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### **Bloomfield's Part In The Atomic Bomb:**

# The Tuballoy Project

Looking appropriately like the site of an atomic explosion, the former site of the Westinghouse Lamp Division, once the largest industry in Bloomfield, is devoid of all of its steel-framed concrete structures. Built to last for a hundred years, (only to be demolished during recent memory), the four-story structures were located on both sides of the street, joined by a bridge over Arlington Avenue. Part of the old Noll Dairy Farm was occupied by an employee parking lot, now a truck junkyard. The old Erie siding and the railroad itself are gone, but the unused station platform still remains under the Arlington Avenue overpass.

It is believed that the construction of this large industrial complex, for which the Town eagerly vacated a number of proposed residential streets, was the site of fabled "Watsessing Hill", where the turn-of-the-other-century baseball games were played.

The producing of light bulbs is a rather prosaic function. But this is what the Westinghouse Bloomfield did manufacturing Mr. Edison's wonderful invention and making it available to the homes and businesses of the country. For a brief period of time, however, it became a participant in one of the top secret programs of WWII, the Manhattan Project. How did that come about? For that answer we have to go back a bit in time.

Westinghouse started manufacturing light bulbs in Bloomfield in the early 1900's. One of the parts of the bulb is the filament, the light-producing element, made of tungsten. This material was formable, had the necessary strength and could withstand high temperatures. After WWI, Westinghouse began to look for other materials that might substitute for the tungsten. If you recall the Periodic Table from your high school chemistry days (who doesn't?), uranium is next to tungsten and this is where the search was started

thinking that uranium would have similar properties. Harvey Rentschler and John Marden of Westinghouse developed a process to reduce the uranium to a metal that could be used in feasibility projects. Work also continued along the same lines with other rare metals.

Uranium did not live up to expectations. Its melting point was lower than tungsten. The process, however, continued to provide uranium metal to college and university laboratories around the country. Westinghouse researchers also developed an electrolysis procedure that provided uranium metal pure enough to be used in nuclear research which was burgeoning in

With the start of WWII, the government embarked on a very secret program to develop an atomic bomb. Uranium was necessary to the program and Westinghouse had the only useful process necessary to produce it. The first request was for 10 kilograms (22+ lbs.) of the metal. This





On May 25th at 8:00 p.m. the Bloomfield Historical Society will hear speaker Ron Goldberger of the New Jersey Historical Society. His subject is the July 1804 duel between Alexander Hamilton and Aaron Burr. There has been much

President. was illegal, so the whole affair was car-

Alexander Hamilton.

ried out in secrecy. Ron Goldberger believes that Burr has been maligned and treated unfairly by history, so...Hamilton buffs, come prepared.

Goldberger retired several



disagreement among

historians about the

intentions and activi-

ties of A. Burr, who,

at the time of the duel,

was Jefferson's Vice

Dueling

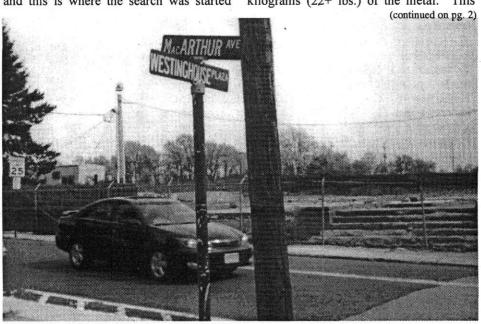
years ago and loves history. Under the sponsorship of the New Jersey Historical Society he donates his time as a speaker for the Society, and any remuneration is turned over to the N.J.H.S.

When questioned about his plans for developing new subjects he said his next program would be about the birth of the movie business in N.J. That started in 1895 but moved west after 1917.

The Hamilton – Burr program will be held at the Bloomfield Civic Center, 84 Broad Street in Bloomfield. Parking is behind the Civic Center, off State Street. It is free and open to the public.

#### ENJOY OUR MUSEUM

Located above the Children's Library at 90 Broad Street. HOURS: Wednesday from 2:00 to 4:30 pm all year. Saturday from 10:00am to 12:30pm September to mid-June and by appointment (973) 743-8844.



Just a few short years ago, anyone standing at this corner would have been facing an impressive five-story building and the main entrance of the Lamp Division of the Westinghouse Corporation. The plant had been established in Bloomfield in 1907 in a small building near this site; by 1957 the complex of modern poured concrete steel framed structures covered an area of 13 1/2 acres and employed 8,000 people. Mr. Al Schramm, a glass blower in the Research Department of the company since 1909, recalled that the buildings were located on part of the old baseball field and the "Knowles" Farm [the Noll Dairy farm]. Another employee, Fred Rowe, had his desk almost directly over the site of his birthplace, the old Rowe homestead.

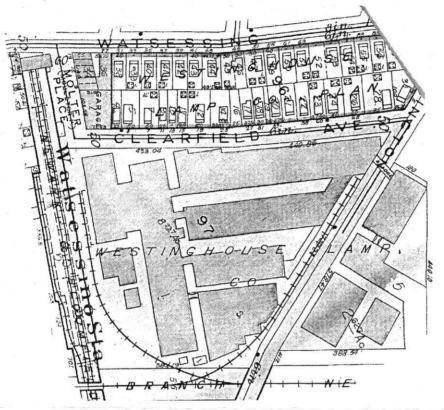
As is related by the memoir by John Gibson, Sr., who worked in the Westinghouse Plant during World War Two, The Manhattan Project was the downfall of the Bloomfield operation. All of the Westinghouse structures have been demolished and there is nothing left but the concrete foundations, the cryptic street sign, and these stairs to nowhere.

#### The Tuballoy Project

(continued from pg. 1)

must have seemed to be a colossal quantity since Westinghouse had never been asked for more than 1 ounce previously. With ingenuity and great effort, Westinghouse personnel got to work. Part of the upscaling of the process required containers. Homeowners in the area found that there were no metal garbage cans available; Westinghouse had purchased all of the locally available supplies. Within three months, the request had been fulfilled.

the tubs were exposed to sunlight in a process called photosynthesis. When this step was complete, the mixture was piped to the basement of the building where it was further processed to form buttons which had the size and shape of small hockey pucks. This was an intermediate step to facilitate the handling of the metal without having it crumble. The final step was to put the buttons in an induction furnace where it was melted and formed into ingots which, in turn,



The 1932 Atlas of Bloomfield shows the extensive Westinghouse Complex of buildings. While its official address was Clearfield Avenue, the name of this street was changed to MacArthur Avenue during the patriotism of World War Two. In 1977, Moulter Place was renamed Westinghouse Plaza. Neither makes much sense today since both seem to have "faded away."

In the early weeks of 1942, the University of Chicago placed an order with Westinghouse for three tons of uranium. The University of Chicago was where the research was being done to develop an atomic reaction, of course unknown to Westinghouse. But an order from such a district was tantamount to a command to go into large scale production. Time did not permit the construction of new facilities and there was no spare space at the Bloomfield plant. So part of the operation was put into the basement of the No. 7 building and the rest was squeezed into odd corners of the plant. So that no suspicions would be aroused, the operation was named the Tuballoy Program.

Wooden tubs were set up on the roof of the No. 7 building where the process of reducing a uranium compound to a metal began. A nitrate of uranium and other compounds in

was shipped to the customer.

Aside from the key people involved in the project, to maintain secrecy, people who had no chemical background were hired. A furrier and a short order cook were hired. In my father's case, he worked on Wall St. as a commodities broker and had a degree from Fordham University in accounting. With the Japanese sneak attack on Pearl Harbor, his was finished. He applied to Westinghouse thinking that he would get a job in accounting. He was hired and became part of the Tuballoy Project. The people who worked on the project were in the dark as to the purpose. Some thought that it was a new explosive or perhaps a blockbuster bomb. At any rate, the people were supposed to do the work and not ask questions. Workers had xray film to carry with them and monthly uri-nalysis checks were done. Beyond that, radiation was not a major concern. Whether the long term effects of radiation were not realized (witness the exposure of U.S. troops to atomic explosions after the war) or it might have been as Dick Lynch, a union representative then (and later), said: "The people up the line saw the project as a way to shorten the war and they weren't going to worry too much about what happened to some factory workers in Bloomfield". One person did die but the cause of death was later attributed to beryllium poisoning.

Another problem was that uranium, particularly in powder form, tended to ignite spontaneously when exposed to air. Fires would break out in drains and in sewers. The Bloomfield Fire Dept. was called on more than one occasion to put out a fire in an outside street sewer. Some kind of story was concocted to cover the reason for the fire. Fires within the plant were extinguished by plant personnel. There were several occasions when our phone would ring in the small hours of the morning. My father would be told that a cab was being sent for him to bring him in to help handle a fire.

Westinghouse continued to produce uranium until October of 1943. Better and more economical processes became available, so the contract was terminated. About 69 tons of uranium had been produced at a cost of almost \$1.6 million. But the war was still raging and secrecy had to be maintained.

With the end of the war, the piping and equipment from the Tuballoy Project were dismantled and scrapped. There were no records kept of where the material was sent. The project workers went on to other endeavors and the project passed into history, or so people thought.

In 1976, as part of a survey of Manhattan Project sites, the Bloomfield plant was inspected. Low levels of radiation were found in the basement of the No. 7 building. Westinghouse went through a cleanup procedure. This cleanup removed the radiation in the basement but small amounts of radiation were detected in the drains beneath it. Subsequent tests showed that the earth beneath the floor was also slightly contami-So the floor was dug up and more than 50 barrels of dirt were carted away. By 1980, Westinghouse was cleared to use the area for unrestricted use. In the ensuing years, Westinghouse razed the buildings and the area was open for development by the Township of Bloomfield.

One might think that the story was completed. But, in 2002, a Project Engineer from a consulting group came up to the house to interview my father. It seems that Westinghouse is considering a request to have the U.S. Government pay for the cleanup. It may be well into the 21st century before all the books are closed on the Tuballoy Project.

-John Gibson, Jr.

#### JOHN A. GIBSON

John A. Gibson was born in New York City on July 3, 1905. His family moved to Bloomfield shortly thereafter where he attended Sacred Heart Grammar School and Bloomfield Evening High School.

At the age of 10 he won his first track medal in a meet sponsored by the Essex County Park Commission at Watsessing Park in Bloomfield. He competed through his high school years for the Bloomfield Catholic Lyceum which was based at Sacred Heart Parish. Fordham University offered him a scholarship which he accepted with the stipulation that he would continue to be coached by Harry Coates, the BCL coach. During his years at Fordham, Johnny won almost every middle distance title in the Metropolitan Association of the A.A.U. In 1927, wearing the jersey of the BCL, Johnny set a world record in the 440 yard hurdles which would stand for 15 years. He realized a life-long dream when he made the 1928 Olympic Team which competed in Amsterdam, Holland.

Following his running career, Johnny served as a track and field official from 1937 to 1990. In 1945 he accepted the position of Head Track & Field Coach at Seton Hall College (now university). During his tenure at Seton Hall he developed many outstanding athletes including Andy Stanfield – 1952 Olympic Champion and world record holder, Frank Fox, Phil Thigpen,

Bob Carter, Morris Curotta, Charley Slade and Bob Keegan. He is the only coach ever to win four consecutive one mile relay titles at the Millrose Games in Madison Square Garden.

Mr. Gibson also coached American teams that competed in British Guyana, Trinidad, Martinique, Sweden, Denmark, Afghanistan and Pakistan. In addition, he conducted clinics for the Armed Forces in Germany, France, Africa and Panama.

John Gibson's accomplishments have earned him induction into: The Helms Hall of Fame, New Jersey Sports Authority Hall of Fame, Fordham University Hall of Fame, New Jersey Sports Writers Hall of Fame, Garden State Hall of Fame, Seton Hall University Hall of Fame, Bloomfield Athletic Hall of Fame and the Sports Hall of Fame of NJ.

John married his grammar school sweetheart from Sacred Heart, Dorothy Croughan, who passed away in 1997 after 69 years of marriage. The six Gibson children are sons John A. Jr., the late Edward L., and Thomas D. and daughters Patricia Carter, Katherine Lipinski and Mary Elizabeth Donegan. Grandchildren number 19 and Great Grandchildren 42.

After living on Belleville Avenue for 61 years, John has moved to Franklin, NJ, where he lives with his son, John, Jr.

### **From The Archives**



The reverse side of the above photograph is autographed by the persons in the picture, which are as follows: John A. Reid, Mayor, (seated), Jeanne Barbier, Bob Gallman [Class of 1944], Helen Keller, John Fitzsimmons [Class of 1946] and Paul R. Hochuli. Two other students are unidentified. Also included is the signature of Fred Cranse, History teacher at Bloomfield High School. Dr. Cranse does not appear in the photo and the names of his students may not be in the usual order of left to right.)

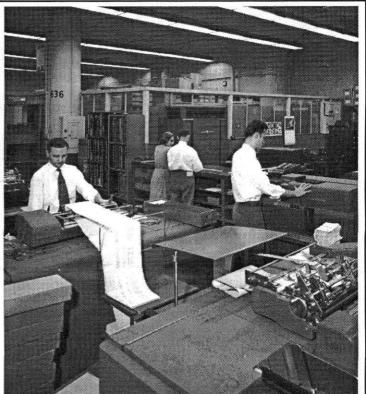
It is not known why this photo was taken (probably for publication in the Independent Press) or the occasion for the photo. If any of the above are able to communicate with the Historical Society, further details about this interesting document would be appreciated

The late Doctor Fred D. Cranse, Jr. was a graduate of Bloomfield High School. He received an A.B. Degree in 1936 from the New Jersey State Teachers College in Montclair. He served as Chairman of the Social Sciences at the Bloomfield Senior High School from 1942, and for some years was a member of the Coadjutant Staff at the Rutgers School of Education. He also taught at Seton Hall University and the New Jersey State Teacher's College at Paterson. He had also done some manuscript evaluation and criticism and/or revision for Scribner's, Harcourt Brace, Prentice Hall, and the World Book Company.

Doctor Cranse was married to the former Marcia Conant Stryker. They had two children, Roger Conant Cranse and Catherine Ann Cranse. It is not known where they may be living at this time.

The above information was taken from a Doctor Cranse' Theseus on the subject of public education in Bloomfield, which is preserved in the archives of The Historical Society.

I was not fortunate enough to number Doctor Cranse among my teachers at Bloomfield High School, which I attended between 1939 and 1943, but well remember his slightly stooped figure as he moved quietly through the hallways of the High School between classes. It is with a feeling of great regret that I missed his influence on my education, which might well have made my present life much more satisfactory. —Frederick Branch



# GENERAL ELECTRIC COMPANY (SPRAGUE ELECTRIC)

The "Tabulating Department" of The General Electric Company, located at 5 Lawrence Street from about 1915 until it moved to a new plant in Tyler, Texas, in 1959. The above photograph shows four employees of The Department hard at work. They are (L to R) Carl Longo, Sandra Weiss, David Levin (in the background) and Gordon Leask. The cumbersome machines were made by the IBM Company and were considered to be a gigantic advance in technology, considering that the work they are doing required a much larger staff writing with wet ink into ledger books just a few years before. Using a system of punched cards, these monsters were able to figure percentages of pay raises and print them out on the folded forms seen passing through the machine to the left. They were the last work in technology and the department was considered one of the wonders of the early 1950's, when this photo was taken. Compare these behemoths with your laptop - wanna trade??

Unfortunately, The General Electric Company considered their Bloomfield plant a liability. It was said to be operating in the red because of the outmoded buildings, some of which dated back to the 1890's. There was also strong feeling among management that the local union had called for too many strikes, and that its constant demands for more money was unreasonable. There was an equally strong feeling among the workforce (with some justification) that management left much to be desired. Just a few years after the above photograph was taken, all of the thousand or so employees at 5 Lawrence Street were looking for new jobs.

The massive six-story building still stands next to the Garden State Parkway. It was completed in 1918 on part of the Noll Dairy Farm and is now occupied by many small businesses.

#### **Around Bloomfield**

In this photograph taken on May 4, 004, we see the destruction of the 1925 addition to landmarked Bloomfield High School. The pyramidal copper roof has already been removed and the machinery at the center right is hard at work prying apart the brick, cut limestone, and poured concrete. This solidly-built addition to the 1912 building contained the Home Economics class, presided over by Miss Clara Schauffler (See page 108, bottom, of The Arcadia Book "Images of America: Bloomfield" in which this photograph is mislabled as a "group of high school teachers".) In the 1970's, the late Arthur Bouse had his Audio-Visual Department in this building. It was a fine example of a well-desgined and sympathetic modern addition to an older building in the Beaux-Arts style.





General Joseph Bloomfield THE NEW TOWN CRIER THE OFFICIAL NEWSLETTER OF THE HISTORICAL SOCIETY OF BLOOMFIELD 90 Broad Street Bloomfield, NJ 07003

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## TELEPHONE CONNECTION

The Historical Society of Bloomfield Museum now has a direct line for outside calls. The number is: (973) 743-8844.

To speak to a "real" person, call when the museum is open— Wednesday 2-4:30 pm all year, and Saturday 10am-12:30 pm from September to mid-June.

After hours there is an answering machine.

At all other times, a message will be taken by General Joseph Bloomfield, James Newbegin Jarvie, Abigail Baldwin Oakes, or whichever posthumous shade is available on the answering machine.

E-mail The Historical Society of Bloomfield

age grave

BloomfHist@aol.com

#### **OAKLAND HALL**

Shown in a photo taken in the 1950's is the former residence of Mr. E. Sherbrooke at 86 Oakland Avenue, southwest corner of Liberty Street. The house was build around 1875 in the French Mansard style on land originally part of the Davis plantation. In 1906 (map), it was occupied by A.H. Bleeker. By 1920, Mr. Sherbrooke lived at number 86 until it became a nursing home, sometime before 1925. By 1951, the owner was Harry Higgins who had vacated the premises just before selling it to Bloomfie



just before selling it to Bloomfield College, which owned it by 1961 and used it as a dormitory called "Oakland Hall".

Standing in front of the hall is Reverend John Tron, a member of the faculty of the College. This photograph is dated 1951, and may have been taken on the occasion of the transfer of the property from Mr. Higgins to The College.

Next door to the south (left) is an 1880's house, possibly built by Josephine Davis when her sister, Caroline Davis Sears, inherited the family home at 425 Franklin on the death of her mother. This has been moved to the site of number 68, and has been sensitively restored by The College. Number 80, razed about ten years ago, is now the site of the new College Library building.

(Photograph from the estate of Aldo Tron.)

## The Origin of 25 Oak St.

25 Oak St. had its roots in 29 Oak St. When Kate, the widow of John Crogan, died in 1904, her will called for the splitting of the original plot called 29 Oak St. into two parcels. The parcel with the house was bequeathed to her son Edward. The other son, John, received the second parcel. However, the original property had a \$500 mortgage. In order for John to have a free and unencumbered title to his plot, Edward was directed to assume the mortgage, which he did. Now, that does not seem to be a great sum of money by today's standards, but, in those days, the average wage was about \$13 a week.\*

After Kate's death, both sons continued to live in the house. In 1907, Edward married Catherine Dillon and brought his bride home to the house. John continued to live there but did not build any structure on his property. The property did not lie idle, however. A large garden was grown on John's parcel. I recall my mother describing the flowers and vegetables that were grown there. It undoubtedly provided food and beauty to the household.

It would be nice to think that the situation would continue, but that was not the case. John, it was said, had a liking for wine,

woman and cards. This led to his owing a debt of \$300 to Michael Higgins, owner of an ice business in town. The debt was in the form of a mortgage on John's parcel. Along about 1914, John sold his parcel to Michael for \$1 and the relief of the \$300 mortgage. However, he did not tell Edward and Catherine that he had done so. When they found out about it, their reaction was immediate. Catherine put John's belongings out in the street and gave him an invitation he could not refuse: "Leave and don't come back." John moved to Newark and eventually to New York City. Edward did not speak to his brother again until shortly before John died in 1934

Michael Higgins did not immediately do anything in terms of building on the property. But he did have plans. One of his daughters was contemplating marriage and he thought that this would be a good location to build a house for her when she did so. In the early 1920's, the house was built, but his daughter, after her marriage, decided not to live there. In 1923, the house was listed as 27 Oak St. and vacant.

In 1924, Andrew and Mary Murphy purchased the property and it was then listed as 25 Oak St. Apparently there was a revision in the house numbering at that time. This would cover the history of the property insofar as the origin and the house number are concerned.

But there is a human side to this history as well. After Andrew and Mary Murphy moved into 25 Oak St., the Crogans and the Murphys became lifelong friends. So much so, that when Andrew died in the early 40's, there was a stipulation in his will that if the house was ever sold, someone from the Crogan family would have to approve the sale. Mary continued to live in the house after Andrew's death. She died around 1968 and the house remained vacant for several years. In the early 70's, George Reilly and his wife, Marianna, purchased the house and Donald Croughan gave his approval, as a member of the Crogan family, to the sale. The tradition of friendship continued with the Reillys and the Croughans until Ruth Croughan sold the house in 1996 (Donald had died in 1991).

Oak St. isn't a very big street, only a block long and sometimes it seems devoid of any activity. But if you can peel back the pages of history, you can occasionally pick up bits of times past on this small but historic street. John Gibson, Jr.

\*Thanks to Donald Carlo, Bloomfield Public Library, for researching this piece of information.

# ANSWER TO LAST MONTH'S HISTORY QUESTION:

Why did the people of Bloomfield blame the Morris Canal for the flooding of The Center during heavy rains? The answer came from the late Russell Marsters, who lived in the vicinity of the aqueduct near Newark Avenue.

The surface of the Second River cleared the underside of the aqueduct by only about one foot. During heavy rains, as the river rose inch by inch, Russell's mother would send him to check out the space between the surface of the river and the bottom of the aqueduct. When the space reached one inch or

less, it was time to get the chickens to higher ground. Once there was no more room for the run off to flow under the canal structure, it began to back up onto the lower ground in the vicinity, and the Marsters property was underwater. During heavy storms, such as in 1907, the water reached as far as The Center.

Since then, in an effort to avoid these periodic inundations, the bed of the river has been lowered by about 15 or 20 feet, and the banks faced with cement and stone. However, as we all found out on September 16, 1999, it can happen again. (See Mr. Joseph Testa's excellent eyewitness account in the September 2003 issue of this Newsletter.)