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“THE LEAVES OF ARCHITECTURE:  
AN OUTLINE OF SOME MEANING GIVEN TO  
BOTANICAL ORNAMENT  
IN WESTERN ARCHITECTURE”

# THE LEAVES OF ARCHITECTURE

An Outline of Some Meanings Given to Botanical Ornament in Western Architecture

by Kent Bloomer

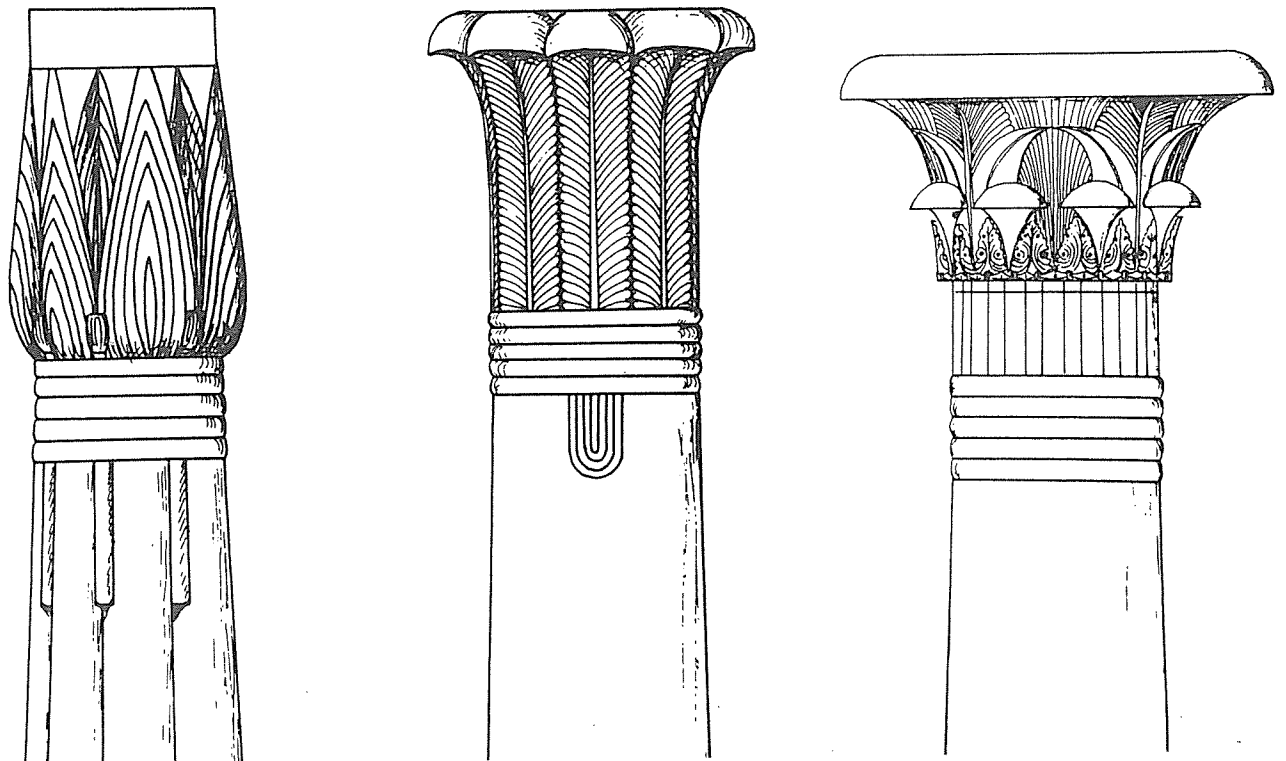
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The carvings of leaves on the capitals of buildings from the mastaba of Ptah-Shepres of the Vth dynasty of Egypt to the exterior of the Carson, Pirie, Scott store in Chicago provide us with evidence of man's feelings and beliefs about "nature." They demonstrate the potential of buildings to reveal aspects of a culture which might not otherwise have been recorded if their architecture had been restricted to the mere expressions of internal spatial and technological functions. Indeed, until recent times (and hopefully once again), great buildings have commemorated man's psychological and mythical vision of "nature" by incorporating figures from the external landscape within the permanent fabric of the building. Among the countless natural figures that one might choose to study

from history (such as animals, birds, shells, stars and man), I have chosen leaves because of their particular persistence and beauty.

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One of the earliest examples of leaves in architecture may be found upon the lotus capital in the rock-cut tomb of Abusir in the Old Kingdom of Egypt. The lotus for the primitive Egyptian was a symbol of the powers of life, light, air and sun in the battle against the powers of the abyss with its darkness and death. Clarke (in *Myth and Symbol in Ancient Egypt*) describes the "cosmic lotus" as a luminous water lily rising out of a limitless dark sea and emitting the light of the world. This is the redolent flower in which the soul of Re (the high God of Heliopolis) resides. The stone leaves were derived from decorations originally installed on the top of reed and mud columns supporting the roofs of traditional houses, placed there to deliver into the home the fertile powers of nature. In the tombs the details and furnishings of the house were faithfully reproduced to perpetuate those powers in the eternal residence of the dead.



*Egyptian Lotus, Palm, and Composite Capitals*

By the end of the Old Kingdom in Egypt the supreme symbolic power of the lotus declined to the status of a poetic rather than a speculative mystery. It was destined in the world to become the most pervasive symbol in Buddhism, alive today in many parts of Asia.

An alternate and more common Egyptian motif, composed of palm leaves capping bundles of palm trunks, eventually became the dominant order of the lower Nile, while in the more arid regions of the South small sedge-like flowers were tucked into the bindings of domestic papyrus columns. Subsequently, by the 18th dynasty, when a grand federation of Egyptian culture was achieved, its history was canonized, and composite capitals appeared in which the palm, the lotus and sedge were combined to cap the enormous halls of Karnak and other civic buildings.

Thus, for ancient Egypt, the leaves originally performed as emblems of fertility and represented sacred plants which brought protection and sustenance to both the land and the people. However, as they evolved into symbols of a specific region they became "customary memory images" commemorating the State of Egypt rather than the sacred power of the plant.

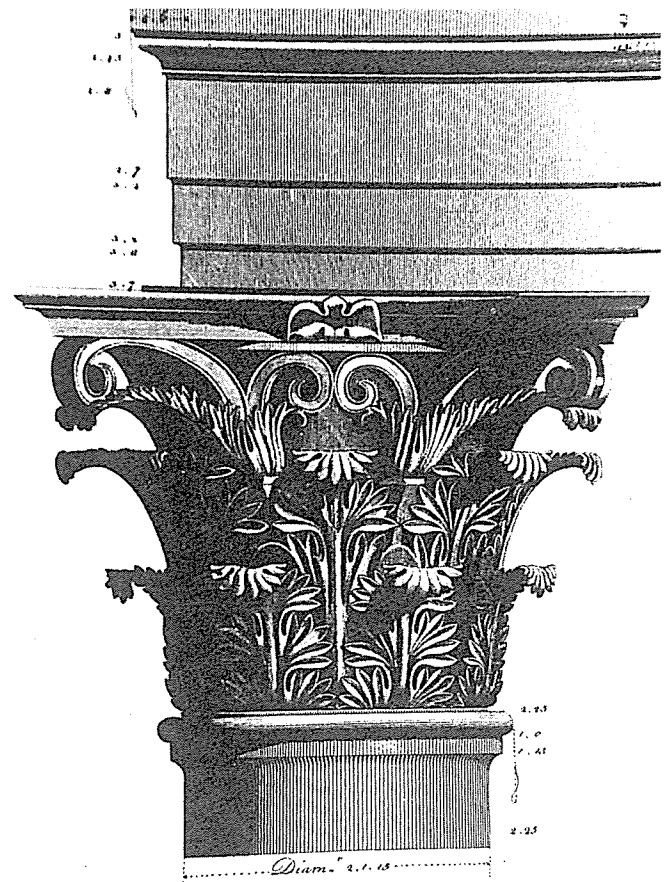
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Perhaps the most remarkable characteristic of the botanical image in classical Greek architecture is its nearly complete absence in principal architectural ornaments with the exception of the Corinthian order. Because Corinth was a wine-growing region and a metropolis that was to become a Greek center of elegance, wealth, and refinement in the late periods of classical civilization, it is not surprising that the capitals of that region were more embellished than the primitive Doric or eastern Ionic precedents. But why a leaf, and the acanthus leaf in particular?

Clues are provided in the books of architecture by both Vitruvius and Alberti. In Alberti's Book VII, when he discusses different sorts of capitals, he comments on a "certain (Corinthian) artist, named Callimachus, who . . . disliking a squat cup (a reference to the Doric Capital), made use of a high vase covered with leaves, in imitation of one which he had seen on the tomb of a young maiden all overgrown with the leaves of an acanthus, which had sprung up quite round it, and which he thought looked very beautiful." This was the mythic origin of the Corinthian capital, "designed to cap the principal ornament in all architecture which certainly lies in the Columns . . . which preserve the memory of Great Events." Vitruvius, in Book IV, referred to both the botanical and the feminine in his discussion on appropriateness by declaring that, "the temples of Minerva, Mars, and Hercules, will be Doric, since the virile strength of these gods makes daintiness entirely inappropriate to their houses. In temples to Venus, Flora, Proserpine, Spring-Water, and the Nymphs, the Corin-

thian order will be found to have peculiar significance, because these are delicate divinities and so its rather slender outlines, its flowers, leaves, and ornamental volutes will lend propriety where it is due."

The acanthus is a somewhat weedy, thistle-like small bush that grows in arid climates, although it requires rich soil. Often it is found growing on tombs, holding tenaciously to life and dramatizing in that setting a living presence juxtaposed with the dead. Indeed, the representation of a life and death cycle in the Corinthian capital of ancient Greece may be the essential classical ornament by the incorporation of a temporal and delicate leaf into the geometry of a permanent stone fixture. This reveals the Platonic and early Christian tendency to construct meaning out of opposing pairs. It is still a tradition in Latin cultures to adorn churches and tombs with freshly cut green festoons and colored flowers surrounding a funeral ceremony, by contrast with the pure and deathly white flowers and streamers used to celebrate a wedding ceremony.



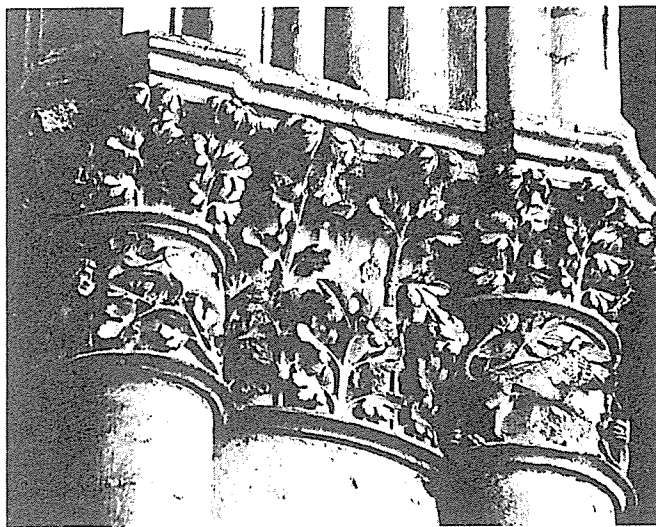
Corinthian Capital

After the decline of Greek culture, and prior to the Renaissance, the leaves of architecture may have reached their greatest moment in the flowering of 13th century Gothic in both France and England. The Corinthian capitals, stylized and stiffened by the Romans, had survived in the naves of Romanesque churches and certainly set the stage for new and refreshing 13th century leaves.

Fortunately, perhaps, the original Greek meanings given to the Corinthian order, were lost, for like the ancient Egyptians and Corinthians, the northern medieval sculptor chose to portray native plants available in the immediate region, plants which for reasons peculiar to the medieval mind also had a measure of magical and sacred power.

Joan Evans, in her wonderful report on medieval leaves, refers to the immense fatigue of the dark ages during which the cloistered "artist" was locked inward, away from the landscape. As he emerged from that gloomy and contemplative state and moved outside the cloister a new vision of nature a desire, to literally depict plants and animals, began to develop.

His first place of investigation was the kitchen garden with its herbs and small plants such as parsley, violet and primrose. At that time the more distant woods and fields must still have been experienced as intangible "reveries" of nature that wafted emotionally through a cloistered mind. Eventually brookside plants, such as bracken, plantain and watercress appeared in capitals; and after that the apple and pear orchards provided motifs along with laurel, cypress and cultivated vines. Finally, the trees of the forest were incorporated into their world and became visible within the sanctuary as oak, poplar, elm and chestnut leaves.



*A representative Gothic Leafed Capital*

This 13th century record of the plant world might be regarded as a scientific journal to the extent that it was concerned with variety and specific likeness, especially considering that there were no herbal or botanical manuals accessible at that time. On the other hand, the record was patently unscientific by its lack of concern for relating sizes of one plant to another or attempting any kind of botanical registry of plants in relation to plantlife as a whole. Actually, the capitals were delightfully medieval in the placement of people and birds alongside leaves in whatever size they deemed important. In the 12th century sculpture in the Cathedrals of Vezelay and Autun, for example, size was determined more by spiritual than physical dimensions.

Above all, one is struck by the fullness, sensibility and truth-to-life of the 13th century leaves. "The sculptor has nowhere gone so far as to force his leaves into decorative symmetry. Leaf, he felt, must remain leaf and never be reduced to abstract pattern." Although the figures were translated into the language of stone.

Thus we see in the late middle ages an attitude which seems pantheistic in its revelation of a living and accessible earthly paradise. For a brief moment the Westerner was out from under a stilted classicism and not yet into a scientism in which his vision of nature within architecture would become increasingly subjected to the abstractions of geometry.

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To comment on the effect of rational thought on the mysteries of the botanical image in architecture is beyond the scope of this brief essay; although it is important to mention that the geometry of neo-classicism spawned by the Renaissance was to become the nemesis of our leaves. The secrets of nature for the 15th century architect resided more in the abstract expression of numbers, symmetry and proportions than in the more literal or figurative representations of earthly life. Leaves did continue to occupy the surfaces of Italian and French neo-classical buildings for centuries, but they did so as rather stylized and impotent pastiche locked within geometric frameworks. If the leaves of the post-Renaissance had an artistic life at all, it was to be found on the canvases of landscape painters rather than in the material of architecture.

Fortunately, there was an alternate tradition to the neo-classical, which found strong theoretical expression in 19th century England as well as artistic expression throughout the Western world in the period which culminates with Victorian architecture. During that episode a flurry of new leaves appeared in architecture which deserve some attention.

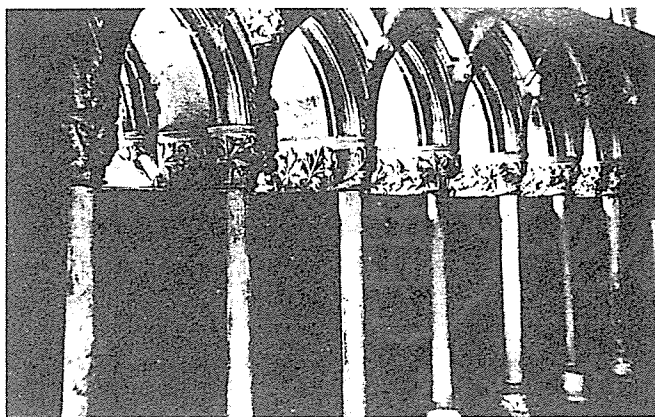
England's endemic dissatisfaction with classicism (despite her sporadic acceptance of Renaissance motifs and plans) seems to be rooted in a preference for the rustic. Noble and royal houses resided in the countryside, rather than the city.

While the English architect sensed “home” in the landscape, the Mediterranean architect sought “civilization” in a city walled-in from nature. Recall that Shakespeare did not make a reference to a “city,” but rather to a “court” as man’s highest place, surrounded by field and forest. Joseph Rykwart commented that “King Arthur’s Camelot was sometimes seen as the nearest thing Britain had to a lost paradise,” and in 18th century England there were even speculations that architecture originated in the form of a grove in the forest.

Ruskin declared a more emphatic theoretical opposition to geometry and classicism in the mid-19th century as he witnessed the destruction of the countryside by the instruments of industrialization. He was looking outward at the landscape and claimed that, “All beautiful lines are adaptations of those which are commonest in the external creation (and) . . . all perfectly beautiful forms must be composed of curves.” He lavished praise on leaves which were common, familiar, and curved while describing Greek frets as ugly and artificial. He saw in the Greek fret an underlying regular (industrial-like) geometry which was a rare and unfamiliar occurrence in visible nature, manifest only microscopically in the form of bismuth-crystals. He felt that if a worker or craftsman was required to construct those straight lines and repetitions he would be a depressed slave to an intransigent authority; whereas if a worker were allowed to represent natural elements he would experience a measure of joy and reveal the power of the divine creation.

Thus, for Ruskin, the visible shapes found in the rustic landscape revealed an order, in fact a natural system, which if violated might lead to an apocalypse. He called for the spectator, the architect, and the worker alike to celebrate that system through a process of modified imitation of nature.

Although his theoretical contribution to the leaves of architecture was enormous, his practical work in the design of a building was limited, the Oxford Museum by Benjamin Woodward being the outstanding single example. In the

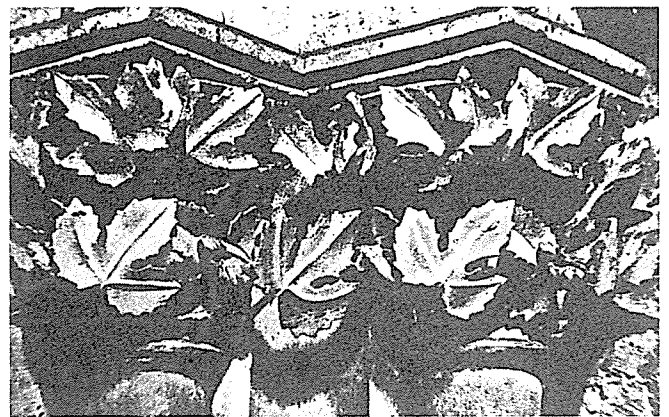


*East arcade of the passage between the choir and the chapter house, Southwell, England*

interior of the main court of the museum we see Ruskin’s dream come true. Not only are the capitals bursting with leaves, the entire skylight becomes a steel leaf-and-branch skyscape. A Commissioner of the Museum, Dr. Henry Acland, wrote in 1859, that the purpose of the building was, “to give the learner a general view of the planet on which he lives, its constituent parts, and of the relations which it occupies as a world among worlds.” Thus, the walls were built from different granites available in the surrounding regions, while the capitals were carved with the leaves and flowers of native aquatic herbs. Chestnut boughs and foliage became entwined in the “branches” beneath the transparent roof. Ruskin even managed to find his happy workers in the brothers O’Shea, a band of Irish craftsmen who carved the stone leaves. O’Shea’s capitals by themselves are similar to their 13th century ancestors, but they were placed on top of slender cast-iron columns, and underneath splayed baskets and silhouettes of leaves, surrounded by the polychromy of granite arches and polished marble columns, and thus delivered to the 19th century a wonderland beyond the technological reach of the master-builders in the late middle ages. The courtyard of the Oxford Museum captures the delight of a Watt’s tower rather than the silence of an industrial greenhouse.

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Louis Sullivan’s celebration of leaves by all evidence comes from a tradition and a philosophy that was remarkably unlike John Ruskin’s and other proponents of the arts and crafts movement that flourished at the turn-of-the-century. Sullivan rejected styles from the past and shared in the development of a new architecture which for many has been regarded as a harbinger of 20th century design. Yet he did not reject ornament, and, curiously like Ruskin, felt that it was a responsibility of an architect to manifest man’s genius and will be revealing the law’s of earthly nature. Although he was

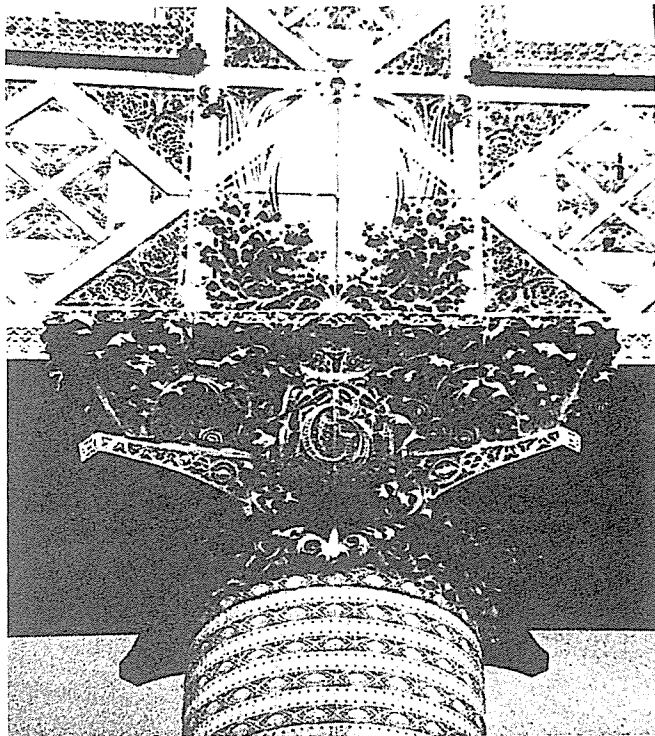


*Buttercup Capitals in the Southwell chapter house*

influenced by French theorists (Theodore Turak cites Ruprich-Robert in particular) as well as New England transcendentalists it is a unique feature of Sullivan that he worked within the framework of the mid-western geometry so typical of the Chicago style.

Yet leaves sprouted from Sullivan's buildings, and in his own words he traces their manifestation back to a definite botanical event, i.e. the two cotyledons or seed leaves that nourish the roots and precede the mature leaves of a plant. The "Y" shaped elemental figure of the cotyledons formed the generating element from which Sullivan's ornament evolved, an ornament intended to transform a primary geometric figure into a more dynamic botanical figure. Thus, unlike the medieval sculptor, he was not representing the shapes of native plants, but instead willing that the energy latent in the primal figure of the universal plant would break the bounds of the geometry in which it was traditionally locked, and thus permit the dynamic order of botanical nature to triumph.

His success in actually producing leaves may be distinguished from the more root-oriented figures of the Parisian Guimard working at nearly the same time in the web of French Classicism. Although it is difficult to deny the powerful influence of classical principles in the early work of Sullivan, Turak points out that it is equally difficult to over-



*Sullivan's capital for the Guaranty Building, Buffalo, N.Y.*

look "... that ethos which emerged from the forests of northern Europe ... (where) Earth, nature, and man could be seen in a constant metamorphosis." By recognizing that Sullivan's leaves have a powerful life of their own, we can almost imagine them without the building altogether, or perhaps more significantly in a symbiotic rather than subservient status in relation to the form of the building.

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We can witness in the struggle between leaves and geometry both the existence and the status of two major images at the root of western architecture, one embodying a vision of the country and the other a vision of the city. Indeed, in vernacular English today the distinctions between town and country, urban and rustic, artificial and natural are commonplace to our descriptions of familiar places and values. Yet it is curious that in recent years we have not generally attempted to describe architectural design in a critical language profoundly concerned with the rustic, although it is virtually an everyday occurrence within the profession to speak about the urban. Does this tendency indicate a disinterest among architects for the expression of values given to life by the countryside or, even more cynically, a professional belief that architecture should dramatize the city, while nature is fair-game for farmers, ecologists, landscape painters and the remainder of our wildlife? Perhaps the absence of vivid rustic and botanical imagery stems much more from a period of rationalism and machinization from which architecture is just beginning to depart. The recent collapse of the ban on ornament suggests preliminary rejection of a reliance on pure geometry as the supreme expressive figure in design. With the status of abstract geometry threatened we can predict the return of the natural figure in the fabric of buildings. Is it possible that a further study might reveal that expressions of botanical nature may become more important as the existence of plants are threatened precisely by the process of urbanization?

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Recently, (and as an epilogue), I was invited by the architect Gerald Allan to collaborate on the design of a new light fixture for Central Park in the heart of New York City. The original concept of the Park, designed by Frederick Law Olmstead and Calvert Vaux in the mid-19th century, was to return a rustic landscape to the smoky metropolis as a place of recreation and health. We felt, in keeping with the earlier design of the lampposts by Henry Bacon in 1910, upon which our fixture was to rest, that leaves should sprout from the new lamp. We also felt, in keeping with contemporary practices of contextual design, that the leaves should reflect the surrounding trees for the same reasons that the horizontal courses of a new building installed in an existing traditional

block should reflect or continue the courses of the neighboring buildings.

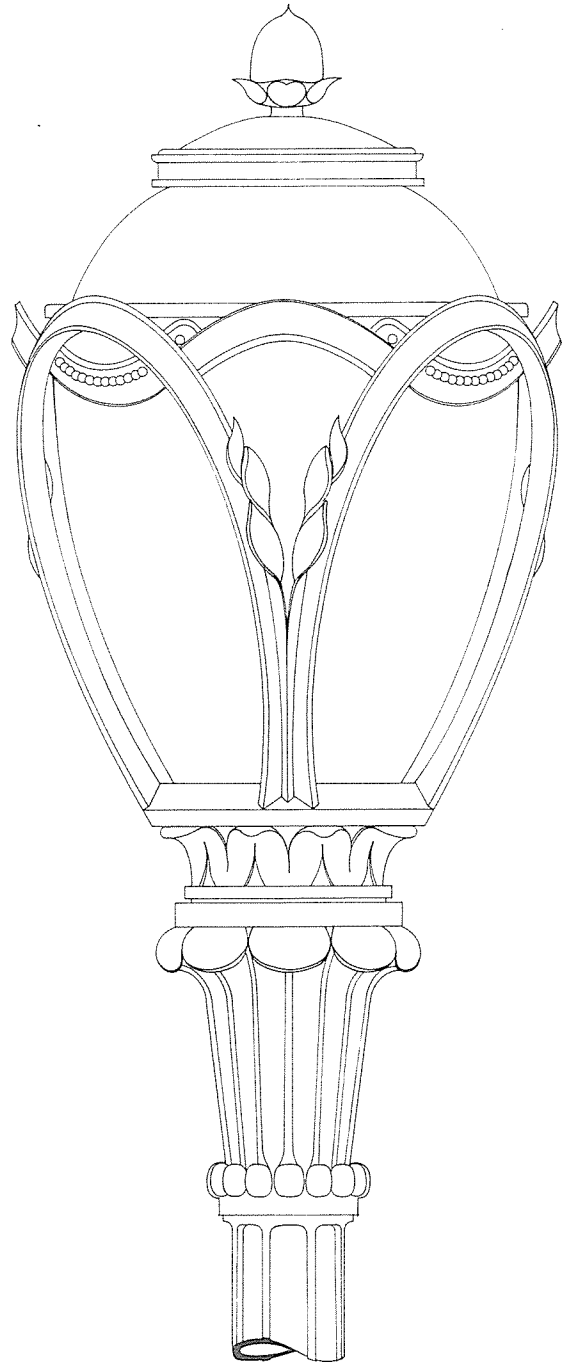
Although we have been awarded the commission and approximately one thousand lamps are to be installed in the Park next summer, we are still recoiling from the bizarre responses to our design that we encountered en route. Orthodox modernists among our professional colleagues seemed to vacillate between tentative acceptance and outright disapproval. Preservationists, assembled to judge our design, while agreeing that the image should be “botanical,” complained that there was no historical style to which they could precisely connect our particular solution. Our subsequent appeals for more thorough criticism from “historians” seemed to reveal that approval of an unprecedented idea was just too risky. Some academic colleagues mumbled proper congratulations for “getting-the-job” but allowed in discussions later on that they really didn’t approve of being “literal” in architectural design.

The strongest approval came from the commissioners least trained in design who had not been educated to take a specific position. They seemed to understand that the acorn finial celebrated the oak trees in the Park, the sprouting leaves were doing just that . . . sprouting . . . which they enjoyed, and the foliated neck responded appropriately to Bacon’s foliated capital beneath.

From all of this we have learned to take special solace in the inspiration given to us by the designers from the past who put leaves on architecture.

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Lamp design for Central Park by Bloomer and Allan