

ZEISS HISTORICA

Journal of the Zeiss Historica Society • Volume 33 • Number 2 • Fall 2011

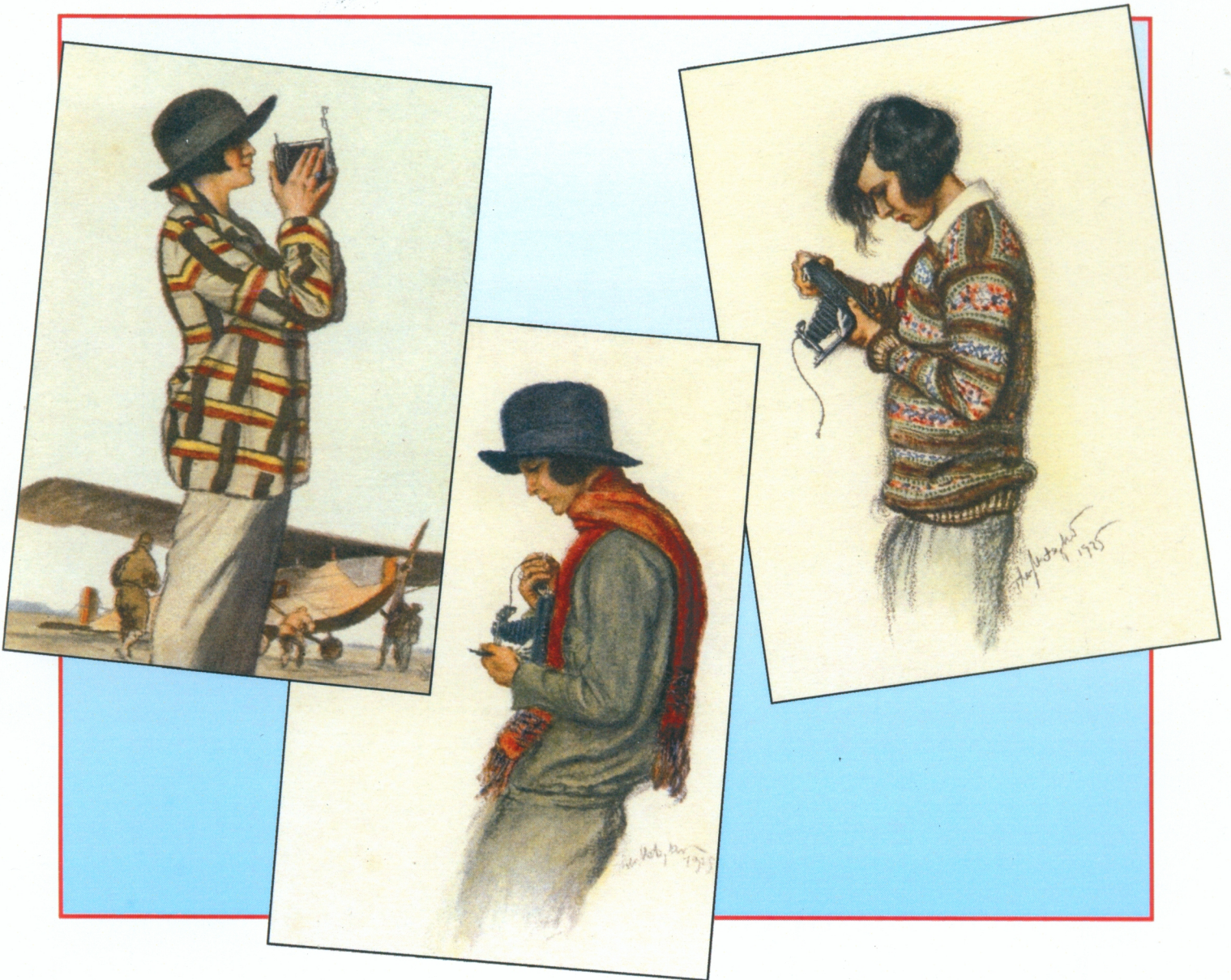


Table of Contents

- 1 **President's Letter**
- 2 **Zeiss in the UK, part II** **Herbert Ober**
Continuing the story begun in the last issue on the individuals and their activities after 1945
- 10 **The Goerz Works, 1945**
Eye-witness accounts of the events at Zehlendorf and Friedenau at the end of the war
- 16 **The rare Tengoflex: A mirror reflex or a simple box camera?** **Bernd K. Otto**
Offered in Sweden during World War II, this camera was little more than a simple box
- 21 **The Contax I and its "pimple" versions** **Stefan Baumgartner**
Many early specimens have these pimples, but their size and number vary
- 23 **The Tenax II — some interesting novelties** **Lawrence J. Gubas**
Models have been seen with unusual departures from the standard design

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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Printing by Minuteman Press, 3007 Longhorn Blvd, Suite 110, Austin, Texas 78758 USA.

Front cover: Larry Gubas provided copies of these ICA/Zeiss Ikon postcards from 1926–27. He added that some were also used as catalog covers.



Back cover: These are a few stamps from André Surmont's collection of German commemoratives, mostly from the DDR (East Germany), on the occasions of some of the Leipzig Trade Fairs and certain Zeiss-related anniversaries. See the inside back cover for the key.



President's Letter

I have recently returned from a visit to Jena in Eastern Germany, where I participated in a meeting of another of our sister organizations, The Binocular History Society. There were a good number of Zeiss Historica people there and I discussed the process of researching my now aging book on Zeiss prism binoculars. This meeting was sponsored by Zeiss, with interesting presentations on all sorts of historical and technical subjects as well as tours of the town, the optical museum, the local astronomical observatories, and the second of the historical planetariums. Of course, I participated in the tradition of eating the delicious 18-inch-long Thüringer bratwurst at the outdoor vendors grill, which I found at the beginning of Schillerstrasse. This is in the shadows of the Carl Zeiss Jena original factories, which are now the center of the town's huge mall, the university and the building provided by Ernst Abbe for the use of the citizens of the town. It was a hugely successful meeting that included, as a special preview, many of the pages of Hans Seeger's next book on the development of Zeiss binoculars; this one begins in 1920.

I found out that this year is the 85th anniversary of the opening of the first Zeiss planetarium and, of course, 2012 will be the 80th anniversary of the introduction of the Contax I. There is a discussion in this issue of the Journal on one detail of this early camera, as well as a continuance of the excellent history of Zeiss in Britain and a rare discussion on the dismantling and recovery of the Goerz factories in Berlin after World War II. It is a rare insight as there has been little documentation of this process behind the Russian-controlled portion of Germany. Anything that the artillery missed was taken in a harrowing manner by the surviving Zeiss Ikon staff. Our editor has done a superlative job of taking a tremendous amount of disparate material and condensing it into an excellent, thorough presentation of what happened in both of these articles.

We are also quite happy to distribute the unique DVD that we have created as a dividend with this issue. It is a digital copy of a 1936 Zeiss Ikon film about the features

and the manufacturing of the Contax II and III cameras. It is from a silent film of the period in black-and-white format. It gives an interesting insight not only to the camera but also to the process of manufacturing and quality control. This was available in somewhat limited distribution some years ago as a VHS product but, with the demise of that medium, I think that this disc will be of interest to one and all. It may not work on your DVD player because there are different formats for Europe, Asia and the US but it should play nicely on any Windows or Apple computer. As usual, we welcome commentary from one and all.

While in Germany, I visited with Bernd Otto and was able to see the galleys of his forthcoming book on all of the cameras manufactured by companies that were managed by the Carl Zeiss Stiftung. Now this does not include all of the cameras that these companies ever made but rather those cameras made while Zeiss was managing these firms. It is an amazing work of scholarship with a page devoted to each and every camera with all of its features and components identified. The language issue is addressed with text not only in German but also in English and Japanese. It is a reference work of significantly more than 500 pages with an excellent diagram of the family tree of all of these companies on two facing pages. It is remarkably well done with an introduction of the history of the firms in these languages as well.

I discussed the possibility that I could assist the process by having a supply of books shipped directly to me by the printer to distribute here in the US and Canada. However, this depends on the level of interest that you express directly to me by 30 January 2012. There will clearly be a savings on a bulk order and shipping if this receives sufficient interest, but I must hear from you directly. You can do this by snail mail or via the website (www.zeisshistorica.org) question area. The cost of the book is as yet not determined but based on the size and amount of material covered, it should be in excess of \$100.

As always, I am happy to hear from you.



Zeiss in the UK, part II

Herbert Ober, former Managing Director,
Carl Zeiss Ltd., London

Continuing the article begun in our last issue, we follow the fortunes of Zeiss in London from 1945 to 1990, in the words of Herbert Ober as adapted and abbreviated by the Editor with encouragement and assistance from Jack Kelly.

In part I of this survey we followed the course of the Carl Zeiss (London) Ltd enterprise up to the outset of World War II. The firm had been doing business along with Zeiss Ikon in Mortimer House in London, but in 1940 it was confiscated as enemy property.

The war in Europe ended in May 1945 with the defeat of Germany. Regular readers of *Zeiss Historica* and other students of Zeiss lore have seen many studies of this period, starting from when American troops, who had already occupied Jena in April of that year, immediately took command of the Carl Zeiss Jena factories. It had, however, been previously agreed between the Western Allies and the USSR that the state of Thuringia, which included Jena, should be handed over to the Soviet occupation forces. The date for the Americans to leave and the Russians to move in was set for the end of June 1945. A few days before the American troops left Jena, they took a trainload full of documents and technical equipment and shipped it over to the West, along with a group of eighty of the most important people at the Zeiss works. This evacuation created the nucleus for the establishment of Carl Zeiss in West Germany when the works in Jena were transferred to Russian control. One of the people in that group of eighty was

Paul Henrichs, who we will remember was the manager of the London office before the first World War and was largely responsible for the renewal of Zeiss's presence in London after that war.

Discord between East and West

Henrichs and some of his colleagues were charged with creating a new Carl Zeiss enterprise in the little town of Oberkochen in Swabia, in the American Zone some 40 miles east of Stuttgart. In the beginning there was still an understanding and cooperation between Oberkochen and Jena, but later, after the total take-over of political power by the Russian-sponsored German communists, the relationship deteriorated. It had earlier been agreed that the West German Zeiss firm should take over the responsibility for all business with foreign countries outside the communist bloc. Consequently the Jena department for export business lost practically all of its former importance.

Meanwhile efforts were underway for Zeiss to renew its association with the UK, starting with some correspondence between the authorities in Jena and Albert Degenhardt. Degenhardt, 64 years old when the Second World War began, was one of the prewar Directors (with Henrichs and J. W. Atha) of Carl

Zeiss (London) Ltd. During the war he was arrested and interrogated as a suspected spy on account of his German name and his connection with a German firm. Although soon exonerated and released, he had lost his pension with the liquidation of the company. He did find employment again, but this period must have been very difficult for him. By 1948 things were looking up; a letter from Jena to Degenhardt dated 10 May 1948¹ mentions a letter received from him dated 30 March. One can conclude from the Jena letter that Degenhardt was working as the Zeiss agent for England with the agreement of Henrichs at Oberkochen. The exchange of letters between Degenhardt and Henrichs² shows evidence of a deep friendship between the two men. The correspondence includes a discussion of their shared memories of past occasions, such as "I suppose we must consider ourselves lucky to have lived and enjoyed some care-free and really enjoyable years prior to the first world war."

The younger Degenhardt

There were attempts at this time by Degenhardt and Henrichs to persuade the former's son, named Albert Harold Degenhardt but generally known as "Bill," to join the company. Bill Degenhardt, born in 1909, was sent,



The student card for A. Harold Degenhardt ("Bill") at the Staatliche Optikerhochschule Jena, where he studied ophthalmic optics. Figure 1

after finishing school at age 16, to Jena to study at the Zeiss sponsored "Staatliche Optikerhochschule Jena," a college for the training of opticians (figure 1). Despite knowing "little or nothing of the German language" when he set out for Jena, according to his father, Bill made a success of his studies and he passed his final examination in 1928 with honors as one of the top three students of his year. His father and Henrichs both hoped and expected that he would accept an offer of employment by Zeiss, but he declined because he had other ideas. He wanted to work for and with people as an ophthalmic optician, helping them to improve their vision and advising them how best to do it. His decision not to join Zeiss was accepted by his father and by Henrichs, who congratulated the elder Degenhardt on having a son who knew his own mind. Much later, after some 40 years, Bill Degenhardt admitted that the reason for his decision was that "Zeiss couldn't pay me enough!"

Bill's interest in, and experience of, ophthalmology was soon in evidence, as was his liking for the Zeiss-made Punktal eyeglasses. In March 1928 Albert Degenhardt, by this time resigned to the fact that his son would not join Zeiss, wrote in a letter to Henrichs:

"When he [referring to his son] was last over here on holiday, he had a

bad attack of "Punktalitis" and I got him to attend our show at the Optical exhibition. He engaged a visitor — an optician Melson Wingate from Bournemouth — spoke about Punktals, then called Savage [the Carl Zeiss London representative] over, then me. Result, a journey by Savage to Bournemouth the following Monday, a call upon me 2 days later by Wingate and an order for 5000 Punktals. And that is the measure of my disappointment."

There is no doubt at all that Bill Degenhardt already had the ability to sell even at the age of 18 years old!

After his return to England, Bill Degenhardt started his career. First in sales, as he had to complete his qualification to work as an ophthalmic optician in England before he could practice after reaching the age of 21. He studied in his spare time and, at the earliest possible opportunity, took the examination. Bill Degenhardt changed employment several times over the next few years and acquired valuable experience. When World War II was declared, he volunteered in 1939 for the Royal Air Force and was accepted. After a few months, however, while his father was imprisoned as a suspected German spy, Bill Degenhardt was dismissed from the RAF without a reason. He was tainted by the same suspicion of spying as his father. Under these circumstances no one would employ him as an optician so

he instead took up pig breeding, of all things. His name, however, was eventually cleared and he rejoined the RAF. For the rest of the war he taught German to pilots and other flying crew, ready for any escape attempts should they have the misfortune to end up in German territory.

After the war Bill Degenhardt returned to his professional career. Besides working as an ophthalmic optician, he started to make a name for himself by writing articles in professional optical journals and giving lectures on new developments in the field of visual optics. His writing activity brought him in contact with Zeiss in West Germany. Most likely prompted by his father, Bill Degenhardt wrote an article in 1950 for the *Optician*, the leading journal for practicing opticians, featuring the new Zeiss Oberkochen slit lamp. During the following years the elder Degenhardt continued working for Zeiss, in spite of his advancing years — he was 74 years old in 1950 — as an agent while his son looked after English publicity material. The next step for Bill Degenhardt came in 1952. He was invited to give a lecture at the Annual Conference of the German society of qualified opticians. Zeiss at Oberkochen learned of his trip to Germany and invited him to visit Oberkochen to see their new factory, whereupon both sides were very impressed with one another.

Legal difficulties

During 1953 the relationship between the two Zeiss enterprises, the old one in the East and the new one in the West, deteriorated sharply, and by February 1954 all cooperation between the two firms ended. Meanwhile Zeiss at Oberkochen planned to re-establish a subsidiary in England to look after their business there. In May 1954 the British firm of Rayner & Keeler reached an agreement in principle to form a new company to sell Carl Zeiss Oberkochen products. Zeiss would take over 50% of the shares of the new company and would be from then on in effective control of the firm. In the minutes of the meeting it is stated as a matter of fact that Mr Degenhardt junior should join

the new company as manager. We do not know how and when this was negotiated between Zeiss and Bill Degenhardt, but this condition was apparently stipulated by Henrichs. Bill Degenhardt later accepted the formal offer from Rayner & Keeler and started in his new job even before the new company was incorporated and listed in the register of companies.

The original plan was for the new company to be registered as Carl Zeiss (Great Britain) Ltd. However it turned out that the name Carl Zeiss (London) Ltd. had not been deleted from the register of companies in spite of the liquidation of the company in 1940. Any use of "Carl Zeiss" as part of the name of the new company was not permitted. Bill Degenhardt had to organise sales activi-

ties until December 1954 without even having a business card as there was no company! In the end, Zeiss Oberkochen, represented by Henrichs, agreed that the name Degenhardt & Co Ltd. should be used. The new company was duly registered³ on 18 December 1954 and could now officially trade from its premises at 32 Maddox Street, London W1.

Eastern Zeiss arrives in London

Another development of significance happened during this period. The East German Zeiss enterprise also decided it was time to have their own agency in London. They encountered the same difficulty in registering a name referring to Zeiss, and the firm CZ Scientific Instruments Ltd. was incorporated instead, financed completely by the

East German side and completely controlled by them, appointing always somebody delegated from Jena as Managing Director.

Legal difficulties

When Paul Henrichs came to London on 5 January 1955 he was immediately and unexpectedly thrown into legal matters. At a much earlier time, Ernst Abbe had determined in clause 1 of the Statute setting up the Zeiss Stiftung that it should pursue its business through the industrial enterprises that it owned. Clause 3 states: "The Stiftung is domiciled in Jena." Then clause 121 states: "Clauses 1 and 3 (*beside others*) can never be changed." But the Stiftung had lost its workshops, as they were called, when they were taken into State ownership.

Can the real Carl Zeiss now stand up?

CARL ZEISS of Oberkochen in West Germany and Carl Zeiss of Jena in East Germany, after a legal wrangle over the identity of the "real" Carl Zeiss that has lasted on and off for 15 years, could hardly be described as the best of friends. But after last week's out of court settlement which has written "finis" to the whole affair they are going to have to live together — at least in the UK.

Considering the ferocity with which the struggle has been waged it is a strange, surprisingly meek end to a legal battle of almost Wagnerian proportions. Over the last 15 years the case has been taken twice to the House of Lords, has outlasted the careers of leading counsel on both sides and has cost the participants an estimated £30,000 in legal fees in the UK alone. The hearing in the High Court which was brought to a premature halt last week had taken over two years to prepare and the solicitors were sufficiently worried that the judge might drop dead in the course of the hearing that at one stage they planned to insure his life for £250,000.

After all this effort the actual outcome is something of an anticlimax. Partly because they are anxious not to reopen old sores and partly because they do not wish the result to influence other similar cases being fought in other countries both sides have agreed not to disclose the contents of the settlement. But what has hap-

by STEPHEN ARIS

pened is that both parties have agreed to accept the status quo. In nearly every other country where similar cases have been fought — and they range from Egypt to America — the victory has gone to one side or another with the balance in favour of West Germany.

But in Britain there has been a Judgment of Solomon: the baby is to be cut in half. In future as in the past there are to be two Carl Zeiss's: the East Germans will trade under the trademark Carl Zeiss Jena and the West Germans as Carl Zeiss. The West Germans will cease to use some of the trademarks that the East Germans lay claim to while the East German will drop their claim for damages for the loss of trade and goodwill and for the assets of the West German company which was formed by some of the original staff of Zeiss after they had fled from the invading Russians in 1945. But the real breakthrough is that for the first time since 1956 each firm will formally admit the existence of the other.

The reluctance of both these famous optical firms, whose offices are no more than 200 yards apart, to admit the existence of the other, has led in the past to some very bizarre goings on. Whenever an innocent customer complained to West German Zeiss about one of its East German rival's products the Westerners always took good care never to refer to the Easterners

by name when answering the letter. It was always: "In regard to your query about a product which we believe to have been made by a certain East German optical firm we have to inform you ..." The East Germans have apparently been less careful about such niceties. They have quite cheerfully forwarded letters addressed to their West German competitors at Carl Zeiss House: a gesture that the West Germans have not felt confident enough to reciprocate.

The complexity of the case has only been matched by the ingenuity of the lawyers involved. The West Germans initially argued that there was no case to answer because their rival was based in a country that was not officially recognised — a point that went right up to the House of Lords before it was finally lost. Having won this trick the East Germans tried to maintain that the solicitors for the West Germans were acting improperly because if Jena won they would have been paid with money that rightfully belonged to the East Germans. This ploy failed.

There is no longer any need for such fun and games. And now, fifteen years and £330,000 later, both firms can get down to the business of cutting each other's throats in earnest; always provided, of course, that their customers can tell which is which.

The report published by The Times on 28 April 1971 summarizing the court case between the East German and West German Zeiss companies over which one could trade as "Carl Zeiss" in Britain, which ended in a settlement permitting both to do business, but under different trade marks.

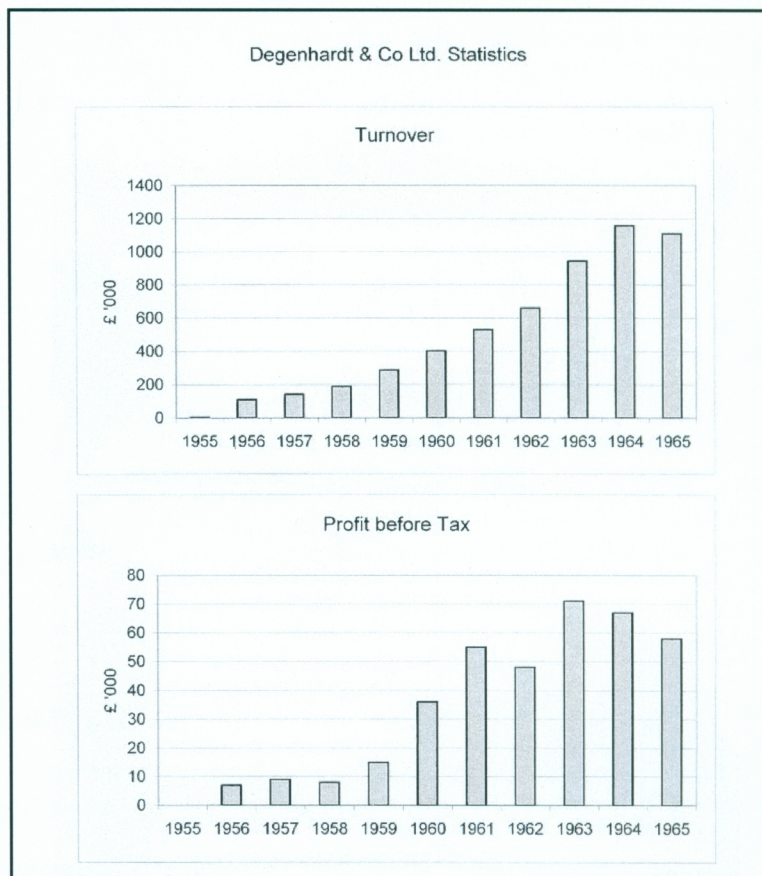
Figure 2

When this happened, the leaders of the group that had been transferred to the West acted to save the Stiftung by moving its domicile to West Germany. In the subsequent legal battles between East and West, the courts had to decide which clause Abbe would have considered to be of overriding importance; Clause 1, with the idea of doing business by means of an individually and privately owned company or clause 3, with Jena determined to be the domicile. The court cases started in West Germany but very soon spilled over into other countries, including England.

The legal dispute centered on the ownership of trade marks, patents and other assets and, most significantly, the use of the name “Zeiss” itself. Both sides, East and West, applied to the authorities responsible for confiscated enemy property to acquire these trade marks, which both parties were already using simultaneously. In November 1955 Carl Zeiss East asked the British courts to declare them to be the rightful owners of the name and all other assets originally registered by Carl Zeiss Jena before the war. After that, it took all of sixteen years to decide the preliminary issue, whether the East Germans were the legatees of the German state authority after the war had ended and could go to court in England. This point was eventually settled in the East’s favor.

The real battle was scheduled to commence in January 1971. A good summary of the trial was published in *The Times* in April 1971,⁴ after the case was closed (figure 2). There are a few problems with this report, however. I believe that the statement in this piece that mail was not forwarded by the “Westerners” to the “Easterners” is not true. Even more troubling is the quoted cost of £330,000 for the legal proceedings. This figure was a massive underestimate. £3 million would have been nearer the mark.

It is now clear that Zeiss East sought a solution to end hostilities⁵ and Zeiss West agreed to discuss a settlement. The East German authorities were obviously not prepared to spend their meagre convertible currency reserves, while not being certain that they would win the court case. Two settlements were then



Turnover and profits of Degenhardt and Co. in London, 1955 to 1965. The amounts are shown in thousands of pounds. Figure 3

negotiated directly between the two sides, the first one described in the *The Times* article to close the court case in England. The second agreement covered the conditions under which the two sides would operate world-wide giving exclusive Zeiss name rights to one side or the other, mostly according to the then existing East and West block countries. For the remaining 83 “neutral” countries, an agreement was reached modelled on the one for England. Judge Megarry accepted the agreement for England and a court order was issued to that effect.⁶ He said with relief “... we have not even [to] read over 300 pages of pleadings in the main action, and this matter comes to a happy, happy end”. And he closed the proceeding with the words spoken in German “*Besser spät als niemals*” (Better late than never).

For the commercial interests of the two sides in conflict in England, there was not much change for the Eastern

side. They were allowed to trade under the name VEB Carl Zeiss Jena, and Degenhardt & Co Ltd. had to change their name into Carl Zeiss (Oberkochen) Ltd.

Success for the new company

With the extraordinary Bill Degenhardt at the helm, the company became an immediate success. The rapid expansion of the business made moves to new larger premises a regular occurrence, firstly from Maddox Street to Cavendish Square and then on to Mortimer Street. All products from within the Zeiss Oberkochen group of companies were sold from the start, including eyeglass frames from the Zeiss associate company Marwitz and Hauser. However, importing advanced and prestigious metal frames — a Marwitz and Hauser speciality — faced considerable import restrictions in the early years of Degenhardt & Co Ltd. It sounds some-

what ridiculous now, but the reason for this embargo was the use of very small amounts of gold in the form of “rolled gold” wire. This was used as material in the manufacturing process of some of the frames. The import of precious metal in any form was very strictly controlled, and at first the frames were imported “illegally” without notifying the authorities about this gold. When, later on, the information on the “rolled gold” was revealed, it took extraordinary efforts to convince the bureaucracy that a few grams of gold, in a comparatively small number of frames, would not constitute a threat to the balance of trade and the economy of the country.

Figure 3 lists the turnover and profits of the firm, demonstrating an excellent performance for a company that started with an investment of just £1000. The rest of the capital needed was borrowed money (in fact a loan from Rayner & Keeler) with full commercial interest rates payable by Degenhardt & Co.

It had been understood from the beginning of the Degenhardt & Co venture that Zeiss would acquire this company whenever time and circumstances were appropriate, and that came about in 1966 when the terms were negotiated and the takeover of the company as a going concern, including all assets, liabilities and the repaying of the loan of approximately £275,000 to Rayner & Keeler, was concluded on 1 January 1967. Additionally Rayner & Keeler sold their original one thousand £1 shares for £100,000 to Zeiss. Together with the dividends paid, the total profit over ten years for Rayner & Keeler amounted to £280,000 on an investment of £1,000.

Bill Degenhardt was justifiably proud of his achievements and he received full respect and recognition from his customers and his peers. He had a charismatic personality, boundless enthusiasm and energy, as can be seen in figure 4, a photograph taken at a later date.

He was also a brilliant salesman with a natural entrepreneurial talent to increase the Zeiss business in England. He was able to motivate the staff to work to his high standards, with the result that



Bill Degenhardt in later life.

Figure 4

the rate of staff turnover was lower than for comparable businesses in central London.

Public relations, and the Newsletter

With his outstanding flair for what we now would call Public Relations, he was able to elicit responses from luminaries such as Eric Hosking, Sir Julian Huxley, and Field Marshal Viscount Alanbrooke, who were even prepared to feature in binocular advertisements (figure 5) without the exorbitant fees celebrities were asking, even then. To give an idea of his talent as a writer and journalist one only has to look at No.1, Volume 1 of the *Degenhardt Newsletter* from January 1957 where you can read:

Editorial

“It is surely ambitious to embark on a Newsletter (...) when only two years old. We ourselves certainly never imagined at our opening in January 1955, that in two years’ time we should adopt this particular method to indulge our ego – and display our wares. As we unguardedly discussed the project with our friends they pursed their lips, furrowed their brows and shifted uncomfortably from foot to foot. “Nobody ever reads a news-bulletin, old boy Price of paper and printing prohibitive any way Your trouble is you can’t rest”

But can you blame us if we have after all haughtily thrown this fond advice to the winds? (...) in England our customers range from the British Atomic Energy Authority to the prettiest

Cottage Hospitals, and from the National Coal Board to the youngest qualified optician. And with the mention of an optician, of course, we come to the essential reason for the appearance of this News-letter. Even if you, good reader, are never actually approached for a theodolite or spectrograph we know that, by and large, opticians are still interested in optical design and theory and we hope, therefore, to bring you from time to time a pepper-and-salt mixture of both ophthalmic and optical information within the pages of the (...) Degenhardt News-letter.”

The Newsletter was not only intended to distribute information among opticians but was Bill Degenhardt’s ingenious strategy to expand Zeiss prestige among frame and lens customers, because the scope for selling very expensive lenses, rather than the standard English products, was limited. Sales soared in 1961, particularly after the introduction of anti-reflection coated lenses.

Bill Degenhardt also had a certain amount of luck in his business dealings. In the 1950’s and early 1960’s there was a sellers’ market as illustrated by the fact that a small advertisement for Zeiss binoculars, appearing in the *Sunday Times* on 25 November 1956, brought Degenhardt & Co over 500 replies. To quote from the Degenhardt Newsletter from November 1957:

The 7 × 50 [binocular] has just become available in limited quantities and it gained an immediate success. (.....)

Alas! Zeiss binoculars are imported under quota. We can obtain only a fraction of our requirements and it is on this account that we often take months to execute your order.

This is an example how from time to time, sales of Zeiss products were hampered by the lack of import licences and the complicated and time-consuming paperwork involved in procuring them. Nevertheless Degenhardt built up an enviable reputation, especially with opticians, who were taken on regular visits to Germany to see the Zeiss production facilities.

After Zeiss took over Degenhardt & Co Ltd., the company moved again to a new address, Foley Street, London W1, continuing the tradition of running the Zeiss organization from premises in London's West End. "Carl Zeiss House" in Foley Street was home number nine, after the first one in Margaret Street in 1894 and all had been located less than a mile from each other.

General economic problems

The takeover by Zeiss was not, at first, the success the management in Oberkochen had expected. In 1967, the British government had to deal with very difficult economic problems, which directly affected the whole business climate. Furthermore, the incoming joint management from head office did not always act appropriately. Business expenses, especially as staff costs for a large number of employees delegated from Zeiss, escalated without regard for current market conditions. The commercial sales (as they were called) of lenses, frames and binoculars were still satisfactory, but the big thrust to increase the instrument turnover did not materialize and Bill Degenhardt became more and more frustrated.

In 1969 I was asked to join Degenhardt & Co Ltd., as it was called until 1973, as Joint Managing Director together with Bill Degenhardt.

Rumours concerning difficulties and problems at the new London subsidiary were making the rounds at the Zeiss Head Office in 1968 and 1969, so it was with some trepidation that I accepted the position. Consequently, when I first met Bill Degenhardt, we were both very wary of each other. In order to assess the

situation properly, I decided not to stay around too long in the office, but to travel about with the instrument representatives in their respective areas. Thus I was able to gradually build up trust and worked toward slow but sure progress. Since 1968 I had been working in the Zeiss Munich branch office and during the second half of 1969 I commuted regularly between Munich and London, continuing to spend most of my time travelling with the British sales representatives. This brought another advantage — Bill Degenhardt saw my approach of going out in the field and meeting customers as the right one.

On 1 January 1970 I was voted on to the Board of Degenhardt & Co Ltd., appointed Joint Managing Director and moved with my family to England, having signed a contract, originally for three years. After regular extensions that contract lasted until 1991.

Bill Degenhardt concentrated his activities of our joint management responsibilities into the lens, frame and binocular business, whilst I was mainly concerned with the instrument side. The organization of the office administration was also split along the same lines. This arrangement worked very well, but it left out the financial administration and control aspect, where we were meant to have full joint responsibility. However, the people at head office held me responsible for everything they required and expected, because they regarded me as their man in England. Bill Degenhardt did not want to concern himself with these "stupid demands" (his words) from head office, which he considered to be far too bureaucratic.

Bill had extensive hobbies and interests outside of his work for Zeiss, which he pursued well into his 70's. Perhaps that made it easier for him to give up his active management of the company in 1974. He was asked to stay on the Board as Acting Chairman, but, finding it very difficult not to be involved in the day-to-day operational management of the business in a company where his word had been law for nearly two decades, he decided to retire completely in 1975 with effect from January 1976.

Before looking into the development

This Christmas give **ZEISS**



a gift that will be treasured for life
read what the experts say:—

Eric Hosking, F.R.P.S. writes: "I have found my 8 x 30 ZEISS binoculars by far the best I have ever used".

Sir Julian Huxley, F.R.S. says: "During my recent African expedition my new ZEISS 8 x 30 binoculars gave me the best results I have ever had with any field glasses".

Field-Marshal Viscount Alanbrooke writes: "Your 15 x 60 ZEISS binoculars... are superb as regards clarity, lighting and colour. I have certainly never before used binoculars that gave me such satisfaction".

Only binoculars engraved  have the new tele-objective system which gives improved performance with smaller size. So look for this sign and ensure that your binoculars come from the Carl Zeiss Foundation, Western Germany. Illustrated booklet and name of your nearest stockist from sole British agents:

The world's finest binoculars—for perfect long-range definition are engraved

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Telephone: LAngham 0979

ZEISS — THE GREATEST NAME IN OPTICS

A 1962 advertisement including testimonials for Zeiss binoculars from Eric Hosking, Sir Julian Huxley, and Viscount Alanbrooke.
Figure 5

of the Zeiss West business in Britain during this period, we should look back at the economic climate then. There was a three-day working week, because of power cuts caused by the miners' strike. There was high inflation with corresponding high interest rates, so that the Accounting Bodies had to put a standard in place for "Inflation Accounting." There were not only price increases for goods delivered from Germany, but the diminishing exchange rate between sterling and Deutsch Mark made big price increases and currency clauses in quotations a necessity. There were budget constraints to control government spending that hit hard on the funds of universities and research establishments — important customer groups for us. Only the National Health Service was left relatively unscathed and we were able to maintain turnover there by offering our first-class contract service in maintaining and repairing our instruments.

As the pound suffered an exchange rate loss of nearly 50% against the Deutsche Mark, our frames and lenses became extremely expensive and it was very hard to achieve the overall budgeted sales and bottom lines. Despite this, we persevered and still achieved growth:

Year	Turnover
1970	£1,179,000
1975	£3,150,000
1980	£4,078,000
1985	£9,540,000
1990	£12,140,000

These figures of course tell only part of the story. Much of the increase in turnover was due to inflation. Nevertheless at the end of this period, the company had increased its own capital out of retained earnings from less than 5% to more than 20% of the balance sheet total, which was the target set by head office.

Competition

The business during this time had not only to cope with competition from British companies and mainly West German and Japanese manufacturers, but also with that from Carl Zeiss Jena. They had greatly intensified their sales operations, particularly after the court case between Zeiss East and Zeiss West ended in 1971 and we had become known as Carl Zeiss (Oberkochen) Ltd. For Zeiss East their London subsidiary was the only one controlled by them in a western country and it was therefore used to earn as much convertible currency as possible. The main tactic was their pricing strategy. As a rule of thumb, one could expect that our equivalent products — for example, microscopes — were roughly 50 % more expensive than those from Jena. This was not an easy situation, as the performance of Zeiss East instruments was good. But, fortunately, the Zeiss West product range was more comprehensive and, in many cases, technically more advanced. Fortunately for us, the Jena microscopes were sold only in low numbers in the

UK due apparently to delivery problems from Zeiss in East Germany.

These price differentials applied not only to microscopes and some of the other instruments but also to binoculars and Umbral sunglasses, where the situation was even more marked. Carl Zeiss Jena sold their binoculars for less than half the price of our corresponding Zeiss West models, they were carrying the well known Carl Zeiss Jena logo, and their performance was good. How did Degenhardt & Co Ltd. and later Carl Zeiss (Oberkochen) Ltd. compete under these inequitable circumstances? Originally it had been the superb sales talents of Bill Degenhardt and his public-relations skills that built up the prestigious image of Zeiss West. Subsequently Zeiss West introduced new innovative binoculars with greatly improved performance. In 1970, after they successfully pioneered the popular mini-binocular series, we had this market to ourselves for a while. However it was not too long before the competition caught up. Happily in the meantime, good contacts with friends achieved an introduction of our mini binoculars to HM the Queen and HRH The Prince of Wales. Obviously, the resultant photos showing them with our “minis” could not be used for advertising purposes but this “Royal Connection” was a fine PR success. The photos appeared in the newspapers and in the case of Prince Charles even inspired a post card (shown in figure 6).

Around 1975 we had yet another royal encounter. The University of Aston in Birmingham acquired a new Ophthalmological Department. It was officially opened by the Prince of Wales and all potential instrument suppliers were invited to support the occasion. We decided to present Prince Charles with a 10 × 50 binocular for his favourite charity, “The Prince’s Trust.” After the speeches, we sponsors waited in the line up for Prince Charles to come and talk to us individually. When it was my turn, I mentioned Zeiss and the binocular gift and he referred in a few words to his own Zeiss binoculars. He moved on to the next person who was none other than Ray Chivers, the Carl

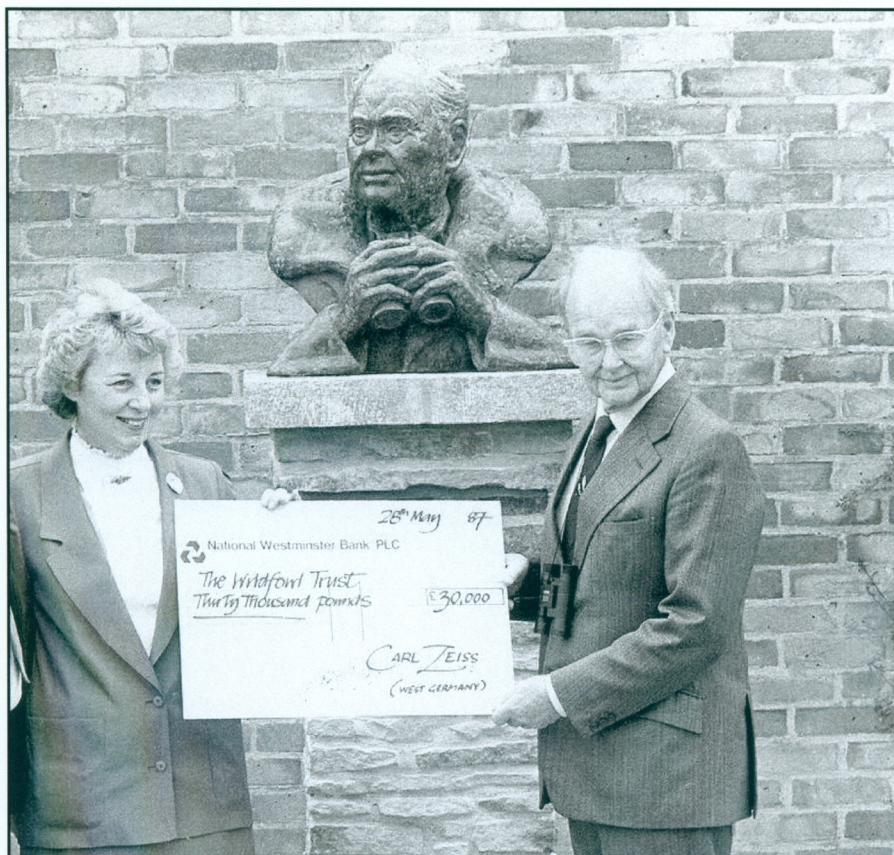


Prince Charles with his Zeiss binoculars.
Figure 6

Zeiss Jena Instrument Division Manager. (Carl Zeiss Jena had presented a slitlamp.) Ray Chivers introduced himself as being from a different Zeiss company. The prince seemed bemused for a moment, hesitated but then carried on along the line of sponsors.

Binoculars for ornithology

Eileen Parsons, manager of our binocular division at this time, had excellent contacts and good relationships with the photo trade and those opticians selling binoculars. She was on equally good terms with important journalists and celebrities including many from the world of ornithology. The bird watchers had always been a special target group for binocular sales here. But Eileen developed this market even further. Here she had her big coup. She had long recognised the wish of keen bird watchers to have a short-focusing 10 × 40 B (spectacle wearer’s) binocular and she even found a meticulous technician here who could “tweak” our 10 x 40 B model to a shorter focussing distance without deterioration of the image quality and keeping within the Zeiss level of tolerances, so she knew it could be done. It would, however, be a hard task to persuade the sceptical managers and designers in Germany that the bird-watching fraternity would pay Zeiss prices for such a short-focusing 10 × 40 specification with the quality of their



Sir Peter Scott with Eileen Parsons, manager of the binocular division, receiving a cheque for £30,000 given by Zeiss to the Wildfowl Trust.

Figure 7

present model. During a sales conference in Germany Eileen was so convinced that she, there and then, placed an immediate order for 1,000 pieces of the 10 × 40 B short-focusing model. Despite the ridicule of her European colleagues she smilingly made the order conditional that no other country would receive an allocation of the model out of this production run and this was agreed. She was proved to be correct. The short-focusing option — down to 5.5 meters (less than 15 feet) — was decisive. In 1985 this version of our 10 × 40 B had more than 20% of the bird watchers' market, a share that was more than four times that of the Leitz Trinovid 10 × 40 B and more than six times that of the Carl Zeiss Jena Notarem 10 × 40 B, the latter selling for less than half the price of our 10 × 40 B model.⁷

In 1987 a large part of the binocular advertising budget was spent on the Carl Zeiss (West Germany) Wild Goose Observatory at the Wildfowl Trust at Slimbridge in Gloucestershire. After

unveiling a bronze sculptured bust of Sir Peter Scott holding his Zeiss 10 × 40's to celebrate the Trust's 40th year, the Duke of Gloucester then received our cheque for £30,000 on behalf of the Wildfowl Trust (figure 7).

As well as this concentration on binoculars, there was for instance the business in instruments for photogrammetry. Together with experts from head office I made introductory visits to important possible customers for first contacts. I joined the Photogrammetric Society and attended their weekly lectures. Worthwhile business was achieved with the Ordnance Survey. Then there was the Teachers of Surveying Conference in Newcastle, where I accompanied a colleague from head office who was demonstrating the then very new Zeiss opto-electronic recording surveying instrument, called Reg Elta. A panel discussion was scheduled under the title "Instruments for Teaching Photogrammetry," and I mentioned to the conference organiser that

we had an instrument, the "Doppelprojektor" DP1, well suited for this purpose and it was a pity that no specialist from our company was a member of the panel. Even before I had finished, the conference organiser said "I'll get you on the panel" before I could explain to him that I was not really somebody for this task. Nevertheless I was given ten minutes to talk about the DP1, followed by question time. A few months later the School of Military Survey in Hermitage ordered nine DP1's!

It was not only binoculars and photogrammetry that received our attention; they are just examples. We looked properly after all product groups and constantly improved our business procedures.

In 1981 we decided to move from the overcrowded West End of London with its high rents and property taxes, and, even then, a totally unacceptable traffic and parking situation. I found new premises in Welwyn Garden City, Hertfordshire, which were refurbished to our requirements during 1982–83, and we finally moved out of London in March 1983.

The official opening followed in June of that year. Bill Degenhardt gave the after-luncheon speech, which he delivered with wit and gusto. He was 74 years old by then and this was to be his last official engagement on behalf of Zeiss. Since his father, Albert Frederick Degenhardt, joined the Carl Zeiss Jena Branch Office in London in 1902, the remarkable fact is that for 81 years both Degenhardts were near or at the top of the Zeiss companies in Britain and were mainly responsible for their success, often under most challenging conditions. □

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The Goerz Works, 1945

Reported by the workers at Zehlendorf and Friedenau

This is the story of the Zeiss Ikon factories at Zehlendorf and Friedenau in Berlin during the eventful period at the end of World War II in 1945, as derived from notes set down ten years later by those who lived through them. Dr Walter Maas collated the reminiscences, and Fritz Schulze translated them. There follows Zeiss Historica's edited and much abbreviated version. It covers the collapse of the Third Reich in April and May 1945, followed by the brief occupation by Russian troops and officials during which the two Berlin factories were totally gutted, and then the arrival of American forces in July.

In the words of the authors: "During the happenings related here feats were accomplished that at other times would have been deemed impossible. The terrible depression and the unbearable tension of the last weeks and days of the fighting gave way to a strong will to survive. Then the extraordinary thing happened: Everybody chipped in, eager for activity, manager and worker, without question, without pay or food, requiring no admonition or persuasion. Thanks to their efforts Zeiss Ikon AG is today [1955] again a prosperous company."

In April 1945 the Russian army was advancing on Berlin and entered the city while American forces paused at the Elbe river and then moved on towards central Germany. In the second half of April, fighting continued in the east Berlin suburbs while factories in the western areas were undamaged. The Goerz works in Zehlendorf (with 2,295 workers) and Friedenau (850 workers), still undamaged at this time, were busy with war production. But by 21 April the city was surrounded and it was clear that the situation was hopeless.....

Russians arrive at Zehlendorf

The management at Zehlendorf had to decide whether to send the workers home, because there was no longer any use for their products. Then came an announcement: "All workers are to

assemble immediately in the machine hall." There they received the news: It has been decided to close the factory until further notice. After thanking the staff for their exemplary loyalty, the director left without giving the customary "German salute," which may or may not have been a deliberate omission. A few managers walked for a last time through the empty halls, finding that everyone had left their workplace in good order and without panic. The safes were secured, the files stored safely in the bunker, just like any ordinary weekend. There were forty Germans and twenty foreigners, mostly French and Belgians. The Reichsministry for Weapons and Ammunition had ordered all machinery that might fall into the hands of the enemy to be made inoperative, but there was no time for that. Only

some aiming and surveillance telescopes were smashed.

The next day, the director and his secretary came back to sort out some files and to burn military papers in the basement. The observer on the roof reported seeing Russian tanks in Teltow. Shells began to fall, with one hitting the Sendlinger Optische Glaswerke, another the fourth floor of the Goerz Works. Refugees arrived, among them women and children of the 38 company houses in the neighboring Goerz subdivision; about 100 people and their hastily collected belongings sought shelter in the safe cellar. A few tired and worn-out soldiers came in also.

By late evening it was no longer safe to go outside. The Russians used loudspeakers to demand surrender, obviously expecting these industrial buildings to



Inside the Zehlendorf Works after the ending of hostilities.

be heavily defended. The women and children were taken to the Friedenau Works in three fire trucks during darkness. The telephone connection to the Friedenau Works was still functioning, and the safe arrival of the first transport was confirmed at one o'clock in the morning. Eventually about 170 people were taken to Friedenau to join the 80 already there.

On Monday morning, 23 April, with the Russians still hesitant to move in on the factory, a half-dozen management staff met again at Zehlendorf. They felt drawn to their place of work as if to save it from any impending disaster. A last few bottles of red wine were shared with a toast for a better future. To avoid retaliation by the Russians all pictures of Hitler and other Nazi VIPs were burned in the cellar, a symbolic iconoclasm signifying the end of a repressive political system.

By now the factory was under con-

stant fire, with some buildings of the Sendlinger Optische Glaswerke in flames. Towards noon the managers started to leave the compound and the last employees left the factory on Monday evening, when the telephone was finally disconnected.

The group of tired soldiers tried to plan the defence of the building against overwhelming forces, but the Russians, knowing of these efforts, increased the shelling. By 5.00 am the entire building was in flames. The once proud factory was ruined despite all preparations and hopes. By noon the Russians occupied the Zehlendorf Works. In the afternoon the director went by bicycle to the Friedenau Works to check on the accommodation, food and care of the refugees.

A few days later, when the situation in Lichterfelde and Zehlendorf had stabilized somewhat, the Russian soldiers left the Zehlendorf Works and a crowd of strangers moved in to pilfer the can-

teen stores, loading peas, flour, and other foodstuffs onto carts.

At Friedenau

At the Friedenau plant things were not yet as dramatic. We have a diary, kept by one of the managers as events unfolded, and it is from this document that the following details are drawn.

Production stopped on Monday 23 April, and by the 24th there was neither water nor electricity. Two firetrucks drove to the Askania Works to fetch water on the Wednesday, but attacks by low-flying planes prevented further trips. A shell badly damaged one of the staircases, and one woman was seriously injured.

On 26 April two more shells hit the building. The first Russians came to the gate and demanded a car, then more troops for more cars. But by the weekend, 28–29 April, this pestering had stopped.



After the dismantling, only the old workbenches and these few useless scraps were left behind.

On Monday 30 April the Russian commandant of Friedenau demanded that the factory be cleared of all women and children in order to restart production. The next step was requiring all men present at the factory to remove the rubble in the streets, after which the production facilities themselves were cleaned and broken windows sealed with cardboard. By Friday about twenty or thirty employees were reporting for work each day.

Trying to resurrect Zehlendorf

By this time Berlin was in chaos, and the Russian attack had rolled over Zehlendorf. Heavy fighting continued in the western parts of the city.

On 30 April there was no public transport, total destruction everywhere, rubble, torn roads, dead civilians and soldiers, electric wires dangling, dozens of destroyed tanks. The Zehlendorf factory was nothing but black ruins.

On 1 May the director was discussing

the possibility of reconstruction when Russian officers arrived, and after some negotiations they decided he should retain that position. This was thought to be a good beginning. A number of employees were soon gathered and the team of managers was called back. In view of the ruins everyone was very depressed but gladly took up the challenge. By Saturday 5 May some managers and about twenty men began clearing the rubble. Everyone joined in, encouraged by the Russian commandant's declaration that production should begin as soon as possible.

The manager of the engineering section had the job of burying the ten foreigners who died in the fire.

The design department and 45 years of files, together with the library of 2,500 volumes (in large part originating from the Optische Anstalt C.P. Goerz) were also destroyed. However, the drawings were kept in a safe and all were unaffected.

Above the design department were the rooms for the lock assembly. The immense heat had melted all the zinc alloy castings and the liquid metal had seeped through the floor and hung like giant stalactites from the ceiling or formed large clumps on the floor.

Soon even the Goerz railway ran again, the first railway in Berlin to be in operation after the arrival of the Russians. To fill the locomotive tank a bucket line 800 m long was needed to get the water from the Teltow canal. (Later it became a useful asset once the Russians started their dismantling operation.)

In the second half of May production of security locks resumed. The Russians were surprised by some management customs of the company. For example, the workers' council (*Betriebsrat*) resumed their meetings, which had been stopped by the Nazis. The Russians, totally unused to workers having a say in the operations of the business, thought

this not only ridiculous but also unnecessary. They were eventually convinced of the value of the arrangement.

The Russians were then surprised to find that the director's office did not have its own staircase but was actually on the same floor as the other offices. They also expected that the managing directors would receive preferential food in a separate room of the canteen. (Everybody ate the same sparse food in the same dining room.) But after a few days, everything was back to normal and everybody, including the Russians, shared the same food in the same room.

Working with the Russians was generally difficult, but there were some positives. That many Russian officers could speak German and some of the management could converse in Russian often made all the difference. No female employees in the factory were ever bothered and the Russian soldiers generally behaved well. One problem, however, surfaced repeatedly: when the Russian soldiers found anything like alcohol, mostly lacquer thinners or other solvents, they drank it, despite warnings, with occasionally fatal consequences.

On May 29 the directors were bluntly told that on the next day the dismantling of the entire factory was to begin. Under the scrutiny of Russian soldiers a group of 100 mostly technically experienced personnel began dismantling the factory.

Dismantling ordered at Friedenau

Over at Friedenau, on Monday 7 May, all women and children had been ordered to leave the compound immediately. On 10 May some Russian generals with their technically trained staff came and demanded to be shown the entire facility. They were particularly interested in the rangefinder assembly. In the end, they asked for a detailed plan of the plant, with exact indication of the location and number of every machine tool, to be ready by the next day.

Three officers came, were given the plans, verified them carefully and took their leave with exaggerated courtesy. By Saturday 12 May cleaning up was practically finished and production could have been resumed if only elec-



Two views of the work in progress to restore the workshops to the condition necessary to resume operations.

tricity had been available. But on the evening of Monday 14 May Russian soldiers occupied the factory and all German staff were asked to leave. Moscow had decided that the factory should be dismantled, the job to begin on 30 May.

...and begins at Zehlendorf

At the Zehlendorf plant, all machine tools, even those heavily scorched by the fire, were supposed to be packed. The workers had to choose whether to dismantle the machines conscientiously and orderly for fear of Russian reprisals, or to hide as much as possible for future use. In childish delight, the Russian soldiers delegated to help attacked the

machinery helter-skelter and created a hopeless chaos. The Russian commandant soon ordered their removal, so that systematic dismantling by the German workers could begin. All blank surfaces had to be oiled and greased and the machines painted in protective blue or grey and marked with red numbers. The wooden crates had to be waterproof, the Russians providing the wood.

Some of the Russian soldiers found a store of mercury and tried to collect it one large glass container, but they got into trouble when the glass broke when only half full and spilt its contents on the floor.

All forms of alcohol were in great demand, be it denatured spirit, lacquer



The works at Zehlendorf (left) and Friedenau (right) after reconstruction was completed after the War.

thinner, or similar substances. Yet despite all warnings the Russians drank it all, inexplicably without any apparent ill effects.

The large crane in the main hall was damaged and could no longer be used. Therefore, all the heavy crates with the machines had to be transported from the various floors and the basement in the elevator, which was not designed for such loads. The Germans were afraid that it would fail and they would be accused of sabotage. But, luckily, it held and worked without incidents, except when a Russian soldier stuck his head through a broken window looking into the elevator shaft at the very moment when the heavily laden cage descended. He was cleanly decapitated. The Russian officer who inspected the scene of the accident almost suffered the same fate when he also looked down the elevator shaft until a German pulled him back at the last moment. That man was thanked with a box of cigarettes.

The valuable teletype machine was supposed to be sent to Russia as a sample, but the Russian "experts" threw it down the stairs where it shattered. Nevertheless, it was also packed up for shipment.

An unexploded bomb was found in the materials store. The Russians did not dare to go near it, so it happened that some valuable metal shears were spared.

One day the commandant required a demonstration of the silverplating plant. Language problems made this difficult and it was not dismantled. It turned out that the Russians were really interested in alcohol, so after a simple claim that all the liquids were "chemicals" they lost interest. This way much was saved for future use.

The technical drawings, all confiscated, were the greatest loss, although they had survived the military action unscathed in a bunker. Russians demanded all technical information, specifically on military products. They were told that all design work had been done at the Carl Zeiss Jena and the Zeiss Ikon Dresden works, and that the Goerz works only received working drawings. Their own construction work was limited to jigs and testing equipment. The Russians seemed to agree to leave at least the drawings for civilian products, but a later check of the bunker showed that it had been emptied. Even blank paper and technical books and atlases had been removed.

The last pay checks had been handed out several weeks earlier. Now, new wage and salary lists were been made up and the hours worked calculated. Before the capitulation a lot of money had been collected from the bank and stored safely in a safe in a bomb-proof cellar. Some safes had already been cut open by the Russians who found only files. But providentially the safe with the money had been overlooked because, without electricity, the cellar was totally dark. After protracted negotiations the Russians finally allowed the safe to be opened and the money retrieved, all RM 260,000. The director and the manager of the personnel department sneaked the money home shortly before curfew and hid it in various places.

On the next day a Russian major demanded most of the money back, claiming that it was not all needed for the wages. Eventually it appeared that he had no real authority, and could not provide any papers, and, he finally gave up. The wages and salaries were then paid out accurately and in good order.

Just before the end of the war the Dresden factory had sent several cameras — prototypes, samples, construction models, and cross-sections — to

Berlin. The Russian colonel in charge of the dismantling distributed the cameras among the officers and the sectioned models to the soldiers. Some cameras had been overlooked and about a dozen were saved.

When the Russians learned that the Americans would soon move into their sector they urged the workers and soldiers to speed up. On the very last day, Wednesday 27 June, a few German workers had been asked to come to the factory to finish some last-minute jobs. They found that the Russians were all drunk. By Monday the Americans arrived and all employees could go unhindered to their workplaces. The Russians had disappeared, but not without taking with them a typewriter that had been hidden in the ladies' washroom and was intended to be useful during the coming reconstruction.

Thus the dismantling of the Goerz Works in Zehlendorf was concluded and a new chapter in the Zeiss Ikon history could begin.

Dismantling at Friedenau

The date for dismantling the Friedenau Works was set for 30 May. Ninety employees arrived in the morning for work, and a Russian captain toured the factory to ensure that all was exactly as at the time of occupation. However, in the meantime all desks and cabinets had been plundered and the entire meat store of the canteen had been stolen.

All the vices, tools and gauges had to be carefully greased and wrapped in paper. By the next day more people were needed, and the Russian captain requested 100 more from the labour department. Only 50 arrived, people taken at random off the street, including some sick ones on their way to the doctor.

On 1 June all crates had to be reopened as the Russians did not deem the tools greased enough. By 3 June packing of the machine tools was in full swing; workbenches, gear-cutting, grinding and optics machines were removed. An electrical cable was reinstalled so that the elevators could be used.

On 4 June an engineer tried to dis-

mantle the refrigeration unit. The Russians were impatient, made accusations of willful delay and threatened severe punishment. To prove his point one Russian colonel tried with eight men to move a heavy machine onto a truck. After struggling for two hours the Russians silently walked away having moved the machine just five meters!

The general came back and demanded that the boiler house be removed. The job appeared impossible because it would have needed expert staff, could not be accomplished in the eight days given, and the boiler was outdated anyway, dating from 1900–05.

By 7 June most of the smaller stuff was gone, including the crates with the tools and gauges. The Russians realized that the deadline could not be met, and set a new deadline of 15 June. During the next week the larger machine tools were readied for crating. The entire T-coating equipment was crated as a whole, but it is unlikely that the delicate glass tubes survived transporting. Lastly the machinery of the elevator was removed. All but 35 employees were dismissed.

On 16 June the deadline was moved back yet again, to 25 June. The general came every third day and still insisted that the boilerhouse be dismantled. This time he brought an engineer from a boiler company and they managed indeed to remove all three boilers by 25 June.

The whole process of emptying out the Friedenau plant was finished on 26 June. The list of machines taken included 70 lathes, 51 milling machines, 32 grinding machines, 31 gear-cutting machines, and 31 die-making machines.

Arrival of the Americans

By order of the Americans West Berlin industry was to restart immediately. On 5 July the first question from the American officer in charge of supplies for the American occupation force in West Berlin was: "Can you manufacture Ikoflex cameras?" The answer was "Of course, at once, as soon as we have the necessary machines and tools." An Ikoflex that had been presented to an employee on the occasion of his 25th anniversary served as a model, but for

production to start, machines would have to be brought from the Stuttgart plant. Die-casting moulds for the Ikoflex cameras were thought to be at the Weissenseer Foundry in the Russian sector of Berlin. On 30 July, with American support, a German contingent went to Weissensee. Despite a thorough search, the items could not be found. A foreman whispered to the Germans that they had been relocated to Lausitz during the war, and they were later fetched from there. So it was that in time, and not without difficulty, all necessary equipment was obtained and production began again in Berlin.

The Russians had confiscated the factories' entire vehicle fleet, except for a "Tempo" three-wheeler at the Friedenau plant. This small truck was totally insufficient for the work that had to be done, but there were plenty of abandoned vehicles lying around, from heavy tanks to simple VWs. The former were not much in demand, but a VW in reasonable condition served well until 1949. Other vehicles followed, including their first postwar car, a Mercedes 170V purchased in 1949.

The company's two locomotives had left the Zehlendorf factory and were taken into the Russian sector. The manager of the Goerz railway worried about his charges and felt responsible for their return, so about four months later he went to a railway repair depot in Rummelsberg where he found the Goerz locomotives. The next day they were put in order, supplied with water and coal, and driven to Zehlendorf, back in the American sector.

Since the 1930s the Goerz Works had prospered. By 1932 Zeiss Ikon employed 670 workers. By the beginning of the war, this number had increased to 2600 and the factory had been completely modernized.

Thirteen years later the two rebuilt factories in Zehlendorf and Friedenau once again employed 2000 people.

We thank Fritz Schulze for translating the original material, and Larry Gubas for providing the illustrations. □

The rare Tengoflex: A mirror reflex camera — or just a simple box camera?

Bernd K. Otto, Frankfurt am Main, Germany

*Available only in neutral Sweden during
World War II, this camera did not exactly live up to
its description in the advertisements.*

This “reflex camera” was presented in 1944, yet a historian of Zeiss Ikon with access only to their German, English or French publications would never know that it existed. However, a look through the January 1944 issue of the Swedish photography magazine *Foto* will lead the reader to an advertisement for the Zeiss Svenska Aktiebolag, Stockholm. (By the way, the editor-in-chief and publisher responsible at that time was Lennart Bernadotte. He was known in Germany as a wildlife photographer, flower grower and also as owner of Mainau Island in Lake Constance on Germany’s southern border with Switzerland and Austria.) The new Tengoflex was offered at a price of 73 Swedish kronor in a whole-page advertisement, together with accompanying editorial text. Just one month later the Swedish Zeiss Ikon subsidiary reran the Tengoflex advertisement, this time with an increased price of 85 kronor (figure 1). The Swedish text tells us why this camera was presented in Sweden of all places and nowhere else. Here is a translation:

“As we know, the closed borders are an extreme hindrance to the import of cameras. It is therefore all the more

gratifying to be able to offer something innovative.

The new reflex camera from Zeiss Ikon is called the Tengoflex. It is a stylish construction in guaranteed peace-time quality at a popular price. 85 kronor including the ever-ready case. Request a demonstration at your photo store.”

Zeiss Svenska Aktiebolag – Stockholm

Sweden and Switzerland were two of the few countries that still had neutral contact with Germany at that time. The reasoning behind the delivery of the Tengoflex to Sweden was of course to acquire foreign currency. The advertisement in *Foto* magazine was placed up until March 1944. Further evidence can be found in both the extremely elusive company brochures with the name *Tusen och ett motiv* (A Thousand and One Subjects; see figure 2). Here the Zeiss Svenska Aktiebolag presented their new model in the May 1944 issue and in April 1945, in what must be one of the last publications of all, just before the end of the Second World War. The Tengoflex is not included in comparable brochures of that time that were distributed in Switzerland. The production fig-

This article was first published in the II/2011 issue of *Photodeal*, in German. Trevor Richards made the English translation from which this version was prepared, and it appears here by permission of the author.

ures for this unusual camera exported to Sweden can no longer be determined. There are very few in collections worldwide.

Zeiss Ikon camera names

If one focuses on the camera production of the former Zeiss Ikon corporation, two aspects of their wide product range attract our attention.

Firstly, they continually, throughout the entire production period, gave a new camera model a name that had already been used. This carelessness is all the more surprising when one considers that they were often giving the same name to cameras of a totally different design. Models of the Contaflex, Nettel and Tenax series come to mind. The Super Nettel III was actually renamed as the Nettax shortly before presentation of the brochure.



The Tengor box camera (on the left) and the Tengoflex (on the right). Zeiss advertised the Tengoflex in the Swedish magazine *Foto* (center) as a mirror reflex camera, but you can decide whether that is a fair description. Figure 1

Secondly, one keeps discovering absolute exceptions among the 220 models, some even manufactured by the predecessor companies, with no parallels in construction before or since. I have already reported in detail on the cute little Colibri (*PhotoDeal I/07*), the plastic Ikonette (*PhotoDeal II/07*) and Zeiss Ikon's only camera in a bakelite shell: the Simplex (*PhotoDeal III/10*). The rarest of these exotic Zeiss Ikon cameras is however without a doubt the Tengoflex.

Collectors of photographica who have not delved so deeply into the terminology of camera names sometimes mistakenly refer to this rare camera as the "Tengorflex." But the Zeiss Ikon company did not want to add the "r" to the Tengoflex, their last prewar product, although there was a distinct connection

to the popular Tengor box camera. Whether Tingo or Tenger, the third syllable "flex" was added to the camera name.

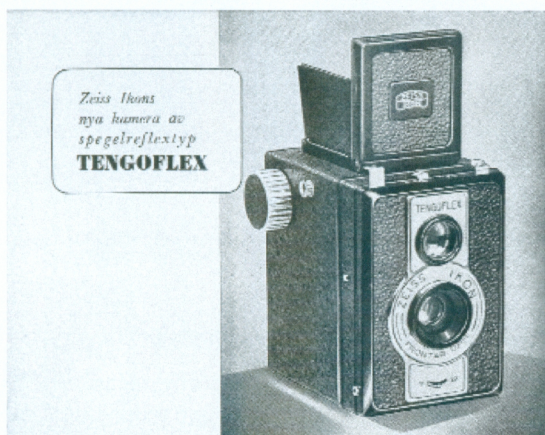
"-flex" for reflexes only?

Up until that time model designations with the final syllable "-flex" had usually been used only for genuine single- or twin-lens reflex cameras. We also find interesting evidence of the use of the same name for three different types of construction with the twin-lens Contaflex 860/24 and the SLR Contaflexes from the 861/24 model to the Contaflex with the Kodapak cassette (10.1100). Nevertheless they were all reflex cameras. The Ernoflex, the Künstler-Klappreflex (the Artist model with hinged cover), the Miroflex and the various Ikoflex models also belong in

this category. So which type was the rare Tengoflex?

Box cameras

I have already mentioned its similarity to the Tengor box camera series (see figure 3). These box cameras, developed by the Zeiss predecessor company C.P. Goerz of Berlin in 1923, were quite successful for a long time. The 500,000th box camera left the factory as early as 22 March 1930. It later reached sales in the millions. Goerz started making them in the 6×9 and 6.5×11 cm formats. After the merger, Zeiss extended the range to 5×7.5, 3×4 and 4.5×6 cm. On the other hand Zeiss Ikon only delivered the film size 6×6 for a short time from November 1926 to March 1927 for the box-camera series Film K, introduced by the company Heinrich Ernemann AG. Users knew



Zeiss Ikon
nya kameror av
spegelreflex typ
TENGOFLEX

Tengoflex 6x6 — en trevlig nyhet:

Gedigen — Inbyggd brilljansökare med hopfällbart sökarskåp — Slutare för ögonblick ($\frac{1}{25}$ sekund) och T — Toppsvtryck — Spär mot dubbel exponering med signal-skiva — Säkring mot oavsiktlig exponering — Olika bländare — Inbyggd försäkring för närbildsfotografering mellan 3—1 m — Nippel för utlöslare — Axelrem.

Fotografieringen sker synnerligen bekvämt med Tengoflex tack vare den stora ljusa brilljansökaren, som är idealisk för motivval. Sökarvisan återger bilden plastisk och strålende ljus i nästan samma storlek, som man ser den för den stora kopia av bilden.

Tengoflex

6x6 cm 102x11,8x7,6 cm/700 g Nr 02/10 Kr 731 —
Väskor och filter & öv. 15—16.



Zeiss Ikon
Box-kameror
BOX-TENGOR
och **ERA-BOX**

Här ha vi Box-Tengor:

Solid — Enkel skottel Slutare för ögonblick ($\frac{1}{25}$ sekund) och tid — Nippel för utlöslare.
För Box-Tengor: Inbyggda försäkringar för närbild — Olika bländare — Säkring mot oavsiktlig exponering — Box-Tengor II har dessutom säkring mot dubbel exponering.

Baby-Box

3x4 cm 9x6x5,5 cm/210 g Nr 04/10 ... Kr 272—

Box-Tengor I

6x9 cm 11,9x10,5x7,4 cm/570 g Nr 04/2 ... Kr 38:25

Box-Tengor II

6x9 cm 11,6x10,5x7,6 cm/570 g Nr 03/2 ... Kr 48:—

Era-Box

utgående av Box-Tengor I
6x9 cm 11,5x10,5x7,4 cm/525 g Nr 02/2 ... Kr 35:25

Väskor, filter och tillbehör å sid. 15—16.

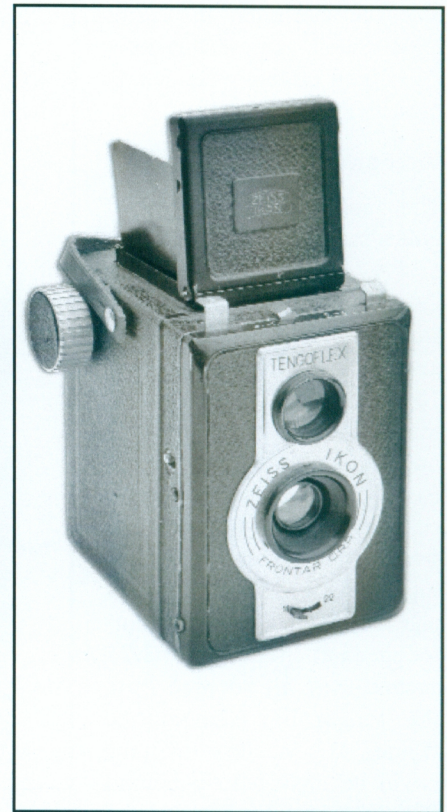
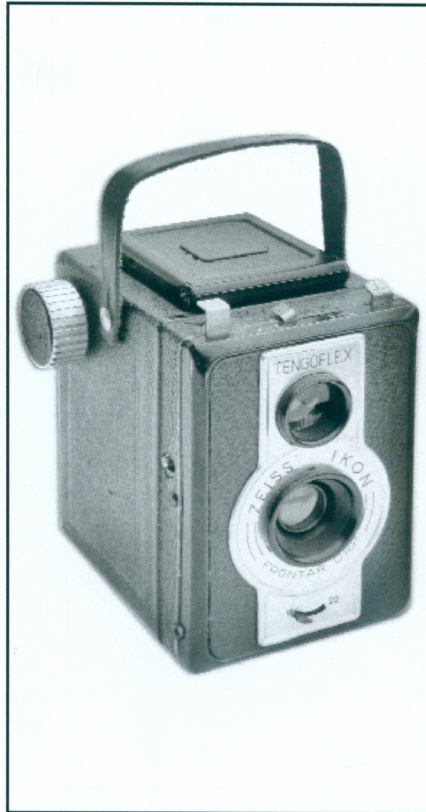
The two Swedish-language versions of "A thousand and one subjects" from May 1944 and April 1945, shown at the top, carry the double-page spread (shown below) illustrating the Tengoflex on the left and the Tengor II box camera on the right. The Tengoflex is clearly described here as a "spegelreflex typ," that is, a mirror reflex.

Figure 2

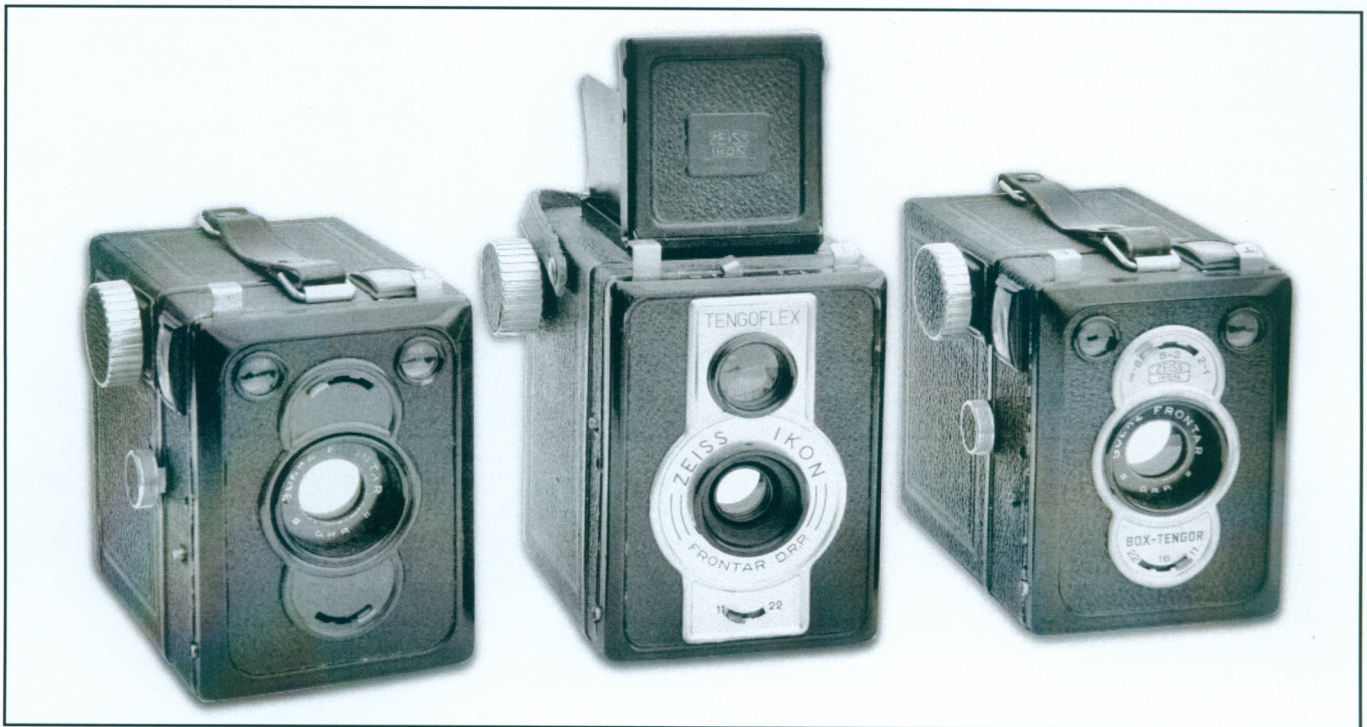
the 6×6 format primarily from the twin-lens reflex Ikonflex. And there is no doubt that Zeiss Ikon wanted to create, with this economically priced box camera, an esthetic proximity to the Ikonflex as opposed to the Tengor box camera. But a genuine twin-lens reflex camera for only 85 kronor just cannot be done.

Conflict with Rollei

For this reason we must assess the principle of the so-called “pseudo-reflex” in order to classify the Tengoflex. The original twin-lens camera principle was applied as early as 1891 in Dr Krügener’s Simplex (*PhotoDeal* III/07). The Voigtländer AG of Braunschweig (Brunswick) developed the brilliant finder around 1931 and immediately had serious problems with Franke & Heidecke, the 6×6 market leader of that time with the Rolleiflex. At Voigtländer they were planning to adopt an enlarged brilliant viewfinder for their reflex cameras to avoid Franke & Heidecke’s existing patent rights. The latter filed an action but in the end Voigtländer was allowed to manufacture the pseudo-reflex viewfinder. In turn Voigtländer



When the viewfinder cover is closed (as on the left) the Tengoflex is very reminiscent of the well-known Tengor box camera. The raised leather handle is original and is missing on almost all known examples. Figure 3



The Tengoflex in the center is here compared with two Tengor II box cameras. The one on the left has the design in black as it was first planned; at delivery the decision was made for a lighter, chrome front plate, as shown on the right. Figure 4

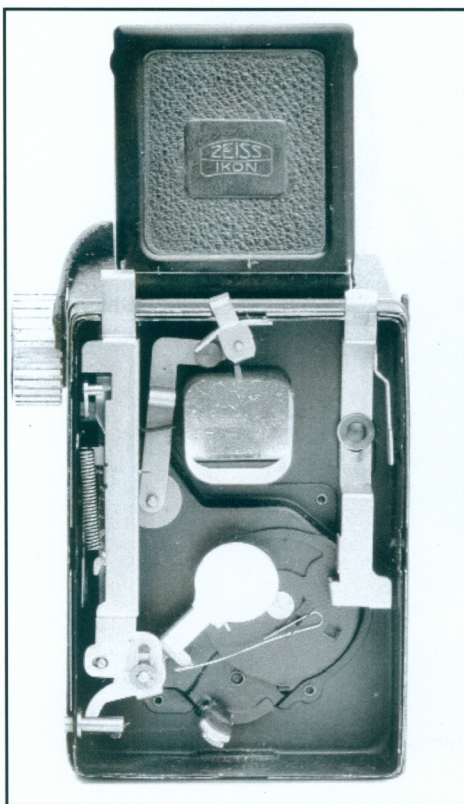
was not interested in taking legal action against this new Zeiss Ikon camera when it was presented in Sweden.

Vital statistics

The Tengoflex, weighing 700 grams and measuring $10.2 \times 11.8 \times 7.6$ cm, was clearly similar to the Tengor box camera, which was slightly lighter (570 grams) and measured $11.6 \times 10.5 \times 7.6$ cm. The square format limited the camera to only one viewfinder, rather than the two small finders on the box cameras. The box shape, the front panel design, the winding knob, the shutter release and the lever setting the shutter speed at either "T" or $1/25$ second were all adopted from the Tengor box camera. (See figure 4). A close-up lens could be swiveled up behind the main lens by means of a lever, thus reducing the fixed focus range from infinity–3 meters to 3–1 meters (figure 5). Figure 6 shows the photographer's view of the brilliant viewfinder.

The lens used was the reliable Frontar $f/11$, which had given good service for many years in the box camera. The aperture could be closed to $f/22$ in sunlight. In the 6×6 format the focal length of 8.5 cm gave a diagonal angle of 56° . The Tengoflex was of course equipped with double-exposure prevention and a closable film gate. A total of twelve shots could be taken on the well-known B II 8 roll film (120). The removable rear casing (figure 7) is kept in position by a lever above the film gate. With the mirror housing open it must have been easy to confuse this simple box camera with a twin-lens reflex camera.

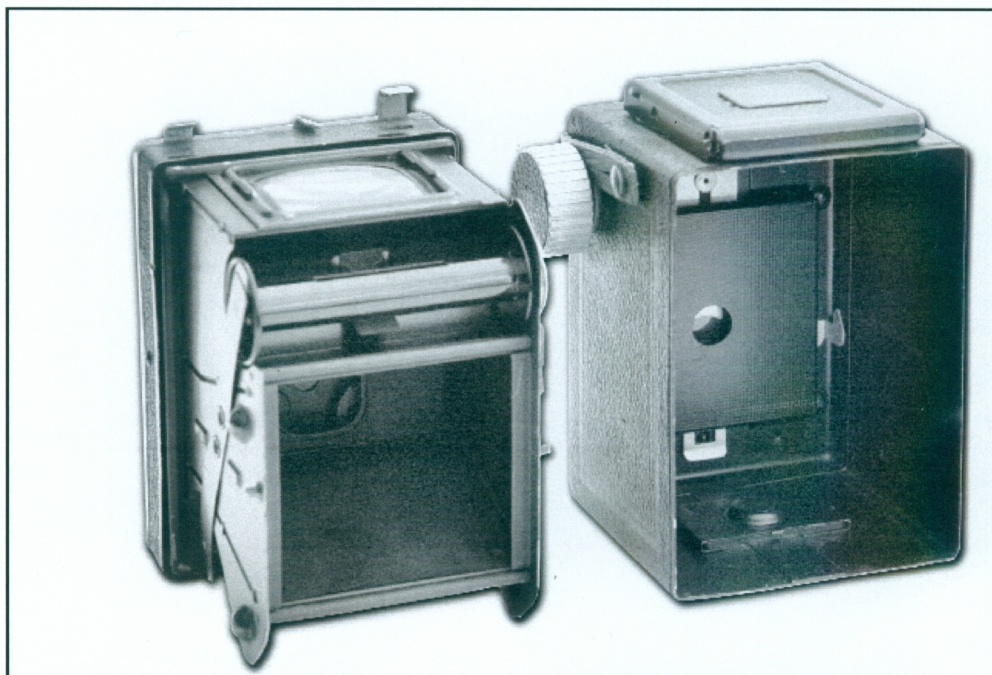
After all, at that time not many Swedes could have recognized the difference. ☐



With the front cover plate removed, the Tengoflex reveals a simple spring shutter mechanism derived from that of the Tengor box, and the close-up lens that could be swung into place. Figure 5



The photographer's view shows the 35×35 mm brilliant finder, the shutter release and settings located at the two front corners, and the close-up lever between them. Figure 6



This view of the dismantled Tengoflex shows on the left the main camera body with the brilliant finder at the top, the take-up spool in its chamber, and the 6×6 cm image window. The removable camera back, on the right, carries the viewfinder cover, the pressure plate, the red panchromatic window, and the film advance knob. Figure 7

The Contax I and its “pimple” versions – a confusing story

Stefan Baumgartner, Lund, Sweden

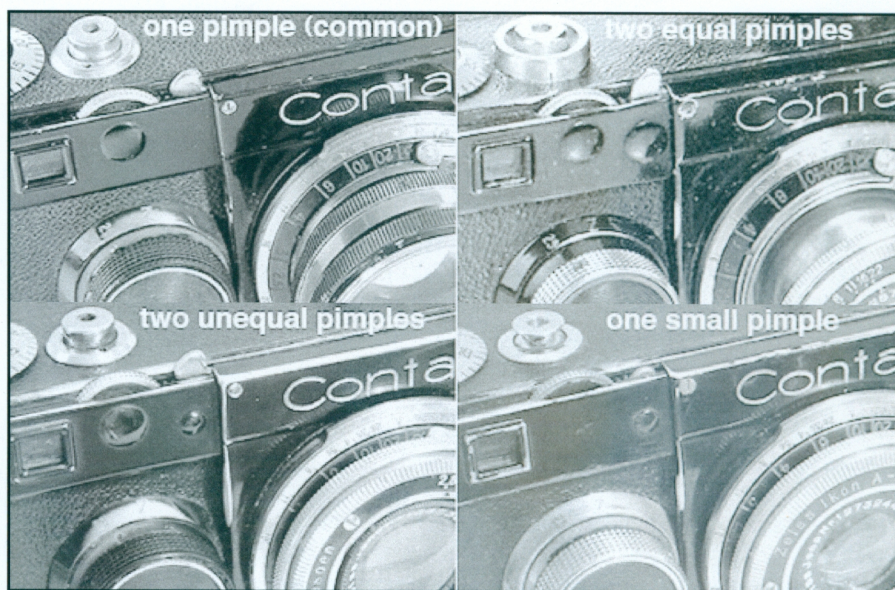
Some early Contax I cameras have these pimples on the front, but how many and why remains a mystery.

If you have ever seen early versions of the black Contax I, then you may have come across cameras that contain pimples on the front, just to the right of the rangefinder window. These Contax I cameras belong to the series made with the lowest speed of 1/25 s and Z, classified as versions 1 and 2 by Hans-Jürgen Kuć (*On the Trail of the Contax*, book 1).

The “most common” Contax I, which is already exceedingly rare among all Contax I, is shown in the upper left of figure 1. It shows a large pimple just at the place where the focusing wheel is centered, suggesting that it is needed to ensure that the wheel’s protruding pivoting mechanism is well protected. The sample camera shown here has serial number AU 80005 and carries an f/2.0 50 mm Sonnar with serial number 1416192.

Another “pimple” version with two equally large pimples is shown on the upper right of figure 1. Here, another large pimple was added to the right of the first one in the area where the infinity lever is located. This sample camera bears serial number AV 10162 and is shown here with an f/3.5 50 mm Tessar with serial number 1272287.

To make matters even more complicated, there is a third version with two unequally-sized pimples, shown at the bottom left of figure 1. The location of



Four different arrangements of “pimples” on Contax I cameras. They have either one or two, and the pimples may be of different sizes. Figure 1

these two pimples is the same as the second version. This version bears serial number AU 79373 and carries an f/2.8 50 mm Tessar with serial number 1345362.

To make the confusion complete, there is yet another version, the fourth, with a just a minor pimple on the right side, shown at the bottom right of figure 1. This version is by far the rarest one and I have seen only a couple of cameras of this type so far. The diameter of the pimple corresponds to the minor one of

the third version. This fourth version bears serial number AU 48860 P where a second serial number has been engraved over (see figure 2). A careful investigation under the microscope reveals that the over-engraved serial number corresponds to Y 35879, which tells us that the camera must have been returned to Zeiss Ikon for repair or modification where it ultimately received its second engraving. Although it is shown with a lens in figure 1, there was no lens associated with this camera at the time of



This fourth version Contax I (bottom right of figure 1) had its original serial number, AU 48860 P, subsequently re-engraved as Y 35878. Figure 2

acquisition that would have helped to unravel its mystery.

What can we deduce from these different versions? The most important data are the serial numbers of the bodies, which allow us to allocate the production period. Zeiss began to number the Contax I with (presumably) U 20001 – U 22000. This group was followed sequentially by other series:

AU 48501 – AU 50000,
U 54001 – U 55000,
AU 65001 – AU 66000,
AU 75001 – AU 81000,
AV 10001 – AV 11000 etc.

A detailed compilation of the production runs can be found in Kuć's *On the Trail of the Contax*, book 1, or in modified versions published in the Zeiss Ikon Collectors Group ZICG;

ZICG@yahooogroups.com assembled therein by Simon Worsley. If the camera serial numbers are compared, it follows that my 4th “pimple” version was made first, followed by the 3rd version, then the 1st version (the most common one), and finally the 2nd version.

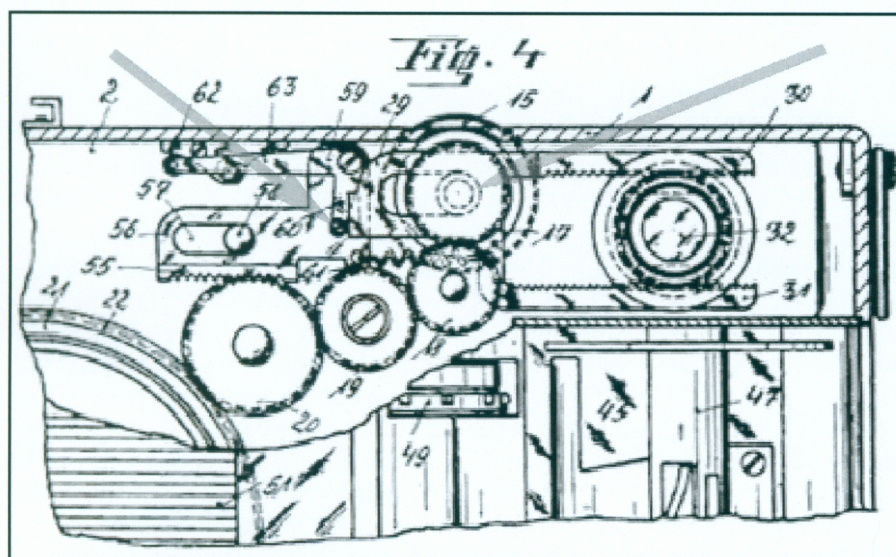
Having now received some hints about the production sequence, there is yet another burning question as to why

Zeiss made these pimples at all. As deduced from the fourth version with the small single pimple, and comparing it to the patent drawings of the Contax (figure 3), there is no immediate need for making such a protrusion, in particular for the pimple at the right-hand side (referring here to figure 1), as there is no wheel at all below this pimple, and that makes its purpose somewhat intriguing. A possible explanation for the difference between version 4 (absence of a large pimple plus presence of a small pimple) and the large pimples of versions 1–3 is that Zeiss designed the cover thinner, thereby saving about 1–2 mm, except at the location where the wheels are centered. Consequently, larger pimples are required for this particular location. Another explanation could have been that Zeiss thought that a large pimple looked somehow awesome, which could have accentuated the distance wheel — a unique feature compared to the Leica.

More data from the Barringer list

Regarding the sequence of the pimples and which type and combination appeared, there is a caveat: a camera data entry from Charles Barringer's database tells us that a Contax I with serial number AU 49307, which was produced slightly later than version 4, did not contain any pimple (at least it was not recorded as such). Moreover, two cameras of the earliest batch of Contax I with serial number AU 21569 and AU 21885 were recorded as “two pimples,” although it is not clear which configuration they had. This could mean that, initially, the first Contax I had two pimples, which then disappeared and reappeared again in the sequence of version 4, 3, 1 and 2 (figure 1, see above). These are the only three exceptions detected so far. Thus, it remains to note that the sequence of the four cameras presented here is in full agreement with the numbers and type of pimples associated with all other Contax I from the Barringer database.

I would be interested in learning of the existence of further versions. To this end, I can be reached at xatnoc@yahoo.com. □



From US Patent 2,040,050, issued 5 May 1936, this drawing shows the interior seen from the back of the Contax I. The two gray arrows point to the locations of the two pimples; one centered on the focus wheel, one near the “infinity” lever. Figure 3

The Tenax II — some interesting novelties

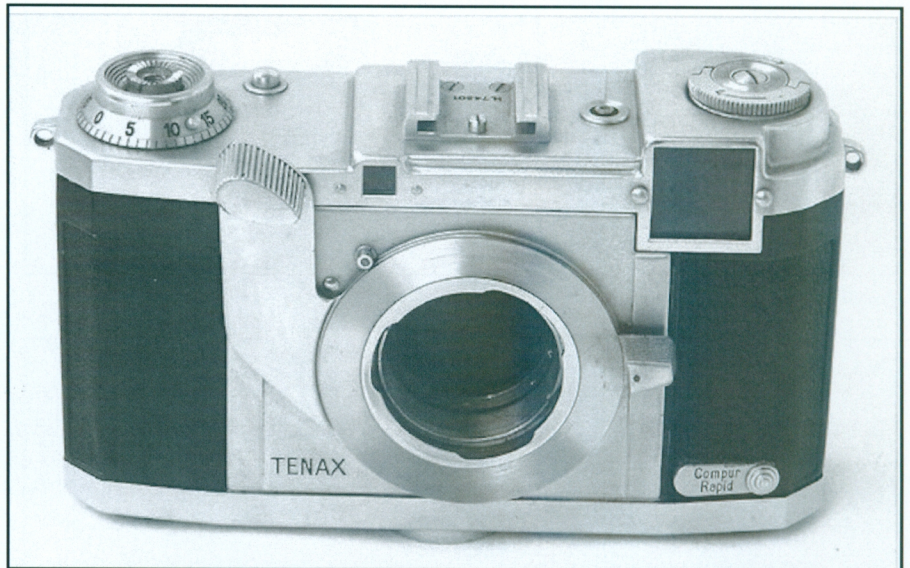
Lawrence J. Gubas, Las Vegas, Nevada

Hubert Nerwin's Tenax II has always been a favorite with me. Its design is unique, with an embedded Compur shutter, a film format of 24 x 24 mm, the fact that a 1938 leaf-shutter camera would have interchangeable lenses and that two of them were Ludwig Bertele's Sonnar's.

During this past summer I have been fortunate to receive the images associated with this article, all of which display some facts and issues that I had never seen before. I will begin with a simple picture of the camera without its lens to define what the production camera looked like (figure 1). It was superbly designed, and Hubert told me in 1980 that "every line of the technical drawings came from his pen." He was somewhat sad that the camera was discontinued in the fog of World War II but felt that it was a step forward in its design concepts.

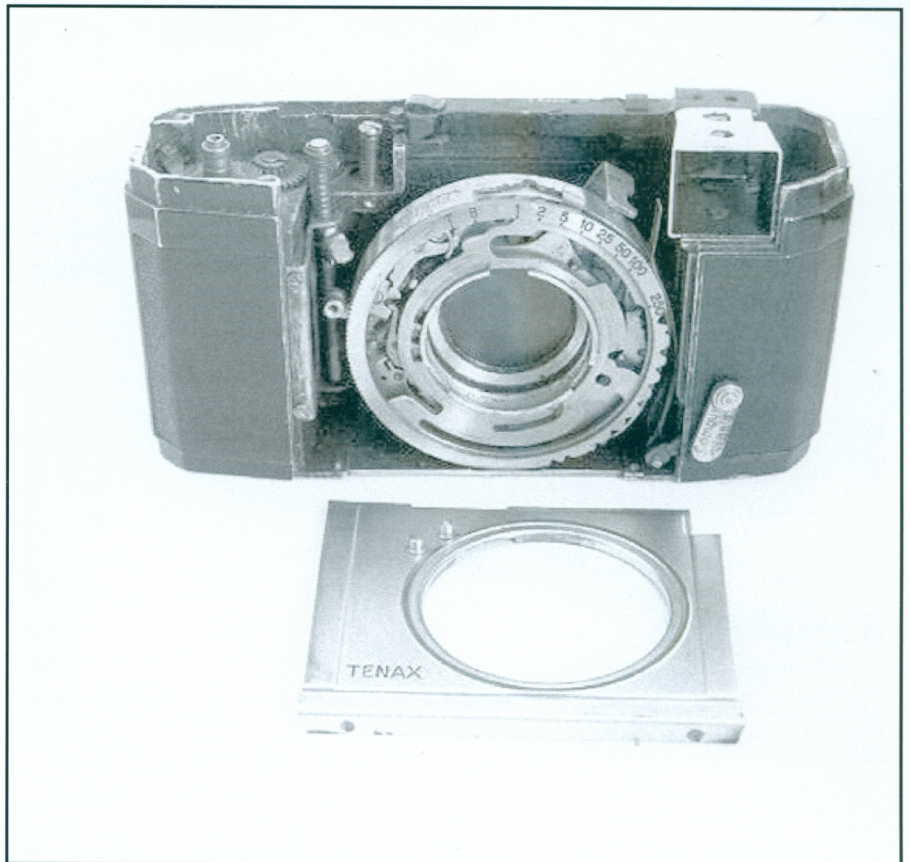
Next, I show in figure 2 the camera with its top front and plate removed to show how the Compur shutter was mounted inside the camera. It is deceptively simple and would be the model for all of the postwar cameras such as the Contaflex as well as a multitude of other non-SLR cameras of both Japanese and German designs. There is a short prism rangefinder placed well to the top rear of the camera which gives us an indication that it was considered to be a high quality instrument.

The next example, in figure 3, is a German Naval model of the camera but the advance lever is different from the standard version, extending well past the standard location of the bottom of the lever. I would describe the normal lever as ending at the 8:00 o'clock location on the mount as you view it, and in this example is now down to a 6:00 o'clock location, with a much longer structure to the lever. The really strange thing is that I had never seen this feature before the mid-summer of this year and now I have seen three such examples in the past few



The standard production model.

Figure 1



Partly disassembled, to show construction.

Figure 2



A Naval model with an unusual film-advance lever.

Figure 3



Possibly a prototype with thumb-operated film advance.

Figure 4



An X-ray model with strange Bestellnummer.

Figure 5

months. They all have the German Navy marking of M followed by a serial or contract number. All three examples were marked M with a 190 or a low 200 number following the mark on the top surface of the camera and another on the front surface of the advance lever. Why they are different (M201 vs. M206), I have no idea, but the same number on the lever has also been placed on the back surface of the interchangeable lens housing where the serial number of the lens is sometimes engraved. Since the cameras were all seen with their lenses, I am assuming that this alternate design was not to mount on another device, so I cannot make a good suggestion as to why this was done. The camera serial number is J 91162, which makes it among the last of the serial-number range for this camera. Simon Worsley would place this serial number in mid to late 1939, when production of this camera was about to be discontinued in favor of the manufacture of war material.

The next example, figure 4, shows the camera with neither of the two advance levers that have been shown so far. Instead, there is a thumb-like advance lever, below the film-exposure counter, that extends outside the body of the camera. This is unlike any other Zeiss Ikon camera of this period or even the forthcoming postwar era. It has the serial number J 88464 inside the camera, which would suggest it came from a batch just before the military versions discussed above. I suspect that it was a production camera that was taken out to be used as a prototype by Hubert Nerwin or one of his designers to check the feasibility of such a manufacturing process. Unfortunately, it was at the end of the era of civilian production at Zeiss Ikon in Dresden. I welcome comments or news of similar sightings.

Lastly, I show the X-Ray Tenax camera (figure 5), which is still in its shipping container. While this model of the camera has been known for many years, the picture shows a unique piece of information, the Bestellnummer of this camera, which does not appear on the body or in our Bestellnummer list compiled some years ago. Welcome to 6200/1. □

Back cover...Zeiss-related postage stamps

Zeiss-Historica member André Surmont, of Ypres in Belgium, sent us a selection from his collection of Zeiss-related postage stamps, mostly from the Deutsche Demokratische Republik, (DDR), or East Germany, plus one from the West. Some of them are shown on the back cover.

The first nine in this list are all from the Deutsche Demokratische Republik.

1. Celebrating 110 years since the formation of the Carl Zeiss firm in Jena in 1846, this 1956 stamp shows a sketch of the Carl Zeiss factory and offices. (The political and economic situation was not conducive for a celebration of the true centenary in 1946.)

2. In 1971 these stamps celebrated 125 years of the foundation of Carl Zeiss Jena. The illustrations show a Geomat astronomical telescope, a Zeiss planetarium projector, and a Mikroval microscope.

3. The portrait of Otto Schott on this 1984 stamp marks the centenary of the development of his borosilicate glass and its production in the Schott Glass Works, in Jena.

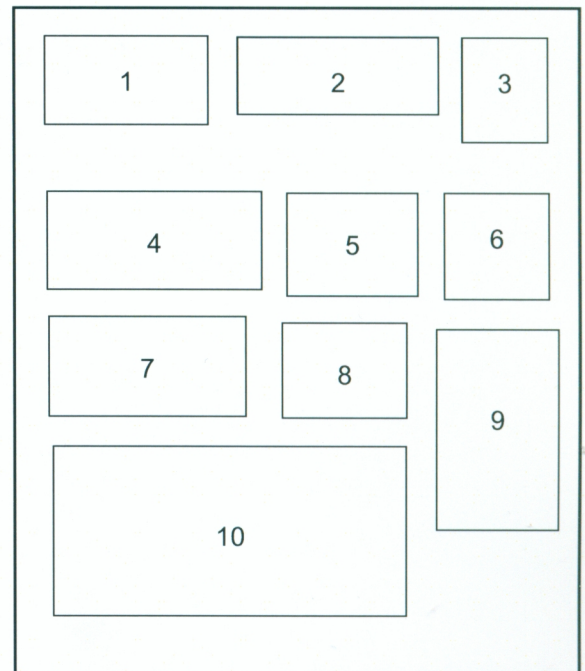
4. In 1989 these stamps celebrated 100 years of the Carl Zeiss Stiftung, or Foundation, by Ernst Abbe (pictured on the center panel) after Carl Zeiss's death in 1888. The other stamps show a Jenaval interferometer microscope and a "two-dimensional" measuring microscope.

5. This stamp was issued in conjunction with the Autumn 1955 Trade Fair in Leipzig. The design includes an Exakta camera and a microscope.

6. In 1966 the stamp for the Autumn 1965 Leipzig Trade Fair showed two Praktisix cameras, with and without the removable prism assembly.

7. Two Leipzig Trade Fairs, those of Autumn 1965 and Spring 1967, were illustrated by a microscope and a 2-meter astronomical telescope, respectively. Note that 1965 was the 800-year jubilee of the foundation of the city of Leipzig.

8. A "Universal measuring-camera," presumably for photogrammetry, marks the occasion of the Spring 1978 Leipzig Trade Fair.



9. Four microscopes from the Optical Museum in Jena appear on these 1980 stamps. They are (clockwise from top left) from Huntley in London, 1744; Magny in Paris, 1751; Zeiss in Jena, 1873, and Amici in Modena, in 1845.

10. From Oberkochen in West Germany, this is a first-day cover for the 1968 stamp honoring 100 years of scientific microscope construction in Jena by Ernst Abbe and Carl Zeiss. A lens diagram for a microscope objective and some calculations in Abbe's handwriting appear on the cover.

