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1808~2008 The Pioneering Spirit

# Knowlton Technologies

## The Pioneering Spirit 1808 ~ 2008

In the year 1808, Thomas Jefferson was serving his second term as the third President of the United States. Lewis and Clark had just completed their expedition of the Louisiana Purchase and Napoleon's legions were swarming across Europe.

In the tiny community of Watertown in upstate New York, Gurdon Caswell had just opened his Pioneer Mill on the south bank of the Black River – churning out 150 pounds of paper a day made exclusively from rags Caswell himself collected.

From that humble beginning, Caswell's little mill has become Knowlton Technologies, a company that is celebrating its 200th anniversary as the oldest paper mill in continuous operation in the United States.

To celebrate the milestone, Knowlton has published this commemorative book chronicling our past, with parallels to the famous events that shaped the world at that time.

When people like Charles Dickens, Thomas Edison and Franklin Delano Roosevelt were making headlines, the company now known as Knowlton Technologies was quietly carving out a niche in the specialty paper industry.

As decades have passed, Knowlton has been there, changing with the times. Webster's Spelling Books, cover paper for photographic tintypes, duplex papers used to protect Kodak film, mimeograph paper, packaging paper for x-ray films, laminated papers for food, filters for gas masks and air fresheners; these are just a few of the products created by Knowlton for other companies.

There also have been many firsts. Knowlton was one of the first U.S. companies to be underwritten for a special kind of fire insurance. It also was among the first to produce its own electricity, offer its employees group health, establish a credit union and develop environmentally friendly manufacturing processes.

Along the way, the company sent its sons and daughters off to fight a Civil War and two World Wars. It survived a Great Depression and several devastating fires, and even received presidential citations for its wartime "contributions and self-sacrifice."

We hope you enjoy reading a little bit about the history of Knowlton Technologies. However, even as we take a peek into the past, the Knowlton of today continues to look ahead, with plans and expectations of further serving our industrial markets and anticipation of working with our customers to develop additional intellectual properties far into the future.

A handwritten signature in dark ink, reading "Franklin D. Cean". The signature is fluid and cursive, with the first name "Franklin" being more prominent and the last name "Cean" following in a similar style.

Franklin D. Cean  
Chairman/CEO  
Knowlton Technologies  
April 2, 2008

*Highlights  
of the First 200 years  
at  
Knowlton Technologies*



## 1808

"This indenture, made the fourth of March in the year of our Lord one thousand eight

hundred and eight, between John Paddock of Watertown and Gurdon Caswell... Westmoreland in the county of Oneida."

Gurdon Caswell builds his first paper mill on the south bank of the Black River opposite Beebee's Island, above Cowan's Grist Mill. The Pioneer Mill, as it was called, probably employed four or five men and as many women, and was capable of turning out 150 pounds of paper a day.



Lewis and Clark Expedition of the Louisiana Purchase.

Beethoven composes his Fifth Symphony.



## 1809

Thomas Jefferson completes his second term as President of the United States.



## 1812

A defeated Napoleon retreats from Russia.

## 1818

The Pioneer Mill and a second mill built by Caswell are sold to Seth Otis of Watertown and John C. Holbrook, presumably to settle a debt.

## 1820

Missouri Compromise partitions "free" and "slave" states.

## 1823

President James Monroe issues his famous "Monroe Doctrine."

## 1824

George W. Knowlton, a young bookkeeper, and Clarke Rice, a young printer, form a partnership to purchase the Pioneer Mill for \$7,000. The business becomes known as Knowlton & Rice, a book printer and bindery. The owners collect rags for paper and deliver the finished books to area schools by horse and wagon, traveling as far north as Potsdam, NY.



Clark Rice.



Deed of purchase for the Pioneer Mill by George W. Knowlton and Clark Rice.

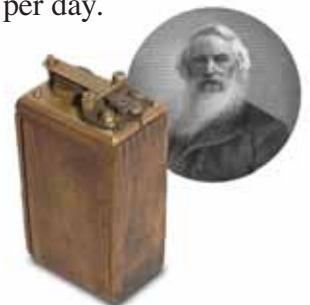
## 1829

"Old Hickory" Andrew Jackson elected President.

## 1832

Knowlton and Rice purchase machinery for making a continuous sheet of paper, known as the Fourdrinier machine (36 inch cylinder). It was the first of its kind in Jefferson County. The paper capacity grows to 700 pounds per day.

Samuel F.B. Morse invents the telegraph.



## 1833

The name Knowlton & Rice becomes synonymous with printing. Webster's spelling books, Cobb's Series of Spellers and Readers, Pierce's Grammar, Ruger's Arithmetic, and the Knowlton and Rice Common Almanac are all published here.

## 1837

Charles Dickens authors "Oliver Twist."



## 1839

Daguerre invents first form of photography.



## 1842

10-hour work days for children becomes law in Massachusetts.



Gold is discovered in California.



John C. Knowlton, George Jr., 1848

## 1848

Fire destroys the Knowlton & Rice mill. Losses are extensive, \$16,000 for the Knowlton Mill.

## 1849

Great Fire of Watertown – May 13, 1849. The mill is rebuilt and the company is renamed Knowlton, Rice & Company when another partner is added – Clarke's son, John H. Rice, who pays \$8,333.33 to become a one-third partner.

## 1851

Singer patents the sewing machine.

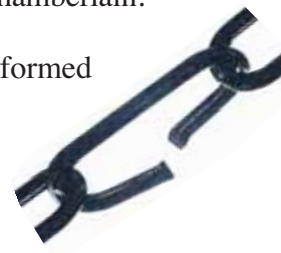


Elizabeth and George Knowlton Sr., 1852

## 1854

Charles Brown and Edward Chamberlain purchase the Mill for \$9,000. They also assume a \$13,000 10-year mortgage at 7%, payable annually. The mill changes its name to Brown & Chamberlain.

Republican Party is formed for the abolition of slavery.



## 1857

Dred Scott decision returns fugitive slave to his owners.

## 1861

Brown and Chamberlain default on the mortgage, and the mill is returned to the Knowlton family. Brothers George W., Jr. and John C. Knowlton, sons of the original owner, take over the business and rename it Knowlton Brothers.





## 1863

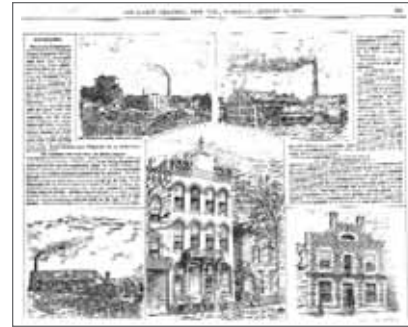
At the height of the Civil War, Abraham Lincoln issues "Emancipation Proclamation".

## 1874

Knowlton begins making "standard cover" colored papers, because the Black River water had become too dirty and dark for making fine white papers. These colored papers come in 20 colors and several weights and at least two sizes, 20 x 25 and 22 x 28 inches.

## 1865

Robert E. Lee surrenders at Appomattox and President Lincoln is assassinated.



Late 1800's newspaper article on Knowlton Brothers

## 1867

Alfred Nobel patents dynamite.



## 1869

A Watertown flood destroys much of the mill's equipment and leads to a plant modernization, including the installation of a Fourdrinier (60" trim) paper machine with 6 dryers.

## 1876

George Armstrong Custer defeated at Little Big Horn.

Union Pacific Railroad links with Central Pacific Railroad.



Alexander Graham Bell patents the telephone

## 1873

A new waterwheel and grinders are installed to produce wood pulp. Paper is now being made with equal portions of rags and wood pulp. The mill begins producing a cover for photographic tintypes.

## 1879

Thomas Edison registers patent for the light bulb.



## 1881

Knowlton begins advertising its cover papers as Kamargo Mills Products. Kamargo is an Oneida Indian name for Black River.

## 1885

An automatic sprinkler system is installed and New England Mutual insures the company against fire, the first such company to be underwritten for this type of fire insurance.

Louis Pasteur administers first rabies vaccination.



## 1888

George W. Knowlton Jr. becomes president of the new Ontario Paper Co., located in Glen Park, NY.

George Eastman's first camera for consumers is developed.



## 1889

Knowlton is the first manufacturing plant in the city to produce its own electricity. Up to that time, light was provided by kerosene. One of the mill jobs was to make sure the lamps were properly cleaned, trimmed and made ready for night.

## 1892

The corporation known as Knowlton Brothers, Inc. is formed and the partnership sold to the corporation for \$100,000. George W. Knowlton Jr. becomes the first corporation president, a position he holds for 39 years.



Four generations of "Knowltons"

## 1895

H.G. Wells writes "The Time Machine".

## 1900

George W. Knowlton Jr. is named the first president of St. Regis Paper Company. His son, Theodore Knowlton directed the engineering of a 4,000-foot canal from the Black River to the St. Regis mill site in Deferiet, NY. This mill operated as a part of the St. Regis organization - the third largest group in the US paper industry at the time.



## 1901

William McKinley assassinated by anarchist at World's Fair in Buffalo, NY.



## 1903

Wright Brothers fly for the first time.

## 1905

Albert Einstein proposes his Special Theory of Relativity.



Knowlton Brothers Office, 1905

## 1907

The company's first duplex machine is installed for the making of a red and black duplex paper used in the manufacture of film rolls produced by the young Eastman Kodak Company. Over the next two decades, Knowlton will branch out into different lines of colored papers, including the first mimeograph paper, laminated bakelite products, dental x-ray films, and other photographic packaging paper.



Theodore Knowlton  
& mother, Gertrude,  
1905

## 1908

Some of the first Kraft paper manufactured in the U.S. is made by Knowlton Brothers Fourdrinier. Previously it was manufactured from Kraft pulp imported from Sweden by Charles F. Hubbs & Co. New York City,



Dam at Lower  
Pond, 1908

## 1913

First Annual Employee Dinner is celebrated right at the paper machine. Hotels and picnics provide more comfortable environment today.



## 1914

Knowlton Brothers, Inc. is awarded a contract to furnish the government with several grades of Kamargo cover paper.



World War I begins  
with Germany's  
invasion of Belgium.

## 1917

U.S. declares war on Germany. Russian Revolution begins.

## 1918

Knowlton Brothers purchases the Harmon Machine Company from A.H. LaFebvre. Mr. LaFebvre reserves the right to use the plant for two years to enable him to get a new building for the business.



## 1919

John C. Knowlton  
dies.

## 1920

Knowlton refuses to purchase dyes made in Germany for its colored specialty papers. Importation of the dyes had been blocked during the Great War. Even after the war, however, U.S. papermakers – including Knowlton – refuse to buy the cheaper German dyes. This enables the infant dye business in the U.S. to grow.



## 1920 (continued)

Knowlton purchases adjoining property from New York Airbrake. A new storehouse is built. New boilers are installed in the basement. The upper part of the building is used to store rags, sulphite and other raw materials used in the manufacturing process of the mill. A new finishing room also is added to the mill, eliminating the need to cart paper across the street to the old finishing room.

Women's Right to Vote passes.



Champions of Knowlton Brothers Bowling team, 1919-1920

## 1926

Knowlton introduces group health insurance to its employees, becoming one of the first paper companies in the country to offer this benefit.

## 1927

Lindbergh crosses the Atlantic. The Babe hits 60 homeruns.



## 1929

Theodore E. Knowlton receives his first patent, #1731467 for "Methods and Apparatus for Preventing Offset in Printing." Over the next decade he'll receive four more: #1873207 and #1922372 for "Methods and Apparatus for Preventing Offset in Printing;" #2030304 for "Printing;" and #2139164 for "Methods and Apparatus for Preventing Slipping in Printing."

The Stock Market crashes, launching the Great Depression.



## 1931

George W. Knowlton Jr. dies shortly after turning over management of the company to his eldest son, G. Seymour Knowlton.



George Seymour Knowlton, President 1931

## 1932

Theodore Knowlton, Seymour's younger brother, joins the company and seeks new areas where the existing machinery and equipment could operate profitably. This started the very significant shift into making technical industrial papers such as latex saturated, low density products.

## 1933

A Credit Union is established at Knowlton Brothers, Inc.

FDR's New Deal. Adolph Hitler becomes German Chancellor.



## 1934

After a year of experimentation, Knowlton introduces a new absorbent paper that removes excess kitchen grease from foods to make them crisp and digestible. It's made available to households in the Watertown area and sold at the W. W. Conde Hardware Company.



Mill Equipment,  
1934

## 1936

Low-density papers are adapted for use as oil filter media for internal combustion engines. Among many technological innovations, Knowlton develops a carbon-filled sheet which conducts electricity and can be coated for automatic reproduction of telegraph messages.

## 1937

Dow Chemical introduces Styron polystyrene resins.



## 1938

Theodore, a graduate of Rensselaer Polytechnic Institute, becomes the company's third president.



Theodore Ely  
Knowlton,  
President  
1938

## 1939

Germany's invasion of Poland starts World War II.



## 1940

With the onset of World War II, Knowlton's expertise in low-density papers makes possible the production of filters for gas masks.



## 1941

Japanese attack Pearl Harbor and U.S. declares war.

## 1943

Knowlton Brothers enters its first agreement with the Circle Kay Local 463 (now known as the International Brotherhood of Papermakers).

## 1944

Knowlton Brothers is cited by the War Department as “one of the outstanding organizations supplying the Chemical Warfare Service” in World War II. The return of the civilian economy creates demand for automobile oil filters.

Normandy invasion opens the “Great Crusade.”



## 1945

Atomic bomb ends World War II.

## 1947

Marshall Plan quashes Communist expansion.

## 1948

Theodore turned over the reins of the presidency to his son. David C. Knowlton becomes the family’s fourth generation to head the company.



David C. Knowlton,  
President, 1948

Fayette Smith



Ben Hall

## 1952

Knowlton Brothers begins routine monitoring of process water for atomic radiation – pioneering this aspect of quality control, particularly as applied to photographic papers. David C. Knowlton, president of Knowlton Brothers, was elected to the first of two terms as president of the Association of Pulp Consumers.

## 1953

Knowlton Brothers becomes the first plant to make a commercial run of all-bagasse bleached paper. The pulp is from the sugar bagasse pulp mill of Valentine Pulp and Paper Co., Lockport, LA.

Korean school supplies



## 1954

Under the management of president David C. Knowlton, a new pilot-size paper machine is designed for research and development. The machine is a Fourdrinier type 42 that can produce explorative paper from 12 – 18 inches wide. Considerable experimental work is directed toward the use of unusual natural fibers, as well as synthetic fibers. Papers are made on the machine using glass, nylon, rayon, Dynel and ceramic fibers in order to evaluate their potential for production. The company invests extensively in control equipment to produce products within the very close tolerances necessary to meet customer requirements.





## 1955

An auto in every driveway, America tunes into TV and radio goes hip-hop.



## 1963

Civil Rights movement grows.

## 1956

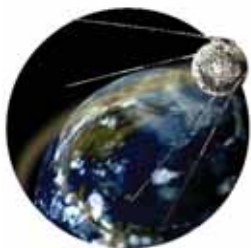
Knowlton Brothers Foundation, Inc. was founded for religious, scientific, literary and educational objectives.

JFK assassinated in Dallas, TX.



## 1957

Sputnik launches the space age.



## 1965

Franklin D. Cean joins Knowlton.

## 1967

Knowlton purchases Southern Specialty in Chattanooga, TN, then known as Southern Cellulose.

## 1959

Knowlton installs a flocculating tank outside its Black River factory to eliminate radioactive particles from its water supply. This tank is used for the photographic backing paper made for Polaroid, Ansco and Kodak. A water filtering system also is installed, enabling rapid changeover from one to another color or type of paper without contamination or waste caused by mixing different kinds of pulp.



## 1968

Vietnam War protests amid race riots in many American cities.

## 1960

A new research program is underway to find uses for a new stretchable paper in the specialty paper field. The new extensible paper is used mainly for paper bags to hold heavy powders such as lime, cement and fertilizers. This stretches rather than breaks when dropped. When most paper mills are closing in northern New York, Knowlton Brothers is concentrating on specialty items that were too complicated for big machines to manufacture. The machine's flexibility allows Knowlton to change products and markets as technology evolves.

## 1970

The merger of Knowlton Brothers Inc. of Watertown and Eaton-Dikeman Company, Mount Holly Springs, PA is announced. David C. Knowlton remains as President and Eaton-Dikeman becomes a subsidiary of Knowlton Brothers. The newly acquired firm concentrates on the manufacture of filter papers for the food, chemical, beverage and pharmaceutical industries.



## 1972

After a thorough survey of potential and existing markets, Knowlton Brothers purchases land in Madisonville, KY. Construction begins on a new mill at the site.



J. Reid Campbell,  
President  
1972

## 1973

The company installs a new closed system waste treatment plant. The closed system uses wastewater, which is clarified and reused in the papermaking process. Water from the Black River is added to compensate for evaporation and spillage. The new system enables the plant to use up to 500,000 gallons of water a day in production of special industrial papers and function for an entire week on the recycled water. (Current capacity in 2008 is approximately 1.2 million gallons a day.) The dewatered sludge is collected and removed daily for deposit at a city landfill.

## 1974

Knowlton Brothers announces the opening of its new plant in Madisonville, KY. This new mill includes a 130" Fourdrinier, the largest paper machine in the world devoted exclusively to the production of impregnated filter paper.



Richard Nixon  
resigns amid  
Watergate scandal.

## 1975

Severe economic conditions affect the paper industry. Local 1450 of the United Papers International Union's contract expires and a strike at the Watertown plant brings peaceful demonstrators and a federal mediator to settle the 18-day walkout. The agreement includes an eight percent wage adjustment, job adjustments and clarification of seniority issues.

Rise of feminism  
and ecology.



Civilians try to climb  
the wall of the U.S.  
embassy when South  
Vietnam surrenders  
to the North.

## 1977

Knowlton Brothers purchases Southern Cellulose Products, Inc. located in Chattanooga, TN, next to its Southern Specialty Division. The new division is a leading manufacturer of cotton linter pulp for the paper industry.

George Lucas  
creates "Star  
Wars" and it  
becomes a box  
office smash.



## 1979

Iranian Revolution  
and hostage-taking at  
the U.S. Embassy in  
Tehran.



## 1980

CD's, VCR and cable TV become common place.



## 1993

Internet expands with the World Wide Web.

## 1983

Three entities were merged into Knowlton Brothers which were later renamed Filtration Sciences.

## 1986

Decision by corporate to sell or shutdown Watertown mill.

## 1987

Franklin D. Cean purchases the former Knowlton Brothers, Inc. Watertown, NY mill from Filtration Sciences Corporation. The company's name is changed to Knowlton Specialty Papers, Inc. and the Watertown mill is operated as a completely independent entity.



Franklin D. Cean,  
President 1987

## 1994

A new boiler is installed, fueled by vapors from the resins used at the Knowlton mill. The boiler replaces an incinerator that was burning an off-gassed air stream from the saturator division. It also replaces a boiler that was fired by natural gas and oil, which generated about half as much steam as the new boiler. Knowlton applies to economic development agencies for \$3.825 million in financing to add a second paper machine, allowing the company to expand its manufacturing capability from single-layered to multi-layered composite materials.

## 1997

NASA lands the Pathfinder spacecraft on Mars.



## 1988

Soviets lose in Afghanistan and the Red Bloc unravels.

## 1991

Japan becomes world's largest automaker.



## 1998

Jefferson County Industrial Development Agency approves a \$300,000 loan for a water-based saturator, allowing Knowlton to use an environmentally friendly process to expand into new markets. The mill also replaces its single-walled chemical storage tanks with new double-walled tanks with spill prevention monitoring equipment. Knowlton achieves registration to QS-9000:1998 quality standard.

## 2001

9/11 terror attacks alert Americans as U.S. invades Afghanistan.



## 2002

Disaster strikes Knowlton when a fire at its Watertown mill kills one worker and injures several more. Three victims are taken to Syracuse hospitals for treatment of burns. The mechanical failure disrupts operations at the saturator plant for five months. Knowlton arranges for product to be saturated elsewhere, while repairs are started to bring operations back on line.

The company does not lose a single customer during this time. This is testimony to the workers and Knowlton's relationships with customers. However, insurers dispute the final portion of the total claim – (approximately \$7.5 million) and delays in payment for the replacement saturator place a tremendous burden on the company.

## 2003

The company hires a turnaround firm to help stabilize the core business. Unpaid contractors reject Knowlton's proposed solutions and try to force Knowlton into involuntary Chapter 7. Knowlton Specialty Papers is successful in converting this filing to a voluntary Chapter 11 Reorganization. This allows management to take the steps necessary to file an acceptable recovery plan. The plan as adopted provides for 100% payout to all creditors.



China emerges as an economic giant.

## 2006

To better serve Knowlton's current and future customer needs, the company receives registration to ISO:9001:2000 and ISO/TS 16949:2002 Quality Standards.



## 2007

Frank Cean celebrates 20 years as owner of Knowlton. John McMahon is hired as VP Sales & Marketing.

A new marketing identity is launched, along with a new web site and brochure.

## 2008

Knowlton celebrates its 200-year anniversary as the longest continuously-operated paper mill in the United States. Frank Cean and the 100 dedicated employees of the "Pioneer" mill pay tribute to the determined spirit of those who persevered and prospered through the first 200 years. We are proud of our upstate New York heritage. We dedicate ourselves to the next 200 years as the "Pioneer" technology manufacturer in emerging markets and products.



**200<sup>TH</sup>**  
**ANNIVERSARY**

NOTE: As we go to press, a Knowlton management group led by Frederick G. "Rick" Rudmann, James "Jamie" Ganter, and James "Jamie" Lee, are negotiating a management buyout of Knowlton Specialty Papers, Inc.



# Through 200 Years of Papermaking

## A Narrative on the Knowledge of Knowlton

When Gurdon Caswell came to Watertown, NY in 1808 to establish his two-story paper mill on the banks of the Black River, he laid the foundation for what was to become one of the great papermaking centers of the country. For 200 years paper has been made on the site he selected, where now operates one of the oldest and most respected specialty paper companies in the United States - Knowlton Technologies - Structured Composites and Integrated Media for the Specialized Materials Market.

It is a far cry from Caswell's "Pioneer Mill," as he called it, to the modern manufacturing plant that exists there today. The wild frontier land of that time is now crisscrossed with highways and borders on the St. Lawrence Seaway, one of the most imaginative water transportation projects of all time. To get a perspective of Knowlton as it is today, it is necessary to first take a look at Gurdon Caswell, his mill, and Watertown as it was 200 years ago. From there, we can go to the men named Knowlton who took Caswell's mill and led it through the kaleidoscopic changes of an industry and a nation for two centuries.

Watertown was organized as a town in 1800, with only a few families settled there.

Two years later an inn opened for business and a dam was built across the Black River for a gristmill. In 1803 a bridge was built across the river, and in 1805, a second dam and a second gristmill. By this time, 70 to 80 families had located into the area. This led to the opening of a store with supplies brought in from Utica. Later, a school was opened.

At this time, Thomas Jefferson was President of the United States. Napoleon Bonaparte was changing the map of Europe at his will and Northern New York was a vast wilderness.

Gurdon Caswell was born in Norwich, Connecticut in 1783. He became a tailor by trade and in 1804 moved to Westmoreland, Oneida County. At Walesville, about nine miles from Utica, there was a paper mill on Oriskany Creek owned by Nathaniel Loomis and his son Erastus. Nathaniel also had a daughter, Mary. The young tailor from Connecticut married Loomis' daughter and joined his fortune with his father-in-law.

He must have found papermaking more attractive than the tailor's bench. In 1808, when the Black River country was the Mecca for so many pilgrims from the Mohawk region, Gurdon Caswell came to Watertown and built his first paper mill on the south bank of the river opposite Beebee's Island. This was just above one of the two grist mills. The Watertown Daily Times which has capably recorded the history of the mill and the area since 1853, had this to say about Caswell's mill:

*"For a quarter of a century this little mill occupied the field virtually alone. It was not until about the time of the Civil war that other paper mills began to appear in the area."*

*"The machinery in the Caswell mill consisted of a small rag machine, or Hollander, carrying about 150 pounds of rags; two or three potash kettles set in a brick arch for boiling rags and preparing sizing; one vat for making paper, sheet by sheet; and a*



*crude standing press to squeeze water out of the pack."*

*"After pressing, the sheets were taken from the pack and hung on poles to dry, and, if they were intended for writing paper, afterward they were dipped in sizing and again dried. No steam was used; no chlorine for bleaching; and no calendaring. The substitute for the latter being pressing between boards. Such a mill cost between \$3,000 and \$5,000 and was able to produce about 150 pounds a day."*

This first small mill, and a second smaller one which Caswell had built only a short distance away in 1819, came into the possession of John C. Holbrook and Joseph Fessenden, who owned a printing office in Brattleboro, Vermont. Holbrook was an uncle by marriage, and Fessenden a cousin of George W. Knowlton.

In 1824, Mr. Knowlton and Clarke Rice, who was a young printer in the firm of Holbrook & Fessenden, bought these two mills for \$7,000 and established the partnership of Knowlton and Rice. They immediately moved to Watertown and began operation of their purchase. This included – in addition to the two mills – a book store, a bindery and a printing shop.

The Watertown Daily Times records that the bookstore, print shop and bindery were finally sold to Hall & Chamberlain but the 'Pioneer Mill' continued to make paper until 1833, when the lot was sold and the building moved a few rods further upstream.

*"Finding it difficult to dispose of any considerable quantity of paper, the partners turned the product of their plant into school books, blank books and even miscellaneous books for public school libraries. The name of Knowlton & Rice came to be a familiar one through a large section of the country."*

*"Probably this company had as far-reaching celebrity as any launched in the village. The Webster's spelling book, Cobb's Series of Spellers and Readers, Pierce's Grammar and Ruger's Arithmetic, which were carried under the arms of many school children of that day were all made and printed by Knowlton & Rice."*

*"They were important books then, many boys and girls getting from the study of them the only education they received. In addition, the partners published Pope's 'Essay on Man,' Knowlton & Rice's famous almanac-cook book entitled, 'The Cook Not Mad' and the historical work, 'The Campaign against Quebec.'"*

It is interesting to note that one of these books, "Essay on Man," bearing the signature of John C. Knowlton, turned up in an Albany, NY bookstore in 1944. John Knowlton signed his name in this book in 1855, when he was 18.

In 1832, Knowlton & Rice began operation of their first paper machine for the manufacture of a continuous web of paper. This machine was made by the firm of Thomas & Woodcock in Brattleboro, Vermont. There is evidence in the correspondence of George W. Knowlton with this firm that the machine was a Fourdrinier.

The Fourdrinier, which has since become the most useful instrument of the pulp and paper industry, was just beginning to prove itself in Europe at the time Gurdon Caswell built his first Watertown mill. The first Fourdrinier installed in the US was in 1827 in the mill of Beach, Hommerken & Kerny at Saugerties, NY.

If the Knowlton & Rice machine in 1832 was indeed a Fourdrinier (and this is also substantiated in reports of the Watertown Daily Times as recently as 1931), then its installation came only five years after the first such United States machine was installed.

This machine and some printing machinery were damaged in a fire early in 1833. The Fourdrinier was repaired and began operation again the same year, and continued to perform successfully until a disastrous fire swept Watertown in 1848 - destroying a number of manufacturing plants including that of Knowlton & Rice.

The mill was immediately rebuilt, the equipment improved, and manufacture continued until 1869, when a second disaster struck Watertown. This time it was a flood that swept through the Black River Valley, sweeping many manufacturing plants along the banks of the river with it. The Knowlton mill stood firm, but the destruction of the dam used for water supply forced the mill temporarily to shut down.

While the dam was being rebuilt, the mill also was modernized. David Knowlton noted that "Six of the original dryers from the rebuilt paper machine were still part of the dryer section of the No. I Fourdrinier of Knowlton Brothers in 1958".

In 1854, Knowlton and Rice sell the company to Brown and Chamberlain. Although they retire, they hold the mortgage note.

In 1861, Brown and Chamberlain default on the note. John Calvin and George W. Knowlton Jr. sons of George W. Knowlton take over management of the mill.

Thus the firm name of Knowlton Brothers was established. John Calvin Knowlton was 24 years old at the time, and George Jr. was 22. They had \$1,200 and an endorsed note from their father for \$5,000. Beyond that they had nothing but their own resourcefulness and courage.

George Knowlton, who later held positions of highest responsibility in his industry, used to tell this story about those early days:

*"It was a case of sink or swim and in this connection, referring to the anxieties of those days of long ago, I have told the story of the boy telling about his hunt for a woodchuck one night. He said the dogs almost got the woodchuck, but he climbed a tree and got away."*

One of the interested listeners said:

*"'But a woodchuck can't climb a tree.'*

*"Whereupon the story teller, undaunted, replied:*

*"I don't know about any other woodchuck but that woodchuck had to."*

*"That represents the situation in those years, when my brother and I undertook to start in business. We had to make it go."*

Make it go they did!



Knowlton Brothers first employee recognition dinner held at the mill in 1913.

# Impact of One Company on the Papermaking Industry

Knowlton's 150 Year Anniversary, 1808-1958

As Written by David C. Knowlton

The pulp and paper industry today is a multibillion-dollar industry. The huge mills that still comprise it – for the most part – can hardly be recognized as having their genesis in the first paper mill which William Rittenhouse established in Pennsylvania in 1690. The equipment and processes are not the same, and even the raw material is different.

The same can be said about the 1958 plant of Knowlton Brothers in comparison with the 1808 plant of Gurdon Caswell. The product was still called “paper,” but it didn’t begin with the same raw material, and the end use had hardly any relationship.

If the story of Knowlton Brothers had not been one of adaptability and change, it would be in the dark past of the history books – along with dozens of other paper companies that once dotted upper New York State.

As with all mills in the early days of papermaking in the United States, the raw material for Caswell was rags. The end product was writing and printing papers. Holbrook & Fessenden, who were printers, were able to add printing and binding to the operation when they briefly took over, so that when the firm of Knowlton & Rice was established in 1824 it had what today would be called an “integrated” business.

G. Seymour Knowlton notes that up to 1854 most paper mills had made a great variety of papers, partly to use up all kinds of stock collected and partly to supply the local demand for different kinds of paper. Wrapping paper, newspaper, paper for school books and blank books and ruled

foolscap. Even letter papers were all turned out of the same mill with the same machinery. The main difference was in the quality of the rags used, as all raw materials were then rags.

With the coming of the railroad, and the greatly-increased facilities for the exchange of goods throughout the country, it was found more economical for each mill to have its specialty and confine itself to one line of product.

The Black River had a great deal to do with the change in end products for Knowlton Brothers. By 1873, it was found that the Black River water was too dirty for manufacture of fine papers. Also by this time, Knowlton Brothers had heard about the first ground wood pulp mill which was established in the United States in Curtisville (now Interlaken), Mass., in 1867.

It has been mentioned earlier that this company established its first machine for manufacturing a continuous web of paper in 1832 – only five years after its introduction to the United States. Knowlton Brothers’ ground wood mill began operation in 1873. This activity came just six years after the industry and the United States had learned of the process!

A letter dated August 27, 1873 from George W. to John C. Knowlton, records this event:

*“We got started Monday, P.M., and ran off quite a lot of wood pulp, but as usual have met with some difficulties, one of which is that we cannot screen it - particularly when we started a fresh cut cylinder.”*



*"I send you a sample of the pulp as it came off the roll. It looks good. We furnished our engine and are now running it and I send you a sample of the paper. It is fully one-third wood of our own grinding and this paper is as good or better than any sample of wood print we have got in the mill. The quality of the pulp is proved in this, for it runs well over the machine."*

So with this development, Knowlton Brothers began making colored papers – thus making a first major adjustment to the changing market and changing technological developments.

Seymour Knowlton further notes that their "standard covers," as they were called, were made in about 20 colors and in two sizes (20" x 25" and 22" x 28") and in three weights (22 – 32 – 48 pounds per ream). One run of colored stock was run which was used for covers of two issues of the "Ladies Home Journal." This was determined impractical, and was superseded immediately by printed white covers.

The pulp and paper industry will long reflect the influence cast on it by the presence of George W. Knowlton, Jr. on the scene for 75 years. As one of the original founders of Knowlton Brothers in 1861, he remained active in his company and the industry until his death in 1931.

Mr. Knowlton was so well known and respected that when George C. Sherman and David M. Anderson, partners in the Taggart Paper Co., opened a new mill on the Black River at Deferiet, NY, in 1900, they asked him to join them and serve as president of the company. That company was the St. Regis Paper Company – for several years one of the world's largest paper companies.

Four years after accepting the St. Regis presidency, Mr. Knowlton was elected as the 14th president of the American Paper and Pulp Association - the highest position of honor the industry had to offer.

The mill diary kept by G. Seymour Knowlton records another industry "first" for Knowlton Brothers - the manufacture of Kraft paper on January 28, 1908. This is confirmed by records of Charles F. Hubbs & Co. which show they imported the first Kraft pulp from Sweden in the fall of 1907 and that Knowlton Brothers along with Volney Paper Co. were the recipients of this pulp. By 1958, the US industry consumed 13,000,000 tons of Kraft pulp annually for its products.

When Knowlton Brothers installed its duplex machine in 1907, it added further to the development of the industry in manufacturing difficult specialty papers. A duplex machine is a combination of a cylinder and a Fourdrinier section to permit formation of a single sheet with each side a different color. There were only a few such in the country.

On the Knowlton duplex machine, pioneering work was carried out for photographic papers for both Eastman Kodak and Ansco – and these papers are still an important item of manufacture (in 1958). It is also believed that mimeo papers were run on his machine for the first time here. In 1953 Knowlton Brothers became the first plant in the United States to make a commercial run of all bagasse bleached paper. The pulp was from the sugar bagasse pulp mill of Valentine Pulp & Paper Co. of Lockport, LA – Valentine was the first to commercially manufacture the pulp in this country.

David C. Knowlton, who was elected to the presidency of his company in 1948, also took an active part in industry affairs.

In 1952 he was elected to the first of two terms as president of the Association of Pulp Consumers – an important industry group which his company helped found – and for many years served as a member of its Board of Directors. He was elected to the Board of Governors of the American Paper and Pulp Association in 1955 and served in that capacity for many years.



David Knowlton also served as vice-president of the Specialty Paper and Board Affiliates, Inc., and was on the executive committee of this organization for many years beginning in 1953. He also served as chairman of the New York State section of the National Council for Stream Improvement of the Paper Industry, and member of the Pulp and Paper Industry Advisory Committee to the Department of Commerce.



Note: In the decades leading up to his death in 1999, David Knowlton remained one of the industry's stalwart leaders. His legacy can be traced to the current Knowlton Technologies, which is now known for its technological expertise in a rapidly changing industry.



## Remembering When ...

A Perspective on the Knowlton She Saw

By Lee Knowlton Parker

Daughter of David C. Knowlton

**W**hat I remember vividly every time I think about Knowlton Brothers and Dad is the smell of the mill, the sound of the steps in the wooden staircase – which father would always take two-at-a-time – and the old pulp vats that resembled huge mixing bowls of oatmeal. Also that wonderful Fourdrinier – I loved to watch pulp on the wire on “the wet end.”

I was always proud of Dad, especially when he would greet every person in the Mill as if he or she was his family member. Of course, he knew everyone's names and pretty much about their families.

Another big memory is being in Dad's great office on Saturday mornings – that is, if my sis and I promised to be good. I remember two offices, both located on the second floor in the corner overlooking the surging Black River. The first was a huge room and I think everyone was in the same room – at least Theodore and David were together, and maybe Sam Wardwell and Bob McCormick.

I think eventually the big room was carved into several smaller individual offices. In any case, Kathie and I would “play office” up there while father worked. If we were REALLY good he would take us into the mill with him. That was always the best part.

I truly love that old mill. Have not been in it in a very long time. At one time in my early adult life I wondered if I would ever work there. I was an Economics major in college and wrote a couple of papers about the cyclical nature of the paper industry. That's about as far as it went!

I think it is so interesting that both David's sons-in-law were in businesses that related at one time or another in some way to Knowlton Brothers. John West (Kathie's husband) was in the Air Force at the time KB was doing some highly secret work for the USAF. And my husband John became Dean of Students at the Institute of Paper Chemistry here in Appleton, WI.

# Filtration and Specialty Papers – Another Knowlton Innovation

Based on 1958 Article by David Knowlton

By 1950, the manufacture of specialty papers requiring versatility and flexibility had become a hallmark of the new Knowlton Brothers. The plant processes and equipment of the time were such that they could be adapted (literally) to “tailor-make” or custom make almost any kind of paper. Knowlton Brothers, as specialists, developed the art of papermaking to such a degree that it could manufacture paper from a wide variety of fibrous materials for a wide variety of end-use products and applications

Literally the whole world provided Knowlton Brothers with the necessary raw materials for manufacture of specialty products. More than 25 wood pulp mills in the United States, Canada and Scandinavia provided pulp for Knowlton processes. From Sweden came high strength bleached Kraft. From British Columbia, Alberta and Quebec in Canada came quality bleached Kraft. From Washington and Florida came high alpha sulfite. Tennessee and Virginia sent cotton linter pulp.

This wasn't all! The versatile, flexible Knowlton plant came to use as further raw materials - leather, kapok, glass, asbestos, ceramics, cork, manila rope and synthetic fibers such as nylon, Dacron and Dynel. Some esparto grass pulp from France was used as well as palm leaf and bagasse pulp.

A typical problem faced by Knowlton Brothers was posed back in the 1930s. Western Union wanted a paper which could be used on its telefax machines for automatic transmission of messages. Knowlton developed a carbon-filled sheet which would conduct electricity and which then could be coated for automatic reproduction

of messages. This paper satisfactorily served the industry for years.

Another specialty problem was the development of a high temperature inorganic filtration medium for filtering fluids reaching as high as 600 °F. Since any alpha cellulose sheet will char at 300°F, it was necessary to turn to other fibers. A ceramic fiber was finally determined best, but the next problem - which was successfully solved - was to find a binder that would hold these fibers and that would also stand up under these same high temperatures!

In the field of filter paper manufacturing, where Knowlton Brothers specialized, the company combined a gauze textile-fiber web with paper on its Fourdrinier - all in one operation and the first time without use of an adhesive!

Another filter medium combining a blend of fibers was developed for separation of water from jet plane fuels.

The manufacture of artificial leathers began with a low density porous paper which could then be impregnated with lattices. These impregnants were used to make a flexible, strong, leather-like material for the manufacture of shoes, briefcases, catalog book covers, hat sweat bands, belts, and more. Making these papers required the careful selection of fibers, chemical purity and careful quality control from the beginning until completion of the sheet.

# Recollections

By Franklin D. Cean

**I**t has been nearly 43 years since I first stepped through the doors of Knowlton, having joined the company on September 16, 1965. My first position at Knowlton required a through knowledge of chemistry, a subject that I neglected in high school. I recall the words of my first boss, Horace A. Spencer, when I told him that I lacked an understanding of chemistry. Horace (who had the distinction of the industry's first TAPPI fellow) replied, "Don't worry, I will teach you everything you need to know."

1965-1968, I worked full time at Knowlton Brothers while attending Jefferson Community College. In 1968 I was offered a foreman's job at Bell Telephone. Upon informing Spence that I was seriously considering this position, Spence asked that I give him a couple of days to investigate an opportunity for me that he had been considering. I later determined that he had contacted Dr. Fred Keeney, Vice President of Research, Development and Manufacturing, regarding the potential of Knowlton sponsoring the remainder of my education in Paper Science and Engineering at Syracuse University's College of Environmental Science and Forestry. This, as it turned out, was a major turning point in my life, the beginning of an exciting future in the paper industry with Knowlton.

I graduated from SU-ESF in June of 1971 and returned to Knowlton Brothers after considering opportunities with companies throughout the United States. Upon discussing these opportunities with my mother, who was concerned as to whether I should return to Watertown or accept an

opportunity offered by Boise Cascade in Salem, OR, I remember her advice: "It all depends upon whether you want to be a little toad in a big pond or vice-versa?" As we all know, I stayed with Knowlton.

Shortly after I graduated from college, David Knowlton continued his expansion of the Knowlton Brothers Corporation with the construction of the Madisonville, KY plant. Subsequent to the opening of the Madisonville plant, Knowlton Brothers moved its corporate headquarters to Chattanooga, Tennessee. I remained in Watertown and was cautioned by newly appointed president, Reid Campbell, "We will keep Watertown running as long as it doesn't cost us more to run it than it would to shut it down." A challenge similar to the one we faced when I purchased the Watertown facility in 1987.

In the spring of 1981, on a Friday afternoon, Reid Campbell called and requested that I be in his office in Chattanooga, Tennessee the following morning. Upon my arrival Reid informed me that he would like me to move to the corporate headquarters in Chattanooga, construct a new R&D building and accept the position of Corporate Director of Research under the direction of Dr. Keeney.

During these negotiations Reid promised that if I would consider the relocation – for at least a year – I could return to Watertown and manage the operation if I was not happy in Chattanooga. That did not happen and I worked in Chattanooga until 1986, serving as Vice President of Manufacturing from 1984 to 1986. In 1985, corporate made the decision to sell the Watertown operation.



Watertown no longer fit corporate goals, since a majority of its business was outside of the filtration market. After a year on the market and the development of several financial scenarios evaluating the company's feasibility of updating the Watertown operation, it was decided to close the doors of the Watertown location. It was at this point I made the decision to investigate the possibility of purchasing the facility. After thirteen months of work with six financing agencies, I managed to arrange 100% of the capital necessary to start up Knowlton Specialty Papers on February 4, 1987. My partner, Roger Taylor, and I opened the doors with \$1.6 million worth of business that included our loyal friends at Car Freshner of Watertown, a small amount of friction materials and 35 employees. It was imperative to have an infusion of business if we were to survive.

The previous parent company retained all the filtration business previously produced at Watertown. At this point, I had twenty-two years experience in that market and did maintain contacts in the filtration business with previous friends/customers who were interested in doing business with Knowlton Specialty Papers.

I first turned to JL Clarke and a close associate, president Bob Brubaker. I made arrangements to meet Bob in a hotel conference room a few blocks from the Clarke mill in Lancaster, PA. I provided Bob with the usual amenities of coffee and donuts and upon his arrival locked the door behind him. He questioned why I was locking the door? My reply, "You are not leaving this room until we have an agreement that Knowlton will be your supplier of locomotive filtration media." An hour and a half later, I left the room with contract in hand. While I understood that this was commodity business and not business Knowlton could retain for the long haul, it was business that would assist in Knowlton's fight to survive. Bob

enjoyed telling the story throughout the industry.

A second memory is a meeting I was able to arrange with General Motors' senior management, introducing Knowlton as a potential friction materials supplier. At the time of my visit, Fabricon was the sole supplier to General Motors. My inexperience was apparent as I informed General Motors that the products they were receiving from Fabricon did not measure up to the products I could produce at Knowlton. Sometimes it is best not to know what you can't do. My inexperience and ego must have been apparent, but the GM managers were kind and appeared interested.

As luck would have it, Fabricon burnt to the ground two weeks later. I received a call from the manager of the Drivetrain Division of General Motors, and as a result launched Knowlton Specialty Papers into the friction material business. Knowlton was General Motors only automotive supplier of friction material for several years. As automotive prices degraded, the decision was made that Knowlton should concentrate on the off-road market.

The bottom line? Knowlton expanded and has continued to grow because of the attitude that one does not accept defeat. The success of Knowlton rests squarely on the shoulders of the men and women who have never accepted mediocrity, and who flourish when challenged. As we know, all has not been without difficulty. The most trying days of my career were the ones that followed the accident; Thom's death and the injuries to the other employees have had an impact on us that altered life as we knew it. This catastrophe became a driving force to assure the future of Knowlton Specialty Papers. I know Thom would be proud.

We have come a long way in the past twenty-three years; and I am proud of





Aerial view of the Knowlton Specialty Paper Mill circa 1970,  
as it appeared when Franklin Cean began work there.

what we have achieved. I am confident the new management team will continue the legacy. I know that Rick Rudmann, Jamie Ganter and Jamie Lee support this legacy and will manage to ensure that Knowlton continues to grow.

In summary, I wish to quote another Franklin. President Franklin D. Roosevelt. I feel that this quote sums up my forty-

three years at Knowlton: “Happiness lies in the joy of achievement and the thrill of creative effort.”

My sincere thanks and very best wishes to all.

# Technology Emerges From Deep Roots in Specialty Papers

**A**ge, in itself, is no guarantee of merit or quality. But a line of craftsmen that can combine the experience that comes with age and the new ideas of a developing world can make this guarantee. This has been accomplished at Knowlton Technologies, whose employees – through six generations – have adapted their experience to the changing times so that their mill, which has been operating on the same site in Watertown for 200 years, today incorporates equipment and techniques as modern as any in the world of papermaking.

From a mill that in its early days manufactured fine papers and standard text and cover, the Knowlton Technologies plant has evolved to one of a very select few that can manufacture structured composites and integrated media for the specialized materials market.

Today, companies turn to Knowlton's vast knowledge and technology resources and service expertise to significantly increase sales and profitability by helping launch technologically advanced structurally sound products and processes for wet laid substrates and solvent saturated media.

Our web solutions run the gamut. From accelerated prototyping to the manufacture of wet-laid non-wovens and complex composite media structures, Knowlton today possesses the technical expertise, experience and insight to transform technological obstacles into a remarkable new generation of commercial successes.

From the art of papermaking to the science of structured media, the Knowlton of today is quite different than the Knowlton of

1808. We explore science like no other, creating all kinds of exotic structured media utilizing a host of diverse materials and fibers. Today we focus on making non-corrosive composite structural media that is an alternative to steel. This high strength, energy-saving alternative to steel will not corrode or rust and is less than 20% of the weight of steel. You may find our composite media in the interiors of public transportation and elevators. In addition, our capability to handle many operations (laminations, chemical treatments, etc.) enables us to meet exacting customer requirements quickly and cost-effectively.

Our wet-end chemistry expertise is a core foundation on which we build composite webs from materials deemed next-to-impossible to include in a wet laid process. Where others may take months or years – or may have completely given up – Knowlton engineers often can successfully prototype complicated products in hours, or a few days.

Knowlton isn't afraid to go above and beyond, blending our knowledge, technology and tenacity with our substantial manufacturing facilities and service commitment. In fact, we've literally transformed technology into an art form, pioneering the development, design, and production of a broad range of innovative composite materials.

We develop, prototype, test and provide scale-up production capabilities. From lab hand-sheets, to small prototyping production runs on the Pilot Machine, we have cutting edge processes. We have comprehensive research and development facilities and most importantly, the creative minds needed to turn bright ideas into exciting

products that will grow our customers' businesses.

Within the "Hyper-Specialty" material segment, we remain steadfast to our customers' needs, applying our "problem-solving technology" edge to solve difficult technical applications, products and processes.

But there's more. Applying the right chemistry to meet the needs of our customers means working in partnerships within select markets where our technical and service capabilities add value. It's all about asking the tough questions and working hard to understand our customer's expectations and true end-use requirements. From rigid company-wide adherence to confidentiality, joint development of intellectual property and our niche collaborations with suppliers and other mills – we're not just "another paper company."

It is often easier to say what we do not make. The following is a small sample list of products we have made over the past 50 years:

- Absorbents & air fresheners
- Acoustics / sound abatement media
- Battery components & separator, fuel cell applications
- Composite media, gears, pre-pregs, pre-forms & veils
- Conductive and non-conductive media and papers
- Coolant / water filtration
- Custom designed webs, veils, sheets, pre-pregs, veils, and pre-form webs
- Design, engineering and manufacture of wet-laid non-wovens
- Development of intellectual property / patents
- Drug screening media & pregnancy test kits
- Expansive insulation media
- Filter papers – aerospace, automotive, fuel & nuclear energy, military & lab markets
- Filtration media – for fuel, lube, hydraulic, coalescing, beverage & pharmaceutical
- Fire retardants, heat, noise and radio frequency shields /substrates
- Flame control, retardants & intumescent materials
- Friction – after market & off road – wet clutch & brake, clutch band, torque converters
- Friction media for non-asbestos brake pad & drive-train gasketing
- Gas mask filter papers
- Interleaving & laminating papers
- Mandrel wrap
- Material processing specialists
- Micro-glass media development
- Military – ballistics control
- Paper for industrial plate and frame presses for filtering fats, oil, varnish and foods
- Performance & filled composite media development
- Photographic wrapping paper
- Porous, absorbent and anti-corrosive media
- Press pad, calender & embossing roll papers
- Rapid proto-typing & sample development
- Reagent paper – poison gas detection
- Removal of technical roadblocks
- Solvent saturation services
- Speaker cone, shotgun shell and fusee tube papers
- Witness papers (detects non-conforming climate control in product shipments)



# A Rebirth After 199 Years:

## A New Look, a New Outlook

A recent trade ad for Knowlton Technologies features the phrase “Leap Tall Buildings,” a reference to the lengths the company will go to help its customers solve their technology road-blocks. If there’s anybody who knows how to leap – and how far – it’s got to be the team at Knowlton.

For nearly 200 years, the company has quietly prospered as one of northern New York’s most versatile paper mills; manufacturing everything from absorbent media for the air freshener market to high performance racing filters, high-energy friction materials, moldable pre-pregs and high temperature gaskets – technical products winning a variety of customer accolades for innovation and performance.

Knowlton is now entering a period of rebirth, due in large part to a workforce of dedicated, hard working employees who each and every day focus their collective talents re-inventing the company.

“We’re not the same Knowlton we were five years ago, or for that matter even a few months ago,” said Franklin Cean, President and CEO, Knowlton Technologies. “The Knowlton of today continues to be focused on those differentiating, leading-edge technological capabilities that are most highly-valued by our customers, and which make us a strong competitive adversary.”

“The company’s experience and technical know-how in producing composites and media for the friction and filtration markets has broadened into other highly-sophisticated applications, such as ceramics nanotechnology”, Cean said. With respect to

nanotechnology, Cean said “it’s no small wonder that Knowlton possesses the expertise to manipulate tiny particles to create functional structures in a web mat material.”

“These new technologies show tremendous promise, with multiple applications for products that have the characteristics of steel, yet are lighter and stronger,” Cean said. “They include everything from fuel cells to ballistics enhancements in addition to a host of multi-functional applications in which non-wovens best serve specific performance needs.”

“We’ve transformed technology into a way of life at Knowlton, pioneering the development of a wide range of innovative materials,” he said. “Customers today are continuously faced with technological obstacles. We encourage them to ‘come to us for solutions.’”

A new website, brochure and corporate identity are the beginning of what’s shaping up to be an extraordinary moment in the history of Knowlton as it enters the third century of continuous business.

The company has changed its marketing identity to Knowlton Technologies to more accurately and strategically re-position the corporate brand. Knowlton’s accelerated prototyping of composite wet-laid non-wovens for use in technical media and reactionary papers is well documented in the industry.

“While others may take months or years – or even give up – Knowlton engineers are known to process complicated materials in a few hours, or a few days,” said Jamie

Lee, Knowlton Director of Technology and New Business Development. "We explore science like no one else, creating exotic structured media utilizing a host of diverse materials and fibers."

"Customers come to Knowlton because we know how to make products where others fail," said John McMahon, who joined the company in spring 2007 as the Vice President of Sales and Marketing with a resume that includes 27 years in the specialty paper industry. "Knowlton is a unique

company with talented, dedicated people, who have proven skills to focus on new markets and rapid deployment of new technology," McMahon said.

A pioneer in the paper industry, the "new" Knowlton now is, "Looking forward to its 200th year anniversary with plans and expectations of being around for another 200 years," McMahon said.

## Knowlton Technologies Factory Gets a Facelift

**I**t began with the recent unveiling of a new sign at Knowlton Technologies Factory Street facility, thus marking the beginning of a new chapter for one of America's oldest corporations. Removal of the old sign in favor of the new one marked the first step in a series of capital improvements on the site where Knowlton is entering its third century of continuous operation.



Knowledge • Technology • Service

"Conscious of the fact that we are located in the center of Watertown and that we receive visits from design engineers at international technology companies, we have started upgrades to the exterior of the mill on Factory Street," stated Franklin D. Cean, Chairman/CEO of Knowlton.

Cean said improvements made to the facility will include the replacement of a galvanized receiving area on the corner of Factory Street and Mill Street, resurfacing of the brick walls, removal and repainting of several structures, construction of a new front entrance and dozens of new windows across the edifice. The work will continue through 2009.

"By then all of the exterior work on Public Square should be completed and we look forward to both a new look and a new outlook," Cean said. "We believe the new look will help enhance the overall appearance of this very significant and historic part of downtown Watertown."

# Where We're at Today

Founder Gurdon Caswell would hardly know his way around the mill he established 200 years ago. However, the many members of the Knowlton family whose footprints are everywhere on Factory Street would be pleased to see the Knowlton Technologies of today.

The pioneering spirit of Caswell and the perseverance and vision of the Knowlton brothers still lives on.

Knowlton Technologies remains a unique company, founded on rich tradition and the talented experience of intelligent hard working people. The pioneering and independent spirit of Upstate New York shines through. Knowlton Technologies prides itself on its ability and know-how to make complex products where others have failed. Asking the right questions and understanding the true end-use requirements are critical to this success.

John McMahon said in a company newsletter "Every one of us is in Sales. We represent our company in the products we make and how we present ourselves in the community. Over one hundred people strong! What a sales force!"

"Everyday, Knowlton's incredible capabilities are tested. We pride ourselves on the solutions we provide, new technology applications we develop and markets we serve. The majority of our

customer relationships are based on mutual confidentiality and development of intellectual property. This is a trust we take seriously"

"We are proud of Knowlton, its rich history and legacy. We are proud to be part of the Knowlton story."



This 200 year anniversary book is dedicated to all the employees of Knowlton Technologies whose names both past and present now number in the thousands – and especially to the memory of Thom Traynor.



A dedicated leader, co-worker, son, brother, husband and friend whom we will always cherish in our hearts.





# Employees as of April 2, 2008

Adams, Wesley C.  
Aldrich, Fred D.  
Anderson, Karen D.  
Backus, Vincent B.  
Baker, William R.  
Barbarito, James W.  
Barcomb, Mark D.  
Barker, Michael T.  
Beach, Dana R.  
Biondolillo, Michael P.  
Biondolillo, Patrick T.  
Blair, Beverly A.  
Boyanski, Michael L.  
Brotherton, Kevin J.  
Burnham, Mark E.  
Cahill, Thomas P.  
Cean, Franklin D.  
Chambers, Bruce L.  
Christman Jr, Stanley E.  
Closs, Anthony F.  
Cochran, Michael M.  
Connor, John F.  
Crosbie, Daniel S.  
Crossman, Benjamin R.  
Crossman, Martin K.  
Crump, Patrick K.  
Cumoletti, Martin J.  
Dean Jr, Michael Joseph  
Dean, Michael J.  
Demar, Randy F.  
Demar, Randy P.  
Denny, Kirk R.  
Dinzler, Scott S.  
Dowe, Kevin A.  
Dowker, Joan M.  
Fenton, Tommy L.  
Filiatrault, Michael D.  
Finnegan, Timothy J.  
Foster, Todd A.  
Frier, Patrick C.  
Fuller, Daniel P.  
Ganter, James S.  
Gebo, Scott J.  
Giannetti, David  
Giannetti, George

Gillett, Clint D.  
Heise, Scott M.  
Hibbitts, Steven W.  
Hofer, Randall A.  
Holder, William L.  
Huff, Sean D.  
Hunter, Terry T.  
Intorcia, Timothy M.  
Kittelson Jr, Timothy  
Larose, Timothy C.  
LaVallee, Marybeth L.  
Lee, James M.  
Lillie, Amy L.  
Lincoln, Melvin C.  
Lincoln, Melvin H.  
Markanich, Andy J.  
Martin, Lynn S.  
Mattingly, Morris R.  
McAdam, Roy A.  
McMahon, John P.  
Mee, Stephen W.  
Mehaffy, Lynn D.  
Mehaffy, Randy L.  
Mitchell, Gregory  
Mitchell, Valerie A.  
Montessor, Francis  
Montessor, Ryan A.  
More, Margaret E.  
Morris, Daniel W.  
Otis, Rick M.  
Pharoah, Jason M.  
Phillips, Kevin A.  
Pierce, Beth E.  
Pierce, Jenifer M.  
Raymond, Jacob J.  
Raymond, John J.  
Richards, Brent E.  
Riordan, Paul R.  
Roberts, Dennis P.  
Rudmann, Frederick G.  
Shattuck, Kathleen R.  
Shaughnessy, Timothy P.  
Smith-Bentley, Lisa M.  
Stark, Jawanza K.  
Stefanik, N. Joseph

Thomas, Dana A.  
Todd, Curtis W.  
Traynor, Brad A.  
Traynor, William J.  
Tripp, Dale K.  
Turner, Jeffrey J.  
Valentin, David C.  
Ward, Ronald G.  
Warner, Daniel C.  
Washer, Christopher J.  
Watson, Thomas D.  
Weed, Kevin D.  
Weston, Ronnie S.  
Wiley, Joseph M.



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04/08



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