

Menlo Park

by William H. Meadowcroft

In the history of the world's progress, Menlo Park, New Jersey, will ever be famous as the birthplace of the carbon transmitter, the phonograph, the incandescent lamp, the commercial dynamo, and the fundamental systems of distributing electric light, heat, and power.

In this list might also be included the electric railway, for while others had previously made some progress in this direction, it was in this historic spot that Edison did his pioneer work that advanced the art to a stage of practicability.

The name of Menlo Park will not have as striking a significance to the younger readers as to their elders whose recollections carry them back to the years between 1876 and 1886. During that period the place became invested with the glamor of romance by reason of the many startling and wonderful inventions coming out of it from time to time.

Edison worked there during these ten years. He had adopted Invention as a profession. As we have seen, he had always had a passion for a laboratory. Thus, from the little cellar at Port Huron, from the scant shelves in a baggage car, from the nooks and corners of dingy telegraph offices, and the grimy little shops in New York and Newark, he had come to the proud ownership of a *real* laboratory where he could wrestle with Nature for her secrets.

Here he could experiment to his heart's content, and invent on a bolder and larger scale than ever before. All the world knows that he did.

Menlo Park was the merest hamlet, located a few miles below Elizabeth. Besides the laboratory buildings, it had only a few houses, the best-looking of which Edison lived in. Two or three of the others were occupied by the families of members of his staff; in the others boarders were taken.

During the ten years that Edison occupied his laboratory there, life in Menlo Park could be summed up in one short word—work. Through the days and through the nights, year in and year out, for the most part, he and his associates labored on unceasingly, snatching only a few hours of sleep here and there when tired nature positively demanded it. Such a scene of concentrated and fruitful activity the world has probably never seen.

The laboratory buildings consisted of the laboratory proper, the library and office, a machine shop, carpenter shop, and some smaller buildings, and, later on, a wooden building, which was used for a short time as an incandescent lamp factory.

Here Edison worked through those busy years, surrounded by a band of chosen assistants, whose individual abilities and never-failing loyalty were of invaluable aid to him in accomplishing the purposes that he had in mind.

As to these associates, we quote Mr. Edison's own words from an autobiographical article in the *Electrical World* of March 5, 1904: "It is interesting to note that in addition to those mentioned above (Charles Batchelor and Francis R. Upton), I had around me other men who ever since have remained active in the field, such as Messrs. Francis Jahl, William J. Hammer, Martin Force, Ludwig

K. Boehm, not forgetting that good friend and co-worker, the late John Kruesi. They found plenty to do in the various developments of the art, and as I now look back I sometimes wonder how we did so much in so short a time."

To this roll of honor may be added the names of a few others: The Carman brothers, Stockton L. Griffin, Dr. A. Haid, John F. Ott (still with Mr. Edison at Orange), John W. Lawson, Edward H. Johnson, Charles L. Clarke, William Holzer, James Hippie, Charles T. Hughes, Samuel D. Mott, Charles T. Mott, E. G. Acheson, Dr. E. L. Nichols, J. H. Vail, W. S. Andrews, and Messrs. Worth, Crosby, Herrick, Hill, Isaacs, Logan, and Swanson.

To these should be added the name of Mr. Samuel Insull, who, in 1881, became Mr. Edison's private secretary, and who for many years afterward managed all his business affairs.

Mr. Insull's position as secretary in the Menlo Park days was not a "soft snap," as his own words will show. He says: "I never attempted to systematize Edison's business life. Edison's whole method of work would upset the system of any office. He was just as likely to be at work in his laboratory at midnight as midday. He cared not for the hours of the day or the days of the week. If he was exhausted he might more likely be asleep in the middle of the day than in the middle of the night, as most of his work in the way of invention was done at night. I used to run his office on as close business methods as my experience admitted, and I would get at him whenever it suited his convenience. Sometimes he would not go over his mail for days at a time, but other times he would go regularly to his office in the morning. At other times my engagements used to be with him to go over his business affairs at Menlo Park at night, if I was occupied in New York during the day. In fact, as a matter of convenience I used more often to get at him at night as it left my days free to transact his affairs, and enabled me, probably at a midnight luncheon, to get a few minutes of his time to look over his correspondence and get his directions as to what I should do in some particular negotiation or matter of finance. While it was a matter of suiting Edison's convenience as to when I should transact business with him, it also suited my own ideas, as it enabled me after getting through my business with him to enjoy the privilege of watching him at his work, and to learn something about the technical side of matters. Whatever knowledge I may have of the electric light and power industry I feel I owe it to the tuition of Edison. He was about the most willing tutor, and I must confess that he had to be a patient one."

It must not be supposed that the hard work of these times made life a burden to the small family of laborers associated with Edison. On the contrary, they were a cheerful, happy lot of men, always ready to brighten up their strenuous life by the enjoyment of anything of a humorous nature that came along.

Often during the long, weary nights of experimenting Edison would call a halt for refreshments, which he had ordered always to be sent in at midnight when night work was in progress. Everything would be dropped, all present would join in the meal, and the last good story or joke would pass around.

Mr. Jehl has written some recollections of this period, in which he says: "Our lunch always ended with a cigar, and I may mention here that although Edison was never fastidious in eating, he always relished a good cigar, and seemed to find in it consolation and solace.... It often happened that while we were enjoying the cigars after our midnight repast, one of the boys would start up a tune on the organ and we would sing together, or one of the others would give a solo. Another of the boys had a voice that sounded like something between the ring of an old tomato-can and a pewter jug. He had one song that he would sing while we roared with laughter. He was also great in imitating the tin-foil

phonograph. When Boehm was in good humor he would play his zither now and then, and amuse us by singing pretty German songs. On many of these occasions the laboratory was the rendezvous of jolly and convivial visitors, mostly old friends and acquaintances of Mr. Edison. Some of the office employees would also drop in once in a while, and, as every one present was always welcome to partake of the midnight meal, we all enjoyed these gatherings. After a while, when we were ready to resume work, our visitors would intimate that they were going home to bed, but we fellows could stay up and work, and they would depart, generally singing some song like 'Good-night, Ladies!'... It often happened that when Edison had been working up to three or four o'clock in the morning he would lie down on one of the laboratory tables, and with nothing but a couple of books for a pillow, would fall into a sound sleep. He said it did him more good than being in a soft bed, which spoils a man. Some of the laboratory assistants could be seen now and then sleeping on a table in the early morning hours. If their snoring became objectionable to those still at work, the 'calmer' was applied. This machine consisted of a Babbitt's soap-box without a cover. Upon it was mounted a broad ratchet-wheel with a crank, while into the teeth of the wheel there played a stout, elastic slab of wood. The box would be placed on the table where the snorer was sleeping and the crank turned rapidly. The racket thus produced was something terrible, and the sleeper would jump up as though a typhoon had struck the laboratory. The irrepressible spirit of humor in the old days, although somewhat strenuous at times, caused many a moment of hilarity which seemed to refresh the boys, and enabled them to work with renewed vigor after its manifestation."

The "boys" were ever ready for a joke on one of their number. Mr. Mackenzie, who taught Edison telegraphy, spent a great deal of time at the laboratory. He had a bushy red beard, and was persuaded to give a few hairs to be carbonized and used for filaments in experimental lamps. When the lamps were lighted the boys claimed that their brightness was due to the rich color of the hairs.

The history of the busy years at Menlo Park would make a long story if told in full, but only a hint can be given here of the gradual development of many important inventions. These include the innumerable experiments on the lamp, on different kinds and weights of iron for field magnets and armatures, on magnetism, on windings and connections for field magnets and armatures, on distribution circuits, control, and regulation, and so on through a long list.

All these things were new. There was nothing in the books to serve as a guide in solving these new problems, but Edison patiently worked them out, one by one, until a complete system was the result of his labors.

Menlo Park was historic in one other particular. It was the very first place in the world to see incandescent electric lighting from a central station.

The newspapers had been so full of the wonderful invention that there was a great demand to see the new light. Edison decided to give a public exhibition, and for this purpose put up over four hundred lights in the streets and houses of Menlo Park, all connected to underground conductors which ran to the dynamos in one of the shop buildings.

On New Year's Eve, 1879, the Pennsylvania Railroad ran special trains, and over three thousand people availed themselves of the opportunity to witness the demonstration. It was a great success, and gave rise to a wide public interest.

Edison's laboratory at Menlo Park had never suffered for lack of visitors, but now it became a center of attraction for scientific and business men from all parts of the world. Pages of this book could

be filled with the names of well-known visitors at this period, but it would be of no practical use to give them; besides we must now pass on to the time when the light was introduced to the world.

Source:

Meadowcroft, William. "Menlo Park." *The Boys' Life of Edison*. New York: Harper & Brothers Publishers. Electronic.