

The People v. Jenney: Revisiting the Debate about the First Skyscraper

Jason Barr^{*}

Department of Economics
Rutgers University-Newark
jmbarr@newark.rutgers.edu

June 20, 2024

Abstract:

It is now well established among architectural and engineering historians that William Le Baron Jenney did not invent the skyscraper and that the Home Insurance Building (HIB) in Chicago was not the first one. Nonetheless, the idea of the HIB being the first skyscraper remains deeply lodged in the public consciousness. This paper revisits the question of how Jenney won the public debate. Based on archival research and historical documents, the evidence shows that starting in the mid-1890s, Jenney and his Chicago colleagues, including Daniel H. Burnham, initiated a public relations campaign to anoint Jenney as the inventor of the skyscraper. The campaign was so successful that by 1907 when Jenney died, the popular press propagated the “Jenney Myth” in his obituaries. In 1931, upon demolition of the Home Insurance Building, the myth was once again pushed by the Marshall Field Trustee’s Report, despite errors in the report and a dissenting report by the Western Society of Engineers. In its efforts at boosterism, Chicago has continued to insist that Jenney invented the skyscraper, despite the evidence to the contrary.

Keywords: first skyscraper, William Le Baron Jenney, Home Insurance Building, steel-framed skeleton buildings

^{*}I’m grateful to Gerald Larson and Tom Leslie for their invaluable discussions. I would also like to thank JT de la Torre at the Art Institute of Chicago who was very helpful in helping to locate documents about William Le Baron Jenney. Any errors belong to the author. A much briefer and simplified version of this paper is Barr (2024). However, it does not contain any of the archival material from the Art Institute of Chicago and other additional material that is included in this manuscript.

“Mr. Jenney was always opposed to any statement that spoke of skeleton construction literally as an invention, or that it had just ‘burst forth’ from somewhere. It was Nature’s child. Progressive through the ages, it was the evolution of principle.” – William Bryce Mundie (1932)

“The skeleton construction was a radical departure from anything that had been heretofore appeared and was exclusively my invention.” – William Le Baron Jenney (1896)

1. Introduction

In 1907, when William Le Baron Jenney died, the press universally mourned the loss of “the inventor of the skyscraper.” Jenney’s life embodied that of an American engineering hero who, by sheer grit and intelligence, created a purely American technological and commercial phenomenon with his Home Insurance Building (HIB), completed in Chicago in 1885.

And yet, today, it is well established among architectural and engineering historians that Jenney did not invent the skyscraper and the Home Insurance was not the first one (Larson and Geraniotis, 1987; Leslie, 2013; Fenske, 2020).¹

Nonetheless, the idea of the Home Insurance Building being the first skyscraper remains deeply lodged in the public consciousness. How and why is this so? This paper revisits the question of how Jenney won the debate amongst the wider public. When the Home Insurance Building was completed, neither Jenney, the press, nor the architectural and engineering community considered the HIB to be anything unusual. Rather, it was seen as a fine example of one of several tall office buildings being erected in Chicago and other cities around the country. The building was recognized as being innovative in its structural form, but it was not viewed as anything so radical that it would mark it as being a complete break from those buildings that preceded it.

But then in 1896, a public relations opportunity presented itself to allow the Chicago architects to retake control of the narrative to cast Chicago as “the home of the first skyscraper.” In that year, a letter-writing “debate” among the professional community appeared in the trade journal, *The Engineering Record* (ER). Jenney drummed up support among his colleagues and acquaintances to collectively anoint him as the inventor of the skyscraper.

{Figure 1: Home Insurance Building about here}

In the years between 1885 and 1896, other architects and cities were vying for the title of “first skyscraper” and the Chicago community fought to claim what they believed was rightfully theirs. As a result, they began re-writing history and offering misleading statements about the structure of the Home Insurance Building.

Jenney was motivated in large part by the lawsuits of Leroy Buffington, a Minneapolis architect who had received a patent in 1888 for an iron-framed building. Buffington started suing people in 1892 and had warned Jenney “to refrain from infringement of said patent or any of its claims” (Buffington, 1892). Though Jenney was never served lawsuit papers, he used the 1896 letter-writing campaign to make the case—in a quasi-legal fashion—that he invented the skeletal frame, in large part to obviate Buffington’s legal claims.

Because of this PR campaign, the historiography of the “first skyscraper” took a decided pivot, with the media and historians directly using or citing the words from these letters. The campaign was so successful that by 1907 when Jenney died, the popular press propagated the “Jenney Myth” in his obituaries. In 1931, upon demolition of the Home Insurance Building, the legend was once again pushed by the Marshall Field Estate Committee or Tallmadge Report (Tallmadge, 1931/1939), despite misstatements in the Tallmadge Report and a dissenting report by the Western Society of Engineers in 1932 (Larson and Geraniotis, 1987; Sanderson et al., 1932).

In its efforts at boosterism, Chicago has continued to insist that Jenney invented the skyscraper, despite the evidence to the contrary. Even today, the Wikipedia pages on Jenney’s accomplishments and the Home Insurance Building are rife with errors and mischaracterizations, which represent a blind repeating of the historiography that Jenney, his colleagues, his protégés, and the Chicago community continued to propagate well into the 20th century.

This paper is not meant to diminish Jenney’s importance in skyscraper history. Jenney was, indeed, quite innovative and one of the great contributors to the skyscraper’s technological development. However, what has been lost in the ensuing years is the historical context and Jenney’s role within the larger ecosystem of the skyscraper-building world in the 19th century. To say that one person invented the skyscraper is to disregard the long-run evolution of building technology and the many individuals who “stood on the shoulders” of their predecessors. As the opening quotes demonstrate, Jenney and his colleagues would try to “have it both ways” when

they discussed the HIB. They would admit, on the one hand, that the building was part of a natural progression of building technology while claiming, on the other hand, that it was a radical invention without precedent.

To the public, all the engineering details in the debate about the “first skyscraper” were too arcane and difficult to comprehend. What mattered was the phrase, “Jenney invented steel-skeleton construction.” Since the leading and revered figures of the Chicago architecture community repeated some version of this statement, the public took their word for it because it simplified an otherwise complex engineering debate into a bite-size, easily understandable slogan. The logic was, in essence, “if the Chicago community of architects and engineers, who built Chicago’s early skyline, say it’s true, then it must be so.” The history went to the “winners” because they benefited from a coordinated effort of simplicity and repetition and were highly trusted because of their expertise and experiences.

The idea that we can pick the first skyscraper is a social convention. The ability to name a “first”—whereby “first” means a building radically different from what came before and so pivotal that the future is fundamentally different—is impossible because no such trajectory like this occurred. Over the 19th century, the evolution of building technology was moving along, in fits and starts, in a trajectory toward the elevated, fireproofed, steel-riveted, moment-resisting frame with stable foundations. In the debates, the Chicago group helped to facilitate a verbal “bait and switch” in that the phrase “first skyscraper” became interchangeable with “steel skeleton construction.” So, in the public’s mind, they were one and the same, even though the HIB was neither the first skyscraper nor the first steel skeleton.

While it’s impossible to have a counterfactual history where Jenney never existed, the evidence strongly suggests that the skyscraper would have been “invented” all the same if he had not designed the Home Insurance Building. For that matter, it seems likely that if Jenney had not been presented with such a propitious opportunity as the ER letter-writing campaign, his building would have been just a historical curiosity among architects and engineers with little notice among the public.

2. Defining the Skyscraper

To investigate whether the Home Insurance Building was the first skyscraper or not requires us to define a “skyscraper.” From the perspective of the 19th-century press and public, a “skyscraper” was so named by its height and not its structural design. Before its use for tall buildings, the word was used for the triangular sail atop a ship mast, and more colloquially to describe nearly any tall or high thing, including big horses, fly balls in baseball, and women’s large hats.²

The word’s reference to tall buildings appears in print at least as early as 1882, three years before the Home Insurance Building was completed, and about a year before Jenney started designing it. On December 19, the *New York Sun* announced plans for the Mutual Life Insurance Building (1884, 11 floors) in New York, running the headline, “Another Sky Scrapper Down Town” (*New York Sun*, 1882). Two months later, the *Chicago Tribune* on February 25, 1883, reported in its “New York Gossip” column about the “high-building craze,” which included a discussion of Manhattan’s “sky-scrappers,” mentioning the Tribune Building (1875, 9 floors) and the Western Union Building (1875, 10 floors).

The height-based definition of a “skyscraper” was also applied to buildings in Chicago. In 1884, the Chicago magazine *Real Estate and Building Journal* identified nearly a dozen buildings in Chicago that were considered “skyscrapers,” based on their heights, including Burnham & Root’s Insurance Exchange (160 feet, 1883) and S.S. Benham’s Pullman Palace Car Building (165 feet, 1883) (Larson and Geraniotis, 1987; Peet, 2020).

The first office building in Chicago to reach ten stories was the Montauk Block, which was completed in 1882 and designed by Burnham & Root. By the height-based definition, the Montauk Block was Chicago’s first skyscraper. The Home Insurance Building, upon completion, was nine stories (two more stories were added in 1891). When opened in 1885, at least three other completed buildings that year were nine stories or taller (Leslie, 2013). So simply from the perspective of its height, there was nothing special about the Home, and could not be designated the “first skyscraper.”

Arguably, however, the technological definition is more important in this context. Thus a “skyscraper” here can be defined as a relatively tall, occupied, commercial building with a

curtain wall facade, made of a steel-riveted, moment-resisting frame with wind bracing (and with an elevator).

Jenney's structural design of the Home Insurance Building failed on all accounts (Larson and Geraniotis, 1987; Sanderson et al., 1932):

1. The two interior-facing party walls were load-bearing masonry.
2. The street-facing walls had load-bearing masonry piers on the first floor and basement. Above that, the masonry piers had iron embedded in them, so the stone and iron shared the load.
3. Iron lintels supporting the windows and masonry spandrels ran from column to column. However, the lintels were loosely connected to the pier columns, rested on cast iron mullions without a strong connection, and relied on the masonry for additional stiffness. None of the iron members were riveted together.
4. Steel beams were added to the upper floors, but they were not load-bearing; rather they were used for the floor beams. Only a small fraction of the total metalwork was steel.
5. The building had no additional wind-bracing elements. Wind bracing was handled primarily by the masonry facade. The ironwork was not designed to withstand bending from lateral forces and could not have done so if there were no masonry.

2.1 Further Details

While it's clear the Home Insurance was not a curtain-walled, moment-resisting frame, it's important to highlight what it was. It will thus pay to go into some details based on two "forensic" studies. Then we can compare the actual details to the building descriptions at the time and in subsequent years.

It is also important to note that if you removed the masonry, you would see what looked like an iron-framed structure (in the street-facing façades only). But the iron was in no way designed to carry the façade and the entire structure. This fact is, in part, why Jenney was so successful in the debate about the "first skyscraper"—the iron members in the street-facing facades gave the appearance of being a moment-resisting frame, even though the iron was working with the masonry and not in place of it.

Furthermore, the only novel innovations were in the two street-facing facades above the second floor. Otherwise, the building was entirely of the standard cage design, with interior iron framing and masonry exterior walls. The building can thus be considered primarily a masonry one with iron supports to reduce the thickness of the masonry exterior. In other words, the structure was a masonry-iron hybrid. Those seeking to claim the Home Insurance Building as the first skyscraper would use phrasing that suggested the case was otherwise (discussed below).

2.2 The Western Report (1932)

A committee of the Western Society of Engineers (Sanderson et al., 1932) was present at the demolition of the Home Insurance Building and conducted an independent assessment of the building apart from the Marshal Field Estate committee (discussed below).

They found that the walls of the building varied in thickness from 24” and 30” at the first floor to 12” on the top floors, and the floors “were of sufficient thickness to be self-sustaining without the use of columns in the pilasters” (p. 8). Furthermore, they found that “Structural members were provided for supporting the masonry, but on account of the size of the piers it is probable the load was divided between the columns and the piers” (p. 9).

They conclude, “It is apparent that the designer of this building was reluctant to give up the known strength of and security of heavy masonry walls and piers for the untried curtain walls and steel wind bracing of the modern skeletal building” (p. 9).

{Figure 2: Larson and Gertaniotis (1987) figure about here}

2.3 Larson and Gertaniotis (1987)

Larson and Gertaniotis (1987) performed a more recent review of the HIB’s structure (see Figure 2) and provided the most details to date. Larson examined Jenney’s working drawing at the Art Institute of Chicago and inspected the four-columned bay fragment housed at Chicago’s Museum of Science and Industry.

The authors found that iron columns in the piers were filled with concrete—something unnecessary if the columns were meant to support the building—and surrounded by brick, which created a solid cross-section in the building’s exterior piers. The exterior brick of the piers ran

continuously up from the foundation and was, therefore, inherently self-supporting. Furthermore, the lintel pans were notched back around these piers to allow the piers to run up continuously. As Larson and Gertaniotis (1987) write, “If it was Jenney’s intention to support the pier’s brick facing on the frame, why did he intentionally notch the lintel pans precisely where they could have offered crucial support to the facing as it turned the corner?” (p. 43).

Three-quarters of an inch above the lintels on floors three, five, and eight were wrought iron spandrels running from column to column. If these spandrels were designed to carry the façade, as in a moment-resisting frame, then why were they only used on three floors? Larson and Gertaniotis (1987) conclude that they were used as transfer beams for the mullions. By enabling the mullions to carry less weight, they could remain thinner, allowing for larger windows on the bottom floors.

3. The Skyscraper in Context

When discussing the history of the skyscraper, it’s important to put words and ideas in a larger context. To begin, in the 1880s, the words “cage” and “skeletal” construction were used interchangeably to describe buildings that had internal iron framing but external load-bearing masonry walls.

In the conversation about the Home, the word “skeleton” is used to describe the structure (Jenney used it himself). But, as building forms evolved, the word changed meanings. Today, a “skeleton” means a curtain-walled, moment-resisting frame. Jenney’s campaign was helped by this confusion during the 20th century. As the word evolved to its modern usage, people have just assumed that its definition was constant, though it was not (Friedman, 2014).

The use of the word “skeleton” for buildings dates to at least the mid-19th century. In 1853, for example, a letter to the journal *The Civil Engineer and Architect’s Journal* (1853) provided a sketch of an ideal structure: “A building fire-proof throughout; its *skeleton*, therefore, of iron as the cheapest metal, cast-iron for parts having to resist pressure, wrought-iron against tension” (M.S.B., 1853, emphasis added). When New York architects like George B. Post and Richard Morris Hunt began designing tall office buildings in the mid-1870s with internal iron framing, they were routinely referred to as “skeleton” or “cage” buildings (Friedman, 2014; Landau and Condit, 1999; Post, 1895).

Furthermore, the phrase “steel skeleton” has been used to refer to the Home Insurance Building, but only three floors had steel *beams*. All the metal vertical members were cast iron, while the girders and joists were wrought iron. So, the Home Insurance building can in no way be called a “steel skeleton” even by the old definition of “skeleton” because the majority of metalwork was iron.

It’s also important to note that in Chicago and New York, architects and engineers were not trying to “invent” the skyscraper per se; rather, they were trying to solve the problem of how to provide more functional and taller office buildings for their clients. The concept that one could “invent” such a structure only emerged after it was, in fact, invented. When steel-riveted, 20-plus-story buildings became common in the mid-1890s, people began asking who discovered the techniques that made such giant buildings possible. Several architects and engineers then sought to claim credit.

4. A Brief History of Iron Framing Before the Home Insurance Building

Before we discuss the Home Insurance Building in detail, it’s necessary to place the building in the larger context of the technological evolution of tall buildings—particularly as it relates to iron framing. However, it’s important to keep in mind that even if one person solved the problem of iron or steel framing, they still had to fully solve the problems of strong foundations, elevating, fireproofing, MEP, etc. So, the idea that one can call a building “the first” simply because it used novel framing is misleading because the framing’s success was dependent on the series of innovations that preceded it.

The invention of the skeleton was just one of many other countless elements and innovations that would make internal spaces safe, habitable, and functional. As Condit (1988) writes, “If we are tracking down the origins of the skyscraper we have certainly reached the seminal stage in New York and Chicago around the year 1870” (p. 22).

The first use of cast iron for a building was the inclusion of internal cast iron columns in St. Anne’s Church in Liverpool in 1772. By the turn of the 19th century internal iron framing was increasingly used for large buildings. As Condit summarizes in his review of the history of iron framing, “By the mid-1860s in Europe and the United States many of the essential features of the

skyscraper structure were in place, but it was the United States that first exploited them” (Condit, 1988, p. 15).

In 1850, New York entrepreneur and builder James Bogardus received a patent for cast iron facades. The facades consisted of cast-iron columns bolted together to cast-iron beams, and the window openings were covered by glass. They were a very early example of a street-facing curtain-wall design. In the 1850s and 1860s, the cast-iron building had become very common in America’s business districts.

The 1850s also saw the emergence of the “Crystal Palace.” In 1851, Joseph Paxton designed the first one for the London International Exhibition. The entire external frame was composed of iron and was covered in a skin of glass. The construction was carried out by assembling prefabricated elements of the curtain wall and skeleton. Next, New York City erected a Crystal Palace for the New York Exhibition of 1853 (Larson, 2020).

{Figure 3: NYC Crystal Palace around here}

As Condit (1964) writes, “More influential because of its relative permanence is Hippolyte Fontaine’s warehouse for the St. Ouen docks near Paris (completed in 1866). There is good evidence that this extraordinary building is the first multistory structure carried entirely on an iron frame without any assistance from masonry bearing elements” (p. 7). Another important European structure was the Meier Chocolate Works at Noisel, France (1872). As Condit (1964) concludes, “The braced framing in the curtain walls of this building, undoubtedly derived from the iron bridge truss, is an important step in the development of wind-bracing for the tall building” (p. 7).

Related was the emergence of balloon framing in Chicago, invented in 1833 by Augustine D. Taylor, where closely spaced light wood studs, joists, roof rafters, and purlins were joined by nailing them together, creating an entirely framed “curtain wall” structure. As Condit (1964) writes, “St. Mary’s Church in Chicago, built by Taylor, was the first building carried on a balloon frame. From it grew a countless progeny in the towns and on the farms of the West. *One can trace a fairly direct line* from the little church through the cast-iron fronts of [Daniel] Badger and Bogardus to the mature architecture of steel framing that Chicago produced at the end of the century” (p. 8, emphasis added).

4.1 Iron Framing in Tall Structures in New York

As the ability to use cast and wrought iron became more well-understood in America, New York builders began using iron framing for multistory structures as early as the 1850s. As Larson (2020) documents, Bogardus' best-known building during the 1850s was the Harper Brothers publishing factory (1854) in New York City. The structure consisted of cast iron internal columns that supported the wrought-iron girders. The street-facing façade was also cast iron. In short, the internal structure was an iron-framed structure attached to a “curtain-walled” façade. Other buildings with similar designs appeared in New York over the following decade.

In 1855, Bogardus designed a shot tower for making bullets. The molten lead would be poured through a sieve at the top, and as the lead fell, it would form into bullets by the time it arrived in a tub of water at the bottom. As Larson (2020) writes, “However, the site in the midst of a former landfill simply did not have the necessary soil bearing capacity to support the huge weight of traditional tall masonry tower, a problem to which Bogardus responded by erecting a lightweight, eight-sided skeletal iron framework of ten stories to a height of 175” (p. 5-6).

{Figure 4: McCullough Shot Tower around here}

The iron framework was then enclosed with brick panels that rested on the external beams. Larson thus concludes, “Therefore, the tower not only was an early (perhaps the first) example of the relationship between poor soil conditions and the use of iron skeletal framing as a technique to reduce the weight of a building to within the capacity of the ground, but was also the first multi-story structure with an exterior iron skeletal frame that supported its masonry enclosure” (Larson 2020, p. 6). The following year, Bogardus designed another shot tower in Manhattan with a similar structure.

When the Western Society of Engineers (1932) report was issued, the authors concluded that, regarding the Home Insurance Building, “The supporting of masonry by the use of structural members was not novel at the time this building was erected, nor was the supporting of loads with a combination of masonry and structural columns. Lintels were common practice as was the supporting of store fronts by a combination of lintels and columns” (Sanderson et al., 1932, p. 8).

4.2 New York's Early "Skyscrapers"

In the sense of a tall elevated office "skyscraper," New York was at least a decade ahead of Chicago. In 1870, the Equitable Life Assurance Society completed its seven-story headquarters in Lower Manhattan, designed by Gillman & Kendall, with George B. Post as consulting engineer. The Equitable Building is notable for several reasons. First, it was the first office building to include an elevator, which allowed the highest floors to rent at a premium. Second its grand style and additional height arguably set the stage for the rise of the "sky-scraper" in New York in the 1870s (Landu and Condit, 1999).

The building had an internal iron frame and load-bearing masonry walls. Its height and grandeur triggered a height competition. In 1875, the Western Union Telegraph Building, designed by George Post at ten stories (230') opened. The Tribune Building, also opened in 1875 and designed by Richard Morris Hunt, came in as the world's tallest office building, at 260 feet. As Aurora Wallace (2006) writes, "The nine-story height ensured that the tower would be taller than any existing New York office building and was thus neither an arbitrary choice of height nor one based on the functional space requirements of the newspaper. The design and size of the Tribune building was primarily governed by the enhanced public image that would be garnered for the newspaper and only tangentially by the potential economic benefits of building tall" (p. 179).

{Figure 5: Equitable, Western Union, and Tribune Buildings about here}

Reviewing the history of these early tall buildings, Weisman (1953) concludes "Of the group that introduced this transformation, the Tribune and Western Union were the most prominent. For that reason and the other mentioned, they should be judged true skyscrapers" (p. 20).

Finally, there was George Post's Produce Exchange Building (1884) on Broadway in Lower Manhattan. Like Jenney's Home Insurance Building, the Produce Exchange represents an evolution of building form for Post, emerging from his long career of building tall buildings. Though not particularly tall (10 stories and with a 225-foot tower), it was a large structure. The interior was framed with cast iron columns and wrought iron beams and girders, with load-bearing external walls. However, most important for skyscraper history was the walls for the inner court, which were framed with iron, and had panels of brick affixed to them, in what

appears to be the first example of curtain-walled construction in a tall office building in the United States (Larson, 2020, Aug.; Landau and Condit, 1999)

{Figure 6: Produce Exchange and interior courtyard about here}

Larson (2020, Aug.) writes,

“There can be no argument about whether or not iron skeleton framing was first used by Post in these exterior walls of the Produce Exchange, for it is right there in the photograph, clear as daylight, for everyone to see. While James Bogardus can be credited as the inventor of the American iron skeleton frame, George Post deserves the credit as being the first post-Civil War architect in America to use the multistory iron skeleton frame in the exterior of a building.”

5. Chicago Buildings Before the Home Insurance

There is little doubt that Chicago architects were aware of the advances being made in New York. Professionals from New York and the northeast regularly made their way to Chicago to set up shop, and for that matter, Chicago architects were regularly visiting the East Coast. Additionally, important trade journals such as *The Engineering News*, *The Sanitary Engineer*, and *The Inland Architect*, were reporting the newest innovations and building designs. Chicago architects also attended professional meetings, such as those held by the American Institute of Architects (AIA). While information did not flow as rapidly across the country as it does today, Chicago architects did not work in a vacuum. There was a large exchange of information across the continent after the Civil War as the print media grew and links between regions became developed due to the railroad. Knowledge also moved rapidly in the form of letters and telegrams.

In his discussion of Jenney, Turpin Bannister (1957) concludes that,

“He had kept well informed by reading American and foreign, and especially French, technical journals. It seems highly probable that he had learned with little delay of the St. Ouen dock warehouse and the Menier Turbine Building, published in 1865 and 1873, respectively.... After returning from Paris late in 1856 he was in New York at least twice during the following winter, only a few months after [Bogardus’s two shot towers’]

completion. He was there again in April 1858, and in 1860 on business as an engineer for the Bureau of American Securities, and he returned to the city in 1866 to accept the vice-presidency of two New York companies which operated coal mines in northern Pennsylvania. Thus, with his absorbing interest in structures, it is difficult to believe that he failed to note Bogardus' soaring landmarks" (p. 15).

Before 1885, Jenney had several commissions for commercial buildings. In 1872, he designed the Portland Block, which was of cage design. He also appears to have made a small technological evolution with the first Leiter building, completed in 1879. As Tom Leslie (2013) writes,

"The five-story building erected by William Le Baron Jenney for dry-goods merchant Levi Z. Leiter at Wells and Madison has traditionally been considered Chicago's first earliest skeletal exterior, though it was only a tentative step. ... Jenney worked to reduce the exterior of the building as much as possible by supplementing traditional brick piers with iron columns" (pp. 41 – 43).

{Figure 7: First Leiter Building about here}

In 1932, Jenney's partner, William Bryce Mundie (1932), also claimed that,

"Architects had occasionally been obliged to build an iron column into a masonry pier where the load was exceptionally great. Mr. Jenney had done this several years before in the Fletcher and Sharp Bank Building in Indianapolis, in order to gain light. Again in 1879, he did this same thing, only much more advanced in this respect, the building for Mr. L. Z. Leiter..." (p. 9 old/11 new).

As I will discuss below, we need to take Mundie's words with a grain of salt and no plans or images of the Indianapolis building survive, but, if true, it suggests that Jenney was already thinking of using iron to aid in carrying external loads as early as the late 1870s.

The years 1883 and 1884 were particularly active in terms of circulating ideas about iron framing. As Larson and Geraniotis (1987) note, the Board of Trade Building with its 10-story tower was under construction from December 1883 to August 1884, a period that overlaps with

Jenney's planning of the Home Insurance Building, only two blocks north. Larson and Geraniotis (1987) write:

“Designed by W. W. Boyington early in 1882, the tower was 303 feet high, although it was only 32 feet at its base. The mammoth tower was supported by the iron columns built during the 1880s. These were 12-sectioned Phoenix wrought iron columns that were 3 inches in diameter and 90 feet high and fireproofed with [Peter B.] Wight's patented terra cotta casings. As the base of the was only 32 feet wide, these columns must have supported some, if not all, of the masonry in the tower's exterior. If not, the thickness of the walls and the columns would have taken up almost all of the floor area at the ground floor installation....In contrast to the ironwork of the later Home Insurance Building, for which Wight was also the fireproofing contractor, the Board of Trade Tower's iron was put in place before the masonry facing was added” (pp. 45-46).

{Figure 8: Chicago Board of Trade Building about here}

5.1 Frederick Baumann

On March 15, 1884, *The Sanitary News* printed an article by the Chicago Architect Frederick Baumann, that laid out the principles of an independent iron-framed tall building (Larson and Geraniotis, 1987). The article followed Baumann's publication of his ideas as a pamphlet in December 1884 (Baumann, 1884). Whether Bauman's pamphlet predated and/or influenced the design of the Home Insurance Building or if the Home Insurance Building influenced Baumann is a hotly debated topic. In 1932, William Bryce Mundie would claim Baumann pressed him for information on Jenney's building before the pamphlet was written, but there is no way to confirm this (Mundie, 1932). All we can say is that the ideas for iron framing for tall office buildings were undoubtedly “in the air” during the early 1880s in Chicago. And for Jenney to claim (discussed below) that iron framing was his idea and his alone is disingenuous at best.

6. Jenney and the Home Insurance Building

In late 1883 or early 1884, Jenney won the commission to build a Chicago headquarters for the Home Insurance Company of New York. As he states in his 1885 remarks (discussed below), the Building Committee wanted as much sunlight in each office as possible. This desire evidently

prompted Jenney to think of a way to reduce the thickness of the masonry piers and walls to allow for larger windows and ones that were not so deeply set back.

Part of the reason for the controversy about the Home Insurance Building is that Jenney's building did have some novelties. Jenney appears to have been the first in Chicago to place cast iron columns directly into loadbearing piers and walls of a tall and very heavy office building to help share the load and to reduce the amount of masonry; and, further, he connected these columns to the iron girders and lintels.

But when we step back to review the long list of firsts in the history of building construction, from the first to use internal iron framing, to the first use of cast iron facades, to the first use of an elevator, to the first use of caissons or stable foundation methods, or to the first use of fireproofed iron with terra cotta tiles, Jenney's "first" action in the Home Insurance Building does not stand out as particularly revolutionary.

6.1 Jenney at the Time

The initial public words about the Home Insurance Building from Jenney himself was an address he gave at the 19th annual meeting of the American Institute of Architects (AIA) in 1885 (Jenney, 1886), and republished in *The Sanitary Engineer* (Jenney, 1885). In that year, Jenney was the secretary of the Foreign Correspondence Committee of the AIA. While not a top leadership position, it demonstrates that he was an involved member of the AIA. It would, therefore, be natural to seek the approval of his colleagues and stake his claim at that point. His committee's correspondences with international professionals would also suggest he was familiar with the latest methods of iron framing being used in Europe.

However, in his talk, there are many glaring omissions, and what he does say strongly demonstrates he felt that his building was not revolutionary. He never says anything to the effect of "This is the first time this was done," or "This is the culmination of years of building adaptations." Clearly, Jenney viewed his building as primarily a masonry one. He did not see it as a curtain-walled structure, nor did he see it as a moment-resisting frame.

Interestingly, though Jenney used steel beams on the upper floors, he never mentions the word "steel" in his address. We can only speculate as to why that is, but its omission suggests that he felt it wasn't so radical at the time. For example, the Eads Bridge, completed in 1867, was the

first steel truss bridge. And the load-bearing properties of wrought iron and steel were similar. So, using steel in place of wrought iron in 1885 was likely an uncontroversial decision. He later referred to the Home as a “steel skeleton” building, but this was an exaggeration (Jenney, 1907).

Furthermore, for someone who would later claim he invented the skyscraper, he completely “buries the lead,” mentioning the framing methods only after thoroughly discussing his method for foundations. This ordering of the paper seems odd in hindsight, given that a decade later, he would claim that his building was a “radical” and unprecedented structure that he “invented.” Let’s turn to his words in more detail.

First, Jenney titles his talk “The Construction of a Heavy, Fire-Proof Building on a Compressible Soil.” This title, again, strongly suggests that Jenney viewed his building as a masonry one—one so heavy that it was going to settle—unevenly—and this was going to be a problem unless he came up with a solution.³

He begins with, “The system of foundation adopted is what is known as that of Independent Piers, each basement pier and each interior column having its independent foundation. A heavy building on such a soil must necessarily settle, the problem being to reduce that settlement to a moderate amount, say from two to three inches, and to make the settlement practically uniform” (p. 96). Again, Jenney knew the masonry façade was very heavy and needed much greater foundation support than the lighter internal columns.

Then, in the second part of his talk, he turns to the framing. Jenney writes, “Iron was used as the skeleton of the entire building except the party walls....A square iron column was built into each of the piers in the street fronts. All columns and mullions were continuous from the bottom plate to the top of the building” (p. 98).

{Figure 9 From Tallmadge Report about here}

For this, it’s easy to see how this makes the building *seem like* an iron-framed modern skeleton. But as discussed above, the word “skeleton” had been used for internal iron-framed buildings for decades, and this was what he meant. He points out that square iron columns were “built into” the piers, meaning that iron and the brick pieces were sharing the load. The brick piers were thus made thinner using iron.

6.2 The Press

When completed, the Home Insurance Building received rave reviews from the real estate and architectural press. The consensus was that it was an excellent example of Chicago “Class A” office space. My searching of the press and trade journal finds no mention of phrases that indicate that the press saw it as the “first skyscraper” or a “radical invention.” A typical example was the review in the *American Architect and Building News* (Blackall, 1888), the building’s

“chief charm...is in the interior, which is certainly the most successful of its kind in the city. The vestibule...extends through two stories and is finished in polished white marble, with the column supporting the wall and the stairwork, including rails, the posts and the elevator-screens, all in dark bronze. The vaulted roof of the vestibule is of marble slabs, supported on bronze ribs...” (p.89).

6.3 1885 - 1895

After an initial set of reviews in the architectural press, little more seems to have been said about the building in public in the immediate decade following its opening. A few notable cases of discussion within the architectural community (that I was able to identify) are worth mentioning. During this time, it was clear that the community, including Jenney, was aware that what he did was novel for tall commercial structures, but there was no belief or argument that he “invented” a radically new building form. It was seen as an evolutionary step forward.

In the June 1885 issue of *The Inland Architect*, Peter B. Wight, who was commissioned to do the fireproofing for the HIB, wrote about the state-of-the-art fireproofing in tall commercial buildings. He begins his review by noting, “The recent construction in Chicago of a large number of fireproof buildings, all varying to a slight extent in the methods of construction and fireproofing employed, but built according to two leading systems....” (Wight, 1885, p. 52). Here, he is suggesting that his reviewed buildings, including the Home, were generally of the same characteristics—tall, fireproof, with cage-style framing.

Later in the article, he compares the internal framing of the structures and notes all have wrought-iron girders and floors supported on iron columns. He then writes, “In one, the Home Insurance, the iron construction of the interior is carried out to the exterior walls, and every pier contains an iron post, which is secured on each story to the whole system of girder construction,

and it thereby becomes an iron structure complete in itself, masked by an exterior brick wall” (Wight, 1885, p. 53).

While we can’t make too much of this statement, it does suggest that Wight saw the building as novel and suggestive that the near future will see moment-resisting frames. But the “structure complete in itself” is only that the iron framing extended to the outside walls, but whether he knew or not, the Home’s frame would not permit a curtain wall, and the iron frame was not connected tight enough to help with wind-bracing.

In 1915, Wight would later indicate that he believed the building’s design was not as radical or novel as people were claiming by the turn of the 20th century (discussed below). It’s likely that Wight had read Baumann’s pamphlet and was making connections between it and the HIB, although this is speculation.

Another discussion of the building occurred at the 1894 meeting of the AIA. The proceedings record a discussion that Jenney had with fellow architects, including the highly regarded George Post, on the use of iron in building structures. Even as late as 1894, engineers and architects (at least the “old guard”) were not quite convinced that a building should be fully supported purely by a metal framework.

Here, Post (1895) stakes out his claim about his innovations, saying, “Individually I believe, although I never very carefully investigated the subject, that I was the first person to use anything approaching to the steel cage. Some fourteen years ago, I think it was, I built the tower of the Produce Exchange with a wrought iron and cast iron combined cage, filling in the panels with brickwork, but covering it on the outside with cast iron plates in the form of pilasters and string-pieces and cornices...” (pp. 160-1).

But demonstrating his conservatism, he further says, “[B]ut I never have used a cage enclosed in solid mason work. I would have never dared to. I have always built the cage detached inside, anchoring the walls to it, so that the cage in case of corrosion, could be painted or repaired” (p. 161). It’s tempting to conclude that Post considered extending the ironwork into the masonry in the ca. 1880 as Jenney did in 1884 and rejected it as too risky. However, his building demonstrated early curtain-wall experiments.⁴

After Post's remarks, the AIA President, Daniel H. Burnham (1895), introduces Jenney as the next speaker. But he seeks to give a plug to Jenney when he says, "The first work of the sort which I ever had my attention called to was building in Chicago, with cast iron columns and wrought iron girders and floor beams and the entire structure was *embedded in the masonry*. Major Jenney was the architect..." (p 161, emphasis added). Again, he reaffirms the idea that it was "embedded in the masonry" and not necessarily independent of it. Interestingly, in Jenney's remarks following his introduction, he makes no further comment on the structure of the Home Insurance Building.

But Jenney's public tone begins to change at least by 1895 when he starts to alter his wording about the Home Insurance Building. On August 27, 1895, he wrote a letter to the editor of the *Chicago Times-Herald* in response to an article suggesting that steel buildings in New York City were subject to less inspection than railroad bridges. Jenney rebuts this idea for Chicago and also adds, "The steel skeleton construction originated in this city [Chicago] in the Home Insurance Building, some 12 years ago" (Jenney, 1895).⁵

7. The Letter Writing Campaign

The following year, in 1896, discussions about the Home Insurance Building took a sharp turn after June 27, when the President of the Bessemer Steamship Company, a manufacturer of steamships, wrote an inquiry to the editor of *The Engineering Record* (ER):

Sir: Will you have the kindness to inform me to what architect or engineer the honor is due of discovering and practically working out the idea of lofty steel construction of buildings?" -F.T. Gates (1896, June 27).

In that issue, the editor responded with a quick note saying that his journal had featured many proto-skyscrapers, including the Home Insurance Building (1885), the Drexel Building (1889) in Philadelphia, and the Rookery (1888) in Chicago, though did not state a clear "first." From the journal's perspective a "skyscraper" was a tall office building (*The Engineering Record*, 1896).

When Jenney saw that letter, he immediately went to work. He began sending letters to drum up support for him and his claim. The language and phrasing he and his colleagues use take a concrete pivot toward trying to make Jenney the sole inventor who allegedly created the skyscraper nearly out of thin air.

Collectively, they start using words or phrases like “radical,” “no one anticipated it,” and “he alone is responsible.” These are novel phrases in the discussion and strongly suggest a concerted attempt at quasi-legal language to box out other claimants seeking to get the title “inventor of the skyscraper.” Jenney and his colleagues were seeking to regain control of the narrative. And their phrasing was frequently misleading or wrong. Whether Jenney believed what he was saying or not can never likely be known, but he was not above bending the truth.

One might also be tempted to argue that Jenney in 1884 didn’t know how “radical” he was when he embedded columns in the piers and connected the lintels to the columns. But he had to know what he was doing because everything depended on the success of his building. His career could have been destroyed if he failed to please his client or his building revealed terrible mistakes.

Furthermore, there is no way he could have sold (or built) a moment-resisting frame in 1883 or 1884. No one would have accepted it because it was simply too ahead of its time (even for Jenney). The only way forward for an engineer like Jenney was to make an evolutionary step forward. He also argued later that he was confident in his methods, even though he got pushback from the Home Insurance Company and Chicago’s building officials (Jenney, 1907).

7.1 Jenney’s Behind-the-Scenes Campaign

On July 2, Jenney wrote a personal letter directly to Gates stating, “My claim is that in 1883 I invented and put into practical use in the Home Ins. Bldg. Chicago, what is now known as Skeleton Construction, a radical departure from anything heretofore existing...” (Jenney 1895, July 2).⁶ He also includes an unsigned, third-person testimonial sketch about the events (discussed below). On July 6, Gates responded to Jenney, apparently convinced by his pleas, by stating, “Your letters seem to be conclusive as to the invention of the Steel Skeleton Construction” (Gates, 1896, July 6).

Jenney also wrote several letters to people involved with the Home Insurance Building requesting they write letters of support to the EN. On July 7, Jenney wrote to J. H. Washburn, the Vice-president of the Home Insurance Co., writing, “As you are I think aware the essential principles were invented by me for the Home Insurance Building. *I learn from the Record and from other sources that there is an endeavor on the part of others to claim the invention.*” Then Jenney concludes, “If you agree with Mr. Lyon and others that I really was entitled to the credit

of the invention, which I most conscientiously believe to be true, for to my knowledge *nothing of the kind had ever been previously executed or published, or even hinted at*, I would ask that you would kindly do me the favor to write to Mr. Gates corroborating the statements, copies of which I enclose to you” (Jenney, 1896, July 7, emphasis added in both quotes).

On July 10, Washburn dutifully writes the EN, “Mr. W. L. B. Jenney of Chicago requests me to write a few words to you respecting the Home Insurance Col.’s Building in that City....I believe that Mr. Jenney is entitled to the credit of the planning and erecting the first building upon these lines” (Washburn, 1896).

Sometime before July 6, Jenney also wrote to Oliver S. Carter, president of the National Bank of the Republic, who was on the Home Insurance Building Committee at the time. In Carter’s July 6 response, he tells Jenney that he was “reminded of your introduction of the iron skeleton inside the brick wall, which at the time (1883) was entirely new and novel plan....” (Carter, 1896).

Then on July 8, Jenney wrote once again to Gates including Carter’s testimonial, in case Gates needed further convincing (Jenney, 1896, July 8).

We need to pause to parse the meaning of these various private conversations. First, Jenney’s remark about the “endeavor on the part of others to claim the invention” reveals his fears that others are trying to get the credit he feels he deserves. And recall Jenney’s debate with George Post in 1894. Post told Jenney that he had used external iron framing in the Produce Exchange Building. Additionally, Baumann’s pamphlet was circulated in late 1884. How Jenney can say “even hinted at,” is odd, to say the least. And note how Jenney uses the word “published” and the phrase, “to my knowledge,” which ostensibly clears him of the historical precedents of curtain-walled structures, like Bogardus’s in New York. We will return to Jenney’s motivations in more detail below.

7.2 The Debate in *The Engineering Record*

Following Gates’ letter, the EN published several letters from those who “voted” for one candidate or another. Jenney’s response appeared in the July 11th issue. He uses in public the same strong wording that he used in private letters, writing in the ER, “The skeleton construction was a radical departure from anything that heretofore appear and was exclusively my invention”

(Jenney, 1896, July 11). Jenney also sent the ER two letters of support, also published in that issue.⁷

Below Jenney's letter was an unsigned sketch of the events of the time, which Jenney most likely wrote. As the story makes several claims that cannot be confirmed independently of those who were trying to support Jenney, it's difficult to know how to interpret the testimonial's veracity, given that several remarks are misleading or contradictory.

The testimonial begins by describing how Jenney needed to add larger windows in the facade to satisfy his client. The piece recalls Jenney's thought process about how to do this: "Architects had often been obliged to build an iron column into a masonry pier where the load was exceptionally great. The natural solution of the problem was to enclose an iron column within each of the small masonry piers, thus satisfying the three requirements—small piers, strong, and fireproof" (Anonymous, July 11, 1896).

These sentences strongly suggest the author is trying to say two opposite things simultaneously because they imply that the HIB's structure was a natural progression in technology. But then, the piece recounts how the Building Committee was worried that Jenney's building was so novel they could not tell if it was structurally sound. But A. C. Ducat, a former engineer, friend of Jenney, and the Chicago agent of the Home Insurance Company, vouched for the building's sturdiness. And to soothe the Committee's concerns, Jenney, allegedly told the members that "the skeleton building resembl[es] in many respects iron railroad bridges standing on end side by side" (Anonymous, 1896).

This statement is misleading. His structure was not able to support itself based on the way it was built. And to say his building was like a railroad bridge also implies it had some form of trusswork, which it did not since there were no diagonal wind-bracing members (which would be used in 1889 in New York City, as discussed below and to which this seems an oblique reference). Since iron framing for railroad bridges was far from novel in 1884, employing its structural methods for a building could not be considered a "radical departure from anything that heretofore appeared."

The testimony then claims that Jenney thought of patenting his idea at the time, but that "inasmuch as the first drawings for this skeleton constructed seemed to him to be making general

over an entire building what had been done before in a single pier, he did not think that the parent, if attacked, could be successfully defended” (Anonymous, 1896).

Again, which is it? Was his building radical or evolutionary? The author is trying to have it both ways. The claim of Jenney rejecting the idea of applying for a patent is an implicit attack on Leroy Buffington, who, as discussed below, received a patent for iron framing in 1888.

Next were seven more letters, with five in support of Jenney (at least two were solicited by him). Of the two “non-Jenney” letters, one was from Dankmar Adler of Adler & Sullivan in Chicago. Adler, in his review of the skyscraper’s history, did not come down on the side of Jenney, instead, he concludes, “Take it altogether, the skeleton construction, or its present successor, the steel-cage construction, was a growth rather than an invention....the credit for which should therefore be given my profession as a whole rather than to anyone in its ranks” (Adler, 1896)

Another letter was from George Post, who sought to reclaim the idea to him, similar to his argument two years prior. He writes, “In 1881, I designed and erected the New York Produce Exchange, in which the interior courtyard wall is constructed with a cage of cast-iron columns and wrought-iron girders, which are filled with brick panels. I am inclined to think that this is the first example of cage construction” (Post, 1896).

In the July 25 issue, two more letters appear, each taking a different side. First was that of Chicago engineer C. L. Strobel, who opined, “The steel-frame construction as now used for tall buildings can, in my opinion, hardly be called the work of one man.” He then briefly reviews the history of Chicago's tall building and summarizes by saying, “The correct conclusion from the above statement of building work actually done would therefore seem to be that the modern steel-frame construction is a development towards which a number of individuals have made valuable contributions” (Strobel, 1896).

Before we go on to the following letter, it is worth a brief digression. When Jenney saw Strobel’s letter, he was not happy. On July 27, he fired off a private rebuttal letter to Strobel to “correct” what Jenney perceived as a mistake. He wrote to Strobel, “Kindly allow me to call your attention to an error which could easily happen unless you had the designs of the building before you. I notice you say that the in the Home Ins. Bldg. that the walls were not carried by the iron but supported themselves encasing the columns....This is an error. The walls on both La Salle St. and

Adams St. are carried independently above the granite story by story, on the columns, in the true steel skeleton style....The lintels over the windows extend from column to column and carry the masonry work of the story above” (Jenney, 1896, July 27).

This is a re-writing of history. The masonry piers and the iron columns jointly carried the walls. While technically, the lintels carried the masonry above them, they did not fully support them independently, as the lintels were not acting as a moment-resisting frame; the way the lintels were designed did not allow for curtain wall construction.

Following Strobel’s letter was one from Daniel Burnham, who tows the party line with exaggeratory language that again seeks to suggest that Jenney was the lone genius. Burnham, it should be noted, was arguably the most important and well-known Chicago architect of his generation.

He writes:

This principle of carrying the entire structure on a carefully balanced and braced metal frame, protected from fire, is precisely what Mr. William L. B. Jenney worked out. No one anticipated him in it, and he deserved the entire credit belonging to the engineering feat which he was the first to accomplish (Burnham, 1896).

This statement is, at best, misleading, which Burnham likely knew given his long history of creating Chicago’s early skyscrapers. The comment “no one anticipated him” disregards that iron framing had a long history discussed above—and is strategic language to “box out” other claimants. The phrase “carefully balanced” has no direct meaning and is used to imply that the building was a moment-resisting frame. Similarly, “braced metal” is misleading since there was no wind bracing. The entire statement is an attempt to rewrite Jenney’s role in skyscraper history.

Then, in the August 8th issue, Leroy Buffington, of Minnesota writes, “I do claim to the inventor and first discoverer of this construction, and I can furnish all the proof necessary.” He claimed, “I have used construction like the Home Insurance Company’s Building of Chicago since 1876, and the Boston Block of Minneapolis, built in 1881, has a skeleton frame” (Buffington, 1896). Here too Buffington is stretching the truth. These buildings were typical cage construction and did not extend the ironwork into the load-bearing masonry walls (Larson 2024).⁸

Finally, in February 1897, the “polling” was over, and F. T. Gates was “officially” convinced of Jenney’s arguments, declaring that his company would name a new vessel in its fleet, “the ‘W. L. B. Jenney,’ after the eminent engineer and architect of Chicago, to whom we think the iron and steel trade is most indebted for this great advance in the construction of buildings” (Gates, 1897).⁹

Jenney was quite pleased. He wrote back to Gates saying, “I accept [this honor] with many thanks: it is the one official recognition, confirming my claim to the invention of the Steel Skeleton Construction, though as far as I know, no one has ever made the claim....I have also to thank you for the inquiry through the Engineering Record, which brought the matter to the notice of the Architectural and Engineering profession” (Jenny, 1897, undated).

Jenney’s use of the phrase “though as far as I know, no one has ever made the claim” is untrue. As I will discuss below, in 1892, Jenney received a copy of Buffington’s patent and a warning from Buffington that he might be in violation of it.

Jenney now had his “tautological victory.” He told Gates he was the winner, and Gates declared Jenney the winner; therefore, he was the winner. Just as importantly, Jenney used Gates’ decision as if it were a final, factual judgment. Gates was a business executive with limited knowledge and information regarding tall building construction, as evidenced by his query to the ER. He relied on the opinions of others, but most stated opinions came from people with a personal and professional interest in promoting Jenney.

8. Post-1896

After 1896, the debate was over as far as the public was concerned, as media outlets just repeated words used in the letter-writing campaign. A few examples will suffice to demonstrate this. *The International: An Illustrated Monthly Magazine of Travel and Literature* published in Chicago in 1898 in its review of Chicago skyscrapers simply summarized the debate, which stated that “More effective than anything else in settling the dispute was a letter from Mr. D. H. Burnham” and then reproduce Burnham’s EN letter *en toto* (Nicholas, 1889). Then, the article recounts the testimonial that Jenney provided demonstrating proof of his innovative genius.

In its obituary of Jenney on June 17, 1907, the *Pittsburgh Press* writes, “William Le Baron Jenney, inventor of the skyscraper...died in Los Angeles, Cal., yesterday...” (Pittsburgh Press,

1907). A few days later, a Chicago Sunday Tribune reported that Jenney “discovered skeleton construction...” (Fullerton, 1907).

As one last example, a 1912 book entitled *Chicago: Its History and Its Builders* leaves the following description of one of Chicago’s important builders, John M. Ewen, who “dates his residence in Chicago from 1886 and here his first professional connection was that of architectural engineer with W. L. B. Jenney, the originator of the steel-skyscraper...” (Currey, 1912, p. 541).

8.1 Jenney

But Jenney was not done. He fought to protect his trophy. In 1897, Rand McNally published the posthumous memoirs of A. C. Ducat, who, before his time with the Home Insurance Company, had served honorably for the Union in the Civil War. A signed letter from Jenney is included, which has the same content and tone as the unsigned testimonial in the ER. It repeats the same tropes and recounts how Ducat stood up for him when the Building Committee feared his building was too radical (Jenney, 1897).

As another example, in 1899, Jenney fired off a missive to William H. Birkmire, who sought the trophy for New York City. Jenney told Birkmire he was wrong since, “That matter has been so thoroughly discussed, particularly in *The Engineering Record*.” He also noted that his building plans, reprinted in *Building* in January 1885, “clearly show lintels over the window, extending from column to column.” However, he does not mention they were not bolted, filled with mortar or concrete, and notched at the corners around the piers (Jenney, 1899).

In one final writing before his death, Jenney published a brief memoir in *The Western Architect*, again recounting the alleged controversy he faced with the Home Insurance Building Committee. Once again, taking liberty with the facts, he states that when the Home Insurance Building Committee asked about other buildings of similar form, “I replied there was none; that they would have the first; that the steel construction was a simple engineering problem....” The Committee, also convinced by Ducat’s support, voted, and the motion “was carried unanimously and the first steel skeleton constructed building was launched” (Jenney, 1907).

Again, notice how Jenney simplifies and misrepresents the description of the building as the “first steel skeleton constructed building.” Steel was only used on the upper floors as floor beams

and not load-bearing columns and was added during the construction process at the request of the Carnegie mills, which, evidently, was facing a glut of steel beams (Wermiel, 2009). Jenney never ordered the steel beams, nor did he expect to use them when pitching his plan to the Home Insurance Company. And, again, the building can in no way be called a “skeleton” in the modern sense of being a curtain-walled, moment-resisting frame.

9. The Claimants

Jenney’s language in the ER and private letters makes sense when placed in the context of what he was seeing and hearing in the late 1880s and 1890s. Several other architects were claiming that they invented the skyscraper. By using phrases such as “radical,” “my invention,” and “first steel skeleton,” Jenney was attempting to securely establish his claim by locking out the other would-be claimants. For simplicity, we can say there were three key factions: those from New York, Chicago, and Leroy Buffington, from Minneapolis, respectively.

9.1 Leroy Buffington

Leroy Buffington (1848-1931) was arguably the most antagonistic and problematic of the lot. In 1874, he opened a practice in Minneapolis, where he flourished. As a designer of large public buildings in the 1880s, Buffington was intimately aware of cage construction. In 1886, he submitted plans for a Crystal Palace-like structure for the St. Paul State Fair, but it was rejected.

He claimed that in 1882, he discovered the ideas behind the skyscraper and was determined to get his due. In 1888, he won a U.S. patent for his iron-framed skeletal building design, which, he argued, showed solid proof that he was the father of the tall building (Upjohn, 1935).

{Figure 10: Buffington Design about here}

After forming his own company, the Buffington Iron Works, in 1892, Buffington started suing for patent infringement. His first of several unsuccessful cases was against William H. Eustis, a real estate developer and the mayor of Minneapolis. Eustis’s answer to Buffington’s bill of complaint referenced Jenney’s article in *The Sanitary Engineer* (1885) as proof that the patent had been anticipated (Upjohn, 1935).¹⁰

In 1892, he also wrote to Jenney (and likely many others), “I beg to direct your attention to my patent, No. 333,179, issued May 22nd, 1888 for ‘Iron Building Construction’, and to warn you

and others to refrain from infringement of said patent or any of its claims” (Buffington, 1892, undated). Jenney responded by asking for a copy of “said patent” (Jenney, 1892). On May 14, 1892, Buffington honored his request by sending one (Buffington, 1892, May 14).

In late November 1892, at least four Midwest and Western newspapers published an article with the headline, “Buffington After Boodle,” which stated that Buffington “is about to begin suite against the owners of all the sky-scraping buildings in Chicago. He claims that the structural iron work has been put in a manner conflicting with patent which he holds. He will claim damages to the extent of the 5 per cent of the cost of each building. This means that he will claim \$4,500,000 from Chicago....” (*Bizmark Weekly Tribune*, 1892).¹¹ Some version of this article was printed around the country during the last week of November and early December, including the in *San Francisco Chronicle*, the Chicago-based newspaper, *The Sunday Inter Ocean*, and *The Chicago Tribune* on December 4.

Buffington’s claims seem extreme today, but when put in the context of Jenney’s private experiences with Buffington and his retainers, such copy, if it reached Jenney—which it likely did—would undoubtedly have contributed to his concern. Jenney’s words in the ER need to be considered in light of Buffington’s actions, and the evidence suggests that Jenney was worried.

In the abovementioned 1899 letter to Birkmire, Jenney also reports that “S. L. Buffington of Minneapolis, took out a patent May 22, 1888, which I have before me....Buffington formed a company with large capital, supposed to be for the purpose of prosecuting and obtaining money from all those who used the skeleton construction. *Parties interviewed me* whom I supposed to be Buffington’s attorneys. I showed them that if they could find anyone using that extravagant column [in the patent] they certainly could prosecute them but no architect or engineer of any scientific knowledge would be guilty. That was the last I knew of the patent. He certainly never attempted to interfere in the use of the skeleton construction which he did not patent” (Jenney, 1899).

The letter-writing campaign can be seen as an attempt for both the Chicago group—through Jenney—and Buffington to claim prior art, which is evidence that an invention was already known, and if another party can document it, it can invalidate a patent.¹² Jenney’s phrasing such as “radical departure,” “my claim to the invention” and “nothing of the kind had ever been...hinted at” were efforts to demonstrate that Buffington’s patent was null and void due to

Jenney's structure, completed at least two or three years before Buffington filed (November 1887) or won (May 1888) his patent.

This "fight" between Buffington and others would continue for many years and was no doubt an ongoing source of concern for Jenney. In 1904, a Chicago-based attorney, James Raymond, responded to an offer from Jenney to help in Raymond's legal work for his client, the First National Bank, which Buffington was suing for patent infringement. Raymond expresses his fear, which no doubt Jenney shared, when he wrote, "Undoubtedly if Buffington should win either the suit commenced here or the suit commenced in New York, claim would be made against all the skeleton buildings in the country which come within the construction which the Court might thus put upon the Buffington patent" (Raymond, 1904).

9.2 The New York Faction

While Buffington may have represented Jenney's "left flank," several New Yorkers on "the right flank" were vying for their trophies. As discussed above, George Post felt he deserved the credit given his accomplishments in New York. Another claimant arrived on the scene in 1889. The architect Bradford Lee Gilbert was awarded a commission by John Noble Stearns, a silk merchant, seeking to erect an office building on an awkwardly shaped lot in Lower Manhattan. The problem was that the Broadway frontage was only 21.5 feet across, though the lot widened toward the rear. To erect a masonry-bearing structure would have meant that the thick walls would have rendered the site unprofitable (Landau and Condit, 1999).

{Figure 11: Tower Building about here}

Gilbert claimed he devised the idea of turning a railroad bridge truss on its side, though there is some debate about whether the idea was his or that of William Birkmire, who worked for the Jackson Iron Works, supplying the building's iron at the time (Landau and Condit, 1999). Gilbert framed the exterior walls with iron columns and included diagonal members for wind bracing. The framing freed up significant space on the lower floors. The Tower Building was only 11 stories.

Like many buildings of the day, it was a hybrid. The rear part had masonry walls. The iron frame in the front stopped at the sixth floor, and above that were load-bearing walls. But his building certainly made an impression. Partly for his achievement with the building, Gilbert won a medal

at the Chicago World's Columbian Exposition in 1893 "for a new type of American architecture." (Landau and Condit, 1999, p. 166). It's telling that Jenney did not win an award for the Home Insurance Building.

Although a few years after the letter-writing campaign, a "fight" erupted between New York and Chicago when, on August 9, 1899, the Society of Architectural Manufacturers of New York affixed a bronze plaque to the Tower Building, which stated that it was "the earliest example of the skeleton construction..." (Landau and Condit, 1999, p. 166). This event illustrates how, during the years after 1885, New York was aiming for the "trophy" as well.

9.3 Chicago's Other Claimants

Finally, while less vocal than Buffington or the New York architectural community, some individuals in Chicago felt they deserved more credit than they received. Jenney, Burnham, et al. were constantly interacting with members of the community, and no doubt, from time to time, they would talk with or hear a story about someone who felt denied their credit.

As Turak (1985) documents, Frederick Baumann, in his later years, felt he was entitled to some acknowledgment. Peter Wight, agreed with Baumann, to whom he wrote in 1915, "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. 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" (p. 64).

As this letter implies, there was also a movement in Chicago to anoint the Tacoma Building (1889), designed by Holabird & Roche, as the "first skyscraper" since it was the first tall office building to have curtain walls in the street-facing façade (though the rear walls were load-bearing brick) (Leslie, 2013).

{Figure 12: Tacoma Building about here}

10. The 1930s

10.1 The Marshal Field Estate Report (1931)

The debate was brought to the surface again in 1931 when the Home Insurance Building was demolished to make way for the 46-story Field Building. Marshall Field (1834-1906) was a Chicago-based entrepreneur who founded Marshall Field and Company, a chain of department stores. Field is also known for his philanthropic donations, providing funds for the Field Museum of Natural History, and donating land for the University of Chicago campus. In short, Field was seen as an important historical figure in Chicago who helped it succeed and gave back to its institutions.

The Trustees of the Estate of Marshall Field, which was constructing the new tower, created a committee headed by Chicago architect, and former protégé of Daniel Burnham, Thomas. E Tallmadge. The committee was charged with reviewing the Home Insurance Building's structure and reporting on whether it could be considered the first skyscraper. Now that the Field Estate was destroying the HIB, it was important to establish its place in Chicago's history. They were not a disinterested party.

The report contains a few misstatements that suggest some “fudging” on the part of the committee. I will offer one example here.¹³ The report states, “There can be no possible question that the metal frame...was a perfectly rigid and stable metal cage. In other words, it did not depend in any degree for its stability on any masonry or other construction” (p. 13). This statement is not true, as has been documented above in Section 2.

Nonetheless, from the public's perception, the Tallmadge report was likely too arcane in its discussion of how the building's external iron frame functioned. Instead, all that mattered was the conclusion—confirming what many already believed, concluding, “We are also of the opinion that owing to its priority and its immediate success and renown the Home Insurance Building was in fact the primal influence in the acceptance of skeleton construction; and hence is the true father of the skyscraper” (p. 17).

However, the report provides no proof of other buildings that copied or adapted its design. Given how silent the historical record is on the influence of Jenney on other architects, it's hard to know

if fact if Jenney's building was pivotal or not. However, given the evolution and trajectory of iron framing across the United States, it seems likely that it was not all that influential.¹⁴

10.2 Rebuttals

As discussed above, the Western Society of Engineers (Sanderson, et al., 1932) also issued findings, noting that “The Home Insurance Building was erected during the development period of the skeleton type of building and is a notable example of its type; *while it does not fulfill all the requirements of a skeleton type*, it was well along in this development....” (emphasis added). However, its conclusion was not of interest to the wider public.

In 1934, the Tallmadge report was reprinted in the *Architectural Record*, and was followed by a rebuttal by the architect Irving K. Pond, who also concluded, in agreement with the *Western Report*,

“In point of fact the frame could not have maintained itself in an upright position had it not been for the massive alley and line walls; and the posts in the street fronts could not have maintained themselves laterally had not the masonry of the piers been carried up simultaneously with the iron to brace the verticals and to take the wide cast-iron lintels which occurred, unbolted to the frame, at the fifth, seventh, eighth and tenth floors.... Major Jenney's notion, expressed later, that he used iron to lighten the load on the Chicago soil must have come as an afterthought. It must have been the need of light which influenced him for it would not take as great a dead load of masonry to serve as piers in his street fronts as he used in his line wall on the same lot with the same soil conditions” (Pond, 1934).

He concludes, “However, it may be set down with a fair amount of assurance that the structure of the original Home Insurance Building had very little or nothing in common with the modern skeleton construction and had little or no influence on ‘Skyscraper’ design” (Pond, 1934, p. 32 ad. section).

11. Jenney's Apostles

In 1932, Jenney's partner from 1891 to 1907, William Bryce Mundie, crafted a manuscript recounting the history of skeleton construction. While the memoirs do not seem to have been

published, researchers who have uncovered archival drafts have been quick to quote or cite Mundie (Turak, 1985; Miller, 1997), but his memoir serves as propaganda to maintain Jenney's legacy as the "inventor of the skyscraper."

As Mundie confesses,

"Up to the time of Mr. Jenney's death, our relationship was like that of father and son.... All that I am I owe to him, and this task that I assume is in grateful remembrance and with the hope that vast amount of doubt to his part in ... skeleton construction, which has existed since his death, may be cleared. 'Who's who' or 'Who was' in skeleton construction, the greatest innovation in architecture in the last several centuries, has been so incorrectly represented in the press that it remains vague in the minds of the present generation throughout the world from when it came or was evolved. The honor of being the birthplace of skeleton construction belongs to the City of Chicago, and that of its former sponsor to Mr. Wiliam LeBaron Jenney" (Mundie, 1932, pp. 4-5).

This is hardly an unbiased account and one that contradicts his statement quoted at the beginning of this paper (and which appears on Part II, page 9, of his manuscript). Like Jenney, he was trying to have it both ways, where, on the one hand, he tries to put Jenney's work in context, but, on the other hand, says that Jenney invented the steel skeleton skyscraper.

In 1905, the architect Elmer C. Jensen was brought in as a partner with Mundie and Jenney, and when Jenney died in 1907, the firm became Mundie & Jensen. And as Jensen's archived files at the Art Institute of Chicago reveal, he continued Mundie's apostolic role. For example, in 1944, Jensen gave a speech to the Chicago Chapter of the Newcomen Society, entitled "The World's First Skeleton Building," which documented Jenney's alleged radical and heroic efforts to construct the Home Insurance (Jensen, 1944).

Even Jenney's grandson carried on the legacy, complaining to the *New York Times* in 1926 that Buffington didn't invent the skyscraper, but rather states, "I believe that you will find on investigation of the facts that my grandfather, William Le Baron Jenney... was the inventor and introducer of steel skeleton construction as the system is used today." (Jenney, 1926).

12. The Historiography Today

In this final section, I want to briefly turn to the Wikipedia pages on Jenney and the Home Insurance Building. While scholars may be quick to dismiss Wikipedia as superficial, there is no doubt that it is part of historical and historiographical conversations and, for better or worse, constitutes an element of the historical record. The wider population generally assumes that the information contained in each listing is reasonably correct and has been written by steeped in the field. (Wikipedia moderators do what they can to check for accuracy, but if an entry has plausible citations, they will do little to change its content.)

We can see that the Wikipedia entries state incorrect facts and cite those who had a vested interest in promoting the “Jenney Myth.” Reviewing the entries also shows how Jenney won the historiography. A few examples will make this point. Jenney’s Wikipedia biography page states that the HIB “was the first fully metal-framed building and is considered the first skyscraper.” Again, “fully metal-framed” is wrong (Wikipedia, Jenney entry, 2024).

Then it makes statements that appear factual but bear inaccurate information and make little sense, stating, “The steel needed to support the Home Insurance Building weighed only one-third as much as a ten-story building made of heavy masonry. Using this method, the weight of the building was reduced, thus allowing the possibility to construct even taller structures. Later, he solved the problem of fireproof construction for tall buildings by using masonry, iron, and terra cotta flooring and partitions.” (Wikipedia, Jenney entry, 2024)

The first sentence is unintelligible and sounds like it makes sense, but it does not. Also note that the reference is to the *Encyclopedia Britannica* (2024), which creates a circular type of citation channel that cites the usual tropes discussed above. The Wikipedia entry falsely claims that Jenney “solved the problem of fireproof construction,” which he did not. For example, in the Home Insurance building, it was solved by Peter B. Wight, who used his patented terra cotta tiles to enclose exposed iron columns.¹⁵

A subsequent line in Jenney’s entry is, “The Home Insurance Building was the first example of a steel skeleton building, the first grid of iron columns, girders, beams, and floor joists ever constructed.” Again, this is factually wrong given the actual nature and history of the HIB (Wikipedia, Jenney entry 2024).

Turning briefly to the entry on the Home Insurance Building reveals similar inaccuracies, stating, “It was the first tall building to be supported both inside and outside by a fireproof structural steel frame, though it also included reinforced concrete. It is considered the world's first skyscraper” (Wikipedia HIB entry, 2014).

{Figure 13 about here: Chicago Architecture Center & Field Plaque}

Jenney’s “victory” in the public forum has also benefited Chicago boosters, who continues to propagate the myth of Jenney as the “inventor of the skyscraper.” A visitor to the Chicago Architecture Center, for example, can see a photograph (see Figure 13) of the HIB along with a plaque stating that the building is “considered the world’s first skyscraper” which “represented a radical departure from traditional load-bearing masonry construction.”

Tourists passing by the Field Building in the Loop can also see a plaque stating that the HIB “was the first high building to utilize as the basic principle of its design the method known as skeleton construction.” This statement, is, at least, more equivocal, though still aims to perpetuate the story of Jenney’s influence.

13. Conclusion

In 1885, when the Home Insurance Building was completed in Chicago, neither its architect, William Le Baron Jenney, nor the architectural community viewed it as revolutionary. Rather, Jenney’s structural methods were seen as an evolutionary step toward the use of load-bearing masonry with iron or steel to create a lighter structure with bigger window bays. By embedding iron columns in the masonry piers and supporting masonry spandrels on iron lintel pans, Jenney created a hybrid masonry-iron structure to satisfy his client's request for larger windows.

However, within a decade after the opening of the HIB, Jenney and his Chicago colleagues began to reformulate how they described the building. In 1896, in a letter-writing debate in *The Engineering Record*, they started using phrases like “radical,” “deserves the entire credit,” and “first steel skeleton construction.” In the process, the Chicago architectural community successfully recast the Home Insurance Building as “the first skyscraper” and Jenney as the “inventor of the skyscraper.”

Stepping back, we need to place Jenney's building in context. First is the issue of whether it was the first skyscraper or not. Based on the two most common definitions—a very tall office building or a steel-riveted moment-resisting frame—it was not the first in either case. Second was the issue of “pivotality.” Was Jenney's building pivotal in that it led others to adopt his techniques and that the moment-resisting frame would not have emerged without the HIB? The evidence for this strongly suggests that Jenney was not pivotal. The curtain wall had earlier precedents in New York with James Bogardus's shot tower and George Post's Produce Exchange Building. More recent research suggests that the Chicago office buildings after the HIB that used curtain-walled framing, the Rookery (1888) and the Tacoma Building (1889), borrowed more heavily from Post rather than Jenny (Bruegmann, 1997). New York's Tower Building (1889) had diagonal wind-bracing members, which Jenney did not include in the HIB.

Lastly is the issue of “radicalness.” Can Jenney's innovations be considered radical? The answer, again, is “no.” Over the 19th century, many architects, engineers, and suppliers were generating innovations in building technology and methods. First was the use of cast and wrought iron for internal framing and, to a lesser degree, external framing; next was the inclusion of an elevator; following that was improved foundations and fireproofing. Following those were riveted steel, curtain-walled construction, and wind-bracing members. Placing Jenney's HIB structural design in this context shows that it was but one of many evolutionary steps forward and was not radical when placed side-by-side within the skyscraper's long technological history.

Rather, the idea that Jenney “invented the skyscraper” resulted from the successful public relations campaign to box out other claimants. The campaign was motivated in large part by the actions of Leroy S. Buffington, who earned a patent for iron framing in 1888. Buffington used lawsuits and the press to push his claim that he invented the skyscraper. If Jenney et al. could demonstrate prior art, they would free themselves of the potential burdens of any lawsuit against them. Ironically, Buffington's attempt to claim credit as the “father of the skyscraper,” handed the title to Jenney, despite having little basis in truth.

References

[Note: AIC = Art Institute of Chicago, EJC Papers=Elmer C. Jensen Papers]

Adler, D. (1896), Letter to Editor. *The Engineering Record*, July 11, 34(6), 103.

Ali, M. M., & Moon, K. S. (2022). "The First Skyscraper Revisited." *International Journal of High-Rise Buildings*, 11(1), 1-14.

Anonymous. (1896). "History of the Steel-Skeleton Construction." *The Engineering Record*, July 11, 34(6), 103.

Bannister, T. C. (1957). "Bogardus Revisited: Part II: The Iron Towers." *Journal of the Society of Architectural Historians*, 16(1), 11-19.

Barr, J. (2024). "A 'Radical Departure'? How The Home Insurance Building Won the 'First Skyscraper Debate'." *International Journal of High-Rise Buildings*, 13(1), 1-9.

Baumman, F. (1894). *Improvement in Construction of Tall Buildings*, December. Self-published pamphlet. ECJ files at AIC.

Bizmark Weekly Tribune. (1892). "Buffington After Boodle," Dec. 2, 7.

Blackall, C. H. (1888). "Notes of Travel: Chicago, Ill." *The American Architect and Building News*, 23(636), Feb. 25, 88-91.

Bruegmann, R. (1997). *The Architects and the City: Holabird & Roche of Chicago, 1880-1918*. University of Chicago Press.

Buffington, L. S. (1892). Letter to W. L. B. Jenney, undated. EJC files at AIC.

Buffington L. S. (1892). Letter to W. L. B. Jenney re Buffington's Patent, May 14. EJC files at AIC.

Buffington, L. S. (1896). Letter to Editor. *The Engineering Record*, Aug. 8, 34(10), 182.

Burnham, D. H. (1895). Panel Discussion. Proceedings of the 28th Annual Convention of the American Institute of Architects, 1894, 159-198.

Burnham, D. H. (1896). Letter to Editor. *The Engineering Record*, July 25, 34(8), 145.

Carter, O. S. (1896), Letter to William Le Baron Jenney, July 6. ECJ files at AIC.

Chicago Tribune (1883). "New York Gossip," Feb. 25.

Condit, C. W. (1964). *The Chicago School of Architecture: A History of Commercial and Public Building in the Chicago Area, 1875-1925*. University of Chicago Press: Chicago.

Condit, C. (1988). "The Two Centuries of Technical Evolution Underlying the Skyscraper." In: Beedle, L. ed. *The Second Century of the Skyscraper*. Van Nostrand Reinhold Company: New York.

Encyclopedia Britannica. "Skyscraper Technology." url: <https://www.britannica.com/technology/skyscraper>, accessed Feb. 9, 2024, 10:12 AM.

Currey, J. S. (1912). *Chicago: Its History and Its Builders*. Vol. 4. SJ Clarke Publishing Company: Chicago.

The Engineering Record. (1895). "Steel-frame Building Construction," June 15, 32(3), 44.

The Engineering Record. (1896). Editorial on Steel-cage Construction, June 27, 34(4), 71.

The Engineering Record. (1897). "An Unusual Recognition of Public Service," March 27, 35(17), 353.

Fenske, G. (2020). "The 'First Skyscraper' in the History of Modern Architecture." In: Lee Gray, Antony Wood, and Daniel Safarik (eds), *First Skyscrapers: Skyscraper Firsts*. Council on Tall Buildings and Urban Habitat.

Friedman, D. (2014). *Structure in Skyscrapers: History and Preservation*. Self-published.

Fullerton, H. S. (1907). "How the First Skyscraper Came to Be Built." *Chicago Sunday Tribune*, June 23, 29.

Gates, F. T. (1896). Letter to Editor. *The Engineering Record*, June 27, 34(4), 71.

Gates, F. T. (1896). Response Letter to Jenney, July 6, ECJ files at AIC.

Gates, F. T. (1897). Letter to Editor. *The Engineering Record*, Feb. 20, 35(12), 250.

Jenney, W. L. B. (1885) "The Construction of a Heavy Fire-Proof Building on a Compressible Soil." *The Sanitary Engineer*, Dec. 10, 13(2), 32-33.

Jenney, W. L. B. (1886). "The Construction of a Heavy, Fire-Proof Building on a Compressible Soil." *Proceedings of the Nineteenth Annual Convention of the American Institute of Architects*, 96-102.

Jenney, W. L. B. (1892). Response L. S. Buffington, undated. ECJ files at AIC.

Jenney, W. L. B. (1894), "Topical Discussions and Interchange of Data, No. 222-21." *Proceedings of the Sixth Annual Meeting of the American society of Mechanical Engineers*, 797-803.

- Jenney, W. L. B. (1895). Letter to Editor, *Chicago Times-Herald*, Aug. 27. ECJ files at AIC.
- Jenney, W. L. B. (1895). Letter to F. T. Gates, July 2. ECJ files at AIC.
- Jenney, W. L. B. (1896). Letter to J. H. Washburn, July 7. ECJ files at AIC.
- Jenney, W. L. B. (1896). Letter to F. T. Gates, July 8. ECJ files at AIC.
- Jenney, W. L. B. (1896). Letter to Editor. *The Engineering Record*, July 11, 34(6), 103.
- Jenney, W. L. B. (1896). Letter to C. L. Strobel, July 27, ECJ files at AIC.
- Jenney, W. L. B. (1897). Letter to F. T. Gates, (undated). ECJ files at AIC.
- Jenney, W. L. B. (1897). Letter. In: *Memoirs of A. C. Ducat*, 65-67. Rand McNally & Co.: Chicago, 65-67 (Published posthumously).
- Jenney, W. L. B. (1899). Letter to W. M. Birkmire, August 21. ECJ files at AIC.
- Jenney, W. L. B. (1907). "Autobiography of Wm. LeBaron Jenney." *The Western Architect*, 10(6), 59-66.
- Jenney, W. L. B. (1926). "Letter to Editor: Chicago's Early Skyscrapers." *The New York Times*, Dec. 12, p. XX12.
- Jensen, E. C. (1944). "The World's First Skeleton Building." Paper read at the meeting of The Chicago Chapter of the Newcomen Society on November 9, 1944. ECJ files at AIC.
- Landau, S. B., and Condit, C. W. (1999). *Rise of the New York Skyscraper, 1865-1913: 1865-1913*. Yale University Press.
- Larson, G. R. (2020). "The Elevator, the Iron Skeleton Frame, and the Early Skyscrapers: Part 1." *International Journal of High-Rise Buildings*, 9(1), 1-15.
- Larson, G. R. (2020). "5.19. The New York Produce Exchange: Post's Masterpiece." *The Architecture Professor Blog*, August, 26. url: <https://thearchitectureprofessor.com/2020/08/28/5-18-the-new-york-produce-exchange-posts-masterpeice/>
- Larson, G. R. (2024). Personal conversation with the author, Feb. 17, 2024.
- Larson, G. R. and Geraniotis, R. M. (1987). "Toward a Better Understanding of the Evolution of the Iron Skeleton Frame in Chicago." *The Journal of the Society of Architectural Historians*, 46(1), 39-48.
- Leslie, T. (2013). *Chicago Skyscrapers, 1871-1934*. University of Illinois Press: Chicago.

- Miller, D. L. (1997). *City of the Century: The Epic of Chicago and the Making of America*. Simon and Schuster: New York.
- M. S. B. (1853). "Letter to Editor: Improved Housing for the Poor." *The Civil Engineer and Architect's Journal*, 16, 215-217.
- Mundie, W. B. (1932). *Skelton Constructions: Its Origin and Development Applied to Architecture*. Unpublished manuscript housed at archives of the AIC.
- The New York Sun* (1882). "Another Sky Scrapper Down Town," Dec. 19, 1.
- Nicholas, F. (1898). "Chicago's Skyscrapers." *The International*, Dec., 5(6), 443-460.
- Peet, G. (2020). "Modern Skyscrapers in the Late 19th Century." *International Journal of High-Rise Buildings*, 9(1), 43-51.
- The Pittsburgh Press*. (1907). "Death Record: William Le Baron Jenney," June 17, 4.
- Pond, I. K. (1934). "Neither a Skyscraper nor of Skeleton Construction," *Architectural Record*, 76, 118 & 32 (advertising section).
- Post, G. B. (1895). Panel Discussion. *Proceedings of the 28th Annual Convention of the American Institute of Architects*, 159-198.
- Post, G. B. (1896). Letter to Editor. *The Engineering Record*, July 11, 34(6), 103.
- Raymond, J. H. (1904). Letter to W. L. B. Jenney, Oct 22. ECJ files at AIC.
- Sanderson, J. C., McConnell, J. L., & Thielbar, F. (1932). "Home Insurance Building: A Report on Types of Construction Used." *Journal of the Western Society of Engineers*, 37(1), 8-9.
- Strobel, C. L. (1896). Letter to Editor. *The Engineering Record*, July 25, 34(8), 144-5.
- Tallmadge, T. E. (ed.) (1931/1939). *The Origin of the Skyscraper: Report of the Committee Appointed by the Trustees of the Estate of Mashall Field for the Examination of the Structure of the Home Insurance Building*. The Alderbrink Press: Chicago.
- Turak, T. (1985). "Remembrances of the Home Insurance Building." *The Journal of the Society of Architectural Historians*, 44(1), 60-65.
- Upjohn, Everard Miller. "Buffington and the Skyscraper." *The Art Bulletin* 17, no. 1 (1935): 48-70.
- Wallace, A. (2006). "A Height Deemed Appalling." *Journalism History*, 31(4).

Washburn J. H. (1896). Unpublished Letter to Editor of *The Engineering Record*, July 10, ECJ files at AIC. (91Jensen)

Weisman, W. (1953). "New York and the Problem of the First Skyscraper." *Journal of the Society of Architectural Historians*, 12(1), 13-21.

Wermiel, S. E. (2009). "Introduction of Steel Columns in US Buildings, 1862–1920." *Proceedings of the Institution of Civil Engineers-Engineering History and Heritage*, 162(1), 19-28.

Wight, P. B. (1885). "Recent Fireproof Building in Chicago." *The Inland Architect and Builder*, April, 5(Extra), 52-53.

Wikipedia (2024). "William Le Baron Jenney" accessed Feb. 9, 2024 at 10:00 am. url: https://en.wikipedia.org/wiki/William_Le_Baron_Jenney,

Wikipedia (2024). "Home Insurance Building," accessed Feb. 9, 2014, 10:15 am. url: https://en.wikipedia.org/wiki/Home_Insurance_Building.

Wilson, J. R. Letter to Editor. *The Engineering Record*, Aug. 15, 34(11), 202-3.

Images



Figure 1: Home Insurance Building (1885), Chicago. Source: [Library of Congress](#).

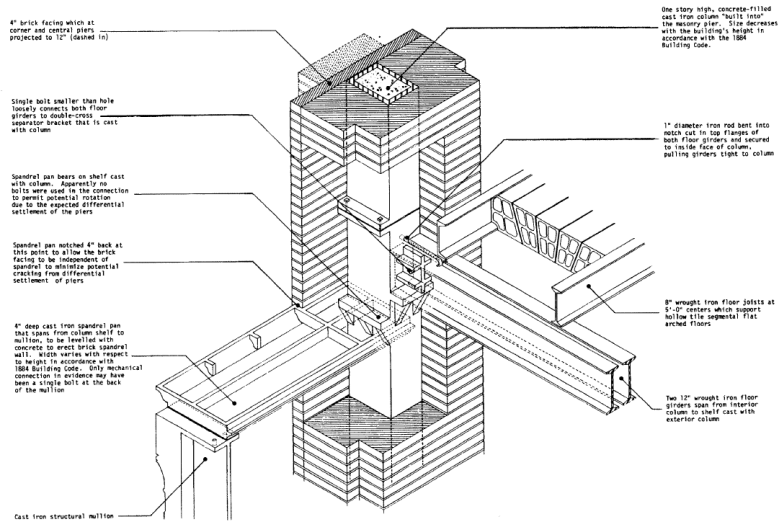


Figure 2: Diagram of Home Insurance Building's Exterior Piers. Source: Larson and Geraniotis (1987).



Figure 3: Crystal Palace (1853), New York. Source: [Wikipedia](#).

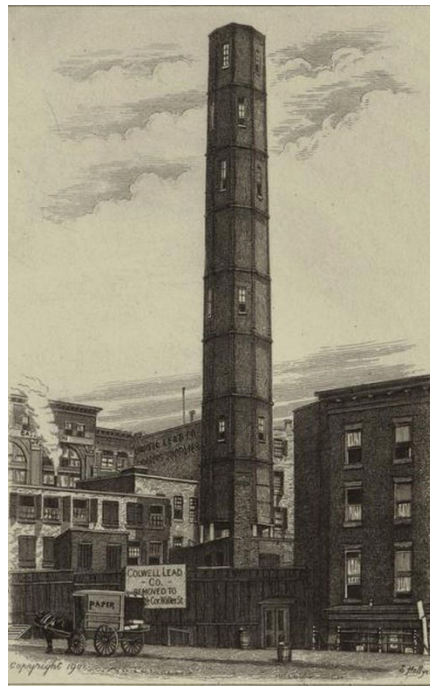


Figure 4: McCullough Shot Tower (1855), New York City: Source: Larson (2020).



Figure 5: Three Early Proto-skyscrapers in New York City. From Left: Equitable Building (1870), Western Union Building (1875), Tribune Building (1875). Sources: Left: [Library of Congress](#). Middle: [Wikipedia](#). Right: [Skyscraper Museum](#).

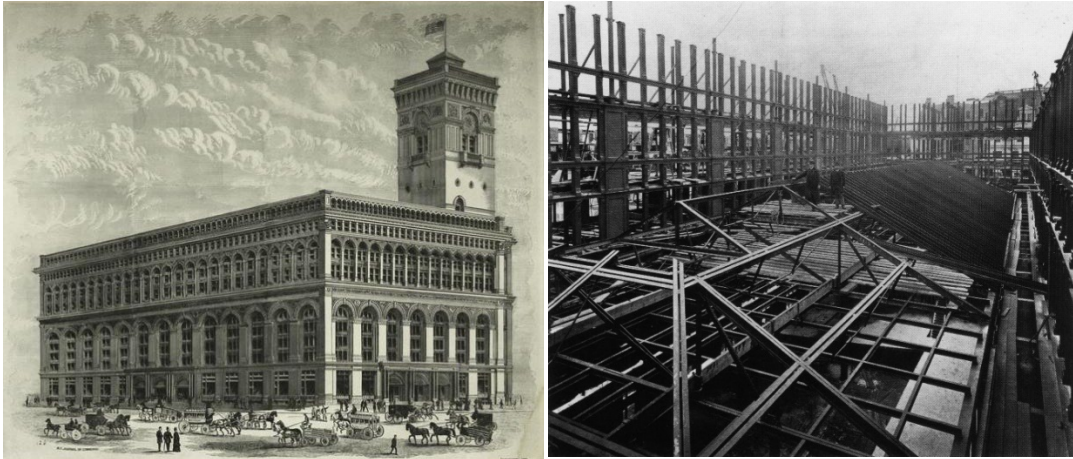


Figure 6: Produce Exchange Building (1884) and Framing of Interior Light Court, New York. Source: Right: [Wikipedia](#). Left: Landau and Condit (1999).



Figure 7: The First Leight Building (1879), Chicago. Source: Chicagology.com.



Figure 8: Board of Trade Building (1885), Chicago. Source: wikidata.org.

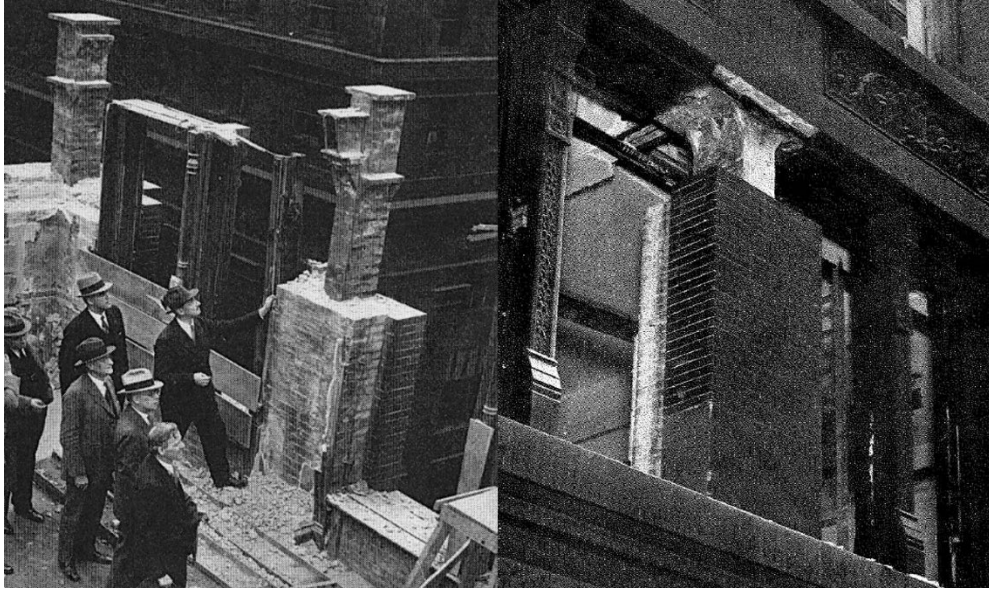


Figure 9: Two Images of Home Insurance Building Upon Demolition in 1931. Source: Tallmadge (1931). Note the Tallmadge Report used these images to suggest the iron carried the building independently.

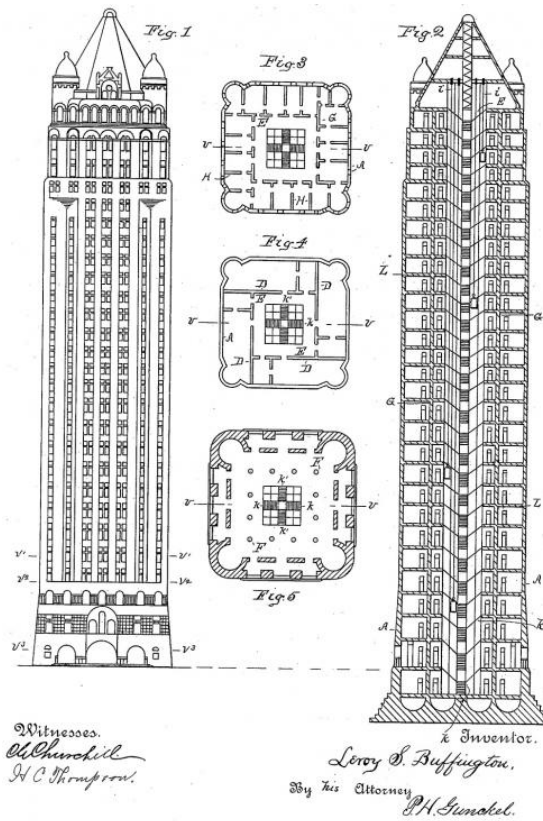


Figure 10: Design for 28-story "cloud-scraper" by Leroy Buffington (1888). Source: [Patenroom.com](http://patenroom.com).



Figure 11: The Tower Building (1889), New York City. Source: Museum of the City of New York.



Figure 12: The Tacoma Building (1889), Chicago. [NY Public Library](#).

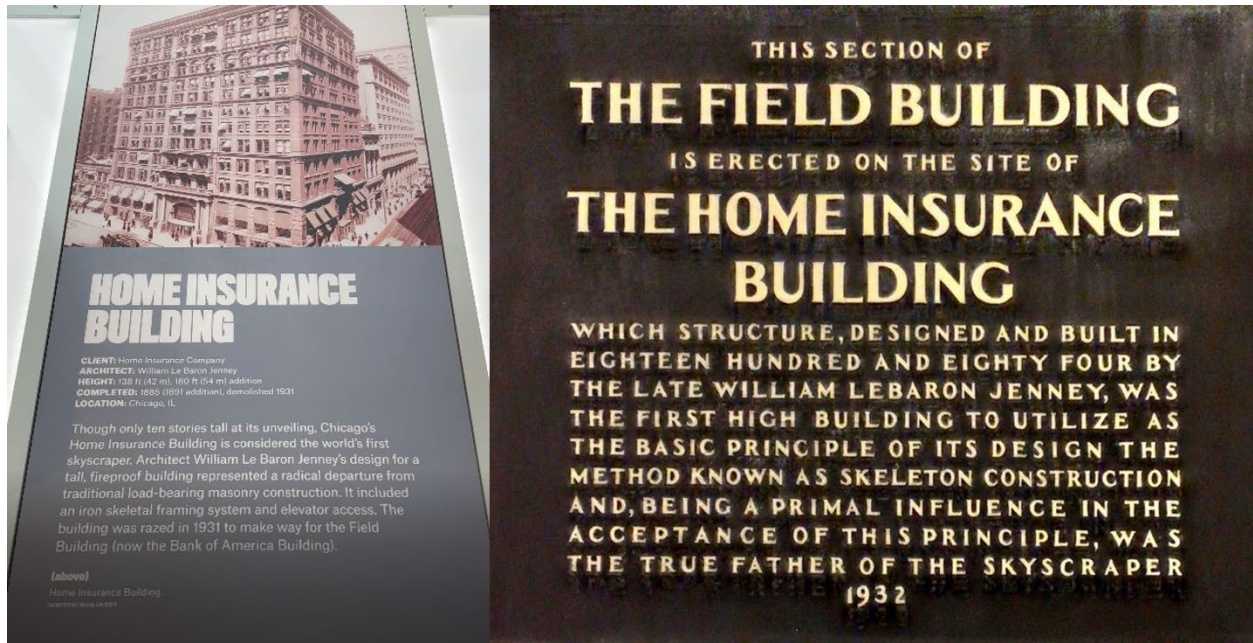


Figure 13: Plaques in the Chicago Architecture Center and on the Field Building. Sources: Left: Photo by author. Right: readtheplaque.com.

Endnotes

¹ Ali and Moon (2022), however, argue that the HIB can be considered the first skyscraper.

² A search of the term “sky-scraper” in historical newspapers, such as those on newspapers.com will demonstrate its past usage.

³ I’m grateful to Tom Leslie for pointing this out about the title and also informing me that wrought iron and steel had similar strength and behavioral properties.

⁴ Post says here that his curtain wall was in the tower. However, most accounts, including one from a Post speech in June 1895 (Engineering Record, 1895), mentions only the interior courtyard. However, both his speech and his remarks at the AIA indicate that he believed his Produce Exchange Building the first example of an exterior wall using skeletal design for a tall commercial structure.

⁵ I have been unable to ascertain if the letter was published. If so, it would be the first public claim by Jenney that he invented steel skeleton construction.

⁶ Unless otherwise noted, the letters of Jenney and others are contained in the Elmer C. Jensen papers, archived in the Chicago Art Institute.

⁷ One was from George M. Lyon of the firm Ducat & Lyon, who was a partner of Ducat before his death. The other was from Erastus Foote, who in 1884-8,5 was president of the firm that did the stonework. While the Jensen file letters do not include any letters from Jenney to Lyon or Foote, it’s reasonable to assume he wrote them to ask them for their support, given that we know Jenney wrote to other people, such as J. H. Washburn and Oliver Carter.

⁸ One more letter appears on August 15th from Joseph M. Wilson, an architect from Philadelphia who describes his projects in that city with curtain-walled-like properties. Again, what these non-Jenney-related letters demonstrate is that there was a large pool of architects and engineers thinking along similar lines (Wilson, 1896).

⁹ In the lead article of the March 27, 1897, issue, the EN wrote an article announcing Gates’ decision and celebrating it because it helped to give credit to engineers, who the journal felt were the unsung heroes of the architectural and building profession (*The Engineering Record*, 1897)

¹⁰ We can only speculate if Jenney was aware of this or not. But if so, it’s possible that it gave him the idea of using his building to demonstrate “prior art” regarding Buffington’s patent.

¹¹ From my search on newspapers.com, the article appeared in the *Chippewa Herald-Telegram*, *Bismark Weekly Tribune* (p. 7), *The Madison Daily Leader* (p. 1), and *The Argus-Leader* (p. 2).

¹² I’m grateful to Gerald Larson for pointing out the issue of prior art.

¹³ Additional examples of errors in the Tallmadge Report (1931) are documented in Larson and Geraniotis (1987). Furthermore, several photographs in the report of the iron columns—stripped of their brick—holding up the iron lintels appear to be clear evidence of the structures’ “rigid frame.” But again, this is a sleight of hand, since removing the brick enclosing the iron only reveals that the iron columns and lintels were doing some of the load-bearing, not all of it.

¹⁴ Though beyond the scope of this paper, there is evidence to suggest that two important tall buildings that followed the HIB, The Rookery (1888), designed by John Wellborn Root, and the Tacoma Building (1889), designed by Holabird & Roche, were more likely influenced by Post’s Produce Exchange than Jenney’s (Bruegmann, 1997).

¹⁵ I suppose the implication is that because Jenney embedded iron columns into the masonry piers, he was essentially fireproofing the columns.