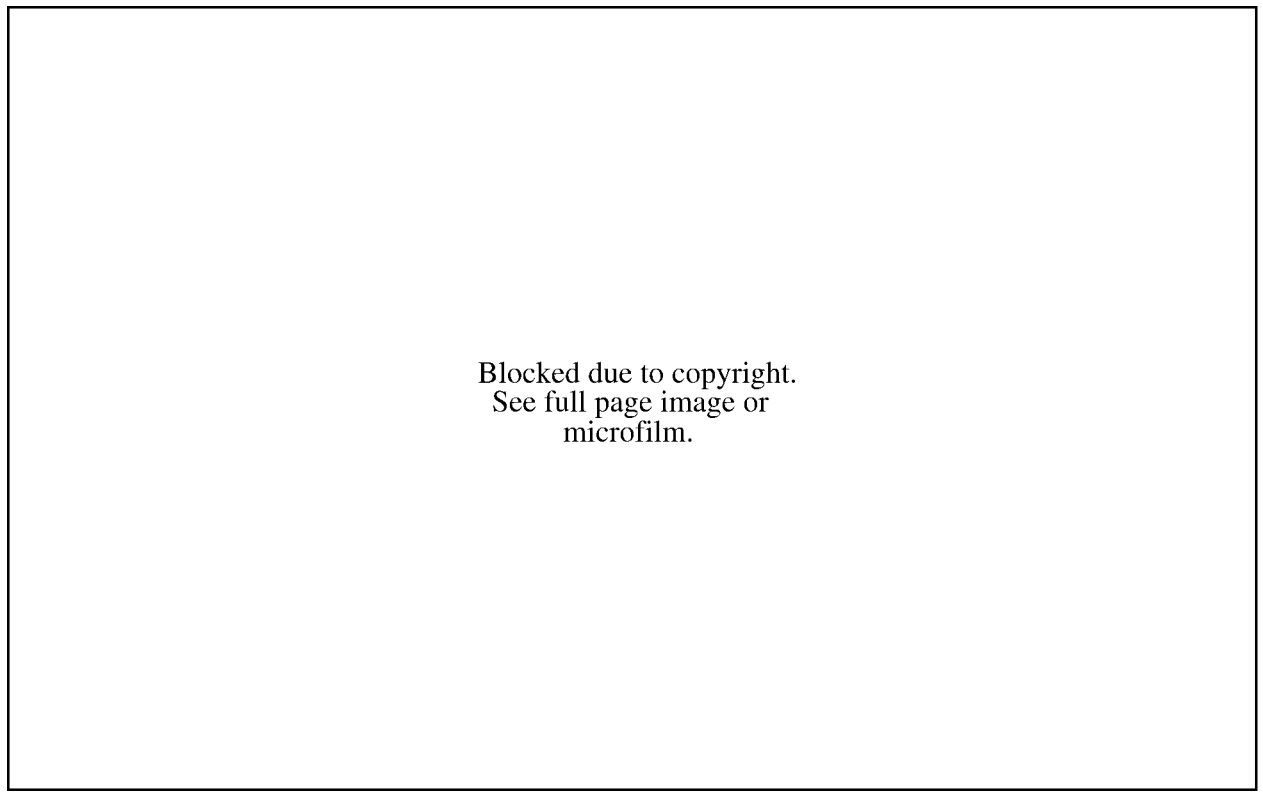
Design Notebook

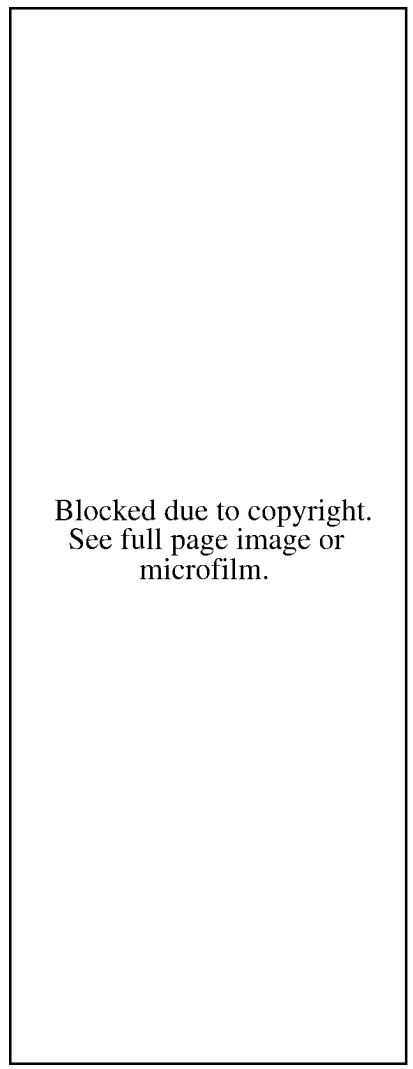
Ada Louise Huxtable

It' a century since Edison lit up the world.



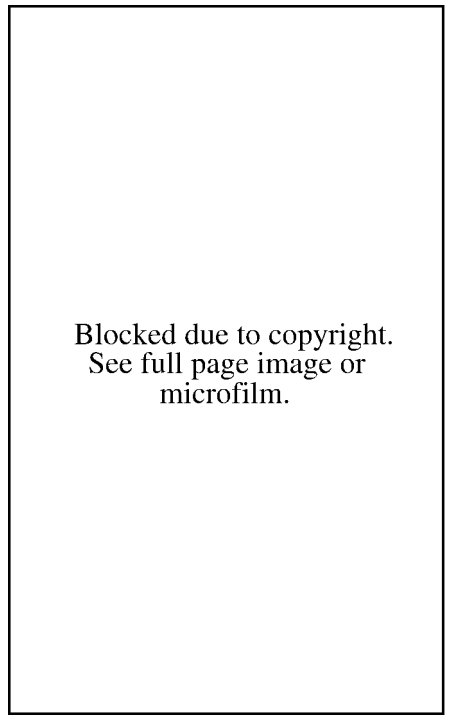
Bettmann Archive

Pre-electric, the family clustered around the center parlor lamp



Edison's first filament bulb as pictured in 1880.

Smithsonian Institution



IN case you hadn't noticed, this year is the Centennial of Light. That little switch you flip so casually is being celebrated officially by the Smithsonian Institution. A major exhibition called "Edison: Lighting a Revolution" will open next Wednesday at the National Museum of History and Technology in Washington, dedicated to the 100th anniversary of Thomas Alva Edison's great invention, the incandescent electric light bulb. The show will remain on permanent display. Chalk up one more fascinating chapter in the Smithsonian's annals of art, science and nostalgia.

The exhibition emphasizes the scientific experiment that led to the use of a carbon filament of baked white cotton thread and the laconic laboratory notation in October 1879, "We have produced a very good light." That year Edison had illuminated the grounds of his "invention factory" at Menlo Park, N.J., with electricity, and on New Year's Eve 3,000 people came from New York to marvel at the results. The chain of events had been started that was to transform the American home.

"In the late 1880's," the Smithsonian tells us, "the electric fan made its appearance. By 1890 it was possible to order electric irons, coffee pots, cigar lighters, stew pans and sewing machine motors. By 1910 the homemaker could buy toasters, corn poppers, waffle irons and heaters, and, in 1920, electric stoves, vacuum cleaners, hair dryers, washing machines and dishwashers were introduced."

"Electricity revolutionized life in the home," said Dr. Bernard Finn, the museum's curator of electricity and organizer of the exhibition. But it was the incandescent lamp, as the first practical light suitable for home use, that wrought the most dramatic changes.

•

The miracle of light did not change everything immediately, however, and not all at once. The domestic revolution was neither as complete nor as instantaneous as one would think. The changeover was gradual, with electricity installed tentatively at first. The elaborate gasoliers that hung from parlor, sitting room and dining room ceilings were not removed or replaced; instead, electrical current and the new bulbs were added to the existing fixtures as a kind of dual, fail-safe system. Few anticipated the profound effects on society's life.

Old customs and habits always die hard. Housewives and servants still carried down kerosene lamps from bedrooms every morning, trimming wicks, cleaning chimneys and replenishing fuel. Families continued to cluster around kitchen and dining-room tables, where illumination was best. Light and heat dictated patterns of work, social life and study, courtship and camaraderie. Tied to the necessity of lamp-lighting and fire-making, life proceeded in its usual diurnal-nocturnal patterns. It was not yet possible, with the touch of a finger, to turn night into day and live accordingly. One could not easily establish an individual and independent existance, freed of communal domestic rituals.

For some time, then, "incandescent," as it was called, co-existed with older forms of illumination. But the use of electricity was increasingly seductive. It was not too long before it became obvious to even the most conservative consumers that electric light was better, cheaper and cleaner than gas. And definitely here to stay.

Its convenience and allure were hard to deny. With fixed and instant light, nothing had to be cleaned, carried or serviced; there was light when and where it was needed or wanted, without effort of any kind. The soot-blackened ceilings above gas fixtures soon became a thing of the past. Above all, incandescent was irresistibly bright and beautiful. Gone was the hazy, yellow glow of the 19th century home.

•

Most wonderful of all — and most difficult for those of us raised under Mazda or Westinghouse to realize — the light no longer flickered. The steady, white light of "incandescent" was nothing less than miraculous. It is equally hard to realize how much easier it became to read by artificial light, and what this probably meant in terms of concentration, learning, the use of libraries and educational institutions, and, ultimately, the information explosion. The image of the squinting student in the unsteady shadow of a fluttering lamp was retired into the illustrations of Harper's Weekly.

All this, of course, was quite marvelous enough. Those conveniences and luxuries that we take so much for granted today — automatic closet lights, fluorescent over-the-counter tubes, high-intensity lamps, wall washers, down lights, illuminated makeup mirrors, special spots of all kinds — did not become commonplace for a very long time. Closet lights were unheard of because closets themselves were still reasonably rare; only upper-middle-class houses had them, while most families made do with black walnut or ponderous golden oak wardrobes.

If you have ever thought about the reason for the old-fashioned glass-doored pantries that are beginning to be so prized again — this was one way of seeing into the shelves, in the daytime, at least. A general architectural rule of thumb was that every room or area should have a window, including stairs and storage spaces. The only place this did not hold true for was in the urban slums, where dark and airless flats became the subject of corrective model tenement legislation around the turn of the century. Even Mr. Edison's invention didn't help much.

•

Nor did it guarantee Utopia, in spite of the much-heralded electrical revolution that so upgraded the American standard of living with labor-saving devices. It depends on how you measure the standard of living in the first place. Today the all-electric kitchen in the so-called luxury apartment is more often than not a small, inside space totally dependent on Mr. Edison's electric light and fan. It is an ironic comment on the quality of life that all of those wretched windowless kitchens and baths would not be possible without them.

Utopia, however, was what American architects and engineers very quickly glimpsed and were not loath to pursue. The incandescent bulb and the private generating plant were the first steps toward that consummately American achievement: the completely controlled artificial environment. Those cryptic letters on construction drawings, HVAC — heating, ventilating and air-conditioning — stand for the mechanical life systems of a standardized world.

Those who build no longer depend on the sky or sun or stars; freshening breezes no longer carry news of the seasons or the cycles of the earth. No open windows bring the sudden scent of spring. The modern building is a place of steady, even illumination and temperature regardless of time of day or year, liberated from any restrictive considerations of natural light or air. It is a giant machine designed by maximum square footage and cash flow for purely commercial purposes. Theoretically, and often practically, cost efficiency and codes are all that dictate how large the box, and how many the foot-candles shall be. Only the occupants of the executive offices know when it rains or snows and if the city's occasional golden afternoons are preparing a Maxfield Parrish sunset sky.

The architect of the pre-electric 19th century glazed his buildings splendidly, out of necessity and delight, illuminating and defining spaces by every means from skylit courtyards and soaring glass atriums to the bay-windowed walls of the early Chicago skyscrapers. It was common to think of life and art in terms of sunlight and shadow; Victorian literature and morality are full of references to both.

Mr. Edison's invention miraculously dispelled the gloom. But it had its dark side as well, in the losses to scale, style and the human spirit and the exploitation of resources that began so unexpectedly with that glass bubble and piece of cotton thread, and that only the energy crisis has finally called to account. So let us marvel at the Centennial of Light and the domestic revolution. It is also progress to know that one cannot live by the light bulb alone.