

ZEISS HISTORICA

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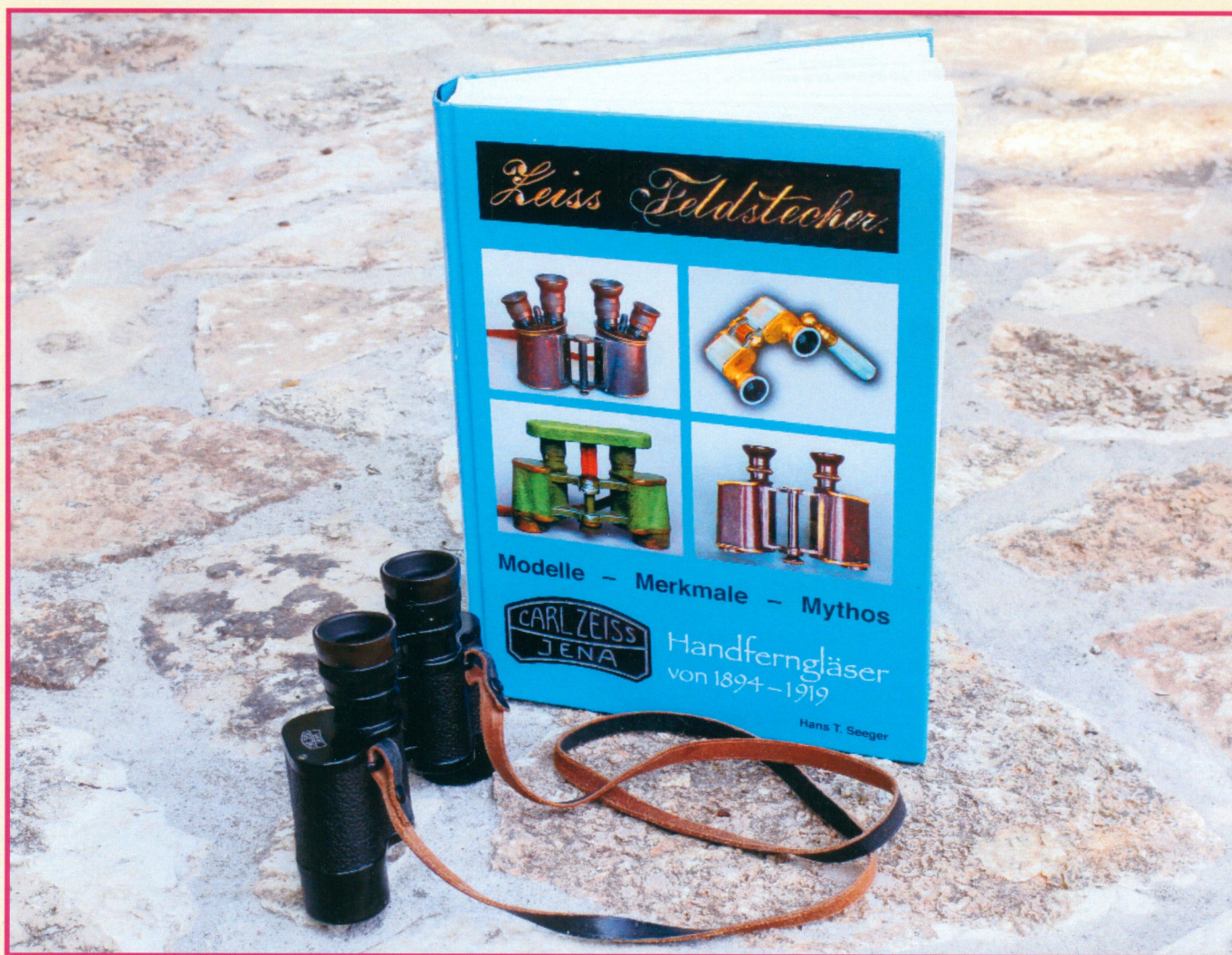


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The Zeiss Historica Society of America is an educational, non-profit organization dedicated to the exchange of information on the history of the Carl Zeiss optical company and its affiliates, people and products from 1846 to the present.

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Send material for the Journal to the Editor at 4507 Mountain Path Drive, Austin, TX 78759, USA or by e-mail to editor@zeisshistorica.org. Annual membership dues: \$40 (USA), \$50 elsewhere. Credit-card payment option (Mastercard, Visa) is available. Dues include subscription to *Zeiss Historica*, airmail postage overseas. Send general enquiries to PO Box 556, Mount Kisco, NY 10549, USA.

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Front cover: All 871 pages and three kilograms (about six pounds) of Hans Seeger's new book on Zeiss binoculars from 1894 to 1919, seen here with a 6×24 Telexem from about 1909. Frederick Schwartzman reviews the book, starting on page 8.
(Photo: J.T. Scott)



Back cover: René Ahrlé's painting of the Zeiss Ikon film-storage cabinet in use, for a mid-1930s advertisement. Bernd Otto discusses this and other advertising products in his article starting on page 10. Once again we note that the men in Zeiss advertisements wear dress shirts and neckties for all domestic chores, while their wives look on with admiration.



President's Letter

We have had some reactions to our last issue. First, the extremely well researched article on the predecessor as well as the Carl Zeiss Jena main competitor firm of CP Goerz received a tremendously positive response. Tom Mix went to a great deal of effort to produce the original manuscript in German, which was translated into American English by member Jack Kelly as a PowerPoint presentation, and then put into our format by our editor, with images from many collecting friends. This is good example of Zeiss Historica people across many miles making a strong effort to produce a unique and informative article for our publication.

Second, I prepared a support article for our 2010 dividend, an early Zeiss Ikon catalog (C 252), stating that it was a large catalog of 32 or 36 pages and was as large as there were before the issuance of the first Zeiss Ikon *Hauptkatalog* of May 1929. I neglected to mention that this last catalog was 136 pages long in the larger page size. I also forgot to include the much earlier and larger first Zeiss Ikon general catalog (C 219) from May 1927 which was 72 pages in length. This was clearly an error on my part and I am grateful for the notification of this fact from Simon Worsley, together with some supplementary information about the advertisement, reproduced on the inside back cover of that Fall 2010 issue, for the first unique Zeiss Ikon camera, the Ikonette (504/12). (See inside back cover for Worsley's comments.) This was all supplementary data missing from the advertisement and my commentary.

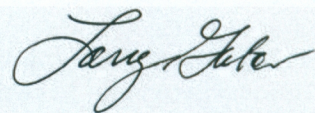
I have no concerns about corrections to the things that I have published and accept them as being constructive when supplied with the evidence such that Simon puts forth. To have them published in the Journal is quite alright with me. We produce much on observation and none of us has seen it all. Please, if you

have issues with what we publish, do not hesitate to let us know your point of view.

I am sad to make you aware of the passing of Herbert Goldberg who was a star at our meeting at Zeiss Thornwood some years ago when he made a presentation about the life and contributions of his father, Herbert Goldberg, the first Director General of Zeiss Ikon. Herbert was a major player at American Optical and Kodak in his career and was 96 years old at his death last Christmas.

Parts of the Barringer collection were sold in the last week of May at the Westlicht Auctions in Vienna. Included were two of the most light-sensitive lenses in camera history, which went for ten times their starting price: The Carl Zeiss Super-Q-Gigantar f/0.33/40 mm went from an opening bid of 6,000 to 60,000 euros (\$86,292) and the Carl Zeiss Planar f/0.7/50 mm went from 9,000 to 90,000 euros (\$129,638). Both sales prices include premiums. The Super-Q-Gigantar was not an actual developed lens. Wolf Wehran, who was then the head of Zeiss Ikon public relations, had this exhibition piece created as a dummy of an imaginary super high-speed lens made in the apprentice department of Zeiss Ikon to ridicule the then Japanese trend to faster lenses, like the Canon f/0.95. He named this dummy the "Super-Q-Gigantar" and showed it during a Zeiss press reception at Photokina. Some years later, he continued this leg-pulling exercise when several years after the Super-Q-Gigantar episode, he ridiculed the attempt for always increasing the acceptance angle of lenses with an extreme wide-angle (not fish-eye) dummy he called "Ultra-W-Angular 1:2-150 deg" at a Zeiss international press meeting at Arles. The "W" in the wide-angle lens name was an abbreviation in German for *Witz* (joke), like the "Q" in the f/0.33 lens for *Quatsch* (nonsense).

Enjoy this issue and we look forward to comments.



Report on the Business Year 1945

Carl Zeiss Jena Photo Department

Some years ago, I looked for details about the postwar situation at the Zeiss Photographic department in the Carl Zeiss Jena Archives, assisted by Dr Wolfgang Wimmer. He directed me to a copy of a special report (Archive document No. 17109) for the business year 1945/6 for the Photo Department. I was permitted to make a copy and later asked Zeiss Historica Society member Rolf Kleuver to assist me in a summary translation. This is an edited version of that report with some commentary from me in italics.

This material clarifies many of the questions that have arisen from the immediate postwar period, including some information on Leica lens mounts, the Zeiss Lens Collection and an attempt to make a Russian version of that collection, what products were being made, some information about the Jena Contax and the worry about the business of "Zeiss Opton" and Zeiss Ikon in the western zones of occupation.

Larry Gubas

Staffing and productivity

Many of the former departmental staff were lost when they were drafted into the military. Production resumed this year with only a relatively small group of core staff, and we had more orders than could be filled. Occupation forces, especially Russian, made great demands for increased delivery of photographic lenses.

The 1946 Business Plan required the capacity of the Photo Production Department to be built up to 125,000 man hours per month, and together with outside suppliers such as Optische Anstalt Saalfeld, Saalfelder Apparatebau GmbH (both Zeiss subsidiaries) and GTW, the Department was able to reach

this target. ("GTW" may refer to Gera Technische Werkstätten in Gera, Thüringen, where Carl Zeiss had a subsidiary.) Despite the low productivity caused by postwar conditions (such as lack of nutrition, susceptibility to sickness, necessary training of new personnel and integration of war returnees) 70,000 effective hours were achieved. This output was comparable to that of the years 1938/39. Revenue for 1938/9 was approximately 6.5 million Marks. For 1945/6 it was 4.9 million Marks.

Unfortunately, normal production levels were never met due to the Russian order on 22 October 1946 for the entire plant to be dismantled and moved to Russia. As a result, any reconstruction

efforts that had been started in July 1945 were totally lost.

Other losses were suffered at the end of the war when foreign forced laborers returned to their home countries.

Later, when the plant was moved to Russia, key staff were taken along with it to be trainers. It was at this time that the East German government permitted Zeiss to scavenge the rest of the country for useable devices to assist in the resumption of manufacturing.

Movie equipment

The production records for photo-lenses show that movie-projection objectives became a major new component of the program in 1945/6. Prior to 1945, Carl



Damage to the center of the Carl Zeiss Jena manufacturing complex after Allied bombing in the later stages of World War II. Obviously this had its effect on the war effort and, after the German surrender, on the later need for immediate reconstruction. Efforts to resume full production after the war were under way when, in October 1946, the Russian military forces took everything to the Soviet Union — as with Zeiss Ikon in Dresden and Goerz in Berlin the year before.

Zeiss had produced only a modest offering in movie-projection objectives (the Kipronar and Kipro-Anastigmats) so that their prices were high, and we were not a leading market force. Competitors with lower prices, and Zeiss Ikon with its house brand “Alinar,” had a major part of the market.

In 1945, the Russian occupation authorities placed a large order with us for spare parts for the portable 35 mm sound-movie kits of a Russian design that required us to start producing projection objectives in large quantities. In addition, we received an order to supply 1500 other Russian-designed sound-movie kits, with each kit being equipped with objectives of 9, 12 and 14 cm focal

lengths. After we had supplied this second order, we were told that Russia might perhaps order a million of such kits and CZ should prepare its production line for this large volume. This work would involve the Photo Kino (*movie*) department as well as lens manufacture.

These Russian orders were to be given the highest priority.

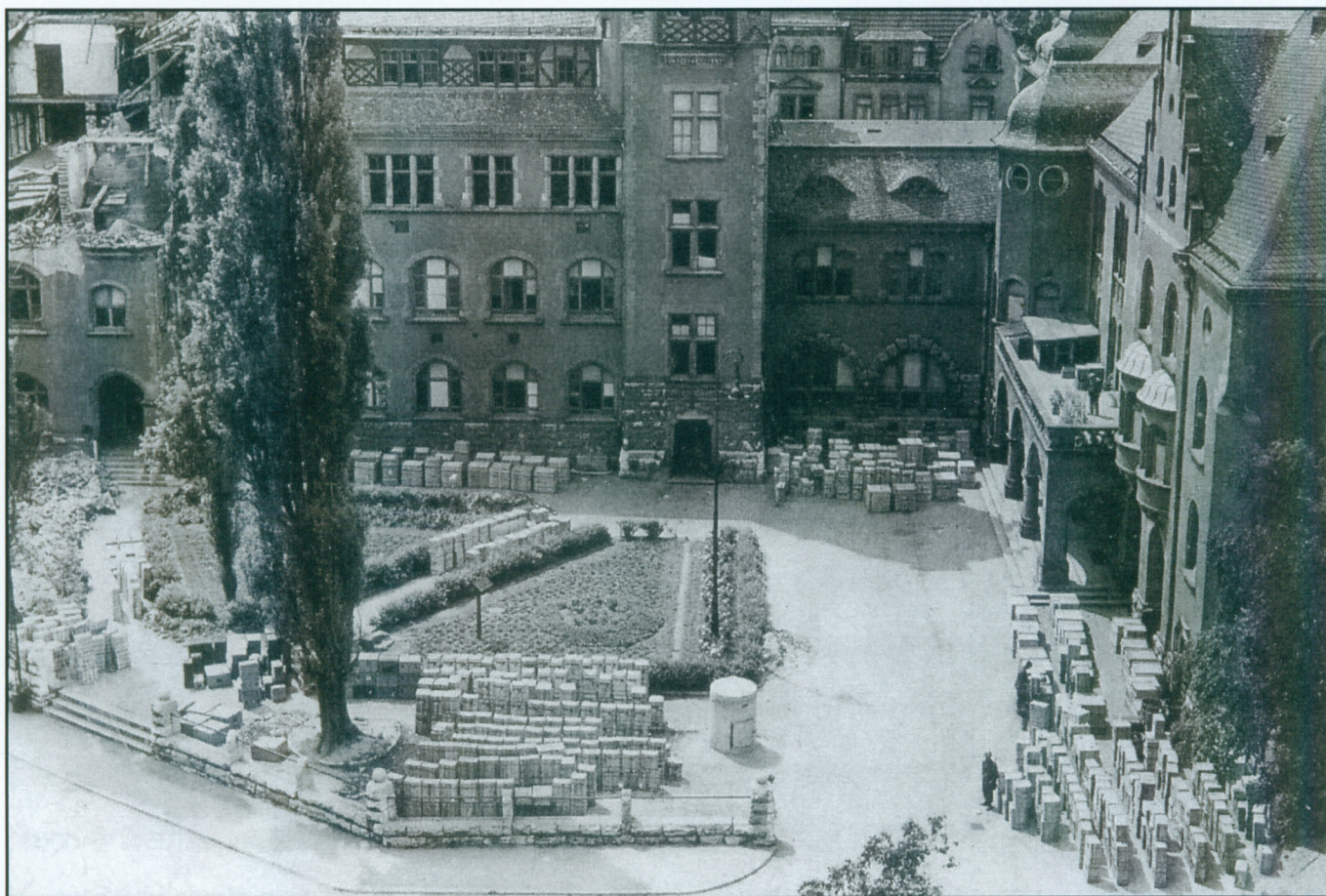
Leica-mount lenses

The Russians also demonstrated great demand for reproduction optics and miniature (35 mm) photo optics, which was reflected in the reconstruction program for this year. Although we deliberately did not produce lenses for the Leica camera until after the war, we

were, at first, induced by the American occupation authorities (April–June 1945) to deliver the Sonnar in a Leica mount. Although only a few examples were delivered to the Americans, the Russian occupation authorities later demanded that the Zeiss Ikon Contax objective range was to be supplied for the FED camera, which was a Russian product based on the Leica.

The following objectives with Leica mount were therefore incorporated into the production program:

Sonnar 1:1 $f = 5 \text{ cm}$
 Sonnar 1:2 $f = 5 \text{ cm}$
 Sonnar 1:2 $f = 8.5 \text{ cm}$
 Sonnar 1:4 $f = 13.5 \text{ cm}$



Packed for evacuation in 1945 during the brief period of American control. This equipment was destined for Heidenheim but was instead taken to the US. The building in this view is not part of the factory but is the Volkshaus built by Ernst Abbe for the people of Jena. This image and the one on page 3 are from the Carl Zeiss Jena archives by courtesy of Wolfgang Wimmer.

Flektoskop and

Sonnar, 1:2.8 $f = 18$ cm

Flektoskop and

Sonnar, 1:4 $f = 30$ cm

Tessar 1:8 $f = 2.8$ cm

Tele-Tessar 1:4 $f = 18$ cm

Biogon 1:2.8 $f = 3.5$ cm and

the Universal Finder.

The Russian order specified that the objectives for the FED camera were to have the identical mount as for the Leica; in addition, it was confirmed to us that the dimensions of the mount as well as the pull-out length of the collapsing mount were to be referenced to the Leica.

After the first objectives were produced in accordance with the approved drawings, we finally succeeded, with great difficulty, in getting a Russian FED camera, and it became apparent that neither the focal length nor the focal

intercept registration distance was in accordance with the Leica's specifications. Nevertheless, the objectives were accepted by the Russians, and it can be assumed that the majority of these objectives were then resold on the commercial market in Germany.

Reproduction objectives, such as the Apo-Planar 170 cm, of which we only sold one or two pieces per year, were ordered by the Russians in batches of twenty with a delivery schedule of two to three months.

The Lens Collection

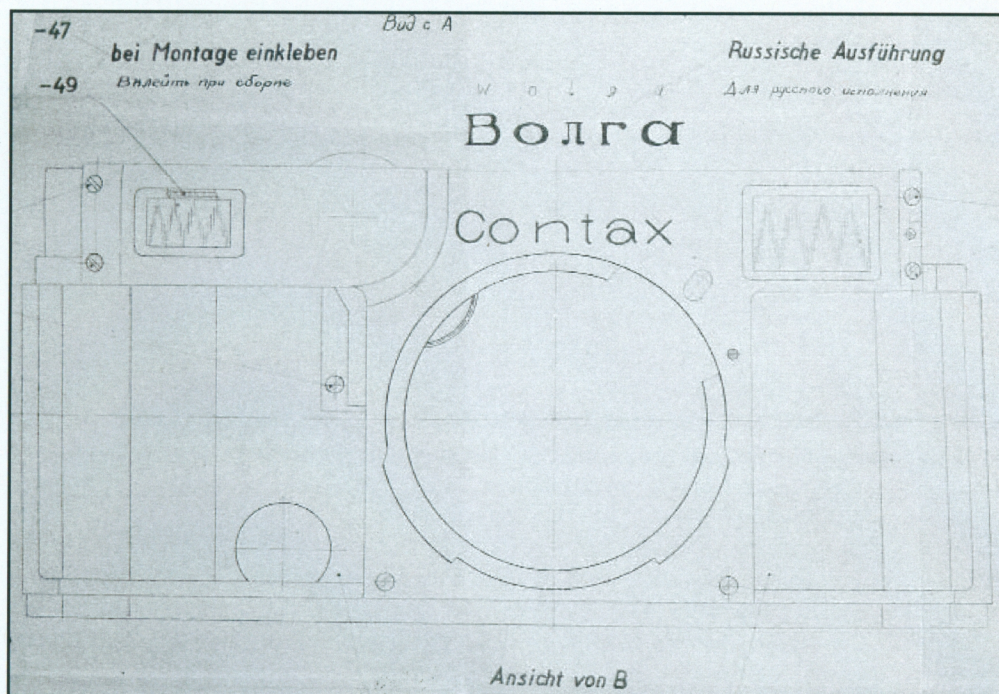
During the initial occupation of our facility in 1945 by the Americans, our complete collection of photo objectives (*the Zeiss Lens Collection*) was removed and transported to the United States.

The Russian Commission, under the leadership of group-engineer Major Professor Jachantoff from the Optical

Institute of Leningrad, requested that they also receive a complete copy of the same collection, and so we were given the order to produce sample objectives in a very short time. Directions were given to produce these immediately, from every type of objective that was ever put into production as well as several comparative non-Zeiss standard samples for delivery to the Commission. (*That is, the Russians demanded a complete "second edition" of the Zeiss Lens Collection.*)

Problems with the 1946 plan

This requested production of the sample objectives was deemed to be of such high priority that the ongoing completion of work on the production lines, which were being readied to satisfy the other Russian needs, had to be delayed: All facilities, from optical production, through pre-assembly and final assem-



The Russian version of the Contax, from a 1946 drawing. The camera is here called a "Volga," or Wolga in German, Bonra in Russian.

bly, were to work exclusively on the production of the sample objectives. With this new instruction, the Delivery Plan for 1946, which had been settled with the Russian Plant Commission, was totally overthrown and all other production disrupted.

As a result, the 1946 production plan was totally reconfigured in terms of the value and numbers of units that were originally meant to be delivered within the four occupation Zones in Germany. Now, the proposed list of exports only showed the direct supply going to Russia. Only a very small portion of the objectives delivered to the four Zones came to benefit the German market.

The vast majority of lenses consisted of indirect deliveries of objectives to camera manufacturers to be used in the assembly of cameras for the occupation authorities. Beside the deliveries to Russia, our largest purchasers were: Franke & Heidecke in Braunschweig, Ihagee in Dresden, Zeiss Ikon A.G. in Stuttgart, Hoh & Hahne in Leipzig, and Kamera-Werkstätten in Dresden. Deliveries to the Kamera-Werkstätten were later redirected, per a Russian directive, to Ihagee. Meanwhile, Franke & Heidecke and Zeiss Ikon, Stuttgart, received the objectives only as compen-

sation for goods received in Jena from the West.

Zeiss Jena did not have the opportunity to satisfy the great demand within Germany for movie-projection objectives from our large series production program, because the Russian Commission would release production only after their delivery plan was met.

Because of the very difficult circumstances during the building up of the production line, it was impossible for us to come even close to the production targets, not to mention to remotely satisfy the needs of the German market.

As a result, the presumptions upon which the 1946 plan had been based were never realized as originally scheduled.

Workforce and other difficulties

At the time we submitted the 1946 Plan to the Russians, the firm's leadership had voiced several reservations, which were later confirmed. Some of those concerns included the difficulties in acquiring a workforce, notably specialists, and the procurement of raw materials.

The deployment of additional workers caused strong fluctuations in the workforce because the largest contingent was made up of refugees and returning soldiers. Many of them were

not residents of Jena, so that most work positions underwent an almost continuous change in staffing and much training was done for nothing.

Unfortunately we cannot document the additional production hours at our suppliers OAS and SAG in Saalfeld and GTW, Gera.

Despite these difficulties, the last months of 1946 would have been satisfactory to us; however, the Russian order to dismantle the physical plant frustrated all of our efforts.

Plans for 1947

In September 1946 we estimated the production plans and requirements for 1947, basing our forecast upon actual orders that were on hand, as well as the enquiries received from the camera manufacturers. In order to cover this demand, our 1947 deliveries would have been:

- 126,000 photographic objectives with diaphragm shutters
- 63,500 objectives in mounts for small format cameras
- 2,600 objectives for movie cameras
- 19,400 objectives in N (barrel) mounts
- 212,000 total objectives
- + 49,300 movie projection lenses
- 261,300 total lenses

Werkstoff		b	neues Original		10.9 46. Sbg.
		a	Teil 51 gestrichen		21.2 46. Sbg.
		Masstab	10.9 46. Sbg.	Zeichnungs-Nr	
5:1 2:1 1:1				543B24 U1	
Diese Masse werden bei Abnahme		Einsatz für			
		Gehäuse - Kopnyc -			

Identification box for the 10th September 1946 drawing, shown on page 5, of a Contax body. Note that after the word "body" ("Gehäuse" in German) someone has added the equivalent in Russian ("Kopnyc" or Corpus).

The major purchasers for these lenses would have been:

Agfa, Munich:

Tessar 1:2.5 $f = 5$ cm or
Tessar 1:2.8 $f = 4.5$ cm
Tessar 1:2.8 $f = 3.5$ cm
Tessar 1:3.5 $f = 7.5$ cm
Tessar 1:3.5 $f = 10.5$ cm

Franke & Heidecke:

Tessar 1:3.5 $f = 7.5$ cm
Triotar 1:3.5 $f = 7.5$ cm
Tessar 1:2.8 $f = 8$ cm

GTW. Gera :

Kino-Proj. objectives 1:1.9 $f = 9$ cm
Kino-Proj. objectives 1:2.1 $f = 12$ cm
Kino-Proj. objectives 1:2.2 $f = 14$ cm

SAG. Saalfeld:

Objectives for 16 mm Projector
Small-frame Projector 24 × 36
Movie-camera 16 × 35

Ihagee. Dresden:

Tessar 1:2.8 $f = 5$ cm
Tessar 1:3.5 $f = 5$
Biotar 1:2 $f = 5.8$ cm

Kamera-Werkstätten, Praktiflex:

Tessar 1: 2.8 $f = 5$ cm
Tessar 1:3.5 $f = 5$ cm
Biotar 1:2 $f = 5.8$ cm

Hoh & Hahne:

Various objectives for the
repro-devices

Kontophot:

Various objectives for the
repro-devices

Veigel, Stuttgart:

Objectives for enlargers

Bernina & Co:

Objectives for the Robot camera

Kurt Bentzin:

Primarflex and Primar cameras

Mimosa:

for a small-frame camera in
development

Goerzwerk. Berlin:

Iko-flex

Carl Zeiss, Jena,

assembly plant Saalfeld:

Objectives for the Contax

On the basis of this demand, and in view of a request by the Four Power Control Commission in Berlin that stipulated in its economic plan for Germany that two million cameras per year are to be produced, GL ("*Geschäft Leider*" = *Business Management*) decided to undertake resolute measures in order to meet the required quantities of high-quality objectives.

We intended to develop a production facility (at a location to be determined) for the key objective types:

Tessar 1:3.5 $f = 5$ cm
Tessar 1:3.5 $f = 7.5$ cm
Triotar 1:3.5 $f = 7.5$ cm
Tessar 1:2.8 $f = 8$ cm

This plan also had to be deferred because the dismantling order required

us to master other things. (*Reparations removal began in September 1946.*)

After the dismantling order was announced, it became clear to the Russian occupation authorities that the camera industry, especially in the Russian Zone, would be strongly disadvantaged, and therefore a new order was issued by Sokolowski, coming immediately after the dismantling order, to plan for and quickly establish production for the following lines:

Reproduction optics for Hoh and Hahne

Standard objectives for Ihagee, Kine-Exacta

Standard objectives for Kamera Werkstätten — Praktiflex

Sonnar 1:2 $f = 5$ cm in a special mount for Zeiss-Ikon

The order covered 6000 objectives per month and this is the monthly output that was just reached in September 1946.

Competition from East and West

As well as the Photo production, the production of microscopes and eyeglass-related devices were also to be initiated, and the other departments should follow as soon as possible because the problems with acquiring manufacturing devices might improve.

As for competition in the Eastern Zone, at least in terms of delivery if not in quality, we should recognise the firms of Meyer in Görlitz, Ludwig in Weixdorf and Laak in Rathenow.

Meyer, Görlitz reportedly employs only about 40 workers, so one cannot yet speak of a meaningful output. However, the firm apparently has a large order for 16-mm film-projector objectives for the public-development central administration in Berlin. It cannot be judged from here to what extent they are able to deliver.

Ludwig in Weixdorf delivers, on a continuous basis, 1200 anastigmat objectives with aperture 2.8 and focal length 5 cm for the Praktiflex camera and also objectives for the Kine-Exakta.

Laak in Rathenow is reportedly engaged in the production of projection objectives.

Competing firms in the Western Zone are now in a position to expand because of our inability to deliver and, as a result, they represent to us a certain danger.

Regarding the production facilities for cameras such as Agfa in Munich, Franke & Heidecke, and Zeiss-Ikon in Stuttgart: the last two have up till now always installed Zeiss optics, but they are now forced, by the circumstances and measures applied to us, to use optics from such firms as Rodenstock in Munich and Schneider in Kreuznach.

Franke & Heidecke were loyal to us up to the moment of the dismantling order and will most likely be forced to contract for deliveries with Schneider, Kreuznach for the business year 1947, because "Opton," our Oberkochen subsidiary, will probably not be able to produce in 1947 the f/3.5 7.5 cm Tessars in large quantities at its production facility in Coburg, formerly belonging to the firm of Kollmorgen.

Zeiss-Ikon Stuttgart, who up to the end of the war used only optics from Carl Zeiss and Optische Anstalt Saalfeld, has already begun to install optics from Rodenstock (the Novar) and Schneider (the Xenar) into their cameras. Over the long run this situation, with Zeiss Ikon cameras being equipped with objectives from makers other than Zeiss, cannot be tolerated.

In order to present Zeiss Ikon cameras to the world market equipped with real Zeiss optics, it is absolutely necessary that we should produce in Jena the major types of objectives such as:

Tessar 1:2.8 $f = 5$ cm
 Tessar 1:2.8 $f = 8$ cm
 Tessar 1:3.5 $f = 5$ cm
 Tessar 1:3.5 $f = 7.5$ cm
 Tessar 1:3.5 $f = 10.5$ cm
 Tessar 1:4.5 $f = 7.5$ cm
 Tessar 1:4.5 $f = 10.5$ cm
 Triotar 1:3.5 $f = 7.5$ cm

For statistics, we can report sales in 1938/39 of the following objectives:

Tessar 1:3.5 $f = 7.5$ cm 83,000
 Tessar 1:3.5 $f = 10.5$ cm 6,200
 Tessar 1:4.5 $f = 10.5$ cm 11,200
 Tessar 1:4.5 $f = 7.5$ cm 8,800
 Triotar 1:3.5 $f = 7.5$ cm 28,500
 Tessar 1:2.8 $f = 8$ cm 18,250
 Biotar 1:2 $f = 5.8$ cm 10,200

Total 166,050

These numbers should be reflected in our production plan in order to achieve, at the beginning of 1947, the required monthly output.

To what extent Stuttgart can be persuaded to accelerate the production of Sonnars for the Contax requires a discussion between Stuttgart and us; and to what extent Sonnars are needed for Russia cannot be determined today because we do not know whether the Russians will decide to produce the objectives for the Russian-produced Contax themselves, or whether we will be required to supply them. (*This "Russian-produced Contax" is of course the Kiev.*)

In addition, the production requirements for Repro optics for Hoh & Hahne, Kontophot, Fotokopist and Klimsch & Co must be taken into account during 1947; for the last three firms, Tessars must be produced with apertures of 1:3.5, 1:4.5 and 1:6.3 and various focal lengths of up to 21 cm for installation in special reproduction equipment.

As far as we were able to determine, the firm of Opton in Oberkochen intends to produce Proxars and yellow filters as training work, in preparation for their later production of objectives; we have no objection against them making these

accessories for objectives; however, special clarification will eventually be required regarding the production of Sonnars, because in accordance with the optics agreement with Zeiss Ikon, which covers the full range of objectives for the Contax, Carl Zeiss is the sole licensee for the Zeiss Ikon patented objective.

Photo Kino Department

In October 1945 the Russian plant commission, which was stationed within our factories and was under the leadership of General Nikolajeff, Major Turigin and Major Winegradoff, ordered us to take up the question of producing the Contax and other hand-held cameras, that is, the reconstruction of the camera-body chambers. At a later date they would decide where the actual production site should be. The negotiations came to the following conclusions:

Carl Zeiss would reconstruct the Contax and supply the complete Contax production plant consisting of fabrication tools and machinery to produce 5,000 Contax cameras per month in a plant in Russia; at first the plant was identified as "Volga" but was later changed to "Kiev."

At the same time Carl Zeiss was to supply another set of fabrication tools and machinery for Contax fabrication in Saalfeld.

The proposal was initially worked out by the Photo Department, and the first preliminary proposal was valued at approximately 16 million Reich Marks, which was then reduced to 8.2 million RM by the Russian commission.

I have chosen not to comment further on the important information about the various cameras and lenses as well as the political situation but rather to let this material stand on its own for individual interpretation.

(I remind readers that the references, above, to "reconstruction" of the Contax refer to the need to reverse-engineer the camera by taking measurements from existing bodies and making new blueprints. Only microfilm versions of the technical drawings were available since the originals were destroyed in the Dresden fire bombing. -LG) □

Book Review

Zeiss Feldstecher, Handferngläser von 1894 – 1919, Modelle-Merkmale-Mythos

(Zeiss Fieldglasses, Binoculars from 1894 to 1919,
Models, Features, Myths)

by Hans T. Seeger

reviewed by Frederick Schwartzman, New York City

If there is any Zeiss enthusiast who has not yet heard about it, then it is my pleasure to bring you the good news that Hans Seeger's long awaited magnum opus to date finally arrived late last year! Printed on high-quality glossy stock and weighing in at nearly 3 kg (about six pounds) the book contains 871 information-packed pages and almost 2000 illustrations, many in color. It is a magnificent one-volume encyclopedia covering the early years of Zeiss and other binoculars in minute detail, and this reviewer has no doubt that it will remain the standard work and the benchmark in its field for many years to come.

This newest work is the latest of Seeger's books about binoculars, starting with his seminal *Feldstecher, Ferngläser im Wandel der Zeit* (known among binocular collectors as "the red book") published in 1989, followed by *Militärische Ferngläser und Fernrohre in Heer, Luftwaffe und Marine* (the "grey book") in 1996 and *Optisches Gerät der Deutschen Wehrtechnik* in 1997. In addition, there have been several later editions of his books reflecting details and information gathered since first publication.

Without doubt, these works and particularly his ground-breaking red book have been pivotal insofar as developing, encouraging and nurturing the hobby of binocular collecting and Seeger rightfully deserves our thanks for his unparalleled achievement.

All of us who care about Zeiss (not only binocular collectors) will rejoice

because this book says and shows everything that there is to be said and shown about Zeiss and other binoculars prior to the first Zeiss Feldstechers in 1894 through 1919.

As a tribute to Seeger and in recognition of the importance of his work, many leading Zeiss binocular collectors

world-wide have made their research and collections available to him, as did the Zeiss archive. Photographs of binoculars from their collections, including many rare examples, are reproduced in glorious detail, most in color.

Particularly noteworthy is the cooperation that resulted in the 54-page table



Hans T. Seeger in Hamburg, with a U boat binocular, the so called "fat one," a blc 8 x 60, also named the Commander's Glass, made circa 1943/44.

listing serial numbers for every Zeiss binocular model from 1907 to 1919. All of these contributors (including this reviewer) are identified by name in the book and graciously thanked for their cooperation. Five principal contributors are singled out and named on the title page of the book. In addition, to the knowledge of this reviewer, textual material for the book was submitted by Seeger for peer review to ensure accuracy. The end result reflects all of this cooperation and speaks for itself.

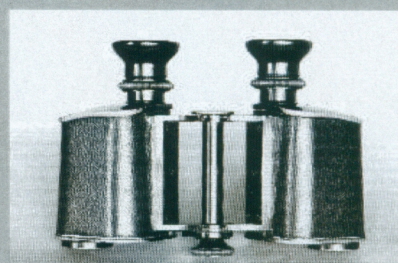
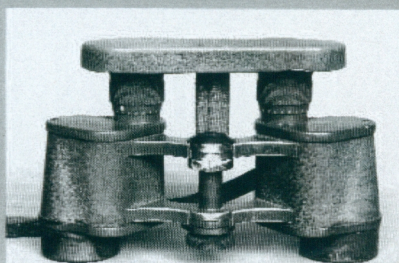
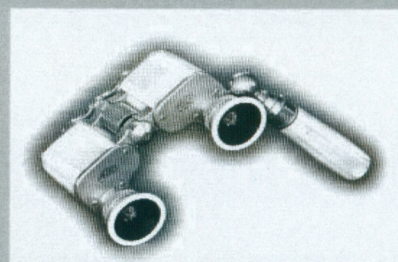
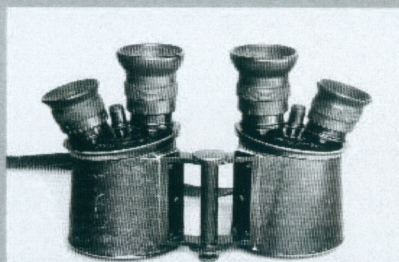
As with Seeger's earlier works, this book is written in German, including descriptions of illustrations. Clearly German speakers will benefit most because they can understand the text, but the detailed photographs alone make this book an invaluable addition to any serious collector's library. If others have a language problem then there is always Google Translate or Babel Fish. It is well worth the effort.

It is beyond the scope of this review to describe the rich contents of this book in detail. However, the three-page table of contents and the detailed 14-page index provide excellent indications of the scope of the book. Commencing with a survey of the early development of optical instruments in the 17th and 18th centuries, the narrative then introduces the first Zeiss Feldstecher binoculars and proceeds to describe early military glasses including "rabbit-ear" observation scopes, Zeiss-licensed glasses made in France, USA and Russia and military glasses made by Zeiss and by many other manufacturers before and during the First World War. Each chapter is richly illustrated with examples of each glass mentioned in the text.

For all of us whose appetites have been whetted by Seeger's scholarship and literary achievements to date there is the good news that he is now busily at work on the next volume of his history of Zeiss binoculars picking up where he leaves off from the 1919 cut-off date of this first volume to the present.

In conclusion, my recommendation is to run, not walk, to the nearest source and secure your copy of this magnificent work while it is available. ☐

Zeiss Feldstecher.



Modelle – Merkmale – Mythos



Handferngläser
von 1894–1919

Hans T. Seeger

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Advertising Zeiss Ikon's films

Bernd K. Otto, Frankfurt am Main, Germany

The company had many ways to boost the sales of their Pernox and earlier films, ranging from advertising materials for dealers' premises to special storage solutions for negatives

Camera manufacturers did not always accompany their products with the necessary film material. Only large companies, such as Agfa, Kodak, Voigtländer and Zeiss Ikon produced cameras and films at the same time. With Zeiss Ikon, the production of films at first lay in the hands of the Berlin Goerz works. Only two years after the company was founded, in 1886, as a supplier of mathematical instruments, Paul Goerz's company was focusing on the production of photographic instruments and consumer goods.

However, it was not until August 1914 that their own Goerz Tenax films were integrated into their product list. The Zeiss Ikon AG advertised their own "new" film for the first time in October 1927 on the back page of flyer C269. Of course, this "Zeiss Ikon" film was still being produced in the Goerz film works in Berlin-Friedenau, but the brands of Contessa-Nettel, Ernemann, Goerz and ICA had to be converted to the new product name of "Zeiss Ikon" after these companies merged successfully.

Here I shall not be focusing on the various products offered and the permanent improvement of the films but rather on the advertising products that went along with them.

I should first mention that Zeiss Ikon films never reached the same level as

those from Agfa, Kodak or Perutz. Any photographica collector who does not concentrate only on cameras and their lenses but also on the additional consumable goods that go along with them will soon learn that nowadays it is almost impossible to find Zeiss Ikon films still in their original packaging. Even those old negatives that can be found usually carry the edge marks of the companies listed above.

Despite the considerable advertising that was undertaken, the photo amateur of those days believed that those companies were producing higher quality films. Although Zeiss Ikon used the slogan that "well made photographs are based on reliable negative material," another slogan, "A good Zeiss Ikon film for a good Zeiss Ikon camera" did not always result in the hoped-for customers' response. Therefore, several point-of-sale support articles were added to increase the sales of films.

Gigantic packages

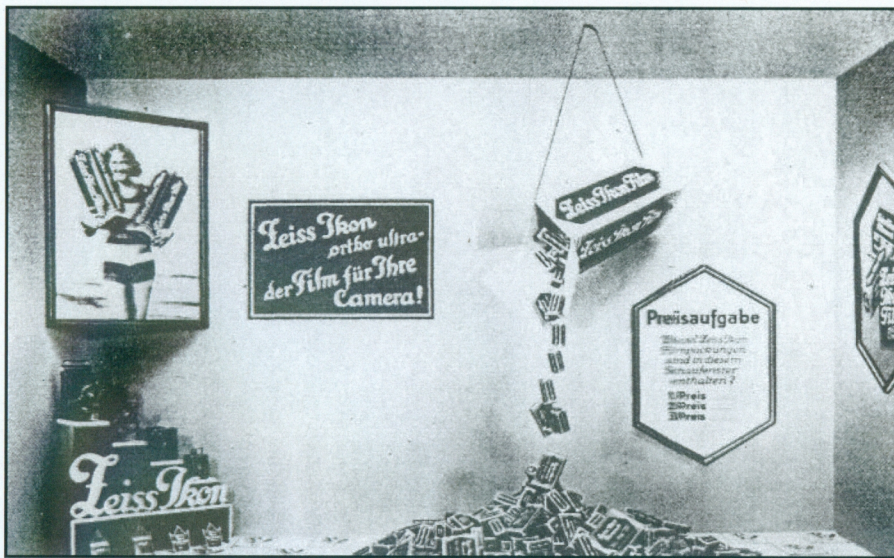
A well-liked eye catcher for the display window of a photo shop was a group of gigantic roll-film dummy packages, as shown in figures 1 and 2. The marketing department made those packages, usually out of sturdy cardboard, in various sizes. The two samples shown here have

the remarkable sizes of 10×10×30 cm and 16×16×50 cm. The outside walls of the shops were also used for advertisements. Especially in spa and holiday towns, visitors were meant to recognize immediately where they could and should find a supply of films. Naturally those advertisement signs, always rocked by the wind and subjected to the weather, could not be produced of card-

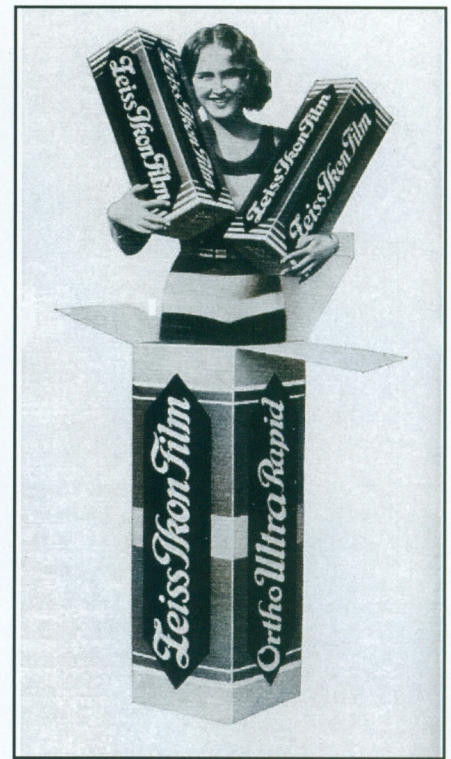
This article was first published in the IV/2010 issue of *PhotoDeal*, in German. Leo Uebelacker made the English-language translation from which this version was prepared, and it appears here by permission of the author.

board but were made of sheet metal with color printing. For easy fixture, they had eyelets at the ends. Those "dummy" signs, sized 24×24×75 cm, were usually fixed above the shop door with wire cables. For inside the store, Zeiss Ikon produced enlarged film boxes made of glass that could be illuminated from the inside in the evening.

A "hot swimsuit girl" carrying two monster film packs on her shoulders decorated the large cardboard poster seen on the left of figure 1. When the poster was no longer presentable, perhaps because of dirt spots on the large



A Zeiss Ikon dealer's display (above). On the wall at left, a "bathing beauty" carrying two large dummy film boxes. To the right, another large dummy box spilling many films to the floor; customers were asked to guess the number in the pile. Figure 1



Another large dummy box (right), but with the girl, now cut out from the poster and standing inside it — still holding her film boxes. Figure 2

white areas, the dealer was advised to simply cut out the girl and re-use her as a stand-up figure in another monster roll-film package dummy, as in figure 2. Not bad advertisement advice in 1931, a time when the population was still fighting with the implications of the economic world crisis and everybody had to save every penny.

Another display-window arrangement, as seen on the right of figure 1, showed small film boxes falling out of the open front of a large cardboard film package hanging from the ceiling. The falling boxes were hanging on a piece of string. The customer was asked to estimate the number of film boxes that had fallen from the large box and had already built up a heap in the display window. Whoever could correctly guess the number of packages in the window would receive a small present from the shop owner.

A photo piggy bank

The difficult financial situation at this time was probably the reason for the production of a photo savings bank, figure 3. Zeiss Ikon recommended that their contract dealers in November 1931 use these new banks for decoration dur-

ing the upcoming Christmastime displays. The magazine *Brücke* stated "Some customers really want to be taken by their hands and led on!" The precise listings of the amount that was needed and how long it would take to save for certain camera models were meant to make the customers think about their own wishes and about their means in respect to the suggestions that were made.

The text on the poster reads: "If you

don't have the money to buy a camera right away, why don't you give away this photo savings bank as a present and fill it with the necessary starter amount." *Photofreund* no. 14 of 1931 commented that most cameras were paid for in installments, which would not be in the best interests of the dealer. It would be much better to save up the necessary amount before the purchase. Further, the gift of a piggy bank was considered to be a nice "thank you" for photographs



A "piggy" bank or savings box to put aside money for a new camera Figure 3



26°

Jede Camera — auch die Box, wird doppelt lichtstark durch Pernox! Das kommt daher, weil Pernox mit seinen 26° Scheiner die doppelte Empfindlichkeit gegenüber der bisherigen Standard-Empfindlichkeit von 23° Scheiner besitzt.

» P E R N O X «

der Film für den anspruchsvollen Amateur, gestattet bei Tage kürzere Belichtung, morgens und abends länger zu photographieren und in vielen Fällen Erzielung einer größeren Schärfe durch Abbildung des Objektivs. Pernox-Film bei uns immer vorrätig.

ZEISS IKON



An advertisement for Pernox film (left). Pointing out the high speed of this film (26° Scheiner rather than 23°), the text claims that every camera will be improved, and photos can be taken in less light than before.

Figure 4

A display board (above), which could be ordered by schools, that shows the many steps required to make a film starting from cotton as a raw material,

Figure 5

received from a photographer. The bank was made of punched-out sheet metal, had the shape and size of a film pack and was pushed into a metal holder. A slit on the top of the bank could receive coins as well as folded bills. A piece of felt attached to the inside of the box prevented the contents from “accidentally” falling out of the box if someone attempted to get at the money prematurely.

Unfortunately, to empty the piggy bank, you had to take it apart and thus destroy it. This might be the reason why only very few of these banks survived intact until today.

In April 1933 the company informed their dealers about the newly developed Pernox film. Zeiss Ikon now offered this orthochromatic film material, produced at the Berlin Filmwerk Zehlendorf, with a speed of 26° Scheiner. This new emulsion doubled the performance of every camera by simply by increasing the speed of Ortho Ultra film from the previous 23° to 26° (figure 4). The company claimed that their new Pernox film would show better results “during the early and late hours of daylight and also

in deciduous forests as well as dark coniferous forests.”

Some display panels that showed the production process of this Zeiss Ikon film at its most important steps were given to preferred dealers by the mar-

keting department to decorate their shops. A simple version presents the development from the raw-material, cotton, to the finished film pack rather clearly on a display board with pictures and in writing (figure 5). This display



A cardboard sunhat. On the left it is shown flat, with Pernox film advertised on the brim. On the right it is seen punched out and in use.

Figure 6

piece with the title "How is a film made?" could be ordered for the use at schools as a teaching tool.

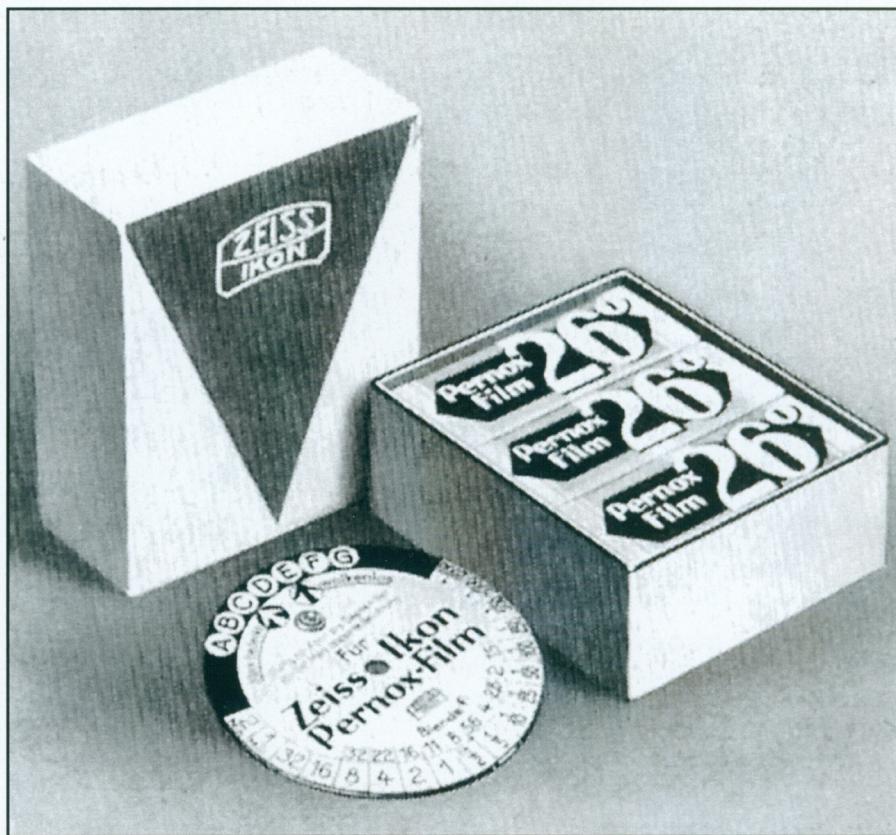
An extraordinary sun hat

Another idea for the coming summer season of 1933 was the so-called Pernox Beach Hat which is shown as supplied, and in use, in the two parts of figure 6. This sun hat was not only meant to promote the new Pernox film but also guaranteed another very practical use for its owner. This airy head cover, punched out from orange-colored cardboard, was given away in large numbers at seaside resorts. A thin rubber band around the neck held the hat in place and the striking Zeiss Ikon Orange color guaranteed attention for the person wearing the hat. A beach photographer could easily use the sun hat to decorate group shots.

From June 1934 on, amateur photographers could buy three 6×9 Pernox roll films in a "travel" or "holiday" pack (No. 3970). For this pack, shown in figure 7, Zeiss Ikon developed a sturdy carton covered with a silk-like material. This triple pack could readily be used for storage of the 6×9 negatives or their contact prints after the roll films had been used successfully. The container also had exactly the size necessary to bring the holiday pictures home safely. Added to this film set was a practical exposure dial-calculator (1329/1), made of metal, which showed the main exposure numbers for the most usual types of photography in an extremely clear and easy display. The dealer's name was imprinted in gold letters on the top of the box, so the triple pack was also an advertisement (figure 8). If a minimum of 100 packs were ordered, the imprint was even made free of charge.

The photo cabinet

In July 1935 a smart member of the marketing department developed the "Photo-Truhe," a cabinet for storing photographs that might otherwise be stacked up at the photographers' homes or just strewn about. See figure 9 (overleaf) for examples. A total of 3×3 of these holiday triple packs could be pushed into a small gold and red plywood cabinet after you had opened its



A triple pack of Pernox 6×9 films, in a box that doubled as suitable for containing the finished prints. The same box contained an exposure calculator. Figure 7

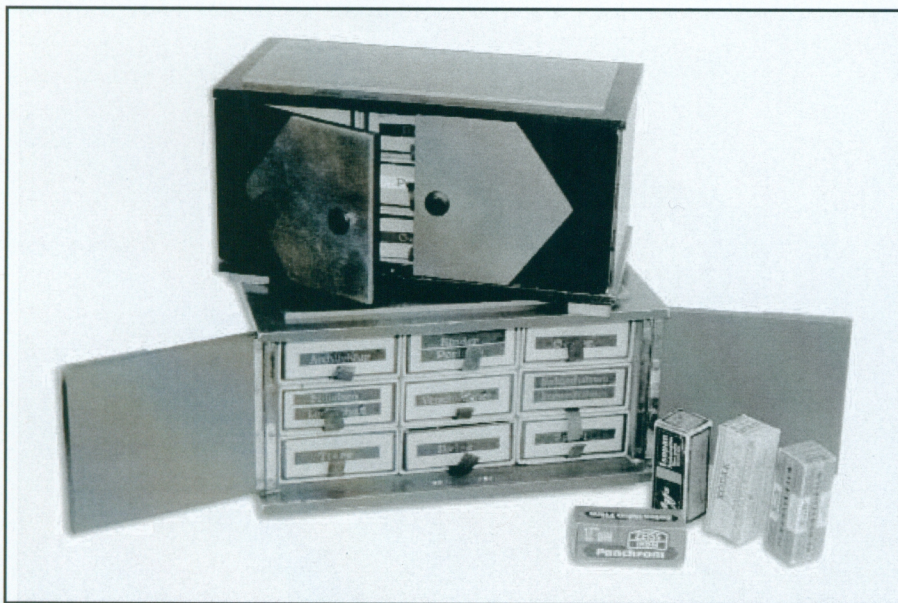
two hinged doors. Because the films fitted in there tightly and there was a velvet coating inside, the films were prevented from sliding out of the cabinet. When you bought this storage unit you also received pre-printed labels to glue onto the front of the drawers. Subject groups such as architecture, genre, interior shots, children, landscapes, night

shots, portraits, travel, sports, still life, animals and "various" were available and made it a lot easier to find the pictures later. The cabinet was first sold in a burgundy red-golden variation and was later delivered in an aubergine red-golden coloring.

Zeiss Ikon did quite a lot of advertising for this idea, as, for example, the



A group of six film boxes bearing the retailers' names in gold letters on the velvet cover of the Pernox triple packs. Figure 8



These plywood cabinets could each contain nine triple film packs, and when emptied they were useful for storing the 6×9 prints, sorted by subject. See also the back cover of this issue for another view of the cabinet in use. **Figure 9**

large color poster by the renowned Berlin graphic artist Rene Ahrle (see the back cover of this issue of *Zeiss Historica*). The expense is remarkable if you consider that, with a price of RM 2.30 for a cabinet, Zeiss Ikon was most probably just covering their own costs. The effort was, however, necessary because the sales figures of the film were permanently stagnating. A dealer who ordered 100 film packs could be given up to eleven cabinets. To make it even easier, the dealer could order them as two different orders. If you consider that a customer had to expose as many as 27 roll films (nine packs of three each) to get a single cabinet, it is questionable if this advertisement idea was really successful. Incidentally, nowhere on the item could you find any hint of its producer. Zeiss Ikon's intention was to demonstrate good taste with this small piece of art. If the cabinet was filled with unmarked film boxes without a compa-

ny name and with no subject labels, it can be rather difficult today to identify it as a "Photo-Truhe" chest. People would often use it for different purposes, such as the storage of sewing equipment, stamps, coins or other things.

In the middle of 1937, Zeiss Ikon recommended to the dealers that they not put the cabinet in their display windows but instead at a highly visible point on the counter. The hope was that customers, especially females, would then inspect the cabinet more closely and then buy it. Soon thereafter, however, advertising for this product was abruptly halted.

A new kind of negative envelope

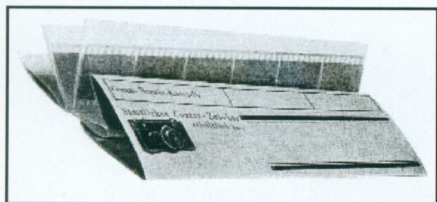
For archiving 35 mm negatives, which had become more and more popular by the popularity of the Contax and the Leica, Zeiss Ikon had also found a new way of storage. At first there was a film-storage box (No. 3097), made of wood, which could be filled with a total of 43 developed but uncut film rolls. Dealers were accustomed to be handed a complete roll of negatives in a cardboard box or tin can. This form of storage always caused scratches and chipping to the surface of the film. Nevertheless, the customers always requested flawless enlargements where the spots had been

removed without any extra charge. This additional work for the dealer could be mostly avoided if the new amateur delivery sleeves for Contax negatives were used. The film had to be cut into six strips of six pictures each and placed in a concertina like, foldable, see-through glassine envelope (figure 10). Now you could view all the negatives at one glance and without touching the emulsion side. The dealers could order 100 for RM 2.- and get their address printed on them at no charge. Zeiss Ikon had this invention patented, and from 1934 onward this method of storage was to be used for over 50 years by all film photographers.

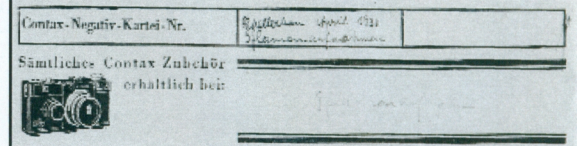
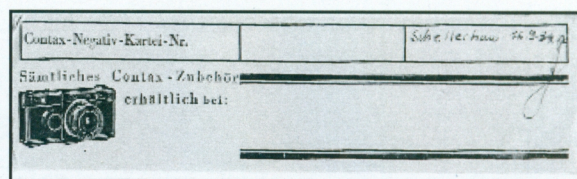
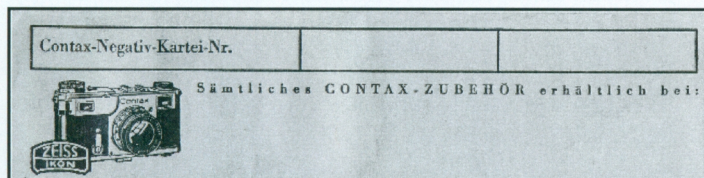
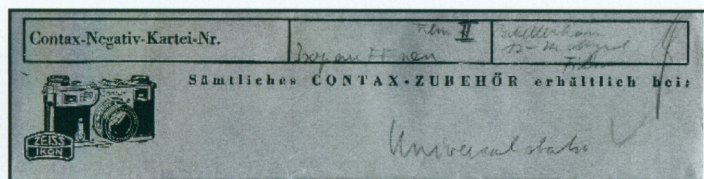
For Zeiss historians it can be rewarding to look closely at the advertising printed on those foldable negative sleeves. See figure 11 for examples. About two years after the Contax had been first presented, in September 1934, an image of the original Contax was still in use. The camera was depicted from the front, with no accessory shoe and without the Zeiss Ikon emblem. On the back of the sleeve we first see a picture of the packaging of the Contax film, which was replaced by a photograph of the Pernox Contax Spool two months later. The Contax I image did not receive the missing viewfinder shoe and the company emblem until the beginning of 1936. Three months later, the marketing department exchanged the Contax I on the negative sleeve for the Contax II model, but the camera that was depicted showed the company emblem at a place where it had only been positioned on the prototype.

A small collection of neatly marked sleeves was given to me a few years ago by the late Zeiss Ikon employee Wolfgang F. Jacobi. Luckily they contained the original negatives that he shot at the 1936 Berlin Olympic Games with the new Olympia-Sonnar f/2.8 18 cm lens on Zeiss Ikon film material. The markings on four negative sleeves from August 1937 also prove that the new competing film Agfa Isopan FF was tested.

For photographers who had films developed frequently, the company offered, in 1934 a "Phototaschenalbum"



One of the concertina-folded glassine envelopes for negative strips. **Figure 10**



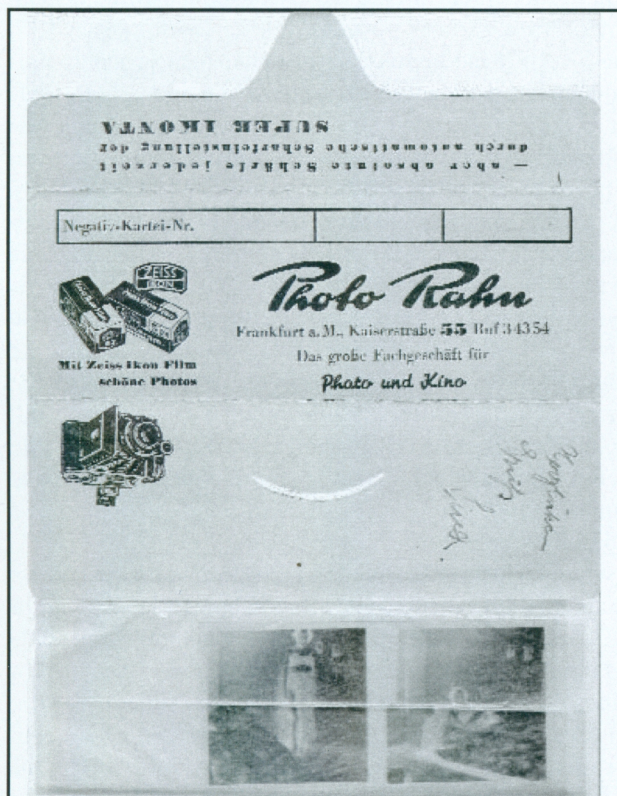
Film sleeves with dealers' names imprinted. The three on the left are from the Jacobi collection, and are dated 1936, 1939 and 1941. On the right are front and back sides of two from November 1934 and April 1936, where the camera depicted is still the Contax I in each case, but the film changes from "Contax" to "Pernox."

Figure 11

(Nr. 3114/4), an album with added register for 120 of those glassine sleeves shown here in figure 12. The films were delivered already in free, practical,

sleeves, so the customers were expected to buy these permanent storage albums later. The price for an album was set at RM 3.20. At about 1937, they were

replaced by stylishly designed velvet-covered cartons (3097/5 for 24×36; 3097/6 for 6×9) at a price of RM 1.50 each.



A film sleeve from Photo Rahn, a dealership that still exists in Frankfurt today.

Figure 12



The plywood dropbox for films and negatives, complete with its "Zeiss Ikon" brand lock.

Figure 13



Wettbewerb

für Leute hinterm Ladentisch.

Ein Tausend-Mark-Preis winkt!

4000-Mark-Preis ausschreiben mit „Pernox panchromatisch“!

Der vor einigen Wochen dem Handel übergebene „Pernoxfilm panchrom. Feinkorn“ ist von den Laboratorien der Fachpresse und kompetenten Fachleuten unter den Photohändlern als Spitzenzeugnis erkannt worden. Der Film zeichnet sich durch ausgeglichene Rotempfindlichkeit, die mit schwachem Gelb- oder Grünfilter eine wunderbare Farbtreue ergibt, und hohe Empfindlichkeit bei erstaunlicher Feinkörnigkeit aus. Die geradezu ideale Schwärzungskurve beweist den großen Belichtungsspielraum, der einen Umfang von 1:10 000 erreicht. Die überragenden Eigenschaften des neuen Zeiss Ikon Films „Pernox panchrom.“ werden ihm schnell die Anerkennung der Filmverbraucher sichern; wir sind überzeugt, daß sich auch in Ihrem Geschäft lebhaftere Nachfrage einstellt.



A thousand-mark prize for the winning photograph! (but it must have been taken with a Zeiss-Ikon film). The text of this competition announcement goes on to extol the qualities of Pernox panchromatic film.

Figure 14

After October 1935 the “Negative Archive for Contax Photography” was produced for cut-up miniature-camera film strips. In contrast to the earlier product, the paper sheets were no longer folded like a concertina but straight. This better version was called “Negatives Album” by Zeiss (Nr. 3463). A ring binder with a capacity of twelve films could be ordered for RM 7.50. The negatives were placed into holding grooves fixed to removable sturdy cardboard frames.

A simpler version offered by Zeiss Ikon consisted of two “negatives Archives” with tacked-in Contax Negative pages and a well-organized register. The customer had to pay RM 3.- for the storage of 25 films (Nr. 3464) and RM 4.75 (Nr. 3464/1) for 50 films. An additional offer was a metal rail (Nr. 3464/5) that helped to slide the film strips into the paper sleeves. The intent was to discourage the photographers, completely and finally, away from the barbaric habit of rolling up entire miniature-camera films.

Another form of advertisement for improving the sales of



Some of the competitors' films from around 1940, shown here alongside the Zeiss Ikon product. Agfa, Kodak and Perutz films (among others) were eventually preferred by the photographic enthusiasts.

Figure 15

the company-owned film material was the release of so-called “*Leistungssproben*” or efficiency samples. They were very big enlargements, which were compared with ordinary prints from the equivalent negatives. The idea was to impress the customer with the sharpness and resolution quality of the Zeiss Ikon film with the help of these printed poster-sized photographs. The efficiency samples gradually replaced the advertising posters that were designed by graphic artists and that hitherto had brought a little color into the mostly black-and-white display windows.

The last of these interesting advertisement products presented here is a device that was only delivered to photo dealers. It was a drop box (figure 13) for exposed but undeveloped film in its box, or for uncut film in an aluminum can, or for a cut-up set of negatives in a sleeve, where customers could put their materials if they wanted to leave them with the dealer in the evening hours or during the weekend. This box was made of wood, had the form of a mail box and was firmly affixed to the front door or the outside wall of the dealership. The customer could drop the material into the box through one of two slits that were protected from the weather by lids. The dealer could remove the film material that had been dropped off through a small door on the side of the box. I do not really have to mention that this door was of course secured with a built-in security lock with the Zeiss Ikon brand name!

In common with other photographic manufacturers, Zeiss Ikon naturally ran a photo contest; a condition of entry, was, of course, that the submitted photographs had to have been made with Pernox film. The advertisement shown in figure 14 describes the contest and its thousand-Mark first prize.

Zeiss Ikon films did not succeed in capturing the market in competition with other, better known, films, for example the Agfa, Perutz and Kodak products shown in figure 15 alongside Zeiss Ikon films of the 1940 period.

□

Zeiss in the UK, part I

Herbert Ober, former Managing Director,

Carl Zeiss Ltd., London

This article and the second part that will follow it are Zeiss Historica's adaptation and abbreviation of a paper assembled by Herbert Ober in 2005. We have prepared it with much assistance and encouragement from Jack Kelly. It contains many direct extracts and quotations from Ober's paper and from Kelly's own summary.

In 1866, twenty years after Carl Zeiss founded his optical business, Ernst Abbe began his long and fruitful collaboration with the company. Abbe's training as a scientist brought a new and scientific approach to the optical design of Zeiss instruments that, coupled with Zeiss's reputation for superior workmanship and attention to detail, catapulted the company onto the world stage as a leader in the design and manufacture of a broad range of optical instruments. In 1873 Abbe published a ground-breaking paper on the scientific and mathematical basis of image formation in the microscope. By 1876 he was a full partner in the Carl Zeiss Company and his 1873 paper had been translated into English. Two years later Abbe was made an Honorary Fellow of the British Royal Microscopical Society. Thus began the long, profitable and sometimes contentious relationship between the British and Zeiss.

The beginnings

The trade with Britain started with microscopes. According to the *Fabrikationsliste*, in which Carl Zeiss identified all the microscopes that left his shop and their purchasers,¹ a Mr Davies of London bought simple microscope no. 224 in 1853, and he appears to have been the first Englishman to buy a Zeiss instrument. In 1862 a Mr Strowelle of Windermere bought another simple microscope, no. 476.

By 1857 Zeiss had added compound

microscopes to their output (with simple microscopes continuing until 1882, when the last one, no. 879, went to the London microscope maker and dealer, C. Baker). These early instruments were made by the "trial and error" method with much hand fitting required for each one to yield the best results. Efficiency improved after Abbe's arrival in 1866, when the firm was able to design these products on a proper scientific foundation, with the improved quality thus made possible.² The Zeiss price list No.19 from 1872 states: "All systems of late are calculated and designed based on the theory of Prof. Abbe in Jena" (and in fact Abbe's designs had been used from 1868 onwards).



Max Fischer

Figure 1

Word of the superior performance of Zeiss microscopes spread worldwide, and in England the Royal Microscopical Society played a decisive role in recognizing the developments coming from Jena. This recognition deepened after Abbe visited England in 1876 and was elected an Honorary Fellow of the RMS two years later.³ By 1883 Carl Zeiss was able to write to one of his sons "...the business is extraordinary, 500 to 600 systems are on order, the larger share going to England (perhaps including America) ... everyone wants their microscopes immediately and Löber [the workshop manager] receives on average only 150 systems manufactured monthly, and complaints come regularly ..."

Of the microscopes sent to England, the records show that nearly 60% went to the Cambridge Scientific Instrument Company and about 14% to Charles Baker in London.⁴ Direct orders from America were relatively few, so presumably the remark in Carl Zeiss's letter reflected his belief that some were resold from England.

After Carl Zeiss's death in 1888 his son Roderich, who had been a junior partner since 1879 and a full partner since 1883, took up a 50% share in the business with Abbe having the other half. But differences of opinion between the two partners soon began to show, with Zeiss wanting the company to continue to concentrate on microscopes while Abbe saw a better future by



The Carl Zeiss Branch Office in London, opened on Margaret Street in 1894. The office moved in 1909 to nearby premises on Great Castle Street. Figure 2

Two Zeiss advertisements, showing a change in the London address between October and December 1894. Note the "new binocular field-glasses" included in the later example. Figure 3

expanding into other optical products. Abbe apparently won the argument, because Roderich Zeiss gave up his share of the company, leaving Abbe in sole charge. Abbe soon started acting on his aim of expanding the Carl Zeiss operation worldwide, and to that end he hired Max Fischer (figure 1) to be responsible for developing the compa-

ny's commercial organization. Between 1890 and 1900 agencies were set up in Vienna, Madrid, Paris, Brussels, St Petersburg, New York and Buenos Aires, as well as London.⁵

Expansion into England

The first agency contract in England, instigated by Fischer with Ralph

Kanthack, was signed in 1890.⁶ Evidently this agency did not achieve the anticipated success, because in 1894 it was terminated and replaced by a Carl Zeiss branch office consisting of a show-room/shop and essential offices, opened on 1 October 1894 at 29 Margaret Street, London W1 (figure 2). Two advertisements (figure 3), published in October

Annual Turnover of Carl Zeiss (London) in £1,000s 1894–1904

	1894/ 1895	1895/ 1896	1896/ 1897	1897/ 1898	1898/ 1899	1899/ 1900	1900/ 1901	1901/ 1902	1902/ 1903	1903/ 1904
Total	3.5	6.5	17.0	22.0	23.2	32.0	36.2	30.7	25.1	24.0
Micro	2.3	3.1	4.0	4.1	4.5	5.1	6.0	6.4	6.4	7.0
Photo	0.3	1.1	1.7	2.5	2.3	2.6	2.8	2.8	3.0	3.7
Tele	1.1	2.2	11.3	16.2	16.4	23.9	27.1	20.8	15.2	11.5

and December 1894, confirm that date.

A Dr Measures was appointed as Branch Manager, staff was hired, and the business immediately became profitable, as shown by the Table above.⁷

Note how quickly the “tele” business

(binoculars and related instruments) took off after 1896. Many of these sales would have been of the new and popular prismatic binoculars that Abbe had patented in Germany in 1893 and in Britain by 1894. The first advertisement

dedicated solely to prismatic binoculars appeared in 1897,⁸ and figure 4 shows one from early in the new century. Carl Zeiss Jena began making photographic lenses in 1890, and supplied them to camera manufacturers. Just as with the microscope lenses, Abbe’s calculations and Otto Schott’s new glass formulae ensured that Zeiss’s photographic lenses were judged superior to all others, and Zeiss began licensing their production methods to other manufacturers. One such was Ross & Co. of London, who produced about 750 “Zeiss” lenses each year at this time (figure 5).

Early in the new century, however, this success story was interrupted. In 1901 an investigation showed that the accounts clerk had embezzled £400 (of the £30,700 total turnover that year), the commercial organization was in disarray, and the Branch Manager, allegedly an alcoholic, was said to be suffering from “softening of the brain.” Max Fischer, of the Jena headquarters, made several visits to sort things out and dismiss the guilty parties, including Dr Meadows the Branch Manager.⁹

Forced to appoint new staff for this London office, in 1902 Fischer hired Albert Frederick Degenhardt, then only 24 years old, as the accounts clerk (figure 6).

Arrival of Albert Degenhardt

He was born in England in 1877, of immigrant German parents — his father was a bootmaker. He trained as an accounts clerk and was working as a cashier in a lawyer’s office when Fischer found him. It was not only Degenhardt’s training and experience that attracted Fischer’s attention; it was also his ability to speak and write German that he had acquired from his parents.

There were constant management changes in the office at this time. Measures was initially replaced with a Julius Rheinberg, who had the title of Commercial Manager. Apparently—

An early advertisement for the relatively new Zeiss prismatic binoculars. The Great Castle Street address places this one as after 1909.

Figure 4

CARL ZEISS LONDON

ZEISS

PRISM BINOCULARS.

REMAIN UNRIVALLED

for Sportsmen,
Naturalists,
Aeronauts,
Tourists, etc.

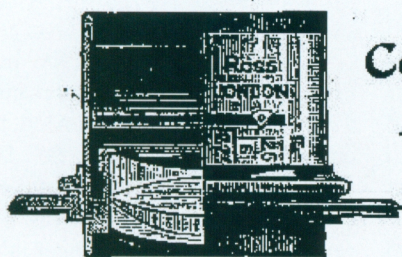
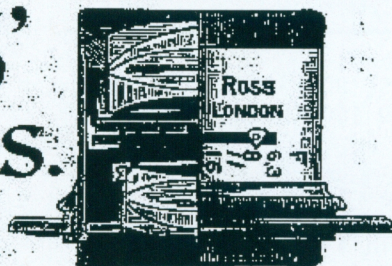
OBTAINABLE FROM ALL OPTICIANS.
Booklet T. 37 post free.

CARL ZEISS (LONDON), LTD.,
13-14, Gt. Castle St., Oxford Circus, London, W.

Distance between oculars.
Increased distance between objectives.

ROSS' LENSES.

Used by Amateur and Professional Photographers in every part of the World. Every Lens is carefully tested, and may be purchased with confidence.



ROSS-ZEISS Convertible = = Anastigmats.

— CONSISTING OF

Single Lenses, $f/12.5$.

Doublets ... $f/6.3$.

Sets for every purpose.

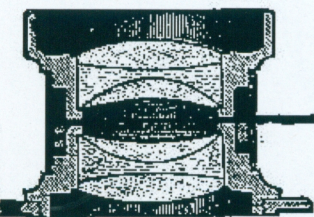
These are undoubtedly the finest Single Lenses yet produced, both for Rapidity and Flatness of Field.

ROSS-GOERZ Double Anastigmats.

These deservedly popular Lenses have already had an immense sale. They are the

VERY ACME of PERFECTION.

FOR FULL PARTICULARS SEE CATALOGUE.



ROSS, Ltd., MANUFACTURING OPTICIANS,
111 NEW BOND STREET, LONDON, W.
ESTABLISHED 1830.

Ross Ltd of New Bond Street was one of the optical firms to which Zeiss licensed its lens designs, as this advertisement for the so-called "Ross-Zeiss Convertible Anastigmats" shows. (But note that the "Ross-Goerz" design is the "very acme of perfection," despite praise for the Zeiss model.)

Figure 5

judging from his regular contributions to the Royal Microscopical Society's Journal—he did more work with microscopes than with managing the office, and he soon left. But Fischer regarded the microscope part of the business as important because of its steady success at a time when other sales were fluctuating. With competition from other microscope manufacturers beginning to be a

concern, Fischer looked for a way to distinguish Zeiss from these others, and he came up with the idea of having so-called "technical support experts" in the sales offices to work directly with customers. The London operation was the first of all the Zeiss branches to make such an appointment.

Fischer hired Max Poser in 1900 as Technical Manager. Poser's job was to



Albert Frederick Degenhardt Figure 6

provide technical support for the customers who bought and used equipment for microscopy, especially photomicroscopy, then a new technique. He lived at 29 Margaret Street, above the office and shop, with his wife and young daughter and Albin Schmidt, a 20-year-old domestic servant.¹⁰ A new Commercial Manager, Max Staehler, arrived in 1903.

The auditors' report for the business year 1902/3 praises the bookkeeping as remarkably improved and, in the following year, they describe it as excellent. So we see that the new cashier (and, later, accounts clerk) Albert Degenhardt had become a valuable member of the office staff and brought a much-needed element of continuity and stability into the organization, in spite of the rapid succession of Commercial Managers. Nevertheless, a letter dated 9 January 1906 sent by Degenhardt to Fischer finds the young clerk complaining to his boss about his latest salary review. Fischer, in reply, praised Degenhardt's performance but explains that he was unable to do more in the current economic circumstances.¹¹ Degenhardt accepted the explanation but added "I am sorry you are unable to accord me a more material encouragement."

The general working conditions at the time included a week of 50 hours, with six holidays each year that were



The shop on Great Castle Street to which Zeiss moved in 1909. Figure 7

paid, but at a reduced rate. The period of notice was one hour.

Degenhardt had to manage the accounts under the supervision of a rapid succession of Commercial Managers. Staehler replaced Rheinberg in 1903, but was himself replaced by Otto Hoffman in 1905. (Staehler transferred immediately to manage the St Petersburg office, but then moved on to Paris in 1911 and Berlin in 1920.) Hoffman was replaced by Paul Henrichs in 1906. Henrichs, only 26 at the time, had worked briefly in the Brussels office but was sent to London in 1905 and worked under Hoffman’s eye for a year while proving himself to be up to the job of managing the largest branch office outside Germany. Henrich established a service and repair department, so increasing the number of employees from 15 to 18 in 1907/08.

New laws and the response

The British “Companies (Consolidation) Act,” passed by Parliament in 1908, required companies established outside the United Kingdom to file, every year, a full set of financial reports in English for the entire corporation (which meant,

for Zeiss, including operations in Germany), for review by British authorities. As a consequence, Zeiss followed the advice of their British lawyers and turned the London Branch Office into a Limited Liability Company, to be known as Carl Zeiss (London) Ltd.¹² This new company was registered on 2 November 1908, with Paul Henrichs and Max Poser as subscribers nominated by Carl Zeiss and with a total share capital of £10,000, all held by Carl Zeiss Jena.

To accommodate the anticipated growth in the business the company moved in 1909 to 13/14 Great Castle Street (figure 7), close to the Margaret St. office just north of Oxford Circus. The business did indeed expand (see the table below).¹³

By 1909 Carl Zeiss (London) Ltd. accounted for 9% of Zeiss’ worldwide sales and 23% of all branch office and subsidiary sales.¹⁴ Although the reported profit represented 30% of that from all branches and subsidiaries, it was well below the percentages that Zeiss in Jena expected and achieved.

The Companies Act of 1907 was joined in the same year by the Patent and Design Act.¹⁵ This law allowed British authorities to revoke any UK patents for a “patented article or process manufactured or carried on exclusively or mainly outside the United Kingdom.” For

Zeiss this regulation covered, among others, their patent for prismatic binoculars and one for photographic lenses including the Tessar. In a reaction to this perceived threat, the company proposed, in the words of a 1908 Board meeting in Jena,¹⁶ “to protect the English Patents, a small Zeiss-owned factory should be established.”

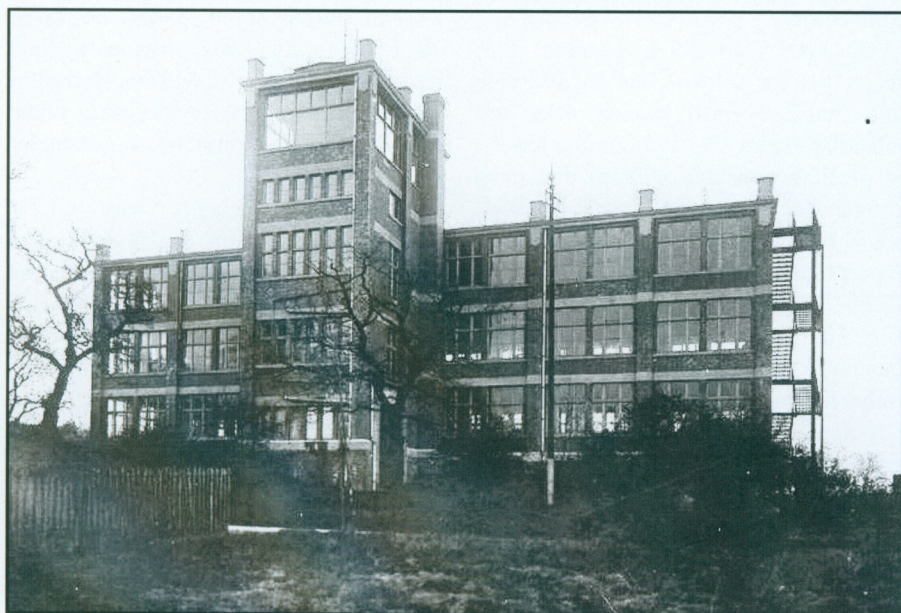
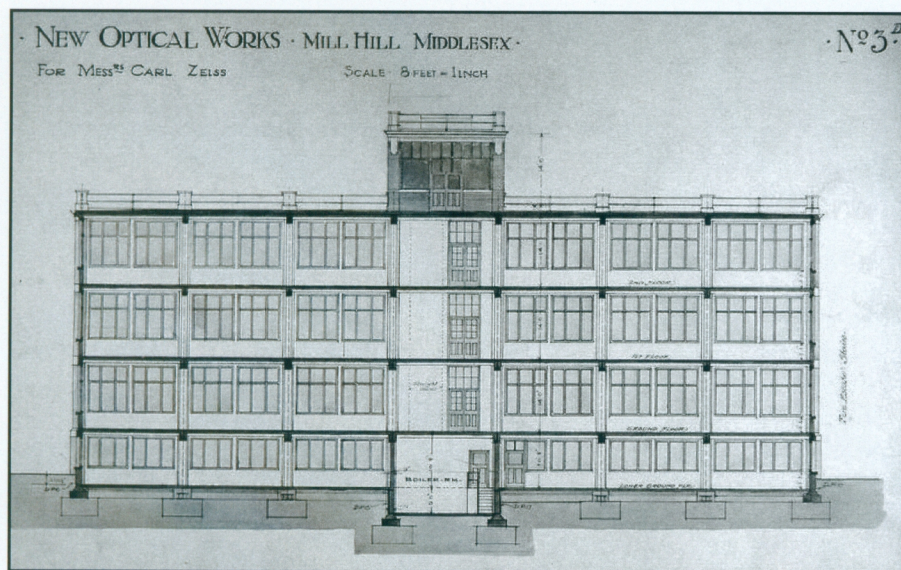
A suitable site for the new factory was found in Mill Hill in Hendon, then in Middlesex (but now part of Barnet in Greater London). Here the company built a complete optical manufacturing facility (figure 8) to produce lenses for all the instruments made on site.¹⁷ The architect’s drawings are dated 1909, and production (mostly of binoculars, but also of photographic lenses) began in 1911. Work that was previously done under license by Ross was transferred to the new Zeiss factory, leaving a bitter legacy that would not be forgotten by Ross.¹⁸

The first manager was a Dr Finkelstein, who ran the factory until 1912 when he left to teach at a college in Haifa. By this time the staff at Mill Hill was up to 53,¹⁹ including six production experts from Jena. Finkelstein was replaced by a Mr A. Winkler, who arrived in January 1913 and soon began to undermine the good relations Finkelstein had established with the

Annual Turnover of Carl Zeiss (London) in £1,000s
1906–1914 (converted from Marks)

	1906/07	1907/08	1908/09	1909/10	1910/11	1911/12	1912/13	1913/14
Micro				9.2	10.0	11.9		
Photo				7.1	12.0	12.2		
Tele				27.7	30.9	30.9		
Total (includes some other items)				46.6	53.0	58.0		82.0
Profit	2.1	2.5	2.1	4.4	1.3	1.2	2.0	2.0

(Note: Ledgers for some years are missing and the data are therefore incomplete)



The Carl Zeiss factory at Mill Hill, shown as an architect's drawing, above, and a contemporary photograph, below. Built in 1912, this structure is in a residential suburb about nine miles (14 km) northwest of London.

Figure 8

workers. Word of his poor management reached Jena, and Winkler was soon replaced in turn by a Mr F. Loewen. From March 1914, when he arrived, Loewen was able to restore the factory to its original smooth operation,²⁰ which was the more remarkable because he almost immediately had to cope with the outbreak of war in August.

The First World War

Production continued throughout the war, and at first the relationship between the German personnel and their British

colleagues stayed cordial on the whole. This is borne out by the fact that during a collection of money by and from German members of staff to support German prisoners of war, the English workers organized their own collection for the same purpose. Although the Mill Hill operation was an enemy-owned company it was capable of producing much-needed military optics, especially binoculars, and was allowed to continue in operation. Prior to August 1915, when the German staff had to leave for internment on the Isle of Wight, not

much changed. All existing finished goods and binoculars produced in the 1914–1915 period—about 800 pieces—were sold to the British Army with the letter “L” added as a prefix to the serial number. Zeiss, Mill Hill also handled some binoculars originally ordered by the Army from B&L that were in need of reticules and for correction of defects in design that the army thought necessary.

The work, now under the management of Thomas Charles, Zeiss's British lawyer, was complicated by the interruption of supplies originally obtained from Jena. When the raw glass material from Jena was exhausted, English and French glass was substituted in the binoculars, necessitating a recalculation of the instruments' optics. The finished binoculars showed some color fringes, but they were accepted by the testers at the Army's Woolwich Arsenal. The Mill Hill factory also made Tessar photographic lenses at this time, and the results were said to be equivalent to Jena-built models despite some difficulties with the iris-diaphragm construction.

So things continued until January 1917, when the British government condemned Carl Zeiss (London) Ltd as “Enemy Property” and put it up for sale. The sale was conducted in secret and under suspicious circumstances, with the result that Ross Ltd. was named the high bidder at £10,500 for assets that had been previously valued by Zeiss Jena at approximately £150,000.^{21,22} This was an exceptional bargain for Ross and could be seen as sweet revenge for their loss of the Zeiss-related business in 1911. Figure 9 shows Zeiss and Ross instruments from this period. In 1919 Ross sold the Mill Hill property to a maker of eyeglass lenses, UK Optical.²³ (By an odd coincidence, UK Optical eventually merged with the American Optical Company, AOC, which in turn merged with SOLA, the eyeglass lens company, which is now part of Carl Zeiss Vision.)

Degenhardt returns

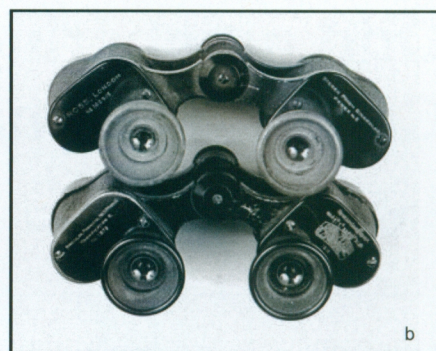
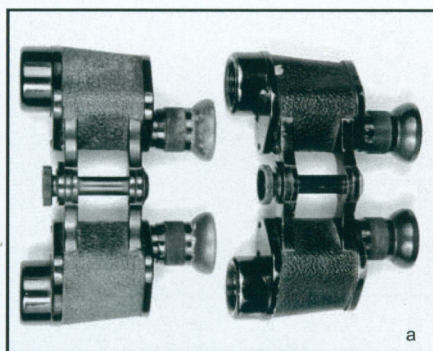
Paul Henrichs, who—with Max Poser—managed the branch office from 1906 and the new company, Carl Zeiss,

London, Ltd, from 1908, was among those who were interned in 1915 until the end of the war. When he returned to Jena in 1919, Henrichs began to look for ways to renew Zeiss's presence in England. To this end he approached Albert Degenhardt, the young accountant hired in London in 1901 and by now working for Adam Hilger, with the offer of a senior position in a new Zeiss company in Britain. After one or two false starts Henrichs and Degenhardt got help from J. W. Atha of Liverpool, who organized a company called J. W. Atha & Co. Ltd to be a Zeiss subsidiary, camouflaged as an English enterprise but with 100% of the stock owned by Zeiss.²⁴ Atha and Degenhardt were joint Directors, with Degenhardt as Managing Director. (See figure 10 for two contemporary Zeiss advertisements).

Postwar difficulties

The new company performed quite well in difficult circumstances, making profits through the early 1920s.²⁵ Rampant inflation in Germany combined with a floating pound sterling made for unstable currency exchange rates; import duties on optical goods increased to 33.3%, and support for "made in England" goods rather than those from a recent enemy all combined to make the business difficult. The arrival of the new "Punktal" eyeglass lenses from the Opto division helped somewhat.

By 1926, thanks to an initiative by Degenhardt, discussions between Max



Two binoculars of the same design, one marked "Zeiss," the other (probably immediately post-World War I) with "Ross" identification. The Ross is on the left of view a and at the top of view b. (Thanks to Jack Kelly.) Figure 9

Fischer (visiting from Jena) and UK government officials resulted in the name "Carl Zeiss" being again legally available in England.²⁶ As a result the name "Carl Zeiss (London) Ltd." was resurrected for another newly incorporated company, with Degenhardt and Atha as Directors joined later by Henrichs. Several changes of address followed; first to Winsley House, Wells St., London in 1927 and then to Mortimer House on Mortimer St., London in 1930. By this time the big merger of camera manufacturers had taken place, and Zeiss Ikon were represented in Mortimer House alongside Carl Zeiss.²⁷

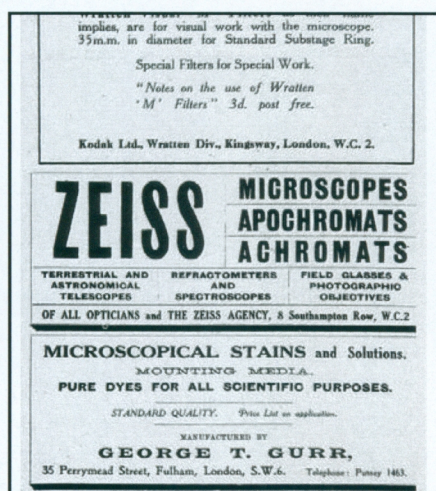
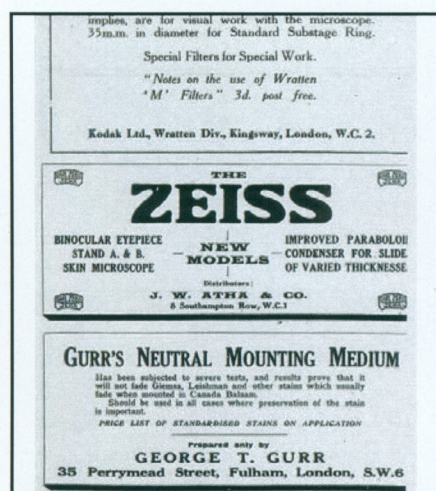
But, after early success, two disasters affected the companies' chances of continued success. First came the worldwide economic depression, starting in 1929 and continuing into the 1930s. All businesses suffered, particularly those

involving international trade, and the Zeiss companies in London began to post losses for the first time. Then, in the later 1930s just as business began to pick up, war came again. All communication with Jena ceased abruptly on 3 September 1939, and by 1940 the company was again confiscated as enemy property.²⁸

TO BE CONTINUED

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23. CZJ archives 159 36
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26. CZJ archives 8351
27. CZJ archives 37181
28. CZJ archives 19259



Two advertisements for Zeiss instruments from J. W. Atha & Co. in the 1920s when the company was in Southampton Row.. Figure 10

Odd numbering of Carl Zeiss Jena Contaxes

Stefan Baumgartner, Lund, Sweden

Two cameras with the same serial number; another, unfinished and with no number at all?

Evidence of “after-hours” work by the Jena staff to generate a little “off-the-books” income.

Recently, I came across two samples of Carl Zeiss Jena Contax cameras (figure 1) that looked authentic and possessed all the unambiguous features that this rare class of cameras reveals. What seemed odd, however, was that the two cameras had identical numbers, 18213, (figure 2), one engraved in a lettering size we know from other CZJ cameras (top), while the other one showed the lettering in considerably smaller letters (bottom). Both cameras showed the correct type of CZJ logo.

Driven by curiosity, I started to investigate possible explanations for the exis-

tence of these two identically numbered cameras and was able to trace their origin. Luckily, they had always stayed together from the very beginning. Conclusive information about their origin was provided to me by the previous owner (now dead), an employee of the CZJ factory who stayed with the company up to his retirement. According to his testimony, it was very common that, after World War II, the staff could finish the assembly of cameras that were lying around because of uncertainty of production runs, and due to lack of proper control of working activity — particu-

larly during the evenings. As far as the engraving step was concerned, it was very easy for the worker to have either a fellow staff member execute this work or to do it on his own.

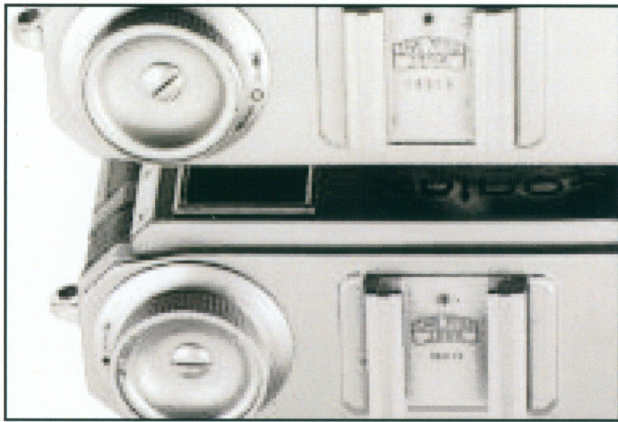
Which one of the two cameras is the “true” CZJ Contax, and which one is the “after-work” Contax? A closer inspection of the two cameras shows that only the top Contax in figure 2, with the normal-sized number, has the same number engraved on the camera bottom and in the back. Conversely, the lower Contax in figure 2 shows no further engraving, neither in the camera bottom nor in the back, suggesting that the Contax at the bottom is the “extra” one.

The above observations may suggest that irregularities in the production runs of CZJ cameras were probably more common than previously assumed. To corroborate this statement, let me show you a CZJ Contax III that possesses all the features of a true CZJ Contax (silver-grey rangefinder, heavy back, CZJ type of shutter-plate screws and so on), but appears unfinished, shown by absence of the winding and rewinding knobs and lack of a serial number (figure 3). The CZJ logo in the flash shoe, however, is present and looks authentic (figure 3, insert). Another odd thing is that the selenium plate in the exposure meter



Two Carl Zeiss Jena Contax cameras showing all the features of true CZJ production after World War II.

Figure 1



The serial numbers of the two cameras. The top one shows the number 18213 in the style common to many CZJ cameras. Also, the CZJ logo looks correct. The bottom one, also 18213, shows a smaller numbering which is uncommon, although the CZJ logo is correct.

Figure 2

reveals a stamp with a manufacture date of 26. 6. 1936 (that is, 26th June 1936), or about 11–14 years before this camera was assembled.

Finally, the f/1.5 50 mm Sonnar lens looks half-finished and the numbers and letters are in black, rather than in white in a black-painted background. Its number, 2725035, points toward a batch of lenses that were made in early 1943, but obviously it was never finished and released

into the production line. Curiously, the lens is coated, but not in the dark-blue color that these early coatings usually revealed.

Again, the whole camera looks to me as if CZJ workers were waiting for spare parts that eventually could contribute to its final assembly. Obviously, this never became true for this particular CZJ Contax III. This camera does not show many traces of being used, so we can

assume that its unfinished status is not due to the fact that it was the source for spare parts for other cameras. Rather the opposite seems to be the case and the camera was never finished.

These examples demonstrate that irregularities in the CZJ Contax numbering system may exist, some of these for the sole purpose of generating an extra income for the “maker” of such a Contax camera



An unfinished CZJ Contax III lacking a meter/rewind assembly, a winding knob, and a serial number in the flash shoe (insert in upper left corner). Moreover, the lens ring is not painted in black with white lettering and numbering, rather it is black on a metal background.

Figure 3

Commentary..... Simon Worsley

The Fall 2010 issue of Zeiss Historica was accompanied by a reprint of the 1927 Zeiss Ikon camera catalogue, and Larry Gubas wrote a brief article about it for the Journal. Soon after the journal and reprint were published, Simon Worsley wrote as follows:

The Ikonette was initially illustrated in contemporary Zeiss Ikon catalogues with an aperture setting of f/9, f/12 and f/25, but as explained in the Zeiss Historica Spring 2008 article on the Ikonette, the first production run had a setting of f/9, f/11 and f/32 but the norm for the Ikonette series was f/9, f/16 and f/32.

The suggestion that the earlier catalogues were only 32 or 36 pages in length ignores the first Zeiss Ikon general catalogue, “Zeiss Ikon Cameras,” which had a print code

(Bestellnummern) of C219 and was produced before May 1927. At 72 pages this was a considerable tome, covering the plethora of cameras offered by the new company. This catalogue was the basis for the “Abridged Catalogue” referred to in the article. This was to be the start of a process of producing a winter and summer general camera catalogue, the first being the December 1927 “Camera Auszugsliste Zeiss Ikon” (C292, A5, 32 pages), this was followed by the August 1928 “Camera Auszugsliste Zeiss Ikon” (C292b, A5, 36 pages) and so on up until the early 1940s.

The first “Hauptkatalog” (Master Catalogue) was dated May 1929 and had 136 pages. These are the primary references for many Zeiss Ikon enthusiasts and were produced spasmodically up until 1938.

From my collection I would suggest

the following Hauptkatalogs were produced:

May 1929: Zeiss Ikon Hauptkatalog 1929 C347, A4, 136 pages

Jan. 1931: Zeiss Ikon Hauptkatalog 1931 C467, B5

May 1934: Zeiss Ikon Hauptkatalog 1934, C555, A4, 160 pages

February 1936: Nachtrag II zum Zeiss Ikon Photo-Hauptkatalog C555, C555 II RM, A4, 84 pages

June 1937: Zeiss Ikon Hauptkatalog für Cameras und Photobedarf 1937, C784, A4.

Larry Gubas addresses Simon Worsley’s comments in his “Letter” on page 1 of this issue.

**Diese
Phototruhe
für 2.30**

- wenn Sie

**ZEISS
IKON**

**Film
verwenden**

René Ahrlé's advertisement for a Zeiss Ikon film and negative storage box. See Bernd Otto's article on page 10.