

SOLVAY PROCESS AMONG STATE'S MIGHTIEST PLANTS

HAZARD NAME BURNS BRIGHTLY IN HISTORY OF VAST WORKS

(This is the fifth of a series of articles which will appear weekly in the Saturday edition of The Syracuse Journal, to permit Syracusans to become familiar with the inside story of the great industrial and commercial enterprises which have played important parts in the development of the city.)

By RICHARD E. WELCH.

Bountiful Nature which supplied Syracuse with huge quantities of salt and limestone coupled with the shrewdness of a Central New Yorker who saw the possibilities in these easily obtainable raw materials gave Syracuse the Solvay Process Company, one of the largest heavy industries in the state.

It is impossible to think of the history of the Solvay Process Company, now a subsidiary of the Allied Chemical and Dye Corporation, without turning to William Browne Cogswell in whose brain the idea of utilizing the resources of this section first germinated.

Much credit for the formation and progress of this mighty industry must also go to Rowland Hazard, first president of the company, and his son, Frederick R. Hazard, who succeeded him. These are names which burn brightly in the industrial history of Syracuse.

Mr. Cogswell was born in Oswego, Sept. 22, 1834, of a lineage which dated back to Sir John Cogswell in 1635. He was educated in Hamilton Academy at Oneida and in private schools of Syracuse.

From boyhood Mr. Cogswell was interested in engineering, topography and geology and among his first jobs was aiding in the survey for the Oswego and Syracuse railroad and the Syracuse and Utica railroad, units which were later taken into the New York Central system.

His spare time Mr. Cogswell used in studying the topography and mineral makeup of the soil in and near Syracuse and the vast deposits of salt and limestone interested him.

He attended a meeting of the American Institute of Mining Engineering at Drifton, Pa., in February of 1879 at which a paper on the manufacture of ammonia soda was read and discussed. The paper discussed the use of the process invented by a Belgian named Ernest Solvay and Mr. Cogswell saw at once that that was his opportunity.

He had been managing the lead mines of Rowland Hazard in Missouri and had won Mr. Hazard's respect and confidence. He explained his idea to Mr. Hazard and the result was that three months later Mr. Cogswell sailed for Europe to learn more about the process.

He carried letters of introduction to Alfred Solvay, who managed his brother's business and to other powers in the chemical industry. Difficulty after difficulty beset his path, but Mr. Cogswell refused to admit defeat.

He and Mr. Hazard kept the issue alive until in 1880 Solvay and Company of Brussels, Belgium, agreed to form an American company to use their process.

Meanwhile Mr. Cogswell had spent some time inspecting sites for the new plant and selected the farm land and abandoned salt land on the shore of Onondaga Lake, just over the Syracuse city line as most suitable.

Then came the mass of detail necessary to start operations. It required months of soundings before the salt deposits which furnished the brine for the wells on the shores of Onondaga Lake were found. The deposit was finally located in 1888 near Tully. The salt was in a vein 1,200 feet below the surface.

One of the Tully lakes was tapped, the water was piped into holes drilled down to the salt beds and then pumped out and piped to the Solvay plant. For other raw material the limestone deposit at Split Rock was used and the stone conveyed to the plant by overhead gravity buckets, but in later years the stone has been secured from quarries at Jamesville and brought to Solvay by railroad.

The first unit of the Solvay plant was started in 1882 and the first ammonia soda was produced in January, 1884. Rowland Hazard came here as president of the company, first capitalized for \$300,000, and Mr. Cogswell became treasurer and general manager. The first plant employed about 100 men.

The growth of the company since can best be realized by the fact that the company was capitalized at \$22,500,000 when it was merged with the Allied Chemical and Dye Corporation in 1921, had an output of about 600,000 tons of soda ash a year and employed more than 5,000 men.

In addition around the plant has grown the village of Solvay, with its own complete government. It has its water system, police and fire departments, modern town hall, schools, library and other improvements such as sewers, sidewalks and pavements. This was all accomplished with the leadership of the founders of the Solvay Process Company.

Solvay village was only farmland in 1880, but in 1894 it had a population of 1,762 and by 1930 the village had grown to include 7,963 inhabitants, nearly all of whom had some connection with the Solvay Process Company.

The Hazard family was prominent in the affairs of Rhode Island before Rowland Hazard became associated with Mr. Cogswell. The family tree dates back to Thomas Hazard in 1610 and members of the family were among the first settlers of Rhode Island.

Rowland Hazard was born in 1829 in Newport, R. I., and died in August, 1895. He took an active part in managing the family affairs which included a large worsted mill at Peace Dale and created a profit sharing system for the mill. It was through other investments in lead mines that he became acquainted with William Cogswell and joined with him in founding the Solvay Process Company.

Frederick Rowland Hazard, second son of Rowland Hazard, was born June 14, 1858, at Peace Dale, R. I. He was graduated from Brown University in 1881 and first worked in the Peace Dale Woolen Manufacturing Company. He then went to Europe and spent some time working and studying in the plant of Solvay and Company.

Returning to the United States, Mr. Hazard came to Syracuse as assistant treasurer of the Solvay Process Company. He later became treasurer and after the death of his father in 1898, succeeded him as president.

F. R. Hazard was instrumental in organization of many of the subsidiary companies which branched from the parent Solvay Process Company until its merger with Allied Chemical.

Among these were the Split Rock Cable Company, the Tully Pipe Line, Semet-Solvay Company, By-Products Coke Corporation and Solvay Collieries. Some of these have now been discontinued or replaced by new units.

Mr. Hazard took a very active part in civic affairs in Solvay and Syracuse. He was first president of the village, serving in that position from 1900 to 1909. He was deeply interested in social and philanthropic work and in this was aided by his wife, who was Dora Gannett Sedgwick, daughter of Charles B. and Deborah (Gannett) Sedgwick.

Mrs. Hazard organized the Solvay Guild which became the

AIRVIEW OF THE SOLVAY PROCESS PLANT WHICH GREW FROM WILLIAM COGSWELL'S IDEA



In 1879, when William Browne Cogswell conceived the idea of using the natural resources of Central New York and the Solvay Process for making ammonia soda, this section, on the shores of Onondaga Lake was farm land and unused salt land. How the foresightedness and shrewdness of Cogswell and his associates changed the section is clearly shown by this airplane view showing the many buildings of the Solvay Process Company and a portion of the village of Solvay which grew up around the plant.—Picture by Journal staff photographer.

center of social, educational and welfare activities in the village. It first met as a sewing circle, but soon expanded in many fields. Mrs. Hazard and her Guild was instrumental in installing the kindergarten system in the public schools of both Solvay and Syracuse, teaching of domestic sciences, setting up the playground system, child health work, Solvay Day Nursery and a hospital fund.

After her husband's death in 1917, Mrs. Hazard continued to carry on many of her activities in both Solvay and Syracuse and has always been a most willing contributor to any worthy cause. Her name has been prominent on the list of patrons for every hospital drive and she has contributed substantially annually to the Syracuse Community Chest.

Mrs. Hazard maintains the estate of her husband in Orchard road and spends her summers in Rhode Island. As another example of her willingness to aid in any civic movement, Mrs.

Hazard two years ago set aside a large portion of her estate for use by the unemployed for garden plots.

A third member of the Hazard family, Frederick Rowland Hazard Jr., became associated with the Solvay Process Company. He was born in Syracuse, Dec. 19, 1891, and was graduated from Brown University with the class of 1914. His first occupation after graduation was with the Solvay Process Company.

Resigning a national guard commission after the outbreak of the World War, Mr. Hazard enlisted as a private, but advanced to the rank of lieutenant of field artillery after service in France. For a time he then resumed his duties with the Solvay Process Company in a technical capacity, but is now engaged in other activities.

F. R. Hazard was succeeded as president of the Solvay Process Company by E. L. Pierce and as president of the Semet-

Solvay Company by H. H. S. Handy. Edwin D. Winkworth succeeded Mr. Handy as head of the Semet-Solvay Company in 1921 and in 1922 was elected president of the Solvay Process Company. Mr. Winkworth retired in 1925 and the presidency of the Solvay Process Company has since been unfilled.

Another man who played an important part in the early development of the Solvay Process Company is Edward Needles Trump. He was born in Philadelphia in 1857 and after technical education and experience came to Syracuse in 1882 as assistant to Mr. Cogswell. He was made chief engineer of the Solvay Process Company in 1893 and in 1913 was a vice president. He later resigned that post to become consulting engineer.

The importance of the Solvay Process Company to the Nation's industry came best be told in the words of Frederick R. Hazard, who in an address to the Chamber of Commerce, said:

"If it were possible to eliminate the alkali business and the iron industry, civilization would return to the stone age."

The manufacture of ammonia soda and the mass of by-products of the process, which took the company into manufacture of coke, the many coke by-products, including dyestuffs, chlorine, atmospheric nitrogen and, during the war, explosives, brought expansion after expansion.

A plant was erected in Detroit in 1897 and this has now grown to compare with that in Solvay for size and capacity. During the last few months plans were made for construction of a third large plant, at Baton Rouge, La., so that all sections of the country can be served easily and speedily through all methods of communication.

First experiments in the manufacture of atmospheric nitrogen were made in Syracuse and a small unit of this plant, now used mainly for research, is maintained here. The main plant of this unit is now in Hopewell, Va.

To connect the Hopewell plant with the Solvay Process Company, a system of transportation whereby the barge canal, Hudson River and the coast waterways could be utilized, was set up.

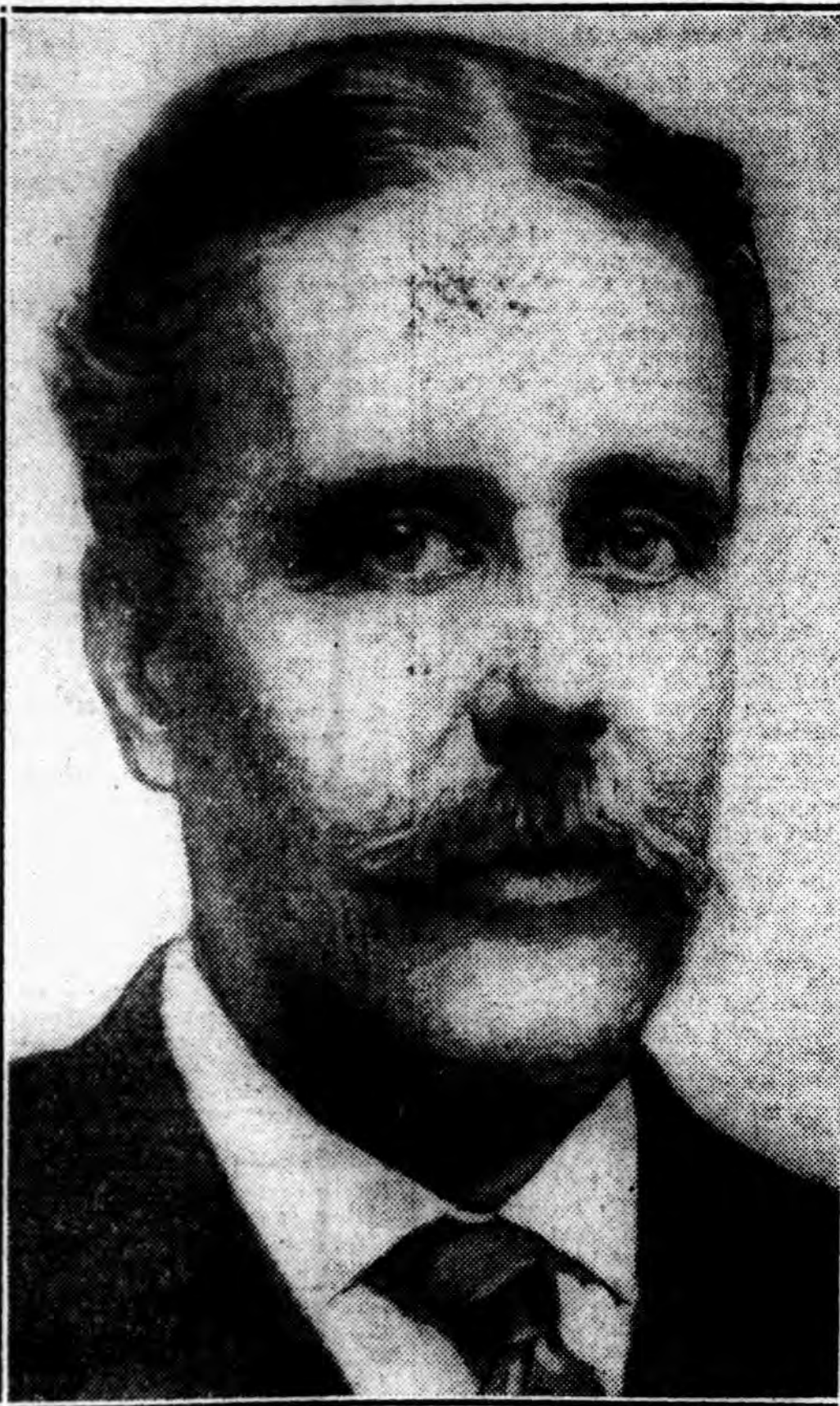
Soda ash from the Solvay Process Company, used by the Hopewell plant, is loaded into fleets of barges which use a private dock and harbor constructed on the shore of Onondaga Lake and connected to the plant by an automatic conveyor.

Solvay Process Company, as a unit of the Allied Chemical and Dye Corporation, has no president but George A. Milligan, with offices in New York City, is the executive officer. H. F. Atherton is president of Allied Chemical. R. H. Perkins is director of operations at the Solvay plant and J. H. Hahn is assistant secretary in charge of public relations.

Of interest to old-timers is a list of the officers and executives of the Solvay Process Company as they were in 1903: F. R. Hazard was president, W. B. Cogswell, vice president; Osgood V. Tracy, treasurer; Edward N. Trump, general manager; William H. Blauvelt, general manager of Semet-Solvay; J. William Smith, assistant general manager of Solvay Process; John D. Pennock, chief chemist; Royal E. Fox, paymaster; Albert R. Gillis, master mechanic; George G. Cotton, assistant master mechanic; George W. Corey, assistant treasurer; Henry R. Cooper, manager of the caustic soda department; Frederick M. Power, general superintendent; Hiram P. Bellinger, manager of the bicarbonate department; George J. Schattle, assistant general superintendent; George N. Comby, assistant engineer; James F. McNeil, in charge of carting and hauling; Abram T. Baldwin, assistant manager of the soda ash department; George G. Fryer, mechanical engineer, and George S. Rood, bookkeeper. Some idea of the wide scope of uses to which products of the Solvay Process Company are put is shown by the following partial list:

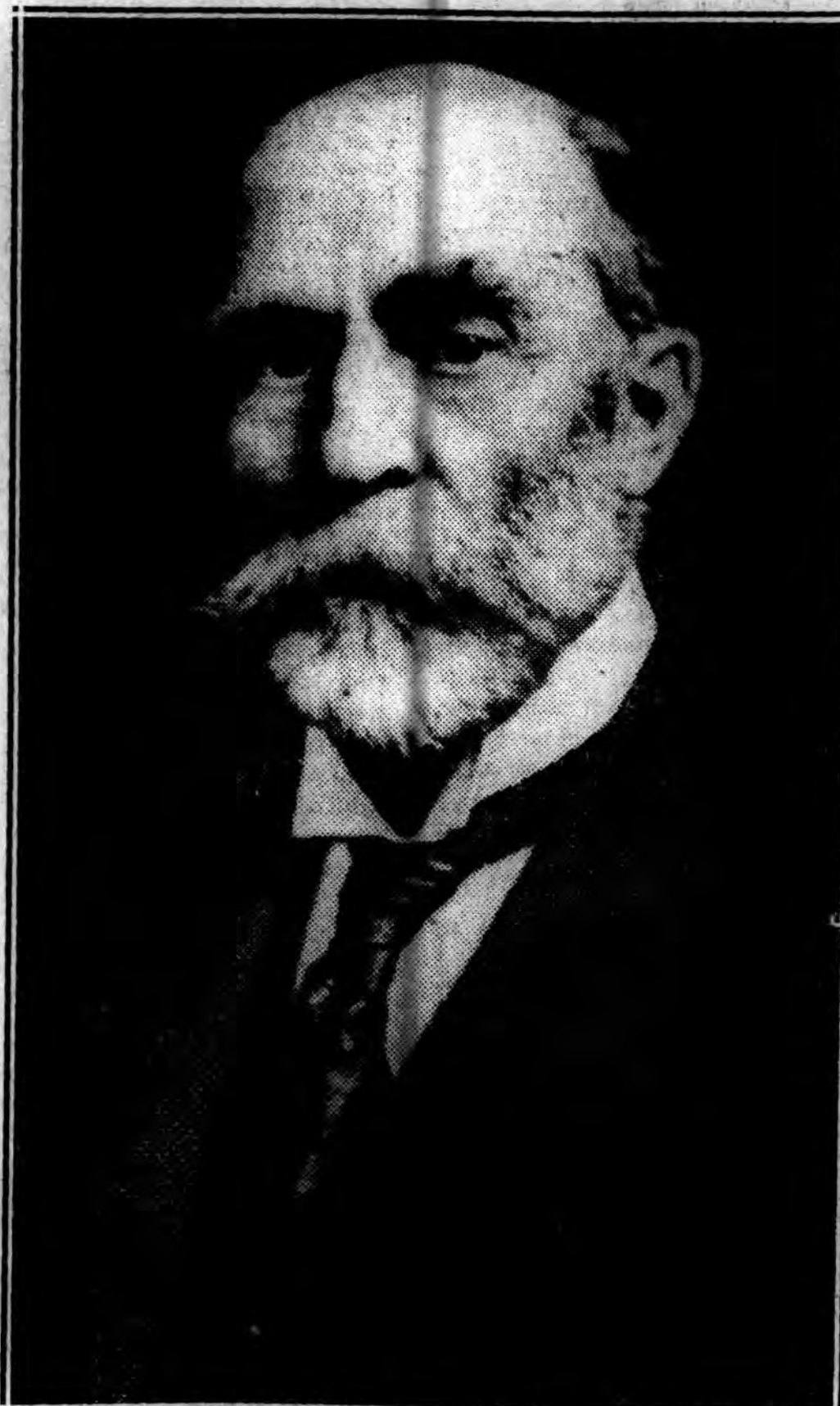
Alumina, baking soda, baking powder, borax, boiler compounds, candles, carbonic acid gas, concentrated lye, china ware, dynamite, dyestuffs, enameled metal wear, glass, glue, hyposulphite of soda, leather, medicines, paper, paint, porcelain, pottery, soap, soda water, starch, ultramarine, varnish, washing compounds and wax.

LEADERS WHO HELPED BUILD THE SOLVAY PROCESS COMPANY



FREDERICK ROWLAND HAZARD

Much of the growth of the Solvay Process Company can be attributed to the executive ability of Frederick Rowland Hazard and his father, Rowland Hazard, who served as presidents of the company. F. R. Hazard succeeded his father in 1898 and served until his death in 1917.



WILLIAM BROWNE COGSWELL

The real genius who saw the possibilities of the natural resources of Syracuse and vicinity was William B. Cogswell, who interested Rowland Hazard in the idea and, after overcoming countless difficulties, brought about establishment of the Solvay Process Company in 1881.