

Not Microscopes

It was in September 2007 that my wife and I travelled to Germany with our neighbours Audrey and Doug. Audrey was of German descent, grew up on a farm in Ontario where the family still spoke German, but she was no longer fluent. She wanted to see the village from where her ancestors emigrated to Canada in the 19th century, a small little known village in Eastern Germany. Doug, on the other hand, was keen to see Germany, in particular the alpine region of Bavaria.

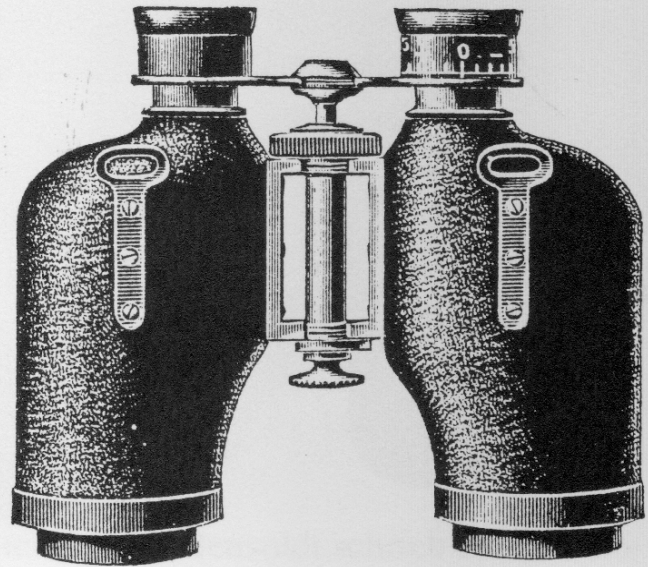
When we arrived at that particular village, nestled in a narrow valley among fields and woods, we were at first at a loss what to do next. But then I saw a farmer coming from a field and accosted him, telling him of our predicament. You are lucky, was his reply, I am the self-appointed local historian and I know exactly the house you are looking for! Audrey was delighted, but the rest of the story is not relevant to my topic.

It was later on, in the world famous small town of Oberammergau in Bavaria, where I found the object of this story. Oberammergau, apart from the Passion Plays which are performed every 10 years, is renowned for its woodcarvings. Almost every house has a woodcarving workshop, even our B & B. Alas, the products of our host were most beautiful but also very expensive. The shop windows in town were cramped with the most extraordinary examples of the local talents, mostly scale copies of antique religious figures from the many Baroque churches in Southern Germany, for example Madonnas. But a considerable quantity of carvings were offered by companies providing mass products, i.e. machine-copied figures of patented originals at "tourist prices". It was at one of these stores that I found my *Hunter*. It attracted my attention because he not only held a gun with a riflescope but had slung around his neck a pair of binoculars. The latter were undoubtedly modelled after the traditional HENSOLDT Dialyt hunting glass. The riflescope was not defined in any way. Still, the optics hobbyist in me made me enter the store and acquire the affordable machine-copied figure. The hunter or forester has the traditional Bavarian garb and is accompanied by his typical loyal dachshund. The figure, not quite 20cm tall, now decorates the mantelpiece of the fireplace in our living room.



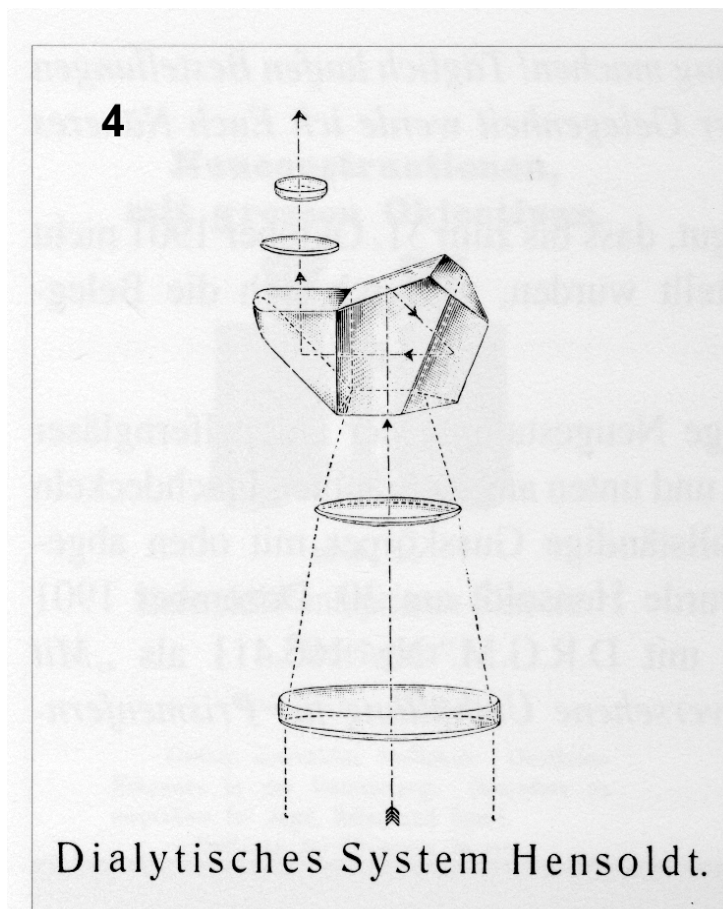
To begin with the binocular. As I said before, the carved binocular looks very much like the very popular Hensoldt Dialyt. Karl Moritz HENSOLDT in Wetzlar started manufacturing telescopes and binoculars at the turn of the century. At the world exhibition in Paris in 1900 Hensoldt won a silver medal for his *Pentaprism binocular Model III*, the first with roof prisms and slender shape. In 1930 Hensoldt listed the *Dialyt 6x42 Jagdglas (hunter binocular)* which became very popular among the hunters . It featured a field of view of 142m at 1000m. Its modern iteration is the Zeiss Dialyt 7x42 B/GA (1994) with a field of view of 150 at 1000m. In 1920 Zeiss became majority shareholder of Hensoldt and as of 1922 the factory operated under the name of M. Hensoldt & Söhne Optische Werke A.G. Since 2006 the name Hensoldt disappeared, the factory is now part of the Zeiss Group: the Carl Zeiss Sportsoptics G.m.b.H. To my knowledge the entire programme of Zeiss high-end binoculars and riflescopes are presently manufactured at the HENSOLDT plant in Wetzlar.

Abbildung in der „Deutschen Jäger-Zeitung, Organ für Jagd, Schießwesen, Fischerei, Zucht und Dressur von Jagdhunden“ am Sonntag, dem 9. November 1902: Hensoldts Dialytisches Pentaprisma-Binocle von 1902 mit abgerundeten Gehäuse-Schultern nach D.R.G.M. Nr. 166.411 vom 11. Dezember 1901.



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From a Hunting Magazine 1902: the HENSOLT *Dialytic Pentaprism Binocle* with rounded shoulders (Patent D.R.G.M. Nr. 166.411 dated Dec. 11, 1901)



Dialytisches System Hensoldt.

The dialytic optical system with the roof pentaprism by Hensoldt.

7 x 42 B/GA ClassiC

Compact binoculars for stalking game, with outstanding optical properties. Wide-angle eyepieces, also offering eyeglass-wearers a full, extra-wide field of view.

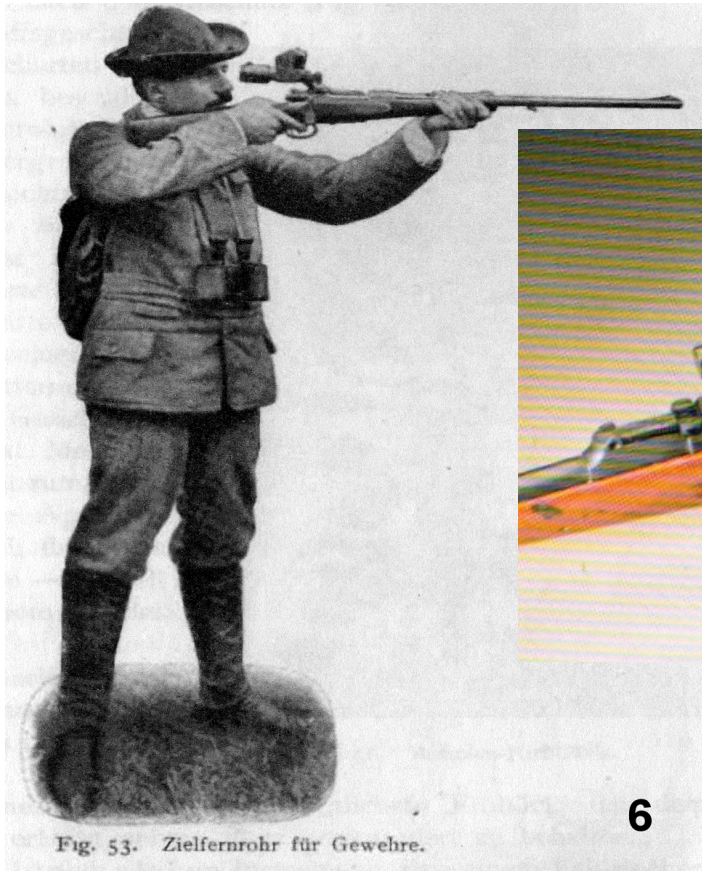
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Width at PD of 65 mm	125 mm 4.9 ins
Height with eyecups extended	190 mm 7.5 ins
Weight	800 g 28.2 oz
Field of view at 1000 m at 1000 yds	Ww 150 m 450 ft
Shortest focusing distance	3.5 m 11.7 ft
Twilight factor	17.1
Exit pupil	6 mm
Objective lens diameter	42 mm
Magnification	7x

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The modern iteration by Carl Zeiss incorporates a different roof prism arrangement yielding a straighter body shape and differing much from the traditional porro-prism binoculars. This model, also called: DIALYT, is rubber armoured.



Carl Zeiss Jena hunting scope 1904, shown with a contemporary porroprism binocular.

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Carl Zeiss in Jena began its production of binoculars with Porro prisms in 1893, riflescopes were added around 1904. The first models still featured prisms, they soon were improved to the straight telescope type.

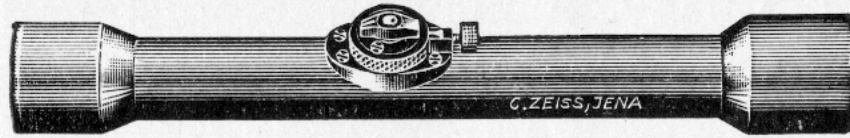


Fig. 90. "Zielvier" Telescope sight.
Magnification $\times 4$, field of view 10·8 yards at 100 yards distance; light-transmitting capacity 59·3, length 270 mm. (10½ inch.); weight 12¼ ounces.

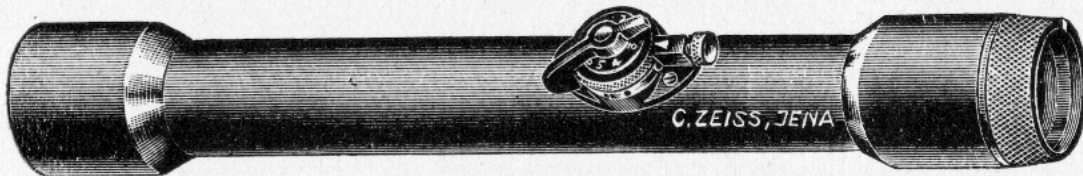


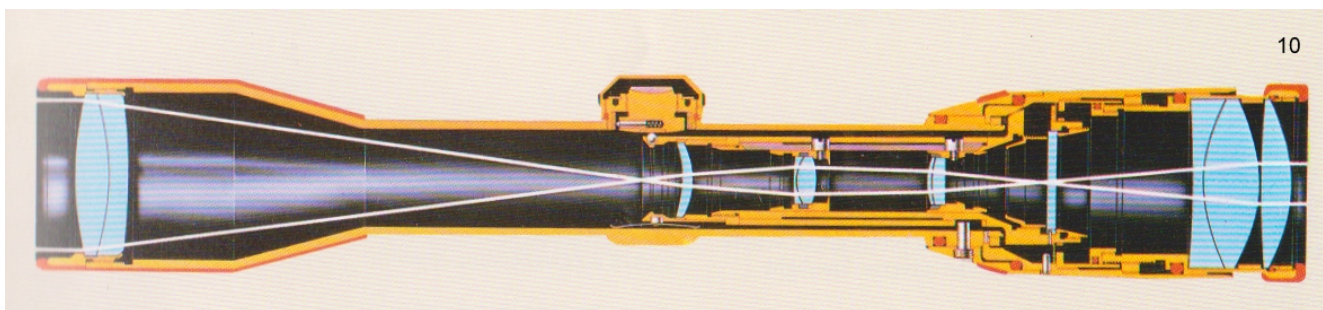
Fig. 91. The "Zielmultar" Telescope sight.
Magnifying $\times 1$ to 6, length 335 mm. (13¼ inch.); weight 1¾ lbs. An all-round telescope sight for heavy sporting guns.

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Zeiss riflescopes as they were offered in 1930



Modern Carl Zeiss DIATAL-C 4x32 hunting scope with adjustment for windage and elevation and eye relief of 90mm, field of view 10m at 100m (1982)



Cross section of a Zeiss Diatal riflescope presenting the optical system (eyepiece at right).

This is how a serendipitous discovery in a Bavarian woodcarver's shop in Oberammergau led me to write a short dissertation on historical and modern optical systems of binoculars and riflescopes. Hunting is, of course, a common legal (and illegal!) pastime in the mountainous Alpen region, mostly aimed at deer or mountain goats (gems/chamois). But wealthy people in the rest of Germany often own large wooded properties where they can hunt. More and more nature lovers nowadays "hunt" with their camera, a field where Zeiss also features. But that warrants another story.

Note: This article is not meant to be an advertisement for Zeiss products, it just so happens that I know these products best and all my relevant literature refers to them.

References/Credits:

- Hensoldt: Karsten Porezag, Hensoldt I, Familien und Gründungsgeschichte bis 1903, ISBN 3-9807950-0-4 (Figs. 3 and 4)
 Zeiss Jena: Felix Auerbach, Das Zeiss Werk, 3rd edition, 1907 (Fig. 6)
 Felix Auerbach, The Zeiss Works Engl. edition 1926 (Fig. 8)
 Zeiss Inc. NY. Brochure 73004 1982 (Figs. 7, 9 and 10)
 Carl Zeiss Oberkochen: Brochure 52-185-e 1994 (Fig. 5)

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