

HARRIS ARMSTRONG'S SHANLEY BUILDING, 1935

by Andrew Raimist

Harris Armstrong established his reputation as an internationally significant modern architect with the publication of the Shanley Building in 1937. With this single decisive stroke, Armstrong became one of the Midwest's foremost pioneers of the Modern Movement. The building demonstrated his original artistic sensibility: a capacity to transform an established architectural language, reconstructing its grammar through formal experimentation, inventive detailing, and technical innovation. Close examination of the Shanley Building also reveals characteristic Armstrong qualities: Surprising juxtapositions of form and material, eclectic sources of inspiration, and sophisticated marketing of architectural talent.

Dr. Leo M. Shanley, a young orthodontist planning to establish an independent dental practice, approached Armstrong about designing a new office in late 1934. Shanley had previously apprenticed with an established dentist in downtown Saint Louis.¹ His new office would be in an untried location for a dental practice: in the Saint Louis County western suburb of Clayton, a residential community where many of his prospective clients lived.

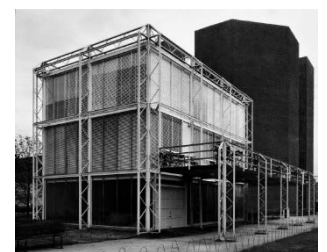
While attending a Chicago dental convention, Shanley had seen examples of the new architecture at the Chicago Century of Progress Exposition of 1934.² He was particularly impressed by George Fred Keck's experimental house prototypes: the House of Tomorrow and the Crystal House. The House of Tomorrow, a twelve-sided steel-frame structure, was a futuristic expression of modern construction techniques applied to family living. It featured glass exterior walls, modern mass-produced furnishings, open-air terraces, and built-in garages for an automobile as well as an airplane. The house projected the healthful, hygienic qualities of sunlight and fresh air typical of the European modernism of the 1920s, combined with optimism for the future of American prosperity. For the second opening of the Century of Progress Exposition, Keck designed the Crystal House, the first fully glazed structure in the US, expressing its unique steel joist structural system on the exterior.



Armstrong in his office with photographs of the Shanley Building hanging behind him, c. 1940



George Fred Keck's House of Tomorrow (1933) with its series of terraces and garages for personal automobile and airplane.



Keck's Crystal House (1934), a fully glazed with dramatic overheating problems.

The young, idealistic Dr. Shanley was impressed by the open, light, and healthy atmosphere of Keck's structures and their ability to embody a progressive vision of a future based on advancing science and technology. As a practitioner in the emerging field of orthodontia, Dr. Shanley began to imagine the potential benefits such an architecture could offer his practice: a healthy, clean environment designed according to functional needs as well as a bold, progressive image.

By 1935, some International Style Buildings had been constructed in other American cities, but none had yet been built in Saint Louis. In that year, Fortune magazine estimated that there were about fifty residences, three schools, two office buildings, and a handful of other structures in the European modern idiom built in the US.³ Hitchcock and Johnson's groundbreaking exhibit of 1932 at the Museum of Modern Art, *The International Style*, brought attention to the few Americans practicing in this mode. For example, Richard Neutra's Lovell Health House (1927-29) in Los Angeles was a sophisticated essay in modern construction combined with the new "clean" aesthetic. More publicly prominent was Howe and Lescaze's Philadelphia Society for Savings (PSFS) Building (1929-32), which announced the arrival of the truly modern skyscraper in America. The International Style exhibit was shown in New York, Massachusetts, Pennsylvania, and Ohio in the East and only Chicago and Los Angeles to the West. Although the exhibit and the subsequent book⁴ consolidated the recent advances in architectural design into an identifiable "style," its influence did not have widespread impact in the US until after World War II.

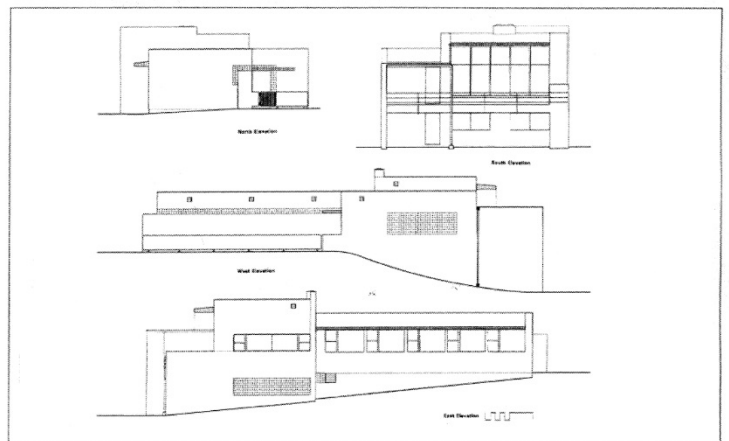
While Armstrong was not the only Saint Louis architect interested in modernism, his Shanley Building was the first comprehensive statement of the tenets of the International Style in the central Midwest. Other local architects pursuing modern methods of construction and form, such as Charles Eames, Fred Dunn, and Isadore Shank, tended to preserve various regressive elements, such as gabled roofs, decorative ornamentation, and a dominant symmetry. For example, Eames' Meyer House (1937) employed commercial steel and concrete slab construction but concealed it on the exterior with a severe but relatively conservative brick and stone veneer and on the interior with dropped ceilings and hardwood floors.



View of Shanley Building entry court from the northwest with sidewalk and landscaping extending to the street edge.

A decade later, Armstrong described the atmosphere at the time: "It was St. Louis itself and its conservative, even reactionary, tendencies that presented such a challenge and such a need that we decided to stay here and starve. It looked like that might be a very likely solution, too, in the early Thirties. But those hard years gave meaning and value to work and to the chance to work. They made clients people, and very special people, at that."⁵ Interviewed in the mid-1940s, Armstrong presents himself as an idealistic, starving proponent of modern design; in actuality, his work of this period, taken as a whole, is less consistent than his words suggest.⁶ Nevertheless, the Shanley Building marks a turning point in his career, expressing his commitment to modern forms and methods in a decisive and convincing statement.

After Dr. Shanley discovered Armstrong, a talented and eloquent proponent of modern architecture in Saint Louis, he became convinced of the value such a striking building could bring to his practice.⁷ As Armstrong developed plans for the small white structure, Shanley became firmly confident of his ability to provide a striking setting in which to practice orthodontia. Orienting his design toward Dr. Shanley's clients—children and their parents—Armstrong freed his creativity from the aesthetic morality of the International Style to create an intimate place of beauty and wonder. Armstrong persuaded Dr. Shanley to borrow the \$12,000 needed for its construction, much more than the \$4,000 required for a basic dental office;⁸ this expanded budget gave him the freedom to design custom hardware and furnishings, to develop innovative detailing, and to realize his comprehensive vision for a new architecture.

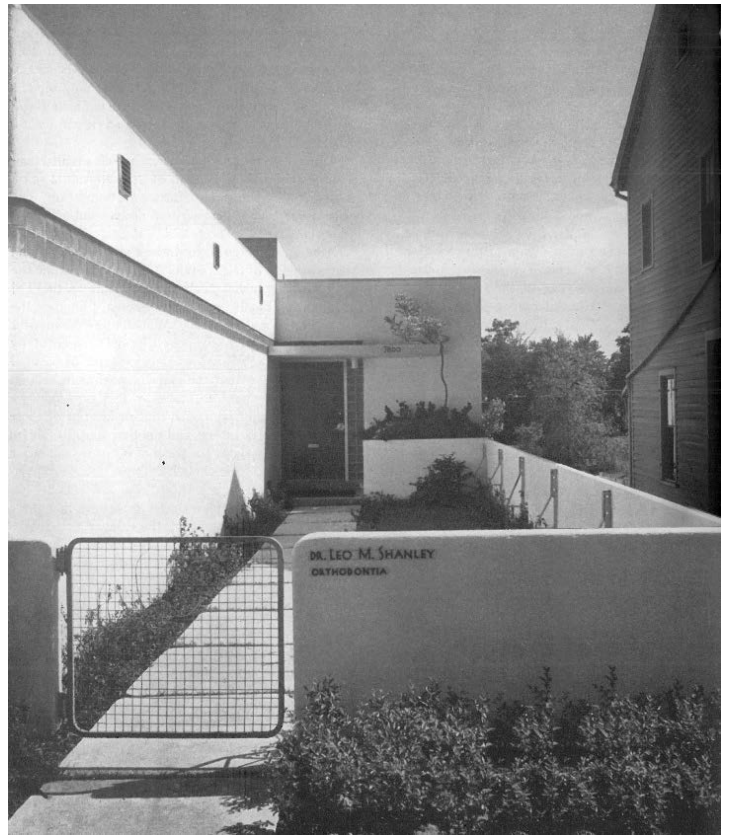


Shanley Building elevations.

Dr. Shanley purchased a small, sloping piece of property⁹ on a corner north of Clayton City Hall¹⁰ in what was then a residential district. Clayton was then a small, independent suburb of Saint Louis with recently constructed upper- and middle-class residential neighborhoods. In previous years, Armstrong had designed a number of traditional houses in this area, while apprenticing with local architects.¹¹ He knew that a building like the one he contemplated would

elicit a strong reaction, giving his work wide exposure and establishing him as *the* progressive Saint Louis architect. Creating a sensation was likely as much Armstrong's goal as producing a refined piece of architecture. With such publicity, he hoped to develop his practice beyond commissions from clients insisting on period homes.¹² With an almost desperate need to establish his reputation and the prompting of his wife, Armstrong ardently invested his creative energies to create this original and striking building, from its unconventional site plan to its inventive construction details.¹³

Armstrong seems to have derived the Shanley Building's plan by arranging the internal spaces to provide the most appropriate solar orientation for each. The building forms an inverted T with a two-story portion forming a broad base, where the ground slopes downward, and a one-story section with five aligned rooms to the north. These rooms, for consultation, operating, and laboratory, are methodically aligned along the east façade, where the sun shines directly only in the early morning. The waiting room on the upper level and recreation room below it face south, but both are protected from the intense afternoon sun by overhands. Armstrong's approach simultaneously addressed the functional and aesthetic nature of each space, based on factors such as views, privacy, solar gain, and daylighting. He carefully modulated the building's openings and entry sequence, gradually revealing its form.

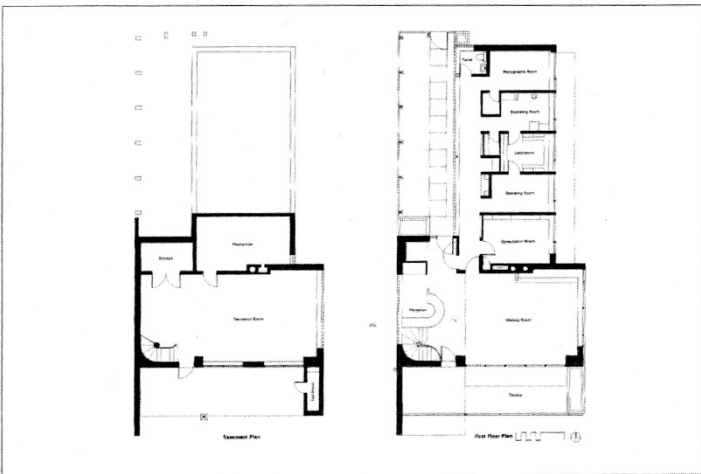


Entry court with floating stucco wall supported by a series of metal brackets.

interrupted only by the stainless steel door handle and mail slot. The line of glass blocks wraps around the door, creating a sidelight. Armstrong kept the building visually and thermally closed along the entry path by using only glass blocks in the openings facing to the north and west.



Reception area.



Shanley building plans.

This organization resulted in an unusual main entry set back from Maryland to the north; someone visiting the clinic enters into a long narrow courtyard through a gate and walk nearly the entire length of the building before reaching the entry. This sequence gives the impression of entering a protected precinct. No views into the building were accessible from the court; the only openings are narrow bands of glass block set flush with the stucco wall surface, lending an air of mystery to the sequence. The door itself, protected by a cantilevering plane, was a smooth black plane

this country. Unbelievable but true. I had seen a few of them in Europe, and they seemed to me an excellent new material.”¹⁴ Lescaze was mistaken about the previous use of glass block in the US, but his prominent position in the profession makes it clear that they were essentially unknown by American architects.¹⁵ Significant examples of glass block use in Europe at the time were Pierre Chareau’s *Maison de Verre* in Paris (1931) and Le Corbusier’s Clarté flats in Geneva (1932).¹⁶ Armstrong had not yet visited Europe but learned of new materials and forms through the architectural publications of the time. He appropriately used glass block to light the interior, provide privacy for the clinic, protect the building thermally and acoustically, and create a sense of mystery and wonder.

A low stucco wall, mysteriously floating above the ground, defined the entry courtyard. Lifting the thin white wall from the ground simultaneously created a subtle, poetic effect and solved potential construction and maintenance problems. This ethereal wall was supported by a series of lightweight galvanized steel joists, eight feet on center, eliminating the need for a continuous foundation beneath, allowing water from the courtyard to drain freely and protecting the stucco from deterioration from contact with the ground. A line of light, therefore, appeared from under the evergreen hedge, dramatically indicating the sharp contrast between Armstrong’s new white dental clinic and the existing dark wood clapboard house immediately to the west.¹⁷

The entry courtyard was originally heavily planted with evergreen shrubs in linear swaths leading from the street toward the entry. The walk was composed of individual pads of white concrete with rounded corners, emphasizing their singularity and making each one rest on a natural bed of greenery. These slabs originally extended all the way out to the street edge, providing a convenient drop-off point surrounded by symmetrically arranged groups of shrubs.¹⁸ Armstrong’s use of landscape materials ranged from this formal, rectilinear placement of plants at the street to a more lyrical arrangement of individual specimens. These plants visually counterbalanced the built forms, as in the case of the small tree trained to grow over the entry canopy. The raised planters built into the walls at opposite corners of the courtyard frame the dynamic view of the dark entry door set back from the street, contrasting the formality and symmetry of the plantings at the street. There is an interesting “circulation” of plant materials from the shrubs at the street edge, along the ground parallel to the enclosing white wall, up into the planter to the right of the entry, up through the stalk of the tree over the canopy, then magically along the taut line of glass blocks to the planter high in the wall above the entry gate. Armstrong’s paradoxical juxtaposition of the natural and the manmade could not be more strongly stated or more paradoxically enmeshed.¹⁹

The zone defined by the parallel white walls established by the deeply recessed courtyard created a narrow circulation and service zone along the west side of the building. This section of the plan contained the exterior entry court, reception area, and a compact curved stair to the lower level. Upon entering the reception area, visitors encounter a protruding monolithic semicircular desk with a reflective terra cotta surface. This intimate lobby with its low, glossy deep blue ceiling reflected the light filtering through the glass blocks here. First, through the L-shaped glass block frame surrounding the entry and then from the large expanse behind the receptionist. This compressed space featured sharp contrasts in color, light, and texture. It enveloped the visitor in a welcoming three-dimensional abstract frame of striking aesthetic beauty. While the color palette was drawn from nature, the form was utterly abstract and modern.



View of patient waiting room from reception area.

The reception and waiting area’s flooring was a dark brown cork tile which visually and tactilely softened the hard concrete floor below. The intense natural hues of the interior (blue, rust, and brown), contrasted the austere, monolithic white concrete walls of the exterior. While the building’s exterior appearance suggests a pristine, clinical structure, the interior immediately embraces you with its striking visual contrasts, abstract beauty, and physical comfort.

To the left, a bright spacious waiting room opened from the relatively contained space of the reception area. After traversing the carefully calibrated, compressed entry sequence extending perpendicular from the street outside, one looks diagonally into the high-ceiled waiting room. The view from this space toward the south was utterly transformed when compared to a pedestrian’s view from the sidewalk outside. Tall sheets of glass extended flush to the high ceiling, visually connecting the waiting room to the outdoor terrace and elegantly framing a view to Clayton’s growing downtown beyond. The grid of aluminum

mullions and the diaphanous net-like fabric of the curtains transformed the experience from the tradition-bound atmosphere of a small Midwestern suburb to the expansive feeling of a modern, clean technological future.

Armstrong's Shanley Building rejected the existing society and its physical manifestations embodied in its traditional masonry and timber architecture. The building symbolized a better future offered by progress, science, and the cultural influences of the wider world far beyond Missouri. This striking critique of its context brought attention to Dr. Shanley's orthodontic practice as well as Armstrong's unique approach to architecture. Further, he was recognized nationally as a progressive architect challenging the tradition-bound St. Louis social structure. The building proposed a reexamination of the relationship of the natural and man-made environment in the context of a Midwesterners' daily life. Despite its modest size, the building's compact, striking form embodied tangible improvements in medical science, human comfort, and environmental quality. The building's challenging, hard-edged modern composition was made humane, personal, and comfortable by its carefully conceived original interior fittings and finishes.



South elevation.

Armstrong's extensive use of glass was as polemical as it was sensuous. It symbolized a future of clarity, openness, and transparency which had been prophesied years earlier by European poets like Paul Scheerbarth. In his book, *Glasarchitektur* of 1914, he wrote, "In order to raise our culture to a higher level, we are forced, whether we like it or not, to change our architecture. And this will be possible only if we free the rooms in which we live of their enclosed character. This, however, we can only do by introducing a glass architecture, which admits the light of the sun, of the moon, and of the stars into the rooms, not only through a few windows, but through as many walls as feasible, these to consist entirely of glass. . ."²⁰ These qualities offered psychological as well as physiological benefits relating to

the healthful aspects of light and fresh air, as promulgated by architects like Bruno Taut, Mies van der Rohe, and Le Corbusier in Europe and Richard Neutra in America. Nevertheless, Armstrong was well aware of the potential environmental concerns associated with the use of extensive glazing. Large areas of glass permit significant heat gain during the summer, particularly when south-facing. Heat loss during the winter due to glass's inherent lack of insulating qualities was also a particular problem with the new approach to designing with large glazed openings.

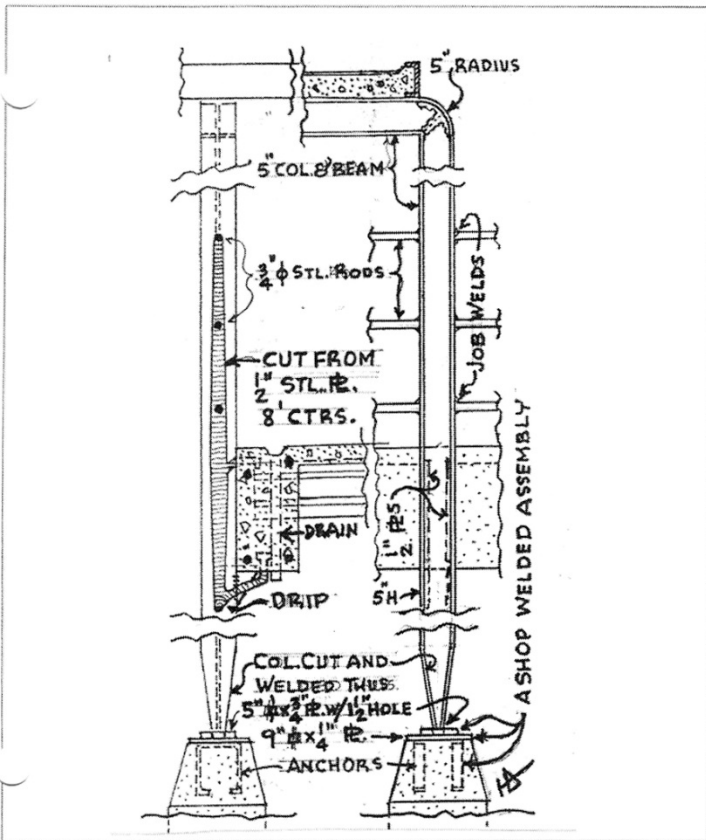
The Chicago architect, Fred Keck learned this lesson in his "Crystal House" built for the 1934 Century of Progress Exposition. Being the first all-glass house constructed in the United States, it clearly demonstrated the extreme temperature variations resulting from walls using simply single-pane glazing. The building interior became quickly overheated in the bright summer sun making its interior temporarily unusable. While the use of double-pane glazing was known to dramatically increase a window's insulating potential, its use presented several technical and practical problems. The most critical defect of double-pane glazing was the tendency for the inner surfaces of its two sheets to fog due to moisture build-up. Armstrong described this problem in his last published article: "When the air between the sheets of glass was heated it would expand and some of it would be forced out. It could pick up moisture and when the air between the glass cooled this moisture laden air would be drawn back in the space. The moisture would settle on the inner surface of the glass and eventually cloud it to an objectionable degree."²¹ This limitation impacted the practical use of this technique. Armstrong wished to address this limitation. Dr. Shanley provided the opportunity to experiment with an untested approach to addressing the problem of moisture and fogging.

While Armstrong was fortunate in having air conditioning technology available for the Shanley Building,²² he could not rely on mechanical cooling to entirely offset the summer heat gain of large south-facing windows. In winter, the loss of heat through such large glazed areas was equally challenging. To deal with the thermal problem, he developed an effective version of double-glazing and solved the problem of fogging due to moisture build-up. He employed a chemical dehydrator to maintain low humidity within the air space between the glass panes. He designed a concealed metal box containing desiccant below the windows connecting it to the contained air space with small metal tubing. The chemical used in the box, calcium chloride, absorbed moisture, keeping the glazing clear. This system remained in continuous use since the building was constructed in 1935, requiring only the periodic replacement of the desiccant.²³

Armstrong successfully devised this method of double-

glazing prior to the development of Thermopane glazing in the 1940s, which relied on vacuum sealing the space between the sheets of glass. The Shanley Building's windows have developed only minimum fogging, more than fifty years since their installation. This is an achievement early installations of Thermopane have generally not matched. The Libbey-Owens-Ford Company, which originally developed the Thermopane technology still in use today, later sponsored Armstrong's design of a model solar house to help publicize their products in the Midwest.

The design of the south elevation and the terrace outside the waiting room reveals his creative approach to architectural composition. This portion displays some of the structure's most inventive details and exhibits his careful attention to environmental concerns. He cantilevered an extension of the roof plane and installed exterior retractable canvas blinds to protect the large windows of the waiting room from the southern sun. The overhang was carefully designed to block summer sun but to allow winter sun to penetrate and warm the waiting room.



Column and railing detail

With this solar control device, Armstrong demonstrated his ability to successfully alter the largely aesthetic precepts of the International Style, which had generally eliminated overhanging eaves in favor of flat roofs with parapets. While Armstrong borrowed the idea for external canvas blinds from Richard Neutra's book,²⁴ he arranged these elements in a new way by constructing the overhang as an

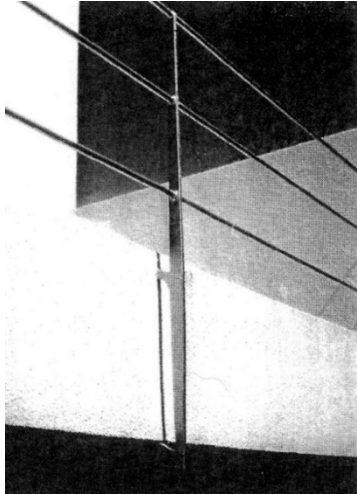
extension of the shallow sloped roof, making it an integral part of the building rather than an appendage to it. Nevertheless, the building presented the image of essentially being composed of walls, minimizing the visual impact of the roof. The building's composition cleverly conceals the sloped roofs, which would have interfered with its rectilinear volumetric expression.

Armstrong designed the sloped roofs in reaction to the particular environmental conditions presented by the Midwestern climate, with its extreme temperature variations. The sloped roof condition provides a natural free circulating air space between the flat ceiling and roof structure above. Armstrong appropriately placed vents at the high and low ends of the roof slope inducing passive exhausting of excess heat. Insulation was installed above the ceiling to further control interior temperatures. Finally, the roof surface itself was painted with aluminum paint to reflect solar radiation.²⁵ Together, these devices helped to control the heat gain of flat, built-up roofing, typically black tar, which absorbs excess heat in St. Louis summers.

The terrace offers a pleasing outdoor space for patients as well as providing shelter for automobiles parked below. The concrete terrace appears to span from the massive concrete planter on the east and the thin supporting wall to the west. A single steel column offset to one side gracefully stands free of the terrace. This column, a galvanized steel H-section, rests on a point at its base, balancing like a ballerina's toe on a small concrete support. It extends vertically to support a concrete overhang where it nimbly turns ninety degrees, becoming a beam. This unique column/beam forms a light L-shaped frame mirroring the configuration of the solid wall and canopy it supports. The solid concrete form shelters the terrace from the intense western summer sun and visually acts as a foil to the lightweight column/beam supporting it. Together, the wall/canopy and column/beam reveal something of the internal organization of the building, indicating the lower ceiling height of the circulation zone along the west side of the floor plan.

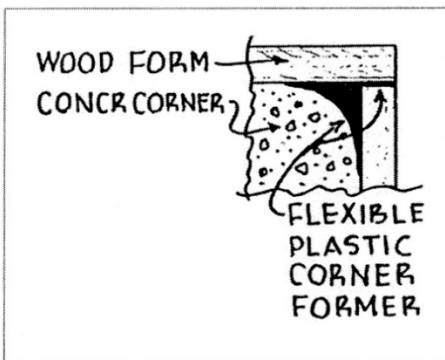
The concrete wall/canopy extends out from the body of the building itself, helping to connect the terrace and the interior to space beyond, as suggested by De Stijl principles of architectural composition. In his manifesto "Towards a Plastic Architecture," Theo van Doesburg wrote that walls should extend beyond defining the limits of the interior spaces so that the "surfaces have a direct connection to infinite space."²⁶ Armstrong's compositional approach to the building's plans and elevations reflects his understanding of this approach to architectural composition particularly in the configuration of the south elevation. For example, the locations of the exterior planters integrated into the walls suggest a dynamic pinwheel composition typical

of De Stijl aesthetics. The form of the waiting room's fireplace also reveals Armstrong's sophisticated ability to apply these formal principles at several scales.



Detail of the terrace's galvanized steel handrail.

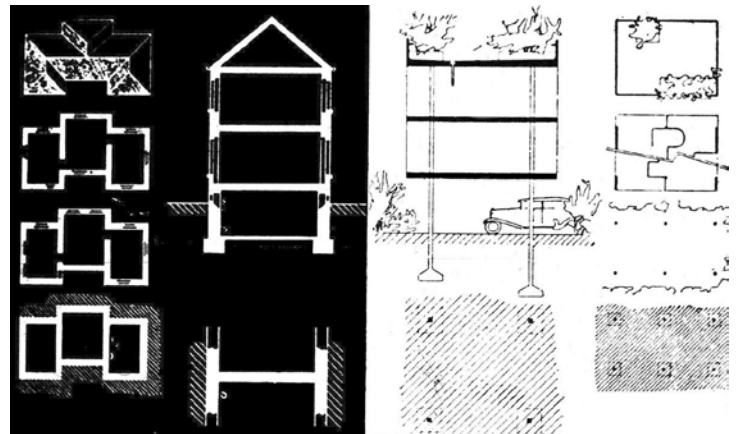
The terrace's light steel handrail further exhibits Armstrong's personal approach to detailing, revealing his attention to function as well as its aesthetic qualities. He employed 3/4-inch galvanized steel rods supported on custom cut steel plates projecting from the face of the concrete terrace. These vertical steel plates were cut and shaped to hang down and away from the concrete surface with an ingenious drip edge keeping water, and therefore rust stains, from marring the white stucco finish. Where the horizontal metal rods meet the wall, they are similarly angled to keep water dripping away from the white surface. These design details have been successful in keeping water away from the building's walls. Armstrong explained the necessity for his close attention to details thus: "When a building is as bare of ornament and texture as the Shanley Building, the care with which parts are assembled becomes more important."²⁷



Concrete corner former patented by Armstrong.

Attention to the exterior corners of the building also demonstrate his ability to innovate in matters of basic construction. He devised a solution to the problem of the fragility of sharply cast concrete corners by inventing a flexible plastic insert to be placed into the formwork into which the flowing concrete is poured. The corner former smoothly rounds the exposed edges making them much less vulnerable to damage. Armstrong later patented this concrete corner former and continued to receive royalties for its design throughout his life.²⁸

The white stucco and formal abstraction of the Shanley Building's exterior were first used extensively by modern architects at the *Weissenhofsiedlung* housing exposition in Stuttgart in 1927. The architects represented at the exhibition included Ludwig Mies van der Rohe, Le Corbusier, Walter Gropius, and J.J.P. Oud. Armstrong certainly knew of these works; his friend Charles Eames had visited the experimental modernist community during his honeymoon in 1929.²⁹ Eames later described his reaction as "like having a cold hose being turned on you."³⁰ Eames and Armstrong were both members of a local group of architects, artists, and writers known as the "Paint and Putter Club" who assembled for social gatherings to discuss recent currents in design and culture. They undoubtedly debated the relative value of movements such as De Stijl, Futurism, Constructivism, and the International Style. The *Weissenhofsiedlung* was an important step forward in sanctioning the modern style of building and formulating a coherent approach that could be institutionalized. For the exhibition, Le Corbusier developed his famous formulation of the essential tenets of this mode of design and construction, his "Five Points of a New Architecture." While Armstrong's design for the Shanley Building did not adhere strictly to these ground rules for modern architecture, it reflected his awareness and reinterpretation of them.



Le Corbusier's diagram for the "Five Points of a New Architecture."

Le Corbusier's "Five Points" were as follows: 1) The house on columns, 2) The roof garden, 3) The free plan, 4) The strip window, and 5) The free façade.³¹ His diagrams illustrating these points were published in *La Ville Radieuse*, contrasting the heavy solidity of traditional masonry construction with the light airiness of the new method of building. Interestingly, some of Le Corbusier's own examples of the "machine aesthetic" were built from traditional masonry materials faced with a layer of white stucco, making them appear thin and light. The Shanley Building continued that contradiction between the apparent construction and the actual building fabric while exploiting the aesthetic opposition of thin, light membranes against thick, heavy concrete walls.

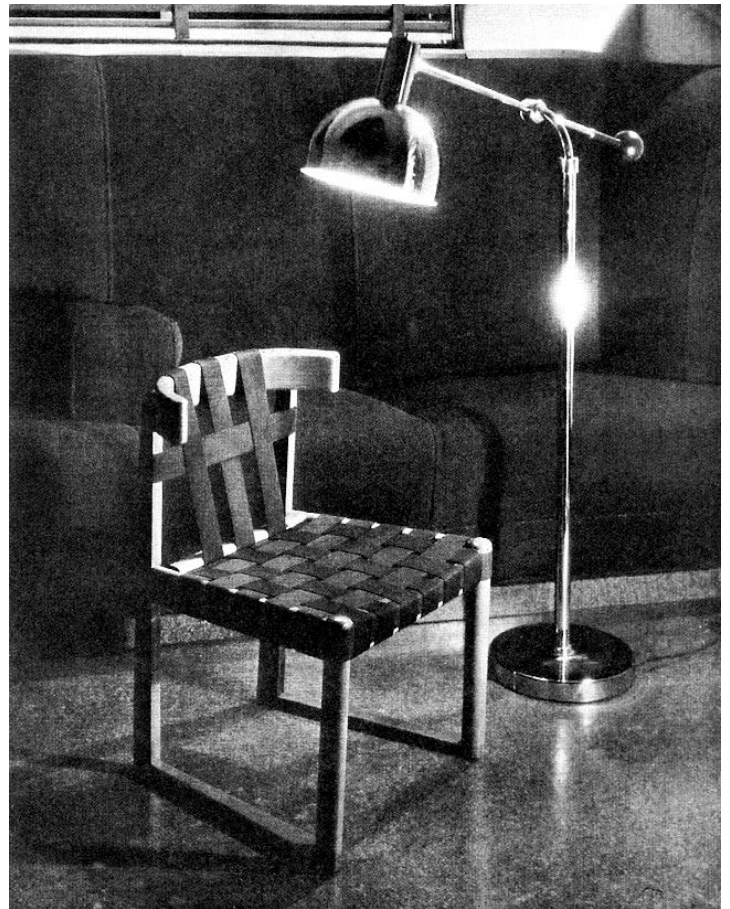
Armstrong included references to each of the “Five Points” in his design but in modified form. The first point (*free-standing columns*) was represented by the single steel column/beam supporting the terrace and the overhanging concrete canopy, altering the ideal of a regular, neutral grid support columns, or *pilotis*, favored by European modernists. Armstrong’s column was a mannerist interpretation of a vertical steel column, making it visually and structurally continuous with a horizontal beam and disconnecting it visually from the ground and its solid concrete support. For Le Corbusier, columns served to open up the ground for vehicles and nature; Armstrong’s column achieved the same end. In fact, the surface of the access drive was originally surfaced with pecan shells as a way of reducing costs. However, it had the undesirable effect of attracting birds from miles around.



Exterior view of waiting room at night.

The second point (*roof garden*) was clearly referenced in the southern terrace with its built-in planters. It is also suggested by the raised planter on the north façade and the vines trained to grow up the walls around the building, an Armstrong custom during the 1930s and 40s. The third point (*free plan*) was effectively employed in in the sequence of movement from the entry and reception area into the waiting room allowing these spaces to open and interpenetrate. This area would have typically featured a load-bearing wall. Instead, he concealed structural members within the ceiling/roof assembly. The fourth point (*strip windows*) was used along the east elevation for the waiting room with a tall band of glazing provided for the examination, laboratory, and consultation rooms. This tall strip window was divided by a series of operable double-hung windows, rather than the casement windows typically used by other modernists. The notion of the *free façade* was suggested through the large glazed wall of the waiting room as well as the 40-foot-long strip of glass blocks along the corridor. This horizontal line dividing the upper and lower

sections of the, long, uninterrupted concrete wall offered a mysterious mask on the exterior which was later playfully revealed at the interior corridor with a singular column emerging from the canted sill below the strip of glass blocks.



Shanley chair and lamp.

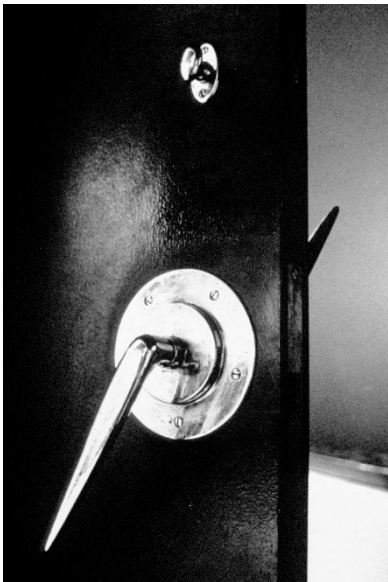
The decorative program Armstrong devised for the interior enhanced the technical and formal innovations he developed in its construction. The waiting room, in particular, expressed an optimistic world view concerning the material and aesthetic advances that modernism represented. A large painted mural of the night sky studded with stars and crossed by the milky way was mounted above the room. The mural was surrounded by recessed, indirect lighting, making it appear to float unsupported overhead, evoking images of flight, the possibility of space travel, and the wonder of escaping the confines of gravity and the earth.

Contrasting the weightless immateriality of the ceiling, a grouping of detailed topographic maps of the earth’s continents is arranged in a corner over the smooth limestone fireplace surround. This display of the earth’s surface without intervening political divisions suggests a confidence in the ability for modern technology and culture to spread its benefits over the globe. It was also a colorful, educational display to capture the imaginations of anxious children waiting to see the orthodontist.

Armstrong designed all the waiting room's furnishings including chairs, tables, lamps, and fireplace andirons. The "Shanley Chair," a comfortable, simple design with a wood frame and fabric seat, had a skewed rectilinear structure and a curved back. Woven fabric tape created its seat and back. The chair exhibited the simplicity of Shaker furniture with its basic geometry, lack of ornament, and solid, smooth wooden frame. The natural warmth of the chair's wood and fabric stands in sharp contrast to the cool tactility of the chromed steel lamp consciously placed alongside it. The sturdy chair is surprisingly lightweight and Armstrong deployed them in other commercial and residential settings.



Table lamp with adjustable "helmet."



Door lever.

The juxtaposition of metal and wood in the furnishings parallels the contrast of man-made and natural materials on the building's exterior. The custom table lamps and other light fixtures were fabricated locally by metal craftspeople to Armstrong's designs.³² While cold to the touch, the lamps produced bright, warm light. These tactile features were important in Armstrong's conception of the decorative arts. Solidity and weightlessness were twin themes extending through the design.

The smaller metal table lamps offer a lighthearted feeling to the clinic. Spherical frosted glass globes supported by a

vertical steel tube were surmounted by adjustable metal "hats," giving the lamps the anthropomorphic image of a conquistador with a helmet or the image of Saturn and its rings. The larger table lamp shares a formal resemblance with its smaller counterpart, creating the sense of a family of fixtures with parents and offspring. These animated touches are typical of Armstrong's approach to architectural and interior design. His design encouraged patients to adjust the lamps to their own liking.

Armstrong also devised original hardware for the doors and cabinets. The door handles alternate between small egg-shaped knobs and long dagger-like levers. These elements recall the shapes of dental instruments, allowing patients to "participate" in their procedures when grasping and operating these allegorical instruments. These elegant stainless steel features stand in sharp contrast to the glossy black doors and cabinets, emphasizing the correlation of the visual, symbolic, and functional aspects of Armstrong's approach to design.



Corridor.

Providing access to the examination, laboratory, and consultation rooms, the narrow corridor runs parallel to the exterior entry sequence only in the reverse direction. Its floor and ceiling are rendered with reflective black coatings, marking them as two horizontal planes that physically define the limits of the clinically white walls but visually reflect them infinitely. The surrealist atmosphere of this narrow circulation space is accentuated by the bright line of light, forty feet long, emanating from the double stacked glass blocks along the ceiling's upper left edge, extending the space upward and outward along this ethereal line. The view captured in the photograph seems strangely reversible; with full-height doors and vertical symmetry, the image can be inverted without substantially losing its power or feasibility. The dark ceiling plane hovered overhead,

seemingly supported on the left by a single stainless steel tube standing free of the glass blocks and mysteriously disappearing into the canted top of the thick concrete wall. Three equally spaced light fixtures, containing single exposed light bulbs, floated in the midst of the dark ceiling, recalling Le Corbusier's similar lights in his Parisian houses *Maison Cook* and *Maison La Roche-Jeanneret*. A minimal metal cylinder held the bulb, revealing a hemisphere of light at its tip. The T-shaped fixture's wide base and narrow tube suggest a phallic symbolism, perhaps unintended. Nevertheless, this compressed linear circulation space exhibited an almost religious impression of light and space, honoring the rising cultural appraisal of the value of science and medicine.



Examination room with external sun shade drawn.

The examination rooms were sheathed in a grid of hygienic white tiles contrasting the dark ceiling and floor. These custom-designed circular aluminum ceiling fixtures provided both light and fresh air to the rooms. They appear like a bright moon in the night sky to the reclining patient undergoing treatment. Even in the most clinical spaces of the office, Armstrong includes natural references such as this, reflecting his emerging interest in contrasting the natural and the technological that recur in his later work. The photograph of the exam room at first glance appears to have been taken at night but was actually shot with the dark terra cotta-colored sun-shade pulled down. These operable, exterior awnings protected patients' eyes in the early morning when the eastern sun would enter the space. Daylight filters through the slot in the external overhang, providing a soft, even natural light for these rooms. He also designed vertical fluorescent fixtures mounted on adjustable supports, providing flexible, task-specific illumination. The exam rooms indicate Armstrong's skill and confidence in tackling the varied technical, environmental, and aesthetic

issues facing designers of medical buildings in an era before standards had been firmly established.



East elevation.

The Shanley Building won national and international recognition in the years following its construction. In 1936, *Architectural Record* featured the building with eleven pages devoted solely to this structure. The English journal, *Architectural Review*, published it the following year. Photographs and drawings of the building were exhibited at the *Exposition Internationale des Arts et des Techniques* in Paris in 1937, where it was awarded a silver medal.³³ Other architects honored included Richard Neutra and William Wurster of California, George Howe of Pennsylvania, and Alden Dow of Michigan.³⁴ In 1938, the Shanley Building was featured in the Gold Medal Exhibition of the New York Architectural League.

The building's initial reception in Saint Louis was far from enthusiastic. It was singled out by a local architecture professor as an example of the "terrible" new architecture from Europe.³⁵ As Armstrong later explained, "A former professor of mine at Washington University delighted in telling his class about the ridiculous building I had designed."³⁶ The professor, Lawrence Hill, who considered himself an expert in French culture generally—and Beaux Arts architecture in particular—was "somewhat chagrined" when the French government publicly honored the building with a design award.³⁷

The Shanley Building was in continuous use as an orthodontist office from 1935 to 1992, having been subsequently occupied by the son of the original Dr. Shanley, who continued to the practice. The building has more recently been remodeled in various ways that have unfortunately removed and obscured some of its important features. These elements can certainly be restored if a sensitive, thoughtful owner takes possession of it. While listed on the National Register of Historic Places, it's not safe from demolition. Clayton is notorious for its lacking of protection for historic structures. Its location in the rapidly

developing commercial center puts the Shanley Building's continuing existence in immediate peril. Other Armstrong buildings in Clayton have already succumbed to pressures from development. An office tower was constructed on the former site of the Armstrong-designed Scruggs-Vandervoort-Barney Department Store at Forsyth and Hanley.

Armstrong's interpretation of modernism, as represented in this building, is more complex and rich than many promulgators of the International Style. This difference marks a tendency in his work toward complexity and contradiction. It reveals his independence from adhering to the sometimes rigid doctrinaire prescriptions of the Modern Movement. His sense of free expression and idiosyncratic individualism marks Armstrong as a Midwestern designer with the confidence to depart from his sources of inspiration. It also indicates his interest in—and acceptance of—layered complexity and pragmatism over the easy simplicity of an idealism that can undermine human values, scale, and sensitivity.

Notes

1. Dr. Leo M. Shanley (1898-1979) had a distinguished career as an orthodontist. He served as president of the International College of Dentists, the Missouri Dental Association, and the St. Louis Dental Society, as well as having been a Fellow in the American College of Dentists. He practiced dentistry for over fifty years, from 1922 until his death at the age of 81. "Dr. Leo Shanley Funeral Monday," *St. Louis Post-Dispatch* (September 29, 1979).
2. Dan Williamson, "Harris Armstrong: First Architect on the Beach," *Mill Creek Valley Intelligencer* (St. Louis) (March 1970): 11-13. Armstrong may have specifically suggested that he visit this exhibition.
3. "The House That Works," *Fortune*, Vol. 40 (October 1935), pp. 59-60.
4. Henry-Russell Hitchcock and Philip Johnson, *The International Style* (New York: W. W. Norton, 1932). This book documenting the exhibit was reprinted in 1966.
5. "Recent Work by Harris Armstrong," *Architectural Forum*, Vol. 83 (Sept, 1945), pp. 115-117.
6. Armstrong experimented with a variety of styles in the mid-thirties and reluctantly accepted commissions for traditionally styled homes. He produced such conservative works, despite a preference for modern design, to support his family, according to his widow Louise Armstrong. He took such commissions with the idea that they were "archaeological" in their motivation and intent.
7. Louise Armstrong played an important role in marketing her husband's practice, according to Dr. Leo S. Shanley, son of the original client, Dr. Leo M. Shanley. Mrs. Armstrong made the initial contact with Dr. Shanley through his wife; they both had attended Washington University and worked together at a downtown St. Louis bank. Mrs. Armstrong also participated in the regular evening discussions between her husband and Dr. Shanley concerning the planning, programming, budget, etc. Dr. Leo S. Shanley interview by author, March 16, 1994.
8. Dr. Shanley later enjoyed telling the story of the building's genesis to his patients and friends, always noting that the mortgage was paid off in two years. Shanley interview.
9. The property, located at the southwest corner of Maryland and Bemiston, was roughly an 80 foot square and contained a modest two-story wood frame house set far from the corner.
10. The City Hall is a brick colonial structure by Maritz, Young & Dusard, typical of public and commercial buildings in Clayton at the time.
11. "Portfolio No. 1," Harris Armstrong Archives, Washington University School of Architecture.
12. In fact, Armstrong's architectural practice was unable to support his family without his wife earning a second income as a realtor.
13. Harris Armstrong, "Detailing: The Final Finish of Architectural Design," *Midwest Architect*, Vol. 2, No. 6 (Dec. 1973), pp. 6-10. In his last published article, he writes, "I am using my own buildings because I know them so well and can think back to the happy years when these techniques flowed so easily as a natural part of preparing the working drawings. Most of them are from the Leo Shanley Orthodontic Office."
14. William Lescaze, *On Being an Architect* (New York: G. P. Putnam's Sons, 1942), pp. 205-206.
15. California architect J. R. Davidson is credited as the first American architect to employ glass block in a non-industrial application. "In his own offices in Los Angeles designed in 1925, he appears to have been one of the first to use regular commercial glass bricks." Reyner Banham, *The Architecture of the Well-Tempered Environment*, second edition (Chicago: University of Chicago Press, 1984), p. 201.
16. Glass blocks had been used as early as 1903 by August Perret at 25 bis rue Franklin in Paris and by Bruno Taut in his experimental glass pavilion of 1914 in Cologne.
17. This house was retained by Dr. Shanley as a rental property for a number of years and was later torn down.
18. Maryland Avenue has since been widened a number of times, removing the shrubs and sidewalk in front of the entry gate.
19. Such use of living elements is typical of Armstrong's building entries throughout his career, drawing on his earlier experiences as a landscape designer and installer during the depths of the Depression.
20. Paul Scheerbart, *Glasarchitektur* (1914). Translation.
21. Armstrong, "Detailing."
22. Central air conditioning was used in large commercial buildings during the 1930s but was not available for residential use until the 1950s when units had been designed for mass production. Reyner Banham, op.cit, pp. 185-186.
23. George McCue and Frank Peters, *A Guide to the Architecture of St. Louis* (Columbia, MO: University of Missouri Press, 1989), p. 133. Also Armstrong, "Detailing."
24. Dan Williamson, "Harris Armstrong."
25. "Building for Dr. Leo Shanley," *Architectural Record*, Vol. 80 (Nov. 1936), p. 391.
26. Theo van Doesburg, "Towards a Plastic Architecture," *Programs and Manifestoes on 20th Century Architecture*, ed. Ulrich Conrads (Cambridge, MA: MIT Press, 1970), pp. 78-79.
27. Armstrong, "Detailing."
28. Armstrong, "Detailing," The corner former is still being

- manufactured and distributed by Greenstreak, Inc.
29. James Newhart, Marilyn Newhart, and Ray Eames, *Eames Design: the Work of the Office of Charles and Ray Eames* (New York: Harry N. Abrams, 1989), p. 20.
 30. *An Eames Celebration*, WNET (New York, 1973).
 31. Karen Kirsch, *The Weissenhofsiedlung* (New York: Rizzoli, 1989), pp. 111-112.
 32. The Conner-Shanley Metal Foundry produced these pieces for the Shanley Building. Dr. Leo S. Shanley interview.
 33. "France Gives Awards to U.S. Architects," *New York Times* (Sept. 2, 1938), p. 17.
 34. Henry-Russell Hitchcock, *Architectural Forum*, Vol. 67 (Sept. 1937), pp. 158-174.
 35. Louise Armstrong interview (by author), April 4, 1992. "He announced to his students that it was the worst building he had ever seen. . . I think he thought he knew what he was talking about."
 36. Carol Rehg, "Old Man of Modern Architecture has Modern Ideas," *St. Louis Globe-Democrat* (June 14, 1968), p. 1S.
 37. *ibid.* Dean Hill later invited one of Armstrong's fellow Washington University architecture students, Charles Eames, to lecture at the school based on student insistence. Eames had earlier been forced to leave the school because of his premature interest in modernism.

THE SHANLEY BUILDING, DESIGNED BY HARRIS ARMSTRONG, FAIA, IS UNDER THREAT OF DEMOLITION.

Please learn more from the following websites. Please let the City of Clayton Mayor, Plan Commission and Architectural Review Board know your thoughts regarding saving the Shanley Building.

- Statement regarding the potential demolition of the nationally and internationally recognized Shanley Building (1935) designed by Harris Armstrong, FAIA (1899-1973) <https://www.stlouisarchitecture.org/Home.html> https://www.stlouisarchitecture.org/pdf/SAH_STL_STATEMENT_2019.02.25.pdf
- 21-Story Condo Tower Planned for Kummer's Clayton Development https://www.cityscene-stl.com/news/21-story-condo-tower-planned-for-kummer-s-clayton-development?fbclid=IwAR15tI8yeNj4HociMGP2IF18rrFyw8Kr7piyPsZbebbKKWI_2I4Kk6kTEs0
- History of The Shanley Building (1935) 7800 Maryland Avenue, Clayton, MO 63105 <http://www.claytonhistorysociety.org/shanley.html>
- The Shanley Building to be Demolished Posted on February 13, 2019 by Ted Wight <https://www.stlouis.style/mid-century-st-louis/the-shanley-building-to-be-demolished/>
- Michelle Harris, Mayor, City of Clayton, Missouri mharris@claytonmo.gov 314-290-8470
- City of Clayton, Missouri Planning and Zoning <https://www.claytonmo.gov/government/planning-development/planning-zoning-and-architectural-review>

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St. Louis and Missouri Valley Chapters

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