Remembrances of the Home Insurance Building

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The years 1984 and 1985 constitute the centennial of one of the 19th century's most significant structures, the Home Insurance Building in Chicago. Ground for the Home Insurance was broken 1 May 1884 and it received its first tenants in the fall of 1885. Since that time, some have hailed it as the world's first true skyscraper; others have seen it as unspectacular and merely transitional. This paper will explore the opinions of the men who were most intimately connected with its construction: the architect, William Le Baron Jenney; his partner, William Mundie; the building's fireproofing contractor, Peter B. Wight; and one of Jenney's competitors for the commission, Frederick Baumann. I have based this article on documents, some of them recently discovered, that were written at widely different times. When brought together, however, they seem to create a dialog between these men, the results of which cast some light on the circumstances surrounding the design and erection of the Home Insurance Building. Moreover, these documents give us valuable insight into the human aspects of what has heretofore been held as a purely technical problem in the history of architecture.
WHETHER OR NOT the Home Insurance Building (1884) in Chicago, designed by William Le Baron Jenney, was the first true skyscraper will be debated as long as such questions are of vital concern to architectural historians. The controversy has centered around the claim that this structure was the first tall building to employ skeleton construction, a system in which the interior floors and the exterior wall masonry were wholly supported by a metal frame. The debate became intense in 1896 when the Bessemer Steam Ship Company suggested that one of its vessels be named after the inventor of "cage" construction.1 George B. Post sought the honor for his Produce Exchange, New York (1881–1885), as did Holabird & Roche for the Tacoma Building, Chicago (1887–1889).2 The razing of the Home Insurance Building in 1931 reopened the question, and three committees were enjoined to investigate the matter.3 Although not all concurred, the majority in each committee held that the Home Insurance constituted the first great step in the evolution of the skyscraper.4

This article will not render a judgment on the controversy; the truth and falsity of the various claims lie almost completely in the way skeleton construction is defined. Rather, the intent here is to attempt an understanding of how the building was perceived at the time of its construction and in the years after by those involved with it. Perhaps, after all, it has been the way succeeding generations have perceived the Home Insurance, and not its actual construction, that has made it so important to architectural history.

Fortunately, Tony Wrenn, the archivist of the American Institute of Architects, in his recent reorganization of the Institute of Architects records, has unearthed several letters written by those who had some relation to the Home Insurance's construction. These documents (published here for the first time) complement those which have been in other collections, and provide an understanding of why this monument has been seen in different ways.

The Chicago authorities issued a building permit 1 March 1884.5 The Inland Architect of the same month commented upon the proposed building in its "Architectural Notes" section, stating that the building committee of the Home Insurance Company had been examining designs of various architects, that these architects were the best in the profession, and that the committee was having difficulty choosing among them. It speculated that the final selection would result from "the fancy of the committee" rather than from some weakness or strength in a given design. The Inland Architect then noted that a permit had been taken out on Jenney's plans and that the architect had orders from the company to let contracts for the materials although neither his nor any other design had yet been accepted.6

We therefore know that Jenney was favored in the selection process, but one wonders who the other architects were. The records of the Home Insurance Company do not yield this information;7 however, a letter from Frederick H. Baumann to Glen Brown, secretary of the AIA, dated 14 December 1907


4. The committees appointed by the Marshall Field Estate and the Illinois Society of Architects were in substantial agreement about the revolutionary role played the Home Insurance Building. A committee formed by the Western Society of Engineers was not so convinced. The engineers judged the building according to criteria established by contemporary (1931) skyscrapers. They demanded that the Home Insurance have five features to qualify as a true skyscraper. First, the skeleton must be self-supporting. Second, the masonry must be entirely supported by skeleton construction. Third, the skeleton, together with the curtain wall, should be sufficiently rigid to withstand wind pressure. Fourth, if necessary, the enclosing wall could be started at other than the first floor. Finally, the engineers demanded that the walls themselves be of a certain type, that is, they must be of uniform thickness throughout their height.

The engineers found that the Home Insurance met the first criterion. Because the masonry piers were so heavy, however, the committee thought they probably carried part of the exterior floor loads. Since no provisions were made for the wind load in the frame, only the weight of the masonry could have provided sufficient bracing. They also observed that the masonry could not be started without providing temporary support for the 8 inches of masonry surrounding the columns. At the thickness of their bases, the walls were 14 and 30 inches thick. These bases were of sufficient thickness to support all that was above. These walls, therefore, could not qualify as the curtain type. It would seem that the architect held to the strength of the masonry as a safety factor.

In the end, the Western Society committee decided that Jenney's scheme of supporting loads with a combination of masonry and iron was not particularly novel for the time. While the Home Insurance was an important step forward, it was, in their minds, transitional and not revolutionary. See: F. A. Randall, History of the Development of Building Construction in Chicago, Urbana, 1949, 107; also, Roll 22, Jenney Collection, Chicago Microfilm Project, Chicago Art Institute, frames 151–152.


6. Inland Architect, 3 (1884), 23.

7. I was in communication with the Home Insurance Company in the winter and spring of 1982–1983. Although no information was found in the company's records, I am grateful to William H. Swezey, Senior Communications Officer, for making the search.
gives some insight into the mystery. Baumann wrote:

Early in 1884 Gen. A. C. Ducat, long deceased, Manager of the Chicago Branch of the N. York Fire Ins. Co. arranged for a private competition between Wm. L. B. Jenney, Mr. John Addison, and myself as to the erection of the Home Office Building nine stories high. Wm. Jenney was the winner. So far as I know none of us had seen the others' plans.9

Baumann's statement is interesting because, as will be shown, he claimed to be the actual inventor of skeleton frame construction. Baumann received a technical education in Berlin and was a pioneer in the development of the isolated pier foundations that were necessary because of Chicago's unstable subsoil.9 This technical expertise therefore made Baumann a logical choice to be a candidate architect for the Home Insurance.

With John Addison, on the other hand, we have some difficulty. No biographical material on him has been uncovered, yet he seems to have been a reasonably successful architect. The Inland Architect published a number of his designs, the most interesting of which was an office building (Fig. 1) that revealed some similarities to the Home Insurance (Fig. 2). An elevation of the latter had appeared a month previously in the September issue of the same magazine. It cannot be determined if the two designs were in any way related.

Although Baumann mentioned only three competitors, the April 1884 issue of Inland Architect congratulated Jenney for triumphing over a field of more than half a dozen "architects of acknowledged ability of the city."10 Regardless of the identity of these architects, the question still remains as to what fancy of the committee tipped the competition in Jenney's favor? Or, as Henry-Russell Hitchcock phrased it, "Who was the responsible client—if that can be pinned down—for the Home Insurance Building? Did he know what Jenney was doing, and things of that kind."11

Jenney's own writings partially answer Hitchcock's questions. Soon after the completion of the Home Insurance, Jenney was asked to report on his design. He delivered a paper entitled "The Construction of a Heavy Fireproof Building on Compressible Soil" to the Nineteenth Annual Convention of the American Institute of Architects on 1 October 1885. The lecture was subsequently printed in Sanitary Engineer and Inland Architect in the same year.

Starting with the foundation, Jenney described the Home Insurance in detail. He clearly intended the iron skeleton to play an important role in its structure. He especially noted that iron columns had been placed into the masonry piers of the outer walls.12 John B. Gass writing in the Royal Institute of British Architects, Transactions in 1886 also noted the novelty of this feature. Yet neither he nor the architect specifically stated that the Home Insurance Building was of skeleton or cage construc-

13. The move to skeleton construction began around the middle of the 19th century. Some of the most important steps in its development were Bogardus's McCullough Shot Tower, New York, 1855 (Condit, American Building Art: the 19th Century, 36–37); the Saint Ouen Dock warehouses, near Paris (Builder [19 April 1865]); and the Menier Chocolate Factory at Noiseul-sur-Marne, 1871–1873 (Encyclopédie d'architecture, 3, 225[1874], 116–117). Skeletal schemes of construction were suggested by various architects of the period, but they and the above all differed from the Home Insurance. Although their metal frames supported masonry panels, the masonry itself did not enclose and protect the iron members. There had been resistance to this concept on moral and practical grounds. Theorists such as Ruskin felt that disguising any material was aesthetically dishonest, while architects such as Viollet-le-Duc in his Entretiens cautioned against too intimate relationship between iron and masonry. He feared that their different rates of expansion and contraction during temperature changes might cause damage to the fabric of the building. See N. Pevsner, "Ruskin and Viollet-le-Duc," Eugène Emmanuel Viollet-le-Duc, ed. Rizzoli, London, 1980, 49. Jenney's accomplishment was to enclose the exterior iron columns in brick piers. Thus, with the interior skeleton protected by the terra-cotta sheathing developed by Wight, the Home Insurance came very near to being fireproof. There were precedents, however. In the Fletcher and Sharpe Bank Building, Indianapolis (1875), and the First Leiter Building, Chicago (1879), Jenney built iron columns into portions of masonry walls in a very limited way. Pond noted that S. S. Beman had used iron columns wrapped with masonry on a grand scale in his water tower (1881) built in Pullman, Illinois. See I. Pond, "Neither a Skyscraper nor of Skeleton Construction," Architectural Record, 76 (1934), 118–119. Post also set iron columns into the piers of his Produce Exchange, New York, in 1881–1884, but the iron merely reinforced the masonry; see n. 21 below. Quite likely, however, Jenney's inspiration came from his French training and his knowledge of French building techniques. Louis Charles Mary was his instructor at the Ecole Centrale. See Theodore Turak, "The Ecole Centrale and Modern Architecture: The Education of William Le Baron Jenney," JSAH, 39 (1979), 40–47. Mary taught a method by which the masonry piers between the windows of grain warehouses could be narrowed by reinforcing them with either wooden or iron columns that backed the piers and were partially sunk into them. See L. C. Mary, Cours d'architecture, 1852–1853, Paris, 1852, 76; this volume is a collection of Mary's lectures and was meant as a text book. Mary's method of backing the piers with columns was not unlike that used by Jenney in the First Leiter Building. See Randall, Building Construction, 88. The earliest and most consistent use of the supporting iron column enclosed in a masonry pier that I have found was in a jewelry store on the rue Parc-Royal in Paris. The architect used the columns to support a clear-span iron-framed roof. Drawings and descriptions of the building were published in the Encyclopédie d'architecture of 1874, the same volume that contained the Menier Chocolate Factory and several other buildings that employed iron. The novelty of the iron and masonry supports was especially noted by the journal.

8. Letter, Frederick Baumann to Glen Brown, 14 December 1907, Archives, American Institute of Architects, Washington, D.C.
10. Inland Architect, 4 (1884), 15, 56.
11. Ibid., 3 (1883), 42.
Jenney and General Ducat tried to convince the company to purchase but the company let it lapse. See W. Mundie, Skeleton Construction, Its Origin and Development Applied to Architecture, Roll 23, Microfilm Project, Chicago Art Institute, 19-20.

It was unlikely that Jenney was discussing only the party walls, which were not supported on an iron frame. The architect therefore strongly implied that the masonry he wrapped around each column was intended to bear some of the structure’s weight. It would seem that even Jenney was not fully aware of what he was accomplishing at this time.

Toward the end of his life Jenney had occasion to recall the circumstances leading to the erection of the Home Insurance. His remembrances throw more light on its background. Jenney wrote:

Like most inventions Steel construction, which made tall buildings possible, originated to satisfy a want. The story may be of some interest—

In ’83 I was appointed by the Home Insurance Company of New York as their architect and instructed to design a tall fireproof building with a maximum number of small offices—the President further stating that he foresaw this would reduce the piers between windows, that if they were of masonry, they would not carry the load. “What will you do about it?” I replied that I would study these requirements and would report later. If the masonry will not carry the loads, try iron, was the natural conclusion, so a building was designed with an iron column in each pier, the masonry only used to fireproof the iron.

The drawings were finished and the Building Committee met in my office to award the contracts. After explaining the new system, the President asked where there was such a building—I replied that their building would be the first. The President stated that he could hardly accept for his company a new system of construction which had never been tried and that this was to involve an expenditure of six or seven Hundred Thousand Dollars. I proposed to call in for consultation one or more of the most celebrated Bridge Engineers as they might select as the Steel Skeleton closely resembles several bridge trusses standing side by side on end.

Then General A.C. Ducat asked to speak—He said that he was an engineer before he was an insurance man; that he had studied the designs and approved them economically and constructively, and recommended that they be adopted and the contracts be signed, which was done at once.17

Jenney’s later version, stating that the masonry was used only to fireproof the iron, contradicts the statement made in his talk before the AIA in 1885. Intervening events probably had influenced his recollections, but since he had a reputation for absolute honesty, there is no reason to believe that he consciously altered the facts.

The rest of Jenney’s description of events no doubt came close to the truth and therefore answers Hitchcock’s questions about patronage. Even the second quotation indicates that Jenney’s intent was to create more window area. Something approaching skeleton construction came about as a result. Apparently, it was this solution that struck the fancy of the committee or, more specifically, the fancy of General Ducat.

General Arthur Charles Ducat’s advocacy of Jenney’s new system doubtless sprang from other factors than his engineering background. Ducat was a recognized expert on fire underwriting and the author of several books on the subject. He must therefore have seen instantly the fire-resistant qualities of Jenney’s design. Perhaps just as significant was the fact that Jenney and Ducat were part of the same old-boy network of Civil War veterans. Both held membership in the Military Order of the Loyal Legion, an association of former Union Army officers. Their war experiences created an even closer bond between them because they had both fought in the West under General Grant and participated in many of the same battles, such as those at Forts Henry and Donelson. It would have been unusual if Ducat had not felt a predisposition to favor the plans of his former comrade in arms.18

Since the judgments of committees and architectural writers influenced Jenney’s mind, it was not surprising that it had an effect upon others who tried either to claim credit for the invention of skeleton construction or to debunk Jenney’s role in its development. Two who were involved with the building itself were especially interesting. The Chicago architect and fireproofing contractor Peter B. Wight could not accept the historical judgment on the Home Insurance Building, and Frederick Baumann shared his opinion. In his later years Baumann became convinced that he receive recognition for his part in the

15. Sanitary Engineer, 13 (1885), 32-33; Inland Architect, 6 (1885), 100.
16. Jenney intended to use the iron frame in every wall of the Home Insurance. According to Mundie, however, the application for the permit did not go smoothly because the Building Commissioner seemed highly dubious about Jenney’s innovations. He and the adjoining property owners objected to the metal frame being extended to the party walls. Thus the plan to build a complete skeleton was defeated.

The lot purchased by the Home Insurance Company did not include the property extending north to the alley, eliminating the L-shaped sections of the party walls. By doing this Jenney could have extended all the frontage on the alley that ran between La Salle and Clark streets. Jenney and General Ducat tried to convince the company to purchase the property extending north to the alley, eliminating the L-shaped sections of the party walls. By doing this Jenney could have extended the skeleton frame around at least three sides of the building. Jenney and Ducat personally secured an option on the property for $90,000, but the company let it lapse. See W. Mundie, Skeleton Construction, Its Origin and Development Applied to Architecture, Roll 23, Microfilm Project, Chicago Art Institute, 19-20.

creation of skeleton construction, and to this end he exchanged correspondence with Wight. In a letter dated 1 January 1915, Wight expressed sympathy for Baumann's cause and outlined his own views on the Home Insurance. Because he installed its floors and fireproofing and knew the Chicago architectural scene better than most men, his observations must be considered. Wight wrote:

Mr. Jenney’s claim has no foundation in fact . . . I know more about the Home Insurance Building than any other man living or dead, but did not feel like contraverting Jenney’s claims, as Holabird and Roche never did with any earnestness. I introduced N. S. Patton to Jenney to help with the construction of his iron work for the building and Jenney was surprised to find that Patton had once been a draftsman in his office. But Patton, after an experience in the office of the Supervising Architect in Washington where he had studied iron construction was the very man that Jenney needed. Jenney could talk building better than any man I knew, but he knew very little how to design and construct them and depended on others. But he was good company and I always liked him. George B. Post used cast iron construction in the inner court of the Produce Exchange in that city, just as H and R had done. I am sorry you did not have an opportunity to bring your ideas into effect.19

Doubtless, Wight expressed deeply felt and sincere views, but it is somewhat troubling that he did not fully understand that Post and Jenney approached the problem of skeleton construction differently.20 This perhaps gives greater veracity to Mundie’s version of the events surrounding Patton. William Mundie, Jenney’s partner, writing in 1931, stated that by August 1884, the iron framework had moved two or three stories ahead of the brickwork.21 The Home Insurance’s naked skeleton silhouetted against the sky provoked considerable comment among observers. Dire predictions about the fate of the structure made their way back to the New York patrons who decided that they wanted still another engineer to evaluate the new system.

Jenney had no objections and suggested a Mr. Cooper as the consultant. Soon afterward, however, a letter to Jenney and Mundie arrived from the Treasury Department’s Supervising Architect, Washington, D.C. It recommended one of that office’s former employees, then in private practice in Chicago, to advise the company. His name was Norman S. Patton. Jenney gave him full access to all plans and calculations. Patton set to work immediately, but after two weeks of his poking about, Jenney became somewhat irritated at the consultant’s presence. Officers of the Home Insurance Company came to confer and asked Daniel Burnham for his opinion. As a result of Burnham’s favorable comments, they decided to proceed with construction. Patton received $633.30 for his work and left.

The United States Government employed Patton as a draftsman. During his sojourn with the Treasury Department’s Office of the Supervising Architect, he undoubtedly became acquainted with the latest developments in the use of iron in construction. If Mundie’s description of events was correct, however, it would seem that Patton had little to do with the Home Insurance.22

Soon after Patton left, a story began to circulate within Chicago’s building and architectural community that the expansion and contraction of the Home Insurance’s metal frame would crack the masonry. At first Mundie believed that the rumor had its origin with the Chicago contractor George B. Fuller, but somewhat later Jenney told Mundie that Patton was its source.

Mundie also remembered the events surrounding the Home Insurance differently than did Baumann. Baumann wrote that his first thoughts about skeleton construction expressed themselves in a sketch for a building 50 feet by 100 feet on the southwest corner of Clark and Jackson streets in 1883.23 Un-
fortunately, the owner sold the lot and the structure was never begun. His ideas, he claimed, took more definitive form during the competition for the Home Insurance. Ultimately, he wrote a three-page pamphlet called *Improvement in the Construction of Tall Buildings*, which he published in 1884.

He listed 21 points illustrating the economies and advantages of the skeleton system. Regarding the exterior of a building, he suggested projecting brackets to support the enclosing masonry. Other than that, his ideas, such as the adoption of flat, hollow-tile floor arches, seemed little different from the usages of the most advanced contemporary buildings. In a note in the margin of the copy owned by the Chicago Art Institute, Baumann lamented the fact that he had not taken out a patent, for about a year and a half later a Minneapolis architect did so.24 He regarded Holabird & Roche’s Tacoma Building as the first to use his principles. The Home Insurance, he felt, was unexceptional in its construction.25

Mundie related the following story. After joining Jenney’s firm, the first building he worked on was the Home Insurance. Soon afterward Baumann invited him to his office to do a perspective drawing. Baumann said little about the rendering, however; instead, he asked Mundie to take on the duties of chief draftsman in his firm.26 When Mundie explained that he was honor bound to remain with Jenney, Baumann turned the conversation to the Home Insurance Building, which was then in the process of construction. Baumann questioned the younger man so intensely and for so long that Mundie told Baumann all he knew about his employer’s project, the commission for which Baumann said he had tried to obtain. Mundie was therefore surprised and somewhat taken aback when six months later he received Baumann’s pamphlet in the mail. By that time, 14 December 1884, the Home Insurance had reached its top story.

Condit has suggested that there may have been an exchange of information between Jenney and Baumann.27 Perhaps Mundie’s story explains how the exchange happened. Jenney, Wight, Baumann, and Mundie had reputations for honesty, yet each gave varying accounts of how the Home Insurance came to be and what significance it had for architectural history. Each saw events from his own vantage point, each interpreted these events in the light of his own experience.

The reputation of the Home Insurance remains secure. Even Jenney, although he was far from modest about his own part in the development of skeleton construction, knew that it was “nature’s child” and part of a long evolution that went back to primitive huts. No one therefore could claim a legitimate patent on it.28 Thus Carson Webster’s designation of the Home Insurance as a “proto skyscraper” is probably still the most accurate description of its place in history.29 One thing is certain, however: after the Home Insurance, the art of building was never the same.

25. Letter, Baumann to Brown; see n. 8 above.