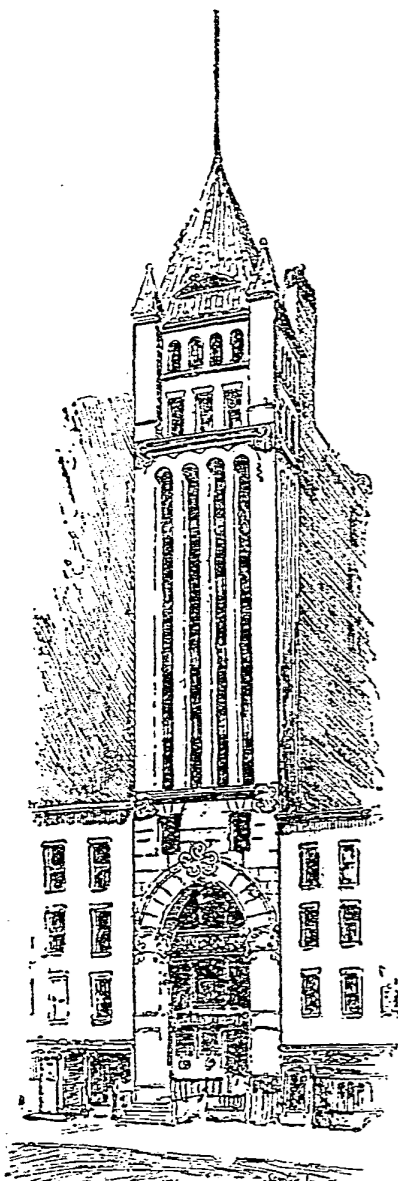


The Birth of the New York Skyscraper---A Romance of Architecture

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The Birth of the New York Skyscraper---A Romance of Architecture

THERE is no limit to the skyscraper, as it is called. I am now at work on a thirty-story building for the Wall Street district that will be as original a departure from the present type of steel skeleton structure as the



First one of that type was from the old style of office building when I put it up. There will not be an inside room in the edifice. It will cover a much greater floor area than any office building of its size in the world. I am not at liberty to give details. Just as a photographer who wants to get a composite type of a race of people places negative upon negative until he attains the desired result, I have amalgamated one plan with another until

I believe I have evolved the most perfect office building yet in existence. But it will in many respects be essentially different from what is now commonly known as the skyscraper."

So declared Bradford Lee Gilbert, architect of the first steel skeleton building in New York, or in the world, for that matter, when he was asked how he came to construct the first skyscraper nearly a generation ago, one soon to be torn down to make way for a larger building. "It was a case of the boy, the chipmunk, and the minister coming for dinner," said Mr. Gilbert. "During the Spring of 1887 John L. Stearns, who owned the first skyscraper in New York, found himself in possession of a double plot in New Street, just south of Exchange Place, with a Broadway frontage of only twenty-one feet. He was unable to dispose of this non-income property except at a considerable loss. He came to me to devise a plan that would enable him to build upon this property on a paying basis. I puzzled over the matter for six months or more. The building laws were explicit as to the required thickness of the walls for superstructure. Anything higher than the existing buildings on the plot could only be built at an actual loss. It would not pay to erect a high building on the Broadway plot to reach the larger rear building, when the thickness of the walls required would leave a passageway only on the three main Broadway floors a little over ten feet in width. A low entrance building on Broadway for a higher office building in New Street would benefit only the abutting property. The problem

grew perplexing and interesting in proportion.

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"One day the idea came upon me like a flash that an iron bridge truss stood on end was the solution of the problem. The building laws did not limit the height of the foundations of a building either below or above the curb line. This was evident from the first floor level of the prevailing high stoop, or English basement. I saw no reason why it was not feasible to carry the foundations up seven or eight stories, or even to the roof itself, in order to obtain floor space where it was most desirable. There was no reason why I should not begin the superstructure six stories above the curb. Having demonstrated to my own satisfaction the safety and practicability of such a construction I went to Superintendent D'Oench, who was then at the head of the Building Department in New York. While he agreed that my plan was feasible, he said, frankly, that no law existed under which the construction could be approved. It required the tedious negotiations with a Board of Examiners before the plans were approved in April, 1888. Meanwhile the newspapers had made my 'idiotic building,' as some of them called it, talked about all over the United States. Architects came from as far away as Portland, Oregon, first to examine my plans, and then to denounce them as unsafe and impracticable. I was told, time and time again, that the building would blow over with the first stiff gale that came up the bay from Sandy Hook.

"The construction throughout the narrow portion of the building, as filed and erected, called for a twelve-inch curtain, or non-bearing inclosing walls between the foundation columns below the eighth story, and in some sections the entire height of the thirteen stories in the building, or about 160 feet, the weight of the curtain walls and floors being transmitted by girders to the wall columns at initial points, and there cared for by cement pile footings. Thus, out of a total available width of 21 feet 6 inches 20 clear feet was obtained (on account of the party wall on the south) through the most valuable and rentable of the Broadway floors and offices. In fact, this wall space as saved and rentable, over the previous style of construction, proved worth upward of \$10,000 a year.

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"When the actual construction of the building began my troubles increased tenfold. The mere suggestion of a building 21½ feet wide, rising to a height of 160 feet above its footings, filled everybody who had no particular concern in the matter with alarm. Finally an engineer with whom I had worked for many years, came to me with a protest. When I paid no attention to him he wrote to the owner. The owner came to me with the letter. He was afraid the building would blow over, and that he would be subject to heavy damages. My personal position in the matter, and that of the Building Department that had given me the permit, never seemed to strike him at all. Finally I drew out my strain sheets, showing the wind bracings from cellar to roof, and demonstrated by analysis that the harder the wind blew the safer the building would be; as, under 100 tons under hurricane pressure, while the wind was blowing seventy miles an hour, the structure was cared for by its footings, and was safest. And that is as true of the twenty-story skyscraper of to-day as it was of the thirteen-story skyscraper then. You must trust somebody," I said, "and you would better trust your architect for the sake of your peace of mind. To show my faith in the building I will make my offices in the two upper floors of the Broadway end. If the building falls, I will fall with it.

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"This seemed to satisfy him, and we went ahead. One Sunday morning, when the walls of the building were ready for the roof, I awoke to find the wind blowing a hurricane. That gale is a matter of record in the Weather Bureau. With a friend who had implicit faith in my plans I went downtown to the skyscraper. A crowd of persons who expected it to blow over stood at a respectful distance to watch the crash. Janitors and watchmen in adjoining buildings, and structures across the street moved out. They were afraid of being crushed to death, and said unpleasant things about my steel frame building. I secured a plumb

line and began to climb the ladders that the workmen had left in place when they quit work the previous evening. My friend went with me as far as the tenth story. The persons who looked at us from below called us fools.

"When I reached the thirteenth story the gale was so fierce I could not stand upright. I crawled on my hands and knees along the scaffolding and dropped the plumb line. There was not the slightest vibration. The building stood as steady as a rock in the sea. In my enthusiasm I was rash enough to stand erect and wave my hat. The wind caught me and carried me toward the end of that scaffolding. It is in emergencies like that that a man prays, if he ever prays. I prayed, not only giving thanks to God that my building was weathering that awful strain, but I prayed for safety. Just as I reached the end of the platform a rope that was swaying in the wind from

an upright beam of the tower was swept within my reach. I grasped it, held on, dropped to my knees, and crawled back to the ladder. My friend and I descended to the street and walked arm in arm up Broadway singing the Doxology.

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"There is nothing to fear about the safety of the skyscraper. The Baltimore fire has put them to the severest test. I went there to watch them. They were not found wanting when weighed in the balance. Some attempt has been made to confound the steel-frame building with the cage-constructed building, like the Pulitzer Building and the Home Insurance Company Building. There is a radical difference. While steel was used in construction of these buildings, and the inner weight supported by the columns, the outer walls were thick enough to be self-sustaining. In the Tower Building, the first skyscraper, everything depended

on the steel framework, outer walls and all.

"It has been demonstrated over and over again that the longer iron or steel is buried in cement the stronger it is. The men who tear down the first skyscraper ever built in New York are going to have a run for their money, long as the building has been standing. The Pabst steel-frame building, which was torn down to make way for the new home of THE NEW YORK TIMES, was a new structure. This one has stood the wear of years. It cost only \$250,000, as against the two-million-five-hundred-thousand-dollar skyscrapers of to-day. The skyscraper idea brought in \$90,000 a year in increased rental. I am sorry I did not copyright it. The royalties would have amounted to millions. I should have done so, but I was scared off by lawyers who said lawsuits about infringements would outweigh the possible advantages."

