

History

American Optical Company

Compiled By

H. H. Styll

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NOTE:

There is a Digest of this History filed in the Library.

It was prepared by H. H. S. to read before the Sales Conference.

Reading Time – 1 Hour

H. H. S.

(Photos of the Plant are contained in the Digest Copy).

At the present time, there are some 18 Institutional Departments in the Company.

There were none of these in 1910 when I came.

Today, each of these Departments are Institutions and Businesses in themselves, and each and every one of them is the greatest in the whole ophthalmic art.

The heads of these departments are each and every one of them outstanding men in their line and in the optical world.

Briefly, these departments are: - (see next page).

Spencer Lens Company –

New Plant:	1 st Wing Opened 1939
	2 nd Wing Opened 1941

AO – Institutional Departments

Sales Department – Branches – AMERICAN Plan – 1902 Hurlbert

Advertising – 1909 – Carson

Financial & Accounting – 1923 – Mosher

Research Laboratories – 1909, Kerr – 1916, E. D. T. (Emerson)

Research & Development – 1937, D. P. B. (Bernheim)

Legal & Patents – 1910, H. H. S. – 1939, R. G. W. (Wright)

Medical – T. E. Story, 3/1/26 to-date. (Installed by Dr. N. S. Monroe)

Personnel – 1916, Parkinson

Foreign – 1915, King – (B. W.)

Production – 1909, Hill – 1916, E. L. S. (Schumacher)

De Zeng Instruments – 1925, Purchase. (Rice Morris)

Purchasing – 1935, Brockway

Visual Science – 1935, Neumueller

Stock – K. W. Spalding, 1926 – Now 177 Employees.

Industrial Eye Protection – 1923, King. (W. S.)

Cases – 1897. (LePage Pratt)

Centralized Manufacturing – John Crawford – 1942.

Executive – Officers.

First Optometry Law – 1901.

Business – 1910 – 9 Million

Business – 1944 – 57 ½ Million

18 Departments

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SECTION I

January 3, 1946

AO Chronology

- 1833 - William Beecher made first spectacles in Southbridge, Mass., at Jewelry Store, where Hartwell's Drug Store, at Main and Central Streets, now is.
- Beecher came to Southbridge in 1826 from Providence, R. I.
- 1839 - First, or Old Spec Shop, established Main and Mechanic Streets on Cohasse Brook. The spectacle business was moved here from Beecher's Jewelry Shop.
- This shop was in use until 1872.
- 1843 - First steel spectacles made in America, made in Southbridge by Beecher. They held the vogue for the next 6 decades.
- 1840 – 1842 Ammidown & Putney, at the Old Spec Shop.
- 1842 – 1849 Ammidown & Son. (Holdridge and L. H. Ammidown).
- 1848 - Gold spectacles first made.
- 1850 – 1851 Ammidown & Company (L. H. Ammidown and Robert H. Cole).
- 1851 – 1854 Ammidown & Company (Wm. Beecher, L. H. Ammidown and Robert H. Cole).
- 1851 - Hiram C. Wells, Uncle of George W. Wells, arrived in Southbridge, Oct. 20th. He went to work for Beecher, Ammidown & Cole to learn trade of making spectacles. Salary of apprentices at that time was \$30.00 first year, \$40.00 the second year and \$50.00 the third year.
- The shop was then making spectacles and goggles.
- 1860 - Beecher & Cole (William Beecher, Robert H. Cole and E. Merritt Cole).
- 1862 – 1866 Robert H. Cole & Company. (R. H. Cole and E. M. Cole)
- 1866 – 1869 Robert H. Cole & Company. (R. H. Cole, E. M. Cole A. M. Cheney)
- 1864 - George W. Wells came to Southbridge and went to work for Robert H. Cole & Company.
- 1869 - American Optical Company Incorporated. (R. H. Cole, President; G. W. Wells, Secretary; E. M. Cole, Treasurer)
- The original stockholders of American Optical were – Robert H. Cole, E. Merritt Cole, Charles S. Edmonds, Hiram C. Wells and A. M. Cheney. Capital - \$40,000.00. Total Number of Shares – 400. George W. Wells had 40 shares. The gross business then was \$50,000.00, and there were 85 employees.
- 1873 - Second factory built. This was built on our present site. It stood until 1904, when present plant was started.

- 1873 – 1904 Second factory expanded and enlarged. By 1883 there were 8 or 9 units, 2 with mansard roofs. None of the units were over three stories. The buildings were of wood.
- 1874 - First rimless spectacles made.
- 1900 – 1909 The present modern buildings were erected of brick and concrete, with the exception of the new Carpenter Shop, and the new building between the Main Plant and Lensdale.
- 1848 – 1866 The average number of employees was 13. In 1868, there were 35.
- 1880 - Telephones were first installed.
- 1883 - Lens Plant Started.
- 1884 - Trial Frames first made.
- 1885 - The Diopter System adopted.
- 1889 - Oculist's test cases first made.
- 1891 - Automatic lens edgers first installed.
- 1893 - Printing Department added.
- 1894 - First catalog issued.
- 1894 - Cylinder lenses first ground.
- 1895 - Chains first made.
- 1895 - Standard trial sets made.
- 1896 - Cottest Fingerpiece Patent issued – 560,895 – 5/29/96.
- 1896 - Ajax strap patent issued.
- 1897 - Cases first produced.
- 1898 - First effective power lenses made. – Fox Guard litigation.
- 1900 - Toric lenses first made.
- 1901 - First Optometry Law passed.
- 1901 - AO Loop Guard Arm – Patent 674,974 – D. H. Ludlow – 5/28/01.
- 1902 - Employed first traveling man – W. H. Hurlbert.
- 1907 - First made our own gold-filled stock.
- 1907 - First made automobile goggles.
- 1907 - 55-hour week.
- 1908 - Schwab Guard Patent – 887,028 – 5/5/08.

- 1909 - Research Dept. started – C. H. Kerr.
- 1910 - Amoptico – House Organ first published.
- 1912 - Second catalog issued.

Branches

- 1905 - London Office opened.
- 1909 - Chicago Office opened.
- 1910 - New York Office opened.
- 1911 - San Francisco Office opened.

AO Modern Era

- 1900 - 1910 Building Decade – Main Plant and Lensdale built.
- 1901 - Channing, Albert and Cheney Wells started to work.
- 1908 - G. W. Wells, President; C. M. Wells, V.P.' A. B. Wells, Treasurer; J. C. Wells, Secretary.
Fused Kryptok Patent – 876,933, Jan. 21, 1908 – J. L. Borsch, Jr.
- 1909 - Kryptok and Ultex Bifocals.
Preparations to put on market.
Kryptok Litigation – 1909 - 1913.
- 1909 - AO Loop Litigation – AOCo. Vs. Bay State Opt. Co. 1909 – 1912. – Ultex Bifocal Patent – 932,965, 8/31/09, filed 10/23/02.
- 1909 - Start toward advertising and sales departments – O. B. Carson.
Harry W. Hill moved into new Lensdale Bldg.
- 1910 - Sales – 9 million dollars.
Lensdale completed.
Legal and Patent Departments started – H. H. Styll.
- 1910 - Ultex Ring Tool Process – Patent - Bentzon and Emerson – 986,571 – 1/18/10 – Filed 12/18/05.
- 1912 - George W. Wells died.
Second catalog issued.

National advertising started.

Lensometer Patent.

Pear Tip Temple Litigation.

1913 - C. M. Wells, President; A. B. Wells, Treasurer; J. C. Wells, V.P. and Secretary.

Fingerpiece Suit – AOCo. Vs. Bay State Co. 1913 – 1915.

Crookes glass placed on market – A. B. Wells.

1914 - Toric attachment patent. – Lensometer – Troppman – Patent 1,083,309 – 1/16/14.

1915 - Courmettes – Split segment bifocal patent. M427 Polishing Machine Patent issued – (Bugbee).

Lensometer Litigation – AOCo and B&L.

Troppman vs. Allen Interference.

AOCo. Vs. Ultex Co. Litigation.

AOCo. Bought Julius King Co. Foreign Dept. and Burn King and Albert Julia came to Southbridge.

1916 - Dr. E. D. Tillyer came to AOCo. From Bureau of Standards, Washington, D.C.

E. L. Schumacher came to AOCo.

Royal Parkinson came to AOCo.

Calobar Patent – Tillyer.

1917 - Cole interest secured.

Bugbee Nokrome Patent 1,397,920 – Nov. 22, 1921, Filed Nov. 24, 1917.

Ultex Litigation – Onepiece – 1917 – 1919.

Co. vs. B. Mayer.

Inner Rim Patent 1,219,254 – Clulee.

3/13/17 – Process.

Adt. Vs. Kristein Litigation.

Inner Rim or Windsor spectacle.

Calobar Patent – Tillyer 1,222,049, Issued 4/10/17.

1918 - Tillyer Trial Set – Effective Power.

M28 Litigation – Paige vs. Brown.

AOCO. Defended Brown 1918.

First Windsor Litigation –

AOCO vs. Universal.

Stevens vs. AOCO. Day & Carson Patent

1918 – 1920.

Bilt-In Bearings Litigation – 1918 – 1920.

Five Party Interference – Haynes Patent.

1915 – 1918 World War I.

1919 - Cruxite Glass Patent – A. B. Wells.

1920 - Bilt-In Bearings – Fingerpiece Patent 1,345,488 – 7/6/20 – C. M. Haynes.

1920 - Sales – 9 million dollars.

Federal Trade Commission vs. Onepiece Company.

Litigation – December, 1920.

Bilt-In Bearings on market.

Albert Julia opened our Branch in B. A., Argentina.

Heat Screen Patents Issued – 1920, 1921, 1922.

1921 - Lensometer on market.

Heat Screen Patents – Bugbee and Tillyer.

Inner Rim Patent – Clulee – 1,366,768 – 1/21/21, Article.

1922 – 1923 Bought our Branches.

1922 – Scheuerle vs. Ultex Company Litigation.

Bought our Distribution.

We bought 14 Branches in 1923 with 119 outlets.

Phoroptor – Additive Power – Tillyer – Patent 1,455,457 – 5/15/23.

Scheuerle vs. Onepiece Company Litigation.

1922 – 1923 cont'd Trial Set – Additive Power – Tillyer – Patent 1,455,457 – 5/15/23.

Sales 7 million dollars.

Trial Frame – Additive Power – Tillyer- Patent 1,455,457 – 5/15/23.

Second Windsor Litigation – 1922 – 1924.

AOCO. Vs. Kerstein, later AOCO. Vs. Shuron – (Standard).

M-28 Machine.

Ira Mosher came to AOCO., December 18th.

Accounting and Financial Department installed.

1924 - Bought Consolidated Optical Company, Canada.

Cruxite Patent to A. B. Wells – Issued 1,485,655 – 3/4/24 – Filed 12/9/19.

1925 - Tillyer Lenses – Patent 1,888,559 – June 15, 1926 – Filed May 26, 1924.

U. S. vs. Kryptok Company Litigation.

Ful-Vue Bifocal Patent – Tillyer – 1,544,612 – 7/7/25.

Bought De Zeng.

K. W. Spalding came to AOCO. – Stock Department.

U. S. vs. Kryptok Co. – Legality of Kryptok License Plane – 1923 – 1925. – Decided 7/22/25.

1926 - Julius Neumuller first worked for AOCO – 10/2/26.

Dr. T. L. Story came to AOCO. March 1st.

Pearl Pad Patent – Boutelle – 1,581,163 – 4/20/26.

1928 - C. O. Cozzens made Sales Manager.

Ful-Vue Patent – Emmons 1,685,192 – 9/25/28.

Bowl Feed Patent – Maynard - Patent 1,666,713 – 4/17/28.

1929 - Polaroid Patent.

Ful-Vue Patent – Smith – 1,739,049 – 12/10/29.

Iseikonic Patent – 1,933,587 – Nov. 7, 1933 – Filed 8/13/29 – Ames.

1929 - Sales – 16 million.

cont'd Panic in fall of year.

Panoptik Bifocal Patent (Hammond) – 1,740,298 – 12/17/29 – Filed 4/6/27

- 1930 - Heat Screen Litigation.
Acme vs. DeVry.
Ful-Vue Frame License.
- 1931 - Univis Litigation 1931 – 1934.
- 1931 - Ful-Vue Bifocal.
Aviation Goggle Patents.
Micro-Surfacar – Maynard Patent 1,800,308 – 4/14/31.
- 1932 - Phoroptor – Lenses calculated distance from eye – Patent – Tillyer – 1,887,049 – 11/8/32.
- 1933 - First Centennial – 1833 – 1933.
Rimway Patent – G. S. Nerney – 1,984,541 – 12/18/34 – Filed 2/13/33.
Prefitted Temple Patent – Splaine – 1,936,773 – 11/28/33.
Metronoscope Patent – Taylor.
Polaroid Patent – E. H. Land – 1,918,848 – 7/18/33 – Filed 4/26/29.
Metronoscope Patent – Taylor – Patent 1,918,298 – 7/18/33.
- 1934 - Project-O-Chart Patent
Wheelock & Tenson Patent 1,949,067 – 2/27/34.
Visual Science Bureau – (Julius Neumuller).
- 1935 - Purchased Spencer.
No-Scru Patent – Baker – 1,988,536 – 1/22/35.
Paul Boeder came to AOCo.
Porter Brockway came to AOCo. – Purchasing Dept.
- 1936 - September 2nd – Channing, Albert and Cheney Wells retired.
Geo. B. Wells, President; I. Mosher, V.P. and General Manager; C. O. Cozzens, V.P., Charge of Sales;
E. E. Williams, Treas.
Numont Patent – Gagnon – 2,050,525 – 8/11/36.

No-Scru Patent – Slotsky – 2,037,279 – 4/14/36.

Ful-Vue Patent – Offset Guards – Emmons – 2,041,638 – 5/19/36.

1937 - Research & Development Department installed under D. P. Bernheim.

Iseikonic Lens Blank Patent – Tillyer – 2,077,134 – 4/13/37.

1938 - Numont – Gagnon – Uhlemann.

Ophthalmograph – Carl and James Taylor – Patent 2,132,520 – 10/11/38.

Numont Patent – Uhlemann – 2,108,875 – 2/22/38.

Tri-Flex – Splaine – Patent 2,106,282 – 1/25/38.

New Carpenter Shop, Southbridge – Completed.

1939 - U. S. vs. Optical Art Litigation – 1939 – 1945 – Still Pending.

R. G. Wallace came to AOCo.

Harry W. Hill Died.

Sales – 19 million.

Spencer – New Plant – 1st Wing opened.

1939 - War – World War II – Germany invaded Poland – September 2nd.

Sintered Lap Patent – Moulton Patent – 2,145,888 – 2/7/39.

1940 - Rimway Frame on market.

1940 - Colorless Calobar – Patent – Tillyer – Patent 2,226,418 – 12/24/40 – Filed 5/15/36 – Silica Free.

1941 - Putnam Plant opened November 1st.

Calcined Clay Patent (Pincus, Rowe et al) – 2,256,528 – 9/23/41.

Zyl-Arc on market – Patent – Cozzens – 2,236,565 – 4/1/41.

Neumuller left AOCo. In September. Paul Boeder took his place.

Canada vs. Optical Art Litigation.

Spencer – New plant. 2nd wing opened.

1942 - John Crawford came to AOCo. Headed consolidation of all manufacturing plants.

Brattleboro Plant opened, in January.

New Frame Plant started at Southbridge.

American Plan for the Profession adopted – June, 1942.

- 1942 - Heat Screen – Color Projection – Tillyer – Patent – 2,269,494 – 1/13/42 – Filed 12/24/38.
Heat Screen – Position of Screen in Beam.
Tillyer – Patent 2,279,084 – 4/7/42 – Filed 5/12/39.
Annealing Glass Process – Tillyer – Serial 453,152 – Pending.
- 1942 - Colorless Calobar – Tillyer – Patent 2,278,501 – 4/7/42 – Filed 5/12/39 – Silica Free.
- 1943 - Rose Smoke Glass – Tillyer – Serial 509,596 – Filed 11/9/43 – Pending.
- 1944 - Ira Mosher resigned.
AOCO. Vs. New Jersey Optical Co. Litigation.
G. B. Wells, President; C. O. Cozzens, Executive V.P.; E. E. Williams, Treasurer; George Baskie, Comptroller.
- 1944 - Sales – 57 ½ million dollars.
- 1944 - Colorless Calobar – Pincus – Patent – 2,359,789 – 10/10/44 – Filed 9/15/41 – (with Silica).
- 1945 - Hydrofluoric Acid Resisting Glass – Pincus – Patent – 2,381,929 – 8/14/45 – Filed 11/24/41.
- 1945 - American Plan applied to AO employees.
- 1942 – 1945 Lens Coatings – Moulton – Several applications filed 1942 – 43 – 44 and 45 – All Pending.

SECTION II

November 23, 1945

The American Optical Company

Its Origin and Growth

Gentlemen:

First Era

You of the American Optical Company organization are the recipients of a great heritage.

Your organization is entitled to every ounce of all that its title "American" stands for and means.

For the foundations of your Company strike deeply into the roots of that Americanism that has made our country great and the wonder of the whole world.

We, of today, accept, perhaps too readily and with too scant thought and realization, all of the toil, sweat and tears of our founding fathers that have made the greatness of American Enterprise.

What a grand and sturdy manhood was that of our Founding Fathers!

I sometimes wonder if we of our luxury loving generation have the stuff in us to meet the acid test, they withstood.

Before I go into the details of the birth and growth of our Company, a word or two, as to the reasons of this heritage, I talk about, will not be amiss.

The American Optical Company in its truest sense is an American Institution.

It stems from that sturdy American stock that met and conquered the terrible odds of colonial New England.

It stems back to those hardy souls, the New England settlers who landed from the Mayflower in 1620, at Plymouth, Massachusetts.

Never were the assets of a sturdy, courageous manhood called upon to greater extent than the bleak, cold, barren and unproductive shores of New England presented to the Pilgrim Fathers.

Their souls were afire to worship as the conscience dictated. They met every test and in their gratitude for the blessings they were able to wring out of a forbidding nature went down on their knees and established the only true holiday to originate in our country to date, Thanksgiving Day.

Many of these settlers soon struck inland, following the Bay Path and King Phillips Trail. They followed the streams into the valleys among the hills. They built by the streams and in the valleys.

Their first efforts were directed to wringing a living from the soil. Essentially, they were first cultivators and farmers.

But the soil was not productive. The ground was stony. The winters were cold and long. The summers were hot and short. The growing season was too short. Only in a few favored spots could a living be wrought from the soil. New England as a whole, as regards food, was not and could not be made self-supporting.

But did these pioneers lose heart and move away? They did not.

They looked at their streams and they said we will dam these and build mills. We will make things which we can exchange for food and so New England industry was born.

Remember, the men who first built these mills were of the soil, were of farm stock. They were used to hard work and long hours, from rise to set of sun. They had to work to survive and they worked and never paused to count the price. They had not time to do it. They had a job to do and they did it.

These first men who built the dams and the mills by the streams, were not mechanics. They were of the soil.

When they built their mills, they had no machinery or equipment to put into them, and they had no money to buy it. In fact, they had nowhere they could buy it.

What did they do? They made it themselves by hand. They labored mightily and bit by bit their mills grew and expanded.

In New England there developed and grew up a new race of men, the old New England Master Mechanic.

The sun never shone on a finer body of men, in all the history of the world. They were the geniuses of New England Industry and the pioneers of Industry throughout all of our country.

These men became marvels of accomplishment. They never hesitated. They could, and did, make everything they needed and wanted. They could turn their hand to anything. They were no one-operation men. They developed themselves into mechanics and they became Masters.

So from the hardships of the soil was nurtured the greatest race of Industrial Builders, the world ever saw.

They became not only mechanics and inventors, they built men, real men at the same time. They were frugal, they worked long hours and never grumbled. They were leaders in their communities, they were religious, they could take the platform in Church or Town Hall with the best of them. They went into the civics of their communities and they built their communities solidly and well.

As for schooling, the little Red School House by the road was their Alma Mater and the three R's about covered all of their text books. Theirs truly was the School of Hard Knocks.

I mention this sturdy Americanism and this wonderful race of Master Mechanics because it is to these that we in the American Optical Company, and in the optical world of America, owe the great heritage which is ours.

This Americanism was founded on an overpowering love of liberty and in the blessings of Democracy. These forefathers of ours believed in the dignity of the individual and in Democracy among individuals.

Even unto this day the New England Town Meeting is the purest form of Democracy anywhere in existence. The men who built this Democracy were the pioneers we have mentioned and their leaders were the Master Mechanics who made the wheels go round.

The word "American" well describes our organization for it has been built on the bed rock of Americanism.

But then we honor our American origin, we must also in our Industry honor the hardy and competent race of New England Master Mechanics, for on their work and their contributions was our Industry dependent.

It was they who turned the stones of New England into the Gold of Industry.

No people, anywhere else on earth, ever developed a greater class of men. On the foundations they laid is built the great American Empire of Industry, the greatest in all the world.

I emphasize this Master Mechanic class here because the men who laid the foundations of the American Optical Company were of this farm stock turned mechanics.

In the history of our Company, you will find as thrilling and as inspiring a tale of Industrial Romance as can be found anywhere.

It is a tale of work, hardship and courage that has never been surpassed.

Spectacles have been continuously produced in Southbridge, Massachusetts, for a longer span than anywhere else in the United States.

The American Optical Company had its birth in and has grown from this activity.

The following is a brief outline of our origin: -

The first spectacles made in Southbridge, Mass. were of silver and were made by William Beecher in 1833.

Beecher was a jeweler and had a store located in what is now the business center of the Town.

Beecher was born January 24, 1805 in Southbury, Connecticut. His father was a farmer, so Beecher was out pioneer American farm stock.

When a young man, Beecher served as a jeweler's apprentice in Providence, R. I.

Beecher came to Southbridge in 1826 and established a jewelry shop, or store. He was a skillful mechanic and inventor. He had as apprentices such men as R. H. Cole, Liberty Phelps, Billings Farington, and others of this pioneer stock who became outstanding in the optical art.

Beecher's great contribution was the development of steel rimmed spectacles. Beecher got the idea he could add to his business by making steel spectacles.

None were made in this country at that time. Our supply depended upon import. Beecher, using the imported spectacles as a model, developed the production of them here. This was in 1843.

So was started the spectacle business or industry in Southbridge.

In 1840, Ammidown and Putney, Beecher trained men, and of our Colonial pioneer stock, purchased Beecher's business.

In 1842, Ammidown and Son (Holdridge and L. H. Ammidown) acquired the business.

In 1849, Robert H. Cole, a former Beecher apprentice, entered the Company under a reorganization known as Ammidown & Company.

In 1860, Beecher, R. m. Cole and E. M. Cole formed the Company of Beecher and Cole.

In 1862, the Company of R. H. Cole and Company was formed and Mr. Beecher retired.

In 1864, George W. Wells was employed by Robert H. Cole & Company. Here was another farm boy of Colonial stock turned mechanic.

In 1869, Messrs. Cole and Wells directed the formation of the American Optical Company.

In 1879, George W. Wells was elected Treasurer of American Optical Company.

In 1891, George W. Wells was elected President and Treasurer of American Optical Company on retirement of Mr. Cole.

In 1912, the following officers of the American Optical Company were elected – C. M. Wells, President; A. B. Wells, Treasurer; and J. C. Wells, Vice-President and Secretary.

And here began a new era.

Really this new era started on the turn of the century in 1900.

There are three very distinct eras in the American Optical Company history, divided about as follows:

- 1) 1833 to 1864. This era may be termed the Founding or Formative Era, and covers the period of the first production of spectacles by Beecher to the time George W. Wells came to Southbridge.
- 2) 1864 – 1900. The era of George W. Wells; and,
- 3) 1900 – 1945. the modern era, or the era of the three sons of George W. Wells, namely, Channing M. Wells, Albert B. Wells and Joel Cheney Wells.

The first era is distinguished by the birth of the Industry and by the development of the class of Master Mechanics I have described to provide the equipment and processes required and to do the work necessary in the production.

As I have stated, the greater number of these men were all of pioneer Colonial American stock, who turned from the stony farms to become Master Mechanics, inventors and founders. Their names are of record and the list is a tribute to that pure Americanism that breathed its inspiration into all of our Institutions. We should glory in the name of our "Institution."

The outstanding events of the first era were:

The making of the first spectacles in 1833, of silver.

The erection of the first spectacle factory in 1839.

The production of "Steel" spectacles in 1843. The first in America; and the

Making of gold spectacles in 1848.

This era was the founding era. The factory was only a small one with up to 1866, an average of only 13 employees.

But on these foundations the modern empire was to be constructed.

First Era

The second era or the era of George W. Wells was one of Vision and Imagination. It was the era of a great practical dreamer, George W. Wells.

He, it was, who first visualized the empire that was to come.

George W. Wells was of the pioneer American farm stock about which we have spoken.

He was born in South Woodstock, Conn., in 1846. He was the last of 9 children of a farmer. There were 5 boys and 4 girls. He attended the local schools of Woodstock and the Woodstock Academy. He has stated that he had barely a year of official schooling. He was mainly taught at home by his sister, Elizabeth.

As a child he was a cripple. From four to fourteen years of age he was never off of crutches. He was crippled by a broken ankle erroneously diagnosed as a sprain.

By an indomitable will to walk and tireless efforts of exercise, the leg was brought back to function.

At age 15 he was working on his father's farm. He did it with a will and learned to labor from sun rise to sun set.

When he was 18 years old, he entered the employ of R. H. Cole and Company, April 2, 1864. This was his entry into the spectacle business.

His first month's pay was \$15.00.

He learned the trade of making steel spectacles.

He became skilled in making silver and steel spectacles and developed a natural trend in mechanics to become an excellent worker in machinery and machine construction and building.

One of his first inspirations was the idea of new, easier and quicker ways of making spectacles. He was not satisfied with the slow and laborious hand operations then in vogue. His experience also led him into the making of new tools and dies.

In him was exemplified to the highest degree that mechanical sense that led him to become one of the Master Mechanics of his day. It was in the blood of his day and it was in his blood.

George W. Wells became a great pioneer in the introduction into the spectacle art of automatic and semi-automatic machinery and equipment for the production of spectacles. He had back in these early days a vision of what we term today "Mass Production" and which has made America the greatest of all Industrial Nations.

The development of this phase of the optical industry was next to his executive, administrative and organizing abilities, his greatest contribution to the art.

While the U. S. Patent Office in many patents issued in his name gives evidences of his great inventive ability, his greatest contributions were found in the new machines, apparatus, equipment, processes and procedures which he developed and fostered for use in the factory wherein the products were produced.

In much of this, as in most other fields, George W. Wells was a pioneer. He developed into a great and outstanding man.

His greatest contribution to the optical art was his great vision of the future. This he foresaw and used his every effort to develop.

He worked hard and assiduously and made rapid strides in the art of spectacle making.

With his employers and his associates he had grown into a man of notice where ability had to be recognized and reckoned with.

Many of his inventive contributions were in operations in the "shop."

On February 26, 1869, when George W. Wells was only 23 years old, the American Optical Company was incorporated to make spectacles of gold, silver, steel and plated metals, rings, thimbles, and such other articles as said company may from time to time desire to make.

This organization was a consolidation of the spectacle manufacture that had grown up in Southbridge as it had developed from the early work of Beecher.

The capital stock was \$40,000.00.

The shares were distributed as follows:

R. H. Cole	-	150 shares
E. M. Cole	-	80 “
A. M. Cheney	-	50 “
H. C. Wells	-	50 “
G. W. Wells	-	40 “
C. S. Edmunds	-	$\frac{30}{400}$ “

R. H. Cole was President, G. W. Wells was clerk which under Massachusetts law is Secretary, G. M. Cole was Treasurer and R. H. Cole – E. M. Cole and A. M. Cheney were Directors.

This was the origin of the present American Optical Company.

The vision of the future was ever present in the mind of George W. Wells. He foresaw expansion and he dreamed and talked of it. His vision bore fruit and in 1873 the “Old Spec Shop” was abandoned and the second factory built on the present site of our Company.

The dreams of George Wells were on the march. From that day on the expansion of the Company was rapid until 1900, when the present modern plant started to grow to replace the old.

In 1868, the year before the Company was incorporated, the number of employees was 35.

Some of the outstanding events of this era were:

- 1874 - Rimless Spectacles made.
- 1880 - Telephones installed.
- 1883 - Lens Plant added.
- 1884 - Trial Frames produced.
- 1885 - The Dioptric System adopted.
- 1889 - Started to make our own paper boxes.
- 1889 - Oculist’s Trial Cases made.

- 1891 - Automatic Lens Edgers installed.
- 1891 - Gold-Filled Spectacles made.
- 1893 - Printing Department added.
- 1894 - 1st Catalog issued.
- 1894 - Ground cylinder lenses.
- 1895 - Making of Chains.
- 1897 - Making of Cases.
- 1898 - First effective power lenses made. These were developed by AO in association with Chas. Prentice of New York. A trial set was completed. It was approved by the Bureau of Standards and became the accepted master set of the art the world over. It has been standard for many years.
- 1900 - Toric lenses made.
- 1902 - AO employs first traveling man – W. H. Hurlbert.
- 1907 - Made our own gold-filled stock.
- 1907 - Automobile goggles added.
- 1907 - 55-Hour Week.
- 1909 - Research Dept. started – Mr. Chas. Kerr.
- 1910 - Amoptico – House Organ published.
- 1912 - 2nd Catalog published.

Branches Established

- 1905 - AO – London Office
- 1909 - AO – Chicago Office
- 1910 - AO – New York Office
- 1911 - AO – San Francisco Office

In the period from 1900 to 1910, the 2nd and 3rd eras overlap because the decade from 1900 to 1910 was one of the most important in our history for it was in this era that AO grew out of the class of “Shop” into that of “Institution.”

This is the decade wherein our Company laid the foundations for our present modern era, and this era was in a way the merging and the blending of the era of George Wells and that of his three sons. It was a decade of grand vision

and foresight in which the genius of George Wells and that of his three sons blended and flourished.

This indeed was the Augustan Age of the American Optical Company.

George Wells visualized the future of our Company. By his great vision and his organizing and administrative abilities and genius he led the way from the old to the new.

He not only built himself but he gave and trained three sons to carry on and to achieve the great vision he had seen.

His gift of organization and the training of three sons to fulfill a mission he, himself, was not to see but the beginnings, were by no means the smallest of George Wells' contributions to the optical art, his country and his native town.

When his lamented death came in 1912, he had lived long enough to see his great ambition achieved, for he saw in full operation the finest and best knit administrative organization in the whole optical industry.

During the era of George W. Wells, the first lenses were made by the Company. This was in 1883. Prior to that, time lenses were obtained from abroad. The foreign lenses were of poor quality and the service most unreliable. The foreign manufacturers seemed to think we had no right to make spectacles in the United States. They took their time about filling orders. As a consequence, the business in frames was held up because of a want of lenses to go with them. So George Wells said, "We will make our own," and he did.

The first lenses were produced January 18, 1884. There were 80 spindles. They were carried in wooden standards. In 1885, AO built the first iron lens grinding machines used anywhere in the world.

R. H. Cole was President of AO until 1890. He died in 1900.

The era from 1869 until 1900 was a great era in the development of the optical industry in America. It is a great tribute to the genius of one man. George W. Wells, an old New England Master Mechanic and Inventor, and a great organizer and administrator, a man with a great vision and a great dream who had the will and the courage to make his dreams come true.

George W. Wells must ever be included with the great men of the optical world, and that is no mean honor, when in the list will be found the greatest of all names of all times. For in this art is found such immortals as Leonardo da Vinci, Benjamin Franklin, Wallaston, Thomas Young, Galileo, Roger Bacon and Sir Isaac Newton.

George Wells was American – one hundred percent American. He was an organizer of the American Optical Company.

When we speak of American, of American Optical Company, and of the "AMERICAN Plan," remember we mean "American" in all the term implies. For our founders and the greatest of all who contributed to the building of our industry, were of the stock of our American fathers and they gave us the greatest of all titles which they could bequeath to us – "American."

It is a great heritage we must live up to it.

The Third Era

The third era of our Company was in the decade 1900 to 1910.

This was the decade in which we converted our Company from the "Spec Shop" to the greatest Institution in the ophthalmic art.

As we have said above, this was the period in which the second and third eras overlapped and blended with each other. In it George W. Wells completed his great work and his three sons were drilled and trained to take over and carry on.

In referring then to this era, we will have to talk back a little from 1900, and a great deal from 1900 on.

The turn of the Century was of profound importance to our Company.

Channing, Albert, and Cheney Wells, the three sons of George W. Wells gave up schooling and started to work at the American Optical Company in 1891.

At that time, the number of employees was less than 1000. The payroll was around \$400,000.00.

These boys were not pampered by their father. They had to learn the business, from the ground up, just as any other employee. Their father had come up through the school of hard work and knew and realized the value of thoroughness. So his sons were initiated to work under the precepts of those who had made their way under the sturdy ideas of their Colonial ancestors.

They were made to realize the value of work well done, and that the money to spend had first to be earned.

In 1869, the year the American Optical Company was incorporated, there were 85 employees and the gross business was \$50,000.00.

After the incorporation of the Company, the duties of the officers, particularly those of George W. Wells, multiplied. Assistance was sorely needed. Henry Cady, a cousin of George Wells and a very capable man was made Superintendent. Charles Wilson, an expert lens grinder came to take charge of the Lens Plant and remained its head for 26 years. Harry W. Hill was transferred from Nelson M. Baker's Department in the Main Plant to become assistant to Wilson and take his place as Superintendent after Wilson left our employ.

In 1879, George W. Wells was elected Treasurer of the Company. Recognizing the importance of sales, he shortly thereafter began calling on customers throughout the country and for 15 years was the Company's only sales representative.

Due to this burden on him, he began in the 1890's to groom his sons to relieve himself of some of these burdens.

In 1891, the year the three boys took employment with the Company, George W. Wells was elected President of the Company. As his sons gathered experience, he more and more called in and relied on their assistance.

These boys were born in the atmosphere of the spectacle shop. All their odd hours were spent around the shop and as a consequence the optical business became their absorbing interest and first thought.

In round figures, the three boys served an apprenticeship of some ten years before substantial promotion came. This intensive training under the guidance of a master, who also was their father, explains fully the organization they were able to perfect and to carry on with when the guiding hand of their great father was taken from them.

Channing started in the Machine Shop under Nelson M. Baker, one of the finest of the old time Master Mechanics and Inventors. Channing then worked 10 hours a day for \$7.50 a week.

In the fall of 1893, Channing went to call on the trade in his father's place. Channing, by nature, was fitted for this contact work. He was pleasant and affable. Took a genuine interest in his contacts and their problems and welfare.

It has been said that Channing Wells became one of the finest hosts in the optical business. He was socially inclined and took a genuine pleasure in his social contacts with the trade, both at home and on the road.

Our sales contacts developed through him and he naturally became the founder of our modern sales and advertising

activities.

The genius of George W. Wells was nowhere better shown than in his analysis of the capabilities of his sons, and the placing of each in that division of the work for which he was best fitted. He trained them, he placed them, and then threw responsibilities on them. He knew they would rise to their responsibilities – and they did.

Albert B. Wells' first job was in the Lens Plant. He went to work at 6:30 in the morning. He worked 59 hours a week. He came home at night covered with rouge and abrasive dirt. He swept the floors. He put pitch on the lenses and blocks. His pay was \$7.50 a week.

Joel Cheney Wells began work in the Shipping Room. Salary \$6.00 a week. His first job was running a printing press. He dusted the stock, prepared shipping cases and entered orders in a ledger.

His father kept a file of all patents. Cheney soon took these over and gradually all matters relating to patents and became eventually the best posted layman on patents I have ever met.

Cheney's greatest characteristic was thoroughness and accuracy. Things had to be right to receive his approval. He had a positive abhorrence for slipshod methods. Naturally, this talent led him soon to be the severest critic of the quality of our products.

He had a keen, analytical mind and his talents led him into the field of quality, legal matters, patents and research and development. Like his father, he was inventive as the Patent Office records attest.

Albert always wanted to know what things cost, how money could be saved by cutting out waste and unnecessary procedures. To Albert, no business could be successful if that business was not making money. Albert Wells was a born financial man and in time became recognized by some of the strongest financial concerns and banks in our country. He leaned to financial affairs of the Company, but lenses and Lensdale ever remained a hobby and keen interest with him.

The father noted these growing characteristics of his sons and he saw to it that they were given opportunity to develop and perfect them.

So in his three sons, he saw a natural division of the work of the organization:

Channing – Sales and advertising and customer relations.

Albert – Finance and Lenses.

Cheney – Quality production, legal, patent and research and development, and Main Plant production.

When the sons took over the management, this was the division of the work. Never anywhere was there better teamwork and expert handling of the affairs of the Company. Neither would interfere in the realm of the other, yet they always acted as a unit. If they had differences of opinions, they were not aired, but were talked out in conference until a decision approved by all three was reached.

I had long experience under that organization and I have never encountered a better anywhere. It was as perfect teamwork as we poor mortals can ever hope to reach. To this teamwork, the success of the organization was undoubtedly attributable.

This brings us to the beginning of our modern era.

The decade, 1900 to 1910, was the building era. The old wooden factory, the second factory, was replaced by the present Main Plant during the years 1900 to 1907, and the new Cement and Glass Lens Building at Lensdale was built in 1909-1910.

In the year 1891, when the three boys entered the business, George W. Wells was elected President and Treasurer. He had previously served as Treasurer from 1879. So the great building era came in the last days of his life. These modern buildings were an imposing and inspiring monument of his vision of the future. They are today the backbone of our plant. That these quarters provided for the rapid expansion of the business, even down to the days of World War II, shows how accurately he had gauged coming events.

The last decade of Mr. Wells' life then was devoted at the one and same time to modernizing the plant and the training of his three sons to carry on.

The decade from 1910 to 1920 also was a most important one in the history of the Company.

When we come to this decade, I am on familiar ground, for I came to Southbridge in February of 1910, and events since then have passed in review before me.

In 1908, Channing Wells was elected Vice President, Albert, Treasurer, and Cheney, Secretary. Mr. Wells retained the Presidency.

The great expansion of our business since 1910 is shown by the comparative sales figures. In 1910, they grossed 9 million dollars. In 1944, they grossed 57 ½ million dollars.

When I came to Southbridge in 1910, the Company was just beginning to emerge from its "shop" days into its Institutional ones. The buildings and equipment for the Institution had arrived, but like Janus, we were looking two ways, before and behind. Naturally, much of the "Shop" atmosphere remained but we were molding them and our thoughts into Institutional ones.

At that time, February 1910, our Institutional Departments were conspicuous by their absence, although they were definitely in the minds of our Executives.

There was no Research Department as such, although in 1909 inspired by Mr. J. C. Wells, a chemist, Mr. C. H. Kerr, from Ohio State University had been secured. He was located at Lensdale. From that beginning grew our Research Department and Laboratories, the most important and the most productive in all the ophthalmic art, and now under the Direction of Dr. Edgar D. Tillyer, undoubtedly the greatest lens physicist in the world, and the ranking and most practical inventor in the ophthalmic art.

In our large and well equipped Laboratories, we have physicists, chemists, metallurgists, and glass experts. They are outstanding men in their fields and their inventive contributions have given our Company pre-eminence in the ophthalmic world.

A list of the most important commercial ophthalmic products of the present Century will show to an astonishing extent the dominance of our Company in the Scientific field.

The following incident will illustrate very nicely this dominance.

A research worker and author in the ophthalmic field, not connected with us in any way, was anxious to obtain a collection of the outstanding patents in the art, that would show the inventive development and progress in the art in this Century.

He went to the United States Patent Office in Washington, D.C., and applied to the Patent Examiner of Division 7, the Optical Division of the Patent Office.

The Examiner listened and then said, "If you wish to get a comprehensive idea of the important developments in the ophthalmic art, just you get a copy of all the patents of Dr. Edgar D. Tillyer of the American Optical Company. You won't find much he has missed."

This was high praise, indeed, but the Examiner was absolutely honest. It was true.

The contributions of Tillyer alone to the practical products in the ophthalmic art are little short of astounding as the following partial list will disclose:

Tillyer Lenses –

The Ful-Vue Bifocal – under this patent fell –

Ful-Vue, Univis – Panoptik and Widesite – all the modern bifocals.

Calobar Glass – the most popular absorption lenses used. Used by the millions in the War.

Rose Smoke Glass – the new improved Calobar.

The development of the Lnesometer.

The centered no power lenses for Aviation Goggles to overcome prismatic distortion. Used by our fliers in the War.

The Venturi Aviation Goggle.

Development of Cruxite Glass.

Tillyer Cataract lenses.

The Tillyer Trial Set.

The Additive Power Phoroctor.

Heat Screens for projectors – used by Kodak and the motion picture projection people, and The Piezo Electric Crystal:

This is a small piece of quartz crystal so cut as to act as a governor of vibration frequency in radio. It was used by the millions in the War. There were over a hundred used in every tank. The demand was so great during the War, that the supply of the mother quartz crystals was exhausted and the Government flew the mother crystal in by plane from Brazil.

Gentlemen – you may be proud of your Research Laboratories. They have no real competitors anywhere in the world in our art.

Dr. Tillyer came to us from the Bureau of Standards in Washington, D.C. in 1916. From that time on, the AO Laboratories out-distanced all competitors.

The vision of J. C. Wells has more than been justified. We have a great Research Department. The best there is.

When I came, we had no Advertising Department as such. O. B. Carson had joined us in 1909 and was working on a new catalog, our second, the one that came out in 1912.

This was the embryo of our Advertising Department. Carson was a clever man with a true instinct for advertising and sales. He worked directly for Mr. C. M. Wells.

Mr. H. C. Ray came to Carson's Department, and took over when Carson left us to take over the advertising of the American Hard Rubber Co., New York City.

Our expanding business soon increased the duties of our advertising men, and the growth of this department was rapid and its personnel grew.

We issued our first house organ "Amoptico" in 1910. This has grown into our "Vision." One of the finest in the art, both in content and make-up. It has been well described as the greatest salesman in the optical art.

We entered National Advertising first in 1912.

Today, our Advertising Department, under Mr. Ray, is the greatest in the ophthalmic art, and our publications have received much notice and many awards of excellence, not only in our own art, but from the advertising world generally.

It is truly an Institutional department. The work is done by our own local personnel under the guidance of the greatest and best advertising experts we can obtain.

We do much of our own printing in our own Printing Department.

We have gone a long way from 1910.

The Legal and Patent Departments – these grew from the inspiration of Mr. J. C. Wells. I installed these local departments in Feb. 1910. The ophthalmic art is an art of patents.

Practically everything worthwhile in the art has been patented. There has been much patent litigation in the art. This period of litigation was beginning when I came to Southbridge. The first two decades of my experience here were busy ones indeed. They were days of organization, of collecting the art, particularly the patented art, of organizing our inventors, of litigation to prevent pirating and infringement of our patents and inventions. Our big problem at the start was to convince infringers in the art that we could and would fight to maintain our rights.

All this may be summed up in the statement that our big job was to encourage research and invention and to maintain and protect our rights under them.

Our local Legal and Patent Departments were fortunate at the start in that we had the advice and supervision of the best legal talent to be found in the profession.

Our General Counsel was Charles H. Choate, of Boston, a descendent of the great Choate's and the greatest trial lawyer north of New York City.

Our General Patent Counsel was Frederick P. Fish of Boston, the Dean of the American Patent Bar, and probably the greatest patent lawyer yet produced.

He was a great businessman as well, having been at one time the President of the American Telephone & Telegraph Company.

With the backing of these men, and with the local productivity of our inventors and research workers, we soon attained a position of supremacy in the art, and we have maintained it.

Through the toil of battle, we gained a position where our rights were respected. The whole art learned that if we were goaded into battle that the fight would be a real one and to the finish. It was bitter and an expensive struggle, but in the end we gained the respect that was our due. Since then we have never lost it.

As we have noted above, our inventors and research workers were giving us inventions that dominated the field. This made us leaders in the art.

The maintaining of the best Legal Counsel obtainable enabled us to maintain our rights. We have always secured the best Legal Talent available.

The sum total of this was that in time the whole ophthalmic art looked to our leadership in invention and research.

We hold and maintain that position today. It was obtained by the most difficult work and effort through the years.

The importance of this work, which as I have said, was a combination of the encouragement of invention and the will to battle to maintain our rights, may be somewhat indicated in the partial list of litigations we had to go thru:

The AO Loop or Guard Arm. This was infringed by the whole art. To this day, it is used by the millions. Every spectacle Guard Arm uses this loop.

The Kryptok Bifocal. We were licensees and there were 7 years of litigation. The patent was sustained.

The Ultex Bifocal. We were licensees. There was long litigation and the patent was sustained.

The Inner Rim or Windsor Frame. This was our invention. It was infringed by all the manufacturers. There were years of litigation. We won. Our patent was sustained.

The Lensometer Litigation. We won.

The Fingerpiece Litigation. Here, we were defendants. We won.

The Fulvue Bifocal Cases. - We had the basic patent on the Ful-Vue Type Bifocal (Dr. Tillyer). It was infringed by Univis, by Panoptik and by Widesite. There were years of litigation in some half dozen courts. We won. The cases were finally settled and the infringers took licenses.

This patent covered basically all the modern fused bifocals. It was a great contribution.

The Bilt In Bearings Case – This was our invention and covered the best fingerpiece ever made. Our competitors ganged up on us and fought us. We won.

The M-28 Lens Polishing Machine – We were defendants here. We proved priority of invention and we won. This was the most popular machine in the art. Two points were apparent in this list:

1. The great contribution to the art of AO Inventions made, and
2. We stood on our rights, fought and won.

Through the years, our Legal Departments have grown and prospered. It now has a large force of common law attorneys and patent law attorneys.

I retired from these department in 1939 and they are now under the supervision of R. G. Wallace, Esq.

We are proud of our Legal Record. Since 1910, we have never lost a Patent Suit in which we were defendants. We have never paid one cent of damages to any patent owner for infringement of a patent. Gentlemen, that is a record to shoot at.

Where we were complainants we lost, I believe, only 2 suits, but in the great majority of cases, we won these suits also.

We are proud of our Legal Record.

Sales Department – When I came in 1910, we really had no Sales Department.

We had only one traveler on the road, Mr. W. H. Hurlbert, who came with us in 1902. He was an old Civil War Veteran and as fine an old gentleman as ever lived. Everybody liked Mr. Hurlbert.

He was really not a salesman but rather a contact man that called on the trade and showed them the new things we were making. If they gave him an order, he took it, but he never asked for one.

Mr. G. W. Wells had first started to call on the trade, then this was delegated to Mr. C. M. Wells, but Mr. Hurlbert was the only employee calling on the trade.

Mr. Carson was working on a new catalog and was doing some work along Sales and Advertising lines.

When Mr. Ray took over from Carson, Sales and Advertising were combined under Mr. C. M. Wells. Mr. C. O. Cozzens, who later developed into the greatest salesman in the optical art, was in this department.

The need for concerted sales effort kept growing and becoming more acute. We brought in from the outside at least two men with sales experience, but they were not familiar with the optical art.

Our Company became more and more sales minded, until in 1923 we realized, from trade conditions, that we would have to take over our own distribution.

This year, 1923, was an epochal one, for here it was we were forced to put the emphasis on sales. We could produce all right, but we had to sell the products so made.

So, in 1923, we took over several of the distributors such as Hardy, Merry, Johnston, Julius King, etc., and their various branches.

Not long after this step, Mr. Cozzens was taken from the Advertising Department to head up our local Sales Department.

The development of Mr. Cozzens is one of the business romances of Southbridge and of the optical art in general.

His great energy and ability carried him rapidly on. He not only had an intuitive sales sense and imagination coupled with a tremendous drive and energy, but from his association with the optical manufacturing business through practically all of his life and undoubtedly through inheritance from his father, who was one of the old time pioneer optical men I have spoken of, and who for over fifty years was in our employ, not only knows the sales angles, but he knows optical products themselves inside out, and is an inventor of optical products of note himself.

So, to us who know him, Charlie's advance has been no surprise. We have seen him go from office employee, salesman to Sales Manager, to Vice President in Charge of Sales all the way up to Executive Vice President of our Company.

Our Sales organization today, the greatest in the ophthalmic art, is a far cry from the one man traveler of 1910.

Today, our Sales organization not only covers our Factory, but covers also the Branches as well, some 275 in number.

This stupendous growth I have witnessed with my own eyes.

The taking over of our Distribution was Revolutionary in the art, but it was essential. Prior to 1923, we had a few large wholesale customers. Due to their buying power, we were considerably in their hands. The various customers had different ideas in products. We had to make what each desired. This was a costly manufacturing procedure.

Today, we have thousands of customers and we are able to standardize our products and manufacturing procedures and assure year around employment for our workers.

This, of course, was costly and entailed a tremendous outlay of money to finance it, but the courage of the three Wells brothers never wavered and in these few short years, they have seen their vision materialize.

It was a tremendous undertaking and headaches were the rule rather than the exception.

It was a job to be done and it was well done.

Medical Department:

In 1910, we had no medical department. Today, we have a wonderfully organized one.

It is in charge of a Medical Doctor, Theodore Story. He is outstanding in Industrial Medicine. He has a trained staff of nurses and assistants.

There is in the department also a registered optometrist to care for the eye needs of our employees.

Our Medical Department and its hospital connections is one of the finest in Industry.

Personnel Department:

In 1910, there was no Personnel Department as such. Today we have one of the finest in Industry.

Nowhere is our "Americanism" better expressed than in the amazing growth of our Personnel or Welfare Department.

Here the slogan has been, "Our Best Efforts must be Given to the Welfare of our Employees."

As I have stated, when I came here in 1910, we were, in effect, a "shop." A great shop, it is true, but still our old shop methods largely prevailed. They were, of course, not to be easily forgotten or laid aside. We were only in the swaddling clothes of an Institution.

At that time, we had a foreman at the Main Plant and another at Lensdale who looked after employment. In the office, our Executives looked after this.

As we grew, our turnover of employment grew and became very large. Expanding conditions just simply forced us to consider the creation of a Personnel Department.

Toward the end of the year in 1916, there came to us an Engineer trained in the matter of Human Relations in Industry, Mr. Royal Parkinson.

This was, in reality, the start of our present Personnel Department.

Mr. Parkinson was a man of capability with a high sense of human values. His organization work with us in creating this department has made him an outstanding Personnel man whose abilities have been widely recognized by Government and Educational Institutions as well as in Industry.

Parkinson's one aim has ever been, "What is best for our employees?"

This department has grown and expanded into an Institution by itself. Whatever is of human interest or of human welfare to the employee is its field of operations.

This department is charged with the following important matters.

Securing help, building employee morale, employee housing, employee transportation, medical care, legal advice, emergency assistance, labor problems and turnover, cafeterias, sports, recreations, a plant newspaper, an employee athletic association, an old timer's club, for those who have served 25 years or more, employee tax questions, an

employee auditorium and theatre, visits to the sick, the injured and to homes where death has come.

In fact, and in short, every legitimate activity that has to do with the health, comfort, welfare and morale of our workers.

Here has been a magnificent job, magnificently done.

Besides our Personnel Director and his staff and corps of assistants, there is also a Personnel Committee composed of the Superintendents or Managers of the Main Plant, Lensdale and Casedale for whom the employees directly work.

This Committee whose interest is closest to the welfare of their employees acts somewhat as a Supreme Court to insure thorough and careful supervision, appeal and review.

An important feature of the work of this department is the training of supervisors, foremen and the help.

The Company is proud of its Personnel work and our low turnover of help speaks volumes for the content of our employees.

An amazing advance has been made here since 1916.

This department now is absolutely institutional.

Accounting and Finance:

In 1910 we had, of course, the embryo of a Financial and Accounting Department.

Albert Wells was Treasurer then and he kept a keen eye on finances.

These departments advanced and expanded but slowly from 1910 to 1923.

Then, as President Truman exclaimed when he was advised that he had become President, "The heavens and the earth have fallen on me all at once," our Financial and Accounting Departments found themselves buried under an avalanche due to our acquisition of the Branches.

No one can conceive what a tremendous burden this was. It covered all the accounting of the various branches, taxes, finances, stocks, costs, legal regulations of both the State and National Governments. Overnight, we had grown into an Institution of tremendous financial proportions.

Fourteen distributing firms were purchased in 1923. In 1924, the Consolidated Optical Company and its branches were acquired in Canada.

A control over finances, sales and distribution was essential.

Naturally, this was a problem of the Treasurer, Albert B. Wells.

To meet the situation, three financial men and certified Public Accountants were called in.

They were Ira Mosher, now President of the N.A.M., Edward E. Williams, now Treasurer, and George Baskie, now Comptroller.

The able and strenuous work of these experts built our Financial and Accounting Department into the splendid organization it now is.

A Branch Finance and Accounts Department was organized. The Branch office network organization became a fact and a great success.

Under this procedure and in connection with these new arrangements, C. O. Cozzens was appointed General Sales Manager in 1928.

With the advance of time, this great organization grew and was expanded. Mr. Mosher was first Comptroller, then Treasurer, and finally Vice President and General Manager, a position that he held up to the end of 1944, when he left to become President of the "National Association of Manufacturers" of the whole United States.

Mr. Williams followed Mr. Mosher as Treasurer, and Mr. Baskie became Comptroller of the Company.

This era starting in 1923, was of wide importance in the industry and development of the Company, and may be termed the Great Distribution and Financial Era. It placed our Distribution branches and finances on the sound basis they now occupy.

Our Accounting has grown into a large and important division where hundreds of accountants, cost and tax experts and clerks are employed. It may be called the nerve or control center of our whole organization for to them we have to go for our money.

Messrs. Williams, Baskie, and Steg are men of exceptional ability and integrity and well qualified to keep us running over well balanced financial roads and credits.

The task they accomplished was outstanding.

The Foreign Department:

We have an important and growing Foreign Department under the supervision of Mr. Harry G. Estabrook.

It is an outgrowth of the purchase of the Foreign Dept. of the Julius King Optical Co. in 1915.

At that time, the Julius King Optical Company had developed a foreign department and business under Mr. Burnham King. He was assisted by Albert Julia.

When we purchased the Julius King Optical Company Foreign Department, we moved the foreign division with Messrs. Burn King and Albert Julia to Southbridge. This was the start of our Foreign Department.

After a few years, Mr. Burn King had retired and we had sent Mr. Julia to the Argentine in 1920 to open our branch at Buenos Aires there. Mr. Julia is still operating that branch. Note, we have just been notified of Mr. Julia's death, Dec. 1945.

After Julia left here, the division was taken over by Mr. Frank M. Shields, who had come into the business as an office boy under Mr. G. W. Wells. His father was a veteran optical worker with a fifty year record of service, one of the old timers we have spoken of.

Mr. Shields became one of the best posted men in the ophthalmic art on the foreign optical business, he having visited the Orient, Europe, and South America on our behalf.

Shields was a brilliant man and became Assistant to Mr. J. C. Wells, and in 1936 Vice President in Charge of Production, after the retirement of Mr. Wells.

He retired shortly before the war but on the outbreak of the war, World War II, was called by the W.P.B. to head the department of health appliances, among which optical devices were included. With the end of the war, he again retired.

After Mr. Shields was called in as Assistant to Mr. J. C. Wells, Mr. Estabrook took over the management of the Foreign Department.

The business of this department is growing by leaps and bounds. During the war, its volume was greatly expanded due to the break down of the optical business in European countries.

It is now a most important and well handled division of our Company. This is another division of which we are proud.

Research and Development Department:

The consolidation of our Research and Development work is of recent occurrence.

Our plant is now broadly divided into the following divisions:

1. The Executive Force.
2. Manufacturing or Production.
3. Financial and Accounting.
4. Sales, and
5. Research and Development.

Previous to 1937, our development work was not consolidated but was carried out by the various divisions separately, frames by the frames people, machinery by the machinery people, instruments by the instrument people, etc.

Of course, this development work was always done in close association with the Sales, Research and Patent Departments. Its principal defect was the want of coordination.

In April 1937, Mr. D. P. Bernheim, Manager of the Nomar Optical Company, was brought in as Manufacturing Assistant to Mr. Mosher.

Mr. Bernheim was the son of an optical manufacturer and had been brought up in the optical business from boyhood until he, in his own right, had become an optical manufacturer himself. Having managed an optical factory of his own, he was well posted and experienced in all the phases of the optical manufacturing business.

Among his first duties was the consolidation of all Research and Development work into one division, a separate and distinct division of our manufacturing organization.

The close contact between Sales, Research, Development and Patent was maintained, but the Research and Development work was all coordinated under one head and division.

Its one and big job as New Products. This means research and mechanical development, new inventions, new products, the redesign of old products, the modernizing of all products. It means a constant, well organized endeavor to obtain new things and to improve the old, to the end that we shall always be ahead in the engineering and scientific developments in our art.

The division has functioned well and is daily growing in importance.

Its record during the war was outstanding. Its contributions were of the first importance and they have resulted in

such prestige to our Company from Governmental, Educational and Scientific sources.

This is a busy department of whose accomplishments we are justly proud.

Many of its contributions are outstanding in the ophthalmic art today.

The consolidation of this department was a consummation we had wished for for many years. It had always been of first interest to Mr. J. C. Wells through whose inspiration it owes its existence.

Manufacturing and Production Division:

When I came in 1910, there were two main divisions of the plant, the Main or Frame Plant, and the Lens or Lensdale Plant.

At that time, these divisions were run much on the old time shop idea. There was a Superintendent at the Main Plant, Mr. George H. Day, and one at Lensdale, Mr. Harry W. Hill.

Both of these men had their roots in the soil of the old shop routine, but they were looking ahead to the new day.

These two plants were run almost as separate units. Albert Wells had his interest in Lensdale and Cheney in the Main Plant. They worked through their Superintendents and they, in turn, through their foremen.

As the business expanded, so grew the needs of Manufacturing.

In January 1916, Mr. Elmer L. Schumacher, a Production Engineer of experience was called to manage our Main Plant. Mr. Schumacher had had wide production experience and he soon began developing the organization that is now in force today under his supervision.

Like George W. Wells before him, Mr. Schumacher's great urge was and has been to improve the ways of making our products, better machines, better equipment, better apparatus, better processes and procedures, better output and less waste and lost motion.

Under him has grown our magnificently equipped Main Plant. Elmer has never fallen down on finding ways and means of producing at minimum cost and maximum output the finest line of optical mountings, machines and instruments in the art.

At Lensdale, Harry W. Hill was Superintendent. He had as his Assistant, Walter G. Buckley, who came to us from Providence in 1909.

Hill was an old timer and a lens man par excellence. His life and interest was devoted to the better ways of making better lenses. He was very closely associated with Mr. G. W. Wells and with Albert Wells. He received great support from them.

Mr. Hill was a fine Executive and an able and prolific inventor. Lensdale, under him, grew and expanded. As new and difficult lens products came on the market, such as Kryptok, Ultex, Tillyers, etc., Mr. Hill found ways, means and equipment to produce them efficiently and of good quality.

When Mr. Hill died in 1939, Mr. Buckley took over as Superintendent at Lensdale. His long schooling and experience under Mr. Hill, coupled with his own ability and energy, ideally fitted him for this responsibility. He carried on, keeping ever in mind the great Lensdale traditions and pointing ever to keep Lensdale in the forefront as regards lens production.

In 1935, AO acquired the Spencer Lens Company of Buffalo, New York, manufacturers of microscopes and optical scientific instruments.

The facilities of Spencer were not adequate for the great expansion that A.O. had in mind for it. So a large new modern plant was erected in Buffalo.

When World War II came on, the importance of Spencer was apparent. New organization to take care of our requirements was needed so Mr. Buckley was sent out there to organize and supervise the production requirements the Government was heaping upon us. Spencer went on 100 percent war work.

Mr. Buckley took over the production out there and the plant made a most excellent showing.

When Mr. Buckley went to Buffalo, Mr. Sam Sheard, one of his supervisors took over the running of Lensdale.

Mr. Sheard is a bright, energetic man of action and carried on at Lensdale during the War as he is now doing.

He is a brother of Doctor Charles Sheard of the Mayo Clinic, one of the outstanding authorities of the optometric profession, lecturer and author on ophthalmic subjects.

Dr. Sheard was, at one time, on our Scientific Research Staff and was called from our service by the Mayo Brothers.

Mr. Buckley has now risen to the position of Vice President of the Spencer Lens Company division of our Company and, in addition, has general supervision of all of our Lens Plants wherever located.

He is well equipped with a lifetime of lens experience behind him and is an able and efficient executive and producer.

The Executive Department:

On September 2, 1936, the three Wells brothers resigned.

They had served long and well.

They decided to turn over the reins to younger men.

The officers elected then were:

George B. Wells, President, Ira Mosher, Vice President and General Manager, Chas. O. Cozzens, Vice President in Charge of Sales, E. E. Williams, Treasurer, Frank M. Shields, Vice President in Charge of Manufacturing and George Baskie, Comptroller.

The Wells brothers, however, did not relinquish all connection with the Company; they retained their position on the Board of Trustees of which Albert was Chairman.

This organization carried on, with the exception of Mr. Shields who had resigned as stated until down towards the close of 1944, when Mr. Mosher resigned, Mr. Cozzens was then made Executive Vice President.

Mr. George B. Wells is the son of Mr. Albert Wells. He is a graduate of Harvard, where he was a good student.

When, after college, he came into the business, he became just as close a student of the business and its organization as he had been at Harvard. He took his work as he would a course in college. His typewriter went wherever he went. He studied and he noted. He had the inherited qualities of his forebears and the great advantage of his association with his father and uncles. George B. Wells worked long and he worked well and he was able to master what he studied, so when his opportunity came in 1936, George was ready. He was no novice.

He has inherited his father's instinct for finance, but he has kept his face forward. While he loves and respects the

traditions of the past and of the American Optical Company, he realizes he is of another generation, and he realizes more fully, I believe, than any of us old timers, that we live under ideologies far different from those of the past, and that willy nilly, that is the fact, and we have to live under and up to the requirements of our day and age.

He knows the optical business, and he is a student of affairs.

Perhaps his greatest characteristic and one of his greatest values in our organization is that he is easy to work with. He knows how to listen and, above all, he never forgets to thank one for any assistance rendered, no matter the rank of the employee.

He is well liked throughout his organization and throughout the whole ophthalmic art.

He is a fine executive in his own right, and he has the invaluable advantage of the close association with his father and uncles.

He, like his forebears, is an outstanding man and executive in the ophthalmic world.

Industrial Eye Protection:

This is another important division of our organization and, like our Foreign Department, is the result of our purchase of the Julius King Optical Co.

The conception of the importance of Industrial Eye Protection originated with Mr. Walter G. King. Through his efforts, the Julius King Optical Company had built up a department and quite a little business in this field.

We took this over and moved it to Southbridge. The volume of the business was but small at the time. Today, the business runs into the millions of dollars a year and is a growing and most important department.

It is under the supervision of Mr. Chas. H. Gallaway, of our Sales Department.

During the war, this was one our busiest departments for there was great demand for practically every one of its products.

The field is constantly expanding and has now grown to include, not only goggles and eye protection, but respirators and all kinds of safety devices, such as helmets, protective clothing, and legging and gloves, etc.

This is a constantly expanding field of endeavor.

Bureau of Visual Science:

Here is another of our newest expansions into the field of ophthalmic and optometric science.

Here are centered the problems of optometric science and practice.

This department is now under the supervision of Dr. Paul Boeder, who followed Dr. Julius Neumueller, who installed the division for us, in 1935.

The members of this division are registered optometrists and their field is research and development in the field of optometric science and practice, particularly in the field of new testing and scientific instruments and the developments in the new field of aniseikonia, or size of image variation.

Dr. Broeder is a very brilliant mathematician and student. He is a great expert on aniseikonia and Iseikonic prescriptions and lenses.

Our Visual Science Bureau was a direct outgrowth of our association with Dartmouth College in developing the science of aniseikonia.

The great value of our Visual Science Bureau is the service it renders in prescriptions, scientific knowledge and advice, publications, etc. In fact, it is a Bureau of Information, consultation and advice to the profession. As such, it plays a large part in building and maintaining the scientific prestige of the Company.

It serves in the optometric field in a similar way that our Research Laboratories serve in scientific optical matters generally.

This service is greatly appreciated by the profession and the art generally.

Spectacle Cases:

This is a large and important division of the Company.

The cases are made at Casedale down below Lensdale in the Old Lens Building.

It is under the supervision of Mr. A. J. Pratt, an expert of long standing.

In 1910, when I came here, the cases were made in a small department of the Main Plant by Mr. Dancereau. Shortly after, Mr. Pratt came and we began to expand. Pratt continued with us awhile, then left to go in business for himself, after a short interval he came back to us at the time of World War I. Due to shortage of labor, Mr. Pratt established a Case Plant for us in Cambridge, Mass.

After the War, the plant was returned to Southbridge, into the present Casedale Building.

Mr. Pratt is an expert in every phase of case production and he knows leather and case covering fabrics and materials inside out.

When, during World War II, we had to expand our Industrial Safety and Eye Protection Division, a plant for this purpose was started in Putnam, Conn., under Mr. Pratt's supervision.

Casedale and Putnam together have done a magnificent job during the War, not only on cases, which was Casedale's specialty but on goggles, respirators, protection and safety equipment, clothing and hundreds of specialties in the line, entirely new products and procedures for them.

The case producing equipment is modern and complete and the products of this division are known and appreciated throughout the trade.

AO cases rank with the finest anywhere in design and quality.

From the above, may be glimpsed the tremendous advance and expansion that has taken place since 1910.

Today we are no longer a "Shop." The "Spec Shop" of "Spectown," has vanished in the limbo of time, and today we, the American Optical Company, have grown into the greatest optical institution of the Ophthalmic art, the world over.

What a tremendous stride has been made in 35 years.

A few of the Outstanding Events of the Last 35 Years:

1910 – Kryptok and one-piece Ultex Bifocals were placed on the market under Patent Licensing Plans.

These quality products marked the birth of the modern dispensation of quality products.

Prior to this, optical products were sold as merchandise and on a price competitive basis. The art was at a low ebb.

Many optical experts have stated that “Kryptok” pulled the business out of the doldrums.

From the time of Kryptok, the art turned toward scientific service and quality, rather than providing merely cheap merchandise.

The real beginning of optometry as a profession rendering professional service dates from this period. Ever since that time, the trend has been away from commercialism towards professional service.

Prior to 1901, there were absolutely no restrictions or checks on the practice of refraction of the eyes.

Minnesota passed the first optometry law in 1901. California and North Dakota in 1903. New York came in, in 1908, and then followed other states.

So you can see the whole growth of the profession of optometry has taken place in the last half century.

As the demands of science and professional service grew, there took place, not only a great revolution of refraction, but also in the scientific development of the highest quality products to provide the obtaining and maintenance of the very highest perfection in the correction of vision.

Due to the vision of our founders, AO had laid the ground work to meet these standards of excellence as the demand for them grew in a rapidly progressing profession.

In the frame or mounting line in 1910, the Fingerpiece mounting or eyeglass was gaining the vogue. The basic invention was made by a French optician, Cottet, in 1896. AO acquired the patent.

This demand ran for many years and AO finally developed the greatest of all Fingerpiece mountings. “The Bilt-In Bearings.”

Incidentally, the Bilt-In Bearings idea, was an inspiration of the young salesman, C. O. Cozzens. It was acquired at his instigation and it was the first great specialty that Charlie got behind and was instrumental in putting over. Charlie’s rise dates from this period on. He went from one specialty to another, with remarkable intuition and success. Charlie’s intuition as to what would, and what would not sell, was remarkable. If Charlie ever backed a wrong one, I do not know what it was.

Space will not permit us to go into detail. A mere mention of some of these specialties is sufficient to make one realize the great influence AO has had in developing the great inventions and specialties in the art.

The AO Loop, or Guard Arm.

The Fingerpiece Eyeglass.

The Bilt-In Bearings Fingerpiece.

The Inner Rim or Windsor Spectacle.

The Ful-View Mounting.

The Numont Mounting.

In Lenses:

Kryptok Bifocals with B&L and Kryptok Sales Co.

Ultex Bifocals with B&L and Ultex Company.

The Ful-Vue Bifocal.

The Tillyer Lens.

Tillyer Cataract Lenses.

Calobar Lenses.

Crookes Lenses.

Cruxite Lenses.

Rose Smoke Lenses.

Tillyer Aviation Lenses.

In Instruments:

Additive Power Phoropter.

The De Zeng Line of Diagnostic Instruments.

The Spencer Line of Scientific Instruments.

The Lensometer.

In Machinery:

The M28 – Lens Polisher.

The Micro-Surfacar.

These are some, but not all, of the many basic inventions and products that have been contributed to the art by AO in the last half century.

There is no other concern in the optical art that can approach even by one-third this record.

These products are the result of AO Research, Development and Invention. Production and Marketing. Our Company has perfected to the highest degree every element and unit of these components and has molded them into a competent, smooth working, coordinated whole.

Thus, it is, our leadership has been earned in the hard way. This leadership is merely and simply the logical result of the organization that was built to take care of it.

As we have sown, so have we reaped.

The remarkable thing is that the Vision of all this was in the minds of our leaders away back yonder in 1901, when the first optometry law was passed, and the three Wells brothers went to join their Father at the American Optical Company.

There are two other department that have come into existence since 1910.

In view of their importance, they should not be omitted from our list.

As you can well see, my great difficulty, is not to tell you great things about our company, for one could fill a great volume and not get them all in.

The problem is, what to leave out to fit my paper into the time allotted.

But, I should really tell you briefly about these two departments:

The DeZeng line of Diagnostic Instruments:

We acquired the DeZeng business in 1925, and that made us the leaders in this line.

Henry L. DeZeng was a great man in the diagnostic instrument field.

He was of French Huguenot descent and came from Geneva, New York, the locale of his ancestors.

He built a fine plant in Camden, New Jersey.

Henry DeZeng had two outstanding qualifications. He was a great inventor, and he inherited from his French forbears a great thrift and common horse sense.

He had the vision to foretell the demand for diagnostic instruments by the profession.

He started in to build a line with this in view. He progressed rapidly until he had a nice little plant in Camden. Here he had gathered around him a corps of fine Swiss instrument makers, the finest obtainable.

Across the Delaware River was Philadelphia, the greatest Medical Center in the United States.

Henry began to cultivate the acquaintance and friendship of the doctors.

For instance, out on Spruce Street was the famous Doctor De Swinetz.

Henry would call on the Doctor. “Doctor,” he would say, “Is there any kind of treatment you would like to make if there were any instruments to do it?”

“Now,” said De Swinetz, “If I only had an instrument to do so, and to do so,” etc.

“That Doctor, should be easy,” Henry would say, “I will be in to see you again in a week or so.”

Across the ferry to Camden, Henry would go. Then came a confab with the Swiss Instrument makers. Then in a week or so, Henry would say “Try this out Doctor, and tell me how you like it, and what is wrong with it.”

Result – In a few short years the DeZeng line was famous and the leader.

This story is true, for Henry told it to me himself.

We brought the DeZeng factory first to Southbridge and then transferred it to Spencer.

The DeZeng patents were the basic ones in the line. We, from this start, have added to, expanded, and developed the line to its outstanding position of today.

Henry's horse sense and his Swiss Instrument makers did a splendid job away back yonder in the early days of this century.

The Purchasing Department:

In 1910, we had only the nucleus of a Purchasing Department. It was then just a clerical division of the Main office. We next brought in a purchasing man, Mr. J. I. Morris, who began to organize a rapidly expanding department. After a few years, Mr. Morris left us to go into business for himself.

He was followed by another purchasing man, Mr. Weir, who served with us some two years.

On March 1, 1923, Mr. G. Porter Brockway, a graduate engineer from Cornell, and a purchasing agent for the Cutler Hammer Company, came with us to head up our Purchasing Department.

From that time on, our Purchasing Department started the development that grew into our present important one.

This department buys everything we use: glass, abrasives, gold, metal, autos, supplies, everyone of the million things we must purchase every year, including machinery, equipment and materials, etc.

It is a large business in itself. It is well organized with a competent staff of experts and still under the capable supervision of Mr. Brockway.

Porter Brockway is an able and likeable gentleman. He knows his business.

He has just come through, with flying colors, one of the most difficult eras any purchasing man can run into – 4 years of war and war scarcities, rations and priorities.

Mr. Brockway has been honored by his profession as an outstanding Purchasing man, as he has served as President of the Purchasing Agents Association of the United States.

So his abilities and manhood have been strikingly recognized by the experts who should know.

We are all proud of Porter and his Department.

The daily routine in his office points out, as nothing else could point out, I believe, the wonderful growth of our company in the span of a few short years.

H. H. Styll

General Consolidation of Manufacturing Plants:

Due to the fact that our manufacturing now comprises many plants, the units of which are widely separated, as for example, Southbridge, Buffalo, Brattleboro, Putnam and Canada, etc., it became a necessity that the activities of these various plants be coordinated.

In 1942, Mr. John Crawford, a man of great manufacturing experience and ability came with us to head up a new

Division of our organization under the title “General Manufacturing Manager for all manufacture of ours on the North American continent.”

Through the means of this Division, all of our American manufacture is coordinated and cleared. Its importance is apparent as a practical means of preventing duplication of effort and expediting our manufacturing efforts generally.

Mr. Crawford is an able and likeable gentleman of broad experience in manufacturing. Previous to coming with us, he had been the Assistant and General Adviser of Edsel Ford, in the Henry Ford organization of the automobile industry.

This department is recent, but is rounding into operation and is filling an essential need of great importance in our organization.

SECTION III

January 7, 1936

Important AO Inventions and Patents

Lenses

Tillyer Corrected Lenses –

Patent – 1,588,559 – June 15, 1926
Filed – May 26, 1924.

Cruxite Lenses – A. B. Wells

Patent – 1,485,655 – March 4, 1924
Filed – Dec. 9, 1919.

Calobar Lenses – Tillyer

Patent – 1,222,049 – April 10, 1917
Filed – June 26, 1916.

Projector Heat Screen Lenses

Bugbee – Patent 1,342,894 – June 8, 1920
Filed – Aug. 7, 1916.

Tillyer – Patent 1,385,162 – July 19, 1921.

Tillyer – Patent 1,434,268 – Oct. 31, 1922.

Tillyer – Patent 1,700,656 – Jan. 29, 1929.

Nokrome Lenses

Bugbee – Patent 1,397,920 – Nov. 22, 1921
Filed – Nov. 24, 1917.

Polaroid Lenses

Patent 1,918,848 – July 18, 1933
Filed – April 26, 1929.

Iseikonic Lenses – A. Ames, Jr.

Patent – 1,933,587 – Nov. 7, 1933
Filed – Aug. 13, 1929.

Iseikonic Lens Blank – Tillyer
Patent – 2,077,134 – April 13, 1937.

Kryptok Fused Bifocal – J. L. Borsch, Jr.
Patent – 876,933 – Jan. 21, 1908
Filed – Jan. 23, 1904.

Ultex Bifocal – C. W. Conner
Patent – 932,965 – Aug. 31, 1909
Filed – Oct. 23, 1902.

Ful-Vue Bifocal – Tillyer
Patent – 1,544,612 – July 7, 1925
Filed – Feb. 23, 1922 – (Reissued).

Panoptik Bifocal – J. H. Hammon
Patent – 1,740,298 – Dec. 17, 1929
Filed – April 6, 1927 – (Reissued).

Ultex – Ring Tool Process
Bentzen and Emerson
Patent – 946,571 – Jan. 18, 1910
Filed – Dec. 18, 1905.

Frames and Mountings

Fingerpiece Eyeglass – Jules Cottet
Patent – 560,895 – May 26, 1896.

AO Guard Arm Loop – D. H. Ludlow
Patent – 674,974 – May 28, 1901.

Schwab Guard – I. M. Schwab
Patent – 887,028 – May 5, 1908.

Bilt-In Bearings – Fingerpiece
C. M. Haynes
Patent – 1,345,488 – July 6, 1920.

Inner Rim – S. J. Clulee
Patent – 1,219,254 – March 13, 1917 – Process
Patent – 1,366,768 – Jan. 21, 1921 – Article
Patent – G. H. Day and O. B. Carson – AO 1,241,717 – Oct. 2, 1917.

Ful-Vue Spectacle
J. A. Smith – 1,739,049 – Dec. 10, 1929 – (Reissued)
E. E. Emmons – 1,685,192 – Sept. 25, 1928 – (Reissued).

Ful-Vue Spectacle with Offset Guards
E. E. Emmons – 2,041,638 – May 19, 1936
Filed – June 14, 1929.

Prefitted Temples – E. M. Splaine
Patent – 1,936,773 – Nov. 28, 1933.

Pearl Pad Nose Guard – W. H. Boutelle
Patent – 1,581,163 – April 20, 1926.

Numont Spectacle – L. L. Gagnon
Patent – 2,050,525 – Aug. 11, 1936 – (Reissued)
Patent – R. H. Uhlemann – 2,108,875 – Feb. 22, 1938.

Rimway Spectacle – G. E. Nerney
Patent – 1,981,541 – Dec. 18, 1934
Filed – Feb. 13, 1933.

No-Scru – D. Slotsky
Patent – 2,037,279 – April 14, 1936
Patent – N. M. Baker – 1,988,536 – Jan. 22, 1935.

Tri-Flex – E. M. Splaine
Patent – 2,106,282 – Jan. 25, 1938.

Zyl-Arc – C. O. Cozzens
Patent – 2,236,565 – April 1, 1941.

Instruments

Phoroceptor – Lenses placed at calculated position before eye.
E. D. Tillyer – 1,887,049 – Nov. 8, 1932.

Phoroceptor – Additive Power
E. D. Tillyer – 1,455,457 – May 15, 1923.

Trial Set – Additive or Effective Power
E. D. Tillyer – 1,455,457 – May 15, 1923.

Trial Frame – Additive Power
E. D. Tillyer – 1,455,457 – May 15, 1923.

Metronoscope – J. Y. Taylor
Patent – 1,918,298 – July 18, 1933 – (Reissued)

Ophthalmograph – Carl and James Taylor
Patent – 2,132,520 – Oct. 11, 1938.

Lensometer – C. I. Troffman
Patent – 1,083,309 – Jan. 6, 1914.

Project-O-Chart – Wheelock and Tensen
Patent – 1,949,067 – Feb. 27, 1934.

Machinery

Bowl Feed – A. E. Mayard
Patent – 1,666,713 – April 17, 1928 (Reissued).

Micro Surfacers – A. E. Maynard
Patent – 1,800,308 – April 14, 1931.

Sintered Lap – H. R. Moulton
Patent – 2,145,888 – Feb. 7, 1939.

Calcined Clay – Rowe – Silverberg – Pincus
Patent – 2,256,528 – Sept. 23, 1941.

AO Laboratory – Glass Inventions and Patents

Colorless Calobar – Tillyer – Moulton – Gunn
Patent – 2,226,418 – Dec. 24, 1940
Filed – May 15, 1936 – Silica Free.

Colorless Calobar – Tillyer – Moulton – Gunn
Patent – 2,278,501 – April 7, 1942
Filed – May 12, 1939.

Continuation of 2,226,418 – Best claims in this patent.

Colorless Calobar – Pincus
Patent – 2,359,789 – Oct. 10, 1944
Filed – Sept. 15, 1941
Aluminum Phosphate – with Silica
This is a heat screen glass.

Hydrofluoric Acid Resisting Glass
Pincus – 2,381,925 – Aug. 14, 1945
Filed – Nov. 24, 1941.

Heat Screen – Color Projection
Tillyer – 2,269,494 – Jan. 13, 1942
Filed – Dec. 24, 1938.

Heat Screen – Color Projection Mounting Screen in the Beam
Tillyer – 2,279,084 – April 7, 1942
Filed – May 12, 1939.

Annealing Glass – Process
Tillyer – Serial 453,152 – Filed

Rose Smoke Glass – Tillyer
Serial 509,596 – Filed Nov. 9, 1943.

Lens Coatings – Moulton
Several applications pending
Filed in 1942, 1943 and 1944
Action on these was suspended during the war.

Chronology of AO Litigation

Fox Guard	-	1898 – 1899
Kryptok	-	1909 – 1913
AO Loop	-	1909 – 1912
Pear Tip Temple	-	1912 – AO vs. DuPaul-Young Co.
Fingerpiece	-	1913 – 1915
Lensometer	-	1915 – Basic Patent
Ultex	-	1917 – 1919
1st Windsor	-	1918 – 1920
M27	-	1918
Bilt-In Bearings	-	1918 – 1920
Federal Trade vs. Ultex	-	1920 – Dec. 1920
Schenerle vs. Ultex	-	1922
2 nd Windsor	-	1922 – 1924
U.S. vs. Kryptok	-	1925
Univis	-	1931 – 1934
U.S. vs. Optical Industry	-	1939 – 1940 – Still Pending
Canada vs. AO	-	1942 – Still Pending
AOCO. vs. New Jersey	-	1944 – Still Pending

SECTION IV

January 5, 1946

Important AO Patent Litigation

Fox Guard Suit: 1898

This was the first important patent litigation in the art.

Patent – 292,479 – Fox – Jan. 29, 1884

Bill filed Sept. 21, 1898 – Eastern.

District of Penna:

Parties – Suit against McIntyre – Philadelphia

Infringers claimed AO – B&L – Standard – Spencer

Sbdg. Opt. Co. – DuPaul Young – Martin Copeland

Bay State

Settled through Geo. W. Wells – Paid Fox \$6000.00

Fox sued McIntyre, Magee & Brown

Fox cancelled McIntyre suit and sued AO and B&L

Case was settled by payment to Fox

All defendants shared expenses proportionally

G. W. Wells handled negotiations.

AO – Guard Arm Loop Case: 1909 – 1912

AO vs. Bay State – 202 – Fed 221

Ludlow Patent – 674,974 – May 28, 1901

Filed Dec. 6, 1909 – Decree sustaining

Patent – July 13, 1911 – Reopened Sept. 8, 1911

Appeal – Jan. 22, 1912

Patent Invalid – Anticipated by Guard of Geo. S. Johnston's father.

U. S. Courts – N.Y. City – Briesen, Atty. For AO – 1909 – 1912.

Kryptok Case – 1909 – 1913

Kryptok Co. vs. Stead Lens Co.

Western Division – Missouri

Patents – 637,444 – 876,933

Bill filed 9/13/09

Patents sustained – July 21, 1913 – Lower Court

Opinion of Judge Van Valkenberg

Appeal Case

Citations – 190 – Fed 767

214 – Fed 268

Lower Court – 207 – Fed. 285

These patents were the cement Kryptok

John L. Borsch and the fused Kryptok – John L. Borsch, Jr.

The patents were sustained – valid and infringed.

The Ultex or Onepiece Bifocal Case – 1917 – 1919

Onepiece bifocal Co. vs. Bisight Co.
Tried in Baltimore – Judge Rose – 246 – Fed 450
Trial – June 9, 1917
Decision – Oct. 26, 1917
Appeal – Circuit Court – Richmond, Va.
Appeal Argued – Oct. 2, 1918
Appeal Opinion – Jan. 20, 1919
Went up to U.S. Supreme Court on certiorari
Court refused to hear – Patents sustained - Valid and infringed.

Patents in Suit:

Connor – 932,965 – Lens

Connor – 925,802 – Process

Connor – 836,386 – Machine

Alexander – 954,772 – Target Blank

This suit put Benjamin Mayer, the Bisight Co. out of business.

First Windsor or Inner Rim Frame Suit – 1918 – 1920

AO vs. Universal – 265 Fed 925
Bill Filed March 18, 1918
Patent 1,241,717 – Oct. 2, 1917
Day & Carson
Opinion – July 14, 1919
Appeal Filed – Sept. 30, 1919
Appeal Opinion – May 28, 1920
Case was tried in Providence
Judge Brown – Appeal in Boston
Judges – Johnson – Anderson and Bingham

Note: Stevens countered and sued us on his patent on the S. Q. Lloyd frame

Both cases tried at once
Decided – No infringement in both cases
We lost our patent
Lyman was our Counsel.

The 2nd Windsor or Inner Rim Frame Case – 1922 – 1927

AO vs. Shuron – 9 Fed 2nd 932
2nd Circuit – Buffalo – Judge Hazel
Clulee Patent 1,219,254 – March 13, 1917
Clulee Patent 1,366,768 – Jan. 25, 1921
Decree – Feb. 27, 1926 – Valid and infringed
See also – 16 Feb 2nd 1013
Both sides appealed
Appeals heard 1926 – Affirmed – Lower Court – June 25, 1927
See “Wellsworth” – Jan – Feb. 1927 for outline of case

Took over 4 years to settle this one
Case started in 1922 – Argued Oct. 1924
Appeal argued New York City – Nov. 1926
Affirmed Dec. 13, 1926
Went up to Supreme Court on certiorari
Court refused to consider
Patents held valid and infringed

AO obtained the patents from Bay State – After final decision, all infringers took licenses – all the manufacturers were infringing

After the final decision, the vogue was short lived as the “White Gold Specialty” soon came on and superseded Inner Rim

We really had only 3 or 4 years after final decision
Lower Court Decision – 9 Fed 2nd 932
Appeal Court Decision – 16 Fed. 2nd 1013.

Fingerpiece Eyeglass Case – 1913 – 1915

Jeo. F. Adt vs. Bay State
226 Fed 925
Bill Filed – Feb. 5, 1913
Decision – Jan. 18, 1915
5 patents in suit
Re – 13,466 – Sept. 17, 1912 – Original patent
1,019,115 – March 5, 1912
1,019,214 – March 5, 1912
1,019,116 – March 5, 1912
1,019,117 – March 5, 1912
1,040,096 – Oct. 1, 1912
These were all Adt patents
Case dismissed – No infringement
Appeal Filed – Feb. 18, 1915
Trial Lower Court – Oct. 30, 1913
Appeal Heard – May 12, 1915 – Boston
Appeal Opinion – Aug. 23, 1915 – Non-infringement.

Federal Trade Commission vs. Onepiece Bifocal Co. – 1920 – Dec. 1920

Hearing – Washington, D. C. – Dec. 16, 1920
The Ultex License Plan was investigated
Dismissed – No action taken
This was an investigation of our Finishing License Plan.

Univis Cases – 1931

The Univis Co. sued AO in five separate courts –
Boston – Dayton – Cincinnati – Columbus and Wilmington, Del.
Bill Filed – Aug. 5, 1931
Bill Dismissed – Feb. 1, 1933, in the Boston Case
The only one fully tried
Appeal Filed April 21, 1933
Appeal Decision – Jan. 3, 1934
Affirmed – No infringement
Univis Patent – Invalid
This was the Watson-Culver Patent 1,729,654 – 10/1/29
After this, there was an agreement between Univis and AO – a cross license was arranged and all the other

cases dismissed.

AO also sued Univis on the Tillyer Ful-Vue Bifocal Patent. AOCo. vs. Univis – Wilmington, Del.

All suits were settled and dismissed.

The Tillyer Patent is the basic one of all the group.

This litigation cleared our Ful-Vue Bifocals and enabled us to continue making and selling them without royalty to anyone. This was an important litigation.

The Lensometer Case – 1915

Interference 38,529 – Jan. 26, 1915.

Troppman vs. Allen.

Troppman was with F. A. Hardy Co.

Allen with Geo. S. Johnston Co.

AO backed Troppman – B&L backed Allen.

Troppman won the Interference – Allen appealed.

Priority was awarded to Troppman.

Then AO licensed B&L on their instrument.

The Bilt-In-Bearing Fingerpiece Case – 1918-1920

Interference 42,423 – April 30, 1918.

Final Hearing – June 3, 1919.

Decision – July 19, 1919.

Priority awarded Haynes – our man.

Ladd Appealed – Hearing March 22, 1920.

Affirmed March 23, 1920.

This was a five party interference, but all dropped out except O. Y. Ladd, Optometrist, Danbury, Conn.

This gave us the exclusive control on the Bilt-In-Bearing Fingerpiece – the best we ever made.

C. O. Cozzens promoted this specialty. It was his first venture in the promotional field. It was a great success.

We bought the patent from Haynes, Optometrist, Chillicote, Ohio.

The M27 Polishing Machine Case – 1918

Paige vs. Brown – U. S. District Court – Philadelphia.

Trial – Dec. 23, 1918.

Paige sued Andre Brown – AO took over defense.

Judge Dickman decided no infringement. Paige appealed.

Appeal Court sustained the Lower Court.

This was an important case and a bitterly fought one.

U. S. vs. Kryptok Co. – Government Suit – 1923-1925

This was a suit by the Government in New York City to try out the legality of the Kryptok Licensing Plan.

The patents expired before the Court decision was reached, hence the Court dismissed the case as moot.

Mr. Choate represented us.

Trial – March 16, 1925.

Answer Filed – February 13, 1923.

Decision – July 22, 1925.

