Frank Lloyd Wright wrote eloquently and often about the destruction of the box, and writers ever since have indiscriminately used such phrases as "open space" and "flowing space," whether they are discussing interiors by Wright, Le Corbusier, or any number of 20th-century architects. In so doing they reveal basic misconceptions concerning Wright's achievement: Wright's spaces are more open and flowing than those that existed previously, but they are also profoundly different both in their design and in their psychological impact from the interiors with which they are often associated.

When Wright entered the profession late in the 1880s the Shingle Style had largely spent its force. From this style he inherited the idea of using generous openings between principal rooms and of occasionally basing his layout upon an axial or cruciform plan. Until about 1900 this exerted a considerable influence on his work.

But Shingle Style planning did not call into question the basic concept of the room. The four walls, joined at the corners, and the uniform floor and ceiling remained; the room continued to be a box. What had changed was the degree of openness between the rooms and this was achieved by increasing the size of the door (the hinged door gave way to a sliding door, or might be eliminated altogether) until it approached the size of the wall itself. The specific organization and use of the room was not affected. What one gained was a sense of spaciousness while looking from room to room. What one lost was a sense of privacy.

Wright realized this. He also saw that room specialization exceeded realistic limits with each social or family function requiring a separate room. In effect, one box, neatly labeled, was placed beside another and a series of these boxes made up the home. This was nothing new; the room as a box had been a western tradition since earliest times. It was a situation that Wright inherited, yet he soon redefined the concept of interior space, and he began this process by dismembering the traditional box.
The Ross House (1902) at Delavan Lake will ideally serve to demonstrate how he approached the problem. Being among the earliest of Wright's Prairie Houses, changes in it can be noted at a rudimentary stage in their development, and being a small house, it is not so difficult to analyze as the more complex Willits or Martin Houses of about the same date. And because the plan derives directly from a Shingle Style house, it is easy to compare and contrast differences.

From Bruce Price's Kent House (1885) at Tuxedo Park Wright accepted, in designing the Ross House, the basic layout of the plan. Both are cruciform in shape, both have the same disposition of similar rooms, and both have a characteristic U-shape verandas around the front (Figs. 1 and 2). Different but essential is the subtle spatial relation in Wright's design between the dining and the living rooms.

Wright attacked the traditional room at its point of greatest strength—at the corner. He dissolved the corner between the dining and living rooms at the Ross House by permitting one room to penetrate into the other. If the living room walls are extended to their point of contact, the corner is at the dining room table. A similar extension of the dining room walls makes a corner located well within the living room. At a primary level, therefore, both rooms are making use of an area within the other room's space; this is totally different from Shingle Style space (Fig. 3). In addition, the area of overlap serves as a connecting space (the corridor or doorway) between the rooms. Thus Wright obtains several uses out of this single space and he can reduce the size and cost of the house by that amount—without making the house seem any smaller.

This, when demonstrated, is a simple idea (most great ideas are simple ones) yet in its ultimate implications it is one of the most important "discoveries" ever made in architecture.

In Wright's work, space loses its fixed value and acquires a relative one. In the sense that it depends upon experience and observation, this is empirical space, contingent upon the viewer rather than possessing an independent reality of its own. It relates to individuals and their changing position within that space.

The visual space in the Ross House extends well beyond that point of overlap between two rooms. Unlike the vista in the Shingle Style house, it is diagonal, not face-to-face. As a result, Wright gains more privacy and variety. The view into the neighboring room is restricted, and changes markedly as one moves from place to place.

Outside corners were more difficult for Wright to eliminate, yet once he got rid of them his "invisible corners" (of mitered glass) became one of the hallmarks of the modern movement. In the Ross House he took a major first step
in this direction. The glazed doors leading to the veranda are set flush against the corner, visually eliminating the right angle at this point. As one looks down the length of the lateral walls one’s sight is not stopped at the corner but passes outside through the doors. At the other end, the left hand wall has no visible inside corner where it dissolves into the dining room. It is beginning to assume the character of a freestanding slab. When Wright completely freed the wall from its corners, it did become a slab, and once it became a slab he was free to move it around or divide it up at will. When this happened, the room as a box was destroyed.

Yet boxes have tops and bottoms as well as sides, and already at the Ross House Wright began manipulating the height of the ceiling in order to enhance the activities taking place underneath. The dotted line on the plan indicates a higher ceiling in the front-center of the living room—the area where one normally stands. Near the fireplace, along the windows of the outside walls, and in the dining room—all places where one normally sits—the ceiling height is lower.

The axonometric sketch (Fig. 4) clarifies what has been said. To the left is what Wright set out to destroy, a house made up of a series of boxes, each placed beside or above the other, and each with its single specialized use. Enlarging the openings between contiguous boxes (as in the Shingle Style) created a sense of greater openness, but if carried too far, the smaller rooms would merge and become a single larger room with one relinquishing its identity to the other (a process that again produces a series of boxes).

The axonometric at the right indicates Wright’s first step in destroying the box. He interlocks two rooms so that part of each space is given over to the other. The corners (the least useful part of the room) are destroyed and a controlled view into the adjacent area is opened up. This view, which is diagonal and pinched at the point of interlock, is limited and leaves much of the adjoining area obscure, introducing a sense of mystery into the spatial sequence. Mystery is an essential element in Wrightian space; he never resolves all visual questions at once; rather he holds in reserve something to be examined later. To assist in this process of limiting and controlling the view and guarding the privacy of the adjoining spaces, Wright screens openings by various means—for example, vertical wooden slats combined with low bookshelves (Willits House), walls that do not reach the ceilings (Roberts and Hanna Houses), fireplaces of chimneys that open into the neighboring space (Martin and Robie Houses).

A comparison of the Willits plan with a house project of similar date by Robert Spencer makes abundantly clear the difference between Wrightian and “open” space (Figs. 5 and 6).

Fig. 3. Shingle Style vs. Frank Lloyd Wright. Left: typical Shingle Style plan with large openings between the principal rooms. Right: in a Wright house, one room penetrates into the other at the corners.

A, B, and C show the angle of vision, taken from identical positions, into the neighboring room. Wright achieves more privacy and variety.

Room dimensions in these two plans are identical (author).

The axonometric also indicates how two spaces of different height can interpenetrate, the one imparting to the other its ceiling and/or floor height. In its simplest form, this creates a balcony (Roberts, Baker, Millard at Pasadena) or “split-level” type of house (Davidson, Pope, Grant). But in the sophisticated arrangement preferred by Wright it produced two or more ceiling heights that overlapped and interpenetrated throughout the house (and on the exterior as well) with the height carefully related to the human activity underneath. Although Wright perfected this for his Usonian house, he mastered the idea prior to 1910.

2. A brilliant early example of this is seen in the dining room of the Boynton House (1908) at Rochester where three ceiling heights relate directly to Wright’s furnishings which, after 70 years, are happily still in place. A small family-size table for breakfast or lunch is placed near the outside windows; over it the ceiling is only head-height and creates a wonderful sense of intimacy for family meals. Further into the room is a large, imposing table flanked by high-backed chairs. This is obviously for formal family gatherings and for entertaining guests, and in scale with it is a higher ceiling. Between these two tables with their related ceilings is a single-sided clerestory that lights the main table and brightens the deepest parts of the room. This story-and-a-half high ceiling covers the area where one walks within the room.

Fig. 4. Left: typical house composed of box-like rooms. Right: Wright’s first step is destroying the box. Rooms are interlocked, usually at the corners, with each relinquishing part of its space to the other. Sometimes this occurs at different levels creating balconies, split-levels, and varying floor and ceiling heights. The corner has been dissolved (author).
Before continuing with other implications of Wright’s research, two points will be developed further in order to clarify and amplify what already has been said. First, a consistency of design permeates every aspect of Wright’s work, imparting to it a unity that is total and complete. Consequently, the concept behind the destruction of the box found expression in a wide variety of things designed by Wright. Note, for example, the interior pier at Unity Temple (Fig. 7). The wood stripping (Wright’s word for trim) is not used in the traditional manner in order to define a two-dimensional rectangle on the surface, with a separate rectangle for each face at the pier, but instead the stripping passes around the corner to unite the two surfaces into a single three-dimensional form. This destroys the age-old concept of the corner just as effectively as Wright destroyed it in the region between the living and dining rooms at the Robie House. This three-dimensional manner of thinking, which is characteristic of Wright’s work, can also be seen in the way he often unites ceilings and walls by this simple device, as in the Robie House. Spatially Wright dissolves the corner and makes it transparent; the next logical step was to use mitered glass instead of opaque materials, a system Wright perfected early in the 20s.

The second point concerns the center of the wall. Unlike the architects of the Shingle Style or their 20th-century counterparts, Wright did not create large openings in the wall since this would lead to a loss of interior privacy. Instead, if he wished to relate two rooms face-to-face, he substituted for the wall a screen that could be walked around or looked over. The Robie House is a perfect example of this. The dining room and living room have their outer walls in common, but the “wall” that separates the two rooms is a freestanding fireplace (Fig. 8). The flues go up the sides making possible a large opening in the chimney mass at the level of the ceiling. From either room one can look back to the adjoining ceiling, and this adds a sense of spaciousness without diminishing privacy. Similarly—and this is of great importance—one has an un-

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**Fig. 5.** Frank Lloyd Wright, Ward Willits House, Highland Park, Illinois, 1902, plan (Hitchcock, *In the Nature of Materials*).

**Fig. 6.** Robert C. Spencer, Jr., “A Shingled Farmhouse,” project, 1901, plan (*Ladies’ Home Journal*, April 1901).

**Fig. 7.** Frank Lloyd Wright, Unity Temple, Oak Park, Illinois, 1906, interior pier (John Szarkowski).

**Fig. 8.** The flues go up the sides making possible a large opening in the chimney mass at the level of the ceiling. From either room one can look back to the adjoining ceiling, and this adds a sense of spaciousness without diminishing privacy. Similarly—and this is of great importance—one has an un-

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3. Except when uniting interior and exterior space. Then he would often create a screen of glazed doors between the interior and the terrace, as at the Willits House or any number of Usonian houses.
By visually extending space, Wright achieved a sense of expansiveness that the actual dimensions of the building would seem to deny. This was immensely important for Wright’s later work; it holds great potential for the future of architecture, yet even in his smallest prairie houses Wright utilized this means with stunning effect.4

Thus far we have emphasized the destruction of the box and Wright’s attack on such traditional elements as corners, walls, and ceilings. But he did not stop there.

The implications of freeing the wall from its terminals were immense, and further consequences of this fact were soon realized by Wright. Once the wall was freed from its corners it became a slab, and once it became a slab, it was no longer locked into a fixed position in space; it could be rotated on its axis, it could be divided into smaller slabs, it could (as later occurred in Cubist painting) be reassembled and reintegrated to define something new. The evolution of this process is illustrated in Figure 10 where the first sketch-plan, A, represents a typical rectangular room with its four walls locked together at the corners. In the second diagram, B, the corners are eliminated and the corner posts removed.5 The walls have become independent planes of slabs, each clearly separate from one another. Taken together they define (rather than precisely enclose) an area that is similar to the first diagram, except for the region near the corners. This sketch is analogous to the Ross House plan already discussed.6

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4. For example, the Ladies’ Home Journal project (1906) for a “Fireproof House for $5,000” (Fig. 9) and its progeny such as the Hunt House at La Grange, Illinois. These share a continuous window-wall between the living and dining rooms similar to that at the Robie House. A fireplace also screens the opening between the two rooms. And again, it is one’s position within the house that determines whether this window-wall is considered part of the living or dining room.

5. A structural advantage is also inherent to this scheme. When the main supports are moved back from the corners a cantilever is created. As a result, under certain conditions, the number of supporting posts, or the size of the stringers, can be reduced.

6. It is also analogous to certain non-architectural elements designed by Wright such as the electric light fixtures at Browne’s Bookstore (1908) in Chicago (Fig. 11). These consist of four squares of translucent glass hung from a larger square such that the pendant pieces, which form a cube, do not touch at the corners. In plan this fixture is similar to diagram B, except for being square.

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Fig. 8. Frank Lloyd Wright, Frederick C. Robie House, Chicago, 1908, living room with dining room beyond the fireplace (author).

Fig. 9. Frank Lloyd Wright, “Fireproof House for $5,000,” project, 1906, plan (Ausgeführte Bauten un Entwürfe von Frank Lloyd Wright, 1910).

Fig. 10. A: typical room with walls joined at four corners. B: Wright’s first step: eliminate the corners, thus turning the walls into freestanding, movable slabs. C: Wright’s second step: define, by reassembling segments of these slabs, a new spatial context that integrates the former functions of the demolished rooms; this is the schematic plan of a Usonian house (author after Wright).

Fig. 11. Frank Lloyd Wright, Browne’s Bookstore, Chicago, 1908, demolished, hanging light fixture consisting of four squares of pendant glass that do not touch at the corners; compare with Figure 10-B (Ausgeführte Bauten, 1911).
rooms as well. They are defined within the context of the larger space. Thus one or two spur walls, a lower ceiling, a different fenestration create the setting for a dining room, other combinations are used to establish a den, and so on.

These are sometimes difficult to identify in plan, but when experiencing the three-dimensional space the function of each area is absolutely clear—and this is independent of any furniture grouping. Each use-space utilizes and participates in part of the adjoining spaces (and they in it) just as we saw in a more rudimentary form at the Ross House. Only bedrooms and baths retain their integrity as private rooms.

Our attention thus far has focused upon the walls of rooms rather than on floors and ceilings. Yet these were also essential to Wright's manipulation of space and they gained in importance as the actual size of the house decreased and more and more "rooms" were integrated into the basic living space. Either two or three ceiling heights were used in his smallest houses and, if the character of the landscape permitted, he would raise or lower the floor as well.

With a change in ceiling height Wright could psychologically define the boundaries of a use-area in a region where the walls had been removed. Thus the outer limits of a low ceiling might "stake out" a dining room, the ceiling height harmonizing with the seated activity of dining. All areas primarily designed for sitting and for intimate thoughts and conversation have lower ceilings than those designated for standing or walking or working. The miracle is that Wright did not end up with an overhead mess of conflicting ceiling heights but instead succeeded in creating something that was as unobtrusive and restful as it was effective.

Floors present a special problem but occasionally Wright introduced a single change in level, as in the Willits and Davidson Houses dating from the Prairie period. Later, for instance at the Palmer House, he might employ an upward step to dissuade the visitor from approaching the bedroom wing, or, as at the Pope House, to increase the sense of nobility and spaciousness as one descends from the entrance into the more public regions of the house (Fig. 13).
Fig. 13. Frank Lloyd Wright, Loren Pope House, Mt. Vernon, Virginia, 1939, interior. Two floor levels and three ceiling heights are visible in this photo. From the entrance (center, rear) several steps lead down, and the height of the ceiling is raised in scale with standing activities of the living area. For seating areas, around the dining table to the right and between the fireplace and the windows at the left, the ceiling is much lower (HABS/Boucher).

Fig. 14. Charles S. Ross House, R. C. MacCormac's analysis of the plan from which he determined the unit system used by Wright in its design. The units form a tartan-like pattern rather than a regular grid, yet it should be noted that MacCormac has suppressed certain (less significant) intermediary lines which would, had he chosen to draw them, reconstitute the regular grid of the Froebel system (MacCormac, Architectural Review, 1968).
The dimensions and placement of these various space-defining elements (such as screens, slabs, piers, ceiling, fireplaces) were never haphazard or arbitrary but were always controlled and governed by what Wright called a “unit system.” Uppermost in his mind was the need to create buildings with a sense of repose and calm and to achieve this it was essential that every aspect of the design—scale, proportions, materials, furnishings, colors—be in perfect harmony. Nothing must strike a discordant note. Architects through the ages have turned to mathematics and geometry to aid their search for harmony: the most enduring crutch has been the golden section \( \frac{1 + \sqrt{5}}{2} \), yet in our time Le Corbusier’s Modulor has claimed much attention.

Wright never made a secret of his system which developed, he said, from his Froebel kindergarten training. Occasionally he even published the units under illustrations of his buildings (Fig. 12). Yet he never explained how the system worked. We had to await Robert MacCormac’s published research before having a plausible explanation. I do not intend to recapitulate MacCormac here, but his analytic drawing of the Ross House indicates the tartan-like grid of units that controlled the size and placement of each element in the plan (Fig. 14). Later Wright applied this system to elevations as well.

An essential aspect of Wright’s organic architecture is the idea that interior space must find exterior expression. That this occurred is revealed by even the most cursory review of his buildings. In the closed, stately forms of the Winslow facade (1893) space is imprisoned and there is no sense of outward release. With the Prairie Houses the wall quickly loses its role as container of space as increasingly it is shattered into piers and screens; horizontal elements are left visually unsupported at their terminals and become cantilevered roofs and balconies that in no way impede the outward-inward interaction of space. A comparison of the Willits (1902) and the Robie (1908) Houses makes this development absolutely clear. In the years that followed, the change was one of degree, not of kind. The buildings became more informal, open, and immediate in their association with the natural surroundings. The modest-sized Usonian house was the perfect expression of this. Yet outwardly, the spatial facts of the interior could always be read. A closed, U-shaped masonry wall, lit internally only by a clerestory window under a low slab roof, was a den, a place of retreat; a higher roof and banks of glazed French doors signaled a more public living space; modest windows facing a protected court were those of a bedroom. The manifestations of the space were always apparent; they were defined, and the definition was there for all to read.

In sum, we have seen how Wright dealt with the age-old question of interior space. For him the process of its reorganization was no fanciful or playful matter, but an arduous intellectual feat. The traditional concept of the room, formed by walls joined at the corners, had existed—unchallenged—since the earliest habitation, and by the 19th century its proliferation (nowhere carried to a more ridiculous extreme than in the English country house) had reached, both socially and economically, illogical bounds. He recognized this and was determined to correct it. He analyzed the components of a room, which basically was a box. He realized that the corners were the most expressive element, so he demolished them first. He then dismembered intermediary walls, ceilings, and even floors. Finally, as in synthetic Cubism, he reassembled the shattered pieces (images) in a different spatial context. He defined, rather than enclosed, the functions that rooms had served. And in accordance with his profound understanding of the human psyche, he created a physically smaller, yet psychologically more healthy, environment in which to live. This is the measure of his genius, and toward this end the destruction of the box was the first essential step.

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THE BASEMENT OF THE DARWIN D. MARTIN HOUSE IN BUFFALO

by Jack Quinan, SUNY at Buffalo

The recent photographs of the basement of the Darwin D. Martin House in Buffalo of 1904 reveal aspects of the original design which are no longer extant elsewhere in the house and which have only become visible, once again, during the past year. A brief account of the history of the house since the death of Darwin D. Martin in 1936 will demonstrate the significance of these views.

Mrs. Martin abandoned the Martin complex in 1939 because it was impossible to maintain. During the 15 years that it stood empty it was wantonly and selectively vandalized. Local youths destroyed the glazed mosaic fireplace, among other things, while craftier persons made off with many of the art glass windows. The property was acquired by the city of Buffalo in 1946. A local archi-
tect, Sebastian Tauriello, purchased the entire complex in 1954 but he soon realized that he was unable to maintain it. He therefore demolished the pergola, the two-story garage, chauffeur's apartment, and stable (which housed the heating plant for the main house), the conservatory, and a second greenhouse, and sold that rear section of the property. He then subdivided the main house into four apartments during which a considerable amount of the oak trim was removed and lost. In 1967 Tauriello's widow sold the main house to the University of Buffalo, and Edgar Tafel was employed to direct a partial restoration of the house which was to become the residence of the (then) University President, Martin Meyerson.

Mr. Tafel, who had visited the house in company with Frank Lloyd Wright in 1939, did an admirable job under the circumstances. He was forced, for instance, to completely modernize the kitchen, to intensify the illumination of the interior with fluorescent light, to add off-white wall-surfaces where there once had been Dutch-metal finishes, and to install a bold skylight in the principal entrance hall. When President Meyerson left the University in 1970 the building was turned over to the University Archives and the University Alumni Association, two organizations which have discretely occupied the basement and second story spaces while leaving most of the main floor accessible to occasional visitors and tours. The gradual return of many of the original furnishings to the house has considerably enhanced the authenticity of these principal spaces.

With the departure of the University Archives from the Martin House in 1978, the long portion of the basement immediately below the dining room-living room-library axis of the cruciform plan was emptied of archival stacks and made visible for the first time since 1971. Despite its barrenness and a worn linoleum floor, the fumed oak trim, which no longer exists in the living room and south room on the main floor, is intact here, while clusters of brick piers and a splendidly arched chimney seem to stand patiently, awaiting the further restoration and use of this handsome space.

In an interview conducted on 14 December 1975, Dorothy Martin Foster recalled that this part of the basement was the family playroom. The Highland Park Literary Club met regularly here, as did a kindergarten to which her younger brother, Darwin R. Martin, belonged. The Martins were quite temperate with regard to partying, but the playroom was equipped with a stove and a piano and could easily accommodate 100 guests on occasion.

The future of the Martin House has not been fully determined, but it is unquestionably one of the greatest of Wright's Prairie Houses, and, as these photographs indicate, its original vitality still lies within the grasp of an extensive program of restoration.

Four views of the basement of the Martin House. Photos courtesy Jack Quinan.
INTERIOR – UNITY TEMPLE, OAK PARK, ILLINOIS PHOTOGRAPH BY RICHARD NICKEL, Courtesy John Vinci. To view this as one would normally see the interior, hold one side at a 90° angle to the other.
WARD WINFIELD WILLITS
A CLIENT OF FRANK LLOYD WRIGHT

by Mark David Linch, Highland Park, Illinois

I am especially grateful to Peter W. Burnside, Ward Willits' grandson, for providing valuable information during the course of this research.

This essay is the result of research which has by no means been exhaustive but has revealed new information about a Wright client and the building of a Wright-designed house. Parts of the picture are yet to be completed. This first part of three essays is just the beginning. The aspects of the subject enumerated here are the following: a brief biography of Willits, a discussion of Wright and the state of his office at the time, a mentioning of various contractors, and the relationships among the participants.

Ward Winfield Willits

Willits was born on October 26, 1859 in New Boston, Illinois, which is located on the Mississippi River straight west of Chicago. His parents, Job Evans and Caroline Baxter, came to Chicago for their son's public education. At the age of sixteen he got a job suiting his training with the law firm of Isham and Lincoln. He was employed there for three years and subsequently was hired by Adams and Westlake, a railway supply manufacturing company which was founded in 1857. Quite sharp and quick to grasp a situation, he was elevated to general manager and director in 1890 and made vice-president in 1891.

Willits married Cecilia Mary Berry in 1897 and in 1901 the first of four children was born. By this time his upward mobility needed expression in a new house. Most probably he chose Wright to design it because of his acquaintance with Giannini who joined Adams and Westlake in 1887 and later teamed up with Hilgart to design glass for Wright. The house was built in 1902 and 1903 for $20,000.

After his move to Highland Park in the late spring of 1903, Willits rose even higher in stature. He became president of Adams and Westlake Company in 1904 and joined the exclusive Exmoor Country Club in Highland Park where he was a vice-president in 1906. He was later listed as a veteran member in 1935. During the construction of his house, Willits had tried to economize where he believed there were inefficiencies. This image of being tight with money resulted from his Exmoor exploits. He was referred to as a "cheapskate" by a man who caddied for him because he did not tip well. He was a kind and generous gentleman, though, and from all indications he was very unassuming. Mrs. Willits, however, was quite a socialite who, though active with the ladies, stood fast by her husband and always travelled with him. She thought Wright was quite a boor which was the result of the trip to Japan which the Willits and Wrights took in 1905.

Mr. and Mrs. Willits left for Japan the week of February 14, 1905 for several months. Upon his return Willits became quite active in civic affairs. In 1909 after a vote of the people living east of the tracks of the Chicago and North Western Railway, the Highland Park East Park District was established. Willits was one of the commissioners along with F. W. Cushing, Joseph Fearing and W. C. Egan. Egan was president for four years and Cushing succeeded him.

The population of District 5 had grown to the point where it warranted the establishment of a board of education. The school district (now numbered 108) had seven board members. Among them were Willits and Mrs. Ralph Fletcher Seymour, who was a good friend of Mrs. Willits.

Up until 1914, Highland Park was run exclusively by a mayor but on October 14th the old form of government was changed to a commission form. On April 20th of the following year five commissioners were elected. Samuel

1. This is the definitive spelling.

2. Located in the directory of Adams and Westlake by Thomas A. Heinz.

3. Sheridan Road Newsletter, July 25, 1902. This letter also states that "... Wright was at work on plans..." thus indicating that the house was still being designed.

Further, when Willits bought the land and built his house, a Plat of Survey was completed by Emil Rudolph, a local surveyor, on July 3, 1902. Apparently Willits had this survey done after he received plans for his house in June of the same year. The actual construction of the house began in the fall. Some time during the construction of the house Willits bought a very slight wedge of land to the southeast which appeared in another Plat of Survey on March 18 and 23, 1903.

Though Willits told Grant Manson unequivocally that the house was designed around 1900 and that there was a delay of a couple of years between design and construction, this seems highly unlikely. The reasons are that the Willits House was not part of the exhibition in the spring of 1902 and the drawings were not completed until June of 1902.

To resolve this conflict, I propose the theory that Wright showed the "Home in a Prairie Town" to Willits as a basis for the design, and that Willits interpreted this to mean that it was the design for his own house, which was not really the case.


5. Sheridan Road Newsletter, February 18, 1905.


Hastings was elected as mayor with Ward Willits being one of the commissioners.\(^8\) The Highland Park Fire Department was established shortly thereafter for reasons which probably had personal significance for Willits. The volunteer firemen were mistakenly summoned to the home of Mayor Hastings and a second drill at the Willits home made a municipal fire department become a reality.\(^9\) A local hospital was also started while Willits was on the commission after a man complained that injured people had to be taken into Chicago by train.\(^10\) On one of the more festive occasions, Willits was photographed with the commission as they opened the newly brick-paved Green Bay Road which stretches from Evanston to Wisconsin.\(^11\)

In a philanthropic gesture, Willits, C. T. Boynton, and F. R. McMullin helped bail out Ravinia Park, a popular summer home of opera, baseball, and theater. Shortly thereafter, however, Mr. Eckstein became principal sponsor though apparently the earlier sponsors did not retire too willingly.\(^12\)

During his lifetime Willits belonged to several organizations. He was a member of the organizing group, vice-president, and director of Head Light Company between 1894 and 1924. He was also an organizing member, director, vice-president, and treasurer of Certain Supply Company between 1899 and 1926, which is when it merged with Adams and Westlake.

Willits was a director of Harris Trust and Saving Bank, Harris Safe Deposit Company, a life member of the Isaak Walton League, a member of the Field Museum of Natural History, and a member of the United States Seniors Golf Association and the Illinois Seniors Golf Association. He also belonged to the following clubs: Union League Club, Chicago Athletic Club, Three Lakes (Wisconsin) Rod and Gun Club, and the Masons. He was also affiliated with the Republican Party.

Ward W. Willits lived to be 90 years old. He was what one might call a prototype American. From a pioneering family, he worked his way from the bottom to the top. His choice of the first truly American architect for the design of a house in the first truly American style is an idea easily romanticized, yet justifiably so.

**Office of Frank Lloyd Wright**

After a short stay at the Rookery, Wright moved back to the Steinway Hall office. Soon thereafter he entered into a brief partnership with Henry Webster Tomlinson in January of 1901. Wright had originally left because he felt the group in Steinway Hall was too sociable.\(^13\) He may even have returned for financial reasons. At the very least he found the partnership with Tomlinson to be a business convenience. Soon thereafter Wright developed schemes for homes on the prairie which were published in the *Ladies' Home Journal* in 1901. Wright was 34 years old at the time the 42-year-old Willits commissioned him, probably in late 1901 or early 1902.

The other key figure in the office of Wright was Walter Burley Griffin. Griffin studied with N. Clifford Ricker at the University of Illinois and received his degree in June of 1899. He spent two years working at Steinway Hall and then moved to the Oak Park Studio in 1901 when business began to pick up. He was 25 years old when Wright received the Willits commission, and Wright placed a good deal of responsibility and faith in his abilities. He was much more amiable than Wright, and he emerges as a buffer in the dealings with Willits.

**Contractors**

The main contractors involved with the building of the Willits House were Mr. Clow—a carpentry, masonry, and plastering contractor; Foster, Glidden and Woodruff—a plumbing contractor who outbid Ambercrombie and Sullivan; and Giannini and Hilgart—a glass manufacturer who outbid Healy & Millet, and Hooker & Company. There were no letters written by Willits to Giannini and Hilgart or to Clow, but there was mention of a Clow foreman named Russell and a Clow employee named Pearson, Foster, Glidden and Woodruff on the other hand received nine letters from Willits, most of which were written in January.

Foster, Glidden and Woodruff had offices in Chicago at 40 Dearborn Street. Giannini and Hilgart were also located in Chicago and were apparently very well known. They did the glass for the First Church of Christ Scientist by Hugh M. G. Garden in Marshalltown, Iowa, at about the same time. The windows were made distinctive by the brackets which linked the window mullions and the roof overhang.\(^14\) It was a very colorful and very plastic treatment which demonstrates the skillful art of glass manufacturing at the time. The glasswork in the Willits house has no less the level of skill.

9. Wittelle, p. 159.
11. *Ibid*.
Though Clow received no letters from Willits, he was mentioned the most often and quite steadily in August of 1902, and from November to March of 1903.

Relationships

The relationship between Willits and Wright is a difficult one to analyze without Wright’s responses to Willits’ letter. However, some reasonable conclusions can be made.

One thing that dominates the letters which Willits wrote is impatience. The job seems to have progressed fairly well until December. In numerous instances thereafter, Willits stated that he had suffered severe hardship and embarrassment because of delays in several areas. One item that held up construction was the lack of correct specifications. Apparently once a change was made in the drawings, it was very difficult to get Wright to change the specifications. A second item is that Wright was very slow to change a detail at the suggestion of Willits. Willits had an excellent knowledge of materials and the way they reacted under many circumstances. The letter of December 20th refers to the refrigerator and its panels, the weight of the ice, and the capacity of the stringers (known as joists today). Willits knew the strength of the wood and was familiar with the necessity of placing additional stringers under the refrigerator.

A third item is that Willits knew very well how water reacts under different conditions. He found leaks in the plumbing. He traced down the problem of the ineffective heating system on the second floor and subsequently informed Foster, Glidden and Woodruff in a letter dated February 17. He also knew that any moisture in the coal room would severely reduce the effectiveness of the heating system. Also, during the construction of the stable, Willits made certain that pipes were being laid below the frost line and that no clay was getting into them. He seems to have been acutely aware of freeze-thaw cycles and the expansion and contraction of water that results. He apparently was on the site quite often talking to Mr. Russell, Clow’s foreman, making certain that his wishes were being fulfilled. In another letter to Foster, Glidden and Woodruff, Willits strongly advised, almost ordered, the firm to drain the plumbing system and repair the leaks. This was March 27. Further, Willits asked that tags be placed at every pipe to indicate what work had been done so that he would be able to check it.

A fourth item is that Willits was very knowledgeable as to how materials are put together, i.e., techniques of building. He knew very well the order of construction and continually attempted to get the plumbing and the electrical work completed before the lathers did the finishing.

Wright had a knowledgeable client on his hands who, becoming impatient in December, threatened to give the job of the stable to someone else if Wright and Clow could not begin to get together on some bids. Willits wanted to be assured of being charged 1902 prices and not 1903 prices, which he stated in the letter of December 27. The job came through less than two weeks later with Willits carefully checking the price estimates and subsequently cutting things out. His economy with the dollar is somewhat evident in his discussion of the barn estimate in a letter dated the 31st of December, in which he dissected each item.

If anything would have disturbed and upset Wright the most it is this last item: Willits for reasons of practicality at times and impatience at others, submitted changes in design in the form of sketches. On February 2, Willits stated that he had received a letter from Wright dated the 31st of January which included a scheme for a terra cotta fireplace. Willits had a totally different change in mind. He wanted the Roman brick to run all the way up to the ceiling which is the way it was finally done.

Another set of instructions which probably did not sit very well with Wright was the one dealing with the design of the lighting. On February 11 Willits stated that he would like the design before he left on a trip to the East Coast. He wanted the gas pipes to run across the ceiling and then to drop for a chandelier. This would have been contrary to Wright’s philosophies concerning natural lighting, but nonetheless, this was carried out as per Willits’ instructions. It is fairly certain though that Wright had the opportunity to design the chandelier.

After four months of waiting for Wright to have an “inspiration” regarding the design of the decorative glass, Willits became very cynical as to Wright’s design abilities. Giannini and Hilgart wanted the design rushed to them so they could begin fabrication. The house was near completion and needed windows.

In another letter of March 7, Willits wanted to settle a matter of the redesign of the radiator boxes with seats built in. Mr. Russell had thought that the seat in the den was to be omitted, while Willits was agreeable to a width reduction. The reason for the change was that a radiator was needed which was larger than had been estimated. As a result, Willits, knowing that a change by Wright could cause a great deal of delay, included a sketch for a proposed redesign.

Willits also changed a good deal of the woodwork. In the den Wright had proposed a change from Georgia pine to quarter-sawed oak. It took too long to get a sample so Willits decided to put a stop to the change. On the second floor, Willits wanted to give up a linen closet in
order to facilitate a later partitioning of one of the rooms. He enclosed a sketch showing the changes. In the living room Willits anticipated an expansion of his book collection and asked that the bookcase be extended by three feet on either side. In this last instance, Willits has even added to the horizontality of the room.

The frustration that Willits felt with the delays during the construction of his house seems to have been justified. He thought highly of his position in society and had he not pushed Wright the way he did, he never would have received the quality of workmanship or design which he desired. He remained fairly tactful in his letters and he knew how to force an issue into completion.

Whenever a large number of changes had to be made or whenever he needed something to get through Wright’s office, Willits wrote to Griffin or even called him. Griffin was more willing to talk over details than Wright was. In August Willits wrote to Griffin and wanted to discuss items such as electric lights, speaking tubes, plumbing, gas piping, hot water heating, carpentry, and glass. In two letters written in January, Willits requested quotations on what some of the extra costs would be for the bookcase and hardware. In a letter of February 6 Willits complained about not having been notified of the changes which neglected safe boxes, an item Willits had specified as being a necessity. Twenty-one days later Willits informed Griffin that Clow was ready to fit the sashes but the drawings had not been revised. He also asked to meet with him early the following week. Willits felt comfortable with Griffin, who was less uncompromising than Wright.

Willits apparently felt as though he were laying his reputation on the line with this house. Any delays caused him a lot of embarrassment. Besides the frustrating delays from Wright’s office, Willits also was quite annoyed by the
delays from Foster, Glidden and Woodruff. The house was
to be ready for occupancy by May 1 and was contingent
upon getting the heating system in operation. Mr. Clow
needed the heat so that there would be adequate working
conditions inside for carpentry and plastering. Clow was
not giving Willits any problems. He even said that he could
be finished by April 15 which Willits told Foster, Glidden
and Woodruff on January 26.

Shortly thereafter the heating system was installed. It
was a hot water system with the water being heated by
a coal furnace. It featured radiators throughout the house
and apparently used radiant heating in the living room.
In a letter dated January 31, Willits discussed the imprac-
ticality of having the control valve for the radiant heating
in the basement beneath the living room. He wanted to
control the heating from the first floor.

Willits had a flair for the practical because in a letter of
February 6 he informed Foster, Glidden and Woodruff of
the fact that it would be most beneficial to set up the
heating system so that it could be totally shut down for
cleaning and to avoid freezing. Woodruff had told Willits
that the system was not set up that way but Willits insisted
it be modified to work that way.

In addition to this request Willits also wrote that the
heating system was not working too well on the north
side of the second floor. This trouble persisted and even
the dining room on the north side of the first floor was too
cold. Willits checked all the branches of the system and
found that they were almost frozen. He said that without
the salamanders they would be completely frozen. As if
this were not enough of a hint, on the 28th Willits wrote
them another letter saying that the main pipes looked
bad and that he assumed that Foster, Glidden and Wood-
ruff were waiting until the weather got better in order
to drain the system and repair it.

A week later he wrote to say that Mr. Clow wanted the
plumbing completed so that he could finish the floor. Clow
had already started the trim in the living room. The reason
this referred to the living room is that there were heating
coils for radiant heating. The floor finish was then to
conceal the radiant heating. Also in this letter, Willits
stated that he had been very embarrassed by the delays
of the plumbing firm. He was anxious to move in on the
May 1 date, apparently for social reasons.

By March 25 the stable had been started or at least laid
down because in a letter of the same day he advised Foster,
Glidden and Woodruff that the sewer drain was clogged
with clay and that the pipes were breaking. He then in-
structed them on how to repair it and emphasized that
they should make sure that the pipes were below the frost
line. Further down in the letter he stated that the I. Wolf
Manufacturing Company was ready with the plumbing
supplies and they were waiting to be asked to send them.

Two days later Willits wrote Foster, Glidden and Woodruff
another letter stating again that the supplies were ready
for delivery. This firm was causing him as much aggra-
vation as Wright was. At one point in the letter he said that
he could not get the sink dimensions from Wright or from
them. He asked for either the sink or the dimensions so
that Clow could finish the casework. He was becoming so
irritated that he threatened to give the contract for the
lawn sprinklers to a local contractor.

He tried valiantly to insure that everything was in order
before he left for the East Coast and that the house would
be ready after his return. This letter of the 27th of March
is the last one. So sometime between then and May 1
Willits probably went east.

Ward Willits wrote Wright over fifty letters in the course
of eight months. On some days he wrote more than once
and on December 11 even wrote three to Wright and one
to Foster, Glidden and Woodruff. This indicates that
Willits was quite concerned about the construction of his
house. He seems to have been a man of great detail, one
who was quite meticulous. Further, Willits apparently
gained Wright’s respect, as evidenced by the trip to Japan
by Wright and the Willits in 1905.

Wright’s office was very busy at this point in his career.
He apparently leaned fairly heavily on Walter Burley
Griffin to maintain client happiness. When Willits was
most aggravated, he turned to Griffin for help. Wright
was too frustrating for Willits to deal with, which is
evident in some of the letters. Willits was annoyed by
undated letters and by omissions in letters which stated
that there were enclosures. The letters may have been
used by Willits to even hound Wright and to keep him
aware of what was going on. After all, Wright was building
extensively in Oak Park and perhaps Willits felt a bit left
out. The two did have telephone contact but perhaps
Wright did all the talking and left Willits to air his com-
plaints in the letters. A very good example of how the two
may have been speaking on different levels is the incident
regarding the designs for the windows. Willits had waited
four months for Wright to have an “inspiration” and he
was tired of waiting. So he gave Wright an ultimatum.

It is likely that Willits was so incensed by Wright’s antics
during the construction of the house, his running off by
himself in Japan, and his running away to Berlin that he
(Willits) had a grudge against Wright for the remainder
of his life. As late as 1939 when Manson interviewed him,
Willits said that there was a couple of years delay between
design and construction. He said this unequivocally. I
believe that there is enough evidence to contradict this, which would mean that Willits was stretching the truth for posterity. It is unlikely that the two men remained friends for very long after the trip to Japan, especially since Willits took numerous trips to Phoenix later in his life and he does not seem to have made any effort to contact Wright.

Mark David Linch recently received his Masters of Architecture degree with Distinction from the University of Michigan at Ann Arbor, where he studied under Leonard K. Eaton. He has also studied under Walter L. Creese at the University of Illinois, Urbana, and currently resides in Highland Park, Illinois.

CLARIFICATION

Since the publication of “Husser House Dining Room Set” by Irma Strauss in the last issue of the Frank Lloyd Wright Newsletter, additional information has been uncovered. The dining room table is not veneer, as originally believed, but of solid oak with a carved border. The table top is composed of a frame of four heavy planks, with four parallel planks forming the interior. Irma Strauss

PAUSON HOUSE, PHOENIX, ARIZONA, ENDANGERED

The Rose Pauson House (1940) by Frank Lloyd Wright is scheduled for demolition for the construction of a new road in October, 1979. The house, atop a prominent hill in Phoenix, burned in 1942 and has been left as a magnificent ruin since. A consolidated international, national and local effort to save and rebuild this house is now underway. An original set of plans has been found and several prospective buyers interested in rebuilding have been located. Statements of support addressed to “To Whom It May Concern” and offers to help should be addressed to: Friends of the Pauson House, 164 Vista del Cerro, Tempe, Arizona, 85281. We are positive that this house can be saved by a concerted effort.

A view to the southeast of the Rose Pauson House, now endangered by the city of Phoenix road program that proposes an extension of a road over the top of the hill currently occupied by the house. Photo courtesy Stuart Hubler.
The many books, articles, and pictures of Frank Lloyd Wright's architectural work can to some extent convey the spirit of his Prairie homes—but it is only in the living in, of and around them that one comes to understand and respect the integrity of the artist.

The 1906 Gridley home, known as Ravine Place, is harmoniously integrated into 3½ acres of mature trees, open lawn and a deep wildflower ravine with a delightful pond. It is located in the Fox River Valley which is 40 miles west of Chicago on Route #31, just two miles south of Geneva, Illinois.

Ravine Place has been in our family since 1912, and three generations have had the privilege and opportunity to gain the deep appreciation of living with a work of art. Now with the family scattered from coast to coast, we are searching for a family, a large family for this is a very spacious home, to carry on the responsibility which we have honored over the years.

This is not one of Mr. Wright's elaborate Prairie homes but its very simplicity is incredibly subtle. That subtlety is only partially seen by the camera's eye; it takes the human eye and heart to really catch the significance of Mr. Wright's genius. If such a statement leads you to think we love this home, you are right. That's why we are looking for that one in a million family who will learn through living here what Mr. Wright's legacy is all about.

With nearly 4000 square feet of living space, the house has 14 rooms overall, including five very large bedrooms (the master bedroom with roman brick fireplace is 19' x 14½"), a spacious (24' x 23') living room with fireplace, a gentleman's den with fireplace, a separate dining room (24' x 14½'), a roomy kitchen, a butler's pantry, a two story separate wing for maid's quarters, plus a full basement. We have scrupulously respected Mr. Wright's original concept; there have been no major alterations either to the interior or exterior.

Please call owner Mary L. Snow at Century 21, Kanute & Zak Realty at 232-9000 or at home 879-5705.
PROPERTIES AVAILABLE

RICHARD C. SMITH HOUSE, Jefferson, Wisconsin

The Frank Lloyd Wright house known as the Richard C. Smith residence is for sale, with bids starting at $250,000. Located in Jefferson, Wisconsin — the heart of cross-country ski area — it is just a 30 and 45 minute drive from Milwaukee and Madison, respectively.

Built in 1952 of native limestone and cypress, this seven room, three bedroom home is a perfect example of Wright's diamond module design. It consists of three wings — the living area wing is parallel to, and shifted back from, the bedroom wing. A shorter connecting wing contains the kitchen and eating area, utility and work area, and the spacious entryway. Thermopane glass door walls in the rear of the home lead to a large private patio that surrounds a magnificent 200-year-old oak tree. The professionally landscaped grounds adjoin the private Meadow Springs Golf Club.

In May 1979 the Wisconsin Historical Society announced that this home was accepted and added to the National Register of Historic Places. Many advantages go along with this prestigious designation, such as grants for any restoration or repair, plus certain tax advantages.

Please submit all bids or requests for further information to:

Jan Castillo, Century 21 T. J. Grant, Inc., Realtors
680 North Western Avenue, Lake Forest, Illinois 60045
Phone: (312) 234-8300, Office—(312) 295-2664, Home

REBHUHN HOUSE, Great Neck, New York

Located in Great Neck Estates, 20 min. from Midtown, New York City on 15,125 sq. ft. of land. Built in 1938 on a cruciform plan with a two-story high living room, the home has living room, dining room, library, kitchen, three bedrooms, three baths, three fireplaces, plus cellar, garage and a small detached sculpture studio. Radiant heating by gas hot water. Exterior is cypress board and batten with brick. $250,000. Contact Jane Rebuhn, 9A Myrtle Drive, Great Neck, NY 11021 (516) 829-8594.

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This photograph is a familiar one, but it has always been presented in a cropped condition without showing the book of pressed plants and the unidentified house model. Edmund Teske speculates that Frank Lloyd Wright took this photograph himself because his right hand does not show and is probably squeezing a bulb. He was an avid amateur photographer with his own 8 x 10 camera. The original negative to this was an 8 x 10 glass plate. Photograph courtesy Edmund Teske.