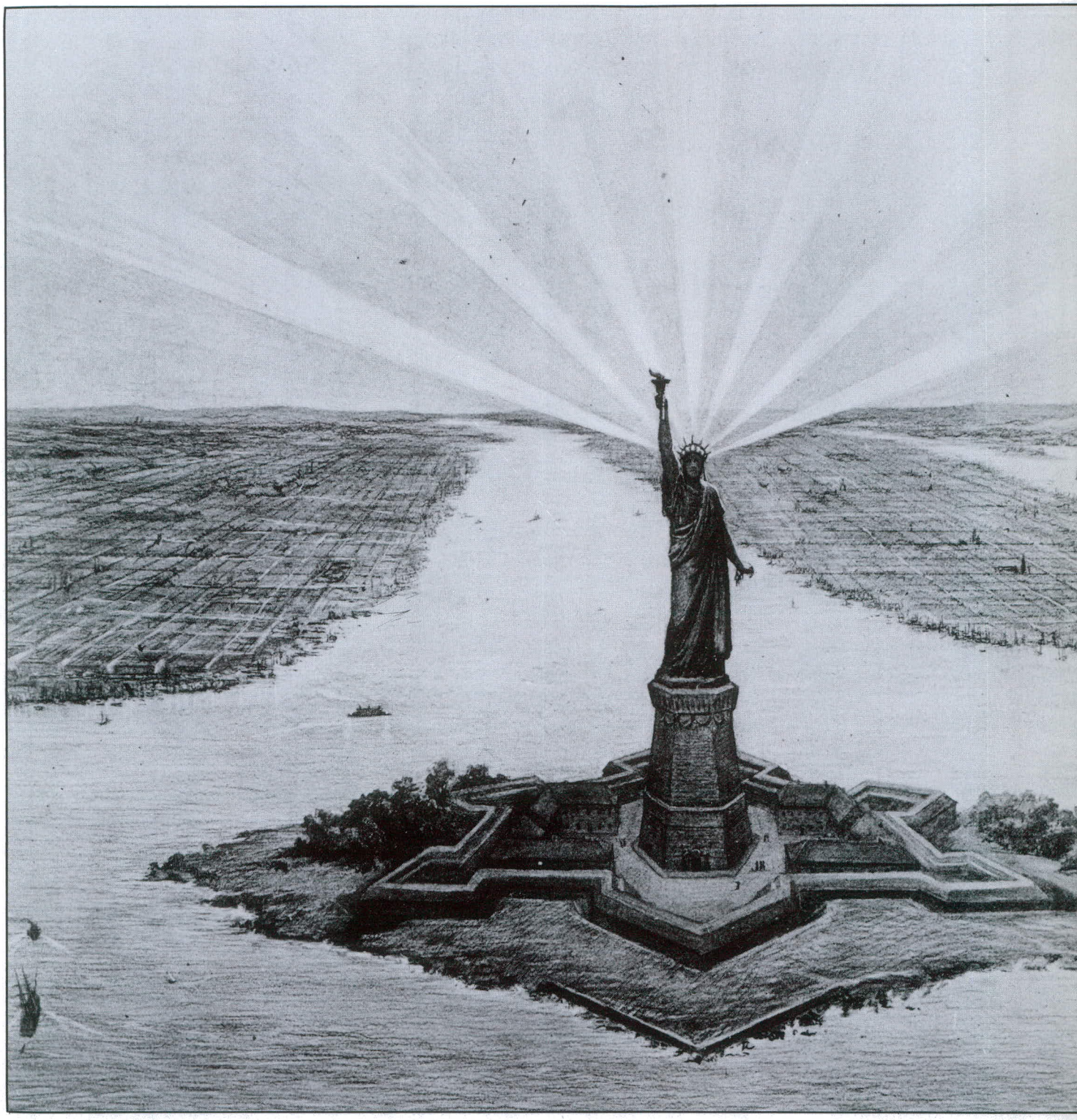
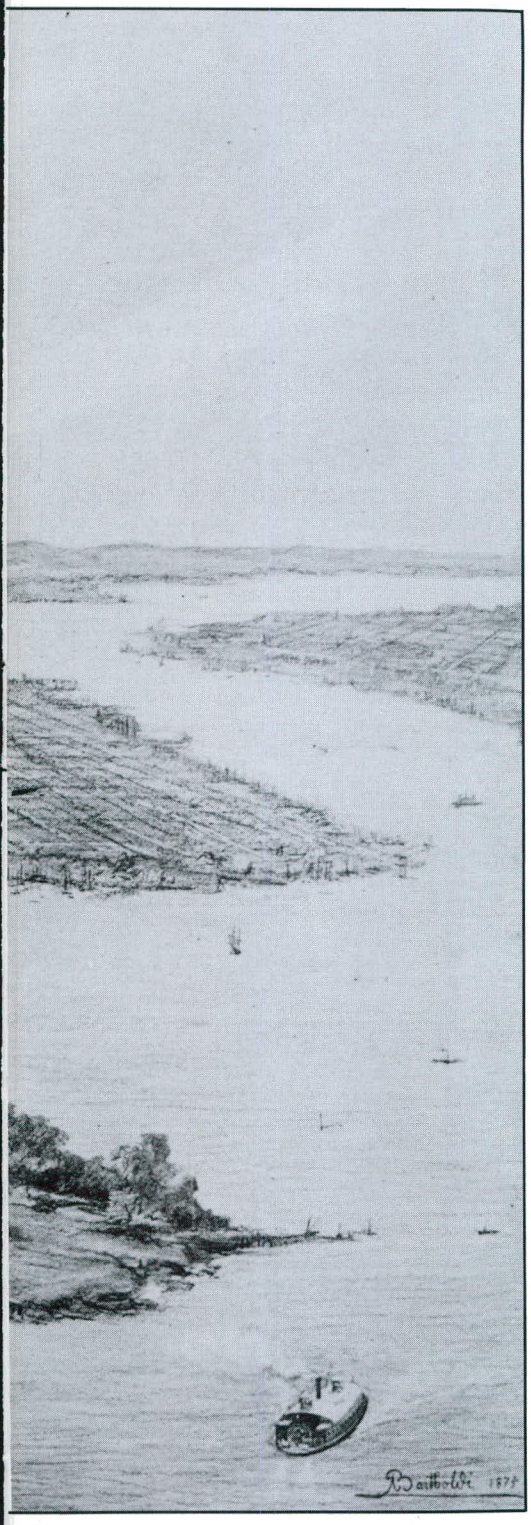
Liberty Enlightening



Liberty's creator, Bartholdi, stated on his first visit to New York City, "It is, indeed, the New World, which appears in its majestic expanse with the ardor of its glowing life...the magnificent spectacle of those immense cities, of those rivers extending as far as the eye can reach..." The design for the Statue of Liberty Enlightening the World would slowly take form. The left hand in this early Bartholdi rendering holds broken chains rather than the realized tablet. The rays of light projecting from the diadem are already strikingly prominent.

the World Part I

by Carole L. Perrault



(Drawing from the Musée Bartholdi located in Colmar, France.)

PREFACE

Height from base to torch: 151'2". **Height from base of foundation to torch:** 291'1". **Length of right arm:** 42'. **Head thickness from ear to ear:** 10'. **Width of mouth:** 3'. **Total weight of statue:** 260 tons. **Materials:** copper skin; iron structure; poured concrete and granite pedestal.
Sculptor: Auguste Bartholdi. **Structural system engineers:** Viollet-le-Duc for the head; Gustave Eiffel for the primary and secondary structure. **Pedestal architect:** Richard Morris Hunt. **Pedestal engineer-in-chief:** General Charles P. Stone. **Location:** Liberty Island (Formerly Bedloe's Island), New York Harbor. **Dedicated:** October 28, 1886. **Commemorates:** The Independence of the United States. **Funding:** Statue—French Citizens; Pedestal—American citizens.

Her vital statistics and historical facts can be neatly recorded, but she defies classification. She is a late 19th-century engineering wonder; a monument of art; an architectural form; and she speaks eloquently—if silently—for the spirit of liberty. She stands in New York Harbor but belongs to the whole nation. Her essence combines the tangible with the intangible. She is the Statue of Liberty Enlightening the World. Today, this symbol of our liberty—however individually perceived—is the subject of the most popularized renovation of any national monument in American history. The seventy million dollar renovation was initiated in 1980, to commemorate her centennial, and is scheduled to be majestically saluted in official ceremony on July 4, 1986.

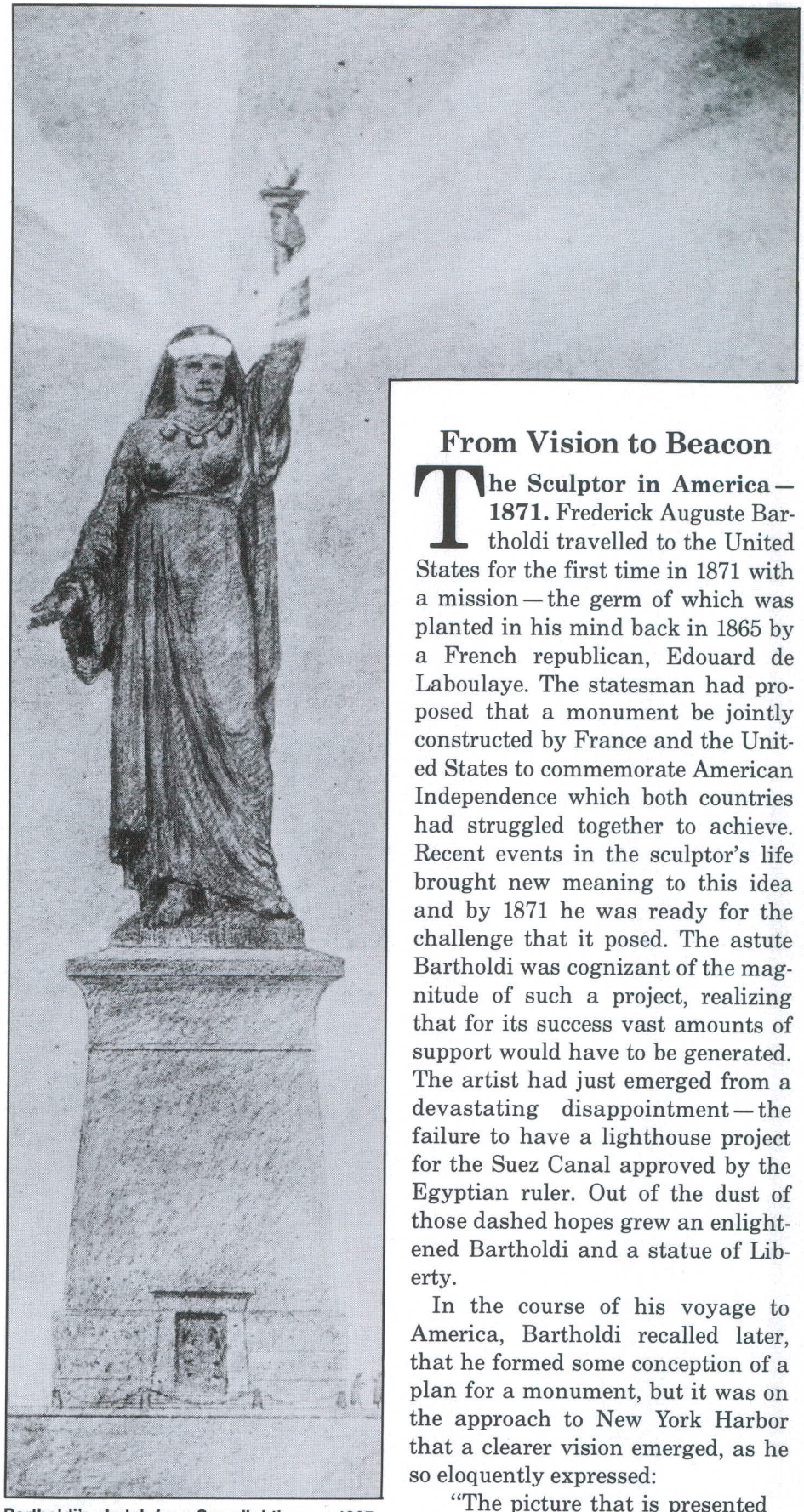
Surprisingly this personification of Liberty which is as dear to us in the 1980's as apple pie and motherhood (and, yes, lighthouses—if you will) was repeatedly placed in jeopardy throughout her first hundred years. She faced a complex, and at times, discordant administrative framework; custodians ignorant and insensitive to her intrinsic value and physical being; and a neglectful Congress which made the good intentions of the administrators even more impossible to fulfill. Transversing the "sea of identity," the unwavering lady of the harbor travelled from the ranks of a wayward beacon in 1886 to the status of a national monument by 1924 and finally to a recognized world class structure in 1984. One would be amiss not to correlate the eventual success of this arduous journey with her evolving and resultant identification with America, the nation.

"Liberty Enlightening the World"'s first 100 years of administrative history mirrored her changing image. The roster of federally-appointed custodians reads, as follows: the United States Light-House Board 1886-1902; the War Department 1902-1933; and the National Park Service 1933-Present. The type and extent of repairs, alterations and improvements performed within each period reflected the then current Federal administrator's sensibilities. A stream of subversive elements, however, inevitably clouded the mission of each of Liberty's guardians. Over and over again their frustrations were expressed in the contemporary correspondence. The role which was accepted openly by all, as a privilege and challenge, would turn sour. This drama made its premier performance during the statue's first two decades while under the guardianship of the U.S. Light-House Board. The story of those years, 1886-1902, is presented below with all the fanfare, struggle, disappointment and resolution characterizing Liberty's first century.

The U.S. Light-House Board Years

To most the idea of caring for a colossus would be mind boggling. This was not the case for the United States Light-House Board. The Board was accustomed to caring for the unusual since its establishment in 1852. Constructing and maintaining wonders of engineering prowess along generally remote, inaccessible and precarious shores was routine for its cadre of federal officers. Ruled by the utilitarian, the Board was driven by a dedication to provide reliable and technologically advanced navigational aids no matter where and what the need. Administrative efficiency, economic steadfastness and technical dexterity quickly became the Service's mainstay in meeting the challenges of the unknown.

Thus, on November 16, 1886, when President Cleveland directed in a letter to the Secretary of the Treasury, "that the Statue of Liberty Enlightening the World be at once placed under the care of the Light-House Establishment, and that henceforth it be maintained by the Light-House Board as a beacon, under the regulations pertaining to such beacons," the Light-House Board set to the task in its usual businesslike manner treating the Statue of Liberty light station like any other. The station became the subject of all the appurtenances characteristic of its new position: funding from the general appropriations for maintaining the Light-House Establishment; a listing in the Light Lists; a topic for Notices to Mariners; and an entry in the Light-House Board's published annual reports, and the engineer's and inspector's monthly reports to the Board. The 1886 Presidential action marked the end of one chapter in Liberty's life and the beginning of another. To fully grasp the impact and significance of the appointment a step backwards must be taken into the origins of the "beacon" of Liberty.



Bartholdi's sketch for a Suez lighthouse, 1867-69. Symbolizing "Progress" or "Egypt Carrying the Light to Asia," the colossus was never constructed. (Musée Bartholdi, Colmar, France.)

From Vision to Beacon

The Sculptor in America—1871. Frederick Auguste Bartholdi travelled to the United States for the first time in 1871 with a mission—the germ of which was planted in his mind back in 1865 by a French republican, Edouard de Laboulaye. The statesman had proposed that a monument be jointly constructed by France and the United States to commemorate American Independence which both countries had struggled together to achieve. Recent events in the sculptor's life brought new meaning to this idea and by 1871 he was ready for the challenge that it posed. The astute Bartholdi was cognizant of the magnitude of such a project, realizing that for its success vast amounts of support would have to be generated. The artist had just emerged from a devastating disappointment—the failure to have a lighthouse project for the Suez Canal approved by the Egyptian ruler. Out of the dust of those dashed hopes grew an enlightened Bartholdi and a statue of Liberty.

In the course of his voyage to America, Bartholdi recalled later, that he formed some conception of a plan for a monument, but it was on the approach to New York Harbor that a clearer vision emerged, as he so eloquently expressed:

"The picture that is presented to the view when one arrives at New York is marvelous: when—after some days of voyaging—in

the pearly radiance of a beautiful morning is revealed the magnificent spectacle of those immense cities, of those rivers extending as far as the eye can reach, festooned with masts and flags; when one awakes, so to speak, in the midst of that interior sea covered with vessels — some giants in size; some dwarfs — which swarm around puffing, whistling, swinging the great arms of their uncovered walking beams, moving to and fro like a crowd upon a public square, it is thrilling. It is, indeed, the New World, which appears in its majestic expanse with the ardor of its glowing life. Was it not wholly natural that the artist was inspired by this spectacle? Yes, in this very place shall be raised the statue of Liberty, as grand as the idea which it embodies, casting radiance upon the two worlds. If, then, the form of the accomplished work is mine, to the Americans I owe the thought and the inspiration which gave it birth."

The sculptor not only became the artistic genius behind the "Liberty" project, but he took on the entrepreneurship of the "big" sell. He crossed vast spaces of America listening to its very heartbeat while promoting the colossal plan. With each step his vision became more real. An August 2, 1871, account in Henry Wadsworth Longfellow's journal is a testament to how quickly the concept for the monument was taking form. The Cambridge, Massachusetts based poet noted:

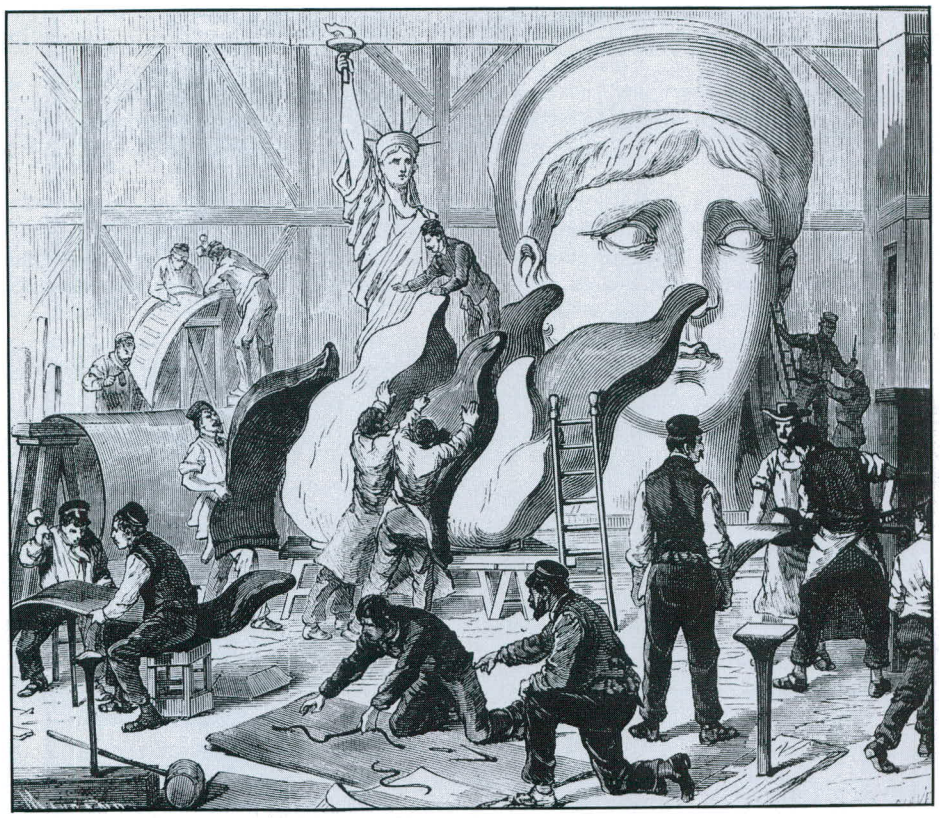
M. Auguste Bartholdi, French sculptor, calls with a letter from Agassiz. A pleasant, lively, intelligent man, a Republican and an Alsatian. He has a plan for erecting a bronze Colossus on Bedloe's Island in New York harbor, — a statue of Liberty, to serve at night as a lighthouse. It is a grand plan; I hope it will strike the New Yorkers.

Already the sculpture was to have a dual purpose: an inspirational and a utilitarian, being presented as a combined goddess and lighthouse. No doubt, the clever Alsatian had realized the advantage of attaching a useful, but enobling, purpose to his work of art. What in principle made good sense would in reality, take its toll over time on the statue's sculptural and physical integrity.

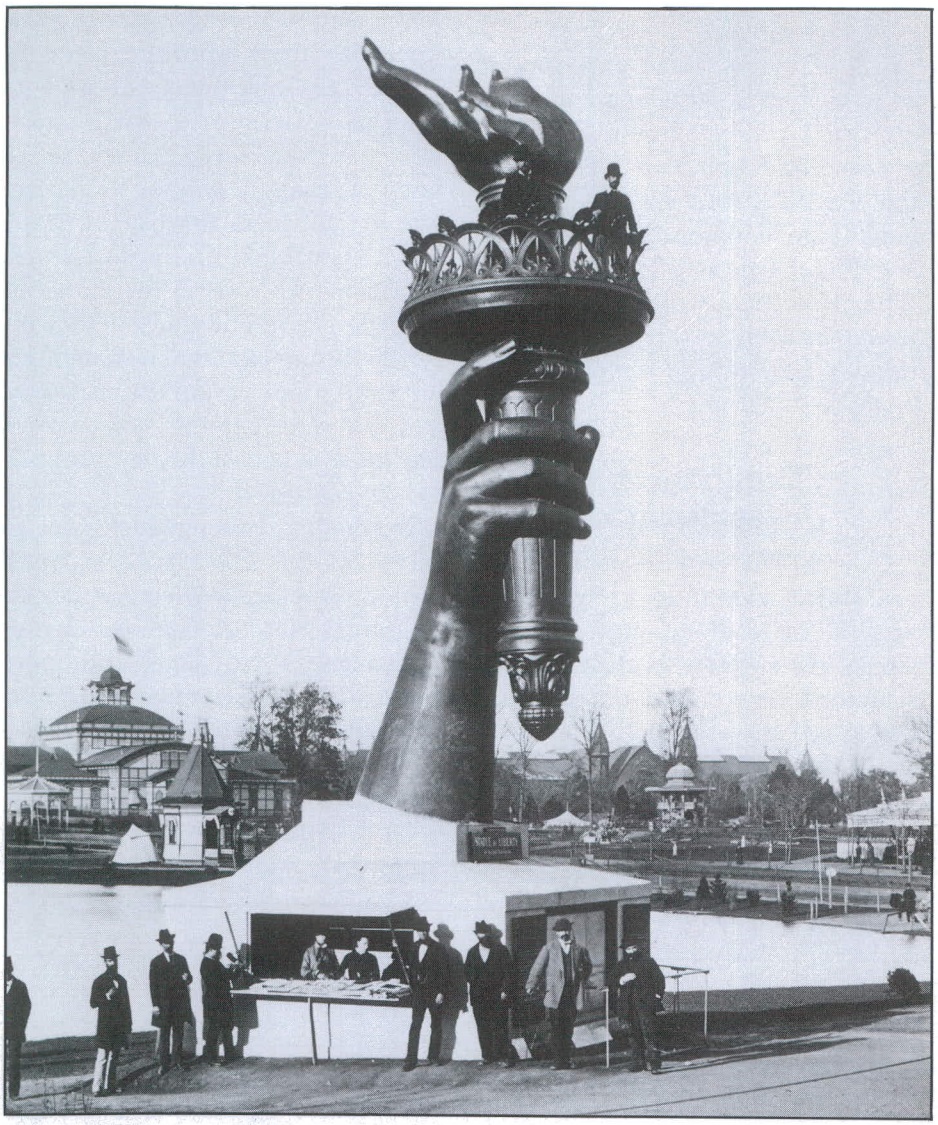
The Project's Crystallization

Over the course of the next decade the project continued to crystallize with a series of accomplishments, which included: the evolution of the sculptor's design to a refined state where actual work could commence; the mobilization and success of a French-subscription campaign to provide the necessary funding for the statue's fabrication and erection in France; the completion of the first features in their monumental proportions (the torch arm and head) for display as fundraising enticements; the organization of a citizen's committee in New York City whose formidable task it was to make the statue happen in the United States — by ensuring a site, pedestal, and provisions for raising the statue on its pedestal, in addition to, allowing for the future care and maintenance of the monument; and the successful passage of legislation by Congress, pledging essential Federal support for the venture.

Bartholdi's vision which was received in the 1870's with so much promise would slowly emerge a reality in the 1880's, although punctuated by endless frustrations and inevitable disappointments. Financial struggles dominated this period due, in part, to the "marketing of Liberty" by the executive body of the American Committee who were New Yorkers of wealth and stature. The active, but increasingly ineffectual,



Bartholdi's creation blossomed forth from flat sheets of copper tediously worked. The head and right hand clutching its torch were the first features to be completed in their mammoth proportions. (Courtesy of Statue of Liberty National Monument, National Park Service, *Le Journal Illustre*, May 28, 1876.)



The Flame on Tour—1876. **The torch made its debut in America at the 1876 Centennial Exhibition in Philadelphia. The monumental curiosity piece then honored New York City with its presence, towering over Madison Square from February 1877 until June 1882. French citizens were given a taste of Liberty as well—the classically ensconced head was displayed at the 1878 Paris Exposition.** (Musée Bartholdi, Colmar, France.)

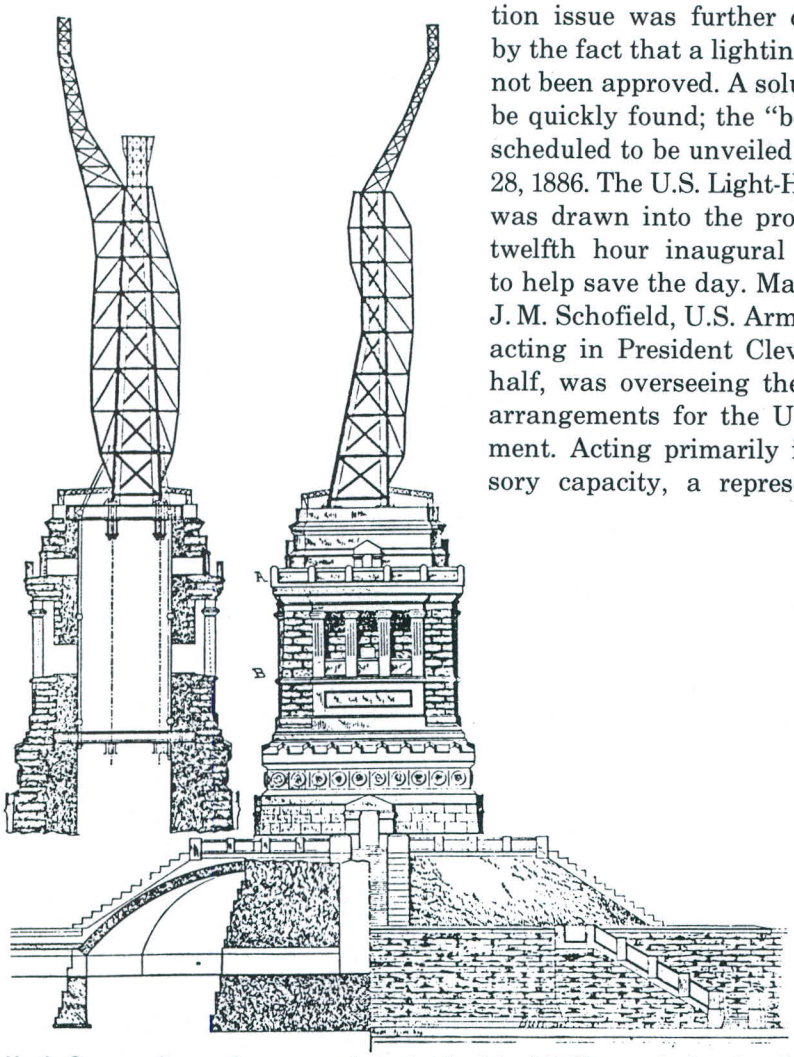
American Committee faced bitter economic hardship in 1884 by stopping major construction work on the pedestal in November. Joseph Pulitzer, publisher of the New York newspaper the **World,** came to the aid of the encumbered pedestal committee. Through the power of his press, the aggressive journalist solicited contributions from the formerly reticent public. Within months the project was salvaged. The complicated series of delays and spiraling construction costs would leave their mark, however.

The American Committee and Congress

The American Committee turned to Congress in 1886 with the hope that the Federal government would come to their rescue by ending their long financial struggle. Uncle Sam had first accepted responsibility for the Statue of Liberty in 1877. The Joint Resolution passed by Congress and approved by the President on March 3, 1877, authorized and directed him **to accept the statue** when presented by the citizens of the French Republic; **provide a suitable site** on either Governor's or Bedloe's Island in New York Harbor; upon completion **cause it to be inaugurated** with such ceremonies as will serve to testify the gratitude of the people of the United States; and **cause suitable regulations** be made for its **future maintenance as a beacon** and for the **permanent care and preservation** thereof as a **monument of art.** Congressional documents imply that the acceptance was made with limited enthusiasm on a conciliatory plea by Senator Cameron (PA): "As this is a matter of courtesy to a number of patriotic Frenchmen and citizens in this country, I ask that the Senate act upon it at once. It costs no money." In spite of the fact the President did appropriately accept the statue in 1884 and provide for a suitable site as required a few years earlier, those last words of the Senator would prove to be a harbinger of an ill-fated future for the statue in Congress as the events of 1886 so graphically attest.

Acting on the request of the Chief of Engineers, U.S. Army, the American Committee's Engineer-in-Chief General Charles P. Stone prepared an estimate on May 21, 1886, with the intention of securing a congressional appropriation for the installation of the Statue of Liberty. This estimate extended beyond the cost for inaugurating the memorial to include the following necessary work to complete the statue: replacement of the wooden wharf with stone or be ton; installation of an elevator to the decent satisfaction of the public; cleaning and arranging the grounds; strengthening of the interior walls of the fort; construction of arches to create a terreplein; and installation of an electric lighting plant. No doubt, the American Committee felt that the type of work cited aptly fell under the jurisdiction of the Joint Resolution. Congress was not so sympathetic. A tone of disbelief engulfed a May 28, 1886, letter from the Treasurer of the American Committee to its Chairman. Treasurer

Henry F. Spaulding expressed to Chairman William M. Evarts (who was also a U.S. Senator from New York): "Where there is a will there is a way... I cannot believe that Congress can be so unmindful... A failure to make a prompt appropriation will leave the Statue standing for another year in an incomplete condition, as a monument of disgrace to Congress and humiliation to the nation." Congress contested its own authority to grant such funding, finally appropriating only about half of the monies requested and so desperately needed by the pedestal committee ($56,500 of the $106,100 esimated by Engineer Stone). This amount was barely enough to cover the ceremonial costs for the inauguration. The American Committee, who were at their wit's end, had no other choice but to temporarily drop the additional work items from the construction program with the exception of lighting.



Uncle Sam won't you please come to Lady Liberty's aid? The granite-faced pedestal rose from the center of an early 19th-century masonry fortification—Fort Wood. The final pedestal design called for the creation of a terreplein punctuated by four grand staircases leading up to each of the monumental doors, and supported by arches. Insufficient funds and a stingy Congress prevented the completion by the American Committee of the goddesses' approaches as envisioned. (Courtesy of Statue of Liberty National Monument, National Park Service, *Scientific American*, June 13, 1885.)

Illuminating Liberty

Lighting became, at once, an issue of prime importance and concern—not only for its utilitarian role in guiding vessels safely through New York Harbor but for its symbolic reasons. How could Liberty begin her task of enlightening the world if, she, herself were not enlightened? The financially burdened illumination issue was further complicated by the fact that a lighting plant had not been approved. A solution had to be quickly found; the "beacon" was scheduled to be unveiled on October 28, 1886. The U.S. Light-House Board was drawn into the project in this twelfth hour inaugural countdown to help save the day. Major General J. M. Schofield, U.S. Army, who was acting in President Cleveland's behalf, was overseeing the inaugural arrangements for the U.S. Government. Acting primarily in an advisory capacity, a representative of the Light-House Establishment was appointed by General Schofield to respond to the illumination issues at the request of the American Committee.

Regardless of the fact nothing substantive had been done, the subject of "light and the statue" had been addressed by Bartholdi in the early stages of the project attesting to the value of this element to his total concept. Artificial light was the medium consciously chosen by the ingenious sculptor to symbolically enhance the message hammered into the 300 copper plates of his creation. A precise account of Bartholdi's plan for illuminating the statue has not been found; it is doubtful whether one ever existed. A fragmented picture of the sculptor's thinking, however, may be sketched from articles which appeared in the contemporary press. Accordingly, Bartholdi appears to have focused on the artistic problems and not on the technical realities—they were left for the Americans to tackle.

The torch flame and the diadem with its projecting seven rays naturally became the focal points for the illumination of the combined goddess and beacon. Electricity, the widely acknowledged advancement in the technological sphere of lighting, was lauded as the means to the end. Electric light was repeatedly mentioned in the project's early American and French press. A June 2, 1876 article in the New York **Daily Graphic** reported, "...in the interior of the hand holding the light, which may be seen far out at sea, it is thought, will be an electric light." A **Le Génie Civil** article published in France in 1883 predicted the Statue of Liberty would be an exceptionally powerful beacon. "From the diadem surrounding the head, powerful electric lights (fires) would project a considerable distance. Symbolically, these lights with their rays would illuminate the sea

that separates France and the United States."

The earliest, most detailed, account uncovered during research of a plan for illumination dates to 1885. An article which appeared in the April 22 New York **World** asked the question "How will the Statue be lighted when complete?" Engineer-in-Chief Stone, although not a lighting specialist, set forth his ideas, as follows:

> "Instead of having lights streaming from the diadem, as was first proposed, I would prefer, should it be found practicable by electricians, to have electric lights placed, with strong reflectors, around the foot of the Statue, casting a very strong light upon it and thus giving it the appearance during the night of a shining statue. Then I would like to have a great vertical beam of electric lights spring from the uplifted torch. Such a beam of light would strike upon the lower stratum of clouds, and its reflection when even light clouds are over it, could be seen far out to sea and at a considerable distance inland where mountains do not intervene."

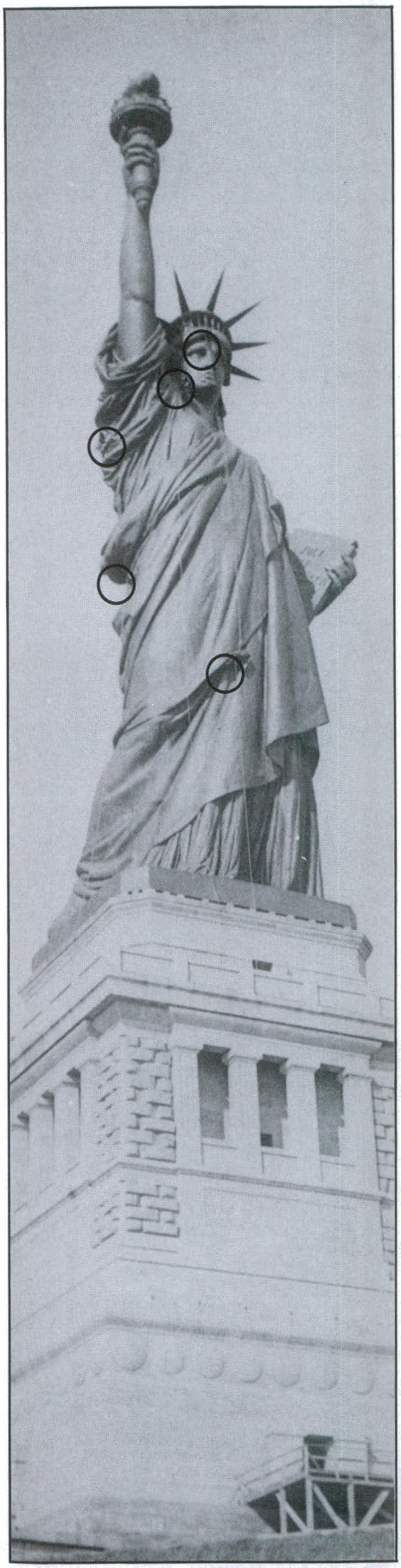
Stone's proposal is of special interest because for the first time the statue as a total entity is discussed in terms of floodlighting with the intent of creating a "shining" image. (Flooding the statue with light was an avant-garde notion as floodlighting's heydey was still some thirty years into the future.)

The New York **World** reported again on the lighting story in its April 10, 1886 edition. General Stone elaborated on his earlier comments noting that "the general plan is to have four large lights at the base of the statue, one on each corner of the pedestal, and a shaft of light that shall shoot up into the heavens from the torch." The engineer concluded his thoughts by expressing that the statue would take the lead of all the light-houses on the coast by being the first light mariners would discover when heading for New York.

General Stone's appropriations request of May 1886 mentions both the unofficial approval of this lighting proposal by the Federal authorities designated to oversee the inaugural ceremonies; and, the fact, that the U.S. Light-House Board had been brought into the lighting project as a technical consultant. The Light-House Board's Lieutenant Millis was recommended to Engineer Stone for his experiments and personal experience in the arrangement of the electric light at Hell-Gate Lighthouse. Described as an "able, young officer," the Lieutenant on duty in the Third Light-House District commenced his participation by reviewing the estimate for the electric lighting plant and conferring on the details of the "proper machinery" to be employed. Millis, who entered the project in a supporting role ended up the antagonist in a post-inaugural drama which would have far-reaching adverse ramifications for the metallic colossus. To properly assess the realization and implications of Liberty's first illumination project, a jump in time must be made to the physical and political conditions following her inauguration.

The Clean-Up Operation

They came, thousands of them in the days and weeks following her dedication —all seekers of the unveiled "Liberty." The steamers Florence and Jud Field were taxed to capacity with the curious. The lowly walks which circumscribed the star-shaped fortification were black with sightseers, while the air rung with the cries of an army of peddlers offering souvenirs for sale. Visitors were banned access to the labyrinthine interior as the work on the stairs continued. Undaunted, they kept an earthly vigil, mulling around like clusters of locusts below. A restaurant at the foot of the pedestal on the New Jersey side of the old fort offered refuge from the bitter northeast winds. Bevies of school



Riveters—just barely distinguishable—dangle from the rigging. (National Archives.)

girls were among the Liberty watchers as were three boys, all 15 years old, who ran away from their homes in Albany. The adventuresome trio caught the steamer Daniel Drew down the Hudson in search of the titanic wonder. Picked up by the police, the captive youth were granted their wish and then ordered home.

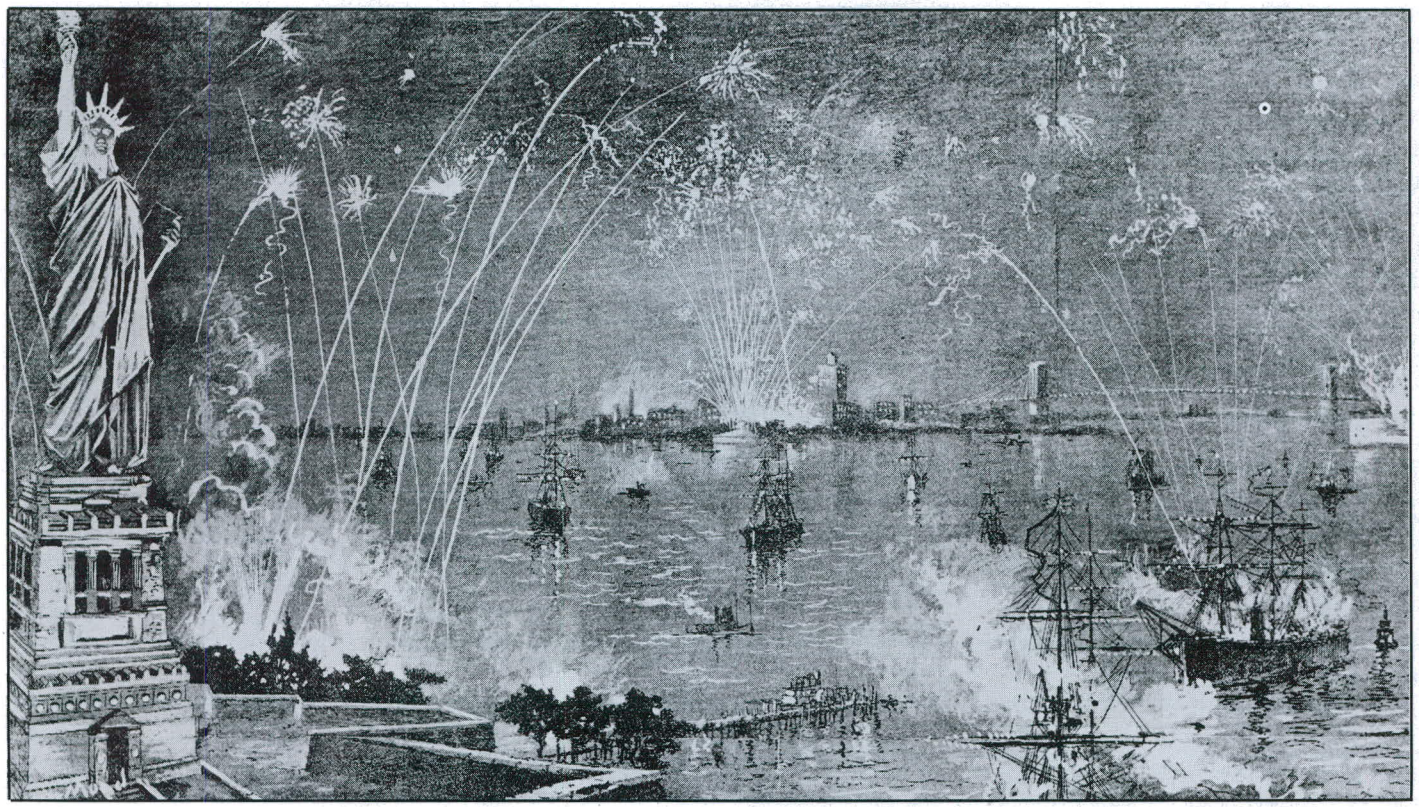
The clean-up operation had begun amidst the sea of visitors. Engineer-in-Chief Stone was seen on the island daily, superintending the finishing touches as workmen were engaged in clearing away the physical vestiges of the dedication. The halyards used in the unveiling of the face were seen to disappear within the goddess herself while numerous ropes hung from the head and shoulders of the Bartholdi statue. Riveters, dangling perilously from the rigging, continued what appeared to be an endless task of securing the copper plates. From the cavernous interior could be identified long lines of perforations created by light peering through the intricate network of unfilled rivet holes. The haste in which the statue was assembled for the ceremonies called for placing only sufficient rivets to hold the copper sheets together. Now she had to be made permanently secure to withstand the vulnerability of her position.

Dazzled and mesmerized by the colossus hardly a word was spoken of the tremendous amount of work remaining to complete both the approaches and the pedestal and, perhaps more importantly, the fact that funding was not imminent for such necessary work.

A Lighting Contretemps

The press was lured by a more urgent turn of events which threatened the very essence of the Statue of Liberty Enlightening the World—her lighting. Inclement weather on October 28 necessitated postponing the presentation of lights until four days after the unveiling. On November 1, at 7:35 p.m., the complete electric lighting apparatus was officially exhibited for the first time to a star-gazed public. Appearing on the heels of the pyrotechnic spectacle, the much anticipated electric lighting was a disappointment to be declared by some a dismal failure. What began as a technical issue concerning the placement of lamps evolved over the next week into an administrative crisis culminating with the temporary extinguishment of the light on November 7, not to be exhibited again until November 22. Pulitzer's **World** which heralded the pedestal campaign maintained its allegiance to "France's noble gift." It was there to disclose this new plight of "Liberty."

A radiant statue was what the **World** was prepared to receive on November 1, instead—as though captured by an ironic twist of fate—the figure of Liberty Enlightening the World was shrouded in darkness while her pedestal stood out grand and imposing against the ebony sky. The calamity



"In an instant the whole harbor for miles around became resplendent with a multitude of variegated colored fires..." Inclement weather on the day of the unveiling forced postponement of the pyrotechnic extravaganza until 7:30 p.m. on November 1.

(Courtesy of the Statue of Liberty National Monument, National Park Service, *The Daily Graphic*, November 3, 1886.)

extended to outer reaches of the upraised arm where the flame was likened to a glow-worm by Pulitzer's arena, appearing detached as if floating from the rest of the statue. The torch bedecking the goddess did not blaze her in light but cast a shadow that sent her head and shoulders into oblivion. A miscalculation in the placement of the lamps was pinpointed as the culprit in this illumination contretemps. The design and functioning of the electrical apparatus; the limitations and awkwardness of the technology; and the physical realities of the structure escaped the critical eye.

A modern analysis of the facts enshrouding Liberty's first lighting project paints a portrait in which many conditions contributed to the less than satisfactory display. The earlier proposal described by General Stone of projecting light from an opening in the top of the flame had given way to alternative plans as the technicalities of employing artificial light, more specifically electric were confronted. The selection process was tainted not only by the state-of-the-technology, but by time and money constraints of the most stringent kind. Just weeks before the unveiling the American Committee acquiesced to a plan evolved by the Light-House engineer, Lieutenant John Millis. His plan of placing the lighting apparatus inside the flame superseded a proposal developed by the American Electric Manufacturing Company of mounting lights on the exterior balcony railing of the torch to project light upward onto the flame. Ruled by pragmatism, Lieutenant Millis perceived the statue first and foremost as a utilitarian beacon, and secondly as a monument of art. What more could be expected of a lighthouse engineer equipped with experience gained from maintaining lights subject to tight budgets and the most adverse of physical conditions? Millis felt it imperative that the illuminating apparatus for the statue be protected from the costly havoc which "wind and



An ironic twist of fate. On November 1, 1886, her lights shone forth for the first time following the dazzling pyrotechnic display. The subservient pedestal stood out grand and imposing against the ebony sky while the regal figure was shrouded in darkness. (National Archives photo.)

weather" could reap. This fact was presumably the selling point for his design to a committee struggling with endless financial woes.

Driven by a mission to provide a reliable aid to navigation — coupled with an insensitivity to the sculptured form — Millis's plan called for carving a double row of staggered circular openings in the lower extremities of the Bartholdi flame. The apertures were covered with glass lenses to project the light generated from the 9 Wood arc lamps. The placement of these lamps was considered not only aesthetically and symbolically deficient, but also harmful to the structure and the keeper of the light. The excessive heat generated within the flambeau cracked lenses, made repairs dangerous and became a towering inferno for countless birds innocently drawn to the beacon of Liberty. The direct illumination of the diadem appears not to have been fully realized in this initial project, although a subject of consideration up until the last.

To render the statue visible, 5 Wood arc lamps with parabolic reflectors were installed in small houses of select salient angles of the fort walls. Contributing to the failure of the projection was the uncompromising reflective property of the copper surface in the shade of a dull brown penny, and the solid protruding mass of the pedestal which shielded the statue from the light sources below. Only in retrospect can the difficulty of the endeavor be fully appreciated. The complexities and intricacies of these challenges would tantalize lighting specialists for a century in their quest to floodlight the "Lady of the Harbor." The evolution and refinement of floodlighting as both a technology and an art parallels Liberty's own luminous history.

The dynamo and arc lighting system was the outgrowth of the inventive genius of James J. Wood, electrician for the American Electric


FRANK LESLIE'S
ILLUSTRATED
NEWSPAPER

No. 1,674.—Vol. LXV.] NEW YORK—FOR THE WEEK ENDING OCTOBER 15, 1887. [PRICE, 10 CENTS;

LIBERTY'S LIGHT A LURE TO DEATH.—THOUSANDS OF BIRDS BLINDED AND KILLED BY THE FLAME IN THE STATUE'S HAND.—THIRTEEN HUNDRED AND SEVENTY-FIVE PERISH IN A SINGLE NIGHT.

Illuminating France's noble gift. In the twelfth-hour inaugural countdown, the U.S. Light-House Board proposed the placement of nine Wood arc lamps inside the flambeau countermanding another scheme to secure the lights to the balcony railing. Two rows of staggered circular holes were cut into the lower extremities of Bartholdi's sculptured flame to allow the light to emanate forth.

(Courtesy of Statue of Liberty National Monument, National Park Service, *Frank Leslie's Illustrated Newspaper*, October 15, 1887.)

Manufacturing Company. First successfully employed in the colossal floodlighting attempt at Bedloe's Island, the American System (as it was called) would become the most notable of Mr. Wood's prolific inventions. The superiority of his dynamo-electric machine was acclaimed by contemporary lighting experts for its simplicity, power (carrying from one to fifty lights of 2,000 candle power each) and economy of action.

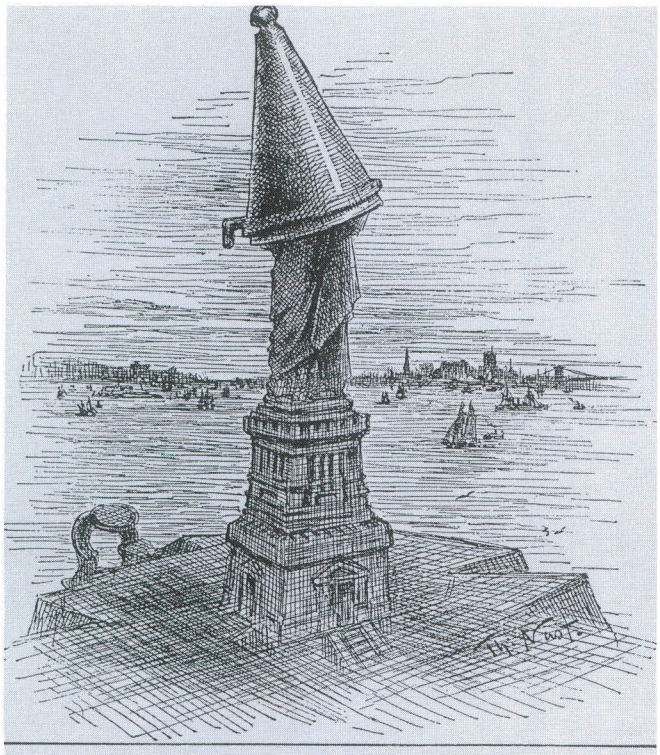
Who Cares for Liberty?

Hardly a day passed without the **World** giving a blow-by-blow account of the lighting predicament. Unmercifully labeled the "Light-Headed Lighthouse Engineer, Lieutenant Millis was blamed for the goddesses' feeble light. As this perceived illumination **faux pas** had not been enough to turn Liberty's fortune to a frown, a new crisis was exposed to the world. Her lights were scheduled to be extinguished following exhibition on November 5 — only one week after her inauguration. The possibility sent the **World** and the American Committee into the throes of despair, after all the French dignitaries, including the sculptor himself, were still gracing American shores. A bungle had developed over custodianship and Uncle Sam was held justly accountable.

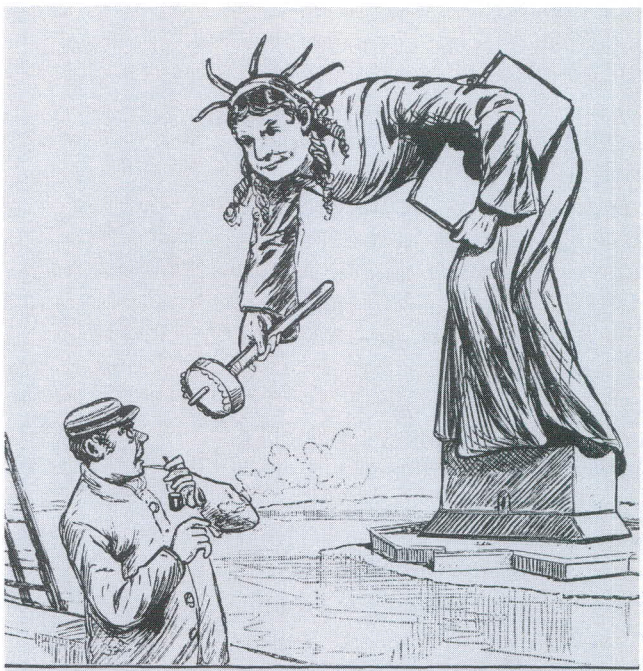


HEAD OF STATUE, SHOWING LIGHT ON CORONET.

The guardianship of the Statue of Liberty Enlightening the World was passed from the American Committee to Uncle Sam at the unveiling ceremonies. An honor of dubious distinction which he was not prepared to undertake or willing to accept wholeheartedly. All parties operated under the assumption that the Treasury Department's Light-House Board would administer the beacon, but Congress failed to pass the necessary legislation in the summer session of 1885. The blatant nudge of an enlightened constituent in February 1886 was still not enough to move the august body into action. The letter addressed to Senator Evarts and cleverly signed "Manhattan," included the following unheeded advice: "I hope and trust (as a citizen who takes pride in this work) that the government has made provision for its proper care after completion; and if there is any further legislation needed at this time; I hope and trust that you will see that it is attended to."



NOW LIBERTY WANTS TO BE EN-LIGHT-ENED.
AND THE WHOLE WORLD KNOWS IT.



STRAITS TO WHICH OUR GODDESS OF LIBERTY IS REDUCED.
GODDESS (to captain of passing vessel)—"*Say, mister, give us a light, will yer?*"

The impact of the gross neglect by the federal government was first felt when the contract for maintaining the lighting plant was to expire. Only weeks before the inauguration on October 1, 1886, Edwards H. Goff, President of the New York based American Electric Manufacturing Company had donated the electric plant as a patriotic gesture in response to the failure of Congress to appropriate the necessary funds. The boiler was supplied by the Edward P. Hampson & Co., also of New York City. The terms of the contract required maintenance of the light without expense to the government for one week after the date of the inauguration.

Lights Out!

On November 6, the date the electric plant was to have been shut down, a despairing Secretary of the American Committee, Richard Butler, telegrammed Lieutenant Millis requesting that the statue lights be kept burning one more night so that Bartholdi at his own volition could view the much talked about lighting. The wish was granted. The sculptor responded favorably to the illumination of the torch. "I believe the determination taken to be excellent and the luminous fire in the hand very logical and happy in effect," he expounded at a later date.

On November 7, the torch of Liberty did not shine forth to relieve the island of its Egyptian darkness. The **World,** in the following morning's edition, lamented that the wind howled mournfully around the Statue of Liberty Enlightening the World as she was under temporary eclipse due to the shortsightedness of the government. The daily tabloid resorted to journalistic lambasting in its crusade to correct the wrongs which had fallen upon the goddesses' shoulders so soon after her rise to prominence. "The Government has the statue," the paper reported, "but the obelisk in Central Park might just as well be planted on Liberty Island so far as the services to mariners is concerned."

General Schofield, as Cleveland's representative explained he had no money, no authority and was simply the custodian. The blame for the predicament was placed, by the press, on President Cleveland. The expense was considered a mere bagatelle in their eyes, and, after all, it was the duty of the President to take an interest in the matter according to the mandates of the 1877 legislation! Despite the attempts by a concerned public to initiate another popular subscription campaign and the efforts of Mr. Goff, President of the American Electric Manufacturing Company, to rectify the situation, it seemed nothing could be done because the issue was smothered in red tape. (Edwards H. Goff did have a vested interest in the project; it was his company's equipment that was lying dormant.) An exasperated **World** reported,

> The torch of the Goddess of Liberty is suffering from an attack of red tape. The Statue has been turned over to the custody of the U.S. Government, and the torch, is like a public trust. Nobody but the Government is permitted to furnish it with light—and the Government is unable to do so because Congress failed to make provisions for the payment of the expense.

The U.S. Light-House Board Will Care

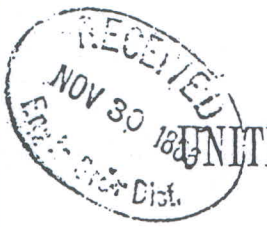
The Light-House Establishment's continued involvement and active preparation to take official control of the soon-to-be Liberty Enlightening the World Light-Station was not reflected in this unflattering portrait of Uncle Sam painted by the press. The Board had lent a supportive, behind-the-scenes hand to Lieutenant Millis, the American Committee and General Schofield since October. The Office of the Light-House Board's official Minutes for October 15, 1886, document the approval of a temporary loan for electrical apparatus, testing equipment, tenders and "certain persons" on-duty at the general light-house depot at Staten Island to assist in the lighting installation and the inaugural ceremonies, on the condition "no expenditures be made from light-house funds." On November 11, the Naval Secretary of the Light-House Board requested a report of the Inspector of the Third District, as soon as possible, on the practicability of taking charge of the beacon's lighting. Specific data was sought on the details of the plant; the cost of coal and other supplies; the number and salary of keepers to be employed; and an estimate of the monthly expenses which would be incurred. Two days later a second letter was urgently forwarded to the Third District asking Lieutenant Millis for additional information pertaining to Bedloe's Island, including a plot of the whole island and the extant structures. Having completed its homework, the Board spurred President Cleveland into action on November 16. The President penned in his own hand the executive order to the Secretary of the Treasury which in turn was forwarded without fanfare to the U.S. Light-House Board on November 17. The beacon of Liberty, at last, had an officially authorized Federal guardian. All was right with the **World.**

The U.S. Light-House Board Takes the Reins

Lights On! Upon receipt of the Presidential mandate, the Light-House Board instantly commenced its official responsibility to the extraordinary navigational aid by directing the Third District Inspector to "take immediate steps to light the Statue of Liberty by electricity," costs to be paid from the general appropriation for maintaining light-houses. The ability of the Board to act with such promptness enamored the heretofore exasperated Edwards H. Goff into writing a letter of appreciation on November 18, acknowledging his

NOTICE TO MARINERS.

(No. 47, of 1886.)



UNITED STATES OF AMERICA—NEW YORK

Lighting the Statue of Liberty Enlightening the World, Bedloe's Island.

The statue of Liberty Enlightening the World, located on Bedloe's Island, in the harbor of New York, having been placed under the care and superintendence of the Light-House Board, will hereafter be maintained as a beacon; and notice is hereby given that it will be lighted on Monday, the 22d of November, 1886.

BY ORDER OF THE LIGHT-HOUSE BOARD:

STEPHEN C. ROWAN,
Vice-Admiral U. S. Navy,
Chairman.

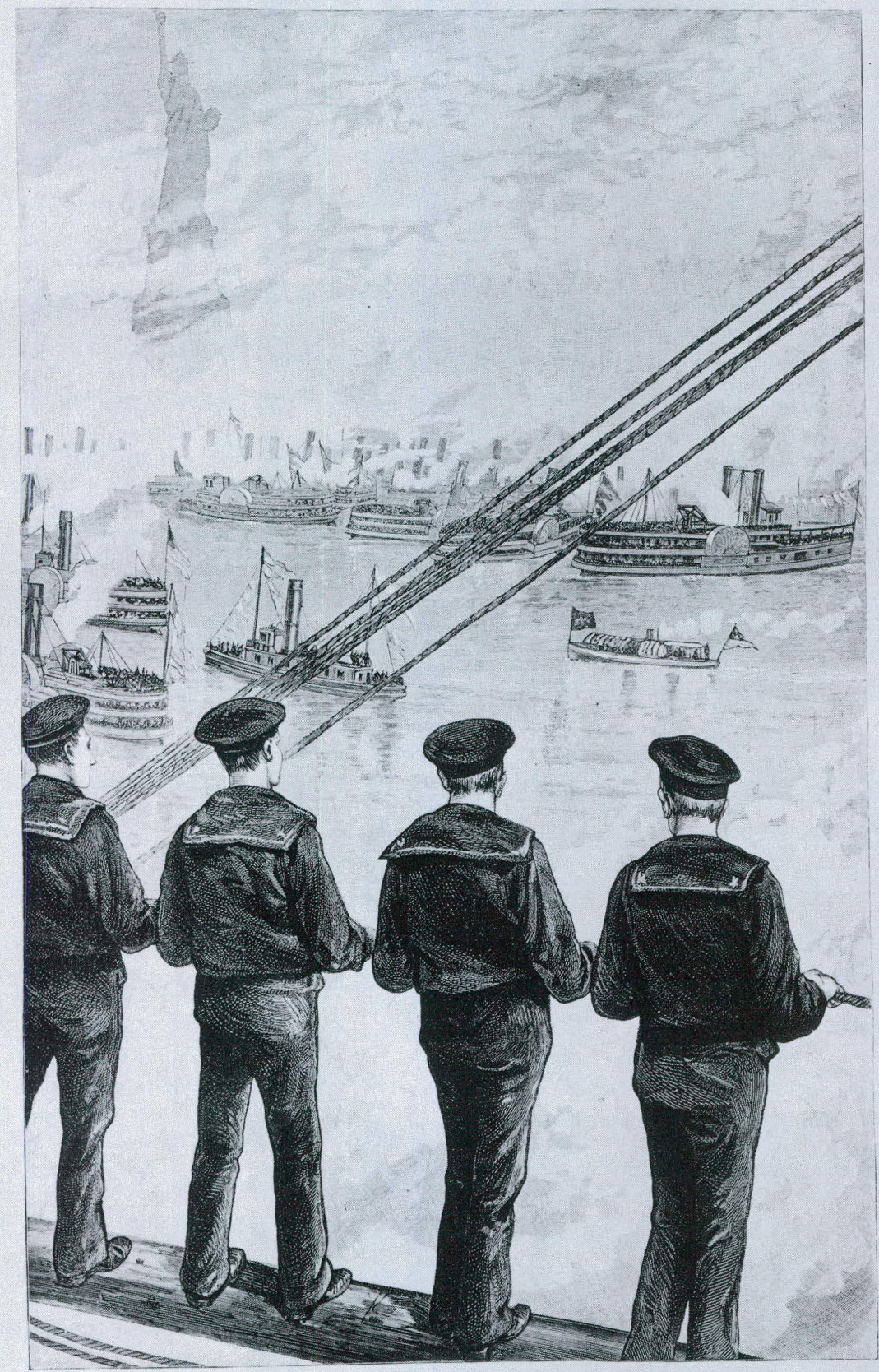
OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, D. C., November 20, 1886.

satisfaction with their timely performance. A day later, a squad of workmen was dispatched on the island by the Service to begin construction of an engine house. Over the course of the next several days the district inspector, with Lieutenant Millis' assistance, coordinated efforts with Goff and "company" to swiftly restore the beacon's light. No time was wasted — an engine house was constructed; the electrical apparatus was placed in perfect readiness; coal was delivered; and a mariner's notice was issued. The Notice to Mariners (No. 47, of 1886) entitled "Lighting the Statue of Liberty Enlightening the World, Bedloe's Island," made known that "having been placed under the care and superintendence of the Light-House Board, [Liberty] will hereafter be maintained as a beacon; and . . . lighted on Monday, the 22nd of November, 1886."

The **World** proclaimed on November 22 that "to-night, unless something unforeseen occurs, Liberty will cast off her red tape shackles and the whirl of the electric dynamos will again keep the sentinels company while on guard." The engine-house at the rear of the statue had been put in order. A storehouse filled with coal supplies was ready for the momentous event. Millis carefully assessed the needs of the lighting apparatus for its continued operation and dashed off a last minute list of protective measures for the Board's approval. The beacon did shine forth that evening without a hitch, although the flame still disappointed spectators appearing as a fiery ball suspended in air — purportedly the captains of the harbor steamers had no complaints. The Third District Inspector could now turn his energies to the creation of the light-station to serve "Liberty Enlightening the World."

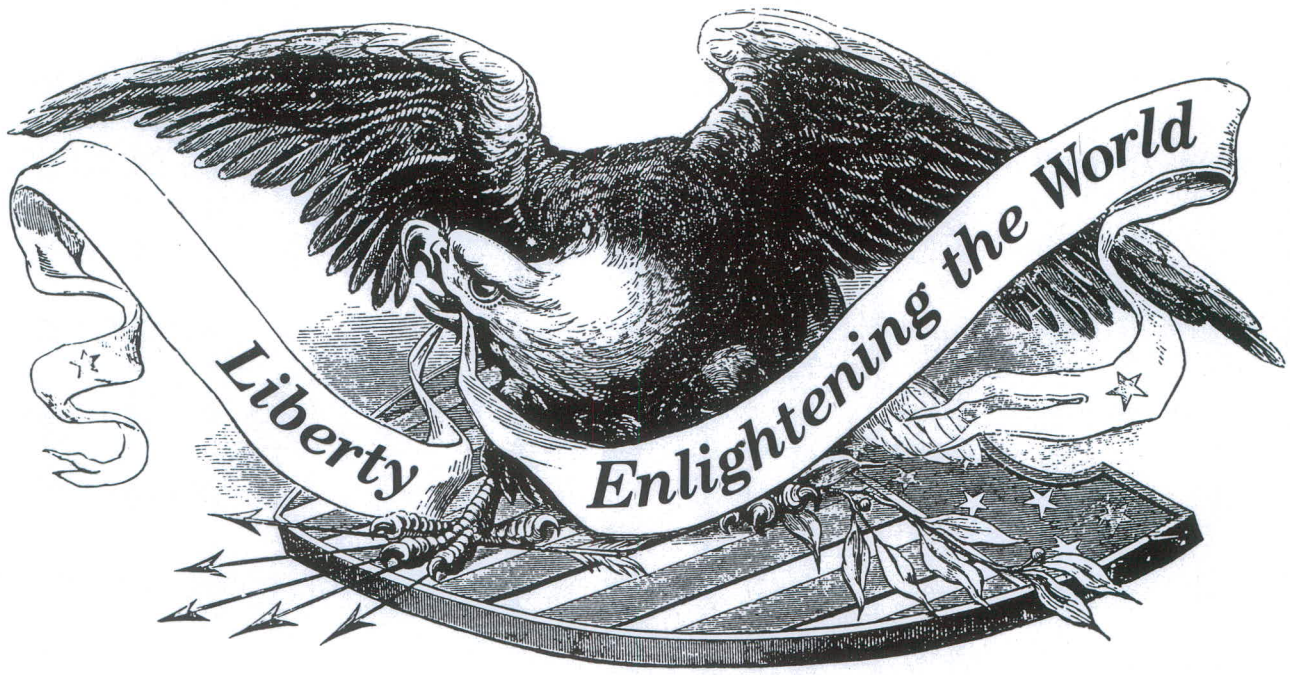


This is the first part of the two part story of Liberty Enlightening the World. Carole Perrault's fascinating story of Liberty under the Light-house Service will conclude in the Summer edition of the Log.



NEW YORK.—THE UNVAILING OF THE BARTHOLDI STATUE OF LIBERTY, OCTOBER 28TH.—PRESIDENT CLEVELAND PASSING THROUGH THE FLEET OF ASSEMBLED VESSELS IN THE LAUNCH "VIXEN," ON HIS WAY TO BEDLOW'S ISLAND. THE GRAND SALUTE.

FROM A SKETCH BY A STAFF ARTIST.—SEE PAGE 182.



Part II

by Carole L. Perrault

THE U.S. LIGHT-HOUSE BOARD: GUARDIAN OF LIBERTY 1886-1902

Carole L. Perrault is an Architectural Conservator for the North Atlantic Historic Preservation Center of the National Park Service.

Seeing the Year Out

A year marked by triumph and tribulation was coming to an end. The remaining weeks of 1886 saw the needs of the newly established **Liberty Enlightening the World Light-Station** being addressed, while fears were emerging over the statue's structural and physical integrity. The American Committee was becoming fully immersed in an endurance battle with Congress to complete the goddesses' approaches and pedestal. The eventful year would, nevertheless, conclude on a hopeful note. After all Liberty **was** not only securely fastened to her pedestal, she had an able-bodied guardian by her side keeping her beacon aflame. **What more could a lady ask for?...**

Appointing a Keeper

The real business of maintaining the lighted beacon began with the appointment of a keeper. In the weeks immediately following the relighting, it still had not been determined how many permanent keepers would be required. The Light-House Board in the interim hired a temporary force to maintain the electrical apparatus. The Edward P. Hampson & Co., which supplied the boiler, assisted the District Inspector in this endeavor by recommending four "young, energetic, sober, industrious" men to operate the steam plant. A December 7 letter to the Third District Inspector, Commodore Benham, from William F. Haring of the Hampson Company, offers insight into the deplorable and virtually non-existent accommodations for the caretakers: "They have no place to sleep, except one cot in the restaurant building." (An impossible situation, he elaborated, when more than one man was off watch.) Not only were his concerns for the comfort and convenience of the men, but he felt the equipment was being subjected to detrimental environmental conditions as well. Mr. Haring warned: the engine room "is so cold, that the oil thickens, and will not feed through the cups, endangering the bearings on the Engine and dynamo to burning out." The Light-House Board was addressing the issue of housing through the bureaucratic process. Finally on December 13, approval was given by the Secretary of War through the Secretary of the Treasury for the temporary use by the Board of a brick building on Bedloe's Island that was formerly a hospital. The structure was to be fitted for use "as a dwelling for light-keepers in charge of the Statue of Liberty." Happily, the year's end gifted Liberty with her first keeper—a Mr. A.E. Littlefield had been appointed in December to serve after



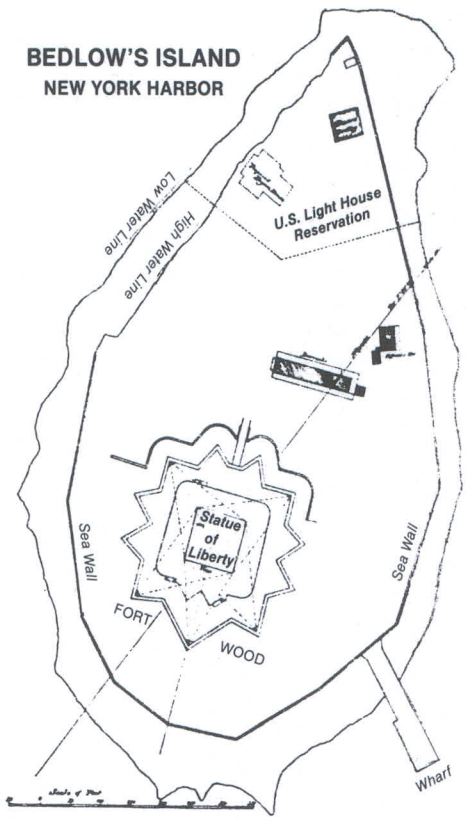
Under the watchful eye of the U.S. Light-House Board, Liberty could now safely radiate the sea linking France with the United States. This classic portrait was featured by the Board as the frontispiece of its published 1886 annual report. (National Archives photo.)

the 1st proximo. The American Electric Manufacturing Company engineer was notified to turn over the works to Mr. Littlefield.

Is the Bartholdi Statue Safe?

During the waning hours of 1886 an undercurrent of misgivings was already being expressed within the Light-House Establishment over the potential burden the gargantuan, metallic structure posed. The Engineer Secretary of the Light-House Board, Major David Porter Heap, reported in Washington on an inspection he made of the statue's physical condition. Major Heap declared to the press that the statue was structurally weak and defenseless against time's erosive tooth. He predicted that the torch arm would break in the not too distant future and that the sheet copper, which was already showing signs of corrosion, would be a constant expense to the government. The press turned to the construction Engineer-in-Chief, General Charles P. Stone for an explanation. General Stone counterbalanced Heap's fears with a reassuring response. The American Committee engineer cited the monumental Italian, sheet copper, statue of S. Carlo Borromeo as being 190 years old and still standing without any sensible diminution of thickness in the copper skin. Stone's solution for maintaining the structure was steeped in pragmatism, recommending the cyclic painting of the internal structure.

Major Heap became a protagonist in the early drama of maintaining the "lighted beacon" along with Lieut. Millis. Both men were clearly challenged by the physical structure of the colossus and the opportunity for creative exploration into the possibilities of illumination technology. Unfortunately, their assessments and solutions were bonded with a limited understanding of the physical reality of the materials; and a restrained appreciation of the aesthetics and integrity of the **objet d'art.**



The boundaries of the Liberty Enlightening the World Light-Station were at once defined. Other concerns requiring the immediate attention of the Third District Inspector included the appointment of a keeper, the establishment of jurisdictions on an island occupied by three powers and the fitting-up of a keeper's dwelling. *Note:* The most common spelling of the New York Harbor island is Bedloe's.
(U.S. Coast Guard print.)

The American Committee's Continuing Saga

Since taking the administrative reins for the beacon, the U.S. Light-House Board was so totally consumed by the immediate demands of reigniting the torch and establishing a light-station on Bedloe's Island that no attention was given to the fact that the "monument of art" was not complete. The treacherous and unsightly trek to Liberty, however, continued to be the overriding concern of the American Committee as the eventful year drew to a close. The steadfast committee members refused to give up their struggle with Congress to obtain an appropriation ($50,000 was felt necessary) for constructing the arches and steps, and grading the ramparts to bring the whole into perfect harmony.

A Preview of What Was to Come

Even the worldly-wise U.S. Light-House Board had never seen the likes of the problems it would encounter caring for the beacon of Liberty. Over the course of the next three years (1887-1889), the Establishment would come face-to-face with complications and issues which would not only characterize its 15 years of service to the colossus of New York Harbor, but would offer a preview of the mammoth struggles "Liberty Enlightening the World" would strive to resolve during her first century.

As the Third District engineers continued their task of transforming the goddess into a navigational aid, the New Year greeted the American Committee with a "charming and satisfactory report" prepared by the sculptor himself. Writing from Paris on January 5, 1887, Bartholdi expressed his great pleasure with the success of the work both in its details and in its **tout ensemble**—"I have not the slightest fault to find and I have no doubt that with care and looking after, the Monument will last as long as those built by the Egyptians." He further expounded on two aspects of the project which had yet to be fully realized: the questions of lighting and landscaping.

Defining Jurisdictions on Bedloe's Island

Prior to the Presidential action in 1886, responsibilities on Bedloe's Island were divided between two parties—the War Department for the functions of the military reservation and the American Committee for the construction of the Statue of Liberty. With the addition of this third line of administration (the U.S. Light-House Board),

it became imperative that the areas of jurisdiction for each group be clearly defined as early as possible. In consequence, a representative from both the Light-House Board and the War Department met "relative to the limits of the military reservation at Bedloe's Island, New York Harbor, and collateral questions arising out of the maintenance of the Statue of Liberty as a Light-Station."

A report was produced (January 31, 1887) with recommendations for jurisdiction. The recommendations were approved by the Secretaries of War and Treasury the following month and the argument set into action. Apparently, the American Committee was considered a negligible force in the matter of jurisdiction by the Light-House Board, and thus, its role was not addressed in this 1887 report. From 1887 until March 1, 1902, when an approved change in administration went into effect, the responsibilities were divided as follows: The **Army** controlled the "Military Post" encompassing most of the island and performed guard functions around the statue as defined by the Light-House Board. **The U.S. Light-House Board** had exclusive use of the "one and fifteen hundredths acres" at the northern end of the island designated as the Light-House Reservation. The Board maintained the lights and to a limited extent the statue and pedestal. The **American Committee** provided the ferry service for visitors to the island at twenty-five cents a round trip (children under 9 could ride free). One half of the fare was purportedly applied to the "Statue Fund" for beautifying and completing the work on the island.

Each entity had its own official guardian on the island. They included: First Lieut. A. G. Tassin, 12th Infantry for the War Department; Mr. Littlefield, principal light-keeper for the Light-House Board; and Mr. Charles O. Long, superintendent for the American Committee. Lt. Millis noted that the beacon was served by 1 principal keeper and 4 assistants in the standard survey form for light-stations which he completed on the Statue of Liberty January 14, 1887. In the same form, the brick keeper's dwelling was described as consisting of 16 rooms.

Establishing Rules for Visitors

They continued to come—the curious and the patriotic—hoping to rise to Liberty's heights. The Board realized from the outset that regulations for visitor admission to the attraction were essential, if any semblance of order was to be maintained on the island. The responsibility for establishing such rules fell on the shoulders of the Third District Inspector, with their final approval and publication the duty of the Office of the Light-House Board. Although on November 17, 1886, the Naval Secretary of the Board inquired of the district inspector what regulations he deemed necessary for the "exhibition of the Statue to strangers visiting the island," nothing had been finalized by the summer of 1887. A recent visitor's letter sparked interest in the fact, when he expressed shock at having discovered the monument was already being defaced by man. The Inspector conducted an investigation into the allegation, reporting that the only graffiti known to the caretakers was on the outside of the torch where the metal had been scratched with names, places and dates. Nevertheless, the Board immediately proceeded to approve a list of official regulations for visitation. Dated September 10, 1887, **"Rules for the Admission of Visitors to the Statue of Liberty and Pedestal Thereof,"** were published. The **"Rules"** noted that not more than ten persons would be allowed in the statue at any one time and not more than three persons in the torch at once. Two types of permits were printed: the first, for general admission to the statue; and, the second, for special admission to the arm and torch. The permits were distributed in late September to the three powers represented on the island. The following month the Light-House Board installed gates at the entrance to the statue from the pedestal and to the torch arm from the statue, preventing unauthorized admission into those spaces. Regulations were posted, as well, to deter the graffiti artist from defacing the "monument of art." Curbing the primal urge of visitors to scrawl their names and addresses would prove to be a losing battle throughout the U.S. Light-House Board's reign and the sublime shrine's first 100 years.

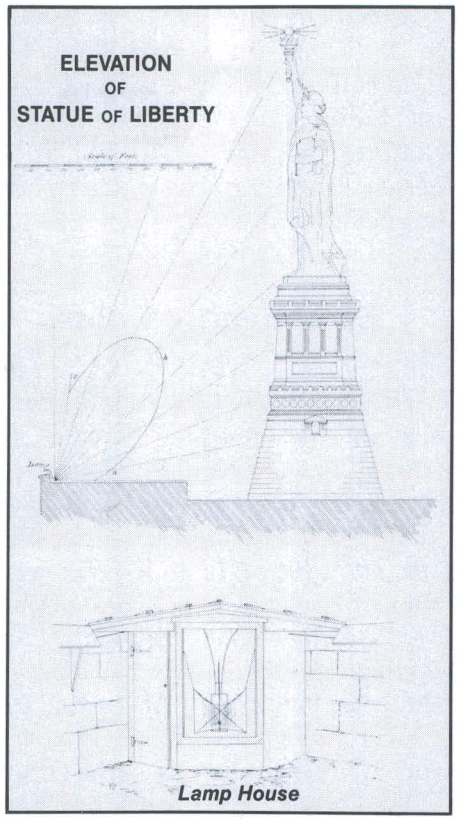
The Challenge of Electric Light Projection

While the Third District Inspector was fully immersed in the intricacies and complexities of placing Liberty Enlightening the World Light-Station in decent order, the district engineers were focusing on the special problems of improving and increasing the statue's lighting. Lt. John Millis, of the Engineers of the Third District, was instructed by the Board to submit a plan for a permanent lighting plant at the station. The hastily installed inaugural plant was necessarily imperfect, meant only as a temporary expedient. (The donated plant became the official property of the U.S. Government when the title was transferred from the American Committee through the Secretary of State in March 1887.) The Light-House Board succeeded in obtaining an appropriation for lighting and grounds improvements in the Sundry Civil Appropriations Bill approved March 3, 1887. The tightfisted Congress, however, only allotted $19,500 of a requested $32,500. The reduced amount would be expended, almost completely, towards a more efficient lighting installation—a definite priority for the Light-House Establishment.

Lt. Millis approached the task of improving Liberty's illumination with the **esprit de corps.** He immediately sought out critiques of the current system and recommendations for improvements from those players with a vested interest in the end result—the "pilots of the harbor" for the **beacon** and Auguste Bartholdi for the **objet d'art.** The pilots were asked to report "the greatest distances from which the light had been observed and the locality of the observation," in addition, to "any assistance afforded by the statue's light." Several pilot organizations responded with a potpourri of comments. The statue was reported seen in fair weather about 20 to 23 miles distance by some. Another noted seeing the beacon 10 miles east of the outermost light-ship and, so distinctly, that the tint peculiar to electric lights was visible with binoculars. The Hell Gate pilots pointed out that the city buildings within a specified parameter shut out Bartholdi's light.

Millis in an April 4, 1887, letter sought the sculptor's advice on "the most desirable effect to be produced by the illumination of the statue, and how the desired result may be best effected." Bartholdi offered a lengthy commentary several weeks later, confessing that it was the American Committee who entertained the idea of lighting the whole monument by means of electric projections. The proposal apparently deeply honored him, but he felt—however grand—it was hardly practicable because of the dull, dark surface of the copper skin. He further added that lighting by projection was a useless expense, unless the luxury of plating the statue with gold or some shining metal were a reality.

The **bel esprit** of the Liberty project explained that the only effective lighting in his estimation was to place a strong light in the hand giving the effect of a "powerful star," as attempted in the initial



An undaunted Lieutenant Millis steadfastly persisted in his quest to flood the goddess in light by electric projections, despite the sculptor's doubts for success. The engineer's 1887 plan for a permanent lighting plant at the station called for extending the present system to include 8 additional sidelights (making 13 in all), set in the salients of Fort Wood and protected by lamp houses.
(U.S. Coast Guard Academy Library.)

project. To satisfy the public's desire for a more original plan, Bartholdi suggested that a supplementary light shooting through the diadem openings would produce a decorative radiance. He went so far as to recommend fitting the diadem openings with stained glass ("so well made in America") representing the "national stars of the U.S." The sensitive, but accommodating, artist concluded his remarks by acknowledging that he was "confident that everything done under the Light-House Department will be performed with great and generous spirit shown by Americans in all their undertakings." This confidence would wane in the next decade.

Lt. Millis addressed the issues, posed by the illustrious sculptor, in the lighting plan submitted to his superiors on October 22, 1887. First to the question of illuminating the diadem, he stated that experience had shown that it would be a matter of great difficulty to carry out. With regard to the "proposition of covering the entire statue with gilding or other metallic plating," he noted: 1) the application and maintenance costs would be prohibitive; 2) the nearest practicable approach would be to paint the statue white or a light color; and 3) further study of a preservative covering was necessary to arrest the metal corrosion already taking place. As the Liberty light essentially satisfied mariners, Millis was spurred-on by the challenge of electric light projection to enhance the grandeur of the statue. He countermanded Bartholdi's defeatest attitude towards projection illumination, arguing that the side lights do pick out the details of the figure for the evening visitor to the island and the expense for their decent satisfaction was a trifle.

The engineer's plan called for the following improvements: erecting a separate building on the Light-House Reservation to contain all the electrical machinery; extending the present lighting system to include 8 additional side lamps (making 13 in all); placing in the torch "a single lamp or group of lamps arranged in a cluster and placed in the focus of a fixed lens of about 3½-order size; and the glazing of the torch flame as originally intended (more on this subject later); and the installation of an incandescent electric lighting plant for lighting the interior of the statue, pedestal and keeper's dwelling.

The improvements proposed by Lt. Millis were approved and the project set into action with the preparation of detailed architectural plans and specifications for the construction of the engine and boiler house in November 1887. Shortly thereafter a contract of $9,200 was let for the engine and boiler house work to Colin McLean of New York City. The John T. Noye Manu-

facturing Company of Buffalo was awarded the contract, in the amount of $3,240, for furnishing and erecting a new steam plant in November 1888. To communicate between the torch and engine house a system of call bells was introduced during the same year. By mid-1889 a cistern, a new coal house, and the engine and boiler house had been constructed and were in operation. The boiler, engine and dynamo were transferred to the new building in May without interrupting the light, Millis was to proudly report. Before the next phase of work could commence, an additional appropriation of $5250 from the penurious Congress was a must.

Acting as the Third District Engineer, and with an insatiable appetite for exploration into the possibilities of illuminating Liberty, Major David Porter Heap requested of the Board permission to try "the effect of an electric light in the head of the Statue of Liberty, so arranged that the light will show through the windows under the rays." The Naval Secretary for the Board granted approval on January 28, 1889, setting the stage for Liberty's next landmark relighting scheme to be realized in 1892.

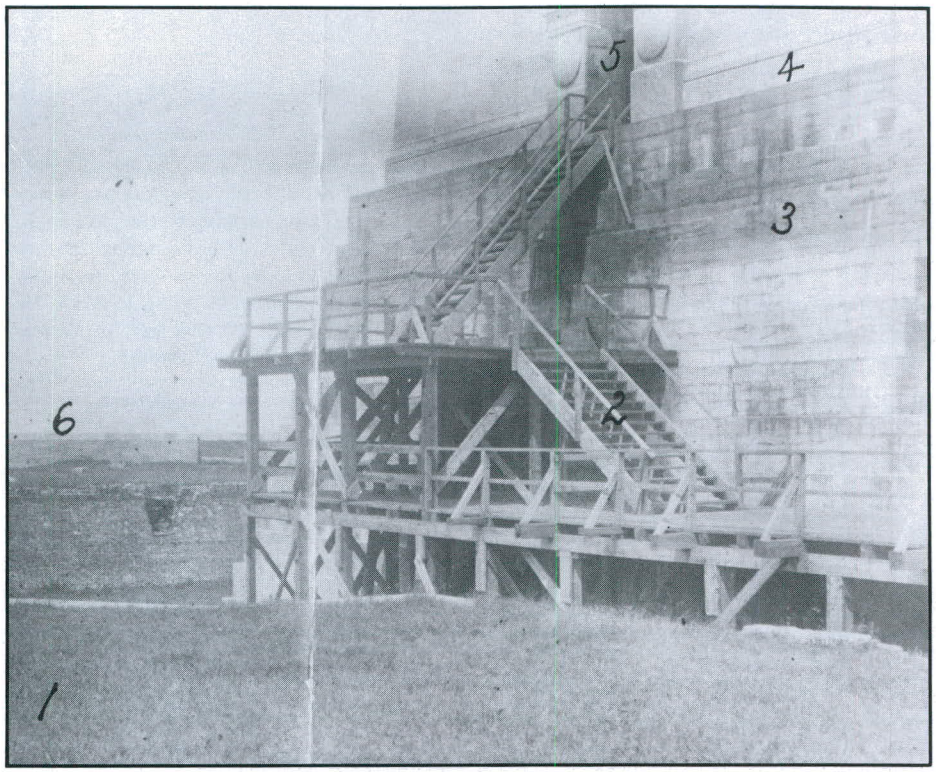
To their credit Millis, Heap and the Light-House Board were cognizant of the significance of their experiments, recognizing that projects for illuminating the metallic goddess of the harbor had historical import. Over the course of Liberty's first decade on Bedloe's Island, the engineers prepared a series of three reports intended for publication on their respective contributions. Appended to the published annual reports of the Light-House Board for the appropriate fiscal year (1887, 1890, 1892), these documents collectively provide a valuable account of the Statue of Liberty Enlightening the World's first decade of lighting history.

In 1889, the beacon of Liberty was not included in the system of lights for New York Harbor. The real value of the light to mariner's and consequently to the Light-House Establishment would be questioned throughout the next decade.

The American Committee Strikes Again

The American Committee saw 1888 arrive with the statue's approaches and pedestal **still** standing in an incomplete state "as a mortification to the people and a discredit to the nation!" The temporary wooden stairs to one of the doors and the wooden platform constructed for the inaugural ceremony had been left intact, offering the only feasible access into the hallowed monument. (The double spiral stairs were only then being installed in the statue from base to shoulders, as the Inspector's annual report for fiscal year 1888 specified.) The American Committee blamed Congress for the neglect. Treasurer H.F. Spaulding, acting **ex officio,** forwarded a memorandum to the Third Light-House District Engineer on April 27, 1888, seeking to enlist the services of the Light-House Board in their crusade. The Third District Engineer transmitted the memorandum to the Board with the following affirmation: "To accomplish their work properly would take at least fifty thousand dollars and I respectfully recommend that an item for this amount be inserted in the pending Sundry Civil Bill." The Board ordered on May 16 that the American Committee memorandum be conveyed to Congress through the Treasury Department with favorable recommendation.

The American Committee addressed the possibility of asking the public for additional funds in the document, noting "further appeals to the people...would be fruitless—they rightly consider that they have already done their part towards this **international** memorial." The dedicated, but increasingly bewildered



The statue's approaches and pedestal would stand incomplete until 1907 "as a mortification to the people and a discredit to the nation." The American Committee had continued its no-win struggle with Congress to complete the "monument of art." These temporary wooden stairs would serve as the prime access into the labyrinthian interior for twenty years.
(National Archives photo.)

memoralists concluded their plea with a benign threat, expressing that if the appropriation were denied, they would be reluctantly compelled to abandon the enterprise at the end of November next. The threat fell on deaf ears as the appropriation was denied. The American Committee struck out again! In spite of their verbal defiance, the pedestal sponsors would not abandon Liberty. This interplay between Congress and the American Committee would continue into the nineties and beyond.

...the Board was now forced to reassess its commitment to the "Lady of the Harbor."

Maintaining Liberty Through the Nineties

What appeared in 1886—an appropriate and fortuitous appointment—would be looked upon with growing frustration as the 19th century drew to a close. This attitude was generated and intimately linked to the beacon's serviceability to mariners which began to be questioned more seriously and directly by the U.S. Light-House Board in the 1890s, as it faced hard economic times. The underlying stumbling block was a parsimonious and tread-lightly Congress. As a proponent of "limited government," the reserved Congress would repeatedly ignore the pleas of the Light-House Board for additional funding to support a beacon which the sentinel increasingly perceived as "symbolic." From the outset, the proud guardian of Liberty did operate under a mixed allegiance to the utilitarian beacon giving a generous share of its illuminating attention to the "monument of art." With the escalating costs of maintaining the Light-House Establishment and congressional parsimony, the Board was now forced to reassess its commitment to the "Lady of the Harbor."

First and foremost, the designated Federal caretaker of the combined **beacon** and **objet d'art** was a service organization with an obligation to the seafaring, no doubt wishing to put funding where it would have the greatest impact on mariners. Its officers had a difficult time justifying tight monies in support of a "useless beacon." In the midst of their reevaluation, however, the Light-House Board did continue to maintain the Liberty Enlightening the World Light-Station. The keepers were still an active, although reduced (from 4 assistants to 2), force on the island performing three watches in a 24-hour period. In addition, its engineers tried to grapple with the dynamic action of time and the environment which was turning the copper skin from shades of brown to shades of black and green before their very eyes. The beacon would continue to glow forth throughout the nineties in spite of it all. As the 20th century appeared on the horizon, the demons of inaction and indecisiveness, in the guise of an unresponsive Congress, would be transformed into the demons of neglect and decay—**a sorry state for a goddess.**



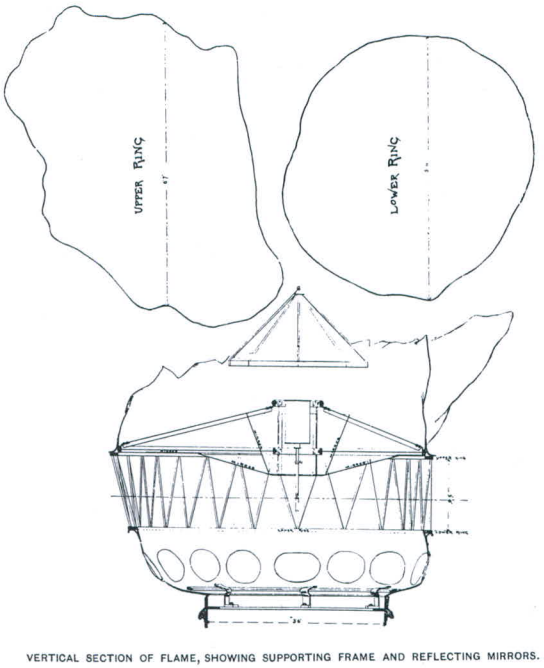
Keeping her beacon aflame. **The extraordinary navigational aid was served in the nineties by a keeper and two assistants who performed three watches in a 24-hour period. Shown here in complete Light-House Board regalia is an 1891 portrait of Charles Nicholas Miller, the then, First Assistant Keeper of the Liberty Enlightening the World Light-Station.**

(Photo from the Charles Nicholas Miller Collections, The Bronx Institute, Herbert H. Lehman College, Bronx, New York.)

The U.S. Light-House Board Wishes Lt. Millis a Fond Adieu

Congress would authorize in 1890 the additional sum of $5,250 and make available all the unexpended balances from the last special appropriation, thus opening the door for the completion of the permanent electric light plant at the station. Millis and "company" directed their energies in the early hours of the nineties toward this end. On April 30, 1890, a contract was awarded to the United Edison Manufacturing Company for a complete incandescent lighting plant with one dynamo and accessories for the sum of $1,692. Moving at record speed, the plant was finished and put in operation by June. Electric light burned in the keeper's dwelling for the first time on June 7, 1890. This action presumably inspired the Commanding Officer of the Post to wish the same luxury for the quarters and barracks under his jurisdiction. He requested permission, in November, to use the electric plant to power the Army structures. The Light-House Board promptly refused, succinctly stating that it was "impracticable to grant his request." The incandescent lamps inside the statue and pedestal excited everyone as well, but especially the visitor attempting to find his way in the darkened maze which was heretofore illuminated by a "few inefficient oil lamps." The climb to Liberty's crown was now a more enjoyable experience allowing the visitor to focus not only on the rigors of the climb, but on the internal workings of the goddess herself. The new lights enabled the custodians to monitor the gigantic figure's aches and pains with greater clarity and precision, too.

In May of 1890 a second contract was let. This award went to the



VERTICAL SECTION OF FLAME, SHOWING SUPPORTING FRAME AND REFLECTING MIRRORS.



Left: "...a flaming torch, flashing diadem and illuminated face." Major David Porter Heap's plan for "an improved method of lighting the Statue of Liberty," was implemented in 1892 in time for the New York-staged Columbian Exposition. (U.S. Coast Guard Academy Library photo.)
Right: The flambeau undergoes a "cut-and-try job" as its metamorphosis continues. The top row of holes introduced in 1886 was transformed into a glazed belt of plate glass panes, while the flame as a whole was crowned with a multicolored lantern. (U.S. Coast Guard Academy photo.)

United States Electric Lighting Company for a dynamo electric generator for the new lamp, for an experimental nature, to be placed in the torch. Plans were prepared for alterations to the torch to adapt it to receive the new illuminating apparatus. Additional miscellaneous work to improve and increase the lights at the station included: the rebuilding of 5 old lamp-houses in the fort and the building of 6 new ones; the refurbishing of the arc lamps in the torch and lamp-houses; and the making of slight repairs to the dynamos and steam apparatus. The wish list for the station featured a hoisting engine for lifting coal into the coal house. A horse was being employed, but its services were recorded as slow, inefficient and resulting in injury to the grounds.

At the end of the year, Lt. Millis was to curtail his assignment to the Third Light-House District as exigencies of the War Department would place him elsewhere. The Board commended the Army officer in their annual report for his highly-acceptable, special work, acknowledging regrets at the loss of his service to the Light-House Establishment. Later in the decade, Lt. Millis would reappear in the statue drama in the capacity of Engineer Secretary for the Office of the Light-House Board.

Colored Lights Bedeck Liberty

For one brief shining spell Liberty would dazzle forth with the national colors. Major Heap who expressed an interest in the problems of lighting the titanic diadem in 1889 continued over the course of the next several years his pursuit of a perfect lighting scheme for the spectre of Liberty. Finally on June 8, 1892, the Major submitted for the Board's consideration a detailed plan for "an improved method of lighting the statue of Liberty." The judging body approved the method of lighting on July 18, 1892, authorizing the engineer to take the necessary measures. He proposed a flaming torch, flashing diadem and illuminated face.

The metamorphosis of the flame from a solid sculptural form to a glass studded relic of endless repairs and alterations a hundred years later, had begun in October 1886 with the introduction of 36 circular holes at the base of the flame. The pre-inaugural plan was first "to insert a horizontal glazed belt composed of triangular panes of glass held in place by suitable framing so constructed as to conform to the original shape of the flame." Because of time constraints, the foreman of the lamp shop at the Light-House depot suggested the more expeditious plan of cutting the double band of circular holes. The 1892 project would see the realization of the first proposal, as the top row of holes would be transformed into a glazed belt of plate

glass panes, 18″ high. The greatest difficulty of physically implementing this work was the fabricating and fitting of the frame to hold the glass. Two rings, an upper and lower, had to be installed conforming to the irregular dimensions of the sculptured form. This was described as a "cut-and-try job" as the performance occurred **in-situ** in the confined space of the flambeau, approximately 6′x8′. Finally, the flame was crowned with a lantern. The lighting apparatus consisted of a self-focusing lamp of 5000-candle power and aluminum mirrors which reflected a portion of the white light horizontally and the rest in a vertical beam through a skylight, glazed with red, white and yellow glass.

The head and shoulders since 1886 had stood modestly out of sight as darkness would fall. To remedy this unfortunate situation, Heap proposed positioning an arc light of 2000-candle power under the balcony of the torch with a reflector which would focus light directly on the head. After experiments, the idea gave way to placing a powerful searchlight in one of the salients of the fort, throwing a beam directly on the classic countenance. For the diadem, the concept was to display the national colors in daylight and depict a crown of jewels at night. Two 100-candle power incandescent lamps, protected from the weather in a glazed lantern with reflector, were secured to each of the diadem's openings. Artfully, 12 red lights were placed in the center, flanked first by 6 white lights, and then, by 13 blue ones over each of Liberty's temples.

The Light-House engineer hastily pushed along the project's implementation for several reasons, including the fact that the Columbian Celebration was in October and he wanted the statue properly dressed for the event. To expedite the work he urged that a contract for the rearrangement of the light go to the Thompson-Electric Company, without advertising. The $3,309 award was authorized by the Secretary of the Treasury in early September. A Notice to Mariners (No. 90, of 1892) was prepared on September 30, 1892, acknowledging that the characteristics of the lights would be changed on or about October 21, 1892. The work proceeded in October and the full effect was to be seen, as publicized, on the 21st. Reviews of the project would be mixed and its life span prematurely shortened as Liberty Enlightening the World Light-Station was to become a victim of extenuating circumstances.

To Gild or Not to Gild

The unflinching Major Heap had not yielded to the opinions of others that the statue's lackluster surface would be an impossible task to illuminate. His most recent lighting experiments, however, would persuade even him to concede to the point of suggesting that the exterior acreage of the metallic repoussé work be covered with paint. In a joint report submitted to the Board on October 14, 1892, a resigned Heap, with the district inspector, recommended "that the Statue of Liberty be painted white for the double purpose of preserving the copper skin and to increase its visibility." The engineers elaborated further that under the most powerful of illumination the titanic figure remained practically invisible at night, at any great distance.

92.

NOTICE TO MARINERS.

(No. 90, of 1892.)

UNITED STATES OF AMERICA—NEW YORK.

LIBERTY ENLIGHTENING THE WORLD.

Notice is hereby given that, on or about October 21, 1892, the following changes will be made in the lights and illumination of the Statue of Liberty Enlightening the World, inside Fort Wood, Bedloes Island, New York Bay, New York.

In addition to the light now shown from the torch there will be a vertical beam of red and yellow light seen only by reflection from the haze or dust in the air.

The face and bust of the statue will be illuminated by a powerful search light from one of the salients of the fort.

The coronet will be decorated with red, white, and blue incandescent electric lights.

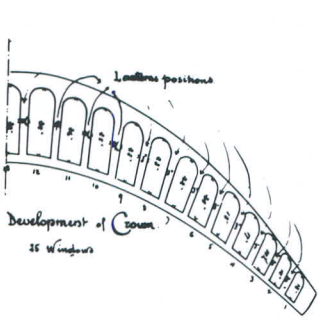
The pedestal will continue to be illuminated as heretofore by arc lamps within the salients and not visible outside the fort.

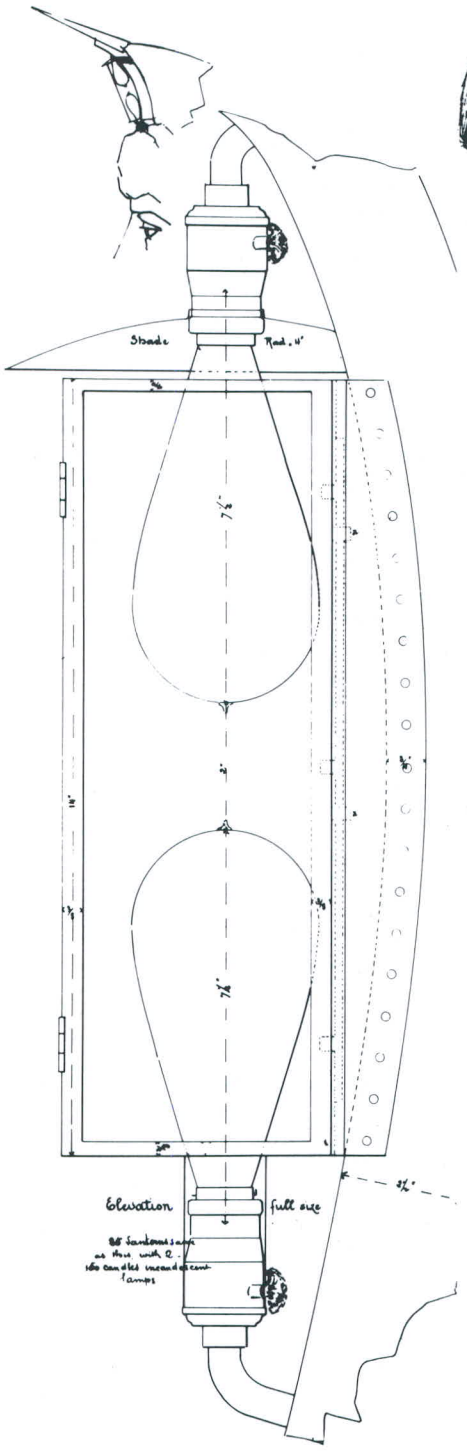
BY ORDER OF THE LIGHT-HOUSE BOARD:

JAMES A. GREER,
Rear-Admiral, U. S. Navy,
Chairman.

OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, D. C., September 30, 1892.

The noble diety dazzled forth, bedecked with color on October 21, 1892. The project's success was undermined by the uncompromising and highly absorbent surface of the copper skin.
(From the National Archives.)







HEAD OF STATUE, SHOWING LIGHT ON CORONET.
For the diadem, the concept was to display the national colors in the daylight and depict a crown of jewels at night. Engineer Heap's proposal included securing lanterns artistically fitted with red, white and blue incandescent lamps between the crown's 25 windows.
(U.S. Coast Guard photo.)

The Board proceeded to investigate the problem, although more from the pragmatic standpoint of preserving the copper skin. Its Engineer Secretary wrote to Bartholdi in May 1893, soliciting "suggestions both to the material and color of the paint to be applied." The shell of Liberty was described by the inquiring officer as being ⅛" thick and badly pitted. Although Mr. Bartholdi's response to the Board was not uncovered in research, he had expressed on an earlier occasion that he felt a solution would be to gild the entire statue. The dignified Frenchman returned to American shores in September 1893—his first trip back since the unveiling. He would reaffirm his belief in gilding, voicing his thoughts to both the press and the Light-House Board.

The sculptor expressed disappointment at seeing the downtrodden state of not only the illumination of his creation but the overall general conditions of her being. While articulating his blighted hope to the unfailing press, he presented suggestions that would help alleviate the statue's aesthetic and physical plight. The artist spoke again of gilding the colossus, realizing that if implemented the daytime effect would appear less artistic and more theatrical. He addressed these issues in a September 7, 1893 letter to Major Heap, proposing that some tests be conducted by placing treated panels on the balcony of the torch and viewing them under varying lighting conditions. Bartholdi was adamant, however, that if gilding proved too costly the alternative should be a metallic appearing coating. He elaborated on varnishing the surface as a means of further protecting it from the ravages of time.

As Independence Day 1894 approached, a solution had not been found. By then, the goddess was a captive of not only her physical problems but political ones as well. The U.S. Light-House Board was in the gripes of a confrontation with Congress over funding—the **lighted beacon** was now in double jeopardy.

Will the Beacon Be Continued?

The first rumblings towards the extinguishment of the light were felt in early December 1893. At its December 7 meeting, the Board's Committee on Lighting was ordered to report on "the necessity for continuing the lighting of the Bartholdi Statue of Liberty." The report, submitted at the February 5, 1894, session was flavored with strong words, concluding that "so far as maintaining the Statue of Liberty is concerned as an aid to navigation...it is of **no importance whatever**...hence the only necessity for continuing the lighting is the requirement of the Joint Resolution." The bottom-line recommendation of Mr. T.L. Mendenhall's committee urged "that the necessary action be taken to obtain congressional sanction to extinguish the beacon entirely so as to eliminate this large item of expense from the Light-House Establishment." The recommendation was adopted **nem. com.**

The Committee on Lighting based their recommendation on hard facts. They wrote that the beacon "stands on no range, and it is so far inland as to be of no value in guiding vessels toward the port of New York." Not even five years old, the electric plant was described as already in the process of rapid deterioration, and shortly requiring costly renewal. The most disturbing facts presented related to costs. The annual expenditures for the light-station for the seven years since its establishment were tabulated. From the general appropriations for the Light-House Establishment $64,759.92 was expended, with the yearly average amounting to $9,251.42. With an already insufficient allocation by Congress, the almost $10,000 per year to support a useless beacon was spared with great difficulty by the Establishment. Purportedly, the district officers had already done what they could to reduce the cost of maintaining the beacon, cutting off all lights except those absolutely necessary. With this data in hand, the Light-House Board proceeded fast and furiously to relieve itself of what had become the "Bartholdi burden."

The word got out that the Light-House Board desired to relinquish its control over the beacon. W.O. McDowell of the Sons of the Revolution proposed in 1894 that the statue be taken over by the "representatives of the different great Liberty loving organizations." McDowell set forth his ideas to the Treasury Department. The anxious Light-House Board—who at this point was willing to accept any proposition—considered McDowell's plan excellent, noting they would "gladly" abandon their control and property in question upon an Act of Congress.

In the interim the Treasury Department sought to revert back to the War Department the property designated as the Light-House Reservation. In the process of having this action endorsed, the War Department threw a snag in the works. The Commanding Officer of the Post felt McDowell's proposal was inappropriate and unrealistic. He recommended that the entire works be transferred to the Quartermaster Department of the Army, maintained by estimates made quarterly by the Post Quartermaster. This Army officer had been in contact with the secretary of the American Committee who supported both his denouncement of the McDowell proposal and the recommendation that the Army take over complete control of the 12½ acre island. The move to transfer the custodianship of the light-station was dropped by the Light-House Board, not to resurface again for almost seven years.

Over the course of the next several months, the remaining decorative lights on the colossus would be slowly extinguished to cut down even more on costs. First went the diadem lights, then the searchlight and quadrangular lights, leaving only the torch light exhibited by July 1895. At this instance the Light-House Board appears to have made an about-face, as a new interest in the maintenance of the Liberty Enlightening the World Light-Station blossomed. The district inspector wrote to the Board in July, expressing his belief that the present system of lighting could be much improved, while reducing maintenance costs. The Committee on Lighting proposed that "the necessary action be taken to reduce the running expenses by substituting more efficient apparatus for operating the lighting system now established." The solution was to introduce an oil-generated engine. The 10 HP Hornsby-Akroyd Oil Engine was installed in October 1897. With this resurgence of commitment to the beacon, came a new interest in the issues of maintaining and completing the "monument of art."

The "Monument of Art" Needs Help

The American Committee was fully distraught over the never ending congressional scenario and, in 1894, its secretary turned to the War Department for help. An alliance between the Army and the citizen's committee developed, placing the Light-House Establishment in the role of stand-in villain for a neglectful Congress. In a lengthy letter to the Post's Commanding Officer, Secretary Richard Butler acknowledged the citizen's group had $40,000 and would need $100,000 total to complete the works. He confided that in May 1886 the Executive Committee of 7 had placed its affairs in a committee of 3 to see the inauguration through. This number dwindled down to 2, when in December 1893 it was revitalized to 8 members. Mr. Butler disclosed that plans for the approaches and pedestal had been finished for years.

The Committee's prime involvement with the statue during the decade following the unveiling was to run a successful ferry service, with the profit supposedly going to a "beautification fund." Obviously, the pedestal committee had essentially stayed away from the site, only financing a few minor repairs and some painting projects. A watchman continued to be on duty during the daytime hours to keep the kerosene oil lamps burning—the interior incandescent lights were the first to be consumed when economic hardship hit—and to sweep out the statue.

The press in the 1890s exposed the apparent neglect and general dilapidated appearance on the island, blaming the lack of proper watch care the culprit. One journalist likened the "retreat" to Coney Island, punctuated by beer selling and fast-food shanties. the same reporter, representing the **New York Herald,** actually spent two days on the island assessing the conditions with a detective's eye, particularly "the wanton defacement and mutilation of portions of the splendid monument." Graffiti was discovered to be everywhere. The tools of the crime were recorded to have included lead pencils, chalk, pen knives, diamond

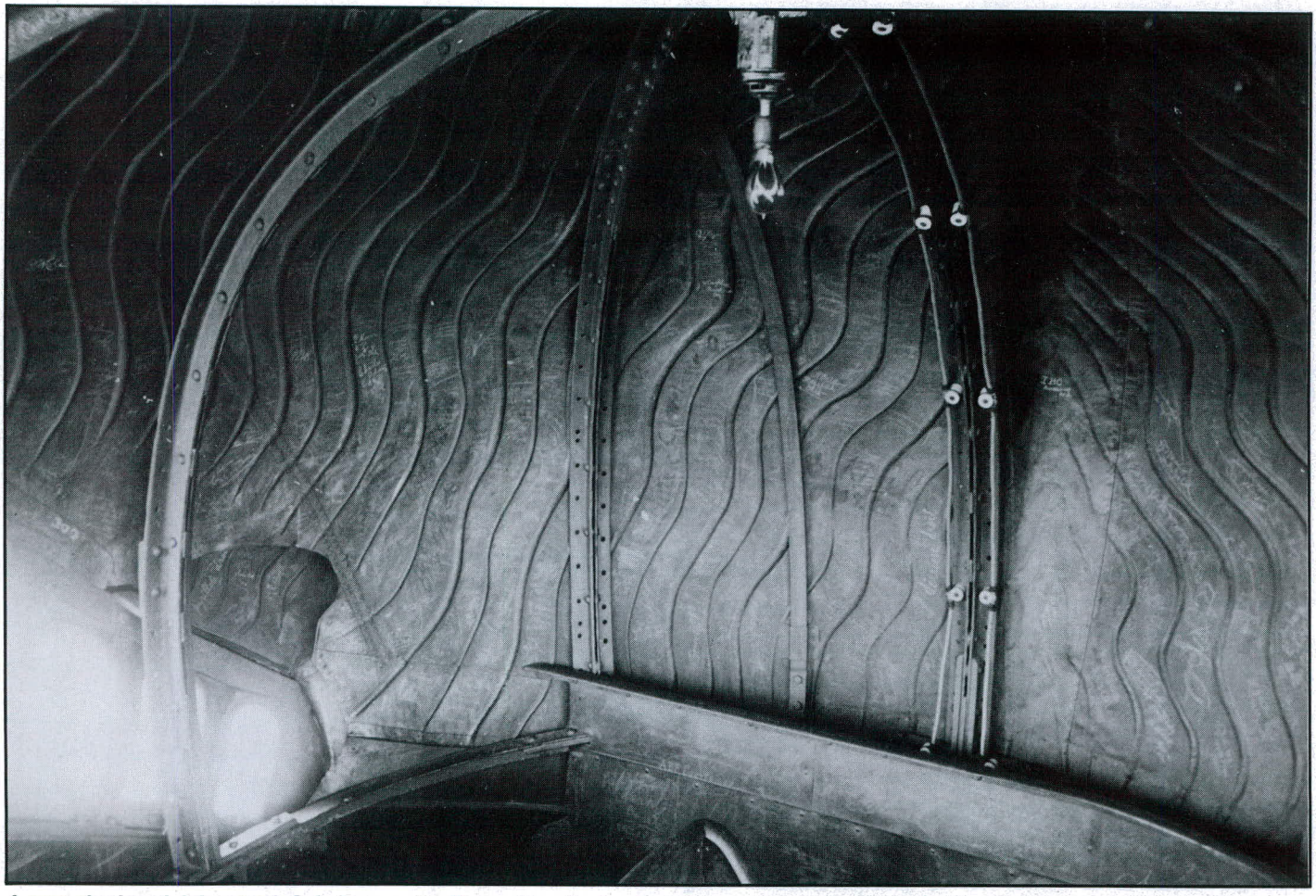
rings and hat pins. The fastidious and incredulous sleuth even tried to analyze the nature of the graffiti beast, broadcasting that "among the Americans cultured Boston comes to the front with surprising strength," in signatures surreptitiously planted on the noble diety.

The U.S. Light-House Board in September 1896 ordered that the Third District Engineer submit a conditions report "with estimates detailing the repairs and improvements needed for the preservation and maintenance of the statue, and putting the surroundings in proper condition." What precisely stimulated this newfound interest in the **object d'art** is not entirely clear. Although, an undercurrent of friction between the Establishment and the American Committee was becoming more and more apparent with each blaming the other for the blatant neglect of the monument. Even to the point, that the Board's annual report for the fiscal year 1896 recommended "that the so-called American Committee be relieved of its charge." The rift was growing deep, as the following unsavory commentary by the Third District Engineer divulged:

> *...the present condition of the Statue is disreputable as regards its interior maintenance where inspected by visitors, its exterior illumination as viewed from a distance, and its status as a 25¢ show as run by the "Committee" which assumes sole charge of it.*

An engineer named Lamy did prepare a conditions report which was transmitted to the Board in November. (Unfortunately, a copy of the study has not been located.) The Committee on Engineering acted on Mr. Lamy's recommendations, specifying a list of needed repairs be undertaken. In addition, two ancillatory items were given approval: first, that research be conducted into a method for cleaning the outside of the statue; and secondly, that the infamous American Committee be asked to furnish plans and estimates for additional work in connection with the statue.

In response to the letter, Lt. Millis (who was now the Engineer Secretary for the Board) made an inquiry of Richard Butler. Mr. Butler in a cryptic December 22, 1896, letter stated: "The American Committee has no plans nor estimates for any additional work in connection with the Statue." **Whew!** In January 1897, orders were issued that the noted repairs and improvements be performed as soon as possible. All, then, grew quiet on the eastern front as the 19th century drew to a close. The dawn of a new age in Liberty's life was about to unfold.



A case of colossal defacement. Only 4 years after its unveiling, the head's interior contours already carried the vestiges of a myriad of visitors.
(Photo from New York State Museum, Seneca Ray Stoddard Collection.)

AU REVOIR U.S. LIGHT-HOUSE BOARD

Liberty Enlightening the World Light-Station greeted the 20th century in a sad state. The physical conditions on the tiny island had continued to deteriorate in spite of the recent surge of interest by the Light-House Establishment. Clearly the complicated and discordant administrative framework was partially at fault—the Light-House Board and the American Committee had locked horns preventing any constructive caretaking. (The fact that no clear lines of jurisdiction had been established initially had come to haunt the relationship between the two.) Dissatisfaction with the arrangement was felt by all parties including the omnipresent press who cried that "continued neglect will...endanger the structure." The U.S. Light-House Board again took the reins by ordering that a conditions assessment be undertaken by its district officers. The January 2, 1901 report addressed the allegations that the statue was being weakened by rust, corrosion, decay and lack of attention. The officers concluded that the goddess was in no danger, although stressing the general rundown at the seams appearance and the timeworn management. It would take a sympathetic plea by an artillery officer to save the day for Liberty.

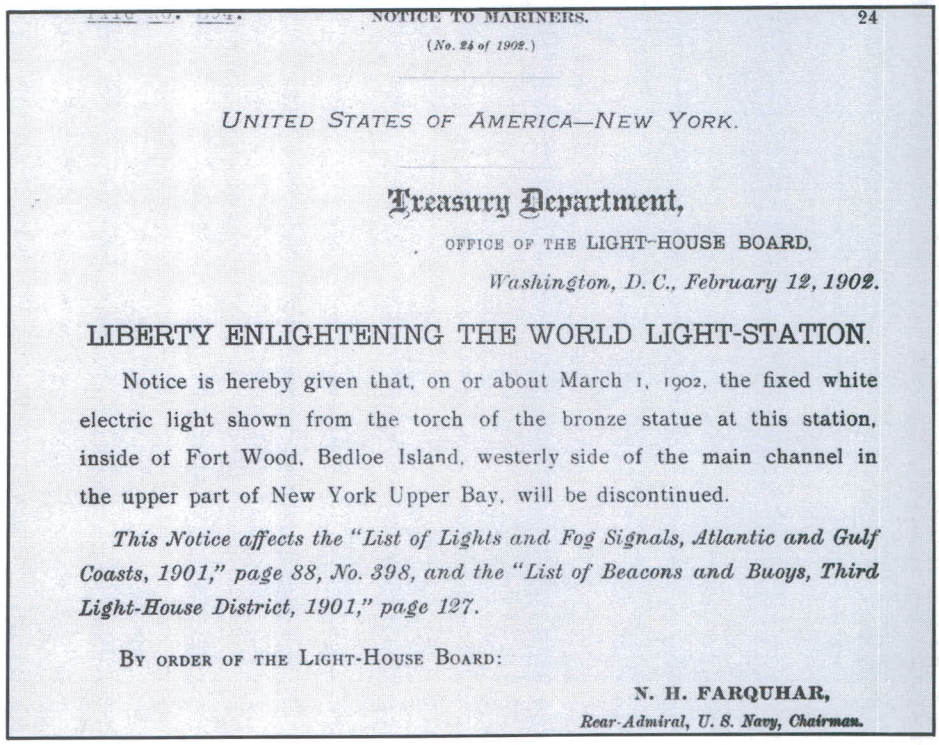
Major A.C. Taylor in a June 30, 1901 memorandum to the Adjutant General, Department of the East, appraised the existing conditions on the island and offered recommendations for correcting the impossible state of affairs. In graphic detail, the Commanding Officer of Fort Wood described the discreditable state of ill-repair to which the colossus had fallen—inside and out. "If anything is to be done to prevent this grand work of Art from deteriorating and actually falling to pieces, it must be done by the General Government," he urged. On July 5, the Major General, Commanding, recommended that the statue be placed in the complete control of the War Department. Over the course of the following months the Secretaries of the two Departments would bond together to induce the President to so "modify the order of 16 November, 1886, that the statue may hereafter be maintained as a beacon, but not as a **lighted beacon;** and that the statue be transferred from the care of the Treasury Department to the War Department..." President Theodore Roosevelt approved the recommendation on December 30, 1901.

Extinguishment of the Light

In its characteristic matter-of-fact manner, the U.S. Light-House Board prepared for the extinguishment of the enlightened beacon. A date was set by the district officers for the historic event—March 1, 1902. A Notice to Mariners (No. 24, of 1902) was promptly issued, as property lists were compiled. On schedule, the **lighted beacon** of Liberty was no more and her keeper was relieved of his duty.

POSTSCRIPT

- The property and grounds of the Liberty Enlightening the World Light-Station were transferred officially to the War Department on March 27, 1902.
- The virtually extinct American Committee presented a check for $38,989.49 to the Treasurer of the United States in June 1904, thus ending its almost 30-year involvement with Bartholdi's "monument of art."
- The approaches and pedestal were completed in 1907, although not to original plan. The work included the installation of an elevator in the pedestal—her first!
- The initial floodlighting attempt in 1886 incorporated the latest in lighting technology. The subsequent floodlighting schemes of 1916, 1932, 1945 and 1976 would follow suit.
- In 1937 all of Bedloe's Island was transferred to the National Park Service (who had managed the statue since 1933) for the sole purpose of interpreting "Liberty." Bedloe's Island was officially changed in name to Liberty Island by a Joint Resolution of Congress, signed by President Eisenhower in 1956.



NOTICE TO MARINERS. 24

(No. 24 of 1902.)

UNITED STATES OF AMERICA—NEW YORK.

Treasury Department,

OFFICE OF THE LIGHT-HOUSE BOARD,

Washington, D. C., February 12, 1902.

LIBERTY ENLIGHTENING THE WORLD LIGHT-STATION.

Notice is hereby given that, on or about March 1, 1902, the fixed white electric light shown from the torch of the bronze statue at this station, inside of Fort Wood, Bedloe Island, westerly side of the main channel in the upper part of New York Upper Bay, will be discontinued.

This Notice affects the "List of Lights and Fog Signals, Atlantic and Gulf Coasts, 1901," page 88, No. 398, and the "List of Beacons and Buoys, Third Light-House District, 1901," page 127.

BY ORDER OF THE LIGHT-HOUSE BOARD:

N. H. FARQUHAR,

Rear-Admiral, U. S. Navy, Chairman.