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Jay Enoch's Column:

Hands Across Time, Charles F. Prentice: A Fine Refractionist

I had just graduated from "A Course in Optics and Optometry" at Columbia University in the Spring of 1950. After some weeks during which we took our State Boards (in my case, New York and New Jersey), I was ordered to active service with the National Guard on the first day and among the first units called up for what was later termed "the Korean War".

With the rapid re-expansion of the Armed Forces, there developed immediate dire shortages of physicians, dentists, and optometrists to screen, process and care for the once-again burgeoning military. As I was "already there", I was transferred almost immediately from the National Guard unit to the U.S. Army Reserve, and received an early optometric commission in the Medical Services Corps (#7, I was told). The commission was conditional upon my having passed one of the licensing exams I had taken. Promptly, I went to see Dr. Manny Nurock in Trenton, New Jersey, and he introduced me to Dr. Fischer. These tremendously kind gentlemen rushed evaluation of my examination and shortly thereafter indicated that I had qualified for optometric licensure in New Jersey. New York followed within about a week. While this was going on, I was sent home temporarily from the Army, pending resolution of the licensing issue, completion of paperwork, and reassignment to Walter Reed Army Hospital for training.

During these few months in the summer and early fall of 1950, I went to work in the office of our family optometrist, Dr. Maurice Hoenig. He proved to be a great teacher and refractionist. I learned many of the more practical aspects of our profession under his tutelage.

One busy day in Dr. Hoenig's office, a tiny, thin, elderly African-American lady was assigned to me for examination. She was certainly perky and full of wit and charm. She literally jumped into the exam chair, and she was 102 years old! (My memory suggests that she had been a slave) I have never met anyone quite like her. At any rate, she had not had an eye exam since the early 1900s (she stated it was more than 40 years), and had not had any real eye/vision problems during the interim. On this occasion, she reported she was having some reading and sewing problems. I asked her who had last examined her, and she responded, "Old Doc Prentice, of course!" Really!

She then “whipped out” her eye-glass case (with Charles F. Prentice’s name and address embossed in gold on it). These were wire frames with small lenses in rather good shape. I refracted her, and then refracted her again, and couldn’t find more than a +/-0.25 DS difference in her distance correction from Prentice’s earlier correction. She needed an add. I prescribed a distance and reading correction (I do not have my records for reasons which will become obvious shortly). She did not have a major refractive error, and her visual acuity was either a weak 20/20 or 20/25, there was no evident central cataract, nor obvious retinal or disc problems. I asked her if I could buy Dr. Prentice’s lenses and case from her, and she said no, but she kindly gave them to me when she received her new correction. I never saw her after that exchange.

After completing Army service, I was in Graduate School at Ohio State University as a student of the late Glenn A. Fry. Concurrently, I served as Vincent Ellerbrock’s teaching assistant for two/three years. Knowing of Vince’s great interest in the growing OSU Optometric Museum, I gave the box to him containing the Prentice case, the frame and lenses of this lively lady, and my records of the case to be added to the Museum collection. He was most pleased by this donation! Sadly, Vince died (prematurely) within two weeks for lack of what we call today a Heimlich Maneuver. Although I asked repeatedly of everyone in sight, the box and its contents were never located. In fact, at the recent Optometric Historical Society meeting in December, 2000, in Orlando, I asked Provost Arol Augsburg (now at Alabama) if he had seen this material during the time he had helped to develop the Celebrity Eyewear Collection at OSU. Although he had helped move Vince’s papers and records on several occasions, he stated that he never encountered this gift.

When the writer was still a young man, he was honored to receive the Charles F. Prentice Medal of the American Academy of Optometry. On the several occasions I have been asked to stand at the time this award is given, often I have felt a special kinship with Charles Prentice. I have often wished this material had been located after Vincent Ellerbrock’s death so that we all could appreciate and value this modest part of Prentice’s heritage and contributions to optometry. Charles F. Prentice’s materials certainly would have qualified for the OSU Celebrity Collection as a fine representation of our profession!

J. M. E.

1938 monograph on the use of cycloplegia:

OHS member Irving Bennett sent me a 30-page booklet entitled “An Investigation as to the Need for ‘Drops’ of Cycloplegics in Eye Examinations”. It was report of The Committee on Refractive Procedure of the Minnesota Academy of Optometry. The members of the committee were not identified. The booklet was published by the American Journal of Optometry in 1938. Bennett wrote that this document may have been an initiative responding to Albert Fitch’s 1937 bill in the Pennsylvania Legislature to get the use of pharmaceuticals for optometrists. He also noted that it was the profession’s argument against cycloplegics in refraction for several decades.

The lack of experimentation on the use of cycloplegics is discussed in the opening

pages of the monograph. Then divergent opinions from the literature from about twenty ophthalmological authorities were presented. These quotations were used to show that "among the leaders in the field of ophthalmology there is no agreement on the need for the use of a cycloplegic in ocular refractive work." (p. 13)

Next there was a discussion of a study by Tait and Sinn in which manifest retinoscopy was compared to the retinoscopy findings under homatropine cycloplegia. A point of emphasis in the booklet was that the difference varied from 0.75 D less plus with cycloplegia to 1.75 D more plus with cycloplegia. The authors wondered whether this variability was recognized by those who used the technique on a daily basis. The writers suggested that the limits of this variability were "so great as to make refractive work done within them of very doubtful character." (p. 21) Later the authors state the findings under cycloplegia are of "such variable and unreliable character as to confuse rather than help the examiner." (p. 30) The authors do not mention the potential diagnostic significance of this variability in cycloplegic effect, but rather seem to be arguing against prescribing solely on the basis of the cycloplegic refraction.

About the last third of the monograph consisted of published case reports which the authors used to suggest to "indicate (a) that the use of 'drops' makes refractive work more confusing, (b) that their use adds nothing to the value or the accuracy of refractive technique employed during an eye examination, (c) that refractive findings are more variable and therefore of less value when homatropine is used as a cycloplegic in eye examination work, and (d) that the claims of those oculists who suggest that only satisfactory examinations can be made by those using the 'drops' are unfounded." (p. 30)

The last sentence of the monograph was the authors' conclusion "that 'drops' or cycloplegics are therefore unnecessary in eye examining work and their use should be discontinued." (p. 30)

D. A. G.

An overview of the history of keratoscopy:

The Summer, 2000, issue of the Indiana Journal of Optometry contained an article by me and Daniel R. Gerstman entitled "The Optical Science Underlying the Quantification of Corneal Contour: A Short History of Keratoscopy and Indiana University Contributions" (volume 3, number 1, pages 13-16). We talk about the early developers of keratoscopy as well as recent developments. It is interesting to note that Gullstrand had worked out all of the methodological and computational aspects of photokeratoscopy almost a hundred years ago, but he didn't have the computers to make it easily adaptable to the practitioner's office, and there wasn't the demand for it then that exists today because of refractive surgery and more detailed diagnostic capabilities. Please write me if you would like a copy of the article.

D. A. G.

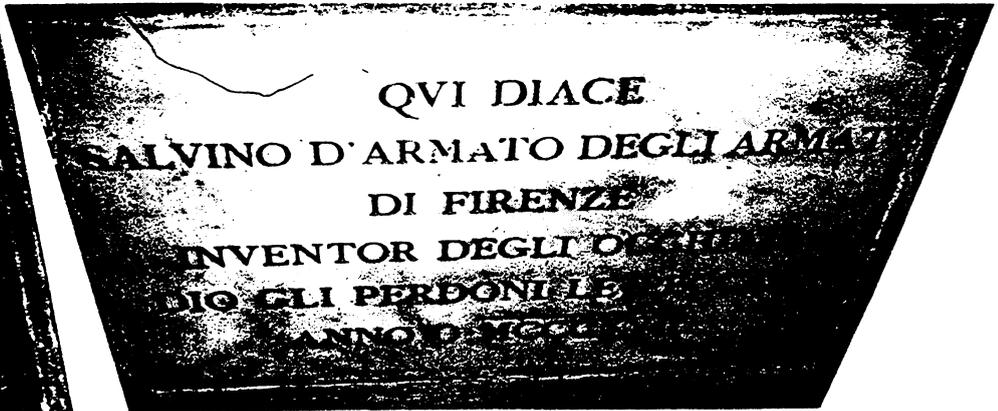
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Photographs taken in Italy by Jerry Abrams:

OHS member Jerry Abrams sent in two photographs he took during his April, 2001, trip to Italy. Below are our black-and-white photocopied renditions of his pictures. One is a picture of the tombstone of Salvino Armati. Its description of him as inventor of eyeglasses, though famous, is probably a hoax, as has been discussed in the pages of this newsletter a number of times over the years. It is located at a small church in downtown Florence.

The other is a photograph of one of the frescoes in the Dominican convent of San Nicolo of Treviso dated 1352. The scribe depicted there is wearing eyeglasses. He is writing on a piece of paper on the table in front of him. On a shelf at about eye level to his right is an open book. This is thought to be the first painting of someone wearing spectacles. As noted by OHS member J. William Rosenthal in his book, "Spectacles and Other Vision Aids: A History and Guide to Collecting," it portrays a person who lived before the invention of spectacles: "Ironically, fourteenth through seventeenth-century artists portrayed Moses, the apostles, and other biblical personalities wearing spectacles. Artists modernized their subjects by surrounding them with the fashionable accessories of the time. The earliest of these portraits is that painted at Treviso in 1352 by Tommaso da Modena. It portrays Hugh of St. Cher Cardinal Ugone wearing riveted spectacles on his nose and was done a century after his death. As with the biblical figures, the invention of spectacles came long after Hugh's lifetime."



Popular science book on optics featuring photos of objects in the Science Museum, London:

Light, by David Burnie, New York: DK Publishing, 1999 (first published 1992 by Dorling Kindersley Limited, London), 63 pages + 1 page index, hardcover, \$15.95, ISBN 0-7894-4885-8.

I found this book at, of all places, the local Sam's Club discount store. It is a nicely done popular science picture book produced in a 8.5 by 11 inch format. Two facing pages are each devoted to a topic, including: sources of light, shadows, reflection, refraction, lenses, the eye, telescopes, microscopes, photography, color, particle and wave nature of light, diffraction, interference, the electromagnetic spectrum, polarization, photosynthesis and solar energy, electric light, fiber optics, lasers, holograms, speed of light. The pages are graced by color photographs and nicely produced color diagrams.

The text is clearly written, although in a few places some simplifications are somewhat misleading. Each topic is developed from a historical standpoint. There are portraits of a number of notable persons in optics, as for example, Newton, Huygens, Young, Herschel, Maxwell, Fizeau, Foucault, Michelson, along with several others.

Each pair of facing pages uses some pictures and diagrams for explanation of various optical principles, and often includes some photos of items of historical interest. There are, for example, pictures of: a model eye made in France in about 1870, a replica of Galileo's telescope, a replica of Newton's reflecting telescope, a Leeuwenhoek microscope, late nineteenth century projectors, and Swan and Edison electric lamps. Many of the items pictured are objects from the Science Museum in London.

D. A. G.

Updates on our list of repositories of items of optometric historical interest:

In the April, 2001 issue of Hindsight, we published a list of museums, archives, and libraries that held items of optometric historical interest and that had been mentioned in the first 30 volumes of Hindsight: Newsletter of the Optometric Historical Society. We asked for updates and corrections from the readership and here are some of the responses we have received so far:

Jerry Abrams wrote that he wanted to add the following to the list:

"a. Luxottica Group's Museum - A Museum of Optical Instruments and Frames in Agordo, Italy. The museum houses one of the fullest and oldest collections in the world, including more than 1,200 pieces. There are about 700 pairs of eyeglasses, the most valuable

dated around 1500, with China and Persia amongst the most interesting countries of origin.
b. SAFILO Optical Museum - Galleria Guglielmo Tabacchi - Padova, Italy

c. Museo dell'Occhiale - Eye Glass Museum - Pieve di Cadore, Italy. An important collection of antique eyewear, trade signs, oil paintings, optical instruments. Established 1986.”

Keith Lammers wrote the following by email: “I noticed in the April copy of Hindsight, you referred to the Albert Fitch Memorial Library of the Pennsylvania College of Optometry as a possible source of historical material. While we have a rather modest historical collection, I am writing to inform you that we have moved our campus and changed the library's name. The information is contained in my signature file. Keith Lammers, Director of Library and Learning Resources, Gerard Cottet Library, Pennsylvania College of Optometry, 8360 Old York Road, Elkins Park, PA 19027; phone: (215) 780-1260; fax: (215) 780-1263; email: keith@pco.edu.”

Jerry Abrams also passed along some information he received from Charles Letocha concerning museums of interest in Paris. According to Letocha, the Marly Museum is no longer in existence. It has been purchased by Essilor, and he did not know of their plans for it. The Louvre contains some paintings showing eyeglasses, and another painting showing spectacles is on display at the Musee du Moyen Ages. Letocha rates the Universite Rene Descartes museum highly as a medical museum. It contains some cataract sets, some eye examining equipment, and some very old spectacles, including what may have been 18th century cataract glasses.

Your continuing input and updates on archives, museums, and libraries with material relating to the history of optometry will be appreciated.

*Managing Editor and Contributing Editor: David A. Goss (School of Optometry, Indiana University, Bloomington, IN 47405, U.S.A.; email: dgoss@indiana.edu)

Contributing Editors: Henry W Hofstetter (2455 Tamarack Trail, Bloomington, IN 47401, U.S.A.); Douglas K. Penisten (College of Optometry, Northeastern State University, Tahlequah, OK 74464, U.S.A.); Jay M. Enoch (School of Optometry, Mail code 2020, University of California at Berkeley, Berkeley, CA 94720-2020 U.S.A.; email: jmenoch@socrates.berkelev.edu)