
# HISTORIC BRIGHTON

## Newsletter and Journal

*Exploring our Town's history and educating our community about Brighton's past.*

Volume 23, No. 3 www.historicbrighton.org Fall 2022

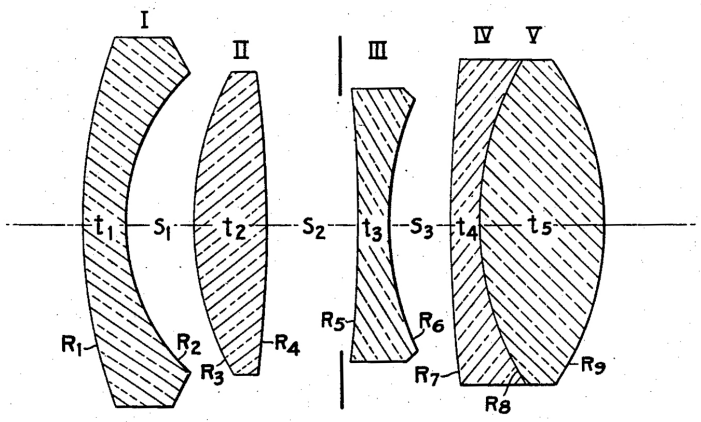

# Through a Different Lens:

## The Life and Accomplishments of Rudolf and Hilda Kingslake

Feb. 8, 1944. R. KINGSLAKE ET AL 2,341,385

WIDE-ANGLE LENSES

Filed Nov. 6, 1941




F = 100 mm. f/3.5

| LENS | $N_D$ | V | RADII, mm. | THICKNESSES, mm. |
|---|---|---|---|---|
| I | 1.620 | 60.4 | $R_1$ = + 81.9 | $t_1$ = 7.1 |
| | | | $R_2$ = + 31.6 | $S_1$ = 10.6 |
| II | 1.697 | 56.1 | $R_3$ = + 48.2 | $t_2$ = 11.4 |
| | | | $R_4$ = − 172.6 | $S_2$ = 14.3 |
| III | 1.617 | 36.6 | $R_5$ = − 410.4 | $t_3$ = 4.9 |
| | | | $R_6$ = + 46.1 | $S_3$ = 9.7 |
| IV | 1.617 | 36.6 | $R_7$ = + 362.3 | $t_4$ = 4.6 |
| V | 1.611 | 57.2 | $R_8$ = + 48.9 | $t_5$ = 19.4 |
| | | | $R_9$ = − 45.9 | BF = 101.7 |

RUDOLF KINGSLAKE
PAUL W. STEVENS
INVENTORS

BY Albert W. Person

ATTORNEY

*Rudolf Kingslake's first patent from 1941, which features a wide-angle lens*

**HISTORIC BRIGHTON** welcomes you to our **23rd ANNUAL MEETING** followed by a free program:

**"Rudolf Kingslake: A Life In Optics"**
by Martin L. Scott

at **2:00 PM**
on **September 18th, 2022**
at the **Brickstone Wintergarden** (located at 1523 Elmwood Avenue)

*All Historic Brighton programs are free and open to the public.*

# Rudolf and Hilda Conrady Kingslake and the Creation of the University of Rochester Institute of Optics

By Elizabeth Doty

At the end of the nineteenth century, Germany had the technical edge on scientific research in the field of optics. Although optical instrument makers and optical designers existed throughout Europe, producing simple camera lenses and achromatic microscopes, Germany had become the heart of the optics industry.

The superiority and skill of German applied optics created a demand in the United States for more textbooks and for more serious teaching of optics, especially the field of applied optics as opposed to theoretical optics. As Professor Carlos R. Stroud Jr. described it:

"The rapid growth of optics-related industry in the United States - eye glasses, scientific, surveying and military instruments, and more recently consumer photography - made it intolerable to be dependent on Europe for the essential materials and trained technicians needed to support these industries. In particular, the dependence on German sources for those vital supplies had proven unsatisfactory in the (First World) war. France and England had recently set up their own optics institutes in response to the same pressure. There was widespread sentiment that the country needed its own school to supply trained optical scientists and engineers as well as to carry out basic research in the subject area. George Eastman and Edward Bausch decided that the school should be in Rochester and helped to support its founding." (Stroud, P. 3)

In 1929, the University of Rochester created the Institute of Optics through the efforts of three prominent Rochesterians: George Eastman, Edward Bausch, and Rush Rhees. This institution was preceded by the establishment in 1915 of the "Association for the Advancement of Applied Optics." This group was created by leaders of Rochester companies and professions in the optic sciences, and included as charter members Edward Bausch and Adolph Lomb. In February of 1918, George Eastman wrote to Dr. Rhees, asking "… whether Rochester is not the place for a School of Applied Optics instead of New York." (Stroud/ Kingslake, p. 5) In December of 1918, at the third annual meeting of the newly organized Optical Society of America, which was developed from the original Rochester optics association, the Council referred to "the School of Optical Engineering shortly to be organized in connection with the University of Rochester." (Stroud, p.6)

*Hilda and Rudolf Kingslake, no date, Kingslake papers, D.333, Rare Books, Special Collections, and Preservation, River Campus Libraries, University of Rochester*

Dr. Rhees traveled to London in June of 1929 to interview Rudolf Kingslake, MSc., his first appointee to the faculty of the Institute of Applied Optics. Kingslake was a graduate of the Technical Optics Department of the Royal College of Science, part of the Imperial College of Science and Technology in London. Dr. Rhees appointed him assistant professor of geometrical optics and optical design on June 15th, 1929 at age 26. Professor Kingslake arrived in Rochester in October of 1929 with his new bride Hilda. She was also a graduate of Imperial College, and had three years of experience in the optical industry. At that time the Institute of Applied Optics was contained in one small office in the old Eastman Building on the Prince Street Campus. In 1930 the Institute moved to the River Campus, where Professor Kingslake's teaching career would last for 63 years.

Rudolf Kingslake was born Rudolf

Klickmann in 1903. His father changed the family name to Kingslake in 1917, as a result of the upsurge of anti-German sentiment during World War I. After his education in private schools, Rudolf attended Imperial College in the same program in which Hilda had already enrolled. Rudolf graduated with his bachelor's degree in 1924 and earned his master's degree in 1926. After Rudolf was recruited to the University of Rochester's Institute of Applied Optics, the couple married in September of 1929 and sailed for the United States.

Hilda Conrady Kingslake was born in London, England, in 1902. Her father, Alexander Eugen (or A.E., as he was called) Conrady was a professor of optical design in the newly established Technical Optics Department of the Royal College of Science, part of the Imperial College of Science and Technology in London. Hilda was a member of the first full-time class in the Technical Optics Department program. She studied under her father, as did her husband Rudolf, and graduated as part of the first class in 1923. After graduation, Hilda continued her work in the department as a research scholar. During this time, she published regularly in journals including the Transactions of the *Optical Society, Proceedings of the Optical Conferences*, and the *Photographic Journal.*

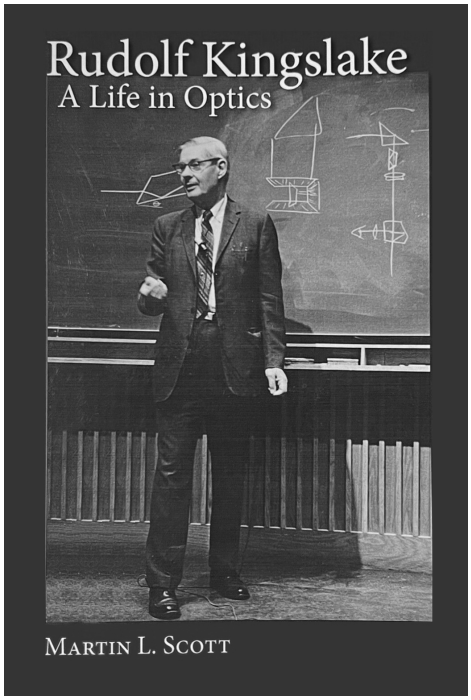
At the start of his career at the Institute of Optics, Kingslake developed the teaching materials for the first courses in lens design and geometrical optics formally offered in the United States.

In 1937, the Kingslakes purchased a home on Westland Avenue in Brighton, where they would live for fifty-eight years In the same year Professor Kingslake also began work at the Eastman Kodak Company as the Director of Optical Design developing commercial optics (e.g., camera lenses, projector lenses, and enlarger lenses), while continuing his teaching career at the Institute. During this decade, the couple had two sons: David Conrady Kingslake in 1936, and Alan Horace Kingslake in 1939.

While Professor Kingslake was thriving in his two positions of teaching and directing a division at Kodak, Hilda Kingslake was also very busy. She devoted most of her prodigious energy to civic betterment, especially regarding the concerns of women; she also provided reading material for shut-ins - while also raising her two sons. Hilda was very influential in the establishment of the Optical Society of America, and served as its president. She chronicled the history both of the OSA, and of the Institute of Optics.

In 1941, after the bombing of Pearl Harbor, Kingslake directed Kodak's efforts in the production of military optics, and accelerated the training of optical scientists at the Institute of Optics.

After the Second World War, the achievements and awards for the Kingslakes began to accumulate. They made separate and joint contributions to the development of optics and to its literature, particularly through publications in the various journals of the Optical Society of America. In 1947-8 Rudolf Kingslake served as the President of the Optical Society of America. In 1950, he was awarded an honorary doctoral degree from the Imperial College in London.




*Book cover of Martin Scott's biography of Rudolf Kingslake*

In 1958 Rudolf and Hilda edited an unfinished manuscript by Hilda's father, A. E. Conrady and published a sequel to Conrady's book, Applied Optics and Optical Design.

In 1969, Kingslake retired from Kodak, but continued to teach at the University of Rochester.

In 1973, Kingslake received the Frederick Ives Medal from the Optical Society of America for distinguished work in optics.

In 1971, the Society of Photographic Instrumentation Engineers (SPIE) gave the Karl Fairbanks Memorial Award to Rudolf Kingslake for service to industry.

In 1974, the Society of Photo-Optical Instrumentation Engineers created the Rudolf and Hilda Kingslake Award in Optical Design to recognize the most noteworthy original paper published in the Society's journal, Optical Engineering.

In 1984 Kingslake was elected an Honorary Member of the Optical Society of America. Both he and his wife were made Fellows of the Society, having served with distinction in the advancement of optics and photonics through distinguished contributions to education, research, engineering, business, and society.

The University of Rochester honored both Rudolf and Hilda by awarding an honorary degree to Rudolf in 1986, and by creating the Rudolf and Hilda Kingslake Chair in the Institute of Optics in 1989.

Over his career Kingslake wrote three books on optical design and with his wife, edited a fourth series on applied optics and optical design. The latter included a volume based on an unfinished manuscript written by A.E. Conrady.

When in 1990, SPIE – the International Society for Optical Engineering wished to establish the Conrady Award in Optical Engineering, William Wolfe, SPIE's president at the time, wrote to Rudolf and Hilda to ask their permission to use the Conrady name. As noted in her private papers, Hilda's reply was: "Of course I am more than happy to give the permission, and thank the Committee for having the name under consideration, for Father was indeed the real pioneer in the teaching of lens design and applied optics. Rudolf was his great disciple who lectured straight Conrady in his first years at the University of Rochester." (Thompson, B. J. August 2003 "In Memory: Hilda Kingslake, Rudolf Kingslake." Physics Today (American Institute of Physics) 56, no. 9, P.73 August 2003) In 1990, SPIE presented the very first Conrady award to Hilda and Rudolph Kingslake.

—HB—

OR 2,393,782

Jan. 29, 1946. R. KINGSLAKE ET AL 2,393,782

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Filed May 1, 1943 2 Sheets-Sheet 1

FIG. 1.

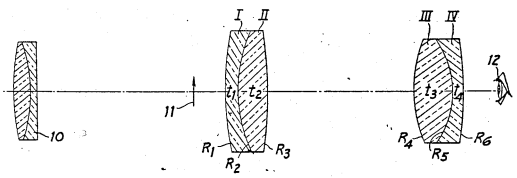


FIG. 2.

| SEMI FIELD 15° | F = 65.9 MM | | FRONT FOCUS = 11.43 MM. | |
|---|---|---|---|---|
| LENS | $N_D$ | V | RADII | SPACINGS |
| I | 1.649 | 33.8 | $R_1$ = +102.9 MM. | $t_1$ = 4.0 MM. |
| II | 1.517 | 64.5 | $R_2$ = +49.1 " | $t_2$ = 10.0 " |
| | | | $R_3$ = −146.2 " | S = 50.0 " |
| III | 1.573 | 57.4 | $R_4$ = +45.9 | $t_3$ = 13.3 " |
| IV | 1.649 | 33.8 | $R_5$ = −29.8 | $t_4$ = 3.0 " |
| | | | $R_6$ = −169.7 | |

FIG. 3.

| F = 100 MM. | |
|---|---|
| RADII | SPACINGS |
| $R_1$ = +156.0 MM. | $t_1$ = 6.1 MM. |
| $R_2$ = +74.5 " | $t_2$ = 15.2 " |
| $R_3$ = −222.0 " | S = 75.8 " |
| $R_4$ = +69.6 " | $t_3$ = 20.2 " |
| $R_5$ = −45.2 " | $t_4$ = 4.6 " |
| $R_6$ = −257.6 " | |

RUDOLF KINGSLAKE
WILLIAM DONALD ORSER
INVENTORS
BY
ATTY & AGT

Jan. 29, 1946. R. KINGSLAKE ET AL 2,393,782

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FIG. 4.

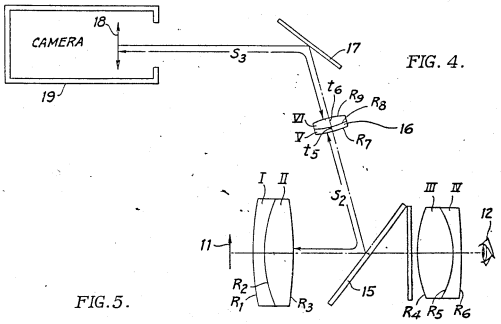



FIG. 5.

| F = 200.9 MM | | | | f/25 |
|---|---|---|---|---|
| LENS | $N_D$ | V | RADII | SPACINGS |
| V | 1.649 | 33.8 | $R_7$ = +70.3 MM. | $S_2$ = 160.6 MM. |
| VI | 1.573 | 57.4 | $R_8$ = +26.6 " | $t_5$ = 2.0 " |
| | | | $R_9$ = −109.2 " | $t_6$ = 3.1 " |
| | | | | $S_3$ = 162.5 " |

FIG. 6.

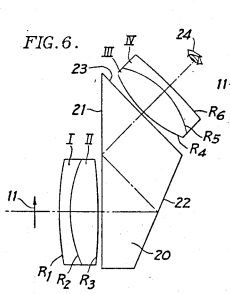
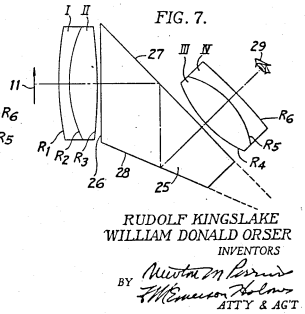



FIG. 7.




RUDOLF KINGSLAKE
WILLIAM DONALD ORSER
INVENTORS
BY
ATTY & AGT

*Pages 1 and 2 (of 4) from a 1946 Patent by Rudolf Kingslake and William D. Orser for a specific type of telescope lens*

# Remembering the Kingslakes: A 70-year Optical Love Story

By Sharon Bloemendaal

Rudolf Kingslake is considered to be the American Father of lens design. He was a charter member of The Photographic Historical Society (TPHS), of which my husband Jack Bloemendaal was co-founder-- in 1966. He spoke at several of the international symposia sponsored by the group. Each time a meeting was held in our home, Dr. Kingslake would gravitate to the Kodak Retina in our camera collection, and say something to the effect of, "That was a well-made camera."

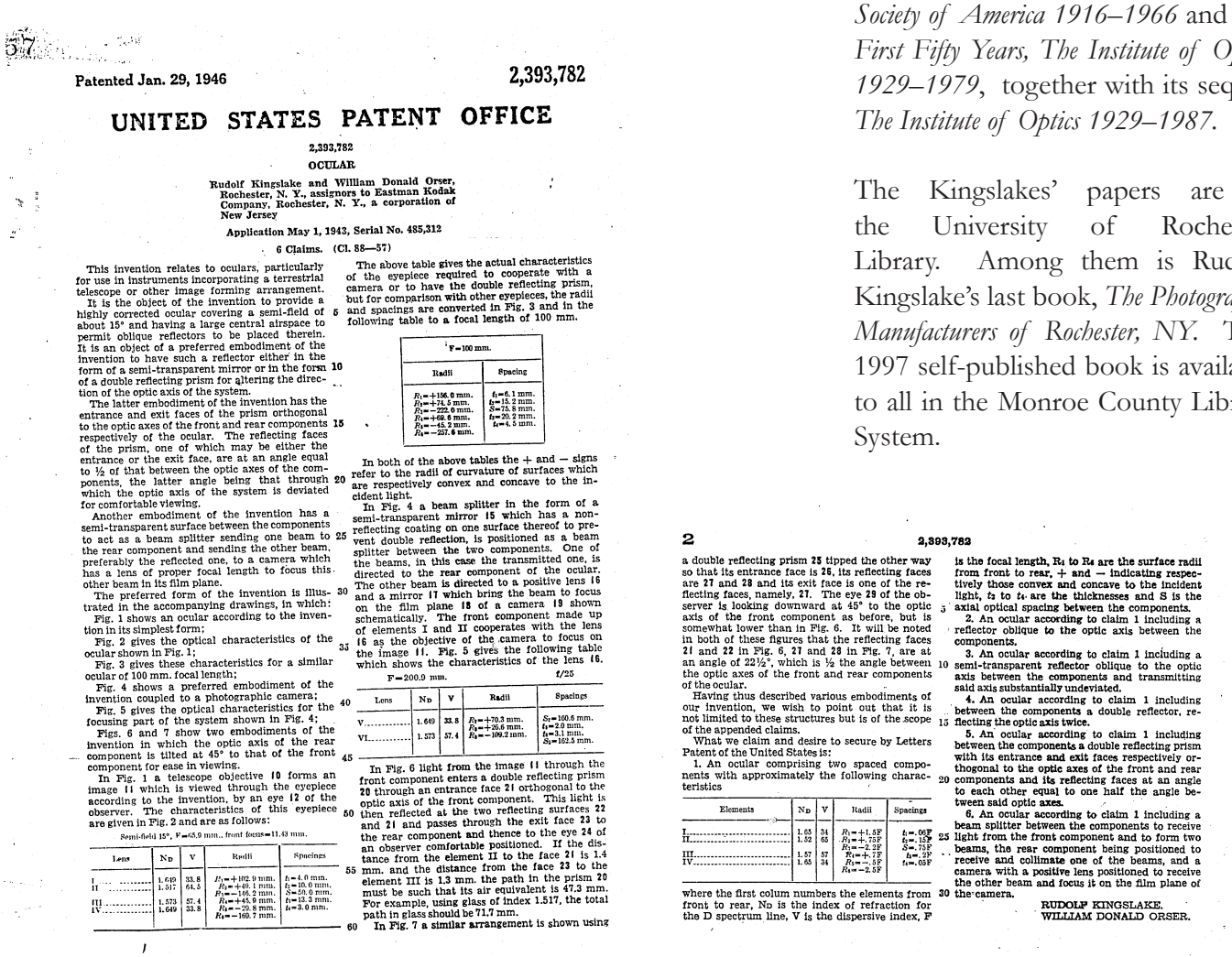
He was an expert on shutters and collected them. At one symposium, when he spoke about taking a Kodak ball-bearing shutter apart, an audience member asked him how he got it back together. He replied candidly, "I never did." Another talk resulted in a 1974 booklet, *A History of the Rochester, NY Camera and Lens Companies*, published by The Photographic Historical Society, and available online.

Hilda Kingslake was more self-effacing. Before television was available, she provided stimulating intellectual books for nursing home patients and shut-ins. Rudolf built the boxes for her to carry her books. Both of them played piano. They were active in optical, intellectual and musical circles, and held season tickets to the Rochester Philharmonic Orchestra.

Hilda entertained the Kingslake's guests. I remember TPHS meetings at their home, where Hilda graciously provided cookies and one of Rudolf's favorite treats, candied grapefruit peel, which she made for him. They lived on Westland Ave. in Brighton for more than fifty-eight years, choosing Brighton because of the reputation of its schools.

However, Hilda continued to help when he wrote his books. Together they edited and finished the second volume of her father's work, *Applied Optics and Optical Design*. Hilda also wrote *Fifty-Year History of the Optical Society of America 1916–1966* and *The First Fifty Years, The Institute of Optics 1929–1979*, together with its sequel, *The Institute of Optics 1929–1987*.

The Kingslakes' papers are at the University of Rochester Library. Among them is Rudolf Kingslake's last book, *The Photographic Manufacturers of Rochester, NY*. This 1997 self-published book is available to all in the Monroe County Library System.



Patented Jan. 29, 1946 2,393,782

UNITED STATES PATENT OFFICE

2,393,782

OCULAR

Rudolf Kingslake and William Donald Orser, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application May 1, 1943, Serial No. 485,312

6 Claims. (Cl. 88—57)

This invention relates to oculars, particularly for use in instruments incorporating a terrestrial telescope or other image forming arrangement.

It is the object of the invention to provide a highly corrected ocular covering a semi-field of about 15° and having a large central airspace to permit oblique reflectors to be placed therein. It is an object of a preferred embodiment of the invention to have such a reflector either in the form of a semi-transparent mirror or in the form of a double reflecting prism for altering the direction of the optic axis of the system.

The latter embodiment of the invention has the entrance and exit faces of the prism orthogonal to the optic axes of the front and rear components respectively of the ocular. The reflecting faces of the prism, one of which may be either the entrance or the exit face, are at an angle equal to ½ of that between the optic axes of the components, the latter angle being that through which the optic axis of the system is deviated for comfortable viewing.

Another embodiment of the invention has a semi-transparent surface between the components to act as a beam splitter sending one beam to the rear component and sending the other beam, preferably the reflected one, to a camera which has a lens of proper focal length to focus this other beam in its film plane.

The preferred form of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 shows an ocular according to the invention in its simplest form;

Fig. 2 gives the optical characteristics of the ocular shown in Fig. 1;

Fig. 3 gives these characteristics for a similar ocular of 100 mm. focal length;

Fig. 4 shows a preferred embodiment of the invention coupled to a photographic camera;

Fig. 5 gives the optical characteristics for the focusing part of the system shown in Fig. 4;

Figs. 6 and 7 show two embodiments of the invention in which the optic axis of the rear component is tilted at 45° to that of the front component for ease in viewing.

In Fig. 1 a telescope objective 10 forms an image 11 which is viewed through the eyepiece according to the invention, by an eye 12 of the observer. The characteristics of this eyepiece are given in Fig. 2 and are as follows:

Semi-field 15°, F=65.9 mm., front focus=11.43 mm.

| Lens | ND | V | Radii | Spacings |
|---|---|---|---|---|
| I | 1.649 | 33.8 | $R_1$=+102.9 mm. | $t_1$=4.0 mm. |
| II | 1.517 | 64.5 | $R_2$=+40.1 mm. | $t_2$=15.0 mm. |
| | | | $R_3$=−146.2 mm. | $S$=50.0 mm. |
| III | 1.573 | 57.4 | $R_4$=+45.9 mm. | $t_3$=13.3 mm. |
| IV | 1.649 | 33.8 | $R_5$=−29.8 mm. | $t_4$=3.0 mm. |
| | | | $R_6$=−160.7 mm. | |

The above table gives the actual characteristics of the eyepiece required to cooperate with a camera or to have the double reflecting prism, but for comparison with other eyepieces, the radii and spacings are converted in Fig. 3 and in the following table to a focal length of 100 mm.

| F=100 mm. | |
|---|---|
| Radii | Spacing |
| $R_1$=+156.0 mm. | $t_1$=6.1 mm. |
| $R_2$=+74.5 mm. | $t_2$=15.2 mm. |
| $R_3$=−222.0 mm. | $S$=75.8 mm. |
| $R_4$=+69.6 mm. | $t_3$=20.2 mm. |
| $R_5$=−45.2 mm. | $t_4$=4.5 mm. |
| $R_6$=−257.6 mm. | |

In both of the above tables the + and − signs refer to the radii of curvature of surfaces which are respectively convex and concave to the incident light.

In Fig. 4 a beam splitter in the form of a semi-transparent mirror 15 which has a non-reflecting coating on one surface thereof to prevent double reflection, is positioned as a beam splitter between the two components. One of the beams, in this case the transmitted one, is directed to the rear component of the ocular. The other beam is directed to a positive lens 16 and a mirror 17 which bring the beam to focus on the film plane 18 of a camera 19 shown schematically. The front component made up of elements I and II cooperates with the lens 16 as the objective of the camera to focus on the image 11. Fig. 5 gives the following table which shows the characteristics of the lens 16.

F=200.9 mm. f/25

| Lens | ND | V | Radii | Spacings |
|---|---|---|---|---|
| V | 1.649 | 33.8 | $R_1$=+70.3 mm. | $S_1$=100.6 mm. |
| | | | $R_2$=+20.6 mm. | $t_1$=2.0 mm. |
| VI | 1.573 | 57.4 | $R_3$=−109.2 mm. | $t_2$=3.1 mm. |
| | | | | $S_2$=162.5 mm. |

In Fig. 6 light from the image 11 through the front component enters a double reflecting prism 20 through an entrance face 21 orthogonal to the optic axis of the front component. This light is then reflected at the two reflecting surfaces 22 and 21 and passes through the exit face 23 to the rear component and thence to the eye 24 of an observer comfortable positioned. If the distance from the element II to the face 21 is 1.4 mm. and the distance from the face 23 to the element III is 1.3 mm. the path in the prism 20 must be such that its air equivalent is 47.3 mm. For example, using glass of index 1.517, the total path in glass should be 71.7 mm.

In Fig. 7 a similar arrangement is shown using

2 2,393,782

a double reflecting prism 25 tipped the other way so that its entrance face is 26, its reflecting faces are 27 and 28 and its exit face is one of the reflecting faces, namely, 27. The eye 29 of the observer is looking downward at 45° to the optic axis of the front component as before, but is somewhat lower than in Fig. 6. It will be noted in both of these figures that the reflecting faces 21 and 22 in Fig. 6, 27 and 28 in Fig. 7, are at an angle of 22½°, which is ½ the angle between the optic axes of the front and rear components of the ocular.

Having thus described various embodiments of our invention, we wish to point out that it is not limited to these structures but is of the scope of the appended claims.

What we claim and desire to secure by Letters Patent of the United States is:

1. An ocular comprising two spaced components with approximately the following characteristics

| Elements | ND | V | Radii | Spacings |
|---|---|---|---|---|
| I | 1.65 | 34 | $R_1$=+1.5F | $t_1$=.06F |
| II | 1.52 | 65 | $R_2$=+.75F | $t_2$=.15F |
| | | | $R_3$=−2.2F | $S$=.75F |
| III | 1.57 | 57 | $R_4$=+.7F | $t_3$=.2F |
| IV | 1.65 | 34 | $R_5$=−.5F | $t_4$=.05F |
| | | | $R_6$=−2.5F | |

where the first colum numbers the elements from front to rear, ND is the index of refraction for the D spectrum line, V is the dispersive index, F is the focal length, $R_1$ to $R_6$ are the surface radii from front to rear, + and − indicating respectively those convex and concave to the incident light, $t_2$ to $t_4$ are the thicknesses and S is the axial optical spacing between the components.

2. An ocular according to claim 1 including a reflector oblique to the optic axis between the components.

3. An ocular according to claim 1 including a semi-transparent reflector oblique to the optic axis between the components and transmitting said axis substantially undeviated.

4. An ocular according to claim 1 including between the components a double reflector, reflecting the optic axis twice.

5. An ocular according to claim 1 including between the components a double reflecting prism with its entrance and exit faces respectively orthogonal to the optic axes of the front and rear components and its reflecting faces at an angle to each other equal to one half the angle between said optic axes.

6. An ocular according to claim 1 including a beam splitter between the components to receive light from the front component and to form two beams, the rear component being positioned to receive and collimate one of the beams, and a camera with a positive lens positioned to receive the other beam and focus it on the film plane of the camera.

RUDOLF KINGSLAKE.
WILLIAM DONALD ORSER.

*Pages 3 and 4 (of 4) from a 1946 Patent by Rudolf Kingslake and William D. Orser for a specific type of telescope lens*

Both Rudolf and Hilda died in February of 2003, just 11 days apart—at the ages of 99 and 100. Their enduring legacy remains in the field of applied optics, and in the significant canon of optical publications they produced.

Michael Brandt, who was a student of Professor Kingslake at the University of Rochester, has this recollection of him:

"He was everything you would expect in an English gentleman… honorable, kind, gentle manner, articulate, soft spoken, confident, proud, well educated, etc. On top of that, he was "the" world expert in optical design.

As one might expect of a professor, who was schooled in England… you learned the subject matter and performed, or you were not going to make the grade. There was no "grading on the curve", etc. Before taking his classes in Lens Design, my colleague from work presented me with a 3 ring binder containing a copy of nearly every final exam that Dr. Kingslake had ever given to his class over many decades. I was told to learn the solutions / derivations to every exam question in this binder. You will see 5 of them on your final exam, and two of your final exam questions will be new. Study hard! My colleague was 100% correct.

Dr. Kingslake schooled us to understand the inherent faults in a lens, and instilled in us the old school intuition to know how to correct such faults via lens design. Many lens designers today rely too heavily on a computer to design modern lenses, and often come up with expensive and difficult to manufacture lenses. They need more of the old school intuition to drive the computer to a better design rather than allowing the computer to drive them."

—HB—

*University of Rochester School of Biomedical Engineering and Optics building*

Resources and additional information regarding Rudolf and Hilda Kingslake:

1) Scott, Martin L. Rudolf Kingslake : a Life in Optics / Martin L. Scott. Rochester, NY: Meliora Press, 2011.
2) A Jewel in the Crown: Essays in Honor of the 75th Anniversary of The Institute of Optics. Edited by Carlos R. Stroud Jr. Rochester, New York: Meliora Press, 2004 http://www2.optics.rochester.edu/~stroud/BookHTML/

See also: UR Institute of Optics: http://www.hajim.rochester.edu/optics/
The Kingslake Papers are housed at the Department of Rare Books, Special Collections and Preservation, River Campus Libraries, at the University of Rochester, and are open for use. The guide to the collection is available at https://rbscp.lib.rochester.edu/finding-aids/D333

Books by Rudolf Kingslake:

3) Together with Hilda Conrady Kingslake: Applied Optics and Optical Design, Vol. 2. Dover 1960 (1st vol. published in 1929, new edition in Dover 1957)
4) Lenses in Photography: the Practical Guide to Optics for Photographers. 2nd ed. New York, A.S. Barnes, 1963
5) Editor, Applied Optics and Optical Engineering, vol. 1-3, New York: Academic, 1965, vol.4, Academic, 1967, vol. 5, Academic, 1969, vol. 6, Academic, 1980
6) Lens Design Fundamentals. New York: Academic Press, 1978
7) The Bausch and Lomb Shutters. Rochester, New York: Photographic Historical Society, 1981.
8) Optical Systems Design, Academic Press 1983
9) A History of the Photographic Lens, Academic Press, 1989
10) Optics in Photography, SPIE Optical Engineering Press 1992
11) The Photographic Manufacturing Companies of Rochester, New York. Rochester, New York: George Eastman House, 1997.

Professor Kingslake published many articles in the following academic journals:

- Applied Optics
- Image
- Journal of the American Ceramic Society
- Journal of the Photographic Society of America
- Monthly Notices of the Royal Astronomical Society
- Applied Optics at Imperial College
- Applied Optics at Imperial College
- Journal of the Optical Society of America
- Journal of the Society of Motion Picture Engineers
- Nature

# Merchants of Monroe - Groceries Fifty Years Ago

Ray Tierney III

Fifty years ago Twelve Corners was a bustling retail area. Stores included Neisners, Altier's, Formans, Chilsons Drug, Earl's Drug and many more smaller retailers. The hub of all that activity was the considerable grocery store presence in the area. Most retail was nestled closely to one of the four major supermarkets.

In 1961 Wegmans was located in the Twelve Corners Plaza while Star Market and A&P anchored the plaza across Monroe Ave. next to Howard Johnson's. Loblaws was located at the intersection of Glen Ellen Way and Monroe Ave.

The status quo was about to change. The impetus was commercial development in Pittsford up the road on Monroe Ave. Once Pittsford Plaza was proposed, every major supermarket needed access to the new customer base looming to the east. Loblaws was the first to move as it relocated to the corner of Monroe Ave. and Clover St. Next, Star Market became one of the original tenants of the new Pittsford Plaza. Wegmans took a different approach and built a store on property adjacent to the plaza proper. Finally, A&P moved into the plaza and completed the grocery migration. By 1962 Twelve Corners had the beginnings of the next generation of grocery stores.

The vacated Star Market was quickly remodeled and opened as a Super Duper. IGA eventually took up residence in the Twelve Corners Plaza after Wegmans moved to Pittsford. As A&P did not close its Twelve Corners store after opening in Pittsford Plaza, the area now had three major supermarkets within 500 ft. of one another. Brighton was now ready for the next chapter of grocery shopping in its town center.

Both IGA and Super Duper were independently owned and operated which was in sharp contrast to A&P and the recently departed chains Wegmans, Loblaws and Star Market. That new era would bring change but would hold together the retail base of Twelve Corners for many years to come.

HB

*This article includes information reprinted from Vol 12 Issue 2 (from Spring 2011) of the Historic Brighton Newlesster & Journal.*

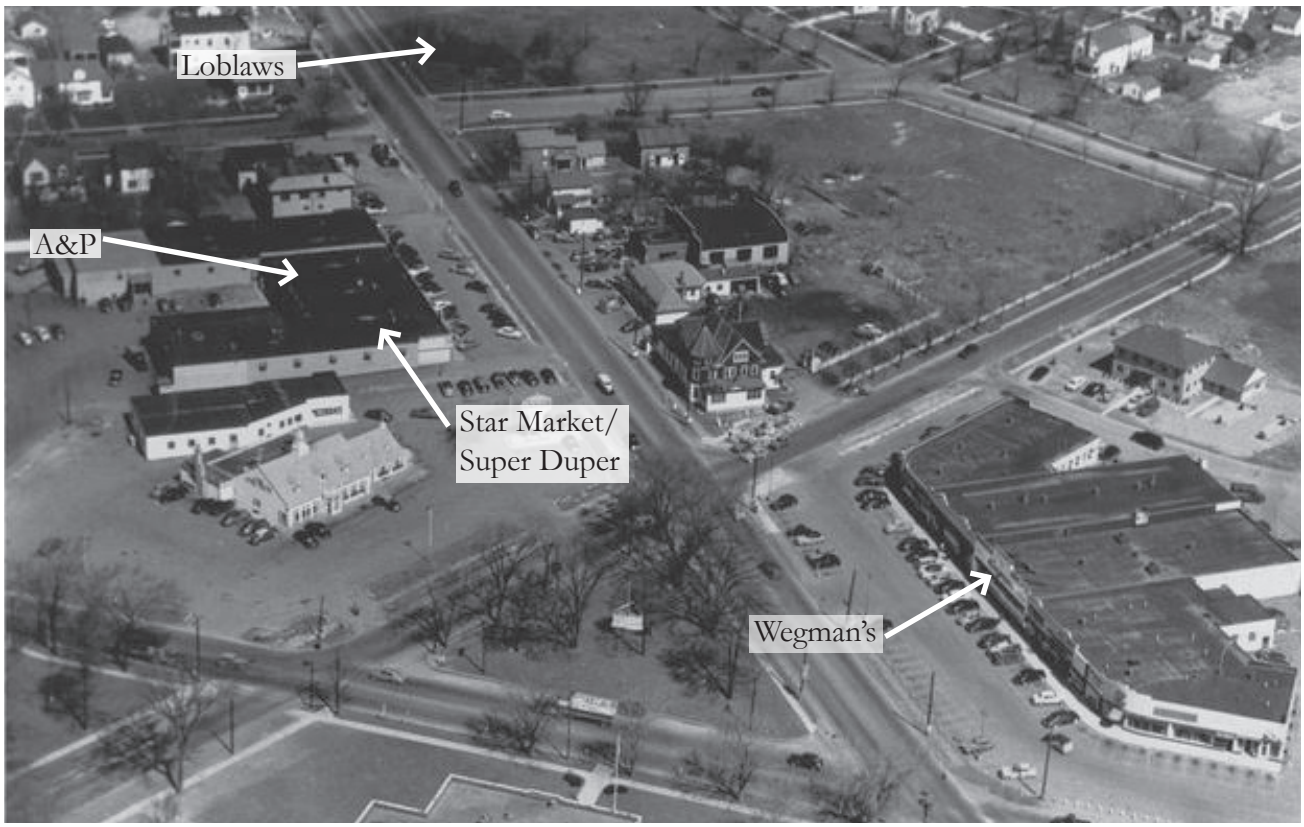
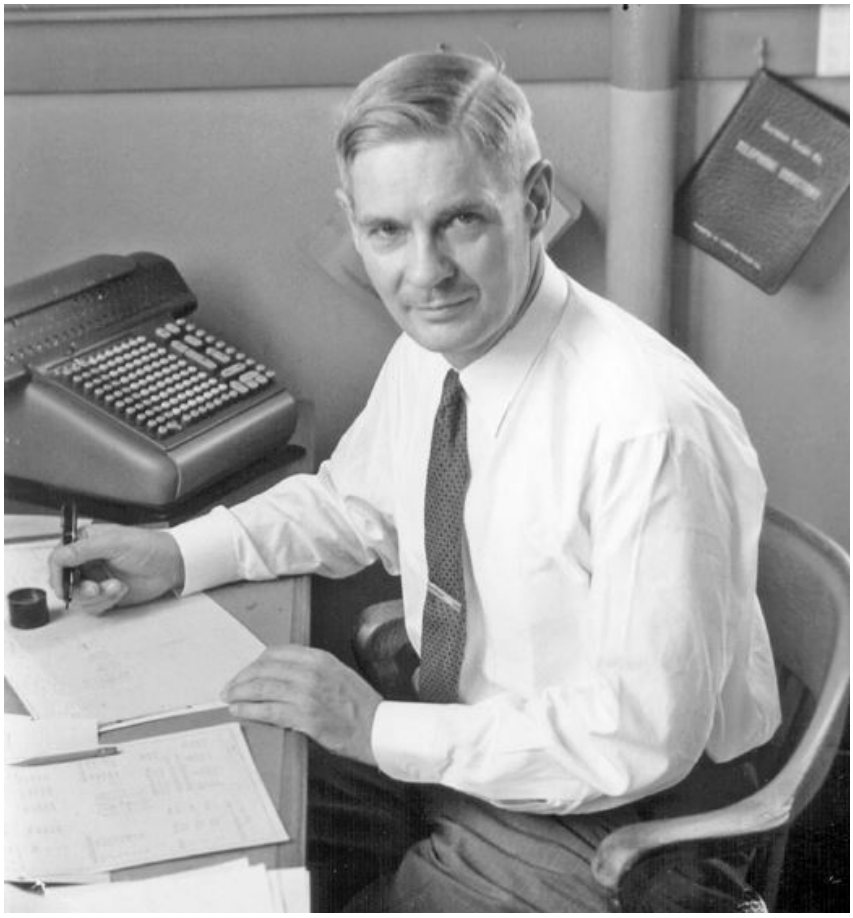



*Image of Twelve Corners circa 1951 from the Brighton Municipal Historian Collection (Monroe Public Libraries); For additional context: Loblaw's location in 1960 is present day Pinnacle Wine and Liquor; Loblaws new location in 1961 is present day Mann's Jewelers; Star Market/Super Duper location in 1961/1962 is currently subdivided into multiple tenants in Brighton Commons Plaza; A&P 1962 location is currently Panache and several other tenants in Brighton Commons Plaza; Wegmans location in 1961 is currently subdivded into multiple tenants in Twelve Corners Plaza*



*Rudolf Kingslake with a mechanical calculator, from* In Memory of Rudulf and Hilda Kingslake, Two Lives Devoted to Optics *by Brian J. Thompson - original source unknown, but may be George Eastman Museum Archives*

*This image was included in Essay No. 06 when Brian J. Thompson's above mentioned memorial essay was included in* A Jewel In The Crown: 75th Anniversary Essays The Institute of Optics University at Rochester, *edited by Carl R. Stroud ,Jr.*

*http://www2.optics.rochester.edu/~stroud/BookHTML/ChapI_pdf/I_06.pdf*



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