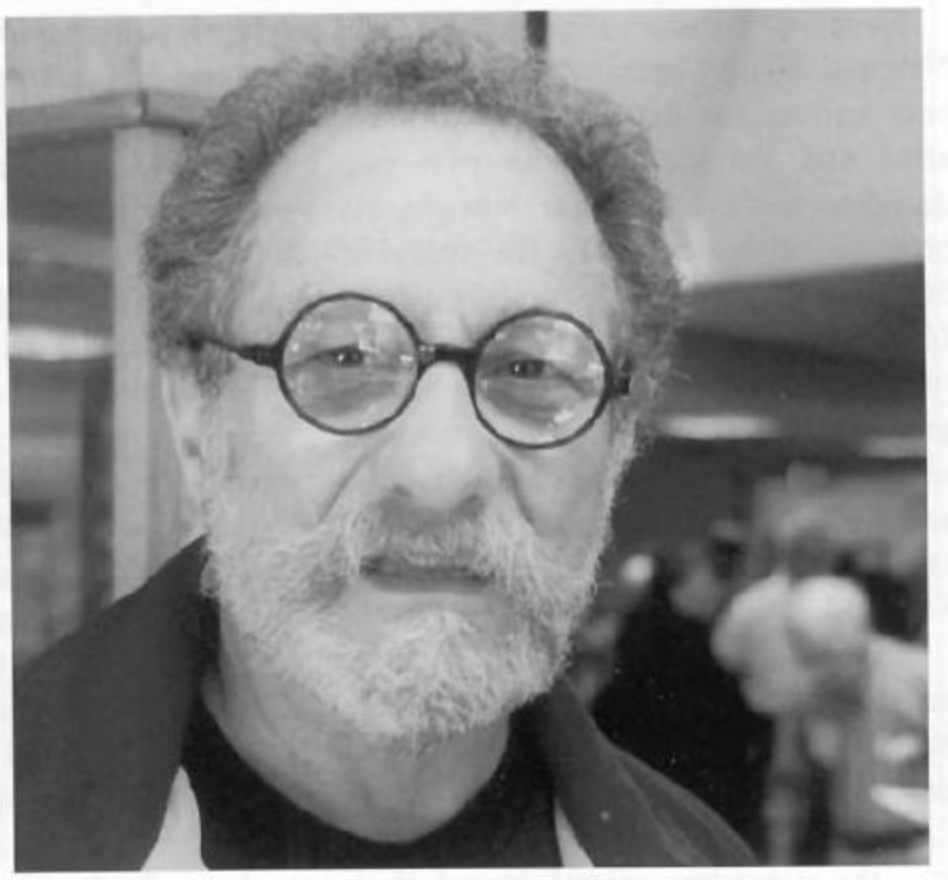
The four speakers. Left to right: Hubert Nerwin, Herbert Goldberg, Martin Strauss, and ZHS President Larry Gubas. (Photo by John Spicer.)

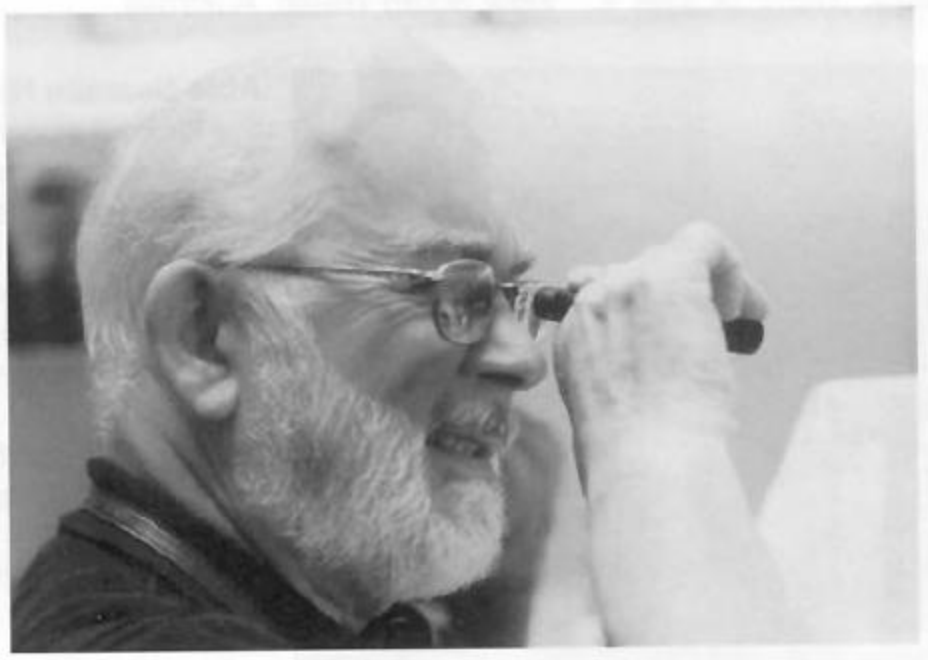


Clockwise from top left: The lunch party includes, right to left: Nick Grossman, ZHS Secretary/Treasurer Maurice Zubatkin and his wife Evelyn, and Larry Gubas; speaker Hubert Nerwin at the lectern; ZHS Past President Charles Barringer, on the right, talking with Jim Lager; Michael Kersten of Carl Zeiss Inc. with Herbert Goldberg and Larry Gubas; and contrasting viewfinder styles modelled by Nick Grossman (left) and Alan Numano.

Photos by: Michael Kersten (top left), Rolf Fricke (top right), Carl Schwartz with his Contax Tix (center left), John Spicer (center right), and Carl Schwartz with his Contarex (bottom left).







Clockwise from top left: Fred Schwartzmann examining a binocular with fellow binocular enthusiast François Vuillemier; Carl Schwartz, proudly wearing his Contax Tix and Contarex; Ed Myers; ZH Editor John Scott testing a Carl Zeiss "Miniquick" telescope (he later bought one), and Jim Stewart.

Photos by: Carl Schwartz with the Contarex (top left and center right); and with the Contax Tix (bottom left), and John Spicer (top right and center left).

Book Review

'We're certainly not afraid of Zeiss' Barr & Stroud binoculars and the Royal Navy

By William Reid

National Museums of Scotland Publishing Limited; 176 pp. £20.00

ISBN 1-901663-66-3

Reviewed by Fred Watson

A new book on the history of binoculars is such a rarity that it will be welcomed by anyone interested in old optics—regardless of their preference as to manufacturer. When such a book comes from the pen of William Reid, it becomes doubly significant.

Reid—a former Director of the National Army Museum in London—is best known for his seminal work on arms and armor. Over the past two decades, however, he has brought his professional approach to the study of binoculars, publishing articles in *Zeiss Historica* and elsewhere. 'We're certainly not afraid of Zeiss' is his first monograph on the subject, and the result of several years of intensive research in the archives of London's Public Records Office and the University of Glasgow, Scotland.

Glasgow, in fact, is where the story unfolds, for it was here that Barr & Stroud embarked on binocular production in the aftermath of the Great War. Already well-known for their rangefinders, the company manufactured their first binoculars in 1919, initially producing both Galilean and prismatic types. It was, says Reid, "the worst time in history to launch such a venture." Nevertheless, over the next 50 years, Barr & Stroud's Glasgow-made prismatic binoculars became a well-known facet of British life—particularly among seafarers, thanks to the company's contracts with the Admiralty.

'We're certainly not afraid of Zeiss' tells the story of these innovative instruments, detailing every aspect of the company's involvement with binoculars. The book's intriguing title is a quotation from an internal company document written in 1930. It went on to express the hope that Zeiss would, in fact, have reason to be afraid of Barr & Stroud, a sentiment that seems almost laughable today.

No stone has remained unturned in the author's quest for detail and accuracy, and by the end of the book the reader feels as keenly as he does the frustrating and unexplained absence of Barr & Stroud's workshop ledgers from the archive. Despite having been denied that particular Rosetta stone, Reid has produced a scholarly but immensely readable book that will also prove a goldmine for any Barr & Stroud enthusiast. In both the text and the appendices, there is a wealth of information that is simply not available anywhere else.

Many other well-known manufacturers (including Zeiss) play a significant role in this story, and its well-researched sub-plot outlines the bigger historical picture. The final chapter, for example, traces the gradual decline of Barr & Stroud binocular production after the Second World War, but reads almost like a threnody for the entire British consumer optics industry. There is also a valuable account of the optical test procedures used by the British government. 'We're certainly not afraid of Zeiss' is lavishly illustrated with original material from the archives, and photographs of instruments from Reid's own collection.

There is little to criticize in the book; it is beautifully presented and extraordinarily free from typographical errors. It has a very British flavor to it, and I wonder what transatlantic readers will make of "the Thunderer" (the London *Times*) or "MOT test centres" (automobile checking stations)? A minor quibble relates to Hans Lipperhey's telescope of 1608, which is stated to have been an inverting instrument (page 24). Contemporary and near-contemporary seventeenth-century documents overwhelmingly support the view that it was a Galilean, providing upright images. Finally, my personal preference would have been for chapter titles rather than just numbers to help the reader navigate the book's many enticing creeks and inlets.

This comprehensive and modestly-priced volume should be on the shelves of anyone professing an interest in the history of optical instruments. Of course, Barr & Stroud collectors will want to buy two—one to use, and the other to display alongside all those fine Scottish binoculars... ❑

Fred Watson is Astronomer-in-Charge of the Anglo-Australian Observatory in New South Wales, Australia.

Able Seaman Newall was the lookout aboard HMS *Suffolk* who first sighted the German warships *Bismark* and *Prinz Eugen* before the action in May 1941. Here he uses a Barr & Stroud CF41/AP1900 binocular.

Photograph courtesy of the Imperial War Museum, London;
negative no A 4216.

Back Cover:

The front and back of a postcard sent by Ernst Wandersleb to a friend in Switzerland in 1949. Wandersleb joined Carl Zeiss, Jena in 1901 and retired in 1939 as manager of the photo department. (See *Zeiss Historica,* Spring 1999, for details.)

The front of the card shows a general view of Jena with the Zeiss works in the middle distance at the left. On the back Wandersleb has written:

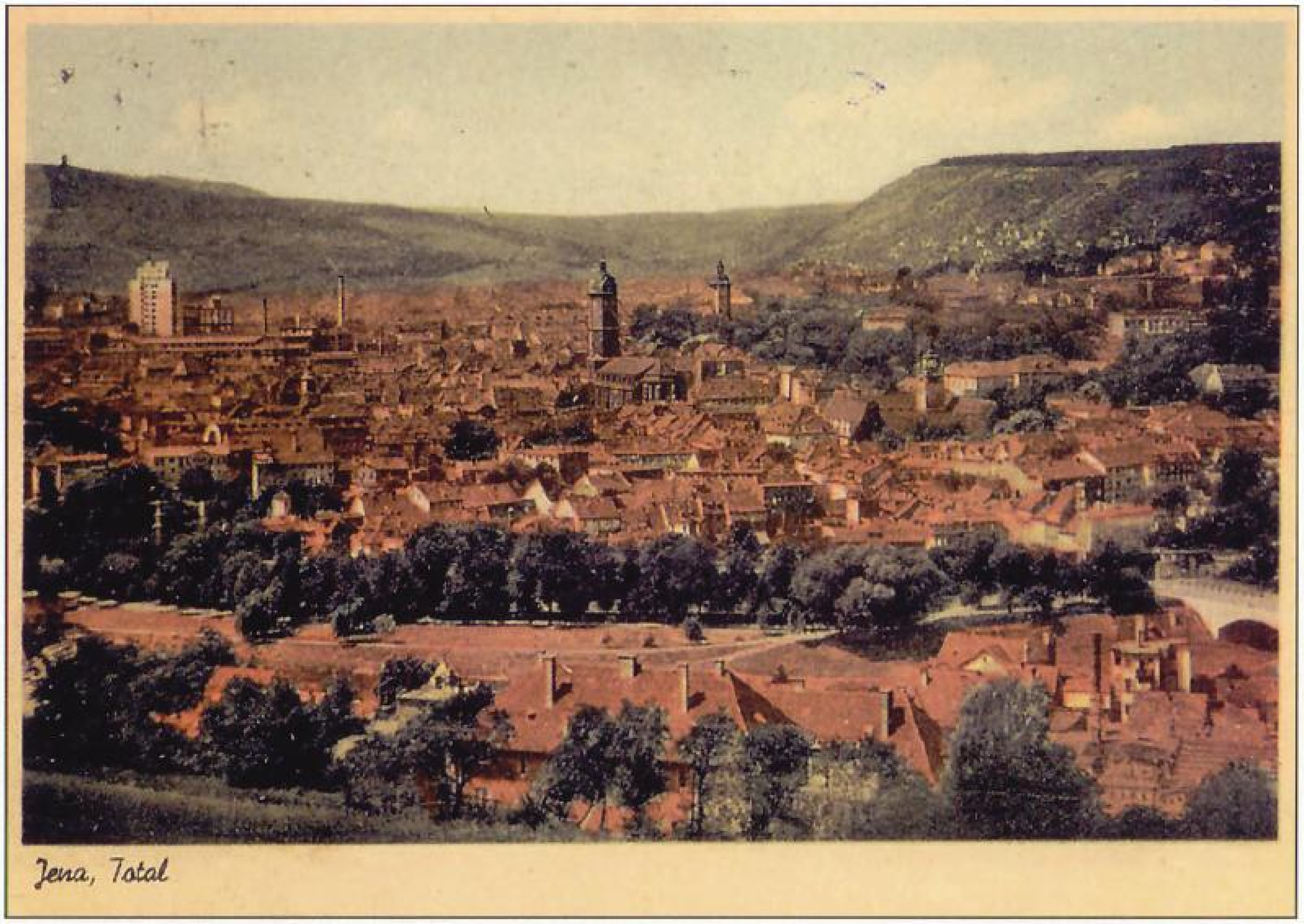
Miss Bertha Brönnimann,
Langnau/Emmental
Switzerland

Dear Miss Brönnimann,

If, like me, you do not yourself belong to the brotherhood of stamp collectors, you may make a friend a little happy by this postcard from Jena, with the group of Goethe stamps and the Jena date stamp of August 28, 1949, which is Goethe's 200th birthday. We hope that you are doing well and send you our best regards.

Yours, Emmy and Ernst Wandersleb

From the collection of Larry Gubas


Jena, Total


Dr. Ernst Wandersleb / Thür.
Schäfferstraße 14
mit dieser Jenaer Karte, mit dem
Goethemarkensatz, und dem Jenaer
Poststempel vom 28.VIII.49, Goethes
200. Geburtstag können Sie vielleicht
einem Freunde eine kleine Freude
machen, wenn Sie wie ich nicht
selbst zur Zunft der Briefmarken-
sammler gehören. Wir hoffen Sie
bei Wohlsein und grüßen Sie
herzlich!
Wandersleb.
1749 1949 GOETHE DEUTSCHE POST
JENA 1 GOETHES ALLERLIEBSTER ORT UNIVERSITÄTSSTADT
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Brönnimann
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