HINDSIGHT
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October, 2014 Volume 45, Number 4

Official Publication of the Optometric Historical Society

Hindsight: Journal of Optometry History publishes material on the history of optometry and related topics. As the official publication of the Optometric Historical Society, Hindsight: Journal of Optometry History supports the purposes and functions of the Optometric Historical Society.

The purposes of the Optometric Historical Society, according to its by-laws, are:
● to encourage the collection and preservation of materials relating to the history of optometry,
● to assist in securing and documenting the recollections of those who participated in the development of optometry,
● to encourage and assist in the care of archives of optometric interest,
● to identify and mark sites, landmarks, monuments, and structures of significance in optometric development, and
● to shed honor and recognition on persons, groups, and agencies making notable contributions toward the goals of the society.

The official publication of the Optometric Historical Society, published quarterly since its beginning, was previously titled:
Newsletter of the Optometric Historical Society, 1970-1991 (volumes 1-22), and
Hindsight: Newsletter of the Optometric Historical Society, 1992-2006 (volumes 23-37).
Use of the current title, Hindsight: Journal of Optometry History, began in 2007 with volume 38, number 1.
Volumes 1-42 are available online at:
https://scholarworks.iu.edu/journals/index.php/hindsight/issue/archive.

OHS website: http://www.aoafoundation.org/historical-gems/

On the cover: Photograph of the Scientific Section Class in Eye Dissection at the AOA Congress 1914. The Archives & Museum of Optometry. American Optometric Association Records. (see the article in this issue on the AOA Congress of 1914)

the optometric HISTORICAL SOCIETY

HINDSIGHT: Journal of Optometry History
October, 2014
Volume 45, Number 4

Editor:
David A. Goss, School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

Contributing Editor:
Irving Bennett, 5551 Dunrobin Drive, #4208, Sarasota, FL 34238

TABLE OF CONTENTS

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The AOA Congress of 1914

Kirsten Pourroy Hébert, B.A.
Heritage Services Specialist, The Archives & Museum of Optometry, 243 N. Lindbergh Boulevard, St. Louis, MO 63141, khebert@aoa.org

One hundred years ago, the American Optical Association held its 17th annual convention on July 18-25, 1914 at the Planter's Hotel in St. Louis, MO. This was the first official "Congress" of the AOA, a title which the Association's annual meeting maintained for more than 80 years. In the context of the Progressive Era, the name change was significant. First, the Association's political structure was, as it remains today, a group of nationally affiliated state organizations each represented by delegates. This emphasis on democracy and equal representation dominated the Association during its critical formative years. Second, the era was characterized by great energy for institutional reform through regulation and the improvement of society through education and public health initiatives. The desire for regulation and standardization brought about a flurry of activity among professional and trade organizations in order to define standards, set qualifications for practice and create measures to assess proficiency. The activities of the Association's first Congress clearly illustrate the influence of larger societal trends on the development of the profession.

Figure 1**.** Photograph of the 17th Annual Congress, American Optical Association, July 18-25, 1914, St. Louis, MO. The Archives & Museum of Optometry. American Optometric Association Records.

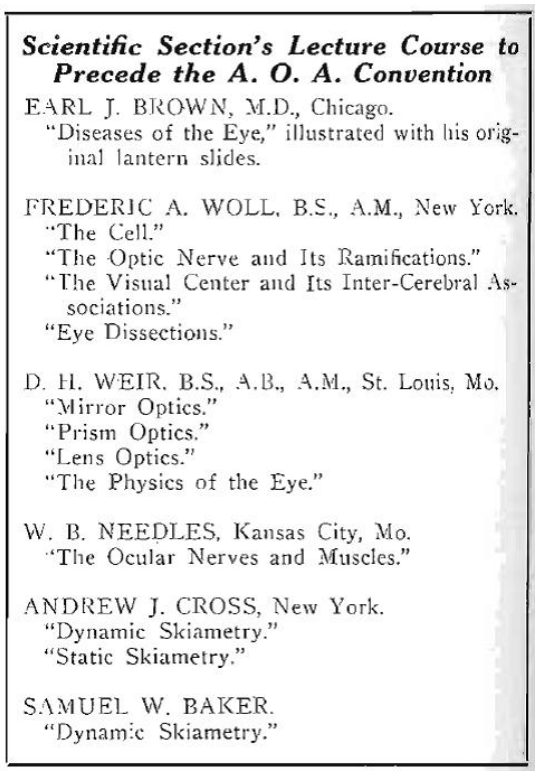
The 1914 Congress was considered exceptionally successful in terms of content and organization, although attendance was somewhat lower than previous meetings due to fears of July temperatures in St. Louis. The leading optometric publication of the period, *The Optical Journal and Review*, noted in their pre-convention issues that "rooms with electric fans will be in demand at the hotels"[1] and The Planter's Hotel assured attendees that "each room has circulating ice water as well as a private bath"[2] Indeed, it was close to 100 degrees during the Congress and at the Annual Banquet men were encouraged to remove their dinner jackets if they were "wearing clean shirts."[3]

Figure 2. Postcard (1920). Fourth Street North from Market Street Showing Courthouse and Planters Hotel. The Archives & Museum of Optometry. American Optometric Association Records.

AOA President Albert Myer, perhaps concerned about the possibility of a low turnout, issued a "greeting" sent to Association officers which was also printed in *The Review.* In addition to defining the pre-convention committees, Myer rallied members to attend the conference by invoking the words of the former president, H.J. Cook, who on his deathbed stated, "If I live, I'm going to the optometric congress in St. Louis. If I don't, *I will be there in spirit*."[4]

Myer's urgency was justified. The Association was engaged in a battle with organized medicine and needed the support of an active and engaged membership to stake out optometry's professional jurisdiction. The pre-convention committees are recognizable as the predecessors of AOA's current sections, centers, groups and departments. These included the 1915 Conference Committee, the Scientific Section, the National Organization State Board Examiners, Education, Publicity, Legislation, Resolutions, Finance, Membership, Amendments, Welfare, Efficiency, Statistics, School Chart, Inspection Dispensaries, Professional Service and a General Committee comprised of Chairmen.

The early structures of the Association reflect a common concern of emerging professions in the early twentieth century when "trades" were being distinguished from "professions". The Association endeavored to determine how the scope of optometry practice and the qualifications of practitioners should be defined and regulated. To this end, the AOA established committees dedicated to setting standards of practice, defining Association positions, educating practitioners and the public about the profession and working to consolidate optometrists under the wing of the Association for the purpose of forwarding beneficial legislation.



Scientific Section's Lecture Course to Precede the A. O. A. Convention

EARL J. BROWN, M.D., Chicago.
"Diseases of the Eye," illustrated with his original lantern slides.

FREDERIC A. WOLL, B.S., A.M., New York.
"The Cell."
"The Optic Nerve and Its Ramifications."
"The Visual Center and Its Inter-Cerebral Associations."
"Eye Dissections."

D. H. WEIR, B.S., A.B., A.M., St. Louis, Mo.
"Mirror Optics."
"Prism Optics."
"Lens Optics."
"The Physics of the Eye."

W. B. NEEDLES, Kansas City, Mo.
"The Ocular Nerves and Muscles."

ANDREW J. CROSS, New York.
"Dynamic Skiametry."
"Static Skiametry."

SAMUEL W. BAKER.
"Dynamic Skiametry."

Figure 3. Scientific Section Lecture Course to Proceed the A.O.A. Convention. Excerpted from *The Optical Journal and Review of Optometry* 1914; 34(2): 116.

The Scientific Section, in particular, performed a critical function. By providing a forum for conducting and disseminating research and building a knowledge base, the Section laid the foundation for the development of educational standards and best-practices, clinical guidelines, and measures of competency.[5] The Section also sowed the seeds of the Continuing Education program, the International Library, Archives & Museum, and the Clinical Resources Group. In the 1914 resolutions, the Scientific Section was given the responsibility of appointing a member in each state to "write optical history" for their home state; here the beginnings of the Optometric Historical Society are evident.

The Scientific Section required the submission of "theses" for membership and worked with the Education Committee and National State Board of Examiners to formulate questions for State certification examinations and to recommend textbooks and standards for University coursework. These latter duties would eventually be taken on by the National State Board of Examiners in Optometry, the Association of Regulatory Boards of Optometry and the Association of Schools and Colleges of Optometry. The American Academy of Optometry had yet to gain momentum as the academic arm of optometry. Indeed, the fledgling AAO was disbanded before 1914 and did not revive until 1922. For the time being, the Scientific Section fulfilled this role as well.

To this end, the Scientific Section provided continuing and technical education for optometrists at a time when only 33 states had laws requiring certification--and, therefore, specialized training--to practice. While independent schools of optometry were operating in a handful of states, University-based programs were few. Columbia University of New York was the first to offer courses in 1910 and Ohio State University founded its two-year program in Applied Optics in 1914.[6] One of the most popular events at the 1914 Congress was the suite of "Post-Graduate" courses held by the Scientific Section. Over 150 participants registered for these courses for a fee of $10 each. Frederic Woll's "Eye Dissection" course was well-attended, as were the others, despite what must have been sweltering conditions in The Planter's Hotel.

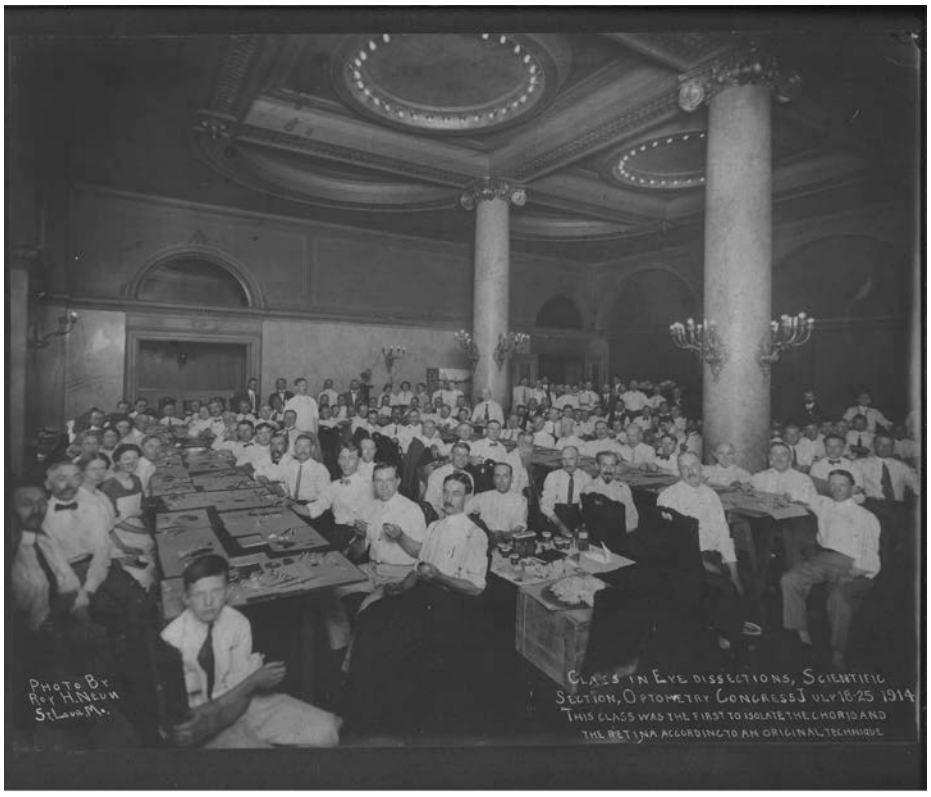


Figure 4. Neum, Roy H. Photograph of the Scientific Section Class in Eye Dissection at the AOA Congress 1914. The Archives & Museum of Optometry. American Optometric Association Records.

The courses began on the first day of the Congress and ended Tuesday, July 21st at noon, when the business of the Congress began. From Wednesday, July 22 until the closing session on Friday, July 24th, presenters delivered papers, committees and sections gave their reports, and delegates elected their officers. Congress attendees were given frequent breaks to explore more than 40 exhibitions. Excursions for "ladies" included a Mississippi steamboat ride on *The Belle of the Bend,* a swimming party at the Lorelei Swimming Pool and a luncheon at Caffereta's Garden.[7]

The proceedings of the Resolutions committee reveal the issues which most concerned organized optometry and other professional associations in 1914. Chairman

P.A. Dilworth reported on several resolutions including one discouraging the practice of advertising "free eye examinations" with the purchase of spectacles. The committee concluded that examinations were professional services which should require a fee and offering these services as a perk included with the purchase of a product undermined the very purpose of the Association. The resolution stated that optometrists are "professional men" who "charge for their services, and are not mere storekeepers selling merchandise."[8] Thus, the Association, which had restricted its membership to "refracting opticians" in its second year of existence, further delineated the distinction between optometrists and opticians and reinforced vision exams as part of the optometrist's scope of practice.

Resolutions were also passed to commend the organizers of the Panama-California Exposition and the women's magazine *Collier's Weekly* for their work in prohibiting and denouncing concessions sales of spectacles at expositions. The ban was designed to stop opportunistic retailers from promising cures of various ailments through spectacle use without evidence and selling erroneous prescriptions to uninformed consumers without proper examinations. In this way, the Association sought to solidify the optometrist's standing as uniquely qualified to identify visual anomalies and prescribe corrective lenses or therapy.

Figure 5. *Collier's: The National Weekly* 52 (17) January 10, 1914. Cover.

The committee also passed resolutions supporting various "fair trade" and "price maintenance" regulatory legislation, such as the Stevens Bill H.R. 13305 and authorized

the Secretary to send a copy of the resolutions to Senators and Congressmen in Washington, D.C. In these resolutions, the AOA was joined by the National Association of Retail Druggists and other professional associations whose members operated as small retailers in addition to providing professional services. As most optometrists were small owners and operators, the maintenance of a fair and level playing field when dealing with manufacturers, "price-cutting" retailers and large institutions--like hospitals which benefitted from economies of scale--was a priority. These actions by the Association illustrate the importance and ubiquitous nature of early lobbying efforts by professional associations on national regulatory policy.

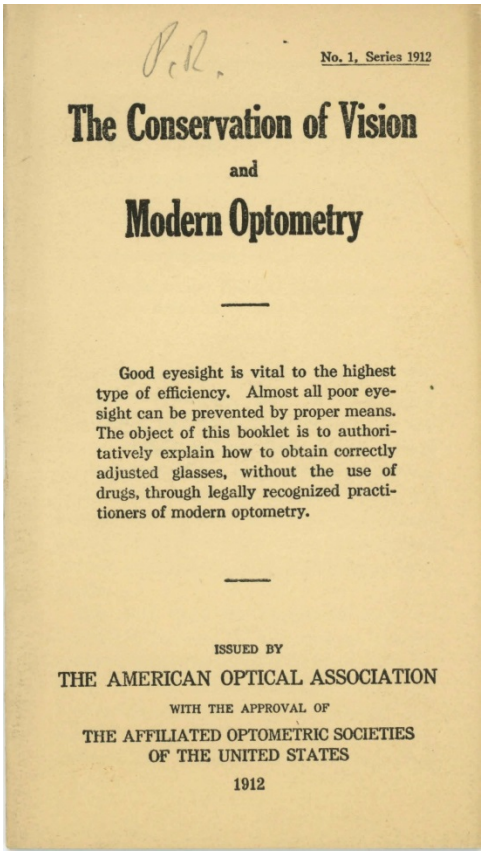
Legal battles in the states without laws regulating optometry and where the American Medical Association was engaged in a turf war with the AOA were also the subject of the resolutions in the 1914 Congress. The "Special Resolution on the Situation in Pennsylvania" dealt with the Pennsylvania Bureau of Medical Licensure's attempt to designate optometry a branch of medicine (and therefore illegal to practice unless licensed as a medical doctor). A court decision in October of 1914 would vindicate optometry as a distinct and separate science and the Pennsylvania Optical Society immortalized this decision on their Certificates.

Figure 6. Certificate to Practice Optometry. Pennsylvania Optical Society. Issued to W.T. Flanagan, 1915. The Archives & Museum of Optometry.

In addition to education, research and jurisdictional issues, the Association began to venture into matters of public health. This had a dual purpose. First, statements on matters of public policy established optometrists as experts and helped to legitimize the profession. Second, promoting vision-related regulation in the private and public sector was good for business.

At the 1914 Congress, a resolution on motorist's vision recommended states prevent visually impaired individuals from driving and to require use of glasses in visually impaired "chauffeurs".[9,10] The popularity and affordability of Ford's Model T, first released in 1908 and selling 15 million by 1927, gave optometrists a new concern and new set of patients.

The Publicity Committee under the direction of Chairman Reginald Augustine was also very active in promoting public health and education as a way to increase the scope of practice and find new markets. To this end, the Committee produced a series of pamphlets for distribution to optometrists and the public on various topics.



No. 1, Series 1912

The Conservation of Vision

and

Modern Optometry

Good eyesight is vital to the highest type of efficiency. Almost all poor eyesight can be prevented by proper means. The object of this booklet is to authoritatively explain how to obtain correctly adjusted glasses, without the use of drugs, through legally recognized practitioners of modern optometry.

ISSUED BY

THE AMERICAN OPTICAL ASSOCIATION

WITH THE APPROVAL OF

THE AFFILIATED OPTOMETRIC SOCIETIES OF THE UNITED STATES

1912

Figure 7. Conservation of Vision and Modern Optometry, 1912. The American Optical Association. Publicity Committee Publications Series, Number 1. The Archives & Museum of Optometry. AOA Records, AOA Publications.

It is worthy of note that "The Conservation of Vision and Modern Optometry" explains "how to obtain correctly adjusted glasses, *without the use of drugs"* (emphasis added). This directly addresses one of organized medicine's principle arguments against optometry and foreshadowed a long battle to come over optometrists' use of diagnostic and therapeutic drugs. Oculists argued that refraction of the eye required the use of cycloplegic drugs and that the use of drugs should be restricted to medical doctors. Optometrists contended that refraction for the purpose of determining a prescription for corrective lenses did not require drugs and accused oculists of over-using potentially dangerous mydriatics.

Augustine was a dynamic speaker and even after serving three terms as AOA president (1918-1921) he remained on the payroll as a travelling spokesman on behalf of optometry.[11] Of special interest to Augustine was the expansion of practice into schools through regular vision screenings of children. In 1914, Augustine's speech to the Congress was a recapitulation of the forward to his 1910 publication *Optometry in the Schools* in which he encouraged optometrists and the AOA to reach out to teachers and parent organizations to incite an interest in seeking vision care for children: "You see the teacher has a derived interest in glasses through the fact that progress in the profession depends on the work one is able to get out of students . . . The teacher was the first link in my chain, and next came the parents."[12]

The 1914 Congress came to an end only days before the beginning of World War I on July 28, 1914. The War brought an end to the Progressive Era and ushered in a relatively stagnant period for the growth of the profession. However, the scaffolding constructed during the early twentieth century provided a remarkably stable structure for the future growth of the Association. Furthermore, the Association continued to engage in public health issues and to hold its own against the attempts of organized medicine to curtail the scope of optometry practice.

Acknowledgment
This paper has been adapted from a virtual exhibit on The Archives & Museum of Optometry website, accessible at: http://www.aoa.org/about-the-aoa/archives-and-museum/exhibits/the-congress-of-1914?sso=y.

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Optometry One Hundred Years Ago

David A. Goss, O.D., Ph.D.
School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

The preceding article in this issue discussed the 1914 meeting of the American Optical Association, later to become the American Optometric Association. The following are some random bits of additional information on optometry 100 years ago gained by a perusal of the 1914 *Blue Book of Optometrists and Opticians* and of 1914 issues of the *Optical Journal and Review of Optometry*.

In a short blurb in a series of editorial notes in the January 22 issue of *The Optical Journal and Review of Optometry*, a writer speculated that about "half of the optometrists of this country use line charts in testing for astigmatism," noting that the 15 degree intervals of a clock dial is not exact. Some optometrists used "dial charts with a pin in the center so that they can be rotated, and with these they get exact results."[1] Another astigmatism testing method was "the older method of swinging cylinders," in which a cylinder lens in a trial frame was rotated back and forth until the patient reported the best visual acuity. An advantage of the line chart method over the latter method was said to be the fact that the axis of some trial case cylinders was not accurately marked.[1]

In an editorial note in the February 12 issue, the writer observed that many optometrists had the opinion that "no examination is complete for glasses until the fundus of the eye has been inspected so that if any signs are present that seem to show an abnormal condition the patient may be properly warned. Not that there is any obligation on the part of the optometrist to discover the presence of ocular diseases. People who come to him are supposed to be seeking glasses for healthy eyes, either to improve the vision or to make their vision easier. Conscientious optometrists, however, feel that they ought to go further than their legal responsibility and use the ophthalmoscope in every case, so that should anything abnormal show itself they can render a service very often very valuable to their patients."[2] After spending two paragraphs discussing the advantages and disadvantages of the direct and indirect methods of ophthalmoscopy, the writer noted that an "incidental advantage of the use of ophthalmoscope by either method, is that if anything abnormal is present in the transparent medium of the eye, it is detected, and, of course, suitable warning given."[2]

In summarizing the optometry laws in various states, the January 8 issue of *The Optical Journal and Review of Optometry* stated that the definitions of optometry in individual state laws was similar to the following: "The practice of optometry is defined to be the employment of any means, other than the use of drugs, for the measurement of the powers of vision and the adaptation of lenses for the aid thereof."[3]

In 1914 *Blue Book* there is a listing of 27 "optical schools and colleges" in the United States.[4] They were:

American Institute of Optometry (New York, NY), Joseph I. Pascal, Registrar.
Bradley Horological Institute (Peoria, IL), Prof. A.F. Westlake, Dean.
Columbia Optical College (St. Paul, MN), James Maguire, President.
Columbia University (New York, NY), Instructors Andrew Jay Cross, William Hallock, W.W. Stifler, Frederick A. Woll, Louis R. Welzmiller, M.D., Frank J. McMackin.
DeMars School of Optics (Minneapolis, MN), Louis L. DeMars, Principal.
Franklin Institute Department of Optics and Optometry (Passaic, NJ), W.C. Browne, Secretary.
Interstate Institute of Optometry (Litchfield, IL), Junius F. Sallee, President.
Kansas School of Optics (Biddeford, ME; chartered at Topeka, KS), personal instruction of J.E. Littlefield.
Los Angeles Medical School of Ophthalmology and Optometry (Los Angeles, CA), M.B. Ketchum, M.D.
Massachusetts School of Optometry (Boston, MA), Theodore F. Klein, Registrar.
McCormick Medical College (Chicago, IL), Charles McCormick, President.
Missouri College of Optometry (St. Louis), C. Harvi Altheide, Secretary.
Needles Institute of Optometry (Kansas City MO), W.B. Needles, President.
New Orleans Optical College (New Orleans, LA), David C. Williams, President.
Northern Illinois College of Ophthalmology and Otology (Chicago), George W. McFatrich, Secretary.
Omaha Optical Institute (Omaha, NE), Adelbert B. Tarbox, President.
Pennsylvania College of Optics and Ophthalmology (Philadelphia), M.L. Yubas, President.
Philadelphia Institute of Optometry (Philadelphia), Otto G. Haussman, Secretary.
Philadelphia Optical College (Philadelphia), C.H. Brown, President.
Physicians and Surgeons Optical College (Denver, CO).
Rochester School of Optometry (Rochester, NY), C.S. Hawkins, Secretary-Treasurer.
South Bend College of Optics (South Bend, IN), H.A. Thompson.
Southern California Eye College (Los Angeles, CA), M.M. Ring, Principal.
Southwestern Optical College (Kansas City, MO).
Spencer Optical Institute (New York, NY).
Washington School of Optometry (Spokane, WA), C.W.Talbot, President.
Western Ophthalmology Institute (San Francisco, CA), Allan H. Browne, Principal.

The brief descriptions of the schools in the *Blue Book* showed significant lack of uniformity. Some schools taught both medical graduates and optometry graduates in post-graduate courses. Some gave both attendance and correspondence courses. The length of study varied, with many of the schools stating a two year program and some mentioning variable lengths of study, one school giving a range of three months to three years. Various degrees or certificates were offered at different schools, such as Doctor of Optometry, Oph. D., Opt. M., Opt. B., Doctor of Optics, and Full Course certificate.[4]

Of particular importance in optometric education in 1914 was the opening at The Ohio State University of the second university-based optometry school. This was announced in the August 13 issue of *The Optical Journal and Review of Optometry*.[5] University trustees decided at an August 4 meeting to establish the program with it to begin on September 15. It was announced that Charles Sheard would serve as Director of the program, with F.P. Barr of Lancaster, Ohio; C.N. McDonnell of Columbus, Ohio; John C. Eberhardt of Dayton, Ohio; and Clark Sloan of Cleveland, Ohio as lecturers.

The requirement for a certificate would be Ohio State's two years of optometry training following a minimum of two years of high school work. The required courses in the two years at Ohio State were:
First Year, First Semester – Mathematics, Physics, Anatomy and Physiology, and English (14 credit hours).
First Year, Second Semester – Theoretical Optics, Practical Optics, Theoretical Optometry (15 credit hours).
Second Year, First Semester – Theoretical Optics, Physiological Optics, Practical Optics, Theoretical Optometry, Pathological Conditions of the Eye, Practical Optometry (15 credit hours).
Second Year, Second Semester – Theoretical Optics, Physiological Optics, Physiological Conditions of the Eye, Practical Optometry, Radiant Energy and the Eye, Practice Course (16 credit hours).

The announcement of the program at Ohio State stated that it was "planned to meet the most rigorous of any of the State laws." It further went on to say that: "Everywhere in Ohio the optometrists are jubilant and agree that now with an optometry department in the State university they must win their campaign for an optometry law."[5]

Periodically throughout the year, *The Optical Journal and Review of Optometry* reported on the status of enactment of optometry laws. In 1914, optometry achieved the passage of licensure laws in Maryland and New Jersey, thirteen years after the first optometry law was passed in Minnesota. By the end of the year, 33 states had optometry laws.[6] It would be another ten years before all states and the District of Columbia had optometry laws.

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An Appreciation of Dr. Henry Hofstetter and His Role in the Preservation and Advancement of Optometry History

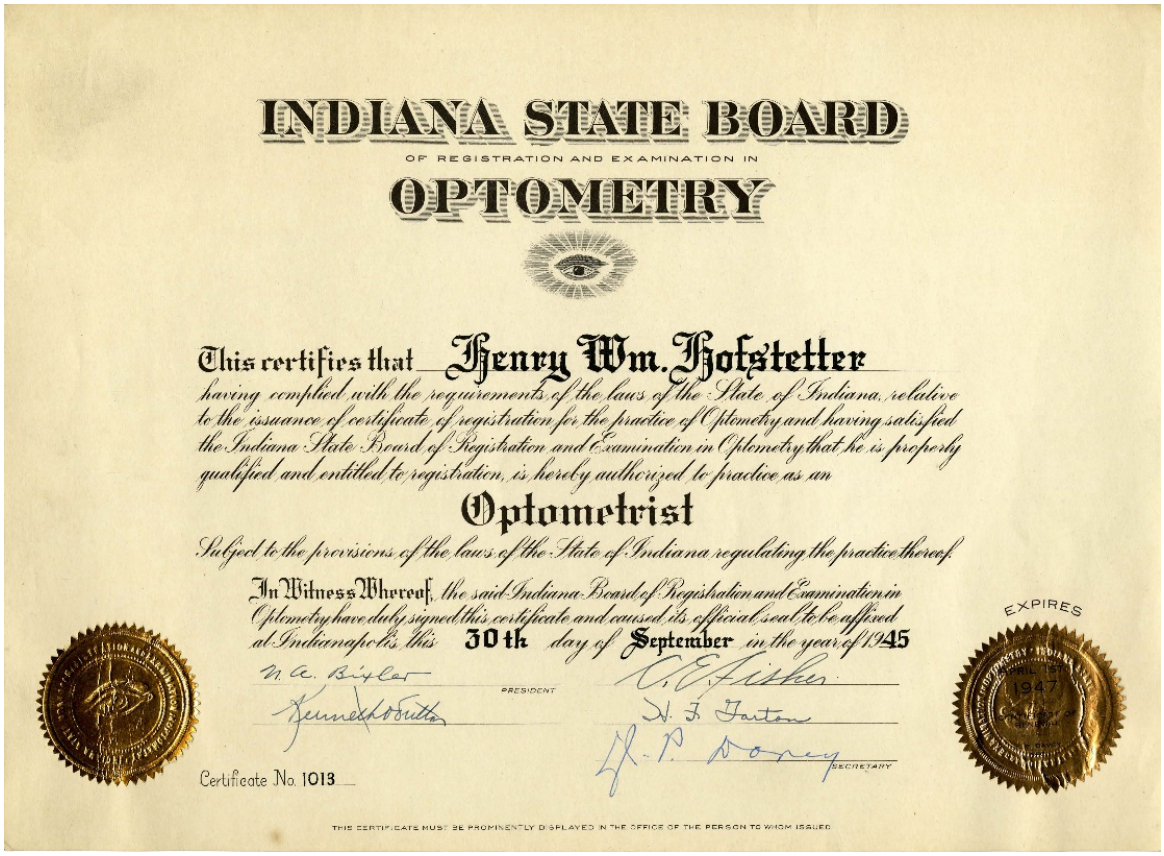
Kirsten Pourroy Hébert, B.A.
Heritage Services Specialist, The Archives & Museum of Optometry, 243 N. Lindbergh Boulevard, St. Louis, MO 63141, khebert@aoa.org

September 10, 2014 marked the 100th anniversary of the birth of the Optometric Historical Society's founder and first President, Dr. Henry W Hofstetter (1914-2002).[a] Born and raised in rural Ohio, Dr. Hofstetter was a first-generation American whose lifelong profession was as an educator. Dr. Hofstetter received his teacher's certificate from Kent State University (1933) and went on to complete a B.S. in Optometry (1939) followed by a M.S. (1940) and Ph.D. (1942) in Physiological Optics from Ohio State University—a program that is also celebrating a centennial this year.[1]

For almost 70 years, Dr. Hofstetter held posts as an elementary school teacher, optometry faculty member and administrator. He was a professor at Ohio State, Dean of the Los Angeles School of Optometry, and the first Director of Indiana University's Division of Optometry. After his retirement, he continued to be active as adjunct and emeritus faculty and received honorary degrees from many institutions. Dr. Hofstetter was not sequestered in academia by any means; he held licenses to practice optometry in three states: Ohio (1939), Indiana (1945) and California (1950) (Figure 1). Additionally, he held leadership positions in many organizations and had an international focus that earned him the honor of having his name attached to the "World Council of Optometry's Hofstetter Symposium on International Optometry and Vision Care" (1999).

Dr. Hofstetter was also active in the American Optometric Association (AOA), serving on the Board of Trustees, as the AOA Vice President and, finally, the 47th President (Figure 2) of the Association (1968-1969). During the course of his career, he received numerous awards[b] from the Association and other organizations for his contributions to the discipline (Figure 3).[2]

Much has been written about Dr. Hofstetter by his colleagues and friends and his monumental achievements on behalf of optometry as an educator, administrator, leader and practitioner are well known to students of optometry history. My relationship with Dr. Hofstetter is different; as the steward of the AOA's institutional repository which includes archival materials and museum objects that document AOA history and the development of the profession, I feel his presence and influence very keenly.



INDIANA STATE BOARD

OF REGISTRATION AND EXAMINATION IN

OPTOMETRY

This certifies that Henry Wm. Hofstetter

having complied with the requirements of the laws of the State of Indiana, relative to the issuance of certificate of registration for the practice of Optometry and having satisfied the Indiana State Board of Registration and Examination in Optometry that he is properly qualified and entitled to registration, is hereby authorized to practice as an

Optometrist

Subject to the provisions of the laws of the State of Indiana regulating the practice thereof.

In Witness Whereof, the said Indiana Board of Registration and Examination in Optometry have duly signed this certificate and caused its official seal to be affixed at Indianapolis this 30th day of September in the year of 1945

PRESIDENT

SECRETARY

Certificate No. 1013

EXPIRES

APRIL 1ST 1947

THIS CERTIFICATE MUST BE PROMINENTLY DISPLAYED IN THE OFFICE OF THE PERSON TO WHOM ISSUED

Figure 1. Certificate of Registration for the Practice of Optometry, no. 1013, Indiana State board of Registration and Examination in Optometry. Issued to Henry Wm. Hofstetter on September 30, 1945. The Archives & Museum of Optometry, Folder GM 3.

Dr. Hofstetter was a member of the Board of Trustees (1962-1968) and AOA President (1968-1969) at a time when the services of the library were beginning to prove invaluable to optometrists and students of optometry. The International Library, Archives and Museum of Optometry (ILAMO, 1973-2009) did not yet exist and Head Librarian, Maria Dablemont, had been communicating her concerns about the state of the reference services, the management of the material in her care and the development of the collections from the moment she was hired in 1964. In Dr. Hofstetter she found a staunch ally and advocate among the Board of Trustees.

As a member of the “History Committee” and the “Library Committee,” Hofstetter corresponded often with Dablemont. In a 1965 letter, he advised her on how to present her case to the Board and cultivate a following among members. He gave the librarian explicit instructions about how create compelling reports to the Board, use the media to promote the library and interact with users. His suggestions demonstrated an excellent understanding of how to appeal to his colleagues not only by providing them with information to combat optometry’s foes, but also by appealing to their egos. Always supportive and ever humble, Hofstetter ends his letter:

> "I hope you will forgive me for preaching like this but it is only because I know you can do this job so very effectively and that you merely need a little encouragement. The most important part of any library is the librarian, and the name Dablemont can become more important to optometry than the name Prentice."[3]

As President-Elect, Hofstetter showed great respect for Dablemont's skill as a historian and researcher while also extending his influence to protect her. In her work with the History Committee, Dablemont authored an article "The Survival of an Ideal" in which she traces the origins of optometry to the optical trade. Hofstetter recognizes the accuracy of her research but correctly asserts that some may be offended by the association of optometry with a "trade." In his response to her submission, Hofstetter replies, "I would have no objection to offending a few nincompoops, but I am unwilling to throw our priceless librarian to the fury of some simple people." He tactfully suggests article be rewritten "with some gentle, subtle, introductory sentences . . . which will make the average optometric reader more receptive rather than resistant."[4]

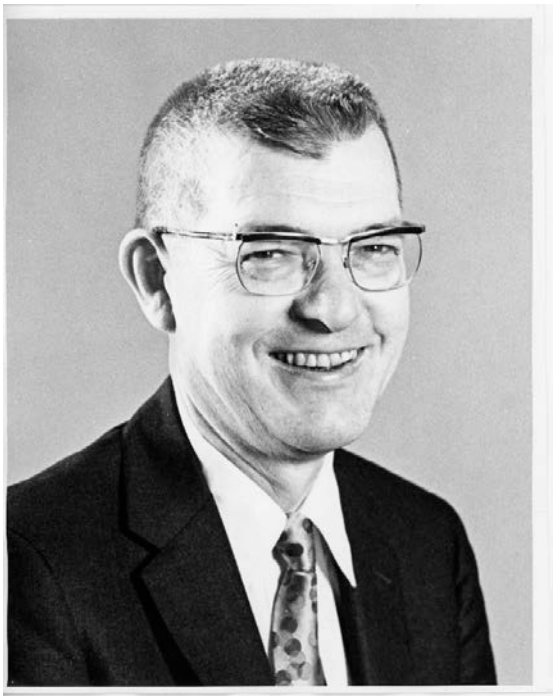


Figure 2. American Optometric Association President Portrait Collection, "Henry W Hofstetter," 1968. The Archives & Museum of Optometry, St. Louis, MO.

As an academic and a scientist, Hofstetter unwaveringly supported the growth of the library holdings. He understood that preserving scholarly research bolstered optometry's scientific knowledge base which in turn allowed it to flourish as a profession, clinical practice and scientific discipline. In his 1969 President's Report to the House of Delegates, Hofstetter stated:

". . . optometry still has a long way to go in the assumption of its full responsibility in support of visual science as a discipline . . . . Our missions, our research support, our libraries, our curricula, our public information channels, our literature, and our organizational resources should be geared for a total interest in vision, not merely on those aspects that currently happen to relate to prevailing clinical demands."[5]

Figure 3. American Optometric Association Distinguished Service Award. Awarded to Dr. Henry W. Hofstetter (1991). The Archives & Museum of Optometry, St. Louis, MO.

While Hofstetter exerted his influence to broaden the scope of the library holdings—the repository's name reflected his interest in international optometry—he also recognized that the collections held there should be unique. In a 1966 letter, he advised Dablemont that her collections development need not "encompass the whole field of visual science." This endeavor, he stated, "seems more appropriate for a major university."[6] It is Hofstetter and Dablemont who deserve credit for developing the breadth and depth of materials on optometry that, at one time, comprised one of the most important repositories of its kind in the world.

In these communications with Dablemont, it is easy to discern why Dr. Hofstetter earned such respect and adoration among his colleagues, students and others who enjoyed his mentorship. He was extremely gracious and always quick to give credit to others which he easily could have taken for himself. He was as generous with his praise as he was with his advice and negotiated compromises that jeopardized neither Dablemont's position nor her integrity as a historian and information manager. This allowed her to apply her considerable expertise to developing the AOA collections and extract the support she needed to make the ILAMO a viable resource.

In tandem with his support of the library, Hofstetter collaborated with Dablemont to found the Optometric Historical Society (OHS). Hofstetter indicates the idea of the Society predated its establishment by at least four years:

> "At almost my first personal acquaintance with her [Dablemont], probably the same year, she pointed up the need for an optometric historical society and suggested to me that I should initiate its founding. Despite my informing her that I was in no sense a historian, history having been my poorest subject in school, she started literally hounding me personally, and perhaps others, to take steps to organize the group."[7]

In 1968, Hofstetter and Dablemont created Bylaws and a Constitution for the Society. In September of 1969, they officially founded the OHS.[8] The first *Hindsight* was circulated in 1970 and listed 33 founding members.[9]

In these early documents, the intimate relationship between the OHS and the AOA repository is clear. Whereas it was (and remains) the mission of the OHS to "encourage the collection and preservation of materials relating to the history of optometry," it is The Archives & Museum of Optometry's (AMO) mission to collect, preserve and provide access to these materials. Just as the OHS collected oral histories from prominent optometrists (1968-1973) and deposited these in the ILAMO for safekeeping, the AMO is in the process of launching a new oral history program to continue on the expansion of optometry scope of practice into public health. Finally, the OHS mission also charges members to "encourage and assist in the care of archives of optometric interest."[10] The AMO has recently embarked on a preservation program to ensure that our collections are protected and will rely on the members of the OHS to help promote our conservation efforts to the wider membership of the AOA and optometrists.

It is evident in the correspondence between Dr. Hofstetter and Mrs. Dablemont, both personal and professional, that this intimacy between the two entities is the result of Dr. Hofstetter's continued support of and promotion of the repository's mission and Dablemont's work in particular. This relationship serves as a model of professional collaboration and cooperation in pursuit of a singular goal that the OHS and the AMO continue to share: to preserve optometry's history. This year, the OHS will fully realize the Board's 2011 decision to become part of Optometry Cares' Heritage Services program under which the AMO also operates. As the Heritage Services Specialist, I plan to remain true to this spirit of partnership and mutual support that Dr. Hofstetter and Mrs. Dablemont forged almost 50 years ago.

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Notes

a. Hofstetter learned late in life that his legal middle name was not an abbreviation, but rather the letter "W". He ceased using a period after his middle name in subsequent communications and publications. (Goss DA, personal communication, October 20, 2014).

b. According to Goss (2002) and *AOA News* (National Optometry Hall of Fame inducts 4 leaders of profession. [1999, November 15]. *AOA News*, *38*, 10, p. 12.) Dr. Hofstetter was inducted into the National Optometry Hall of Fame and received the Distinguished Service Award from the World Council of Optometry in 1999, the Lifetime Achievement and Distinguished Service Awards from the Indiana Optometric Association, the Prentice Medal from the American Academy of Optometry, the Armed Forces Optometric Society Orion Award, the Apollo Award from the AOA, and the International Optometrist of the Year Award from the International Optometric and Optical League.

A Look at the Origins of Dissociated Phoria and Fusional Vergence Range Testing

David A. Goss, O.D., Ph.D.
School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

A dissociated phoria test measures the magnitude of misalignment of the ocular lines of sight with the object of regard when binocular fusion has been disrupted. The design of dissociated phoria tests must thus have some method of preventing binocular fusion. And they use either a scale or prisms to measure the ocular misalignment.

It appears that the first subjective dissociated phoria test was the von Graefe prism diplopia test. The German ophthalmologist Albrecht von Graefe (1828-1870) described the test in 1861.[1,2] As with the procedure as practiced today, for lateral phorias, von Graefe used a vertical prism to eliminate fusion and found the amount of lateral prism that aligned the diplopic images. The test target that von Graefe used for lateral phorias was a dot with a vertical line passing through it. Later it was recognized that control of accommodation during the test was important, so that today letter targets are used for the test.

The Maddox rod test was originated by the British ophthalmologist Ernest Edmund Maddox (1863-1933).[3,4] In this test, fusion is prevented by the distortion produced over one eye by the Maddox rod. The initial form of the Maddox rod was a short glass rod mounted on a metal disc, and later it was several pieces of glass rod laid side by side and sealed together.[5] Maddox described the performance of the test as follows: “On looking at a distant flame with this before one eye, it appears converted into a long streak of light, which there is no desire to regard as a false image of the flame, from its dissimilarity, especially if red glass be used. If the streak pass through the flame, equilibrium is perfect, but if otherwise, its distance indicates the amount of latent deviation. The prism that is able to bring the line and the flame together is the measure of it.”[6]

In the test that is commonly known today as the modified Thorington test, a Maddox rod is held over one eye while the other eye views a tangent scale calibrated for use at a particular distance. A light is shined from the zero point on the tangent scale. The patient reports where the line produced by the Maddox rod appears on the tangent scale. When the tangent scale is at the correct distance from the patient, the location of the line on the scale indicates the amount of the phoria. Although the test typically is eponymous to James Thorington (1858-1944), it appears that priority should go to E.E. Maddox or Charles Prentice. Maddox described the test in an 1890 paper.[7] Maddox noted that this test could be used to measure lateral and vertical phorias at distance and at near.[8] Charles Prentice may have independently designed a test like this one at about the same time, differing in that he used a +12 D cylindrical lens instead of a Maddox rod.[9] When Thorington described this test in a 1913 book, he made no

claim for priority and he referred to the tangent scale as the "tangent scale of Prentice."[10] The origin of this test being known as the modified Thorington test may have come from a 1948 paper by Hirsch and Bing.[11] Maddox may have gotten the idea for this phoria test from tangent scales of Landolt and Hirschberg (1875), who used them with diplopia tests to determine the angle of deviation in strabismus,[12] although it is interesting to note that von Noorden referred to a tangent scale for that purpose as a "Maddox cross."[13]

Another test for lateral phorias is one popularized by Australian optometrist Edwin Howell.[14] This test makes use of a scale arranged along a horizontal line with an arrow directed vertically at the zero point on the scale. Vertical prism is used to double the scale and the patient reports the number on the doubled scale to which the arrow and points as well as whether the arrow is to the right or the left of the zero on the doubled scale. Some publications have attributed this test to Charles Prentice,[14,15] but it appears that priority might perhaps go to E.E. Maddox. Maddox described the test in 1889.[16]

Prisms used for phoria measurements have included loose prisms, prism bars, Stevens phorometers (1888), and Risley rotary prisms (1889).[17,18] The first phoropter, patented by Henry DeZeng in 1909, included a Stevens phorometer, rotary prisms, and Maddox rods.[19] Another early instrument that could be used to test phoria status was the Hazen kratometer, an instrument which could be clamped to a table. In the Hazen kratometer, a "prism battery," a slide with a series of different prisms, could be used to vary prism power in front of one of the patient's viewing ports.[20,21]

By the beginning of the twentieth century, phoria testing was part of the repertoire of many optometrists. The 1895 correspondence course of the South Bend College of Optics included "muscle insufficiencies" as one of its twenty lessons.[22] A 1911 article in *Optical Journal and Review of Optometry* declared that: "Many optometrists now consider a test of the muscle balance as much a part of every examination, as is the record of visual acuity."[23]

Fusional vergence range testing involves determining the range of prism powers base-in and base-out through which the patient can see clearly and/or singly. It is unclear who originated fusional vergence range testing. In the 1860s, F.C. Donders[24] implied ranges of relative convergence in his studies of the zone of clear single binocular vision. In the 1880s, Edmond Landolt[25] noted that the divergence limit is seldom located at a finite distance, but rather the eyes can diverge beyond parallelism of the lines of sight, therefore making it necessary to use base-in prism to measure the vergence far point. For the convergence limit Landolt[26] used a device he called an ophthalmo-dynamometer. This consisted of a black cylinder with a vertical slit and an attached tape measure. A candle was placed inside the cylinder. The illuminated vertical slit served as a target for a near point of convergence determination. The distance at which the patient noted the slit doubled was measured with the tape measure.

In 1889, Maddox[27] described measurement of the "relative range of convergence" by using base-in prism for negative vergence and base-out prism for positive vergence. Maddox suggested that: "This test would probably be the most valuable of any, if the best ratio between the negative and positive parts were well worked out for different distances."[28] Maddox recommended using pairs of prisms rather than a single prism over one eye.

The British astronomer John Herschel (1792-1871) showed that when two prisms were placed in opposition and rotated in opposite directions, the resultant effect would be that of a single increasing prism.[29] That principle was used by S.D. Risley in 1889 to make a rotary prism system with smooth increase in prism power for clinical use.[30] Evidence for the utility of that design is the fact that rotary prisms based on Risley's design continue to be incorporated in phoropters manufactured today.

By the early twentieth century, dissociated phorias and fusional vergence ranges had become a part of the standard examination of many optometrists. Charles Sheard included them in his 1917 list of tests that should be performed by the optometrist.[31,32] They were then included in the "21 point" examination which was introduced by the Optometric Extension Program in the early 1930s and which subsequently saw wide usage for several decades.[33-35] They continue to be an essential part of binocular vision analysis.

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Book Review: The Eye in History

The Eye in History. Frank Joseph Goes. New Delhi, India: Jaypee Brothers Medical Publishers, 2013. xii + 502 pages. ISBN: 978-93-5090-274-5. Softcover, $149.

David A. Goss, O.D., Ph.D.
School of Optometry, Indiana University, Bloomington, IN 47405, dgoss@indiana.edu

This book is a collection of essays on topics related to the eye and to ophthalmology and its history. The editor is a well-known Belgian ophthalmologist. In the preface, he states that his "idea was to give the interested ophthalmologist, the general practitioner, and an enquiring layman, an insight in the historical development of the discoveries that relate to the eye…" The editor authored or co-authored 25 of the book's 50 chapters. Writing was also done by 37 contributors, most of whom were from European countries.

One could categorize the book's topics, covered at varying levels of detail and depth, as anatomy and physiology of the eye, comparative ocular anatomy, famous ophthalmologists, history of various visual aids, growth of the eye, refractive errors, psychology and symbolism of light and vision, blindness, relation of vision to painting, vision problems of famous painters, vision problems of famous persons in history, selected persons who made important contributions to the improvement or understanding of visual function, history of eye surgery procedures, and speculations on the future of surgery and technology in ophthalmology.

The foreword to the book states that it was not the editor's "intention to be complete," but rather he "chose…topics which are not usually found in ophthalmology textbooks." As an example of the tidbits of information in the book, Philippe Lanthony, in a chapter titled "Accommodation and Painting," says that painters have three "practical vision distances": (1) the distance from the object being painted, (2) the distance from the surface on which he or she is painting, and (3) the observation distance, which is the distance from which the painting is meant to be observed. Lanthony also reported a study showing that almost all painters who used the pointillism technique abandoned it around the age of presbyopia onset.

Another tidbit I learned was that Teddy Roosevelt was nearly blind in one eye in the last year of his presidency, probably due to traumatic cataract and/or retinal detachment. He had about 8D of myopia in each eye. One can also read short chapters on Antonie van Leeuwenhoek, Louis Braille, John Dalton, Otto Wichterle, Arthur Conan Doyle, and others.

As with any book errors can be found. One example is in the discussion of the myopia of several members of the Medici family in 15th and 16th century Italy. The

author states that because of their myopia, they were able to pursue intellectual activities even though “Reading spectacles were not accessible to them.” (p. 332) Spectacles were invented well before that time in the late 13th century, and Vincent Ilardi in his well researched book *Renaissance Vision from Spectacles to Telescopes* documented that spectacles were quite common in the time of the Medici and that they were well aware of them. Another example is the mention of Roger Bacon as the inventor of spectacles (p. 336). Bacon described how magnifying lenses can be used to aid reading, but various scholars have noted that his writings did not mention spectacles and he has been discounted as a potential inventor of them.

The book is profusely illustrated with numerous color photographs, diagrams, paintings, and other illustrations. It is remarkable for the wide variety of topics it addresses.

Instructions to Authors

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Material submitted for publication should be sent to the editor: David A. Goss, School of Optometry, Indiana University, Bloomington, IN 47405; dgoss@indiana.edu. Material may be submitted by postal service or by email, although the preferred mode of reception of submissions is a Word document in an email attachment.

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Submissions should include a title, the names, degrees, postal addresses, and email addresses of the authors. Abstracts are not recommended for short articles. Abstracts and key words are recommended but not necessary for longer articles.

Tables and figures should be numbered sequentially in the order that the mention of them appears in the text, e.g., Table 1, Table 2, Figure 1, Figure 2. Each table and figure should have mention or discussion of it in the text of the article. Each table and figure should be accompanied by an explanatory figure legend or table legend. Any article containing tables should be submitted as a Word document attachment to an email message with the tables produced through the table creating function of Word (as opposed to an Excel or comparable spreadsheet).

Extensive use of uncommon abbreviations, symbols, and acronyms is discouraged. Common abbreviations, such as D for diopters or cm for centimeters, may be used. Common symbols, such as Δ for prism diopters, may be used when the context for their use is clear. The first use of acronyms should be accompanied by the name or phrase spelled out followed by the acronym in parentheses, as for example: The Optometric Historical Society (OHS) has produced a quarterly publication since 1970.

Acknowledgments should be placed between the text of the article and the reference section. Sources of support, such as grant funding or other significant

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Chapter in a multi-author volume:
Penisten DK. Eyes and vision in North American Indiana cultures: An historical perspective on traditional medicine and mythology. In: Goss DA, Edmondson LL, eds. Eye and Vision Conditions in the American Indian. Yukon, OK; Pueblo Publishing, 1990:186-190.

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