

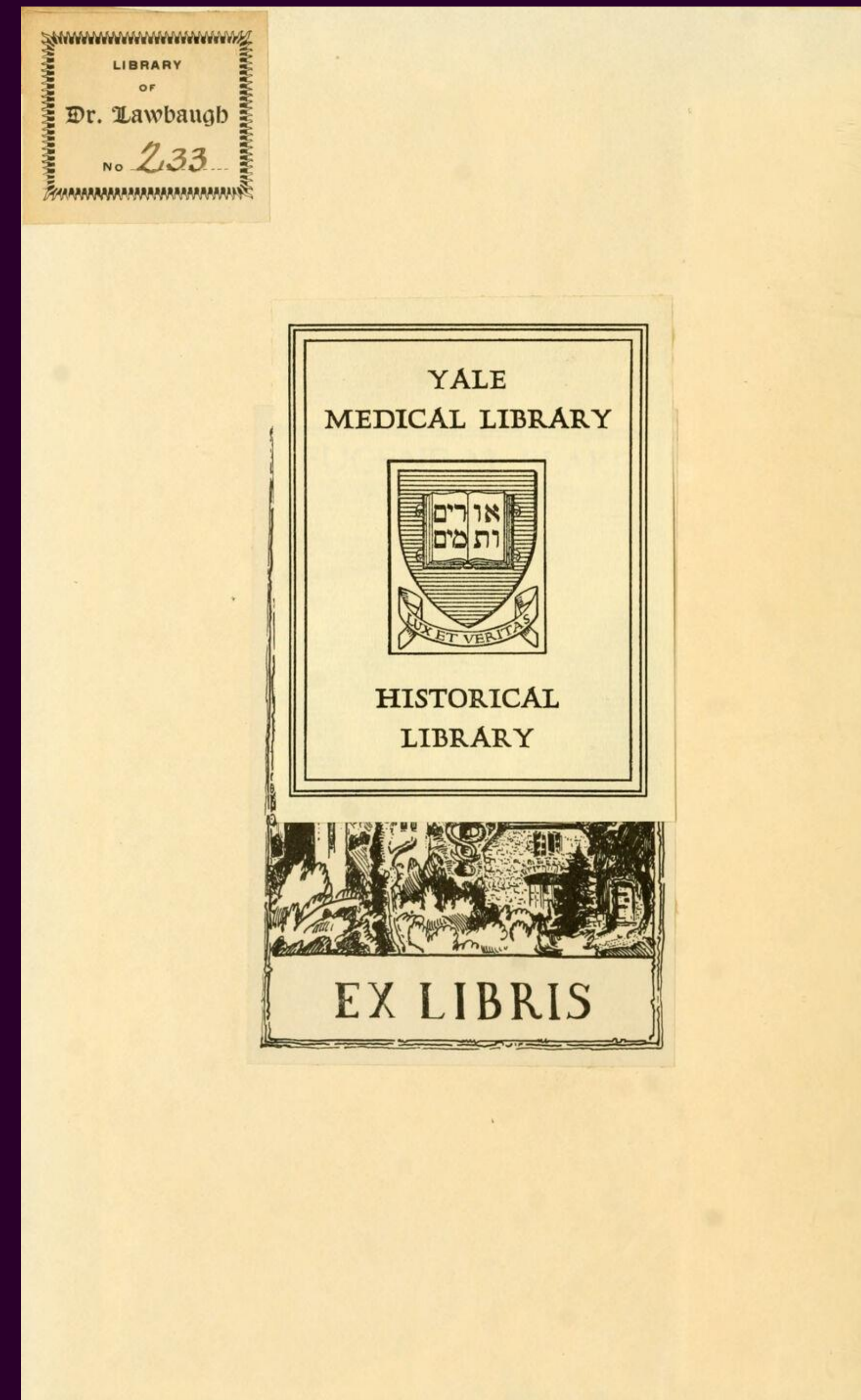
FERDINAND RITTER VON ARLT
A Reformer of Medicine and his work 'Clinical Studies on Diseases of the Eye'

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THERE IS NO ANY FINANCIAL
INTEREST FROM THE AUTHORS

HIS LIFE AND WORK

Ferdinand Arlt was born on April 18th, 1812 in Obergraupen, in Erz Mountains of northern Bohemia. In his autobiography he refers to the hard work he was put while still in his childhood, the meager diet he ate, and the severe cold he suffered during the winter months. He had hard adolescent years and managed to keep alive with the free meals from charitable persons and by helping younger pupils and was paid a small fee.

From the experiences of his hard youth he had acquired the qualities that served him well in his professional life: untiring industry, a sense of duty and a deep sympathy for the misery and poor. “ Primum medici est humanitas’ became his guiding principle and as a the basis for friendships with the practitioner Arlt , Donders and the genius Albrecht von Graefe.

He went against his family’s wish for him to become a clergyman, Arlt decided to study medicine in Prague and, even in this, experienced considerable hardship.

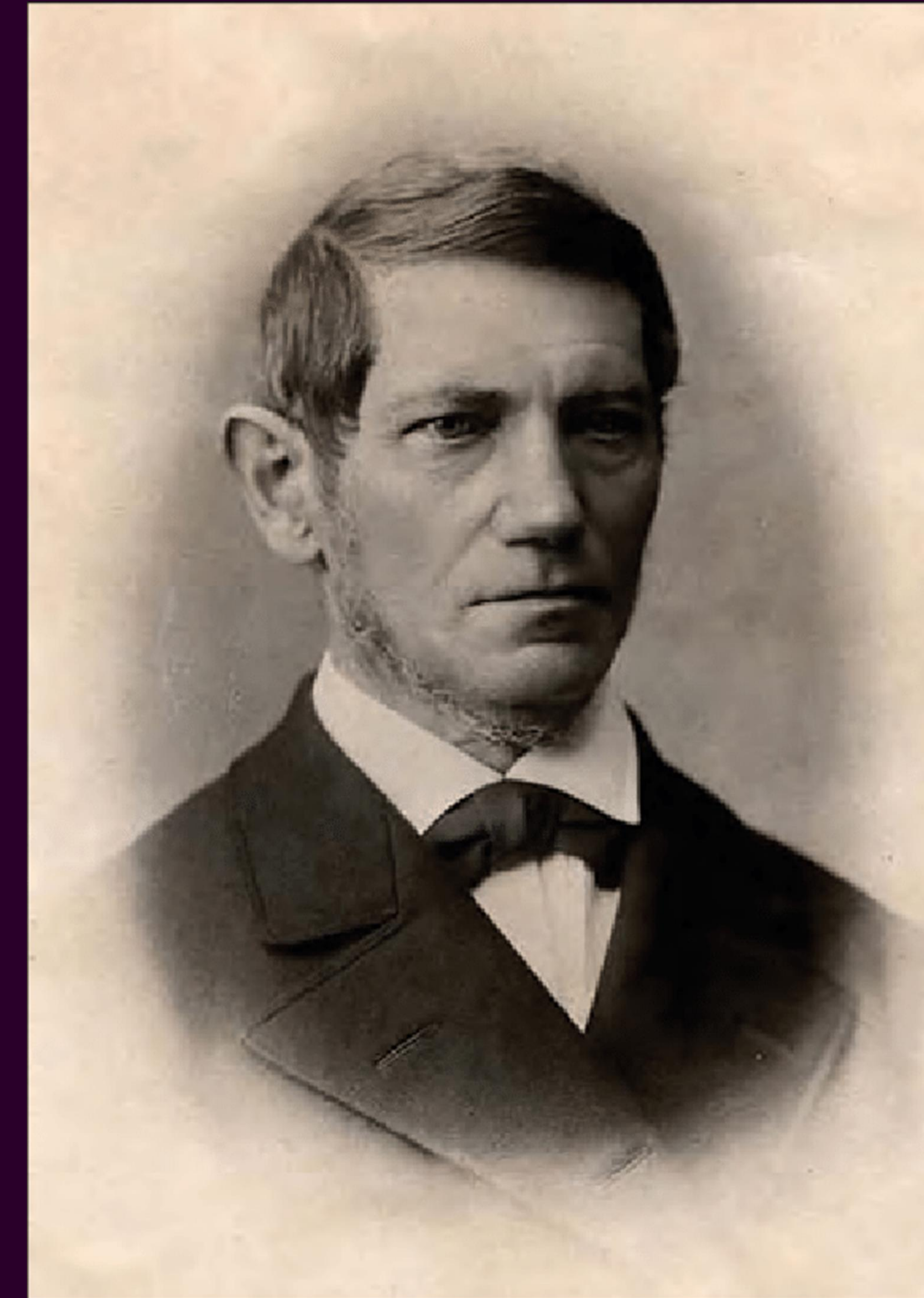


Fig. 3: Carl Ferdinand Ritter von Arlt (1812-1887)

In 1839 he graduated from the University of Prague and became a student in ophthalmology of Professor Johann Nepomuk Fischer (1777-1847), the professor of Ophthalmology at the University of Prague. Fischer is considered the founder of modern ophthalmology in Bohemia and was the first physician appointed to the Prague Ophthalmic Institute. Fischer traveled to Vienna and Arlt followed him and became his assistant. After his return to Prague Arlt published a series of papers that appeared in the journal "Prager Vierteljahrschrift" and referred to staphyloma, pterygium and trachoma as well as his operative method of trichiasis.

Arlt's most important research in Prague was his work on myopia.

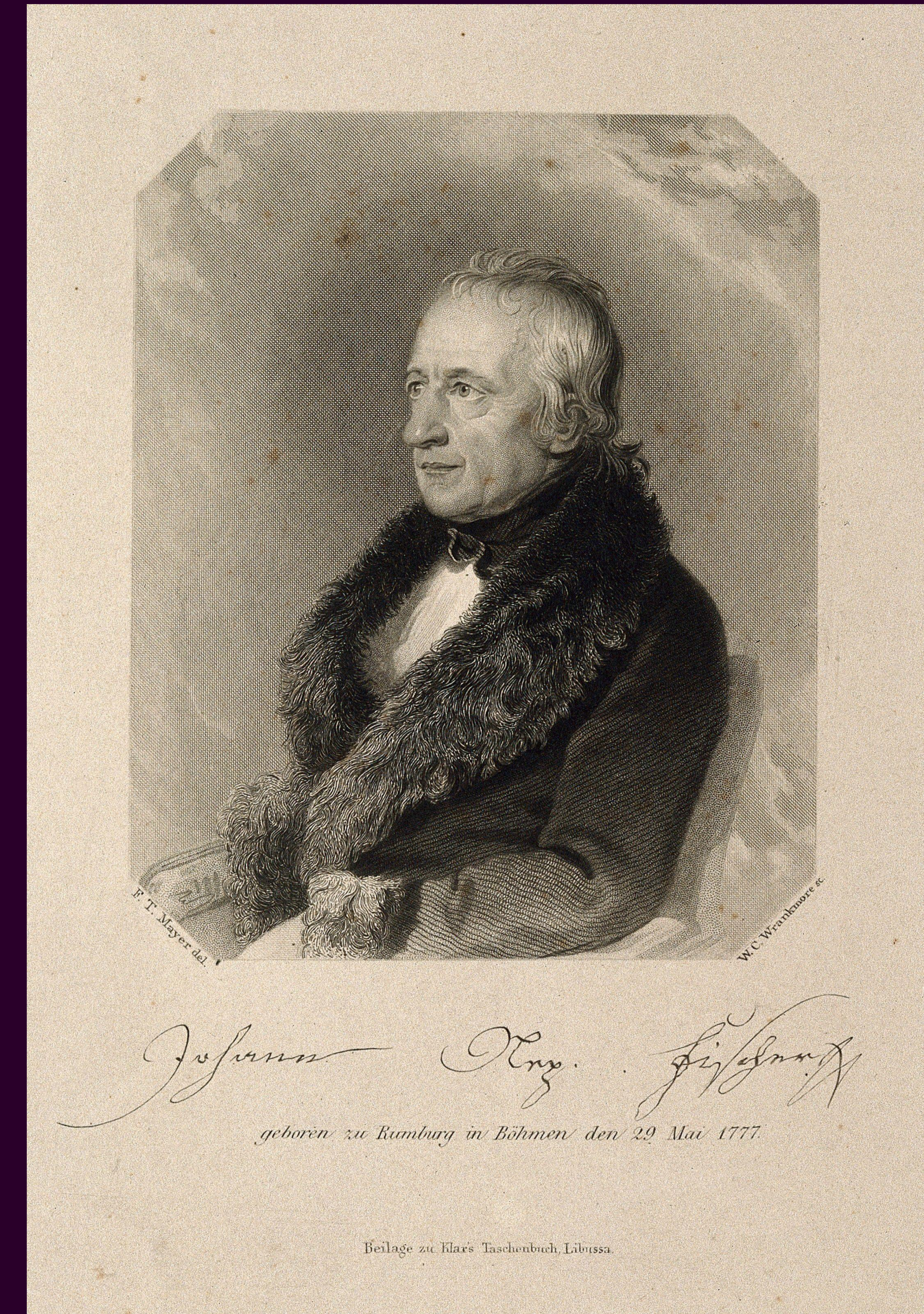


Fig.4: Johann Nepomuk Fischer (1777-1847) Arlt's mentor

HIS CAREER- HIS WRITINGS

In 1839 In 1846, a year before Fischer's death, Arlt became acting- professor of diseases of the eye at the University of Prague and continued until 1849. In August of this year was appointed as incumbent and continued in Prague until July of 1856.

He had a numerous writings during his academic career and his first monograph published in 1846 titled 'Die Pflege der Augen in Gesunden und kranken Zustande (Care of Healthy and Sick Eyes). Joseph Beer also edited a similar publication 'Art of preserving the Sight Unimpaired to Extreme Old Age' where Arlt contributed and insisted that the prescription of eyeglasses should be a matter reserved for ophthalmologists.

Of greater importance than *Die Pflege* was Arlt's three-volume textbook titled: 'Die Krankheiten des Auges (Diseases of the Eye). About this this book B. Becker notes: "Epoch-making" has been the term used to describe the first appearance of this title in 1851. It is one of the most important works of the greatest figure in the history of the Vienna school of ophthalmology in the 19th century.

In 1849 Arlt was called to Vienna to succeed Anton Rosas (1791-1855) as the professor in Vienna. Arlt academic outlook and philosophy revitalized ophthalmology in Vienna.

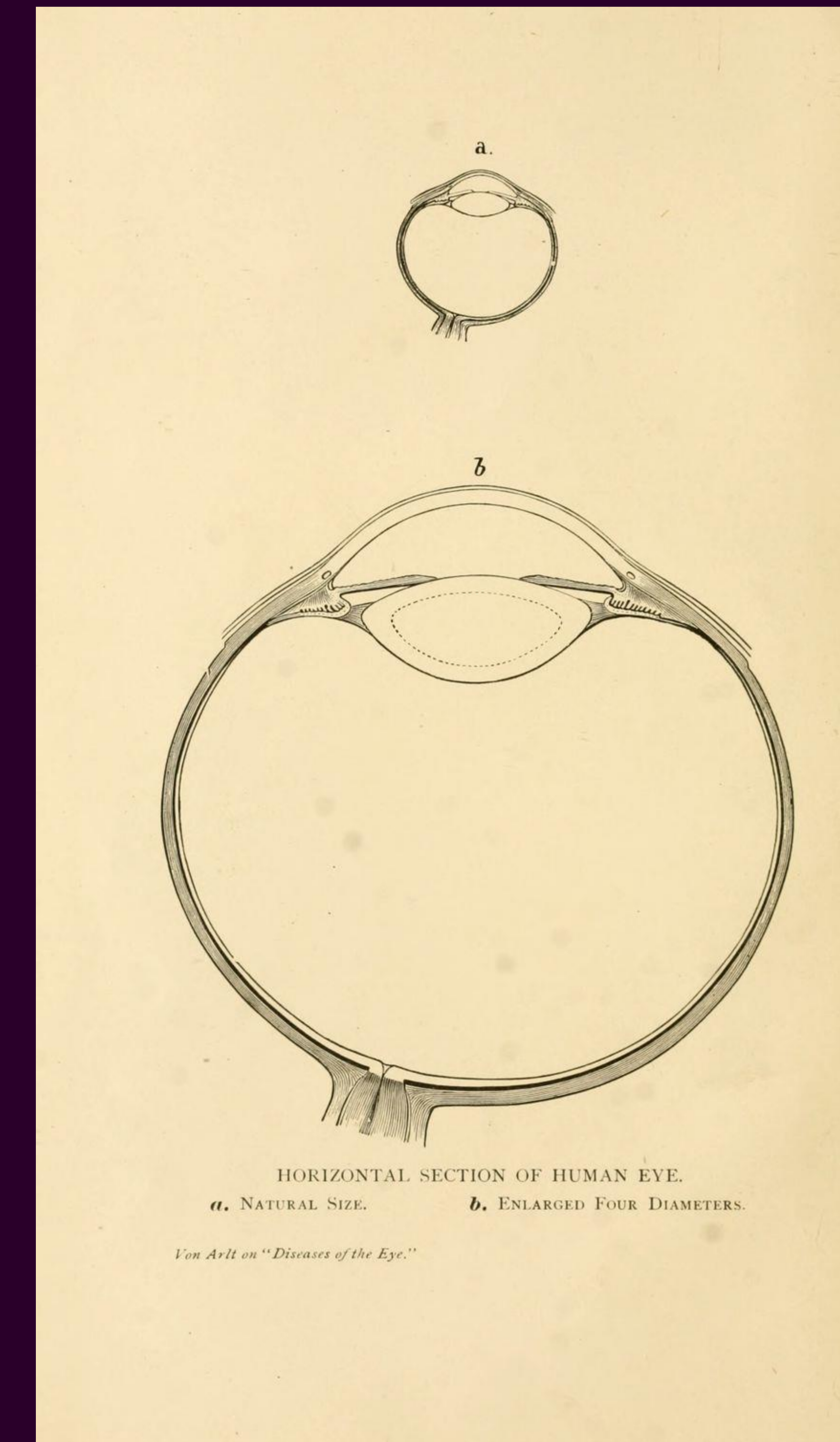


Fig. 5 : Anatomical cross section Of the eye from the english translation of Arlt's monumental work

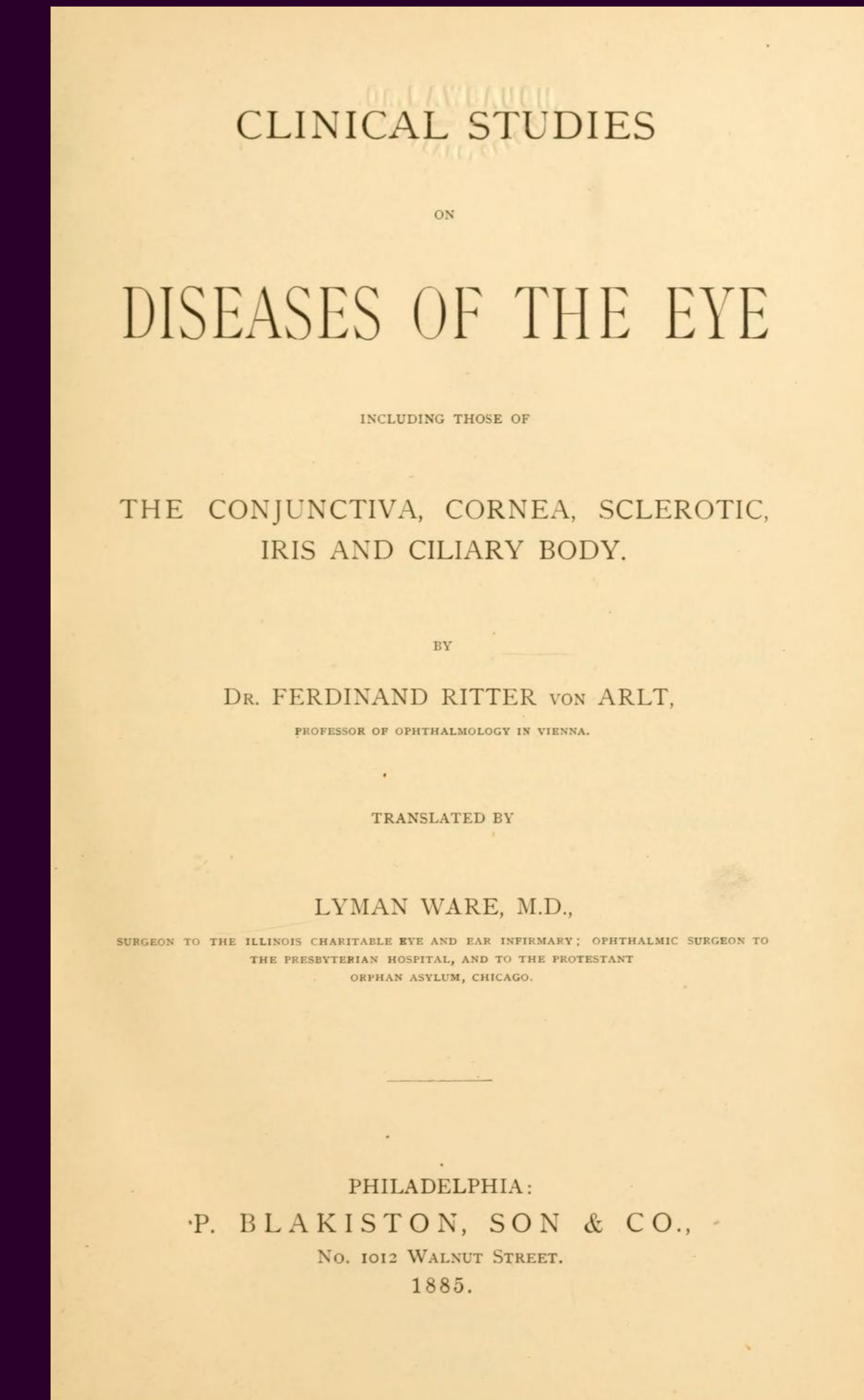


Fig. 6: The title page of the Lyme Ware's translation of Ferdinand Arlt's treatise (1885)

THE VIENNA YEARS

The revival of ophthalmology in Austria originated in Prague. Ferdinand Arlt became its protagonist. As did Rokitansky, he undertook the necessary macromorphological investigation of the structures of the eye, making pathological anatomy the basis of clinical symptomatology. He introduced into his practice the new histological, physiological and ophthalmoscopic methods of work, and his pupils to study under his friends Albrecht v. Graefe (1828-1870) of Berlin and Frans Cornelis Donders (1818-1889) of Utrecht. Throughout the second half of the century, Vienna remained an attractive center of research in ophthalmology. Professors in Vienna came from Germany, Switzerland, from Holland and from Italy. To become a member of this illustrious collegium academicum in Vienna was regarded as such an honor that everyone was proud to belong to it. Ferdinand von Arlt was regarded as typical representative of the Vienna Medical School of this period.

Due to Arlt's appointment at the University of Vienna, a rift was created in the ophthalmological community with a rival, Eduard von Jaeger, distinguished ophthalmologist and grandson of Georg Beer. The repercussions of this rift were felt far beyond Vienna, and for decades Jaeger's followers resented Arlt's appointment and as a result two hostile camps continued to exist in Vienna. And due to this old discordia neither in 1866, nor in 1880 was it possible for the International Ophthalmological Congress to be convened in Vienna.

Eduard Jaeger obtained the chair in 1883 and said 'twenty-five years too late for me'. From the other hand the severance of the Rosa's clinic aroused bitterness on the part of Arlt who had been accustomed in Prague to having 60 beds and found himself restricted to 30 in Vienna. And the conditions of the patients were not the best: newly operated patients lay next to convalescent ones, as did acute and chronic infectious and noninfectious cases, children and adults.

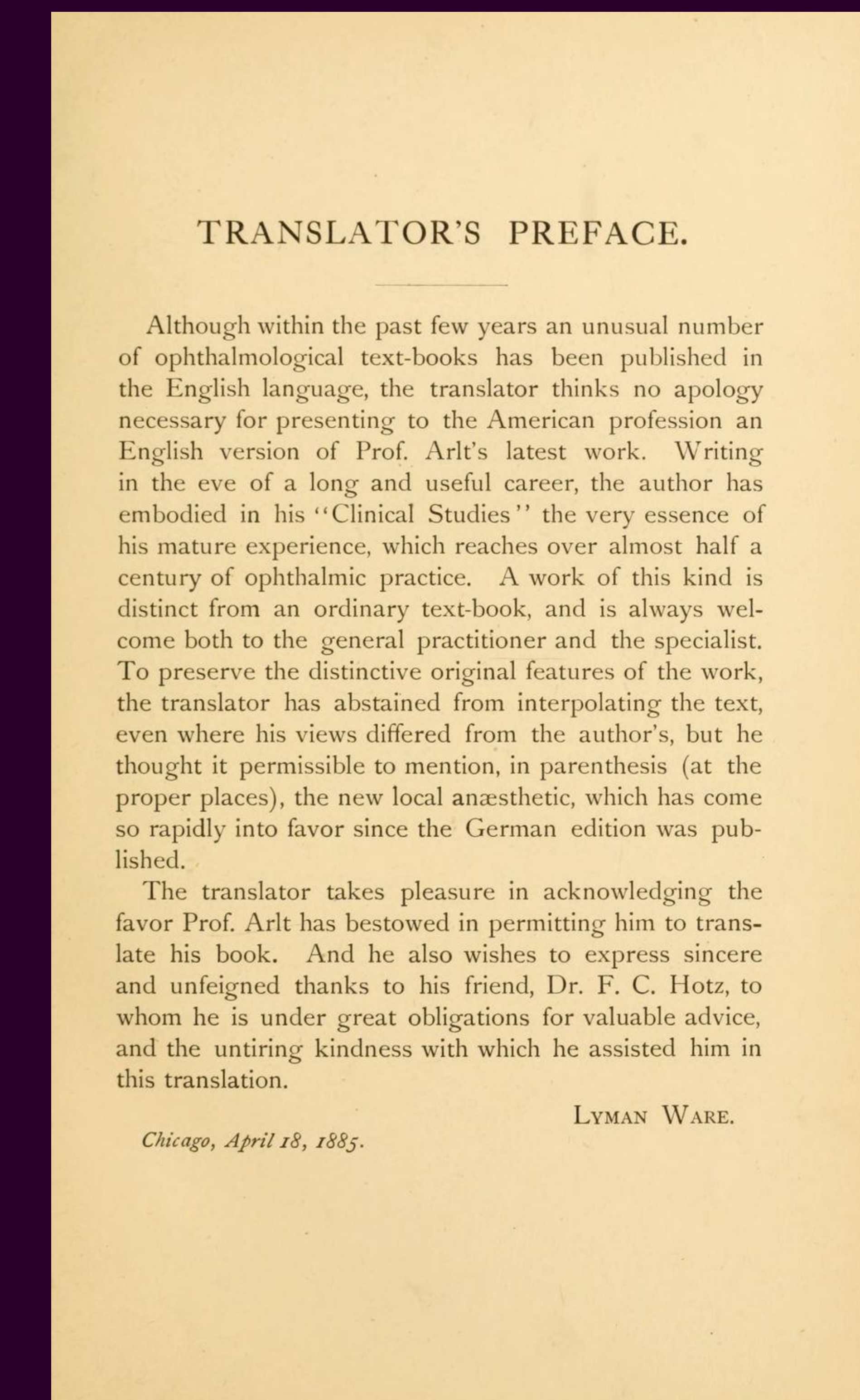
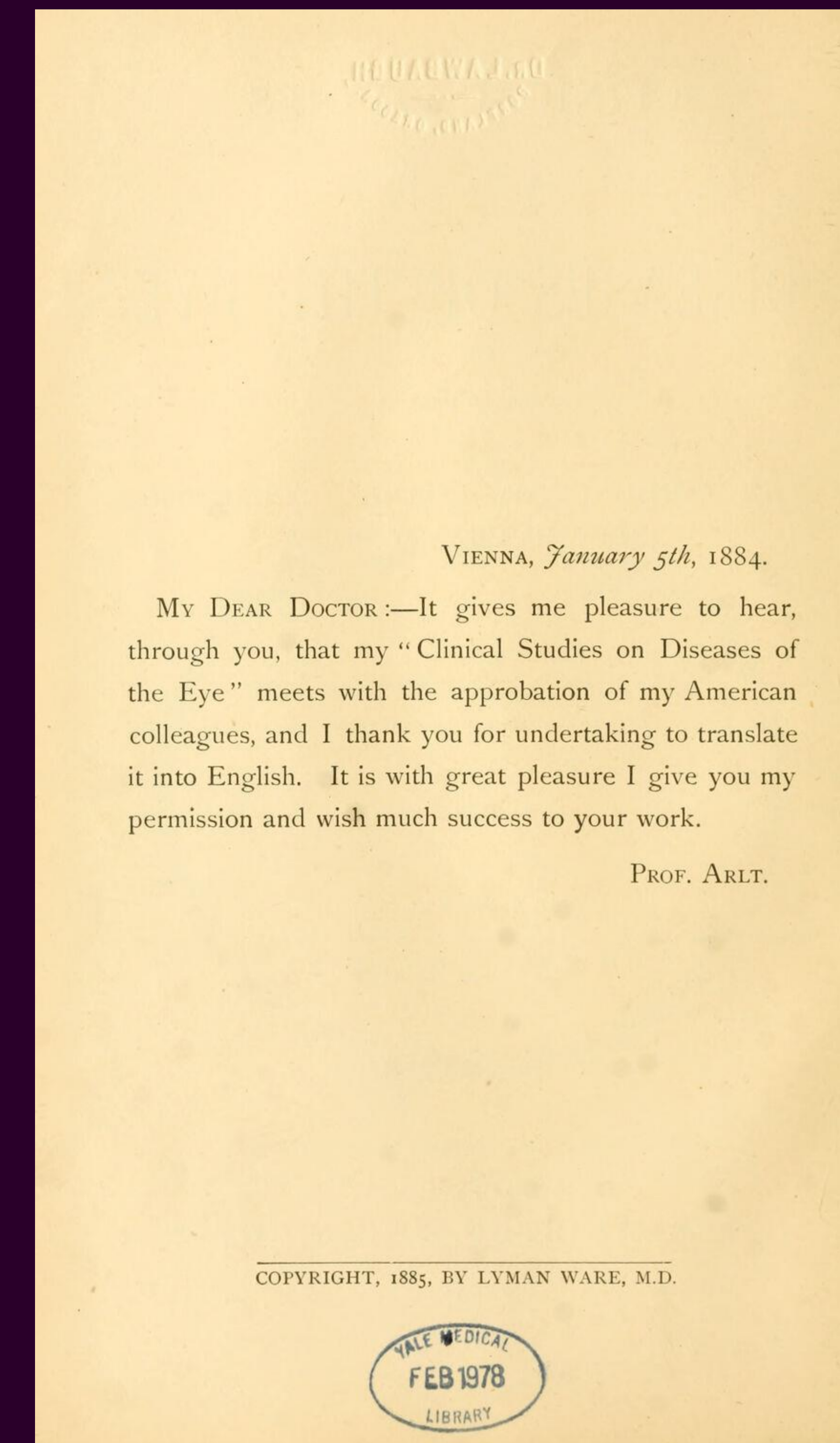


Fig.7: Dr. Arlt's thank you note to his American translator
Fig.8:Translator's (Lyman Ware) Preface

TREATING AND TEACHING

Beyond the limited space afforded Arlt, the volume of ophthalmological pioneering work from this clinic was impressive. Arlt was an excellent teacher according to the memoirs of his assistants, including Francesco Businelli, Oto Becker, Sattler, Fuchs and Dimmer. He was surrounded by 100 students and the mass of patients (2800 cases annually). Arlt's oral teaching activity was intended above all to provide the practitioner with the necessary knowledge to recognize and treat the common eye diseases and those requiring assistance.

The diseased eye itself provided the direct means whereby Arlt taught the beginner what to observe and how to diagnose. Additionally Arlt provided for didactic lectures and special courses for his students including advanced training in ophthalmoscopy and in histology and pathology. He personally taught the surgical techniques of ophthalmology and was considered 'the master in ophthalmic surgical technique of his time' and mentioned that he was able to operate with his left hand as skillfully as with his right.



Fig. 9: Arlt in Vienna

SURGERY

In 1874 Arlt published his 'Operations Lehre (Theory of Operation). This work appeared in chapter II in the third volume of Graef-Saemisch' 'Handbuch der ges. Augeheilkunde (Handbook of Ophthalmology) and Hirschberg wrote: "It is all sound and clear, and systematic; it is all sound and clear, and systematic; it is all based on personal experience... Every one of us whose duty it was to perform operations on the eye, studied this work with great diligence and consulted it again in every difficult case." The American Encyclopedia and Dictionary of Ophthalmology" by Casey Wood includes:

Arlt's enucleation method, Arlt-Jaesche operation for trichiasis (with plastic techniques), Arlt's operation for internal tarsorrhaphy, Arlt's symblepharon operation.

Arlt devised new instruments including scalpel and an iris punch.



Fig. 10-12: A 'Weiss' vintage set of surgical instruments from the Ferdinand's Arlt era

EPILOGUE

Ferdinand Ritter von Arlt (1812-1887) was an emblematic figure of Ophthalmology of 19th century. He started from a humble peasant family in mountainous Bohemia. With a strong will and a passion for learning and education, he reached the pinnacle of 19th-century Ophthalmology, making Vienna the leading reference point of our science. He had ethics, compassion for patients, and love for his students. He was an excellent teacher, pioneer, and innovator, laying the foundations for Ophthalmology of a new era. He was a keen surgeon inventing new techniques and new instruments.



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