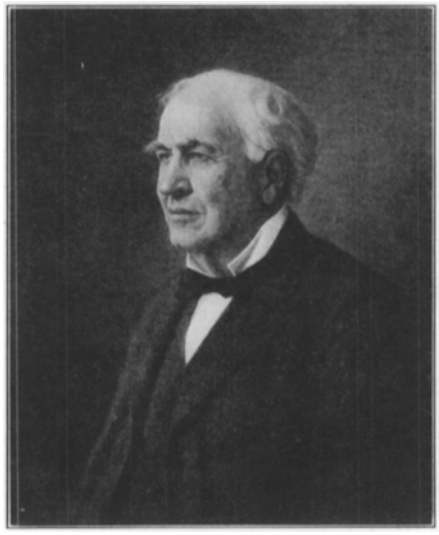
THOMAS A. EDISON

Thomas Alva Edison was the first motion picture engineer. Before him there were many who thought of motion pictures and who made endeavors toward producing them. After him came many who labored on improvements and elaborations of the motion picture. None have had for the motion picture, or have brought to it, a broader concept than did Mr. Edison.



THOMAS A. EDISON

He viewed the problem of the motion picture as the making of a machine, a machine tool in the service of the art of expression. He was personally interested in it chiefly as a maker of a mechanism, which he delivered to the world to do with as it might.

The motion picture was a set of dawdling experiments and a haze of day-dreams when Edison assigned himself the problem of bringing it into a practical working existence, sometime in the year 1887. The motion picture is in a very real sense the offspring of the Edison

phonograph. It was in 1887, in a bit of a lull in the laboratory work, and in a day, too, when the commercial affairs of the phonograph were annoying, that Edison took a bit of playtime to spend casually on a machine "that should do for the eye what the phonograph did for the ear."

Edison set a staff to work on his preliminary drawings, locked up in the secrecy of room five at the West Orange (N. J.) works. His first picture machine was a spiral record of microscopic pictures photographed on a cylinder like a phonograph, actuated with an intermittent motion and viewed under a microscope. He had filled a room with sound from a needle in a tiny groove and he was out to fill it with pictures in a somewhat similar manner. In time, he decided upon a machine that would feed pictures the size of postage stamps upon a flexible tape moving past a lens, for viewing them either directly by magnification, or by projection. By the mid-summer of 1889, he had achieved such a machine, but had no satisfactory tape. He demonstrated the machine with strips of collodion varnish that went to bits and failed immediately. In the autumn he heard of the coming of George Eastman's flexible medium for roller photography in the Kodak. He sent to Rochester for a sample and put a trial strip fifty feet long through his machine. It worked, and the motion picture was an accomplished fact.

Interestingly enough, Edison's concept was a talking picture, and in 1889–90 he built a talking picture machine, a twin phonograph peep-show device.

It was not until late in 1892 that a promoter chanced upon the motion picture machine in a corner of the West Orange plant and prevailed upon Edison to let him put it on the market. The machine in its peep-show form went out into the world, and all over the world, beginning April, 1894. That was the Edison Kinetoscope. It presented film of the same dimensions, using the same sprocket holes and other physical characteristics as the motion picture film of today. The very size, which remains the same today, despite many experiments then and since aimed at greater areas, was determined by the covering power of the objective of a microscope that happened to be about the plant in 1887 when the experimentation began.

For a complexity of commercial reasons which we, as engineers, are not concerned about here, Edison wanted to keep the motion picture in the peep-show for a while. But all over the world showmen were demanding a machine that would show pictures to a whole room full of

paying patrons at one time, and so a score of inventors took the Kinetoscope and set about the task of wedding it to the magic lantern. Most of the technical tangles and patent wars of the industry since have resulted from these parallel efforts. The history of the motion picture industry in every nation in the world, and of every motion picture corporation now in existence, can be traced to an Edison Kinetoscope, be it in London, Paris, Berlin, Stockholm, or Shanghai.

It is of incidental interest in this day of the talking picture to recall that it also was Edison's exploration of the properties of the double-filament incandescent lamp that led to the radio valve of today with all its sound-picture functions and applications. It is coincidental that William Kennedy Laurie Dickson, the same laboratory assistant who worked on the motion picture job for Edison in room five, was also the assistant who made the galvanometer tests of the "Edison effect" in the twin filament lamps. They had sound and the radio there, too, filed away in the notes of an unexplored region. One lifetime was not enough in which to cover all that vast world of technology that came within the range of Edison's vision.

Mr. Edison's records and correspondence of the day reflect a recognition that the motion picture should present the sound, the color, and the perspective of reality; and that it was destined to serve as a major successor of all the prior arts of expression, in entertainment, in advertising, in education, and as an instrument of record. He made it a tool, and left it largely to others to use and apply it.

Edison was concerned with what he deemed the great important work of the world and the mechanisms with which to do it. He was a maker of machines that worked. He brought processes and methods across the dim borderland from the dreamers and the experimental laboratories into the factories of modern, working fact.

TERRY RAMSAYE