

NEWSLETTER  
OF THE

OPTOMETRIC HISTORICAL SOCIETY

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1978 O.H.S. Officers:

Immediately following the election of James P. Leeds, O.D., 2470 East 116th Street, Carmel, Indiana 46033, U.S.A., as the newest member of the Executive Board for a five year term, the Board balloted among themselves for duties as officers, but a few days too late to be announced in the January issue of this newsletter. Elected and serving for the calendar year 1978 are:

President: Henry A. Knoll  
Vice-President: Grace Weiner  
Secretary-Treasurer: Maria Dablemont  
Directors: James P. Leeds  
John R. Levene

Hometown recognition:

Our most recently elected OHS Executive Board member James Leeds was given a three-page celebrity write-up in a very locally published periodical called The Hamiltonion, a monthly magazine for and about people of Hamilton County, in which Dr. Leeds' town of Carmel, Indiana, is located. The article, "In The Off Hours," by Glenn Kerfoot in the November 1977 issue, Vol. 2, No. 11, pp. 7-9, includes two smiling photographs of Jim with a small part of his extensive book collection in the background. Virtually all of his more than 2,000 early books are related to the eye, vision, and optics.

Dr. Leeds' oldest book is "An Inquiry Into the Human Mind on the Principles of Common Sense" by Thomas Reid, D.D., printed in Edinburgh, Scotland, in 1764. It describes all the senses but the emphasis is on sight.

This issue of The Hamiltonion is being sent to ILAMO, the International Library, Archives, and Museum of Optometry.

James Leeds' quarterly epistle:

"Ready for my quarterly letter on your letter? The thing that intrigued me was about early color glass. E. E. Shreiner wrote a book in 1919 titled, 'Colored Glass' ('Scientific Tests of Colored Glass for Optical Purposes Including a Short History of Glass & Glass Terms'). It was published by McCoy & Stillwell, Dispensing Opticians, New York. He lists all available tinted lenses of that day, plus a sort of optical dictionary.

"I also have a book by Pleasanton concerning blue glass. My copy was written in 1877. I didn't look through it in the past few days, but I recall reading some place elsewhere that a lot of homes in Philadelphia (where he lived) had blue window panes to let in the blue light. It was mentioned that a blue window pane could still be seen in some old homes. Perhaps one of our Philadelphia members might recall seeing the blue window pane. Incidentally, his book was written on blue paper with black ink, hardly helpful to a presbyope.

"When the Academy met in Philadelphia a few years ago, I made my usual bookstore trek. I saw about a half-dozen copies of Pleasanton's book. Apparently they never got out of Philly. That compares to the two or three I have seen or heard of in all my other years of collecting. I have seen a number of references to this book, so it must have had quite an effect in its day.

"There was also a book on the effects of red light written by Dr. Pancoast about the same time, but so far it has escaped my clutches. So has the next famous one of that era, 'The Principles of Light and Color' by Edwin D. Babbitt, New York, 1878. An edition edited and annotated by Faber Birren, printed by University Books, New Hyde Park, NY, 1967, is in my library, but he omitted some of the 'outdated and unacceptable' chapters."

#### Earliest exclusive optometric periodical?

In an article entitled, "Retrospect of 42 Years in Optics" in the April 13, 1922, issue of The Optical Journal and Review, Vol. 49, No. 15, pp. 55-57, the author, "Dr. J. Milton Johnston, A.M.," gives an account of ". . . the launching of the first exclusively optical journal." A similar account appeared in the December 1908 issue of The Optical Journal, Vol. 25, No. 11, pp. 115-117.

The author was associated with the Johnston Optical Co., a firm founded by his brother George, which sponsored publication of the journal. The chronological details are not stated perfectly clearly, but it is evident that Dr. Johnston authored a series of optometric lessons entitled Eye Studies. This was the caption of a series of articles in a new periodical called The Johnston Eye-Echo. The first issue was the January-February 1886 number.

The paper survived for some years. In 1891 the title was changed to The Eye-Light. In 1893 Johnston published an optical periodical entitled Our Vision, which perhaps was merely another change of title of the same serial publication. The statement that he ". . . started an optical school" in 1895 suggests that Our Vision was then discontinued.

The Eye Studies series was revised and published in book form in 1892.

Dr. Johnston was born in 1844. After service in the Civil War he attended Adrian College in Michigan and later Northwestern University in

Illinois. It was after nine years in the Methodist ministry that he joined his brother George in the optical business. In 1905 he moved to Portage, Wisconsin, where he succeeded to the optometric practice of a Dr. Sandatein. He died in 1930. His obituary and portrait appeared in the March 7, 1930, issue of the Optical Journal and Review, Vol. 65, No. 10, pp. 45-56.

### The Johnston Eye-Echo:

Hardly an hour after my proof-reading of the initial typewritten copy of the immediately preceding paragraphs who should drop in for his approximately once-every-five-years visit but OHS member J. J. Abrams, O.D., with an old, substantially beaten-up, embossed, stiff-cover cumulative binder containing 20 very brittle and yellowed issues of the Johnston Eye-Echo. The earliest was the September-October 1887 issue, Volume 2, No. 5. Then followed the bimonthly 1888 issue numbers 1, 2, 4, 5, and 6 of Volume 3, all six bimonthly issues of Volume 4 for 1889, and all six issues of Volume 5 for 1890.

Three additional unnumbered issues, all different but identically subtitled "Extra 1, 1888" quite evidently replaced portions of missing regular issues. They were explained simply as "reissues of exhausted numbers." Apparently the demand in at least these instances exceeded the supply of originals. These "extras" were therefore issued to enable subscribers to get complete sets of the serially numbered technical articles entitled "Eye Studies", quite obviously the most popular feature of The Johnston Eye-Echo.

The regular issues and these "extra" issues in this collection together provide Nos. I-IV and X-XXVIII of the "Eye Studies" columns. These articles, incidentally, are well written and contain a great deal of contemporary technical information and terminology related to vision and spectacles. All of these issues should be microfilmed or otherwise reproduced in usable form for scholarly research, as they are too brittle to handle safely in their presently preserved form.

Each regular issue consists of four pages, approximately 35 x 26 cm (14" x 10"). The publisher, the Johnston Optical Company, was located in Detroit, Michigan. The printing style is quite elegant and well edited, and the subscription rates suggest that it was strictly a self-supporting enterprise rather than a complimentary company promotional scheme.

Dr. "Jerry" Abrams purchased the collection from a rare book dealer and has donated it to ILAMO, the International Library, Archives, and Museum of Optometry, Inc., in St. Louis, Missouri.

Genealogy of the REVIEW OF OPTOMETRY:

In June 1882, or in January 1886, both of which dates have been asserted in print, a special optical department was established in the Jewelers' Circular, apparently the first ophthalmic optical literature to be provided systematically in an established periodical in the United States. The department was edited by C.A. Bucklin, M.D. At about this time, at the age of 16 or perhaps a bit older, Mr. Frederick Boger (1866-1936) was gaining his first journal experience as an employee of the publisher.

On December 31, 1890, Mr. Boger entered The Optician, a monthly, at the New York Post Office as second-class matter. The issue was Number 1 of Volume 1 dated January 1891.

Various published historical notes in the Optical Journal and Review of Optometry (Vol. 49, No. 15, April 13, 1922, page 46, and Vol. 73, No. 15, August 1, 1936, page 31) show a mere title change of The Optician to The Optical Journal in 1895, but a notation in the catalog file of the International Library, Archives, and Museum of Optometry (ILAMO), shows The Optician suspended at the close of 1894 and resumed again, still as a monthly, in March, 1895, under the title The Optical Journal, Volume 1, Number 1. Mr. Boger continued as editor and proprietor of the newly named periodical.

While The Optical Journal continued, another periodical, The Focus, was started early in 1901 by George A. Rogers and published by him for several months until he joined the professional staff of the Northern Illinois College of Ophthalmology and Otology. At that time, The Focus became the property of Drs. J. B. and G. W. McFatrach. It was specially issued as The Daily Focus, a daily bulletin, during the 1901 (Chicago) convention of the American Association of Opticians (now the American Optometric Association). Around May, 1902, the McFatrachs sold The Focus to Frederick Boger, which seems to have terminated its publication under its own title except that it was again issued as a daily bulletin as The Daily Focus at the August 1902 convention in Boston.

ILAMO catalog notations indicate Volume 5 of The Optical Journal was not published, presumably just a skip in numbering. Actually "Volume 5" was issued separately during 1899 as The Optical Journal Supplement, a monthly magazine for students, simultaneously with the last one or two issues of Volume 4 and most of the issues of Volume 6 of The Optical Journal. The Optical Journal became a weekly in March 1904, perhaps temporarily, and in 1906 it, or rather Mr. Boger, acquired the Optical Instrument Monthly which had started its own Volume 1, Number 1 in June, 1905, and had continued at least until issue No. 5 in October, 1905.

On April 15, 1907, there appeared issue Number 1 of Volume 1 of another new periodical, The Optical Review, derived from the above-mentioned "Optical Department" section of the Jewelers' Circular, later consolidated with the Jewelers' Weekly and called the Jewelers' Circular-Weekly. The Optical Review continued publication through May, 1910, Volume 4, Number 2, and in June, 1910, combined with The Optical Journal to form the Optical Journal and

Review of Optometry. As of May, 1977 the title was reduced to Review of Optometry.

Unfortunately, with the reduced title the current publisher, the Chilton Company, has indicated its ownership by including with the title the possessive word "Chilton's" on the cover. Librarians being as meticulous as they must be, this periodical listing also appears now in some serial catalogs as Chilton's Review of Optometry, alphabetically under "C" instead of "R"!

Well, the above information, generously supplied to me by the International Library, Archives, and Museum of Optometry, has many missing details indeed, but it may be the most complete account available anywhere. If you have on your shelves, in your basement, in your attic, or otherwise in cold storage a clipping or an early issue of one or more of the publications mentioned, please send it to us, or at least a xerographic copy of it, so we can enter another detail or two in the pedigree.

#### A living legend for a half century:

"Make 'em See" is the title of a tribute to Herbert McCracken Dixon, O.D., attractively printed in the form of a 19½ x 19½ cm booklet of 24 pages by the Southern California College of Optometry. Dr. Dixon, born in 1892, completed the optometry course of the Los Angeles Medical School of Ophthalmology and Optometry, now the Southern California College of Optometry, in 1923, passed the Nevada State Board examinations the same year, and immediately started practicing optometry in association with Ward E. Taylor, O.D., in Reno. Recently retired from practice at age 85, but very much alive, he has established the Herbert McCracken Dixon and Minnie B. Dixon Family Trust, all the residue and remainder of which will be left to his optometric alma mater.

The booklet gives a homey account of Dr. Dixon's life and philosophy derived from an interview with Dr. Dixon and the recollections of three of his optometric protégés, Drs. Leonard W. Carpi, Samuel M. Davis, and Robert E. Robinson. The anecdotes in particular provide much historical background of early optometry in the far west of the U.S.A.

Very tastefully laid out and superbly illustrated with numerous candid photographs of Dr. Dixon, the booklet allows only one disconcerting detail, -- the spelling of the root syllables "ophthalm" in ophthalmology, ophthalmoscope, etc., twice correct, but five times incorrect.

#### Sterrett S. Titus, O.D., memoirs:

Dr. Titus of Leawood, Kansas, an OHS member who has contributed much more than his share to his profession, has responded to the suggestion of several of his optometric colleagues that he put into writing some of his early memoirs. Here are a few excerpts from his paper entitled TWO GENERATIONS IN OPTOMETRY which he dutifully submitted to our OHS Secretary with the humble request, "Let me know in which basket you throw this."

Once upon a time about 1880 a boy named John Titus was taken to an "eye-man" in Cincinnati, Ohio, to get some glasses. His eyes were aike and a pair of -1.75 spheres helped him somewhat but did not clear his vision. He struggled along until about 1890 in Chicago when a doctor he had become acquainted with called him one day and asked him to come over to his office after work, because he had some new lenses and he thought they were what Johnny needed. So for the first time John Titus got a pair of -3.50 cyls. x 180° and could really see. He was so impressed that as soon as possible he enrolled in the International School of Optics in London, Ontario. In 1894 he came to Kansas City, Missouri, and commenced to practice.

At that date he was a refracting optician. The words Optometry and Optometrist were not in use then. I'm not sure they had been invented then, but one of my early memories of the optical business was of arguments over using the new-fangled words. I was born in 1896, and I think it was about 1903 that my father moved into a new office and used both on the window (street level store): "John Titus, Optometrist and Optician." You will note that I left out "Dr." That also came into use later and helped to teach the public that Dr. John Titus, Optometrist, was indeed a member of an honorable profession.

Even in the 1920s there was still some doubt among the older refracting opticians as to whether they would ever be, or ever wanted to be, professionals.

One of the things I remember clearly is the very gradual transition as my father learned to call his customers patients. Before his death in 1930 it still called for great care to keep him from occasionally saying "customer." Along with this there began to be an urge for the professionally minded to move "upstairs." In this case upstairs didn't refer so much to the distance above the sidewalk as it did to the elimination of show-windows full of barometers and thermometers with lorgnettes and chains, and show-cases full inside. In other words, the store to office transition was hard. In 1921 hardly anyone had managed to change the emphasis from glasses to services, and I might say that in 1971 there were still men who had not done it, even in an office that looked professional in every respect.

I began to practice in 1919 and always had a professional attitude. It was very shortly after that that the struggle began to make a separate charge for examination. At first we tried to charge two dollars and later three and then five. During the late 1920s I experimented with some patients by asking, "If you are going to pay thirty dollars for your services and your glasses altogether, would you rather pay five dollars for the services and twenty-five for the glasses, or would you rather pay fifteen dollars for the services and fifteen dollars for the glasses?" Almost without exception the answer was the first way. Even when I explained that the glasses would be the same, the answer would be unchanged.

It was hard to educate the public, but it was harder to educate the Optometrist.

Turning back to 1894, complete equipment in those days was a trial frame, a trial case of lenses, plus and minus spheres, 0.12 to 20.00, plus and minus cylinders, 0.12 to 6.00, sometimes a card board chart that included an astigmatic dial, a ruler, a chair for the patient, and usually a stool for the optician. Most were taught to use the fogging technique, which approached an acceptable Rx from too much plus or too little minus until maximum clarity was obtained. In those days few men used weak cylinders, and as a youngster I saw one or two trial cases that didn't have any.

In examination technique the next forward step came with the retinoscope around the turn of the century. I don't know who the father of the retinoscope was, but in the central part of the United States a man named LaGrange was a good teacher. John Titus learned from him how to use a concave mirror about two inches in diameter with a small hole in the center mounted on a handle three or four inches long which would reflect the light from a spotlight above the patient's head into the pupil of the patient's eye. There was also one with a plane mirror instead of the -1.00 concave mirror. The only difference was that the reflected light from the patient's pupil moved in the opposite direction with one from what it did with the other. Whether the motion was "with" or "against" it could be neutralized with lenses and the first truly objective test had been born. In a short time all scopes were made with plane mirrors so there was no more confusion.

The spotlight above the head was a coal oil lamp in some offices, but my first one was an electric light bulb in a housing with an iris diaphragm so that the light could be made brighter or less so for different patients. My trial frame at this time, 1919, was commonly called a Wells Head. It had three lens cells, a Maddox Rod, and Risley Prisms, and was made to hang on a wall bracket which could be swung in front of the face, relieving him of the weight he formerly had to carry on his nose and ears.

It was about this time that emphasis was put on a real twenty foot test distance, even in a ten foot room. So we put a reversed chart above the patient's head and had him view it in a mirror ten feet away. Even the finest plate glass mirror gave a slightly double edge to lines and letters so we had to have mirrors silvered on the front surface to correct that difficulty. The chart showed only one row of letters at a time and worked on a roller principle controlled by a cord by the patient's chair.

It was also in 1919 that we got our second objective test, the General Optical Co. - Shuron Ophthalmometer. My father had owned another called the Chambers-Inskeep, or CI, about 1903 but had never been able to get any useful information from it. We began to study the Javal rule for interpretation of its findings and it helped greatly by speeding up our scoping and subjective findings.

I should say here that I had "puttered" around with optometry on Saturdays and holidays since 1914. I finished my course at Needles Institute and got my O.D. in 1919. Some of what I did in practice in the next year or so I had learned in school and some at "my father's knee." Of course, in Missouri, anyone could practice until the optometry law was passed in 1921. I might say that John Titus was one of the original members of the Board of Examiners, serving from 1921 to 1926.

Near the turn of the century a very few men were giving some attention to pairs of eyes that didn't work together. Dr. Wells was among the early ones and he adopted the principle of the stereoscope, took it off of the table in the front parlor, devised a set of cards with double pictures set at various widths apart which could be viewed in the stereoscope and by that means make the eyes turn in or out somewhat from their natural position in order to see the picture as it really was. These pictures or charts, as they could be called, involved the three degrees of fusion and could be used to give muscle exercises. He also devised the Wells Head mentioned previously, put a little bracket on the front of it four inches in front of the eyes, put +10.00 D spheres in the lens cells, and had a stereoscope with Risley prisms, and could really make a pair of eyes do tricks.

In 1949 the late Ralph Barstow wrote me and asked me a question to which I replied. . . . In 1962 he returned that letter with the following comment: "You may look upon your letter of 1949 with amazement, but I wanted you to have it as evidence of how much I've used it. In fact my last year's series for the Women's Auxiliary was built entirely on it, which shows that you have not lived in vain."

The full report, 13 typewritten pages, including the correspondence between Titus and Barstow, are on file in the International Library, Archives, and Museum of Optometry, Inc.

Derek C. Davidson writes:

We are delighted to include Mr. Davidson, Northall Cottage, East Chiltington, Nr. Lewes, E. Sussex, England, among our members. He wrote last September as follows:



I have just heard of the "Optometric Historical Society" through the British Opticians Journal and hasten to apply for membership, having been a collector for some 40 years.

There are between 300 and 400 items in my collection from "eyeglasses to spyglasses" from 1700 to 1900 and a similar number of 20th Century Spectacles, and am at present preparing a book on the subject.

The enclosed photocopies of some articles which I have written recently are for your information.

The four one-page articles, with illustrations are from the June 10, June 24, July 22, and September 16 issues of The Optician, vol. 173, nos. 4488 and 4490, and Vol. 174, nos. 4494 and 4502, on pages 22, 16, 25, and 27, respectively. The respective titles are "The long-handled lorgnette," "Early optician's cards," "Protective eyewear," and "The silvered brass spectacle." Mr. Davidson writes in an easy but authentic style.

#### How Helmholtz invented the ophthalmoscope:

On October 3, 1893, the year before his death, Professor Hermann V. Helmholtz delivered the opening lecture of Professor H. Knapp's Ophthalmic Clinic at the College of Physicians and Surgeons, in New York. The title of his lecture was "The History of the Discovery of the Ophthalmoscope," and it was reported under the same title in the December 16, 1893, issue of Medical Record, New York, Vol. 44, No. 25, Whole No. 1206, pages 769-772. Present on the occasion were Mr. Alexander Graham Bell, President Seth Low, and Professor Knapp, who introduced Helmholtz with some historical remarks on the development of ophthalmology with special reference to the contributions of Helmholtz. The introduction was considerably longer than Helmholtz's talk.

Following are a few especially interesting excerpts from Helmholtz's talk:

Gentlemen, Professor Knapp asked me to tell you the story of the invention of the ophthalmoscope. In complying with his request I must beg your pardon, first, for being obliged to speak of myself; secondly, for my insufficient command of the English language.

At the time when I devised the ophthalmoscope I was professor of physiology and general pathology in the University of Koenigsberg. My career before had been somewhat erratic. When at school my ardent desire had been to study physics, but physics at that time was a branch of science that did not promise its followers a good livelihood. It is different nowadays.

My father told me that he did not see how it was possible

to maintain me in the study of physics or inorganic natural science alone, but if I would also take up the biological department, or practical medicine, he could help me, so I went to become a medical man.

I think that no physiologist doubted, until the end of the last century, that the eyes of cats, dogs, oxen, and other mammals, and of birds, developed light of their own which shone forth at night. It seemed to them to be the same process as was observed in the luminosity of insects in the water, etc.

About 1846 the English oculist, Dr. William Cumming, discovered that the experiment which had succeeded on the luminous eyes of mammalia could also be performed on the living human eye, and everybody's eyes could be made luminous. It is an entertaining experiment in a social gathering, and students have applied it to frighten young ladies.

In my lectures I had to give an account of these experiments, and to try to give an explanation of the phenomena. I was obliged, therefore, to seek for an explanation myself, and I may say that it was not difficult to find - at least for a man who had occupied his time with reading physics and chemistry, and in making experiments, as far as his scanty means would allow. Being acquainted with the principles of optics as far as they were then known, I proceeded to analyze the course of the rays of light in the experiment just alluded to, and thus reached an explanation of the phenomena, the correctness of which was afterward confirmed by the ophthalmometer.

We have seen how it is possible to illuminate the eye by a light which is outside of the eye. The eye to be observed having been rendered luminous, there is only a second condition to be fulfilled, namely, to make it possible for the eye of the observer to accommodate itself to the focal distance of the one to be observed. That was easily done, it being only necessary to choose a lens of the proper focal distance. By placing it behind the glass-plate, the observer no longer sees a diffuse illumination of the pupil of the other person, but a picture of his retina in all its anatomical details.

All that was original with me in the matter was that I went to ask how the optic images could be produced by the light coming back from the illuminated eye. All my predecessors had failed to put this question to themselves. They had stopped in the middle of their way instead of going on to the end. As soon as I had answered that question I saw also how an ophthalmoscope could be constructed, and it took me only two days to do it and successfully to experiment with the new instrument. Having followed the chain up, link by link, to its end; having traced the rays of light on their course from the flame into the eye of the observed, and shown what becomes of them

when reflected, and how they can, by the interposition of proper lenses, be united on the retina of the observer and thus give him a distinct view of the background of the eye observed; that was the solution of the problem; and with that, gentlemen, my story is told.

### Concerning W. B. Needles:

A folded, printed, and somewhat yellowed announcement, 22 x 28 cm, found by Professor Charles L. Haine, O.D., in a 1908 book, is entitled "Outline Study of Fogging System" by W. B. Needles, N.D., identified as President of the Needles Institute of Optometry, Kansas City, Missouri. Under the heading "Accommodation" (sic!) are listed 10 sub-topics or brief assertions. Under a second caption, "The Fogging Principle", are listed 20 more subtopics or phrases. Finally is shown a "QUIZ" consisting of 12 questions ranging from "Give one reason why we do not believe nature intended the Hyperopic eye to correct its own error." to "What kind of vision would you expect to find where the prescription calls for minus .25S, minus .25 Cyl axis 180?"

There are still many of us who remember "Bill" Needles, or at least met him. A number of his little books and teaching manuals may be found in optometry libraries. His operational influence on optometric education may well be argued to have been the most persistently dominating in the first half of this century. Quite certainly for almost 40 years he personally made the decisions as to what subjects the largest plurality of students in the United States were taught.

Who was he?

The 1912 Blue Book of Optometrists and Opticians listed Dr. Needles as having done postgraduate work at the McCormick Medical College in 1905, and that he was President of the Kansas City Optometric Society and a member of the Missouri Optometric Society and of the American Optometric Association.

The statement concerning the Needles Institute of Optometry in the same volume indicates that Needles began his career as a tutor in optometry in 1906 when he received occasional students for instruction in his private office. In the spring of 1907, the account goes on, he was engaged as Principal of the Kansas City School of Optometry and continued in this capacity until July, 1909, when he organized and chartered the Institute. Shortly thereafter the Needles Institute purchased the Kansas City School of Optometry outright. All of this, probably written by Needles himself, was just the beginning of a long and flamboyant institutional career.

What were his true attributes and fundamental nature of his character? Was he an enigma, and if so, must he remain so? Where is his biography, or his biographer? What was his "N.D." degree? Doctor of Naturopathy perhaps? He seems rarely to be mentioned in the annals of optometric history, yet his almost ubiquitous presence was surely a force, however inscrutable.

More about Ellis Island:

Following up the "Island of Tears" comments in the October issue (page 68) and the response from Professor Ress in the January issue (page 2), OHS member L. A. Ress has written us further to tell us what he has learned, as follows:

Just as I was about to give up hope of ever receiving a reply from the Ellis Island facility, it came in the mail.

According to Section 234 of the Immigration and Nationality Act, the medical officers of the United States Public Health Service conduct all medical examinations. In the event of their unavailability, "civil surgeons of not less than four years' professional experience may be employed . . ." So much for the dream that an optometrist was present.

As for the visual acuity testing that was done, eye charts were available in the Roman alphabet as well as others, such as Hebrew.

The purpose of the specific examination depicted and referred to in Bond (submitted to you by William H. Gentz) was to examine the conjunctiva for the presence of such "eye trouble" as trachoma which was responsible for more than half of the medical detentions. (When I first read the previous OHS Newsletter, my immediate guess was trachoma, but I didn't want to commit myself until I had firm evidence.)

Incidentally, a Japanese immigrant by the name of Hideyo Noguchi (1876-1928) in 1927 discovered the cure for trachoma. He cultivated the Bacterium granulosis from trachoma.

As far as the examination for pathology, hygienic provisions, and apparatus used - the upper eyelid was "swiftly snapped back. . . over a small instrument (actually a hook for buttoning old fashioned gloves)." Those who didn't pass had an "E" for eyes chalked on their coat fronts. The hygienic provisions consisted of a bowl of disinfectant into which the hook was dipped between inspections and a towel.

One final item, which should be of current practical interest to OHS Newsletter readers is that according to the Immigration and Naturalization Service 1969 Annual Report, since 1951 only five individuals over the age of 16 years have been found unable to read and therefore barred from entry to the United States. Specifically 2 in 1954, and one each year in the years 1955, 1956, and 1958.

Of course, from 1908 (the first year for which figures are available) to 1950 is another story entirely with a total of 16,756 adult illiterates barred. One reason for the large difference

in figures is that after 1950 most alien examining was done in their native country. These figures represent actual deportations.

The largest group of illiterates (8,329) were deported between 1931 and 1940. I wonder whether this was a case of the wrong eye chart being used or the actual presence of pathology?

With best wishes for a successful 1978.

Sheard on DeZeng and Sonter:

A January 3 communication from Professor E. J. Fisher of the School of Optometry at the University of Waterloo, Canada, mentions what may be a unique find, another booklet by Charles Sheard. The letter reads as follows:

Since you are the "co-ordinator" for items of historical interest, I would mention that I have recently come across a booklet by Charles Sheard entitled, "A Third of a Century of De Zeng Instrumentation," 1923, published by the DeZeng Standard Company of Camden, N.J. Perhaps it is old stuff to many of the members of O.H.S. but it is interesting in its account of DeZeng's contribution to instrumentation. It is a 47 page booklet giving some details of DeZeng's many contributions to the field of Optometry.

While it has an obvious bias towards the contributions of Henry L. DeZeng, it does provide an useful history of his work on ophthalmoscopes, retinoscopes, photometers, corneal microscopes, transilluminators, perimeters, otoscopes and contributions to the literature. It includes a reference to Sonter's tonometer which was new to me.

The pictures were useful in dating some of the material in our museum.

Earlier fundus photography:

OHS member Charles L. Haine, O.D., whose office is just a short distance down the hall from mine, tells me that his reference list includes a report of fundus photography almost 20 years earlier than the one I suggested as the first on page 15 of the January issue of the newsletter. He cites Jackman, W. T., and J. D. Webster, "On photographing the retina of the living human eye" in the June 5, 1886, issue of the Philadelphia Photographer, vol. 23, page 275.

He says that the illustrated photograph shows only very gross detail, that it is difficult to ascertain that it is actually the ocular fundus. The reflex of the light obscures most of the photograph. The major vessels are visible but hazy.

[3], (vi), [4], 280; [1], 281-455, blank, 171, (xiii) pp:

If this is gobbledygook to you, as it was, and still is, to me, then you, and I, are not sophisticated in the code of bibliographic description. These numbers, letters, brackets, and parentheses tell the well prepared librarian, buyer, or seller of rare books a lot about the paging of a set of books entitled "A Compleat System of Opticks in Four Books, viz. A Popular, a Mathematical, a Mechanical, and a Philosophical Treatise" by Robert Smith, printed for the author in 1738.

The set, in two volumes, with 83 engraved folding plates, is listed for sale by Bennett and Marshall, Booksellers, 8214 Melrose Avenue, Los Angeles, California 90046, at \$635.00.

The listing includes further interesting description derived largely from the Dictionary of National Biography, as follows:

FIRST EDITION. Robert Smith (1689-1768), mathematician and founder of Smith's prizes at Cambridge, was the cousin and literary executor of Roger Cotes. On his cousin's death he was elected to fill his post as Plumian professor of astronomy; and after the death of Richard Bentley, he was appointed headmaster of Trinity College. In the present work, the first of his two published original works, Smith produced the first general exposition of optics from the Newtonian point of view, treating the properties of light, the eye, reflection and refraction, and methods of grinding and polishing lenses. This became the standard work of its time on optics, (gaining the author the nickname of 'Old Focus'), and the information provided in the work allowed Sir William Herschel to construct his great telescope. A very scarce work.

#### A most useful contribution:

Due to problems of space the Research Center Library of the American Optical Corporation Southbridge, Massachusetts, has had to consider the placement of parts of its ever-growing collection elsewhere. With foresight and appreciation of national archival needs, the librarian, Mrs. Aileen A. Carlson, after consultation with key Research Center personnel, selected ILAMO, the International Library, Archives, and Museum of Optometry, as the most appropriate and conveniently located recipient institution for their bound collection of The Optical Journal, the early predecessor of the current Review of Optometry.

#### Prentice's watch and ring recovered:

In 1970 the American Optometric Association Library, now incorporated into ILAMO, the International Library, Archives, and Museum of Optometry, received a donation of Charles F. Prentice memorabilia which included a watch and a ring from his granddaughter, Mrs. Geraldine Prentice Craven of Rye, New

York. Geraldine's father, the son of Charles F. Prentice, died in 1968.

The ILAMO staff has maintained occasional contact with Mrs. Craven, now widowed, and in recent telephone conversation, has learned that she will donate another personally owned item or two left to the family by her grandfather Prentice.

#### Molyneux's problem of 1690:

In 1690 the famous Irish philosopher and mathematician Molyneux wrote to the comparably famous philosopher John Locke, "Suppose a man born blind and now-adult, and taught by his touch to distinguish between a cube and a sphere, so as to tell when he felt one and the other, which is the cube and which is the sphere. Suppose then the cube and the sphere be placed on a table and the blind man made to see, will he be able to tell by sight which is the globe and which is the cube?"

Molyneux and Locke were both of the opinion that the answer was no.

In the October 15, 1977, issue of The Ophthalmic Optician, Vol. 17, No. 20, pp. 754 & 758, Mr. E. Lienberger, a prominent Swiss ophthalmic optician, gives clinical confirmation to Molyneux's conclusion from interviews with four blind patients who had been operated on with good results by Professor Strampelli of Rome.

#### A bit of German Latin:

"The term 'dyslexia,' was introduced in 1877 by a Stuttgart ophthalmologist, Randolph Berlin," reports Yvonne Eaton, a staff writer, in the Sunday, January 29, 1978 issue of The Courier-Journal (Louisville, Kentucky), Vol. 246, no. 29, page G1, in an article headlined "Interest wanes, but dyslexia still persists."

One might wonder what the Romans called it!

#### Prevention from blindness commemorative stamps:

OHS member Alan York, O.D., sent us a newspaper clipping calling attention to a series of four postage stamps released on June 15 by Swaziland in support of the prevention of blindness campaign. A 5-cent stamp shows a victim of blindness from malnutrition. A 10¢ stamp shows an inverted ocular fundus interior with a silhouetted image of a child and the supplementary legend, "Operation prevents blindness." The 20¢ stamp provides a symbolic portrayal of an eye blinded by trachoma. The 25¢ stamp illustrates a syringe, a medicine dropper bottle, a tube of eye ointment, and the words "medicine and rehabilitation."

### Early Philippine optometry:

Seymour Kuntz, O.D. of San Diego, California, was written up in the April 1977 issue of the OAP Newsletter, monthly publication of the Optometric Association of the Philippines, No. 107, 3-5, for his contributions to the development of optometry in the Philippines, especially during the "mopping up" phases of World War II.

One of his contributions was the preparation of a 31 category test which could be employed by the Philippine Army to determine qualifications of enlisted medical personnel as optometrists. The test is included in the article.

### Sign of the time:

A news item in the May 25, 1922 issue of the Optical Journal and Review of Optometry, Vol. 49, No. 21, p. 41, states that "Ethelred Curtis, the well-known optometrist, of LaPorte, Indiana, combines chiropractic treatment with his optometric services." Included is a comment on a picture of his building into which he announced removal of his dual practice, "On a street post, in front, are two arms, from one of which suspends a sign, optometrist, and a pair of eyeglasses, while from the other is a chiropractic sign and a representation of a spine."

### Newton and Gauss commemorated by East Germans:

On April 4 the Research Center of the Jena Optical Works, the Chamber of Technology, and the Optics Trade Association of the East German Physical Society jointly sponsored an optics colloquium in recognition of the 250th anniversary of the death of Isaac Newton and the 200th anniversary of C. F. Gauss.

This was reported in the June 1977 issue of Jena Review, Vol. 22, page 263.

### History of Maryland optometry:

Maryland was the 32nd state to enact a registration law for optometrists, but not without considerable frustration and compromise. Israel Dvorine, O.D., describes some of the details in "The early history of optometry in Maryland" in the December 1976 issue of the Journal of the American Optometric Association, Vol. 47, No. 12, pp. 1558-1567. He derived some of his information from the 1904 and subsequent Baltimore telephone directories, certainly a candid technique for ascertaining the profession's image of itself even today.

He briefly recounts organizational activities, legislative efforts, characteristics of early practices, and bootstrap educational efforts.



### First American ophthalmology textbook:

Fascinating reading is a 1977 reprint of the 1823 edition of "A Treatise on the Diseases of the Eye" by George Frick, M.D., originally published by Fielding Lucas, Baltimore. The present printing is distributed by Dabor Science Publications, Oceanside, New York 11572, with an introduction by Lawrence A. May, M.D.

"George Frick, author of the first American textbook on ophthalmology, has gained recognition as the father of American ophthalmology," says Dr. May. He "earned his place in medical history as surgeon, teacher and writer."

Any notion that there might have been some "good ole' days" in the treatment of ocular conditions a century and a half ago is quickly dispelled by a reading of a few pages of this volume.

Inversely, the spelling in the 318 pages of the Frick text seems completely free of error while the root syllable "ophthalm" is misspelled eleven times in less than five pages of the introduction by Dr. May.

### Contact lens history:

In an article captioned "Memoire Laureats du Travail de Belgique 1977: SECTION OPTIQUE CONTACTOLOGIE" Mr. O. A. Kever gives a chronology of developments in contact lenses. It appears on pages 145-148 of the November 1977 issue of L'Optician Belge/De Belgische Optician, No. 243, in French.

### President Jackson's spectacles:

The spectacles of Andrew Jackson (1767-1845), seventh president of the United States, are on display at his home, The Heritage, now a national shrine a few miles outside of Nashville, Tennessee. Also on display are those of his wife Rachel, who died shortly after he was elected, but before he moved into the White House.

### Winfield S. Brown, O.D., 1888-1976:

Born May 12, 1888, Dr. Brown as recently as June 1969 expected "to live to at least 110" with "my exercise bike continuing to keep me in trim." At that time he was working feverishly to gather and record the "History of Optometry in New Hampshire" and met with several of us that year at the AOA Congress in Philadelphia to help him pursue his objective. At that time he was retired from practice and lived in the Masonic Home in Manchester, New Hampshire, where he was very active in the home activities and ran the home's canteen until his death on August 21, 1976, at the age of 88 years.

Huygens birthday, April 14:

Christiaan Huygens was born on April 14, 1629. Several activities to celebrate the 350th anniversary of his birth are being planned by a specially formed Committee Huygens 1629-1979, c/o Dr. H. J. M. Bos, Mathematical Institute, Budapestlaan 6, Utrecht, The Netherlands. Science History departments of Dutch universities, the Boerhaave Museum, and several scientific societies will cooperate. Plans include an exhibition, an international conference, and a publication.

This bit of information was obtained from a page of the History of Science Society Newsletter, Vol. VI, No. 4, October 1977, edited by Professor R. H. Stuewer at the University of Minnesota. The clipping was sent to me by Professor L. A. Ress of Bronx, New York.

Evolutionary history of the eye:

Francois Jacob is a professor of cellular genetics at the College de France in Paris. He shared the Nobel Prize in physiology and medicine in 1965. The following two paragraphs are excerpted from an article entitled "Darwinism Reconsidered" which appeared in the January 1978 issue of Atlas World Press Review, Vol. 25, No. 1, pp. 20-22, based in turn on translations of lectures by Professor Jacob which appeared in the Paris daily Le Monde.

Unlike an engineer, a tinker attacking a problem has an excellent chance of arriving at a variety of solutions. The same is true of evolution, as evidenced by the diversity of eyes in the living world. Given their importance, the variety of photoreceptors in the living world is amazing. The most sophisticated of them supply information bearing not only on the intensity of light but also on the shape, color, position, motion, velocity, and distance of the objects generating light. Structures such as eyes are necessarily complex and can develop only in organisms which already are complex.

One would think there would be only one way of producing such a structure. But no. Through evolution the eye has made its appearance a great number of times, exploiting three different physical principles: the pinhole, the lens, and multiple pipes. The lens eye (e.g., the human eye) was created at least twice in evolution; it exists in certain mollusca as well as in the vertebrates. Nothing resembles our eye as much as that of the octopus. They function in almost exactly the same manner. Yet they did not evolve the same way. In the mollusca the photoreceptor cells follow the direction of the light; in the vertebrates they point in the opposite direction.