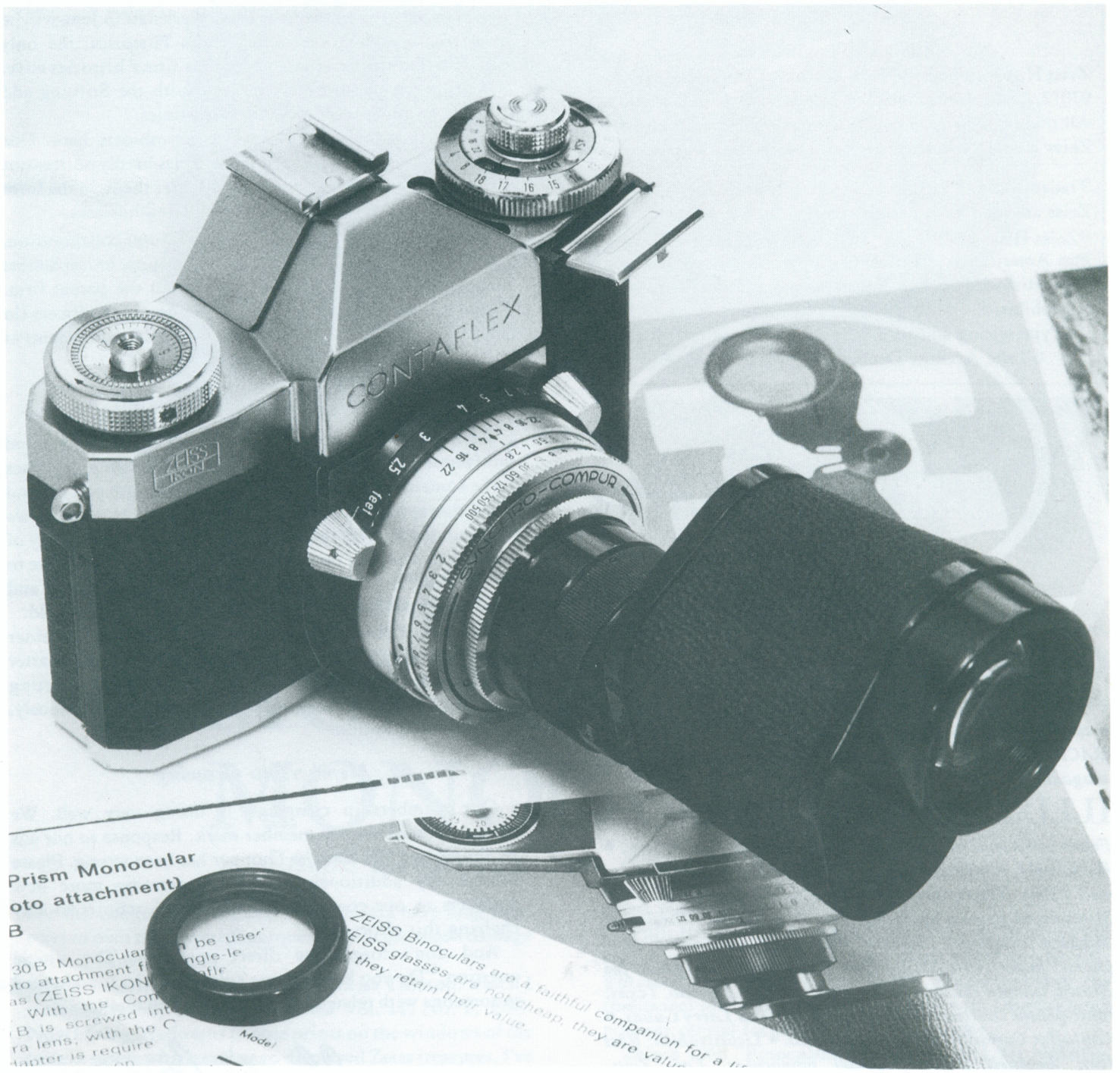
ZEISS HISTORICA

The Journal of the Zeiss Historica Society • Volume 17, Number 1 • Spring, 1995



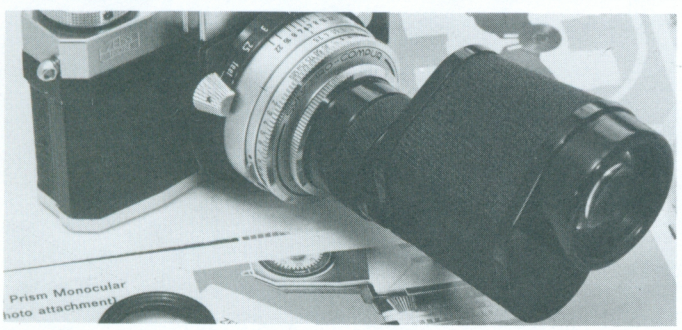
The Zeiss Historica Society of America is an educational, non-profit society dedicated to the study and exchange of information on the history of the Carl Zeiss optical company and affiliates, its people and products from 1846 to the present.

OFFICERS

Founder	Thomas Schreiner
President	Charles Barringer, Jr.
Vice President	Marc James Small
Secretary	Maurice Zubatkin
Treasurer	Maurice Zubatkin
Archivist	Lawrence Gubas
European Liaison Officer	Hans-Juergen Kuc
Journal Editors	Marion Husid William Stone

Address all inquiries to:
Zeiss Historica Society, P.O. Box 631, Clifton, New Jersey 07012, USA. Annual membership dues: Only in USA, $25. All other countries, $35. Dues include subscription to the Zeiss Historica Journal, airmail postage overseas.

Type-setting and printing: The Warren Press, Inc.
6 Lake Avenue, Danbury, Connecticut 06810.



ON THE COVERS

FRONT COVER: 8x30B monocular (first version) in place as a telephoto attachment on the Contaflex.
BACK COVER: Contax III featured on the cover of 1942 Swiss magazine.

ILLUSTRATION SOURCES

Front cover and 8x30B monocular with case, Joe Brown. • Back cover, Siegfried Schaub. • Version 2 and 3 monocular and "Tiny Trademarks" photos, Charles Barringer, Jr. • Stereo movie camera photo, Auction Team Koeln. • Statistical Machine diagrams, Michael Buckland. • "Golden Age" photos: Super Nettel II, Bernard Ente; Ikoflex III, photo Joe Brown, camera courtesy Nemo Antiques, San Antonio, Texas; other photos courtesy Maurice Zubatkin and Larry Gubas. • Contaflex Curiosity, Marc James Small. • Lichtstrahlen: Ross lens, Siegfried Schaub; 20x60 monocular, Carl Zeiss; Photokina cartoon, Wolf Wehran via Larry Gubas.

PRESIDENT'S LETTER

A company with a heritage as rich as the one Zeiss enjoys has no problem coming up with special events to commemorate. Zeiss recently celebrated the centenaries of events as diverse as the creation of the Stiftung (Foundation) and the introduction of its binoculars.

Zeiss Ikon set new standards in anniversaries in 1937, recognizing with much fanfare the 75th anniversary of a company we all thought was founded in 1926. (Actually, the celebration honored the founding of its eldest ancestor company, Huettig. To set matters straight, Zeiss Ikon feted its true 25th in 1951.)

Celebrating a Major Anniversary

We hope and assume that next year's sesquicentennial of the 1846 opening of the Carl Zeiss Werkstatt in Jena will be cause for a major celebration. Zeiss Historica, the only organization dedicated to keeping the firms' histories alive, has a unique opportunity to work with the Stiftung and become an integral part of the ceremonies.

There is ample opportunity for symbiosis here. Our relations are excellent. But in truth, Zeiss hardly notices our existence. I believe we have much to offer them, in the form of our collective knowledge and enthusiasm.

To promote greater recognition and closer collaboration, I want to solicit ideas which we could propose or implement to strengthen the bonds between us and the parent firm. Please submit your ideas to any of the Society's officers (in writing, preferably) and we will report on developments as the event nears.

October Meeting in Toronto

Zeiss Historica will not be celebrating a round-numbered anniversary in 1995, but our next annual meeting promises to be something special. Acting on the strength of a ground swell that appeared at the annual meeting last November, we will join forces with the Photographic Historical Society of Canada in Toronto on October 27-29. Many details have to be worked out, but you can count on an active and interesting program in a new (for us) part of the world.

Actually, I shouldn't say new. In 1979, Tom Schreiner gathered the first group of what would become the charter members of Zeiss Historica in Toronto. Our 1995 meeting will thus be an act of recognition, regrettably posthumously, of Tom's inspiration.

Membership Growing

Our membership campaign is doing very well. We recently passed the 400 member mark. Response to our ads in Shutterbug and Camera Shopper has been strong. Please submit any additional ideas for generating more new members to our coeditor, Marion Husid, who is so ably chairing this effort.

And don't forget the direct approach. The simple question, "Do you know about Zeiss Historica?" addressed to someone with related interests is often all it takes.

Charlie Barringer

The 8x30B can be used both as a hand-held device, and as a telephoto attachment. Monocular carries Carl Zeiss trademark. But Zeiss Ikon logo on the red-plush-lined leather case suggests its use as a camera accessory.

A MULTIPURPOSE MONOCULAR

Joseph K. Brown, San Antonio, Texas

For the budget minded, Zeiss monoculars have long been ways to own this coveted marque without too much damage to their bank accounts.

One interesting monocular is the Zeiss Turmon, which I reviewed briefly in Zeiss Historica Vol. 11, No. 2, 1989. Now having left dozens of nose prints on the windows of the camera stores which years ago displayed Zeiss treasures, I've had the opportunity to collect another monocular, the Zeiss prism monocular 8x30B.

While the roof prism monoculars Dialyt 8x20 and 8x30B are, due to their compactness, more allied to the tiny Turmon, the Porro prism 8x30B monocular has the traditional low profile shape associated with Oberkochen's postwar central focusing 8-power binocular.

Zeiss's 1966 "Binoculars" booklet (52-051/II) identifies this Zeiss prism monocular 8x30B as a telephoto attachment.

An illustration shows the optic attached to the taking lens of a Contaflex Super. (It cannot be used with the Contaflex I or II.) Its use with the prestigious Contarex is also described, but for use on the Contarex, an adapter is required.

In the case of the Contaflex, the monocular can be screwed directly into the camera lens after its eyepiece relief ring is removed (see cover photo). Used thus, the camera's 50mm Tessar becomes the rear component of a very compact optical system with a focal length of 400mm. But, as with the addition of a Zeiss Duonar or Magnar to the Rolleiflex (Zeiss Historica fall 1992, pp. 16-18, and spring 1993, pp. 16-17), the "f" value of this monocular-plus-Tessar combination shrinks considerably...in this case, to approximately f13.

At least two variations of the 8x30B Porro prism monocular exist. Mine is the first version. Introduced in 1959, it has eyepiece focusing. A second version, somewhat more convenient for camera work, is focused with its objective lens. A third 8x30B, dating from 1969, does not employ Porro prisms, but belongs to the Dialyt design family.

Proxar-type supplementary front lenses turn this monocular into a telemagnifier offering macro views of evasive subjects like butterflies...a great convenience to the field naturalist. While the near-focus capability of monoculars and binoculars is almost always overlooked, one of the finest features of the pair of 8x Deltrintems I use is their ability to focus down to 8 feet. The 8x30B monocular and the little Turmon are good at this, too. Someone on the design staffs in Jena and later in Oberkochen must have been also an entomologist or botanist. (The concept of the field glass used as a magnifier is briefly discussed in the 1928 edition of the catalog "Zeiss Field Glasses" T380 E.)

Because the Zeiss 8x30B monocular is useful for visual as well as photographic work, it gives the Contaflex/Contarex enthusiast a telephoto lens that's as functional off the camera as it is handsome when attached.

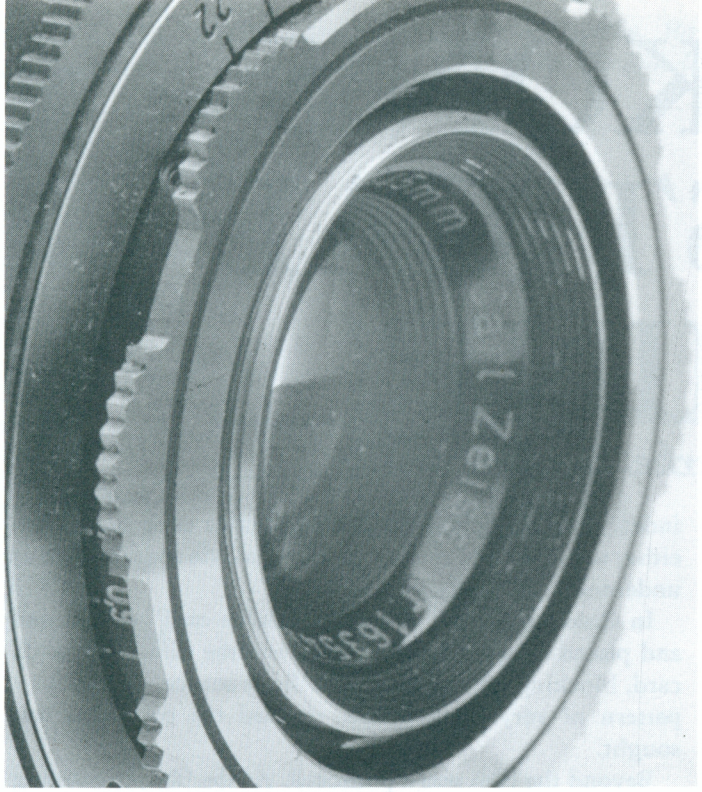
Other Versions of the 8x30B Monocular

Second version of the Porro prism 8x30B, shown here on an SL706, has front-end focusing.

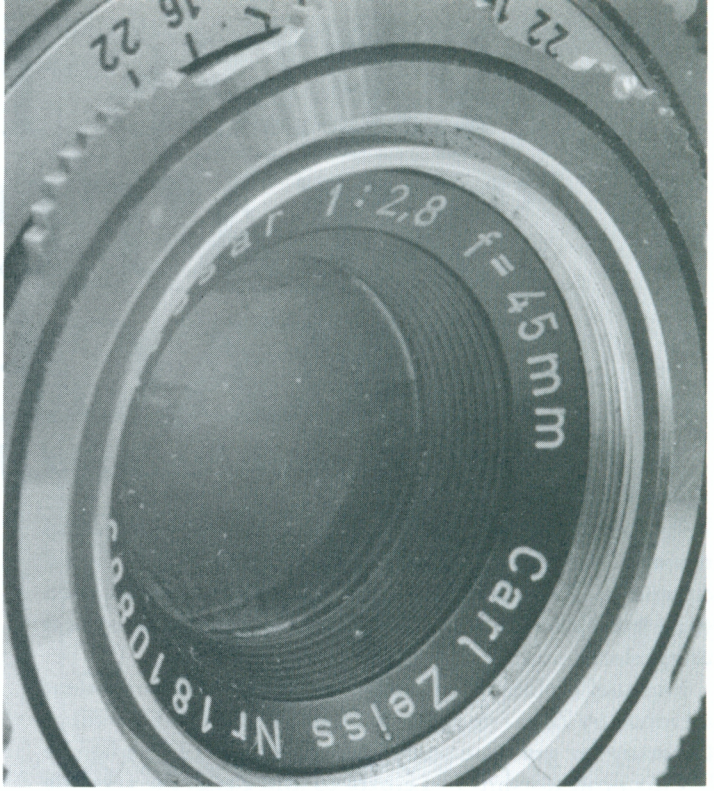
Third version of the 8x30B, now part of the Dialyt design family, on a Contarex Electronic.

Porro prism version of the 8x30B dwarfs its smaller relative, a postwar 8x21 Turmon.

Versions Two and Three, with adaptors for Contarex and Icarex, and slip-on closeup lenses.



Lens/shutter assembly with Tessar #1635435, carries an unusual male thread.



Lens/shutter with Tessar #18108xx displays the accustomed and expected female thread.

ANOTHER CONTAFLEX CURIOSITY

Marc James Small, Roanoke, Virginia

There have been many comments concerning variations in early Contaflex cameras. Well, another has surfaced, and this time is even more curious.

A reputable repair shop recently fixed a Contaflex I, serial number A77557, with its f2.8 45mm CZ Tessar #1280386. The MX lens-shutter assembly had been replaced with an MXV set, including a Tessar with a later number 1635435.

But one significant difference between the two shutters prompted a call to the shop to make sure nothing had been left out. The repair had been a straight swap from a junked-out Contaflex I body. Examination of the replacement unit alongside a conventional female-threaded Contaflex suggested that this male-threaded arrangement might have come from the factory as well.

Since the 1930s, we've become accustomed to expect that filter threads will be female and that the filters will be screwed into them. To encounter a male thread was a bit off the mark!

To make matters even more confusing, Zeiss Ikon marketed a hard plastic lens shade, Bestellnummer 1103, which had the female threads necessary to fit into this lens. At the same time, Ednalite also marketed a Series V filter adaptor for the fitting. Is there reason to believe that cooperation existed between Zeiss Ikon and after-market producers?

Regardless of the male or female thread, an auxiliary lens, the 1.7x Teleskop, cheerfully attaches and does its thing without a quibble. The male thread offers no resistance to the 27mm filter's simply reversed thread, and the 1103 lens hood fits well, too. Nevertheless, that Zeiss Ikon would market in low volume a camera whose filter thread was the reverse of one already accepted and expected remains a puzzlement.

Does anyone else have an early Contaflex with male filter-thread? I would appreciate hearing from you.

Sources:

- Bisschops, Jan E.M. "Two Compurs for the Contaflex I," Zeiss Historica Journal, autumn 1986, pp. 10-11.
- Edstrom, Paul. "Identifying Contaflex I Variations," ZHJ, autumn 1987, pp. 3-6.
- Kuc, H-J. CONTAFLEX CONTAREX GESCHICHTE TECHNIK FAKTEN, Verlag Hans-Juergen Kuc, Hamburg, Germany, 1988.
- Takeda, S. "More on the Contaflex I," ZHJ, spring 1989, p. 13.

ZEISS IKON'S "STATISTICAL MACHINE"

Michael Buckland, Berkeley, California

Zeiss Ikon pioneered in the automation of the storage and retrieval of business records. In 1931, well before digital computers, Emanuel Goldberg of Zeiss Ikon demonstrated what may have been the first document retrieval system using electronics.

Emanuel Goldberg, another example of academic talent recruited by Zeiss, was born in Moscow in 1881. He went to Germany for graduate study and stayed. By 1917, when he left his professorship in Leipzig to join Zeiss, the versatile Goldberg had contributed significantly to galvanizing, photochemistry, photography, and color printing.

Initially a technical advisor at Jena, he became a manager at Ica, the Zeiss subsidiary in Dresden. In 1926, when Zeiss Ikon was formed, Goldberg was appointed principal director.

In the 1920s the practice of microfilming business records was becoming common. Banks, in particular, found that they could reduce fraud by microfilming checks before returning the cancelled originals to customers.

His extensive work on movie camera and projector design familiarized Goldberg with engineering problems in handling 35mm film. The issue with microfilmed business records was to find and retrieve particular records promptly from long spools of film, which stored thousands of records in no particular order. One could create indexes to the microfilmed images, but that was tedious and yielded only an address for the record, not the record itself.

Goldberg found electronics intriguing. He became actively involved in the development of television technology and enjoyed rebuilding radios as a hobby. In particular, photoelectric cells, central to sound movie technology became a development of great importance for Zeiss Ikon.

To solve the problem of retrieving individual records from spools of microfilm, Goldberg used movie projector technology to handle the microfilm and a photoelectric cell to do pattern recognition in finding the right record. The principal application, expected to retrieve accounting and sales data, was called a "Statistical Machine."

The idea is shown in Figure 1. When the documents were microfilmed, they were indexed. Whatever feature likely to be used for retrieval, e.g. amount of check, account number, sales area, was represented by code. One might use letters or numbers, but patterns of opaque dots were simpler. The index code was photographed alongside each document, either to one side of the image (like a movie sound track) or underneath, as in Figure 1.

In Goldberg's basic design, a "search card" was created and placed between a light source and the film. The search card, blocking all light from the light source, except for a pattern of very small beams, defined the code that was sought.

Beyond the film was a photocell. As the film, containing images of documents, moved through the machine, some of

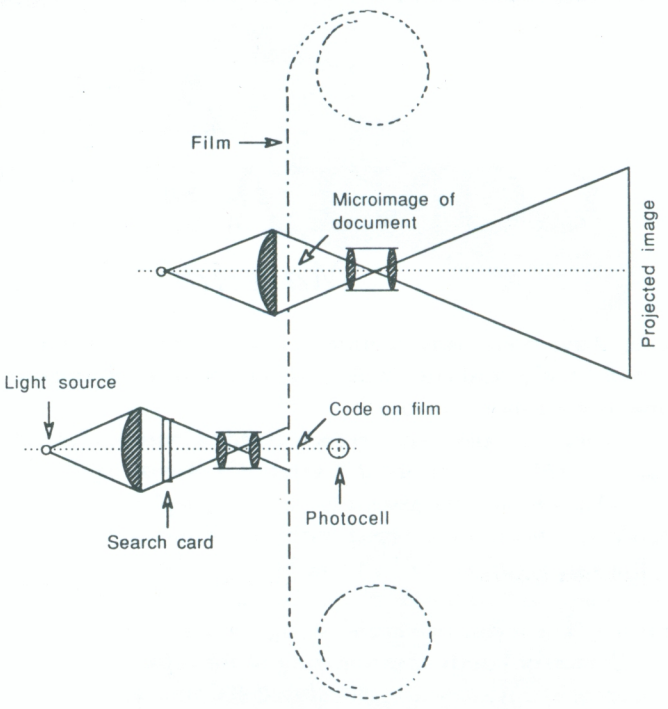
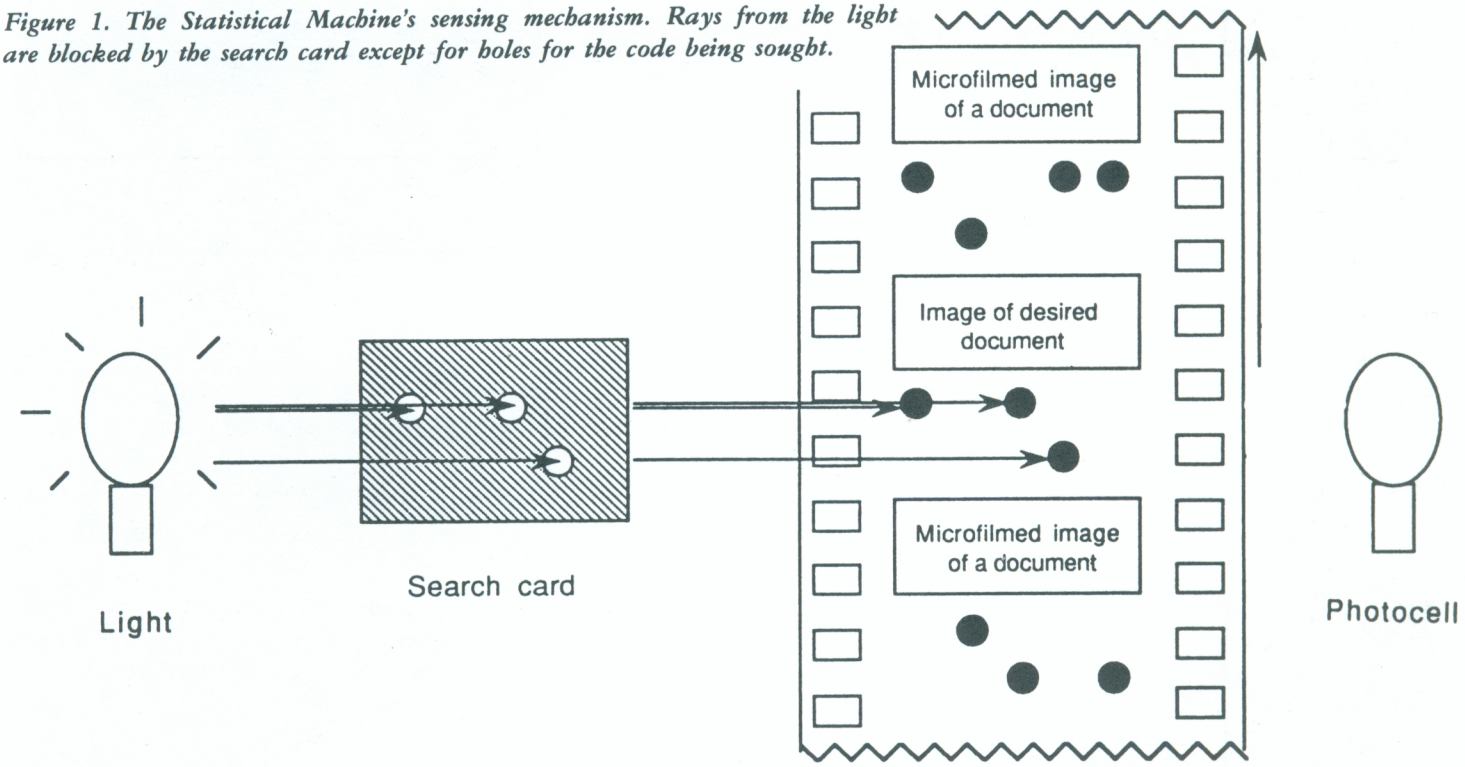


Figure 2. Diagram of the Statistical Machine showing the sensing mechanism and, above it, projection of the image of the document.

the light that passed through the search card passed through the film and reached the photocell, where it generated a low voltage electronic current.

When the opaque dots on the film coincided exactly with the pattern of light beams defined by the search card, all light was blocked and no light reached the photocell. When no light reached the photocell, the flow of low voltage

Figure 1. The Statistical Machine's sensing mechanism. Rays from the light are blocked by the search card except for holes for the code being sought.



electricity faltered. Circuitry detected the loss of current and signaled the desired document had been found.

A modified movie projector was used with suitable lenses to focus the beams of light onto the film, as shown in the lower half of Figure 2. Another mechanism was needed to project the image of the selected document for viewing or copying as shown in the upper half of Figure 2.

In August 1931 at the 8th International Congress of Photography in Dresden, Goldberg described and demonstrated his machine at one of the smaller technical sessions.

More attention might have been paid to this presentation had the delegates not been excited by Goldberg's other widely reported demonstration of sound movie technology. His proposal for an international standard for film speeds, the DIN and ASA was eventually adopted.

When, in October 1931, Goldberg as Taylor Lecturer at the Royal Photographic Society in London demonstrated the Statistical Machine as part of his lecture, he received prolonged acclamation.

Goldberg clearly attached great significance to the Statistical Machine for German patent No. 670, 190, December 22, 1938 was issued jointly to Zeiss Ikon and himself. He is said to have negotiated an agreement with Zeiss Ikon to receive a share of any royalties from it.

Goldberg supposedly built two different prototypes that he described as variant designs in which one could dial a code number, like dialing a telephone, instead of using a search card. But in 1933, Nazis kidnapped Goldberg from the Zeiss Ikon offices. He was released and urged to leave Germany.

In the USA, IBM promptly acquired rights to the US patent No. 1,838,389, issued December 29, 1931. Separately at MIT, Vannevar Bush developed a similar device in the late 1930s with support from Eastman Kodak and National Cash Register.

Aptly named Microfilm Rapid Selector, the film moved continuously and rapidly without a movie gate. Still, Bush's patent examiner identified the Zeiss Ikon Statistical Machine as "prior art."

In great secrecy, Bush also supervised the development of a variant version, the Comparator, to help Navy cryptanalysts break enemy codes. Its special function located the prevalence of particular characters in encrypted messages.

After World War II, Engineering Research Associates revived the MIT-designed Microfilm Rapid Selector. The development of retrieval machines, combining microfilm and photocell continued into the early 1960s, when digital computers took over.

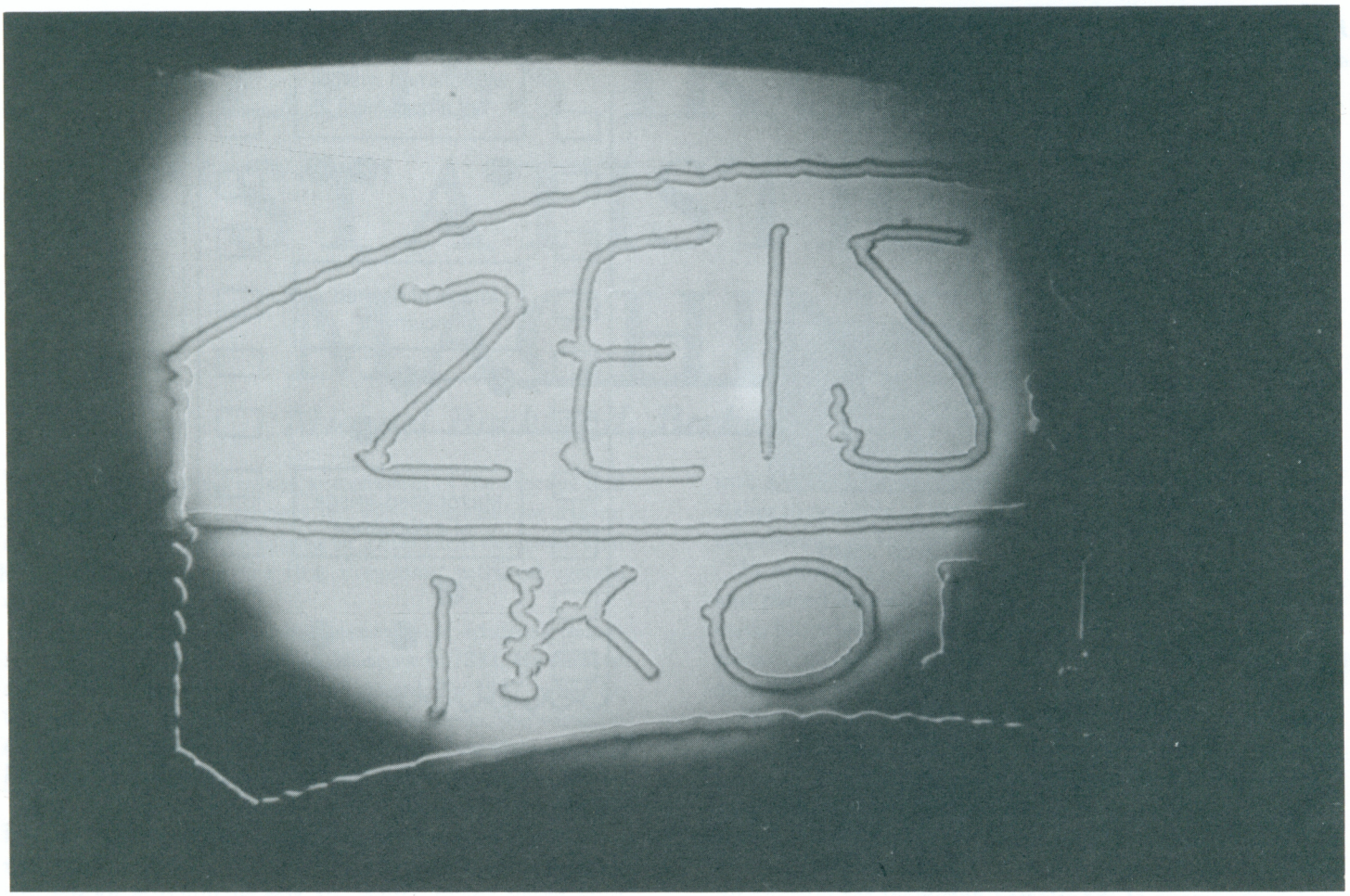
Never did the Statistical Machine develop into a Zeiss Ikon product and few traces of it remain. Nonetheless, a pioneering achievement and, apparently, the first of its kind began with Dr. Emanuel Goldberg at Zeiss Ikon.

Further reading:

An article on the Zeiss Ikon Statistical Machine, and a translation of Goldberg's original description in Dresden, 1931: Journal of the American Society for Information Science (Vol. 43, No. 4) May 1992, pp. 284-294; pp. 295-298.

Colin Burke, INFORMATION AND SECRECY: VANNEVAR BUSH, ULTRA, AND OTHER MEMEX, Scarecrow Press, 1994. A detailed account of similar machinery developed in the USA for cryptanalysis and document retrieval.

Professor Michael Buckland, School of Library and Information Studies, University of California, Berkeley, CA 94720, is assembling material for a planned biography of Emanuel Goldberg. Any information on the Statistical Machine or Dr. Goldberg would be appreciated.
Tel: (510) 642-3159 *Fax: (510) 642-5814*
E-mail: buckland@otlet.berkeley.edu



TINY TRADEMARKS

Charles Barringer, Jr., Haddonfield, N.J.

Your reaction on seeing the Zeiss Ikon logo illustrated above might well be "How did that one ever pass quality control and make it to the marketplace?" But you're unlikely to have seen this logo at all unless you knew exactly where to look for it. The tiny Zeiss Ikon and stylized Carl Zeiss logos shown here grace the extreme edges of most filters made or marketed by these firms prior to World War II.

The vast number of filters offered to the photographer of the prewar era has always bewildered me. In the Zeiss Ikon 1938 Photo Hauptkatalog (Main Photo Equipment Catalogue), one can find roughly two dozen different series of filters, varying by source (CZ or ZI), diameter (from 17.5 to 77mm), and configuration (push-on or screw-on). In each combination there were from 6 to 13 different colors, not including any of the Proxar or Distar lenses or their Carl Zeiss equivalents. A task of great complexity faced the photodealer or client of that era when determining the most appropriate filter for the job.

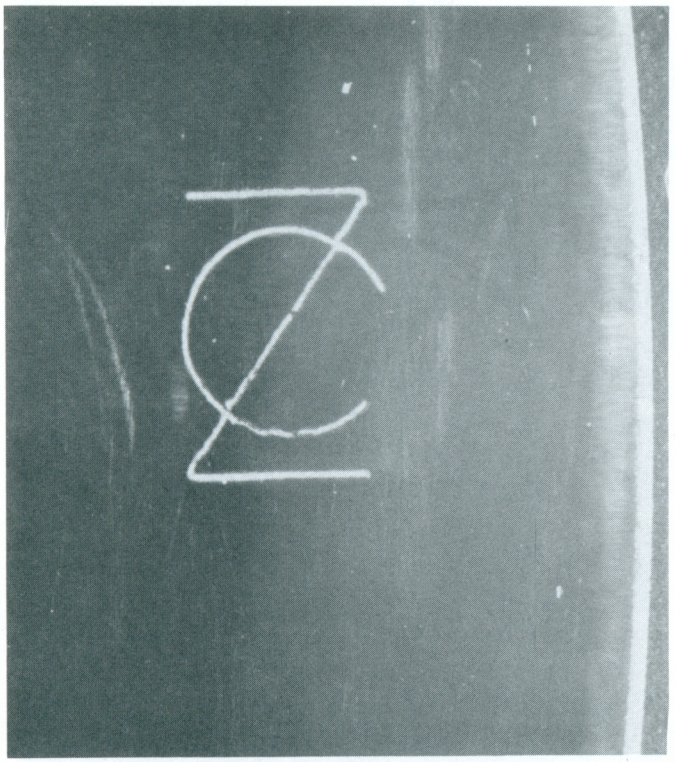
Studying the samples here, it appears that the Carl Zeiss CZ logo is clearly machine-made and engraved into the glass. One also finds this version of the logo on other minor photographic pieces (rubber eyecups, for example). It was likely used in many other non-photo applications as well. The softer outlines of the ZI logo shown above suggest that a different process was used to produce it. Its shakiness bespeaks the direct involvement of a human hand. Could this have been an exercise imposed on Lehrlings (apprentices) to sharpen their micro-engraving skills?

The other ZI logo (shown opposite) is evidence of machine control at work. (The meaning of the numerical reference is unknown.)

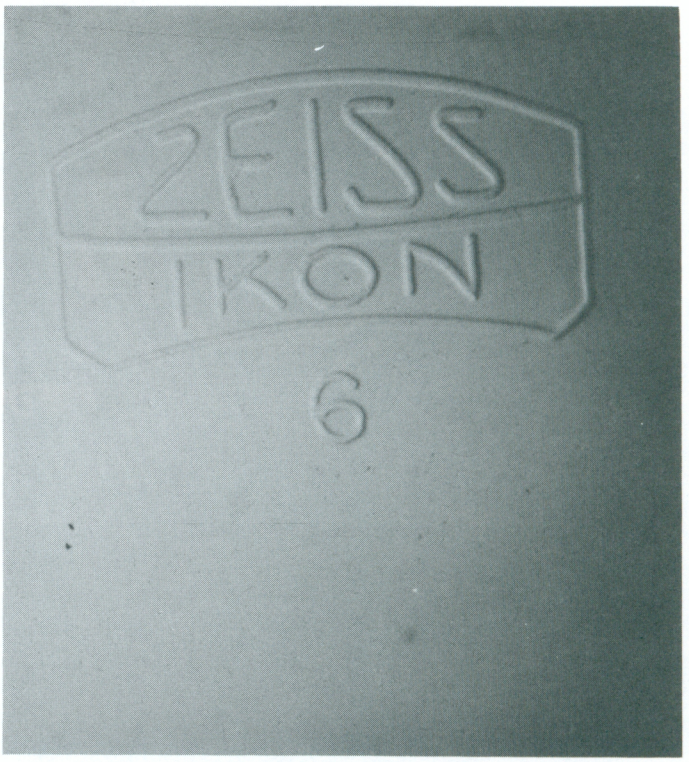
The actual logos are at most 5mm long. They are not easy for the uninitiated to spot. But once you know they're there, you will forever be on the lookout for them.

Consumers reared on "None genuine without this seal" slogans must have been reassured to see that their filter carried not only a Zeiss inscription on the mount but on the glass as well!

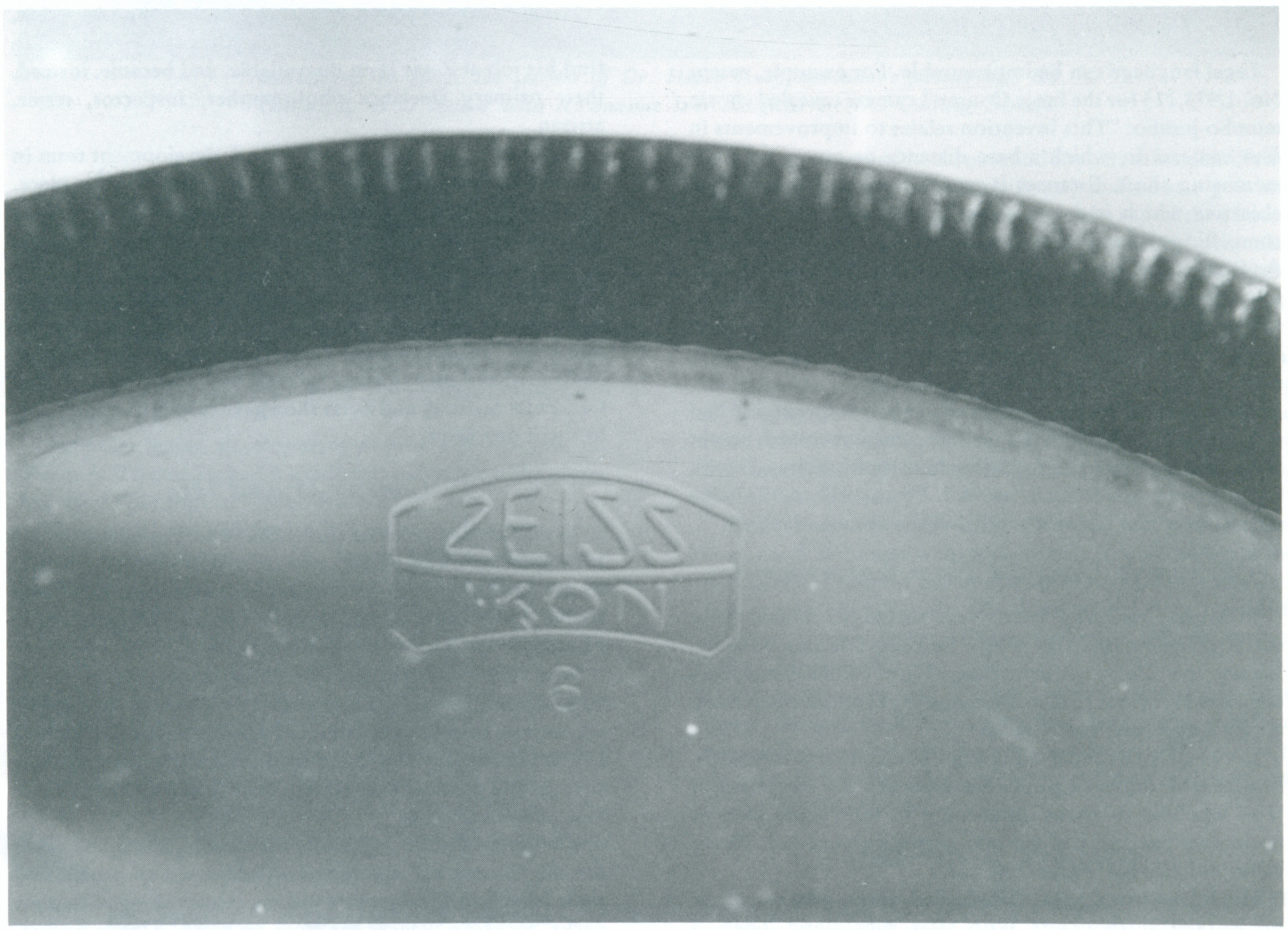
While the idea for this article was easy, its realization was a much greater challenge. The final negatives were made using bellows-mounted 25mm Carl Zeiss Luminar. I still haven't completely figured out how to control the dark field lighting needed to get an image of a low-contrast micro-subject against a transparent background, but it was fun trying. Suggestions will be gratefully accepted.



Carl Zeiss marking appears to be machine-engraved.



Machine control produced a virtually perfect trademark.



Tiny indeed: the logo on a 40.5mm diameter filter.

ZEISS IKON: THE GOLDEN AGE

Larry Gubas, Randolph, New Jersey

Part II

In Part I of this story, (Zeiss Historica, autumn 1994, pp. 3-8) the Carl Zeiss Stiftung announced in 1927 the creation of a consortium, Zeiss Ikon. From that time until World War II, their scientist-designer-innovators contributed a mighty universe of photographic equipment. Their vision, their imagination, their curiosity, their individuality took concrete form in the objects they created. That period of glorious dynamic vitality demonstrated the complexity and ingenuity of human endeavor and, for me, epitomized Zeiss Ikon's Golden Age.

Pressures for Contax I Patent

Legal language can be impenetrable. For example, patent No. 1,973,213 for the basic Contax I camera revealed classic mumbo-jumbo: "This invention relates to improvements in film cameras in which a base distance or rangefinder for measuring short distances is coupled to the frame for the objective which is displaceable by means of a worm gear compelling the objective to participate in the adjustment of the finder until the desired focus has been obtained." Simply put: "By means of a worm gear, the rangefinder and lens work together." The remaining 278 patents need careful decipherment as well, but Kueppenbender's drawings were marvels of creativity and clarity.

The need to devise patents to assure prime ownership had to meet the lightning speed at which cameras evolved. So not only did pressures arise from the sheer multiplicity of ideas, but from the government as well. From 1932 to 1937, the evolution of the Contax paralleled the rise of Naziism.

Pressures from the Nazi Government

Pressures, resulting from Nazi ideology, created huge social problems that the Zeiss Stiftung felt immediately. Inside the Zeiss Ikon firms, Third Reich members organized workers to march under their banners, instituting social purges that cost dearly.

In 1934, Dr. Emanuel Goldberg was taken for several days, imprisoned, and as a public example for the treatment of Jews was tied to a tree. According to the Nazis, Jews in leadership positions of German business must end. Never again did Goldberg enter the plant.

His life endangered, Goldberg fled. First to Paris, where he worked at the Zeiss Ikon sales subsidiary. Then, a moment before the German invasion of France, Goldberg started for Israel. There he settled and began a small scientific business repairing Allied targeting apparatus. After World War II, Goldberg created scientific items for local markets.

Other Faces Gone

Martin Nowicki, head of the design branch at Dresden with Dr. Kueppenbender, also disappeared. Whether he moved elsewhere in the company or was forced to leave remained a mystery. Clearly, his presence was missed.

Hans Padelt, the first engineer hired in the late 1920s, took an "extended" vacation to Yugoslavia. He returned to find his job at Zeiss Ikon unavailable, and became, instead, their primary freelance photographer, inspector, tester, artisan.

Goeckeritz, also on the design and development team in Dresden, disappeared. Hubert Nerwin stood in his place. Quickly, Nerwin became the man on the fast track because Kueppenbender replaced Goldberg as Director of Zeiss Ikon's Board of Management.

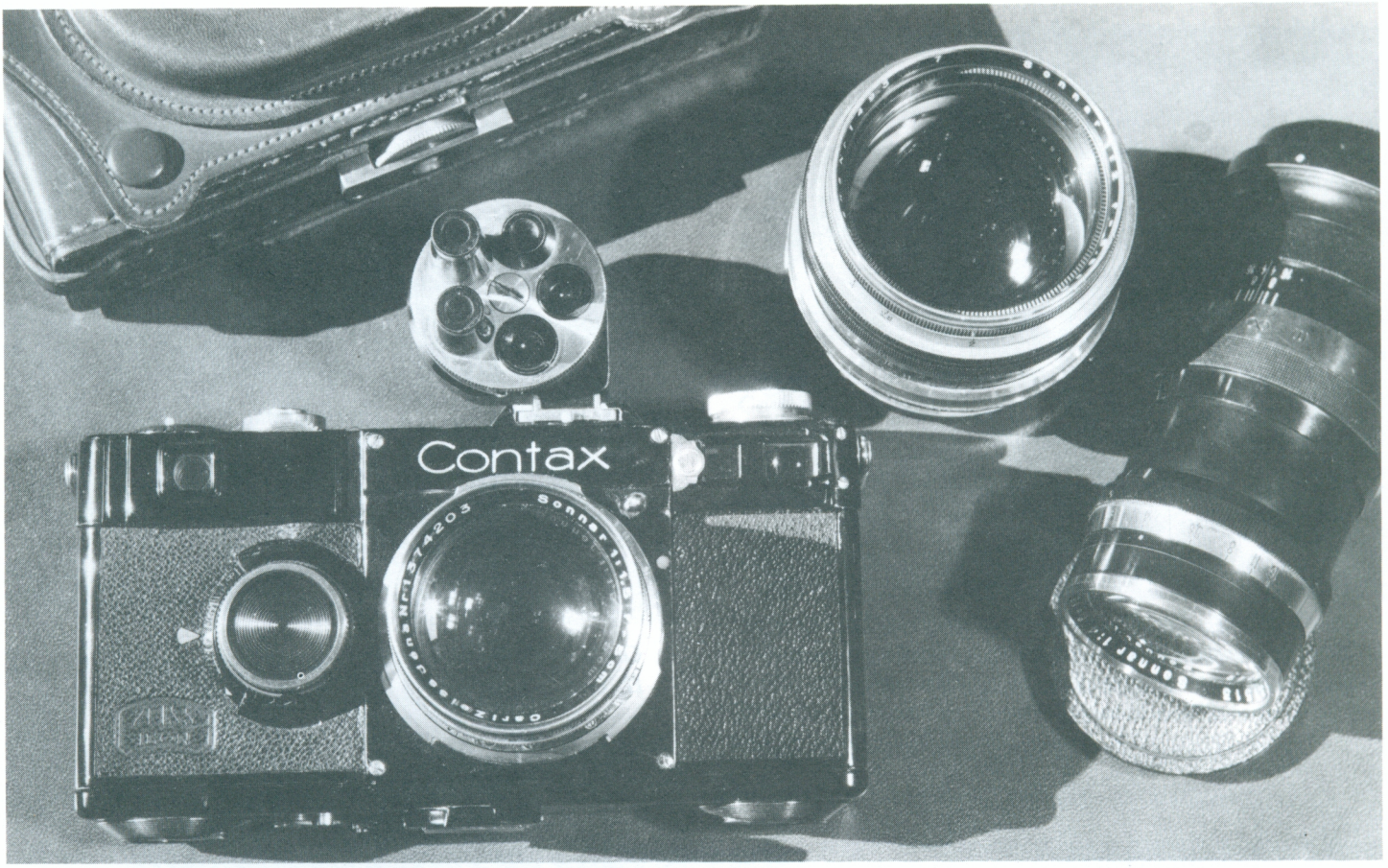
Responsibility for overall management, plus attendance to design and development kept Dr. Heinz Kueppenbender immersed in his work. Indeed, other personal losses continued and many others on staff needed protection. The Carl Zeiss Stiftung and Zeiss Ikon gave special consideration to these problems.

Contax II and III

In this atmosphere, the Contax II and III came out largely through Nerwin's efforts under Arthur Mende, project leader for the prewar Contax models. Other products took shape, including the Super Ikonta family and the Super Nettel.

Both Carl Zeiss and Zeiss Ikon manufactured major accessories for the Contax family, unlike any other accessories being made. Sure, Leitz produced similar things, but the Zeiss family pulled out all the stops to amplify their fittings and product lines for the Contax and for all the other new cameras.

Their viewfinders, especially the rotating multiple finders for the Contax and the Movikon surpassed all others, and their filter family covered a vast spectrum, along with plate packs, focusing devices for close-up work, Albada finders, and on and on.



Introduced in 1932, the subject of Dr. Heinz Kueppenbender's patent was the Contax I. It is shown with its Sonnar lens designed by Dr. Ludwig Bertele.

Contax Lenses and Lens Design

Lenses for the Contax and the general growth of lens design followed a variable route. First, the Contax had four different 50mm or normal lenses. The Tessar f3.5 enjoyed big news a few years earlier, but then appeared the f2.8 Tessar, which could adapt to Super Nettel, the Super Ikontas, and the Ikoflex III. On the other hand, the Bertele Sonnars at f2 and f1.5 were super fast — speed unmatched anywhere.

For other lenses, development slowed. For example, the 85mm f4 Triotar inched a grade above former technology, but the 135 f4 Sonnar leaped forward.

The promising 30mm f6.8 Dagor wide-angle never arrived, whereas the less exotic 28mm f8 Tessar that showed up instead couldn't couple with the rangefinder. Soon the awaited telephoto lens reincarnated from another Tessar formula as the 180 Tele-Tessar K appeared to much acclaim. Interchangeability of lens mounts, based on past Zeiss experience with cinematic lenses, permitted quick change and precise focusing.

While this production was more than the competition could present and highly impressive for the time, it was small change compared with things to come. Dr. Kueppenbender heard the demand for innovation and quality.

Innovations and Quality Design

Large scale changes in the design of the ContaxII created a showpiece. Covered in chrome and leather, this scientifically designed camera was as meticulously crafted as a precious jewel. Its winding knob, relocated to the top of the camera, had a new addition. Nerwin made a simple contribution that became a ubiquitous part of camera design. He placed the shutter release in the middle of the winding knob, another idea that most future designers imitated.

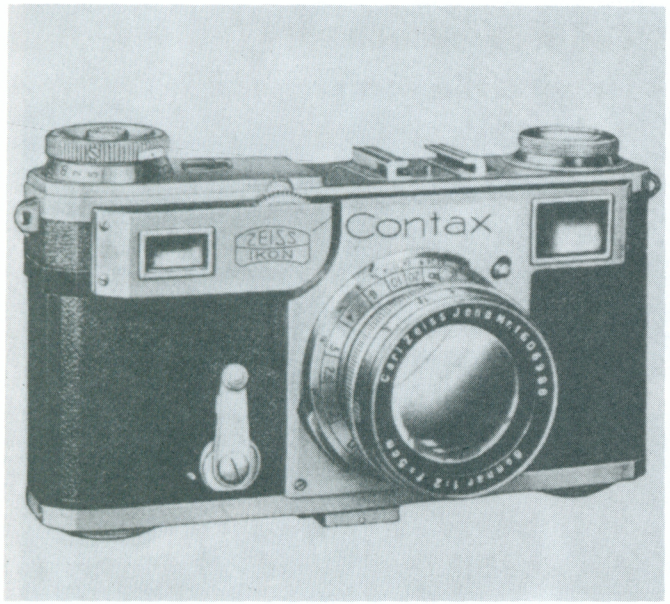
The rangefinder and viewfinder in a single window plus an increased shutter speed to 1/1250 second was frosting on an already delicious layer cake. Whereas the Contax I had been subject to multiple on-the-fly redesigns, the design of the Contax II remained basically unchanged throughout the life of the camera.

Yes, improvements and advances on the camera continued, but most were cosmetically imperceptible to the purchaser, except for the lens family where chrome replaced the earlier black/nickel. The lens family now included: 42.5mm Biotar, 180mm Olympic Sonnar, 85mm Sonnar, 35mm Biogon, etcetera.

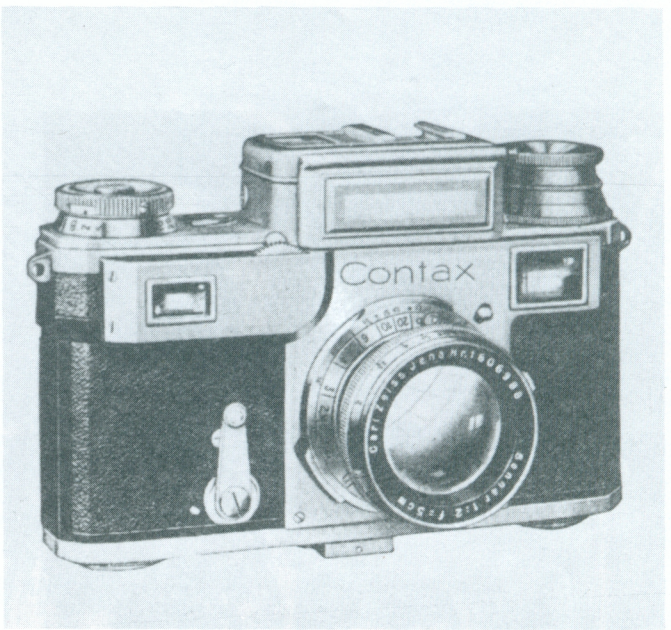
Kueppenbender and Nerwin shared interests in light meter design, each having applied for several different patents for his products. Two or so years after the Contax II reached the market, a light meter was affixed to the camera. Voila, the Contax III!

Other New Products

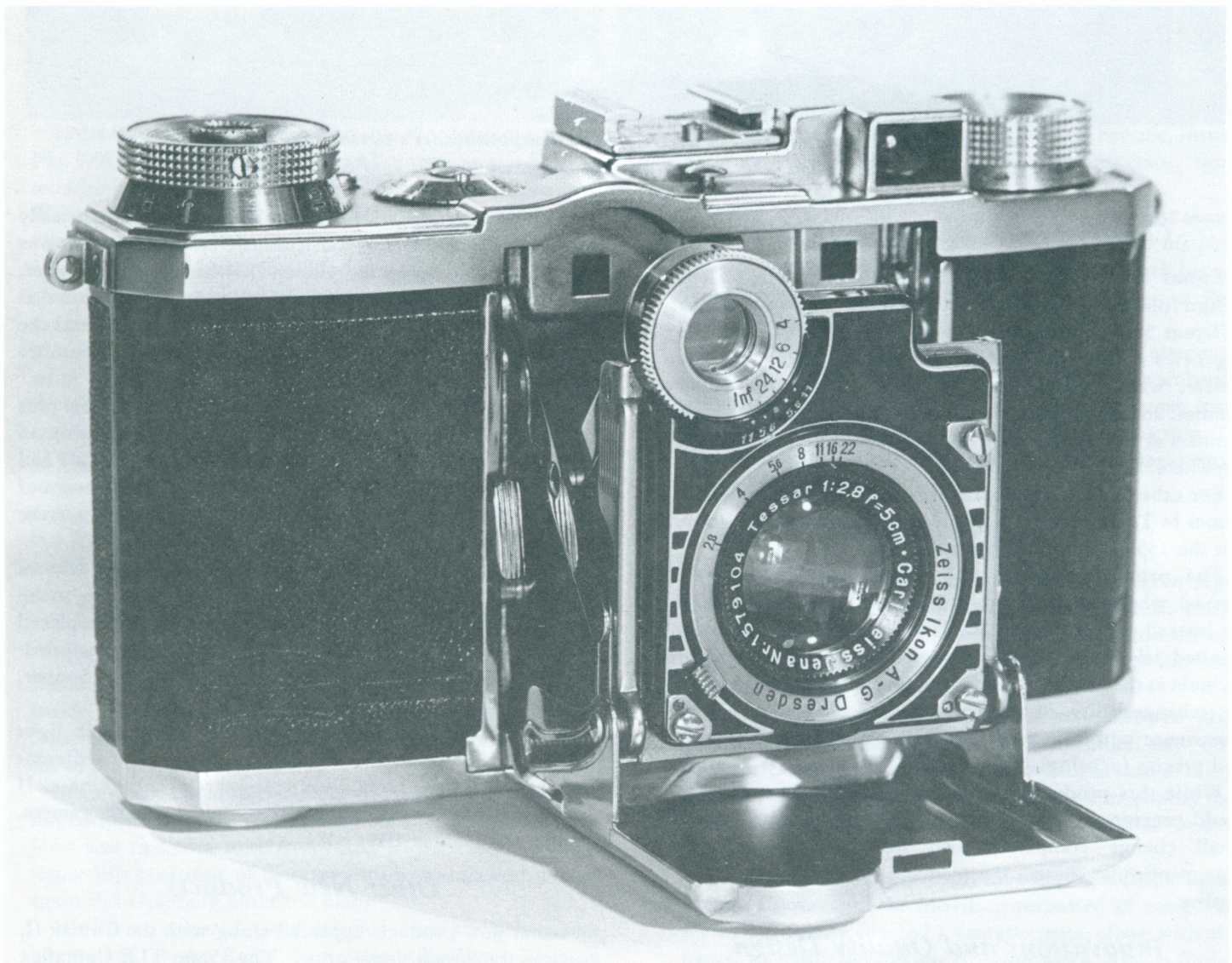
Other new products appeared along with the Contax II, such as the Super Nettel group. The 35mm TLR Contaflex (Contax Reflex) was designed and marketed, using many



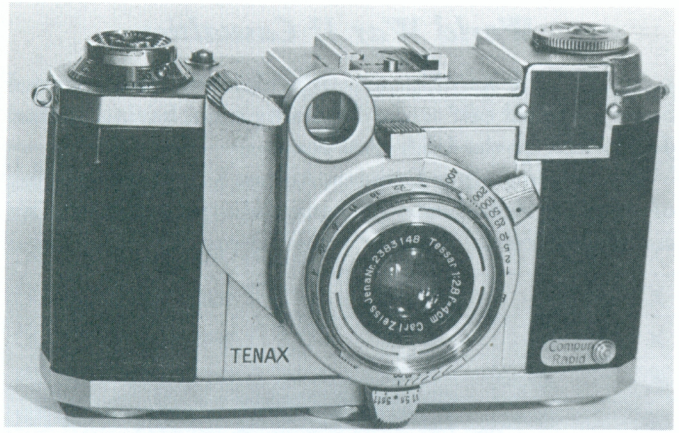
The first Zeiss Ikon miniature camera to have a rangefinder-viewfinder window and an increased shutter speed to 1/1250 second was the Contax II.



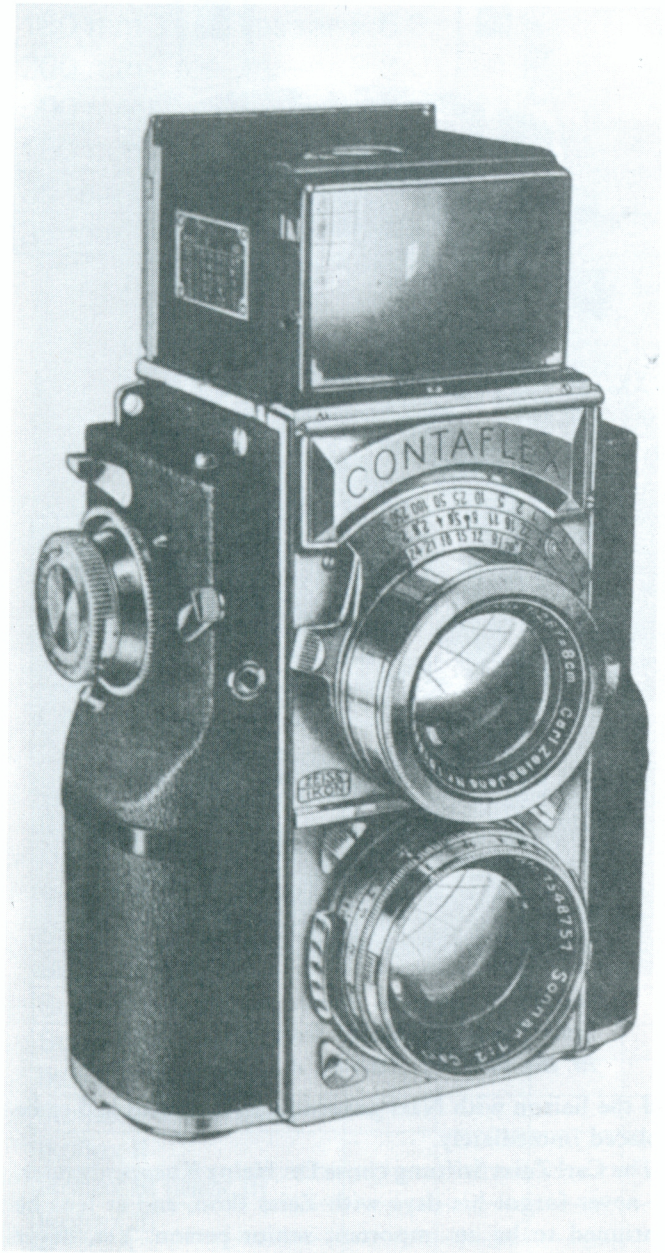
Contax III embodied all the features of the Contax II, but now carried a built-in selenium light meter.



Super Nettel II with its Zeiss Tessar lens was called the "poor man's Contax." One of the first true pocket cameras.



The Tenax II, with its square viewfinder window and chrome trim that forms a square around the lens, seems to proclaim its 24x24 format.



One of the heaviest-of-all-heavies has to be the Contaflex that embodies the twin-lens reflex principle in a small negative, one and a half inches by one inch.

features and accessories of the Contax but with different alignments, detail designs and manufacturing processes.

By 1938, Zeiss Ikon had more 35mm cameras in world markets than had all of the competition combined. Included were the Tenax I and II, and the Nettax (sometimes advertised as the Super Nettel III in Europe) followed by improvements in the Super Ikonta as well as the classy Ikoflex III.

Contax Literature

Miniature books on the Contax were excellent: The Connoisseur and the Contax (64 pages), Accessories for Contax Photography (48 pages), The Ten Contax Lenses (56 pages). Written by Dr. K. Wolter and printed in Germany, they were translated into every language where Zeiss products were available. A book, like those on the Contax but devoted to the Super Nettel and the Contaflex, had been published only in Dutch, so far as one can tell.

The epic, Contax Photography, a handbook dealing with Zeiss Ikon miniature cameras —Super Nettel, Nettax, Contax, Contaflex— comprised 116 pages in its last edition in the late 1930s. These helpful books were updated every three to six months to keep abreast of new inventory added to the camera and accessory lines.

Dresden, Berlin, Stuttgart

The major new products were manufactured in three important cities: Dresden at the Ica and Ernemann shops, Berlin's Goerz factory, and in Stuttgart, at the Contessa Nettel plant.

Ica housed the executive offices, the camera designers, the manufacture and assembly of the new 35mm cameras. Component manufacture, such as small prisms, rangefinders, filters, supplementary viewfinders, darkroom equipment, accessories and mechanical components took place at Ernemann, which also produced their professional and amateur movie line. This movie line never made it to the United States but it led the field in Europe.

Goerz in Berlin concentrated on various box cameras: Baldur, Era Box, and Box Tengor, some folding cameras, and the Ikoflex TLR cameras. Also from Goerz came various chemicals, photo paper, film and darkroom products.

Contessa Nettel in Stuttgart provided major rollfilm cameras: Nettax, Ikonta and Super Ikonta.

Despite their distances from Jena, (Dresden-Jena 98 mi. [157.5 km]; Stuttgart-Jena 186 mi. [300 km]; Berlin-Jena 140 mi. [225 km]) each location maintained its individuality. Apprentice-trained staff worked only on the product lines of their particular shop.

Eschewing direct contact between cities as far as output was concerned, Zeiss Ikon's advertisements proclaimed their unity and diversity. "Zeiss Ikon A.G., Dresden, the world-renowned concern comprising several of the oldest and best known camera works...". Now, that's truth in advertising!

Unrelated Relations

Having inherited unrelated product lines with a factory brought further recognition for the Zeiss Ikon logo. Goerz

and Ernemann, for example, continued their small medical products department that still produced blood-sugar testing devices.

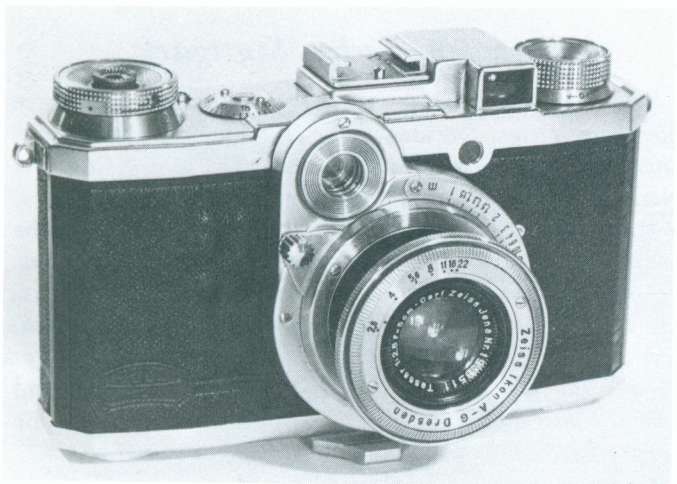
Additionally, a professional commercial lighting design and manufacturing section of the factory, as well as a large-sized Goerz mechanical calculator, continued to yield profits from the European community.

A department that made keys and door locks also existed. The Hauptkatalog (Master Catalog) for Zeiss Ikon contained items that export countries never saw. Almost all of these unrelated relations survived the camera industry of Zeiss.

The Zeiss Ikon in the lens logo appeared on keys for locks in homes, businesses, ocean liner staterooms, and international hotels until 1990. When the Carl Zeiss Stiftung finally sold that business, their logo keys became collectibles.

The War Years

As World War II drew nearer, the German government determined design and manufacturing processes to suit their needs. Zeiss Ikon entered new areas where sophisticated military equipment and specific projects in photography



Another "poor man's Contax" was the Nettax of 1938-39. Of rigid construction (without bellows) and interchangeable lenses, it was a compact 35mm rangefinder, and remains high on the collectible's list.

took top priority. Nerwin said later that he worked on new camera designs during his lunch hour.

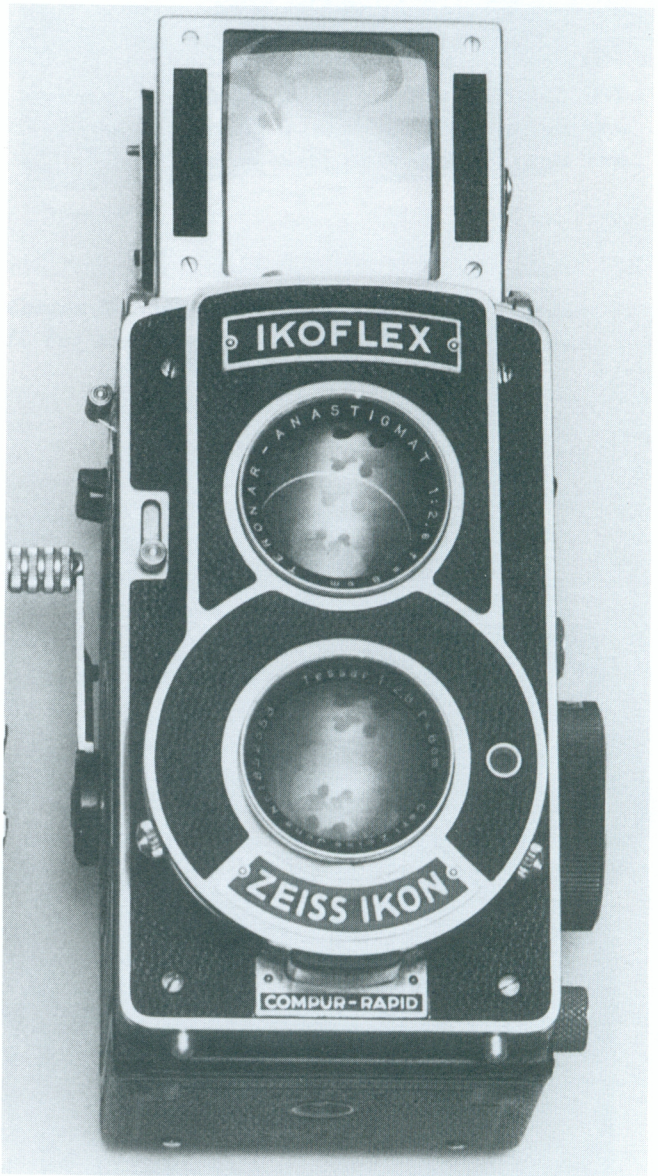
Markets changed as developing wartime economies changed so that cameras which should have been successful, such as the 35mm Nettax, the Ikoflex III and the Tenax II, lacked commercial play. Important war production shoved them aside. Accomplished craftsmen and young men, who should have begun their careers, entered the military instead.

In 1940, the German draft took Hans Padelt, a Zeiss Stiftung member since the late 20s. He found himself in soldier's garb and on the road to the Russian front, despite Zeiss Ikon's attempts to have him returned. An increasing number of slave laborers supplied by the government, entered the Zeiss work force.

World War II Casualties

In 1940, the last shipment from Germany to the United States travelled east across Russia by train, having its final destination on the USA west coast.

In 1941, on a trip to Dresden, August Kotthaus, a member of the Carl Zeiss board of management, was killed in an automobile crash. A major technical production manager



Ikoflex III with the Albada finder, among other new products from Zeiss Ikon in the late 30s, became a war casualty.

and the liaison with Nazi government, Kotthaus had to be replaced immediately.

The Carl Zeiss Stiftung chose Dr. Heinz Kueppenbender. He never forgot his days with Zeiss Ikon, and at Jena he continued to be an important senior person. Yet, never again would he give the position his full attention. It was a different time and different place for many.

About 1943 marked the demise of a Contax telephoto

Chronology of Prewar Lenses for the Contax

Lenses	1932	1933	1934	1935	1936	1937	1938	1939	1940
50 mm Tessar F3.5	X	X	X	X	X	X	X	X	X
50 mm Tessar F2.8	X	X	X	X	X	X	X	X	X
50 mm Sonnar F2	X	X	X	X	X	X	X	X	X
50 mm Sonnar F1.5	X	X	X	X	X	X	X	X	X
85 mm Sonnar F2	X	X	X	X	X	X	X	X	X
85 mm Triotar F4	X	X	X	X	X	X	X	X	X
135 mm Sonnar F4	X	X	X	X	X	X	X	X	X
28 mm Tessar F8	X	X	X	X	X	X	X	X	X
40 mm Biotar F2	X	X	X	X	X	X	X	X	X
180 mm Tele-Tessar F 6.3	X	X	X	X	X	X	X	X	X
300 mm Tele-Tessar F 8			X	X	X	X	X*	X*	X*
500 mm Far Objective F 8			X	X	X	X	X*	X*	X*
180 mm Olympia Sonnar F 2.8					X	X	X*	X*	X*
35 mm Biogon F 2.8						X	X	X	X
35 mm Orthometar F 4.5							X	X	X

*All dates are sales dates, not dates of manufacture. *In Flektoskop mount only.*

Chronology of Major Prewar Zeiss Ikon Cameras

Camera	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Kolibri		X	X	X								
Ikonta/Ikomat	X	X	X	X	X	X	X	X	X	X	X	X
Contax I				X	X	X	X	X	X			
Contax II							X	X	X	X	X	X
Contax III								X	X	X	X	X
Contaflex							X	X	X	X	X	X
Super Nettel I						X	X	X	X			
Super Nettel II							X	X	X	X		
Nettax								X	X	X		
Super Ikonta A						X	X	X	X	X	X	X
Super Ikonta B							X	X	X	X	X	X
Super Ikonta C						X	X	X	X	X	X	X
Super Ikonta D								X	X	X	X	
Super Ikonta BX										X	X	X
Ikoflex I - original						X	X					
Ikoflex I -late model											X	X
Ikoflex II							X	X	X	X		
Ikoflex III [later II]										X	X	X
Ikoflex III											X	X
Tenax I										X	X	X
Tenax II									X	X	X	X

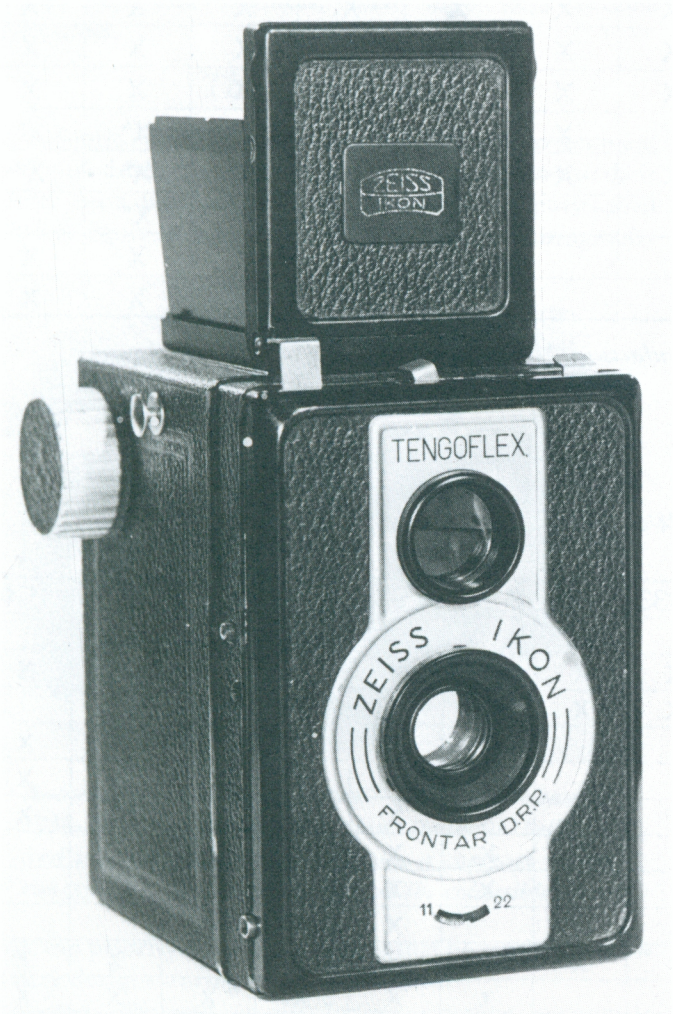
All dates are sales dates, not dates of manufacture.

camera that never went beyond the prototype stage. New light meter technologies were not incorporated in cameras, although the first Ikophot meter had been marketed in wartime.

Berlin shipped the Tengoflex to Sweden in 1943. Some were sold in Germany, but this reflex box camera became one of the rarest of the Zeiss Ikon line.

Throughout the war years, Zeiss Ikon's commercial manufacturing dropped, especially in Dresden, because the firm complied primarily with government orders. The devastating Dresden bombing included the Ica plant.

Berlin suffered considerably, as well. Yet, despite their contribution to the war effort, their commercial production continued. Stuttgart at war's end endured the least damage. It was still able to assist the government and maintain private business.

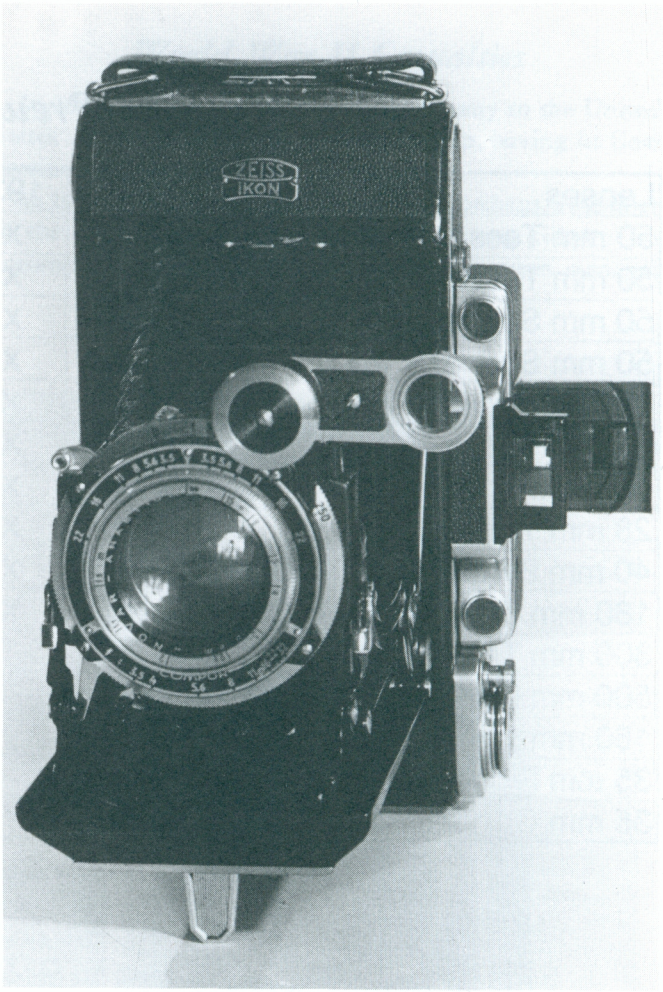


A reflex box camera with limited sales, the Tengoflex became one of the rarest of the Zeiss Ikon line.

Conclusion

The Golden Age of Zeiss Ikon ended with the beginning of World War II. Subsequent events divided East from West Germany and changed the unity and diversity of the Zeiss Stiftung.

In Dresden, the Ernemann plant became the seat of the VEB-Zeiss Ikon Dresden. (VEB, Volkseigener Betrieb in English means People's Own Enterprise.) William



Super Ikonta C.

Winzenburg, Nerwin's successor, introduced the postwar Tenax I with a coated Tessar lens, the Contax S, and the Ercona (the Ikonta knockoff). Later, the Praktica and Pentacon cameras represented a dilution of the combination with other East German camera programs.

Nerwin's wartime musings became the basis for the Contax S, as well as the first Ikonta 35, Contina and Contessa cameras. His memories of the Contax quickly put into effect the reintroduction of the Contax IIa and IIIa. Sadly, the Tenax II, Ikoflex III, Nettax, Universal Juwel, the Movikon products, completed the casualties list — never to rise again.

So far as concerned the classic Contax rangefinder, it left Dresden forever. The Russians moved the machine tools and plans to Kiev and were able to establish a "re-creation." These nameless Contaxes arose from the ashes of the new VEB-Carl Zeiss Jena.

After World War II, Zeiss Ikon came back to contribute greatly to the profitability and growth of the Carl Zeiss Stiftung in the late 1940s and 1950s. But never again did the mighty combine reach the creativity, diversity and development of the prewar era. Greece enjoyed its Golden Age in Fifth Century BC, Rome had its heyday just before the birth of Christ until the sack of Rome in AD 410, Europe's Renaissance prevailed during AD Fifteenth and Sixteenth Centuries, and some extraordinary cities' Golden Ages predated all of the above. One Golden Age continues to be a major accomplishment.

RARE STEREO SURVIVOR IS SOLD

The single surviving example of a remarkable 35mm stereo movie camera from Zeiss Ikon was sold at auction in Cologne in September, 1994.

Only four of these units were made, before and during World War II. This one dates from 1939. It's approximately 21" high, has a gray hammertone finish, and uses 35mm film in 120 meter (400 foot) cassettes. The camera is electrically driven, and produces images via an unusual system employing a moving rhomboid prism. Each frame — roughly 18 x 24 mm — contains two images, one atop the other.

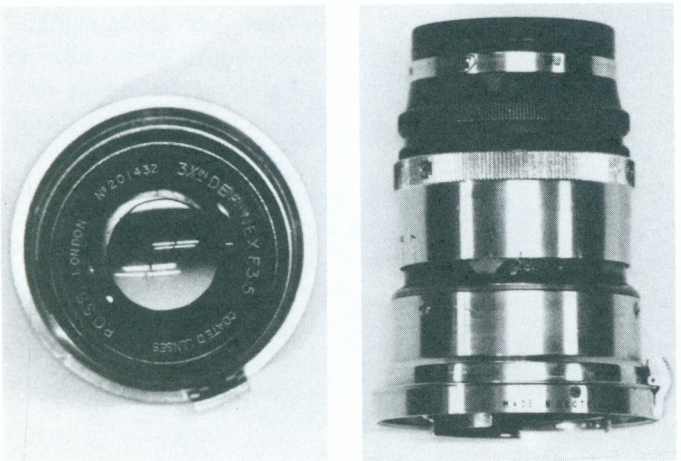
During the war, over 100,000 meters (325,000 feet) of stereo films for military training were made with this camera. At war's end, Allied specialists searched vainly for surviving examples, little knowing that their tanks were actually rolling over this one in a buried hiding place. It was Franz Buehner, a pioneer German filmmaker whose 3D films in sound and color had been shown in Berlin's UFA Palast as early as 1937, who rescued the camera.

Sold with the camera was a lens necessary to project the films: a Sterikon K, Number 20D 03a, 113402. Presale estimate for the complete outfit by Auction Team Koeln, the auction house, was DM 6500 ($4225). The winning bid was DM 16,800 ($10,900).

Material for this article, including auctioneer's catalog and photo, was provided by member Terence Sheehy.

LICHTSTRAHLEN

ROSS LENS FOR CONTAX



In the collection of Swiss member Siegfried Schaub is this rare non-Zeiss lens in a Contax mount. It's a coated rangefinder-coupled 3 1/2" Definex f3.5 by Ross, London. The front chrome ring is marked "89mm," and "Made in England." But the rear ring is marked "Made in Scotland."

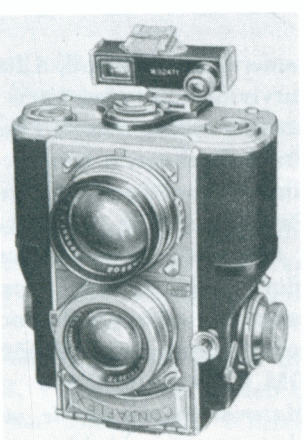
MYSTERY SOLVED

On page 22 of the spring 1994 issue of the Journal, Australian member John Keesing asked for help in identifying an unusual Zeiss optical device. Member Nick Grossman supplied the first answer.

Nick identified the device as a microscope eyepiece used for precise photomicrographic work. Zeiss and its affiliate Winkel of Goettingen had standardized the optical tube length of their transmitted-light microscopes at 160mm. This provided optimum visual performance. But adding an auxiliary device like a camera increased tube length. While mechanical adjustments could compensate for this additional length, they degraded photographic images. The device shown optically compensated for the change in tube length, and improved photographic performance. Its "6x" marking indicates a nominal magnification of six times.

CONTAMETER BRACKET

One of the rarest Zeiss Ikon accessories must be #860/44 — the bracket which attaches Contameter #1343 (for Contax I and II) to the twin-lens Contaflex, which must then be used upside down! To make operating the camera easier in this position, a cable release was supplied with the bracket. The entire outfit could be used at distances as close as 8".



ZEISS IKON ATTRACTS VIEWERS

Greetings via Larry Gubas from Wolf Wehran, Public Relations Director extraordinaire of Zeiss Ikon in Stuttgart from 1956 to 1972, and from that time to the present, PR representative for Carl Zeiss. Larry went especially to Mallorca (Spain) where Wolf lives to query Wolf about aspects of Carl Zeiss. Larry needed to fill in the gaps of Zeiss Ikon for his book on the company. What sells cameras? Only Wolf Wehran (Don Lobo) knows! (See Zeiss Historica, autumn 1993, pp. 3-8.)

ORGANIZATIONS OF INTEREST TO ZEISS AFICIONADOS

ANTIQUE TELESCOPE SOCIETY. Walter H. Breyer, Secretary. 30 Green Valley Road, Wallingford, PA 19086. $40 annual dues, quarterly journal.

HISTORICAL SOCIETY FOR RETINA CAMERAS. David L. Jentz, 51312 Mayflower Road, South Bend, IN 46628. (219) 272-0599.

HOME PLANETARIUM SOCIETY. Gary Likert, 1203 Highway 25, Gallatin, TN 37066. $8 annual dues, occasional newsletter.

MOVIE MACHINE SOCIETY. Adrian J. Levesque, Secretary/Treasurer, 42 Deerhaven Drive, Nashua, NH 03060. (603) 889-4056. $17 annual dues, quarterly journal ("Sixteen Frames").

THE SPYGLASS NETWORK. Gary Likert, 1203 Highway 25, Gallatin, TN 37066. $8 annual dues, occasional newsletter.

LIGHT RAYS: NOTES OF INTEREST ABOUT ZEISS AND ITS HISTORY

ZEISS IKON AD PORTFOLIO

From UK member Terence Sheehy comes new work: a compendium of reprints of Zeiss Ikon, Zeiss Ikon - Voigtlaender, and Zeiss advertising from 1934 to 1988. (Sheehy is also editor of "Classic Camera Collector," an English quarterly.)

Some three dozen ads are included, all but a few in English. In addition to the ads, this "Handbook of Zeiss Ikon Advertising" contains much on Zeiss history, a description of each camera advertised, and other information of interest to collectors.

The handbook is available from Terence Sheehy, 39 Beechwood Avenue, Orpington, Kent BR6 7EZ, England. Also available are similar volumes of Nikon and Rollei advertising. Each costs £7.50, plus an additional £2 for overseas airmail postage.

BERGEDORF TELESCOPE

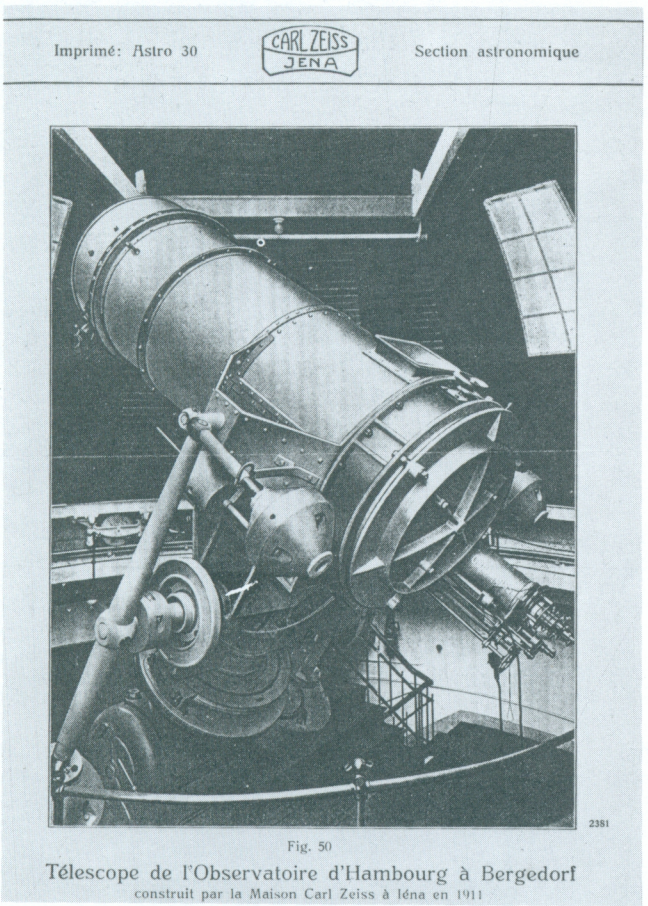


Fig. 50

Télescope de l'Observatoire d'Hambourg à Bergedorf
construit par la Maison Carl Zeiss à Iéna en 1911

Responding to the Hamburger Sternwarte article (Zeiss Historica, autumn 1994, pp. 14-17), Jim Cornwall of Auktionshaus Cornwall wrote the following: "I checked quickly in my library and found...the telescope was made in 1911." "...I [believe] I have pictures of every major Carl Zeiss telescope that was made between 1900 and 1930."

GOOD NEWS FROM "PHOTODEAL"

Non-German-speaking members who have passed up subscribing to PhotoDeal now have reason to reconsider. This authoritative German collector's magazine will soon include an English language supplement with each issue that translates virtually all of its editorial content.

In a further effort to attract USA readers, the price of a yearly subscription to PhotoDeal has been reduced from $55 to $40. PhotoDeal is published quarterly by Rudolph Hillebrand, Kiefernweg 21, D-41470 Neuss, Germany.

20 X 60 MONOCULAR

A monocular version of the remarkable 20 x 60 stabilized Zeiss binocular (ZHJ, spring 1993, pp. 12-13) is now in production by Zeiss. The stabilized scope provides a steady image. Despite its high magnification of 20x, no tripod is needed, for example, to observe animals in the wild. The relative compactness and lightness of the instrument make it suitable for mountain rescue work, and for industrial uses.

GOLDBERG AND THE MICRODOT

The microdot — text and images reduced to a size invisible to the naked eye — is familiar to readers of spy stories, both factual and fictional.

Less well-known is the important role played by Zeiss's Emanuel Goldberg in the development of this technology in the mid-1920s at Ica in Dresden.

Goldberg's contributions are detailed in the late William White's book, "The Microdot...History and Application." (White was greatly aided in his research by member Ed Kaprelian, among others.)

The book is available from Phillips Publications, Williamstown, NJ 08094 for $49.95. Phone: (609) 567-0695.

Cover of the May 20, 1942 issue of the Swiss magazine "Schweizer Illustrierte Zeitung" features reporter Franz Carl Endres with the Contax III he used to photograph his travels to and in New York. This wartime issue from Zurich also includes an ad for the camera by its Swiss distributor. The German text reminds readers that the Contax is "available in all good photo shops."