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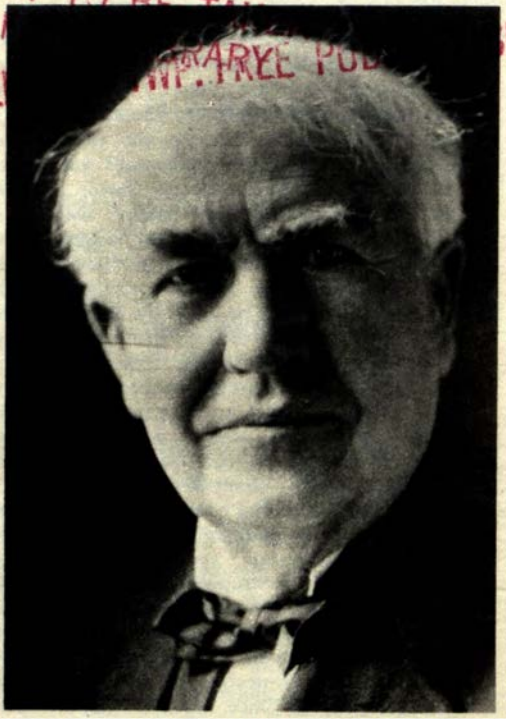


A Brief Biography

of

THOMAS ALVA EDISON

GODFATHER OF INDUSTRY

"BUT the man whose clothes were always wrinkled, whose hair was always tousled and who frequently lacked a shave probably did more than any other one man to influence the industrial civilization in which we live. To him we owe the phonograph and motion picture which spice hours of leisure; the universal electric motor and the nickel-iron-alkaline storage battery with their numberless commercial uses; the magnetic ore separator, the fluorescent lamp, the basic principles of modern electronics. Medicine thanks him for the fluoroscope, which he left to the public domain without patent. Chemical research follows the field he opened in his work on coaltar derivatives, synthetic carbolic acid, and a source of natural rubber that can be grown in the United States. His greatest contribution, perhaps, was the incandescent lamp—the germ from which sprouted the great power utility systems of our day . . .

Although his formal education stopped at the age of 12, his whole life was consumed by a passion for self-education, and he was a moving force behind the establishment of a great scientific journal. The number of his patents—1100—far exceeds that of any other inventor. And the 2500 notebooks in which he recorded the progress of thousands of experiments are still being gleaned of unused material. Once, asked in what his interests lay, Edison smilingly responded, 'Everything.' If we ask ourselves where the fruits of his life are seen, we might well answer, 'Everywhere.' "

From *Nation's Heritage*

THOMAS ALVA EDISON

The Story of a Great American

JOURNEYING from Holland, the Edison family originally landed in Elizabethport, New Jersey, about 1730. In Colonial times, they farmed a large tract of land not far from West Orange, New Jersey, where Thomas A. Edison made his home some 160 years later. Their fortunes fluctuated with their politics. Like many well-to-do landowners of that time, John Edison, a great-grandfather of the inventor, remained a Loyalist during the revolution, suffered imprisonment and was under sentence of execution from which he was saved only through the efforts of his own and his wife's prominent Whig relatives. His lands were confiscated, however, and the family migrated to Nova Scotia, where they remained until 1811, when they moved to Vienna, Ontario. Edison's grandfather, Captain Samuel Edison, served with the British in the War of 1812.

In Ontario, Edison's father, another Samuel, met and married Nancy Elliott, schoolteacher and daughter of a minister whose family had

originally come from Connecticut where her grandfather Ebenezer Elliott had served as a captain in Washington's army.

The younger Samuel now became involved in another political struggle—the much later and unsuccessful Canadian counterpart of the American Revolution known as the Papineau-MacKenzie Rebellion. Upon the failure of this movement, he was forced to escape across the border to the United States, and after innumerable dangers and hardships, finally reached the town of Milan, Ohio, where he decided to settle.

Thomas Edison's Early Days

The brick cottage in which Thomas Alva Edison was born on February 11, 1847, still stands in Milan, Ohio. Its humble size and simple design serve as a constant reminder that in America, a humble beginning does not hamper the rise to success.

Even as a boy of pre-school age, "Al" Edison was extraordinarily inquisitive; he wanted to find out things for himself. The story is told of how he tried—unsuccessfully—to solve the mystery of hatching eggs by sitting on them, himself, in his brother-in-law's barn. Among other tales of his youth in Milan are his narrow escape from drowning in the barge canal that ran alongside

the Edison home, and his public spanking in the town square after he accidentally had set fire to his father's barn.

When he was seven years old, his family moved again; this time to Port Huron, Michigan. But, unlike their earlier migrations by wagon, the trip was made by railroad train and lake schooner.

Edison's formal schooling was of short duration and of little value to him. To use his own words, he "was usually at the foot of the class." His teacher did not have the patience to cope with so active and inquisitive a mind, so his mother withdrew him from school and capably undertook the task of his education herself. In spite of his lack of formal schooling, Edison recognized the great worth of education and, in his later years, sponsored the famous Edison scholarships for outstanding high school graduates who were selected each year through a national contest.

Young Tom's First Laboratory

Most of Edison's vast knowledge was acquired through independent study and training. At the age of eleven, for example, he had his own chemical laboratory in the cellar of his Port Huron home and had read such books as Gibbon's "De-

cline and Fall of the Roman Empire," Sears' "History of the World," Burton's "Anatomy of Melancholy," and the "Dictionary of Sciences."

At twelve, his parents permitted him to take a job as newsboy and candy "butcher" on the train of the Grand Trunk Railroad running from Port Huron to Detroit. In this, his first job, Edison exhibited a knack for business and an ambition that far exceeded that of the average boy of his years. He maintained a chemical laboratory in the train's baggage car, which also served to house a printing press on which young Edison ran off copies of "The Weekly Herald," the first newspaper ever edited, published and printed aboard a moving train. In addition, he became a middle-man for fresh vegetables and fruit, buying from the farmers along the route and selling to Detroit markets.

When only thirteen years old, he was earning several dollars a day, a tidy sum even for a man in that period. Already he was putting into practice a theory followed throughout his life — that hard work and sound thinking recognize no substitutes.

One of the most widely known stories about Edison is the one which attributes his deafness to a quick-tempered trainman who soundly boxed his ears when Edison's traveling labora-

At fourteen, young Tom was selling candy and newspapers on a train plying between his hometown of Port Huron, Michigan, and Detroit. Simultaneously, he was learning telegraphy, the field in which he scored his earliest successes as an inventor, and experimenting in his own chemistry laboratory.

Edison was at the White House in Washington, D.C. to demonstrate one of his early tinfoil phonographs to President Rutherford B. Hayes when this photograph was taken in April of 1878. Edison considered the phonograph his favorite invention.

tory caused a fire to break out in the baggage car. Only part of the tale is true: the fire broke out and the trainman boxed his ears, but Edison himself never believed his deafness resulted from this incident. He traced it to a later occasion when another trainman thoughtlessly picked him up by the ears to help him aboard a train that was pulling out of a station.

It was during this period that a dramatic incident occurred which altered the entire course of Edison's career and which, therefore, may well have also altered the course of world progress. At Mt. Clemens, Michigan, the young Edison risked his own life to save the station agent's little boy from death under a moving freight car. The grateful father taught him telegraphy as a reward. Edison's association with telegraphy brought to a climax his interest in electricity — a word with which the name of Edison was to become inseparably associated — and led him into studies and experiments which resulted in some of the world's greatest inventions.

A Telegrapher at Seventeen

Edison's skill as a sender and receiver earned him a job as a regular telegrapher on the Grand Trunk line at Stratford Junction, Ontario, when only seventeen years of age. His creative imag-

ination, however, proved his downfall in this instance. He was fired when a supervisor happened across the secret of one of the young inventor's creations—a device for automatically "reporting in" on the wire in Morse code every hour, when, in actuality, Edison was napping to make up for sleep lost in pursuing his studies.

As a telegrapher, Edison travelled throughout the middle west, always studying and experimenting to improve the crude telegraph apparatus of the era. Turning eastward, Edison went to Boston where he went to work for Western Union as an operator. In his spare time, he created his first invention to be patented—a machine for electrically recording and counting the "Ayes" and "Nays" cast by members of a legislative body. While the invention earned him no money, because members of Congress could not be interested in any device to speed up proceedings, it did teach him a commercial lesson. Then and there he decided never again to invent anything unless he was sure it was wanted.

From Boston, Edison went to New York, where he landed, poor and in debt, in 1869. While working as an employee of the Gold and Stock Telegraph Company and later as a partner with Franklin L. Pope in their own electrical engineering company, Edison invented the Uni-

versal Stock Printer. For this device he received $40,000, the first money an invention brought him.

To Edison, the mere possession of money meant nothing; its only value rested in its ability to provide the tools and equipment necessary for further work and experiment. With the $40,000 he opened a factory in Newark, New Jersey, in 1870, where he manufactured stock tickers and devoted his energies to invention.

By the time he was twenty-three, his established methods of hard work and sound thinking had catapulted him to a point on the road to success rarely attained by one so young.

Edison's Hectic Years

With his success as an inventor and manufacturer at the age of twenty-three, Thomas Alva Edison in 1870 plunged into a period of feverish endeavor that has no parallel in the lives of other great men of science. His fertile brain and boundless energy drove him from one great invention to another, each of which, in turn, launched new manufacturing enterprises, giving employment to thousands of people. Few were his working days that did not extend through twenty of the twenty-four hours. The group of men who worked closely with him as his immediate assistants

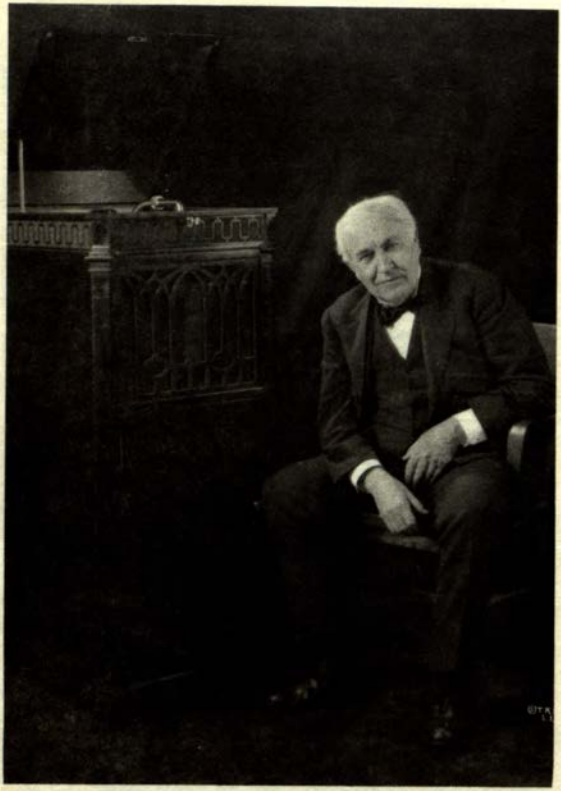
earned the name of the "insomnia squad" as they tried valiantly to follow the pace set by the "boss."

Actually there was no "boss" since, as the men who worked with him have testified, he worked harder, longer, and looked less like the owner of the plant than anyone present. A casual visitor, we are told, would have regarded Edison as one of the least likely persons to have been in charge, judging by outward appearances. Democracy walked with him through his laboratory.

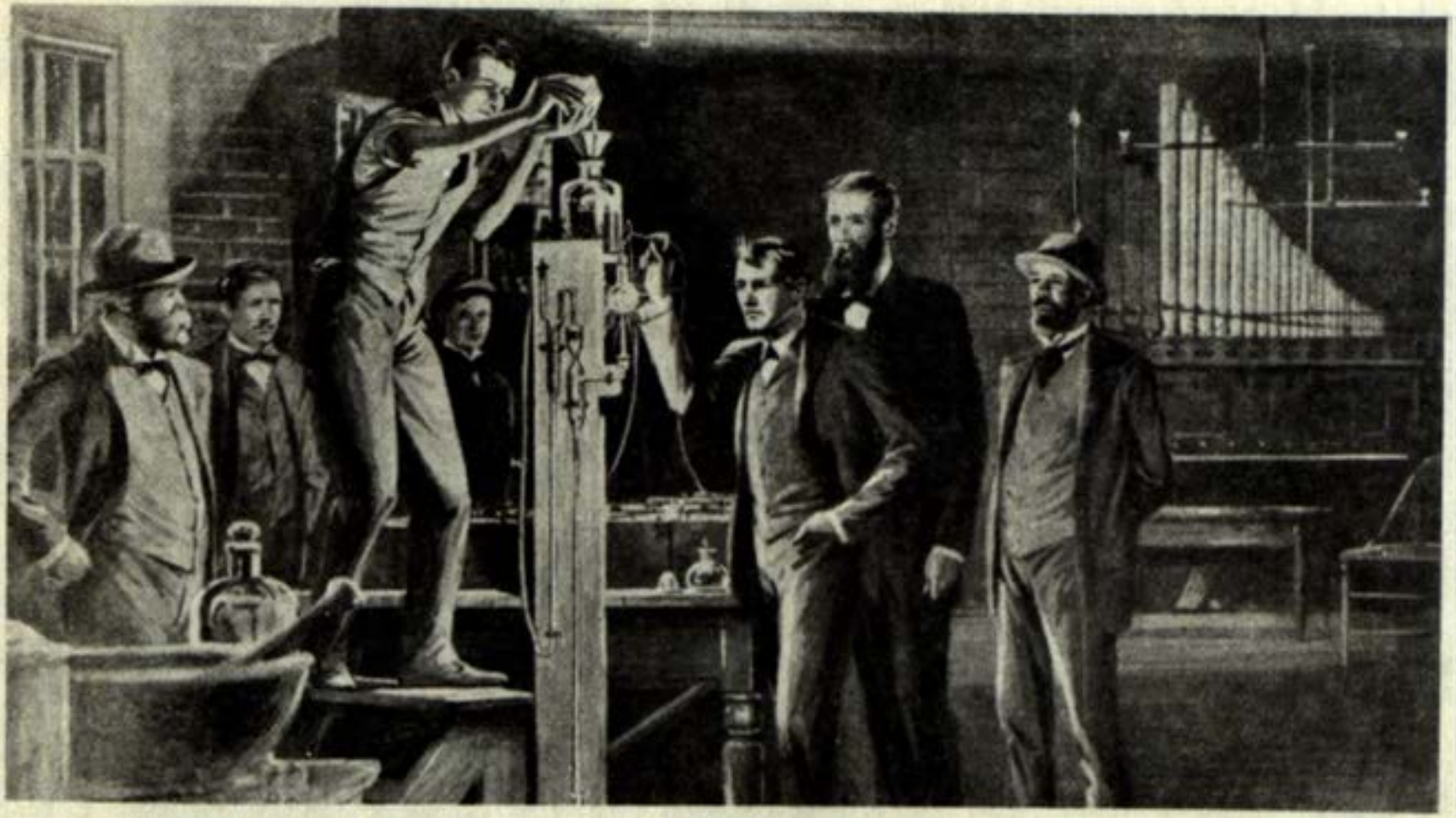
Work in his Newark plants constantly demanded more time for production than creation, so in 1876, in order to devote more of his energies to invention, he turned the management of his factories over to trusted assistants and established laboratories at Menlo Park, New Jersey.

Before moving to Menlo Park, however, Edison made one of his great discoveries, an electrical phenomenon he called "etheric force." This was the discovery that electrically generated waves would traverse an open circuit — the principle on which wireless telegraphy and radio are founded. The idea that electricity would traverse space was almost beyond belief at that time.

In a related field of research, Edison also discovered that messages could be sent through space by induction, in which a current generated



Years later, at seventy-four and still going strong, Edison listens to a recording on a 1921 model Edison phonograph.



Edison, left hand in trouser pocket, watches intently as his incandescent electric lamp burns brightly in his Menlo Park, New Jersey, laboratory. Artist's re-creation of this historic event of October 21, 1879, depicts Edison at age thirty-two.

in one set of wires induced a like current to flow through another set of wires between which no connection existed. As a result of this research, he received patents in 1885 on the transmission of signals, by induction, between a moving train and a station and between ship and shore.

Edison Aids Marconi

Guglielmo Marconi had become a personal friend of Edison's and, because of this friendship, Edison made these patents available to him rather than to a competitor who offered more money. Thus, these patents enabled Marconi to become recognized as the inventor of the wireless telegraph.

Edison was the first to give credit where credit was due, even though some of his earlier experiments and discoveries laid the groundwork for his successors.

It was at Newark, too, that Edison invented the "electric pen," forerunner of the mimeograph machine.

With the opening of his Menlo Park laboratories, Edison devoted most of his time to invention rather than to the manufacture of things. The results were astounding.

One of the greatest of the many "firsts" at-

tributed to Edison is the carrying out of research on an organized basis. Before Edison did this, the process of invention was usually a one-man and one-brain undertaking. At Menlo Park, Edison surrounded himself with scientific apparatus and trained assistants who handled the drudgery and time-consuming details of research, making possible his most acclaimed invention, the incandescent electric lamp. Menlo Park itself was an experiment for Edison, and he did not really perfect his invention of organized research in industry until eleven years later, when he transferred operations to West Orange on a greatly enlarged scale.

Edison's Favorite — The Phonograph

The carbon telephone transmitter which made the telephone commercially practical was invented by Edison in 1877, the same year he gave the world the phonograph.

Until Edison produced the carbon transmitter, telephone communication had been highly impractical. He sold his rights in the invention to Western Union which, in turn, reached an agreement with the company backed by Alexander Graham Bell, and for many years thereafter telephone instruments bore the names of both Bell and Edison. To use Edison's expression, it

was fifty-fifty — he invented the transmitter and Bell the receiver.

Edison's carbon transmitter later helped to make radio possible in that the same principle was adopted in developing a practical microphone.

The phonograph not only was Edison's favorite invention, but it probably was one of the most original ever created. In most instances, the inventor is the man who first perfects a device or method for achieving a result which for a long period of time had been a goal of experimentation and research by others as well as himself. But in the case of the phonograph, the idea of recording sound for later reproduction had not been conceived until Edison received his inspiration while experimenting with the automatic telegraph. Just as amazing, perhaps, is the fact that his first phonograph, although just a crude model, was a complete success.

Lawyer Steals Edison Patents

Edison worked at breakneck speed during the decade following 1876. Not alone was his own tireless constitution responsible for this pace; the period was one of unending competition and no holds were barred by his competitors. Despite his almost inhuman capacity for work, others in

some instances gained recognition for creations that were rightfully his. On one occasion, a lawyer entrusted to file applications for fifty-seven new patents stole the papers instead and sold them to Edison's rivals.

The desire for revenge formed no part of Edison's character, as revealed by his reaction to the theft of these patents. Even after long years had gone by he steadfastly refused to name the dishonest attorney. "His family might suffer," he told associates who suggested that he make public the lawyer's name.

Edison followed a policy which, absurd though it may sound today in contrast to the secrecy now surrounding most inventive endeavor, permitted the press to know and report even minute advances he made in experiments leading to the perfection of the first practical incandescent lamp.

The Edison Lamp

Others before and in the same period with Edison toiled long and hard to produce a practical incandescent lamp. The idea was not original with him, but it required the Edison genius to solve the difficult problems involved.

Many persons tried to deprive Edison of the honor of having been the first to perfect a prac-

tical incandescent electric lamp, but they all met with failure. Edison's claim was too genuine to be set aside, even by the courts which, for one reason or another, might have been inclined to bias.

An English jurist considering the claim of an English inventor, for example, might well be inclined to rule against Edison, if such a ruling were at all possible. But Lord Justice Fry, sitting in one of Great Britain's Royal Courts of Justice, made this commentary on the claims of Joseph W. Swan, an English inventor: "Swan could not do what Edison did . . . the difference between a carbon rod (as employed by Swan) and a carbon filament (Mr. Edison's method) was the difference between success and failure.

"Mr. Edison used the filament instead of the rod for a definite purpose, and by diminution of the sectional area made a physical law subserve the end he had in view. The smallness of size, then, was no casual matter, but was intended to bring about, and did bring about, a result which the rod could never produce, and so converted failure into success."

Edison realized that the invention of a practical lamp alone was not enough to replace gas as the most-used means of lighting. Therefore, his work on the electric light is even more aston-

ishing, because in addition to perfecting a commercially practical lamp he also invented a complete generation and distribution system, including dynamos, conductors, fuses, meters, sockets, and numerous other devices. Of 1,097 United States patents granted to Edison during his lifetime—by far the greatest number ever granted to one individual—356 dealt with electric lighting and the generation and distribution of electricity.

The "Edison Effect"

The year 1883 was significant for Edison in that, by his discovery of what was to become known as the "Edison effect," he pushed aside a veil of darkness behind which were to be found all the wonders of electronics. Edison in this achievement discovered the previously unknown phenomenon by which an independent wire or plate, when placed between the legs of the filament in an electric bulb, serves as a valve to control the flow of current. This discovery unearthed the fundamental principle on which rests the modern science of electronics.

In that year, 1883, Edison filed a patent on an electrical indicator employing the "Edison effect," the first application in the field of electronics.

Edison's experiments with incandescent lighting led to his launching the science of electronics. He is shown here, years later, with three of his "Edison Effect" bulbs, forerunners of the electronic tubes used in radio and television.

Although he was best known for his electric light and power systems and the phonograph, Edison was equally superb as a chemist. Out of this laboratory in West Orange, New Jersey, came such things as the nickel-iron-alkaline battery and the birth of America's coal-tar chemical industry.

The facilities of Menlo Park were proving inadequate to meet the requirements of Edison's amazing ability. He began looking around for a place more suitable for his needs. This he found in the little Essex County community of West Orange in northern New Jersey. He gave the orders that set workmen to the task of building a new and greater research laboratory.

The West Orange Laboratory

Thomas Alva Edison entered into a new and the fullest phase of his career when, at the age of forty, he moved his talents and tools from Menlo Park to his great new laboratory at West Orange, New Jersey, on November 24, 1887.

One of his first undertakings was the development of his favorite creation, the phonograph. The pressure of his work in connection with the perfection and installation of electric lighting systems throughout the country had made it impossible for him to concentrate on the phonograph, but now he went to work in earnest to see that the instrument fulfilled the high destiny he had held out for it from its beginning ten years earlier.

During the first four years of his occupancy of his new laboratory at West Orange, he took out more than eighty patents on improvements

on the cylinder phonograph and its businessman's counterpart, the dictating machine.

At the same time, Edison interested himself in an entirely different field, one that was as new to the world as it was to him. That field was the motion picture. Eadweard Muybridge and others had done some experimental work, but had only hinted of motion pictures. Muybridge, for example, by the employment of multiple cameras strung along a racetrack, had taken successive shots of a trotting horse, but he offered no method whereby the pictures could be viewed in motion.

The Motion Picture Camera

Two things led Edison to the invention of the motion picture camera: his idea that motion could be captured by having one camera that would take repeated pictures at high speed, and a new celluloid film developed by George Eastman for use in still photography that proved adaptable to Edison's proposed camera.

To Edison's mind, motion pictures would do for the eye what the phonograph did for the ear. Thus, we find that on October 6, 1889, when they first projected an experimental motion picture in his laboratory, he gave birth to sound pictures, as well. This first movie actually was

a "talkie." The picture was accompanied by synchronized sound from a phonograph record.

He applied for a patent on the motion picture camera on July 31, 1891. The first commercial showing of motion pictures occurred three years later, April 14, 1894, with the opening of a "peephole" Kinetoscope parlor at 1155 Broadway, New York City.

Several men developed machines for projecting motion pictures. The best such projector, to Edison's mind, was one built by Thomas Armat. Edison acquired the rights to Armat's crude machine and then perfected it at his West Orange laboratory.

Commercial projection of motion pictures as we know it today began on April 23, 1896, at Koster and Bial's Music Hall, New York City, where the Edison Vitascope, embodying the basic principles of Armat's invention with improvements added by Edison, was used.

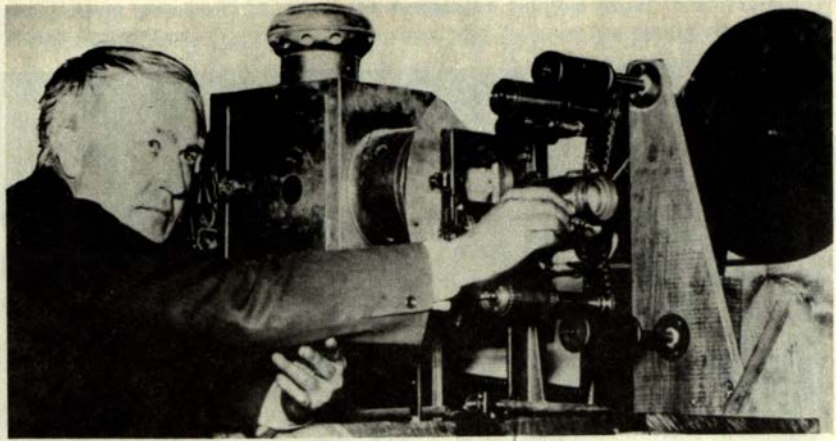
The Vitascope was Edison's name for the motion picture projector. When he added sound, he called it the Kinetophone, which he introduced commercially in 1913, or thirteen years before Hollywood adopted that means of improving motion-picture entertainment.

With Wilhelm Konrad Roentgen's discovery of the X-ray in 1895, Edison turned his attention

to the mysteries of these invisible rays. Within a few months he developed the fluoroscope, which invention he did not patent, choosing to leave it in the public domain because of its universal need in medicine and surgery. On May 16, 1896, he applied for a patent on the first fluorescent electric light, an invention which stemmed directly from his experimentation with the X-ray.

At the turn of the century, Edison propelled himself into one of the great sagas of science—his search for an acidless battery. Others scoffed at his theory that somewhere in nature there existed the elements for a battery which would not destroy itself by corrosive action, but Edison was not to be denied. After ten years of exhaustive experimentation he produced the alkaline storage battery, which today is employed in hundreds of industrial applications, such as providing power for mine haulage and inter- and intra-plant transportation, and in railway train lighting.

No field of scientific endeavor seemed foreign to his talents. When, in 1914, a shortage of carbolic acid developed because World War I had cut off European supplies, Edison quickly devised a method of making domestic carbolic acid and was producing a ton a day within a month.



Edison adjusts the lens on an early motion picture projector. He invented the motion picture camera "to do for the eye what his phonograph did for the ear."

During World War I, Thomas Edison (far left) headed the Naval Consulting Board under Secretary of the Navy Josephus Daniels (next) and Assistant Secretary Franklin D. Roosevelt (far right), later to become President.

Edison and the War

New problems were heaped on Edison by the approaching entry of the United States into the war and the destruction by fire of his giant West Orange manufacturing plant. His laboratory, fortunately, was spared from the flames. Almost before the embers died, new buildings began to rise from the ruins.

America at that time was almost entirely dependent upon foreign sources for fundamental coal-tar derivatives vital to many manufacturing processes. These derivatives were to become increasingly essential for the production of explosives, so Edison established plants for their manufacture. His work is recognized as having laid the groundwork for the important development of the coal-tar chemical industry in the nation today.

Josephus Daniels, then Secretary of the Navy, foresaw the country's need for technological advances in its preparedness program. His mind turned to one man, Thomas Edison, to undertake such a program, and in 1915, Edison became president of the newly created Naval Consulting Board, forerunner of the Navy Department's great research division of today. A colossal bronze head of the inventor, honoring him as the

founder of the Naval Research Laboratories, was unveiled December 3, 1952, on the mall at the Anacostia, Maryland, Laboratories.

Edison arranged for leading scientists to serve with him on the Consulting Board and also made available to the government the facilities of his laboratory. Much of the Consulting Board's effort was directed against the German submarine menace. Among the many inventions and ideas turned over to the Navy were devices and methods for detecting submarines by sound from moving vessels and for detecting enemy planes, for locating gun positions by range sounding, improved torpedoes, a high-speed signalling shutter for searchlights, and underwater searchlights. These and many other devices and formulas of prime importance came out of the Edison laboratory.

With the end of the war, Edison, although he had passed the seventy mark, thought only in terms of scientific and industrial progress. There would be time enough to think of taking it easy when he reached one hundred, he said. "My desire," he once remarked at this period of his life, "is to do everything within my power to further free the people from drudgery, and create the largest possible measure of happiness and prosperity."

Honors Come to Edison

A great many honors and awards had been bestowed upon Edison by persons, societies, and countries throughout the world. To him, such things were nice to have but were not to be sought after. He could never get over being embarrassed when some new medal came his way. But one of his greatest honors was yet to come. On October 20, 1928, he was awarded the Congressional Medal of Honor — the nation's highest award in recognition of services rendered.

A year later on October 21, 1929, the fiftieth anniversary of his invention of the incandescent light, the world again paid homage to him. In ceremonies participated in by Herbert Hoover, then president of the United States, Henry Ford, Albert Einstein, and other world figures, Edison re-enacted the making of the first practical incandescent lamp.

Time was running out for Edison, even though his keen mind and energies refused to admit it. Creative thought and hard work still constituted his creed, and at the age of eighty he was launched on another great experiment. Remembering his nation's lack of preparedness for World War I, he attacked the problem of devising a method for domestic production of rubber

so that, in event of another war, the United States would not be dependent upon foreign sources for this vital material. From goldenrod grown in his experimental gardens at Fort Myers, Florida, Edison was to produce rubber before his death.

A peaceful death enveloped him at his home, "Glenmont," in Llewellyn Park, West Orange, New Jersey, on October 18, 1931. He was eighty-four. His lifetime had embraced four wars and as many depressions. His achievements, more so than those of any one man, had helped to lift America to the pinnacle of greatness. The world was his beneficiary.

Chronology

1847 February 11—born at Milan, Ohio, son of Samuel and Nancy Elliott Edison.

1854 Edison family moved to Port Huron, Michigan.

1859 A newsboy and "candy butcher" on the train of the Grand Trunk Railway, running between Port Huron and Detroit.

1862 Printed and published a newspaper, "The Weekly Herald," on the train—the first newspaper ever printed on a moving train.

1862 August—saved from death the young son of J. U. MacKenzie, Station Agent at Mt. Clemens, Michigan. In gratitude, the father taught Edison telegraphy.

1863 Began a five-year period during which he served as a telegraph operator in various cities of the Central Western States, always studying and experimenting to improve apparatus.

1868 Made his first patented invention—the Electrical Vote Recorder. Application for patent signed October 11, 1868.

1869 Landed in New York City, poor and in debt. Shortly afterwards, looking for work, was in operating room of the Gold Indicator Company when its apparatus broke down. No one but Edison could fix it and he was given a job as superintendent.

1869 October—established a partnership with Franklin L. Pope as electrical engineers.

1870 Received his first money for an invention — $40,000 paid him by the Gold and Stock Telegraph Company for his stock ticker. Opened a manufacturing shop in Newark where he made stock tickers and telegraph instruments.

1871 Assisted Christopher L. Sholes, the inventor of the typewriter, in making first successful working model.

1872 Began a four-year period during which he conducted manufacturing of telegraph instruments for Western Union Telegraph Company and Automatic Telegraph Company. He had several shops during this time in Newark, New Jersey. He worked on and completed many inventions, including the motograph, automatic telegraph system, duplex, quadruplex, sextuplex and multiplex telegraph systems; also paraffin paper and the carbon rheostat.

1875 November 22—discovered a previously unknown and unique electrical phenomenon which he called "etheric force." Twelve years later, this phenomenon was recognized as being due to electric waves in free space. This discovery is the foundation of wireless telegraphy.

1876 March 7—applied for patent on his invention of the "electric pen." Patent was granted August 8, same year. Licenses covering the pen were later obtained by the A. B. Dick Company of Chicago, for the manufacture of the mimeograph.

1876 April—moved from Newark to his newly constructed laboratory at Menlo Park, New Jersey. This was the first laboratory for organized industrial research.

1877 April 27—applied for patent on the carbon telephone transmitter which made telephony commercially practicable. This invention included the microphone which is used in radio broadcasting.

1877 August 12—invented the phonograph. Patent was issued by the United States Patent Office within two months after application without a single reference.

1878 September 8—accompanied by Professor George F. Barker and Professor A. B. Chandler, he visited William Wallace in Ansonia, Connecticut, where he became actively interested in the problem of electric lighting.

1878 October 24—incorporation of the Edison Electric Light Company.

1879 Invented the first practical incandescent electric lamp. The invention was perfected October 21, 1879 when the first lamp embodying the principles of the modern incandescent lamp had maintained its incandescence for more than forty hours.

1879 Invented radical improvements in construction of dynamos, making them suitable for generators for his system of distribution of current for light, heat and power. Invented systems of distribution, regulation and measurement of electric current, including sockets, switches, fuses, etc.

1879 December 31—gave a public demonstration of his electric lighting system in streets and buildings at Menlo Park, New Jersey.

1880 April 3—invented the magnetic ore separator.

1880 May 13—started operation of the first passenger electric railways in this country at Menlo Park, New Jersey.

1880 Ushered in seven strenuous years of invention and endeavor in extending and improving the electric light, heat and power systems. During these years he took out upwards of 300 patents. Of 1,097 patents issued to Thomas A. Edison, 356 deal with electric lighting and power distribution.

1881 March 2—Edison arranged to open the Edison Machine Works at 104 Goerck Street, New York City.

1882 January 12—opened the first commercial incandescent lighting and power station at Holborn Viaduct, London, England.

1882 May 1—moved the first commercial incandescent lamp factory from Menlo Park to Harrison, New Jersey. Organized and established shops for the manufacture of dynamos, underground conductors, sockets, switches, fixtures, meters, etc.

1882 September 4—commenced the operation of the first commercial central station for incandescent lighting in this country at 257 Pearl Street, New York City.

1883 Discovered a previously unknown phenomenon. He found that an independent wire or plate, placed between the legs of the filament of an incandescent lamp, acted as a valve to control the flow of current. This became known as the "Edison Effect." This discovery covers the fundamental principle on which rests the modern science of electronics.

1885 March 27—patent executed on a system for communicating by means of wireless induction telegraphy between moving trains and railway stations.

1885 May 14—patent executed on a ship-to-shore wireless telegraphy system, by induction.

1886 December—moved plant of Edison Machine Works from 104 Goerck Street, New York City, to Schenectady, New York.

1887 November 24—moved his laboratory to West Orange. During the first four years of his occupancy of his West Orange laboratory, he took out over eighty patents on improvements on the cylinder phonograph.

1889 October 6—first projection of an experimental motion picture.

1894 April 14—first commercial showing of motion pictures took place with the opening of a "peep-hole" Kinetoscope parlor at 1155 Broadway, New York.

1896 Experimented with the X-ray discovered by Roentgen in 1895. Developed the fluoroscope which invention Mr. Edison did not patent, choosing to leave it to public domain because of its universal need in medicine and surgery.

1896 May 16—applied for a patent on the first fluorescent electric lamp. This invention sprang directly from his work on the fluoroscope.

1900 This year marked the beginning of a ten-year period of work which resulted in the invention of

the Edison nickel-iron-alkaline storage battery and its commercial introduction.

1901 Commenced construction on the Edison cement plant at New Village, New Jersey, and started quarrying operations at nearby Oxford.

1902 Worked on improving the Edison copper oxide primary battery.

1907 Developed the universal electric motor for operating dictating machines on either alternating or direct current.

1910 This year initiated a four-year period of work on improving the disc phonograph.

1913 Introduced the Kinetophone for talking motion pictures, after spending much time on its development.

1914 October 13—patent executed on electric safety lanterns which are used by miners for working lights. These miners' lamps have contributed in an important degree to the reduction of mine fatalities.

1914 Developed a process for the manufacture of synthetic carbolic acid. Designed a plant, and within a month was producing a ton a day to help overcome the acute shortage due to the World War.

1914 December 9—Edison's great plant at West Orange, New Jersey, was destroyed by fire. Immediate plans for rebuilding were laid and new buildings began to arise almost before the ruins of the old were cold.

1914 Invented the Telescribe, combining the telephone and the dictating phonograph.

1915 Established plants for the manufacture of fundamental coal-tar derivatives vital to many industries previously dependent on foreign sources. These coal-tar products were needed later for the production of wartime explosives. Mr. Edison's work in this field is recognized as having paved the way for the important development of the coal-tar chemical industry in the United States today.

1915 Became President of the Naval Consulting Board, at the request of Josephus Daniels, then Secretary of the Navy. During the war years, he did a large amount of work connected with national defense, particularly with reference to special experiments on over forty major war problems for the United States Government. At that time the late President, Franklin D. Roosevelt, was Assistant Secretary of the Navy.

1923 Made a study of economic conditions, the result of which was published in a pamphlet in 1924, when Mr. Edison presented to the Secretary of the Treasury a proposed amendment to the Federal Reserve Banking System.

1928 October 20—presented with the Congressional Medal of Honor by Andrew W. Mellon, Secretary of the Treasury.

1929 October 21—commemorating the Fiftieth Anniversary of the incandescent lamp and in the presence of President Hoover, Henry Ford and other world leaders, Mr. Edison re-enacted the making of the first practical incandescent lamp.

1931 October 18—died at Llewellyn Park, West Orange, New Jersey at the age of eighty-four.

—Photo by Daryl Stone

Edison First Aid Squad No. 2 members Frank Nicolato (l), assistant captain, and Mark James check out equipment in one of the squad's ambulances. Edison: First Aid

Squad goes to the rescue

First ambulance was housed in a $500 bungalow

By David Sheehan Raritan 4/27/90

EDISON — When members of the Raritan Engine Company in the southern portion of what was then Raritan Township learned that an out-of-town ambulance company refused to transport a child to a hospital because the father was unable to pay the required $20 fee, they met and formed in 1935 what is now Edison First Aid and Rescue Squad No. 1.

Almost immediately, however, it became apparent that it would take the new rescue squad far too long to respond effectively to emergencies in the northern part of town, and some of the members of the Menlo Park Volunteer Fire Company, in that area of Edison, recognized the need for an emergency service to respond to calls there.

In 1936, they formed what is now Edison First Aid Squad No. 2, and the founders of the squad prevailed upon Art Latham, a certified Red Cross instructor, to conduct classes in first aid at the Menlo Park Firehouse.

The volunteers held bingo parties and dances, raising enough money to purchase late in 1936 their first ambulance, a converted 1927 Studebaker hearse from Squad No. 1.

The new ambulance was housed in the second home of the Menlo Park Volunteer Fire Department on Monmouth Avenue between Frederic and Christie streets; it was a bungalow purchased for $500 from Minnie Claskson. The fire company's first home was in Thomas A. Edison's machine shop on Christie Street.

According to Nicholas Dudas, a founding member of the squad, the original Studebaker ambulance was an "imposing hawk-nosed vehicle" and the first of many second-hand vehicles with which the squad had to make do.

"It was a little top-heavy, but it did the job," Dudas said. "It used to plow across the snow through Potter's Crossing, the present Inman-Grove section."

The squad's 10 founding members — Dudas, Thomas Swales, Joseph Enringer, Alfred Schnebbe, Albert Christofferson, Andrew Dudas, Kenneth Shepard, John Hartman, Rudolph Peins and Stewart Straka — included some future officials. Swales later would become mayor; Andrew Dudas, Menlo Park postmaster; Nicholas Dudas, an elected fire commissioner; and Straka, the township's supervisor of sanitation.

In 1940 and 1941, the Menlo Park Volunteer Fire Company built a new firehouse on Route 27, and Squad No. 2 relocated and remained there until 1951, when a lack of adequate space forced it to move to a structure next door — a one-car garage.

When the squad would hold meetings, the ambulance was pulled out of the bay and parked on the apron so members could sit inside.

In its history, the squad has owned more than 18 emergency vehicles, and all from 1936 to 1954 were used ones. Its first new vehicle, a 1954 Cadillac, was delivered in that year and cost $16,000.

Several limousine-style ambulances and modular-type ambulances were put into service over the years.

Rescue 2 was placed in service in 1976 and was recognized as one of the best-equipped rescue rigs in the area. It was noted for its state-of-the-art lighting system.

During the 1970s, in order to keep the membership's training above average, five members of the squad — Bob Kallio Sr., Mike Mermelstein, Paul Stein, Gene Berta Sr. and George Taylor Jr. — enrolled in the first extrication instructor's course to be held in the district.

After they were trained, they instructed the entire squad in proper extrication techniques. Hence, when Rescue 2 arrived, it was staffed by a fully trained crew of extrication specialists and equipped with the Hurst Jaws of Life, air chisels, reciprocating saws, 7,500 watts of lighting and other life-saving apparatus.

According to squad members, their variety of equipment continues to change as improvements in rescue techniques are made.

Since the early 1950s, women have played a substantial role in squad activities. In fact, as early as 1964, Squad No. 2 had a woman captain, Lois Jogan. And township women continue to participate in the squad and ensure that the ambulances will roll.

The squad has responded to many notable incidents and rendered emergency medical services over the years, including a 1971 mid-air collision between a Boeing 727 and a Piper Cub aircraft in the vicinity of Jean Place.

Squad No. 2 also assisted in the treatment and transfer of the injured when a commuter train collided with a parked work train near the municipal complex. About 24 patients were transported via ambulance to area hospitals along with two bus loads of ambulatory wounded.

In January 1975, life member Robert Kallio was honored by local and state organizations for saving the life of a Linden police officer. Kallio heard a call for help while at his business, rushed to the scene and administered cardio-pulmonary resuscitation, then a new technique, and maintained breathing and circulation until the officer was linked to life-saving equipment at Rahway Hospital.

The next month, squad member Ron Curto was credited with life-saving actions in the rescue of an 8-year-old. While two others rescued the boy's companion, Curto pulled the boy from the icy waters of Roosevelt Park Lake. Then the three worked on the unconscious boy until he regained consciousness.

Dispatching procedures have changed and improved over the squad's 55-year history.

In the early 1960s, when the procedures were less than satisfactory, an alarm phone was established at EM's Delicatessen, which was part of Menlo Park Esso, Route 27 across from the squad's headquarters. Edison police dispatchers would notify the clerk at the deli, and he, in turn, would run across the street and activate the siren at the Menlo Park Firehouse. Police would also contact by phone squad members in the immediate vicinity of the squad building.

Squad No. 2's new headquarters is equipped with a modern base-station and encoder to activate 40 pagers. Should Edison's fire central system fail, this system would serve as a backup to ensure uninterrupted service to the community.

Dedicated at ceremonies on September 13, 1986, Squad No. 2's new headquarters was a culmination of years of planning by the squad's building committee.

The structure, located on New Dover Road, consists of three double bays, a large meeting hall, a training center, kitchen facilities, sleeping quarters and a lounge area.

The building's dedication was held in conjunction with the squad's 50th anniversary celebration parade, in which other rescue squads and community organizations from Edison and surrounding towns also participated.

The history of Edison First Aid Squad No. 2 is more than a collection of facts, figures and accomplishments, however. It is a tradition of tireless, expert, dedicated volunteer service to members of the community. It also is a story of missed dinners, interrupted family activities, canceled social events, hours spent of stand-by and hours spent maintaining and upgrading skills.

Members take pride in providing a high level of emergency medical service to the community throughout the year. Squad No. 2, like all three of Edison's first aid squads, provide their services free of charge and depend on the contributions of the residents and businesses they serve.

New members always are welcome.

The squad's current officers include Ray Talarico, captain; Karl Schenk, president; and Michael Petercsak, chairman of the board of trustees.

David Sheehan is president of the Edison Township Historical Society and honorary member of Edison First Aid Squad No. 2. This article is one in a series written by society members on the history of the area.

Edison: First Aid

She's answered 10,000 calls giving help and saving lives

HN 3/11/91

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Person of the week

ASK AT

By WISAM ALI
Home News staff writer

EDISON — Long before Thelma Swartz joined the Clara Barton First Aid Squad in 1973, she was helping rescue accident victims near her Grandview Avenue home.

For a long time, there was no traffic light at the intersection of Woodbridge and Grandview avenues and accidents were so frequent there that Swartz got into the habit of hanging out by the corner, handing out towels and Kleenex to rescue workers and accident victims.

"I'd just run out, and I wouldn't know what to do," said Swartz, 68, who has lived in Edison since 1956. "There were always a lot of accidents there so I began handing out towels and Kleenex not really knowing what I was doing, just trying to save people, I guess."

People would send her candy and boxes of Kleenex in return as a show of gratitude, and soon after seeing an ad in a local newspaper for volunteers to join the Clara Barton squad, Swartz signed up.

Swartz was honored Feb. 16 by practically every governmental body from the state Assembly and Senate to the Township Committee for answering her 10,000th squad call. (She has a big portfolio filled with resolutions and proclamations honoring her and thanking her for her dedication. She proudly shows the book when asked persistently.)

Swartz answers an average 750 calls a year while the average volunteer may answer anywhere from 150 to 350 a year.

"I'm fortunate that I don't have a (regular) job," said Swartz, a lieutenant on the 30-person squad. "I had the time to do it and then of course, I got into it."

It also helped that her husband, Ben, up until three years ago, was a merchant marine and away at sea six months out of the year — which meant she had a lot of free time, which she volunteered to the squad.

"I just love the (squad)," said Swartz, who spends every morning at the squad building on Amboy Avenue fielding calls. "You never know what you're getting into. Every call is different, even if it's the same, because you're working with different personalities."

Swartz said she prefers riding in the back of the ambulance with the patients rather than driving up front, "because when you're driving, you don't have much contact with the people."

"I've always liked to talk to people," said Swartz, "At that moment, (when you're answering a call) you are the most important person in that patient's life. Saving them, helping them, this makes you feel good inside, to save someone's life. You're up there in the clouds."

For Swartz, squad life is as satisfying as her life as a traveling vaudeville musician in the 1930s and 1940s.

Swartz smiled at the mention of her music — "I haven't played in years," she said, adjusting the crackling scanner at the squad.

Edison Tw
340 Plain
Edison,

At one time, Swartz was such a good accordion player that she, and a few other acts, were selected in 1944 by the Major Bowes Vaudeville Show to entertain the troops in Europe during World War II.

Swartz leaned back in her chair slightly as she recounted those glory days.

She got an accordion, "a beat up thing," when she was a little girl growing up in Philadelphia, she said, and an Italian musician who used to chew on cloves of garlic all the time, took a liking to the young Swartz and taught her the tricks of his trade.

"She's not Italian, he would always tell people, but she plays like an Italian," said Swartz.

They played small gigs together and Swartz eventually got her big break when she auditioned for the Major Bowes Radio Talent Show.

A couple of weeks later she was touring the country as part of an all-female Major Bowes show, "playing small, dinky theaters

See **SWARTZ**, Page B2

Marc Ascher/The Home News

Thelma Swartz of Edison, a lieutenant on the 30-member Clara Barton First Aid Squad, was honored last month for answering her 10,000th call.

SWARTZ: 10,000 calls

Continued from Page B1

for $50 a week." HN 3/11/91

When the war broke out, Swartz was again one of a few acts selected by Major Bowes to travel to Europe to do USO camp shows.

"I played the front line," she said proudly of her seven-month tour, which took her to England, Belguim, Germany and France. "We could hear the shelling and everything."

She met her husband after the war was over, in one of the Philadelphia clubs she was playing.

"There are the three parts of my life that I'm very satisfied with — my entertaining, my two kids, and this (the rescue squad)," she said.

Of course, life as a first aid volunteer is not always satisfying, she stressed.

Swartz said one has to learn very quickly how to deal with death and dying.

"You have to learn how to accept death," she said. "You have a problem if you don't."

The first call Swartz ever made when she first joined the squad was for a cardiac arrest victim.

At the time, (almost 18 years ago), CPR was a fairly new procedure being used in ambulances.

"I felt the patient swallow," she recalled. "But when we got to the hospital, the doctor checked the patient and very quickly pronounced him dead."

"This man is not dead!" I yelled at the doctor," said Swartz. "We had worked so hard on him and to have this doctor just look at him and pronounce him dead, well, I was just beside myself."

But you learn, said Swartz, and you go on to the next call.

The average day for Swartz is by any definition, stress-filled.

Last week, Swartz answered four calls — a motor vehicle accident, a cardiac arrest victim, a woman with flu symptoms, and a choking child. But Swartz is very matter-of-fact about her job.

"Person of the Week profiles and salutes Central New Jersey's unsung and forgotten heroes. Wisam Ali asks your assistance in nominating anyone you feel deserves the title Person of the Week. Write to her at The Home News, P.O. Box 551, New Brunswick 08903, or call her directly at 246-5549.

Early days

The first ambulance of the Edison First Aid and Rescue Squad No. 1 was a converted hearse. Standing by are Arthur Latham, left and Thomas Swales Sr. right. The man in center is unidentified. The squad is celebrating its 50th year.

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EDISON - FIRST AID

Squad celebrates 50th year

Rescue unit marks many milestones

EDISON — It assisted in the 1979 Conrail train wreck, the 1982 Perth Amboy chemical plant fire at Duane Marine and the 1951 Woodbridge train wreck disaster.

Handling these and less publicized emergencies has been the work of the Edison First Aid and Rescue Squad No. 1 for 50 years.

The squad will celebrate its golden anniversary on June 8 starting with an 8:30 a.m. memorial service at the squad building on Lakeview Boulevard. Several local and state politicians have been invited.

A parade will be held at noon beginning at the Edison Main Library and ending at the Municipal Complex where a variety of events are being scheduled.

Founded on March 23, 1935, the squad "was the product of vision of seven members of what was then called the Raritan Township Fire Department," according to David Sheehan of the Edison Historical Society.

Aided by contributions, they purchased a used hearse and converted it into the squad's first ambulance.

Two years later, a LaSalle ambulance was purchased and it was in service for so many years that it acquired the nickname "the old man," Sheehan said.

The primary mission of the squad at that time was to transport sick residents to hospitals in New Brunswick.

First aid classes were instituted for members in 1942, the same year the Clara Barton First Aid Squad was formed. Seven years later, the Raritan Township Safety Council was dissolved and Squad No. 1 was established as an independent organization. Members continued to meet in each other's homes and conduct training classes.

The squad's first rescue boat, a row boat, came in 1952. It was a gift from a New Brunswick resident to the squad in memory of a friend who had drowned in Farrington Lake, East Brunswick, Sheehan said.

In 1956, the name of the squad was changed from the Raritan Township First Aid and Rescue Squad to the Edison First Aid and Rescue Squad No. 1 to coincide with the naming of the municipality that year.

A year later, all three township rescue squads became independent organizations and served separate areas of the rapidly growing community. Edison No. 1 covers a 5-by-8 mile section in the southern portion of the township extending to Route 287 at the Piscataway border, according to Second Lt. Dee Eberle of the 50th anniversary committee.

Reflecting the rapid growth of the township in the 1950's, the squad established its first duty schedules to provide round-the-clock coverage.

The whistle alarms were begun in 1958 and the squad purchased its present property on Lakeview Boulevard at that time. Construction of the squad's present three-bay building was begun in 1959.

The headquarters — housing two ambulances, the rescue truck, boat and trailer, all emergency equipment — alos houses a lounge and meeting room. It was dedicated in 1960.

"Throughout these years of brick-and-mortar accomplishments and purchases of state-of-the-art rescue gear, the squad has consistently provided its tireless uninterrupted volunteer service to an ever-growing population," Sheehan said.

Less noted is the squad's quiet but reassuring presence at high school football games, high school band competitions, the Hand-In-Hand Festival and Oktoberfests, he said. "These too are hours spent at the ready for the benefit of Edison's residents by dedicated and highly trained volunteer professionals," he said.

The first female member added to the ranks of the squad was Dorothy Klemick. That was in 1972. Today, women account for about 25 of the 85-member organization including the first female captain, Renate Stopford, elected in 1983, Eberle said.

With the growth of housing and industry in this area, a third ambulance was added to the squad's fleet in 1974. A second boat was purchased in the 1960's and in 1978 the squad accepted delivery of "Rescue 1," a fully equipped rescue apparatus and "Communications 1" a mobile command post center.

Community aid

Ambulances and squad truck of Edison First Aid and Rescue Squad No. 1 line the driveway outside squad headquarters on Lakeview Boulevard.

At 55, Edison first aid squad continues to grow with town

Edison: First Aid

Review 1/20/90

Members' first ambulance was a refurbished hearse

By Kim and Scott Kaschak

EDISON — Edison First Aid and Rescue Squad No. 1 has a legacy of 55 years of dedicated volunteer service to the community.

It is a rich heritage and is a product of the vision of seven members the Edison (then Raritan Township) Fire Department. On March 23, 1935, these men formed the Raritan Township Safety Council, which went on to raise money and purchase a used hearse which they converted into the squad's first ambulance.

Two years later, a LaSalle ambulance was purchased. It was in service for so many years and logged so many miles that it acquired the nickname "the old man."

At that time, the squad's primary mission was to transport sick residents to hospitals in New Brunswick.

First aid classes were first held for members in 1942 — the same year that the Clara Barton First Aid Squad was formed.

In 1949, the Raritan Township Safety Council was dissolved and Squad No. 1 was established as an independent organization. Meetings and training classes were conducted in the homes of members.

The squad accepted delivery of its first rescue boat in 1952. It was a gift from an New Brunswick resident given in memory of his friend who drowned in Farrington Lake, East Brunswick.

The name of the squad was changed in 1955 to the Edison Township First Aid and Rescue Squad No. 1 to coincide with the renaming of the municipality that year.

The following year, all three township first aid squads became independent organizations to serve their respective areas of the rapidly growing township.

In 1957, the squad received its first rescue truck — a 1957 Chevrolet pickup — to facilitate rescues in motor vehicle accidents.

Reflecting the rapid growth of Edison in the 1950s, the squad established its first duty schedules to provide around-the-clock coverage, and whistle alarms were initiated in 1958.

The squad also purchased its present property on Lakeview Boulevard at that time. The new headquarters — housing two Cadillac ambulances, the rescue truck, boat and trailer, all emergency equipment, a lounge and meeting room — was dedicated in ceremonies held in 1960.

The squad moved from its original home, a side-bay of the Fire Department headquarters building on Plainfield Avenue, to the Lakeview Boulevard facility that year.

Two new Miller Meteor Cadillac ambulances were dedicated in 1962. Throughout these years of brick and mortar accomplishments and state-of-the-art rescue gear and equipment purchases, the squad continued to provide uninterrupted volunteer service to the township's growing population.

Edison Township First Aid and Rescue Squad No. 1 was on the job at the Woodbridge train wreck disaster, the 1979 Conrail train wreck in Edison, the 1982 Perth Amboy chemical plant fire and countless other emergencies. Less noted is the squad's quiet but reassuring presence at high school football games, the Hand-in-Hand festival, the Fall Festival of Fireworks and other such events.

In 1980, the squad answered in excess of 4,000 calls for help and logged more than 55,000 miles, making it one of the busiest in New Jersey.

Other squad accomplishments include the acceptance of its first woman member in 1972, about the same time a third ambulance was added to the squads fleet.

A second boat had been purchased in the 1960s, and in 1978, the squad accepted delivery of Rescue 1, a fully equipped MVA rescue apparatus, and Command 1, a mobile emergency communications vehicle and mobile command center.

Another milestone in the squad's history was marked in 1983 when the squad elected its first female captain.

"We can be proud to have evolved from the 'swoop and scoop' concept to a highly sophisticated emergency medical system, offering basic life-support capabilities," says Roger O'Connell, the squad's current president. "This evolution could not have come about without the dedication of our members, both past and present, and the generous sypport of our townspeople."

The future, he adds, is filled with challenges and changes. "These challenges and changes can only be met by keeping an open mind and matching our skills and education to the needs of the community," he says.

According to Capt. Don Sommer Sr., the squad has pledged to the community it serves to be there when needed.

Edison First Aid and Rescue Squad No. 1 — like all volunteer first aid squads — depends heavily on the generosity and support of the community, and one day each May, members solicit contributions from residents — contributions that are needed and appreciated.

And like other squads, Squad No. 1 always needs new members. Interested volunteers should contact the squad.

A brief glimpse into the chronicle of events helps in understanding the immeasurable contribution that this organization has made to the township's history. It is the legacy of seven visionaries who were — like the members of today are — dedicated to the service of their neighbors.

Kim and Scott Kaschak are members of Edison First Aid and Rescue Squad No. 1 and members of the Edison Township Historical Society. This article is one in a series by society members for the Metuchen-Edison Review on the history of the area.

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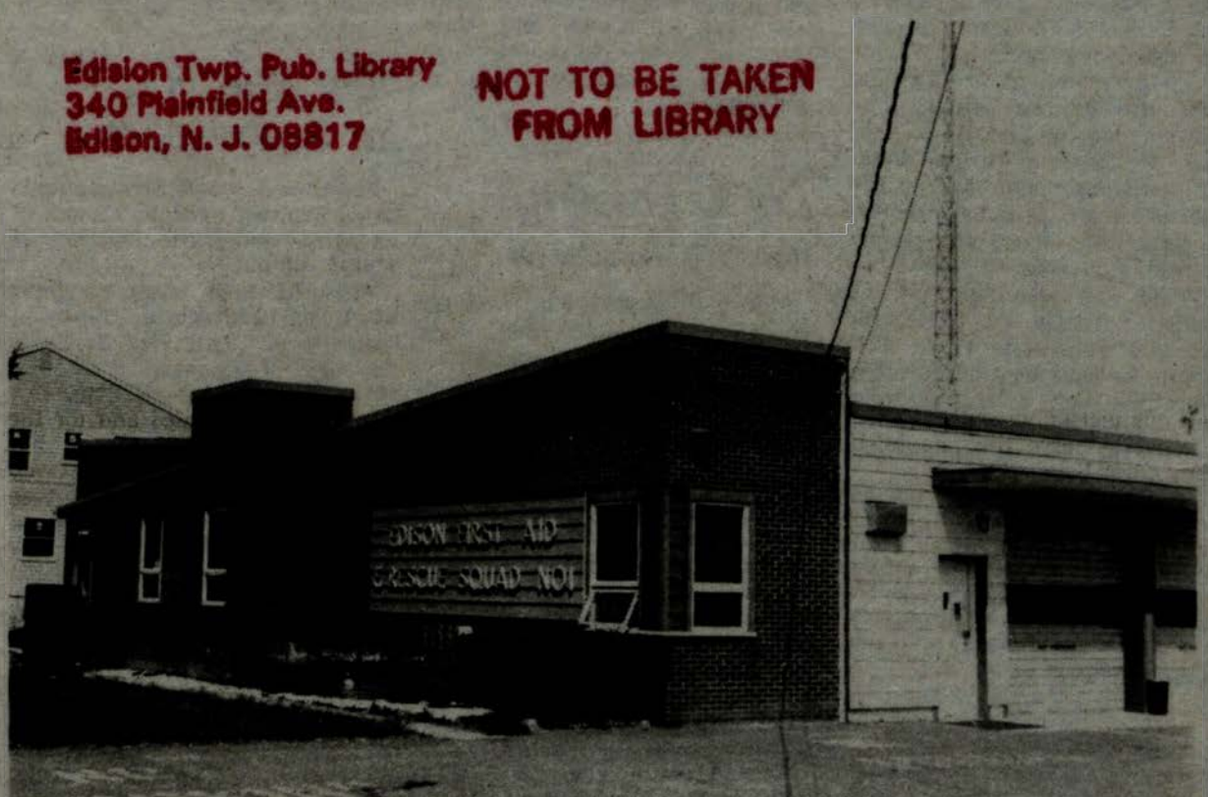

Edison First Aid and Rescue Squad No. 1 has been in existence for 55 years, but its has occupied its present quarters on Lakeview Boulevard only since 1960.

Edison: First Aid

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—Photos by Jim D'Amico

Thelma Swartz, a longtime member of the Clara Barton First Aid Squad who has answered more than 9,000 emergency calls during her volunteer career, stands beside one of several rescue rigs maintained by the squad at its Amboy Avenue headquarters.

Clara Barton's contributions to health care are paralleled by squad bearing her name

Longtime member answers 9,000-plus emergency calls

By David Sheehan

EDISON — The National Parks Service has published a biography, authored by Elizabeth Brown Pryor, entitled *Clara Barton: Professional Angel.*

In it, it is noted that Clara Barton organized what is recognized as New Jersey's first public school in Bordentown in 1852. Later, living in Washington, D.C., she met several friends and former students who had arrived at the capital after being wounded at the bombardment of Fort Sumter, and filled with a sense of duty, she headed for the war zone.

"Clad in a calico skirt, she carried food and supplies to Union soldiers at the Battle of Cedar Mountain and the Second Battle of Bull Run," according to the account, which continues:

"She built fires, extracted bullets with a pocket knife, made gallons of applesauce, baked pies with 'crinkly edges,' drove teams and performed last rites."

In 1881, Barton and some friends formed the first American Association of the Red Cross. She was its first president and held that post for 23 years.

In the section of Edison Township known as Clara Barton, there is a former elementary school, an American Legion Post, several businesses and a first aid squad with bear the name Clara Barton.

In light her contribution to life-saving efforts and her founding of the American Red Cross, it is fitting that one of Edison's first aid squads bears her name and upholds her legacy of care and service to the sick and injured.

All three of the township's volunteer first aid squads have their roots in the Raritan Township Safety Council. To best serve the needs of residents of the Clara Barton section of the township, 22 residents formed the Clara Barton First Aid Squad on May 6, 1951.

These charter members were Richard Bandics, president, and Henry Stockel, captain, and Paul Hornacik, Richard Sattler, Donald Dudics, Julius Bergman, Pete Elko, Norman Vroom, George Hansen, Edward Hansen, Joseph Sovart, Anita Geisz, Inez Larson, Ralph Nelson, William Demcsak, Irving Neilsen, E.L. Christensen, Robert Pfeiffer, Marion Hansen, Charles J. Erm, Albert Larson and Anders Christensen.

In researching the history of the squad, one must go to Thelma Swartz, a lieutenant in the squad, who is able to provide most of the facts and figures.

Long an active member, she said that her involvement arose from her concern about the many motor vehicle accidents that occurred near her home at the intersection of Woodbridge and Grandview avenues.

In the early 1970s, she said, the intersection was not protected by a traffic light as it is today.

"Almost every morning," she said, "I'd run out of my house with clean towels and bandages and try to help those who were injured in the accidents until the ambulances arrived."

Soon thereafter, she read a newspaper "want ad" for new members to join the Clara Barton First Aid Squad. Armed with the ad, she went to the squad's headquarters on Amboy Avenue to find out how she could best help those injured at the corner of Grandview and Woodbridge.

"Well, one thing led to another," she said, noting she found herself joining friends and neighbors in becoming a squad member.

When asked how many emergency calls she has responded to in her volunteer career, she responded, "9,001."

A chapter in the League of Women Voters' *Know Your Town* booklet of 1970 reveals that the Clara Barton First Aid Squad answered 1,423 calls, logged 16,652 miles and expended 5,165 volunteer hours in that year.

The 1978 edition reported that 1,571 calls were answered; 17,834 miles logged; and nearly 5,000 vounteer hours expended.

The squad originally was housed in the firehouse on Amboy Avenue. By 1962, however, more space was needed to house its equipment and because squad members needed more work area. A new building solely for the squad's use was erected on Gross Avenue.

In a few years, however, the New Jersey Turnpike Authority acquired the property for use in the expansion of the interchange with Interstate Route 287, so the squad had to relocate to new quarters.

Its present site on Amboy Avenue was constructed using some of the materials from the Gross Avenue structure, and in ceremonies hosted by the squad, the new building was dedicated. Officials in attendance included then-Rep. Edward Patten and the late Mayor Anthony Yelencsics, both of whom praised the squad and their efforts.

According to Capt. Chuck Kravitz, squad members maintain a high level of professional emergency medical technician expertise and spend many hours a year in specialized training.

Each call presents a unique challenge, Kravitz said, and the volunteers pride themselves in offering prompt, appropriate and expert care.

An addition to the squad's headquarters is being completed, and according to Kravitz, it will house a new rescue truck, which the squad plans to purchase. The truck will contain extrication and heavier rescue gear.

The addition was necessary to house the rig because, in the past, rescue trucks — which were generally used, coverted commercial vehicles — were stored outdoors on the squad's parking lot. It was a make-do situation, but the rigs deteriorated rapidly.

The new bay, scheduled for completion by the summer, will provide much-needed garaging area and offer additional room for rescue equipment arising from new technologies.

As with all volunteer first aid squads, the group depends on the support of the area it serves, and the squad currently is conducting its fund drive. New members always are invited to join the Clara Barton First Aid Squad as well.

David Sheehan is president of the Edison Township Historical ociety, and this article is one in a series by members of the society for the Metuchen-Edison Review on the history of the area.

Sheehan notes: "My meeting with Thelma Swartz came to a quick end when the emergency alarm phone rang, and she and Capt. Mark Banyecski left the office to answer another emergency call. 'Well this is number nine thousand and two,' Thelma said as she drove out of the headquarters building enroute to the scene. Clara Barton herself would be proud of these volunteer.

At the Clara Barton First Aid Squad annual installation dinner, held February 17, Thelma Swartz was honored with a plaque for answering more calls than any other squad member. The plaque was presented by Joe Onufer (l), immediate past president of the squad, and Chuck Kravitz, captain.